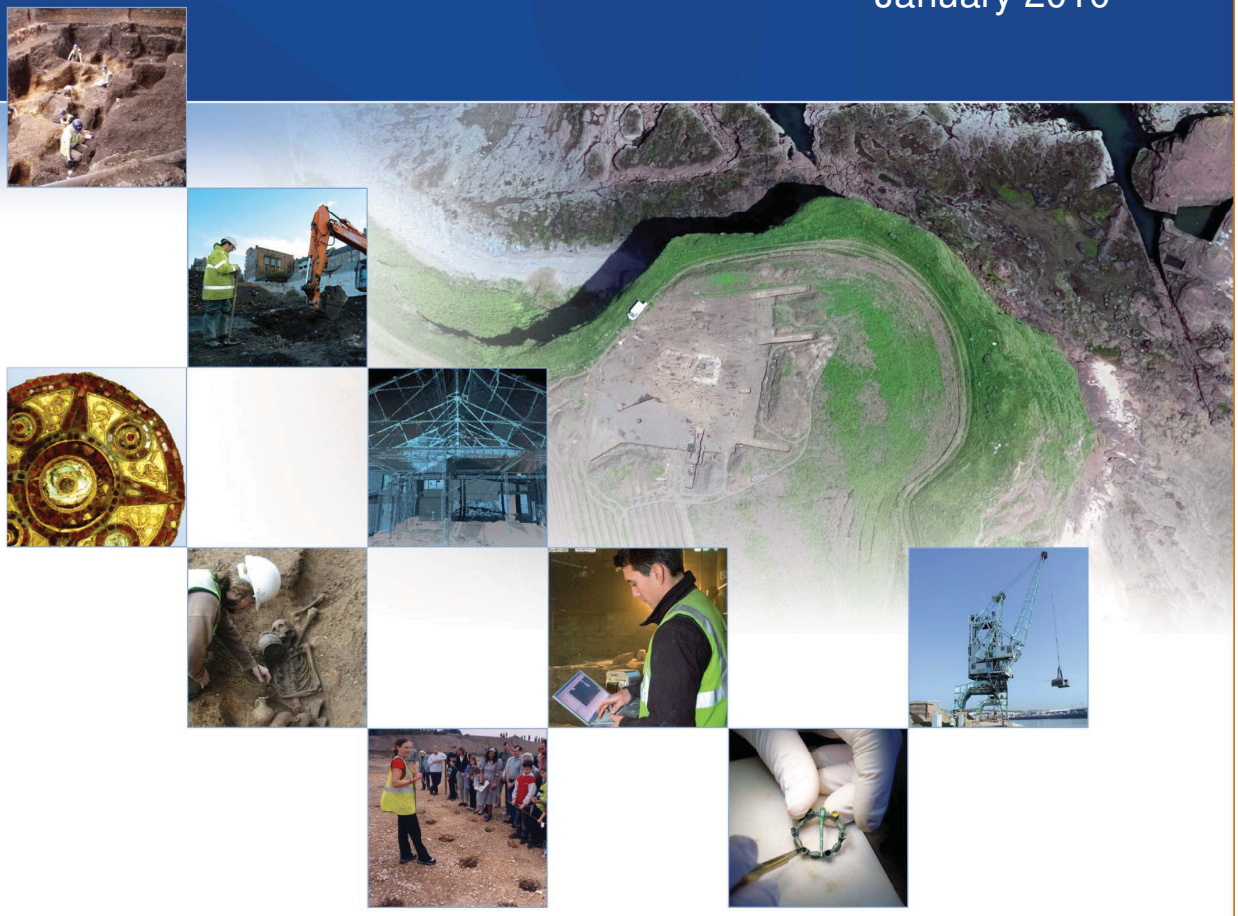
South-East Quadrant, Tate Britain

The City of Westminster:

Archaeological Desk-Based Assessment

Project No: 30487

January 2010



AOC Archaeology Group

ARCHAEOLOGY | HERITAGE | CONSERVATION

South-east Quadrant, Tate Britain, The City of Westminster: Archaeological Desk-Based Assessment

On Behalf of:	**Drivers Jonas LLP / The Board of Trustees of the Tate Gallery**
National Grid Reference (NGR):	**TQ 301 785**
AOC Project No:	**30487**
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his document has been prepared in accordance with AOC standard operating procedures.

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Non-Technical Summary

Drivers Jonas LLP, on behalf of the Board of Trustees of the Tate Gallery, have commissioned AOC Archaeology Group to produce an Archaeological Desk-Based Assessment (DBA) of the works to the south-east Quadrant of the Tate Britain art gallery, located in the London Borough of Westminster: National Grid Reference **TQ 301 785**.

The proposed development works comprises a number of internal alterations centred around the south-east quadrant of the gallery and an area of external groundworks located to the east of the main Millbank entrance to the gallery.

The Tate Britain Site is located within the Millbank Conservation Area, as defined in the City of Westminster Unitary Development Plan. The area of external groundworks does not lie inside, adjacent to, or within 250m of any identified designated Areas or Sites of Archaeological Priority / Importance, Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields or World Heritage Sites.

The assessment has identified a total of 28 Statutory Listed Buildings within the 250m study radius; Tate Britain itself is Grade II* Listed.

The assessment has identified no known or previously identified below ground cultural heritage features within the *area of external groundworks.* The Tate Britain site does, however, overlie part of the 19th century Millbank Penitentiary site, identified during archaeological investigations as part of the Tate Gallery Centenary development, which likely extends across this area and within the area if internal groundworks. Archaeologically important alluvial and peat deposits were also been encountered, dated to the late Neolithic / early Bronze Age.

Based upon the available evidence, there is considered to be a:

- Low Potential for evidence of *significant archaeological activity* dating from the Prehistoric to early-post-medieval periods.
- Medium to High Potential for significant below ground archaeological evidence dating to the late post-medieval

Tate commits to carrying out a programme of mitigation works for this scheme based on AOC Archaeology's recommendations, and subject to review and approval from Diane Abrams of the Greater London Archaeology Advisory Service; archaeological advisors to Westminster City Council.

Such works are likely to include an archaeological monitoring / watching brief undertaken during ground reductions across the area of groundworks (internal / external), with sufficient time allowed for the identification and recording of any archaeological remains encountered, if present.

The required groundworks will likely expose the lower footings of the Tate Gallery and, as part of this watching brief, any areas exposed will be recorded during the archaeological works.

With regards to the internal built heritage, Tate commits to undertake archaeological investigation and recording of any areas that are to undergo alteration. This form of work could be satisfied though a Historic Building Recording 'watching brief' undertaken during works, with time allowed for the recording of any identified built heritage features exposed.

1 INTRODUCTION

1.1 Project Background

1.1.1 The Board of Trustees of the Tate Gallery has proposed works to the south-east Quadrant of Tate Britain, Millbank, London Borough of the City of Westminster.

1.1.2 AOC Archaeology has been commissioned by Drivers Jonas LLP, on behalf of the Board of Trustees of the Tate Gallery, to produce an Archaeological Desk-Based Assessment (DBA) of this scheme. This report describes the results of the assessment and will form part of the documentation submitted with the planning application.

1.1.3 This report includes a description of the baseline conditions, identifies the potential impact of the proposed development scheme and formulates a mitigation strategy to prevent, reduce or offset negative impacts on any surviving archaeology / built heritage remains, where necessary.

1.1.4 The Greater London Sites and Monuments Record (GLSMR) is the primary source of information concerning the current state of archaeological and architectural knowledge. Together with sources listed in section 2.2.3 this information predominately forms the description of the archaeological baseline conditions.

1.1.5 A detailed architectural and historical assessment of the internal built heritage of Tate Britain has been presented in '*Tate Britain Conservation Management Plan*' (Alan Baxter & Associates, 2008), '*Transforming Tate Britain: Structural Engineering Report For Planning* (Alan Baxter & Associates 2010) and '*Tate Britain: Gazetteer Draft* (Alan Baxter & Associates, 2009b). It is outside of the scope of this assessment to replicate the findings and recommendations of theses reports; however, a general overview, as well as summary of the observations and recommendations made, will be given which should be read in conjunction with these earlier documents.

1.2 Site Location & Development Summary

1.2.1 Tate Britain is located along Millbank (the A3212), within the City of Westminster. The Gallery is situated on the north bank of the River Thames, centred on National Grid Reference (NGR) **TQ 1884 6927** (Figure 1).

1.2.2 The proposed development comprises a number of internal alterations and external groundworks.

1.2.3 The internal alterations will be centred around the south-east quadrant of the Gallery, which includes the original block of 1897 and later additions of 1899, as well as the central galleries of 1937 and the Clore Building of 1983-7. The internal alterations are explained in more details in Section 8.

1.2.4 The external groundworks (referred to as 'the development site'), in the area to the east of the main Millbank entrance to the Gallery, comprise the removal of c.1000mm of material in the area immediately around the café and schools reception doors to provided sunken access to the café area located on the Lower Level of the Gallery.

1.2.5 The development scheme proposes the retention of the existing lawn area

1.2.6 The designs also include the demolition of the existing circular steps in the north-west corner of the area of external groundworks to make way for a new ramp to provide disabled access to the café and schools reception, while the existing granite ramp in the south-east corner will be removed and replaced with new steps. The existing paving will then be extended to meet these new steps.

2 AIMS & METHODLOGY

2.1 Aims

2.1.1 PPG 16 emphasises that early consultation on the results of archaeological assessment and consideration of the implications of a development proposal are the key to informing reasonable planning decisions. The aim of this report is to facilitate that process.

2.1.2 The Institute for Archaeologists has published various *Standards and Guidance* papers seeking to amplify the guidance in PPG 16 and, in accordance with IFA *Standard* definition of a Desk-Based Assessment (IFA, 2008), the aims of this report are to:

- Identify and assess the known and potential archaeological resource within a specified area (site), collating existing written and graphical information and taking full account of the likely nature and extent of previous impacts on the site, in order to identify the likely character, extent, quantity and worth of that resource in a regional context as appropriate.
- To define and comment on the likely impact of works (e.g. site clearance / reduction, construction, infrastructure etc.) resulting from the proposed scheme on the surviving archaeological resource
- Devise appropriate responses, which may consist of one or more of the following:
  - The formulation of a strategy to ensure the recording, preservation and management of the resource;
  - The formulation of a strategy for further investigation, whether or not intrusive, where the character and value of the resource is not sufficiently defined to permit a mitigation strategy or other response to be devised;
  - The formulation of a project design for further archaeological investigation within a programme of research.

2.1.3 In accordance with PPG 16, the Desk-Based Assessment forms the first stage in the planning process. If the archaeological potential warrants, this may lead to evaluation by fieldwork within the defined development area.

2.2 Methodology

2.2.1 The assessment has been carried out in accordance with the Institute for Archaeologists' *Standard and Guidance for Desk-Based Assessment* (2008).

2.2.2 The assessment has been undertaken with regard to relevant statutory requirements, national planning policies, the City of Westminster Unitary Development Plan (www.westminster.gov.uk) and professional good practice guidance, including:

- Ancient Monuments and Archaeological Areas Act, 1979;
- Planning (Listed Buildings and Conservation Areas) Act, 1990:
- Planning Policy Guidance Note 16: Archaeology and Planning;
- Planning Policy Guidance Note 15: Planning and the Historic Environment

2.2.3 A number of sources were consulted for this report, principally:

- An examination of the available topographic evidence;
- An assessment of historical and documentary evidence held at the City of Westminster Archives and ;
- An historic map regression exercise looking at the cartographic evidence for the study area;
- An assessment of the Greater London Sites and Monuments Record (GLSMR) database for archaeological sites, finds, events, monuments and designations;
- An assessment of relevant published and unpublished archaeological sources, including local archaeological journals;
- A site-walk over; and
- Published sources listed in Section 11.

2.2.4 In order to understand the nature and extent of the surrounding archaeological resource a study area of 250m radius from the centre of the development site (e.g. area of external groundworks) was created for the purpose of this assessment.

2.2.5 All relevant cultural heritage features identified from the sources assessed (above) have been described and presented numerically in the Gazetteer of Cultural Heritage Features (Appendix A) and are displayed on the Cultural Heritage Features Maps (Figures 3 & 4). Where identified features appear within the text, the AOC number is shown in round brackets e.g. (**AOC X**).

2.2.6 All the work carried out in this report is based upon AOC Archaeology's professional knowledge and understanding of current (November 2009) and relevant United Kingdom standards and codes, technology and legislation. Changes in these areas may occur in the future and cause changes to the conclusions, advice, recommendations or design given. AOC Archaeology does not accept responsibility for advising the Board of Trustees of the Tate Gallery or its associated parties of the facts or implications of any such changes in the future.

2.3 Assessment of the Cultural Heritage Resource

2.3.1 There is currently no standard adopted statutory or government guidance for assessing impacts to the historic landscape; therefore the following methodology has been designed as an attempt at best practice in determining significance of effects.

2.3.2 The importance of a cultural heritage feature (such as an archaeological asset, a building, structure, settlement / area or park and garden etc.) is judged upon statutory and non-statutory designations, architectural, archaeological or historical significance, and the contribution to local character. Considering these criteria each identified feature can be assigned to a level of importance in accordance with a five point scale (Table 1, below).

Table 1: Assessing the Importance of a Cultural Heritage Site

SCALE OF SITE IMPORTANCE	
NATIONAL	The highest status of site, e.g. Scheduled Monuments (or undesignated assets of schedulable quality and importance), Grade I and Grade II* Listed Buildings. Well preserved historic landscape, whether inscribed or not, with exceptional coherence, time depth, or other critical factor(s)
REGIONAL	Designated or undesignated archaeological sites; well preserved structures or buildings of historical significance, historic landscapes or assets of a reasonably defined extent and significance, or reasonable evidence of occupation / settlement, ritual, industrial activity etc. Examples may include burial sites, deserted medieval villages, Roman roads and dense scatter of finds.
LOCAL	Comprises undesignated sites with some evidence of human activity but which are in a fragmentary or poor state, or assets of limited historic value but which have the potential to contribute to local research objectives, structures or buildings of potential historical merit. Examples include sites such as historic field systems and boundaries, agricultural features such as ridge and furrow, ephemeral archaeological evidence etc.
NEGLIGIBLE	Historic assets with very little or no surviving archaeological interest or historic buildings and landscapes of no historical significance. Examples include destroyed antiquities, buildings of no architectural merit, or relatively modern landscape features such as quarries, field boundaries, drains and ponds etc.
UNKNOWN	Insufficient information exists to assess the importance of a feature (e.g. unidentified features on aerial photographs).

2.3.3 The importance of already identified cultural heritage resources is determined by reference to existing designations. For previously unidentified sites where no designation has been assigned, an estimate has been made of the likely importance of that resource based on professional knowledge and judgement.

2.3.4 Adjustments to the above classification were occasionally made, where appropriate; for some types of finds or sites (e.g. Registered Battlefields, Conservation Areas or Historic Parks and Gardens) there is no consistent value and the importance may vary from local to national. Levels of importance for any such areas are generally assigned on an individual basis, based on professional judgement.

2.4 Impact Assessment Criteria

2.4.1 This assessment has identified the baseline conditions for archaeology and built heritage within the study area and potential for previous unidentified archaeological resources. The magnitude of impact upon the Cultural Heritage resource, which can be considered in terms of direct and indirect impacts, is determined by identifying the level of effect from the proposed development upon the baseline conditions of the site and the cultural heritage resource identified in the assessment. This effect can be either adverse (negative) or beneficial (positive). The criteria for assessing the magnitude of impact are set out in Table 2, below.

2.4.2 In certain cases it is not possible to confirm the magnitude of impact upon a cultural heritage resource, especially where anticipated buried deposits exist. In such circumstances a professional judgement as to the scale of such impacts is applied to enable the likely Significance of Effects to be established.

Table 2: Criteria for Determining Magnitude of Impact

LEVEL OF MAGNITUDE	DEFINITION
ADVERSE	
HIGH	Major impacts fundamentally changing the baseline condition of the receptor, leading to total or considerable alteration of character or setting – e.g. complete or almost complete destruction of the archaeological resource; dramatic visual intrusion into a historic landscape element; adverse change in the setting or visual amenity of the feature/site; significant increase in noise or changes in sound quality; extensive changes to use or access.
MEDIUM	Impacts changing the baseline condition of the receptor materially but not entirely, leading to partial alteration of character or setting – e.g. a large proportion of the archaeological resource damaged or destroyed; intrusive visual intrusion into key aspects of the historic landscape; and changes in noise levels or use of site that would result in detrimental changes to historic landscape character.
LOW	Detectable impacts which alter the baseline condition of the receptor to a small degree – e.g. a small proportion of the surviving archaeological resource is damaged or destroyed; minor severance, change to the setting or structure or increase in noise; and limited encroachment into character of a historic landscape.
NEGLIGIBLE	Barely distinguishable adverse change from baseline conditions, where there would be very little appreciable effect on a known site, possibly because of distance from the development, method of construction or landscape or ecological planting, that are thought to have no long term effect on the historic value of a resource.
BENEFICIAL	
NEGLIGIBLE	Barely distinguishable beneficial change from baseline conditions, where there would be very little appreciable effect on a known site and little long term effect on the historic value of a resource.
LOW	Minimal enhancement to key historic landscape elements, parcels or components, such as limited visual improvements or reduction in severance; slight changes in noise or sound quality; minor changes to use or access; resulting in a small improvement in historic landscape character.
MEDIUM	Changes to key historic elements resulting in welcome changes to historic landscape character. For example, a major reduction of severance or substantial reductions in noise or disturbance such that the value of known sites would be enhanced.
HIGH	Changes to most or all key historic landscape elements, parcels or components; visual changes to many key aspects of the historic landscape; significant decrease in noise or changes in sound quality; changes to use or access; resulting in considerable welcome changes to historic landscape character.

2.4.3 The overall Significance of Effects from the proposed development upon the Cultural Heritage Resource is determined by correlating the magnitude of Impact against the value of the Cultural Heritage resource. Table 3 highlights the criteria for assessing the overall Significance of Effects.

Table 3: Significance of Effects

IMPORTANCE	MAGNITUDE							
	ADVERSE				BENEFICIAL			
	HIGH	MED	LOW	NEG	NEG	LOW	MED	HIGH
NATIONAL	Severe	Major	Mod	Minor	Minor	Mod	Major	Ext.
REGIONAL	Major	Mod	Minor	Not Sig.	Not Sig.	Minor	Mod	Major
LOCAL	Mod	Minor	Minor	Not Sig.	Not Sig.	Minor	Minor	Mod
NEGLIGIBLE	Minor	Not Sig.	Not Sig.	Nt.	Nt.	Not Sig.	Not Sig.	Minor

Ext. = Extensive; Mod = Moderate; Not Sig. = Not Significant; Nt. = Neutral;

2.5 Report Structure

2.5.1 The introduction provides a brief description of the project background, study area and proposed development (**Section 1**) followed by an outline of the assessment methodology (**Section 2**); explanation of policy context and planning considerations (**Section 3**) and a description of the archaeological, topographic and geological base line conditions (**Section 4**).

2.5.2 The archaeological and historical evidence is assessed (**Section 5**), followed by assessment of all other available sources (**Section 6)**, including cartographic evidence. The available evidence is evaluated and used to assess previous impacts upon the site and all information is then used to determine of archaeological potential of the site (**Section 7**). Next, the development proposal is examined and its degree of impact upon the cultural heritage resource is determined (**Section 8**), and then the results of the report are used to determine our recommendations for further work and / or mitigation, with the residual effects of implementation explained (**Section 9**).

2.5.3 The report concludes with a summary and evaluation in the Conclusion, relating back to planning policy requirements **(Section 10**) and a bibliography of reference sources used (**Section 11**).

3 PLANNING, LEGISLATIVE FRAMEWORK AND GUIDANCE

3.1 Planning Policy Guidance Note 16: Archaeology and Planning

3.1.1 The importance of archaeology in the planning process is detailed in PPG 16. The underlying principle is that archaeological remains should be seen as a finite non-renewable resource and should be regarded as apart of the environment to be protected and managed. The primary objective is to secure the best possible treatment of the archaeological heritage.

3.1.2 Where nationally important archaeological remains, whether Scheduled or not, and their settings are affected by a proposed development there should be a presumption in favour of their physical preservation *in situ*. If physical preservation *in situ* is not feasible, and archaeological excavation for the purposes of 'preservation by record' may be an acceptable alternative. From and archaeological point of view this should be regarded as a second best option.

3.2 Planning Policy Guidance Note 15: Planning and the Historic Environment

3.2.1 PPG 15 recognises that Listed Buildings, Conservation Areas and other historic sites, which together form some of the individual elements of the historic environment, are a unique and irreplaceable record that contributes to our understanding of both the present and the past.

3.2.2 In any development control decision, planning authorities are required to fully take account of this resource and mitigate the possibility of unnecessary erosion or damage. Paragraph 2.11 of PPG 15 states that the 'local planning authorities should expect developers to assess the likely impact of their proposals on the site or structure in question, and to provide such written information or drawings as may be required to understand the significance of a site or structure before an application is determined'.

3.3 City of Westminster Unitary Development Plan (Adopted 24th January 2007)

3.3.1 The City of Westminster Unitary Development Plan (www.westminster.gov.uk) was adopted in September 2007. The following policies are relevant to this assessment:

POLICY DES 9: CONSERVATION AREAS

3.3.2 Aim: To preserve or enhance the character or appearance of conservation areas and their settings.

A) Applications for outline planning permission in conservation areas:

3.3.3 In the case of outline planning applications within designated conservation areas it may be necessary to require additional details to be produced in order that the physical impact of the proposed development may be fully assessed.

F) Setting of Conservation Areas

3.3.4 Development will not be permitted which, although not wholly or partly located within a designated conservation area, might nevertheless have a visibly adverse effect upon the area's recognised special character or appearance, including intrusiveness with respect to any recognised and recorded familiar local views into, out of, within or across the area.

DES 10: LISTED BUILDINGS

3.3.5 Aim: To protect and enhance listed buildings, their settings and those features of special architectural or historic interest that they possess.

A) Applications for planning permission

3.3.6 Applications for development involving the extension or alteration of listed buildings will, where relevant, need to include full details of means of access, siting, design and external appearance of the proposed development in order to demonstrate that it would respect the listed building's character and appearance and serve to preserve, restore or complement its features of special architectural or historic interest.

D) Setting of Listed Buildings

3.3.7 Planning permission will not be granted where it would adversely affect:

- The immediate or wider setting of a listed building, or
- Recognised and recorded views of a listed building or a group of listed buildings, or
- The spatial integrity or historic unity of the cartilage of a listed building.

DES 11: SCHEDULED ANCIENT MONUMENTS, AREAS AND SITES OF ARCHAEOLOGICAL PRIORITY AND POTENTIAL

3.3.8 Aim: To identify archaeological remains of national and local importance, conserve them in their settings, and provide public access to them.

3.3.9 Where new development is proposed on sites of archaeological potential, to ensure adequate archaeological impact assessment, followed by appropriate provision for preservation or investigation, recording, and publication.

(B) Areas and Sites of Special Archaeological Priority and Potential

3.3.10 Permission will be granted for developments where, in order of priority:

- All archaeological remains of national importance are preserved in situ
- Remains of local archaeological value are properly, evaluated and, where practicable, preserved in situ.

3.3.11 If the preservation of archaeological remains in situ is inappropriate, provision is made for full investigation, recording and an appropriate level of publication by a reputable investigating body.

3.3.12 The principles of the above policy can be applied to non-designated archaeological sites and land of archaeological potential, in line with Policy Application discussion in the UDP (Chapter 10, Paragraph 10.150 & 10.151).

4 BASELINE CONDITIONS

4.1 Designations & Key Planning Considerations

4.1.1 The Tate Britain Site is located within the Millbank Conservation Area (**AOC 71**), as defined in the City of Westminster Unitary Development Plan. Two further Conservation Areas lie within 250m of Tate Britain: Regency Street Conservation Area (**AOC 72**), c.170m to the west of the building, and Smith Square Conservation Area (**AOC 73**) c.160m to the north.

4.1.2 The development site (the area of external groundworks) does not lie inside, adjacent to, or within 250m of any identified designated Areas or Sites of Archaeological Priority / Importance, Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields or World Heritage Sites.

4.1.3 The assessment has identified a total 28 Statutory Listed Buildings within the 250m study radius from the centre of the development site (see Figure 4); the closest being the Grade II Listed gates, railings and gate-piers of the Tate (**AOC 45**) and Tate Britain itself (**AOC 46**), which is Grade II* Listed.

4.2 Topographic Setting & Geological Conditions

4.2.1 The likely below ground geological conditions have been previously examined as part of previous archaeological assessments undertaken by AOC Archaeology at the Royal Army Medical College / Chelsea School of Art and Design site in 2002, to the immediate south of Tate Britain, as well as during previous works as part of Tate's Centenary development works.

4.2.2 The Tate Britain site lies within a low-lying area of ground, overlying an expanse of post-glacial alluvium, located approximately half way between the higher, dryer, gravel deposits of the medieval Thorney Island, c. 700m to the north (approximately modern date Westminster Abbey and Parliament Square), and those along the riverfront at Pimlico, c. 300m to the south. Borehole evidence indicates that the alluvium is underlain by Shepperton Gravels at c. -0.7m to -1.45m OD (Alan Baxter & Associates, 2008, P.3)

4.2.3 The low-lying nature of this area suggests that, prior to post-medieval / modern land build-up, the area of the site is historically likely to have been relative marshy.

4.2.4 One of the Thames main tributaries, the River Tyburn, crossed this area of Westminster, splitting somewhere in the vicinity of modern day Buckingham Palace, with the main southern branch probably running along the present line of Tachbrook Street to the south-west of the site; a 2nd branch ran in an easterly direction, dividing again to create Thorney Island.

4.2.5 It is possible that the triangle of alluvium beneath Westminster, Victoria and Pimlico (in which the Tate Britain site is situated) effectively comprised a delta at the mouth of the Tyburn (AOC Archaeology, 2006). At various times in the past this may have meant a complex landscape of watercourses, marshland and drier higher islands of land in-between.

4.2.6 This type of landscape is, in the main, unlikely to have attracted significant human activity during such times, though there is a potential for activity on higher dryer ground, such as the gravel riverside islands, as well as persevered palaeo-environmental data (e.g. alluvium / peat deposits etc.).

4.2.7 Geotechnical investigations carried out on the site of Tate Britain in 1993 (AOC Archaeology, 2006) comprised the excavation of 10 test-pits and 3 boreholes. The results indicated that the current day ground surface lies above deposits of made ground that varied in thickness from 6.00m to 1.50m. This overlay deposits of soft silty clays and peat (alluvium), which were recorded at depths of 1.92m

OD and -0.10m OD. This alluvium overlay deposits of gravel, recorded at depths of -1.88, -1.45 and -0.70m OD (AOC Archaeology, 2006). Carbon ^{14} analysis of these peat deposits, following archaeological investigations on the Tate Britain site in 1998, indicated soil deposits of a late Neolithic / early Bronze Age date; although no features or artefacts dating to these periods were encountered.

4.3 Consultation

4.3.1 Email consultation was undertaken with Diane Abrams of the Greater London Archaeology Advisory Service (archaeological advisors to Westminster City Council) on the 6th July 2009.

4.3.2 Mrs. Abrams advised that reference should be made to previous archaeological investigation undertaken by AOC Archaeology upon the Tate Britain site and highlighted that alluvial deposits, dating from the Late Neolithic, had previously been encountered (see Section 4.2 above).

4.3.3 Telephone consultation with Paul Ragsdale, Structural Engineer of Alan Baxter & Associates between 16th and 17th November 2009, confirmed the proposed depths of ground reductions of current proposals.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

5.1 The Prehistoric Periods (c. 500,000 BC – AD 43)

5.1.1 The assessment has identified seventeen entries on the Greater London Sites and Monuments Record (GLSMR) database of prehistoric date; however, there is little evidence to suggest significant activity (such as settlement, ritual or industrial sites) within the 250m study area, with the majority of prehistoric material representing out of context artefactural material recovered from the Thames, often as the result of dredging operations.

5.1.2 It is likely that any land-based prehistoric activity (particularly dating to the earlier periods), if present, would be overlain by later deposits of alluvial material (Merriman, 1987, P.320). For example, during the Mesolithic period (c.10,000 BC – c. 4000 BC) riverside locations were often sites for temporary settlement and hunting camps established on the higher dryer gravel banks, close to the natural resources and communication links the river provided. The gradual rise of sea and river levels during this period would have eventually inundated these gravel bank sites, forming islands of some and submerging others, depositing alluvial material over any earlier archaeological evidence (MoLAS, 1996).

5.1.3 Archaeological investigations within the study area has identified prehistoric peat deposits, dating to the Neolithic (c. 4000 BC – c. 2200 BC) and Bronze Age (c.2200 BC – c. 700 BC), during investigations at the Chelsea School of Art and Design (**AOC 3**), c. 100m to the south of the site, which is likely to have also extend across the Tate Britain site. Further archaeological investigations on geotechnical test pits during the Tate's Centenary developments identified organic clay peat, which C14 dating suggest was deposited during the Late Neolithic period.

5.1.4 The assessment has identified four Neolithic (**AOC 4 – 7**), three Bronze Age (**AOC 9, 10, & 11**) and one Iron Age (**AOC 12**) artefacts found within the Thames and its foreshore (some possibly deliberately deposited), which testify to activity within the wider locality during these periods. Further evidence of prehistoric foreshore activity has been recorded during the London Archaeological Research Facility's (LARF) foreshore survey in 1996, including unidentified timbers (**AOC 15**) and a number of geo-archaeological deposits (**AOC 13, 14, 16 & 17**).

5.1.5 Within the site of Tate Britain itself a Bronze Age leaf-shaped sword (**AOC 8**) was discovered during the excavation of the foundations for Millbank Penitentiary in the early 19th century though, apart from the geological deposits discussed above, there have been no further prehistoric activity recorded in this area.

5.2 The Roman Period (AD 43 – AD 410)

5.2.1 There is little archaeological evidence of Roman date within the 250m study radius from the centre of the development site suggestive of significant activity within this area during this period.

5.2.2 The archaeological recorded in the surrounding locality does, however, suggest Roman utilisation of the wider landscape; for example, in the location of the former Thorney Island (approximately the area now covered by Parliament Square and Westminster Abbey), to the north of the site, 19th century observations of Roman masonry and mosaics and more recent discoveries of Roman material have been made (Thomas, 1993).

5.2.3 It is postulated that a possible crossing of the Thames is located here between Lambeth and Westminster (Margary, 1955), suggested by the alignment of a detour in line of Watling Street (one of the main Roman routes), and it has been hypothesised that this would be the site of the first

Roman crossing of the Thames. While this is possible, there is currently a lack of conclusive evidence supporting this theory (Perring, 1991).

5.2.4 The assessment has identified one findspot of Roman pottery (**AOC 18**) at No. 47 Vincent Street c.250m to the north-west of the development site and another findspot of a possible Antonine Vessel (**AOC 19**) found sometime between 1901 – 1910 on the site of the Millbank Penitentiary; however, the specific location of this find is not recorded and it cannot be confirmed whether it was found in-situ.

5.2.5 A further piece of possible Roman evidence was encountered during previous archaeological investigations on the Tate Britain site (AOC Archaeology, 1997), when an 'orange-brown roof tile fragment' was found in a layer of peat at a depth of 650mm beneath Gallery 18. The post-excavation report (AOC Archaeology, 2006) suggests its presence within the alluvial material indicates that it must be of some antiquity and its description suggests that it could be no earlier than Roman.

5.3 The Early Medieval Period (AD 410 – AD 1066)

5.3.1 The assessment has identified one single entry on the GLSMR database dating to the early medieval period, relating to a findspot of a Viking Spearhead (**AOC 20**), recovered from the River Thames.

5.3.2 Whilst there is a paucity of evidence of significant early medieval activity within the study area, the available documentary, etymological and archaeological evidence does demonstrate human activity and utilisation of the landscape in the wider locality.

5.3.3 The focus of early medieval settlement activity in London during the first half of this period is now known to have been located in the Strand / Covent Garden area of modern day London. Documentary sources dating from the 7th to 9th centuries refer to this settlement as '*Lundenwic'* and it is described in the AD 730's by the Venerable Bede as an *emporium*; a market for many peoples coming by land and sea – suggesting an important North Sea trading port.

5.3.4 The most significant example of Anglo-Saxon settlement activity within the vicinity of the Tate Britain site is the monastic settlement at Westminster on Thorney Island, first recorded in c. 785 in a charter of King Offa as '…*St. Peter and the people of the Lord dwelling in Thornea at..Westminster…'* (MoLAS, 1996).

5.3.5 Thorney Island (formed by a split in the River Tyburn) was important both religiously and politically. St. Peter's Abbey (now the site of modern day Westminster Abbey) is thought to have been founded in the 8th century, became a Benedictine foundation by the 10th century, was famously enlarged and rebuilt in the 11th century and again in the mid-13th century, with various additions, alterations and modifications in the 14th, 16th and 18th centuries. To the east of the Abbey lay the Palace of Westminster, first recorded as a royal palace built by Edward the Confessor (1042 -1066) and thought to have been a seat of the Royal Court and government from the reign of King Canute (1016 – 1035). It remained as a royal palace until being abandoned by Henry VIII in c.1540. Both Westminster Abbey and the Palace of Westminster (the present day location of the Houses of Parliament) are World Heritage Sites.

5.3.6 The boundaries of the Manor of Westminster is described in a charter of c. 951, as:

'*first up from the Thames along Mereflete to Pollenstock, so to Bullinga Fen, along the old ditch to Cowford. From Cowford up along Tyburn to the Broad Military Way; following the Military Way to the*

stocks of St. Andrew's Church, then within London Fen, proceeding south on Thames to Midstream, and along the stream by land and strand by Mereflete..." (MoLAS, 1996, P.22).

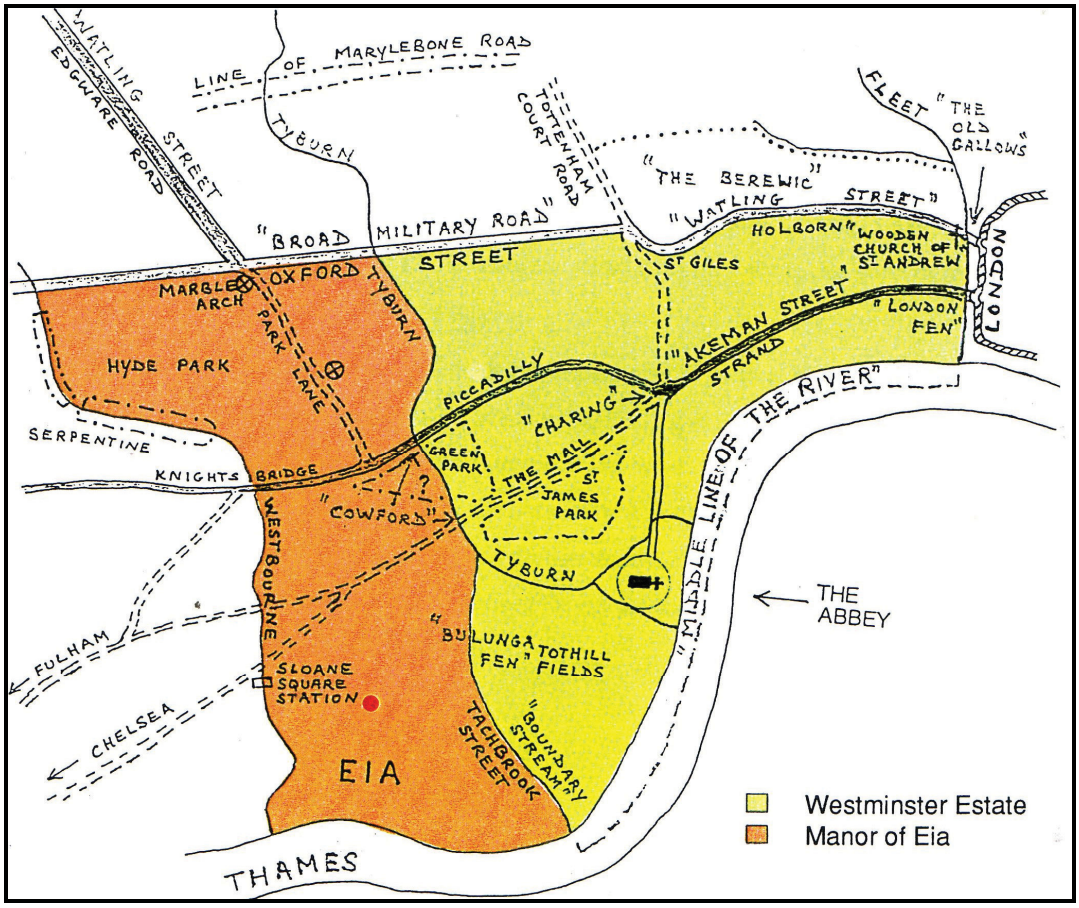

PLATE A: Sketch plan showing the boundaries of the early medieval manors of Westminster and Eia. Taken from '199-203 Buckingham Palace Road: An Archaeological Assessment' (MoLAS, 1996)

5.3.7 The Tate Britain site is thought to have been located to the south of the focus of activity during this period, within what is latterly referred to a 'Tothill Fields'. This area is likely to have been a relatively marshy, poorly drained, wetland environment – suggested by the name '*Bulinga Fen*' in the above description.

5.3.8 The available evidence does not suggest significant activity within the Tate Britain site and during the early medieval period the site was likely to have been waste or secondary land.

5.4 The Medieval Period (AD 1066 – AD 1536)

5.4.1 London expanded through the latter half of the early medieval and into the medieval period – with settlement re-founded in the City, within the old Roman town walls, and continuing piecemeal expansion to the west, east, north and along the south bank of the Thames.

5.4.2 The precise nature of the area of the Tate Britain site at this time is unknown; however the post-medieval mapping evidence gives us some indication of the extent of the medieval expansion southwards from Westminster and suggests that the site remained undeveloped until at least the early 19th century (see Figures 5 & 6).

5.4.3 The Domesday Book of 1086 indicates the Manor of Westminster Abbey contained sufficient meadow to support 11 teams of oxen – an estimated 250 acres out of Westminster's total of 1000 acres – likely located to the south and west of the main focus of settlement on Thorney Island and surroundings (AOC Archaeology, 1997). The area of the Tate Britain site would have remained with the lands of Westminster Abbey, until the dissolution of the monasteries under Henry VIII in the mid-16th century.

5.4.4 The Tothill Fields area to the south and west of Westminster is thought to have comprised market gardens and occasional settlement along parts of the riverside with the remaining area likely to be waste ground, waterlogged and marshy (Watson, 2002, P.20). Water meadows might have been in existence in these areas closer to the river.

5.4.5 This area likely remained a relatively waterlogged marshy ground, used for a range of fringe activities; excavations at No's. 1 and 17 Elverton Street (c. 500m to the north-west) recorded scores of animal burials, largely horse but including a few dogs, dating to the 11-12th centuries (Miller, 1994: Cowie, 1996 in AOC Archaeology, 1997), whilst it is recorded that Tothill was used for various activities including archery and bull racing (Watson, 2002, P. 20).

5.4.6 The Tate Britain site is located in the south-east of this Tothill area, to the south of the higher, dryer, gravel beds along the Thames bank. There is no evidence of extensive settlement activity in this area during this period and the assessment has identified no archaeological sites, finds or features within the 250m study area.

5.5 The Post-Medieval (AD 1536 – AD 1900) & Modern (AD 1900 – Present) Period

5.5.1 Following the Disillusionment, the lands belong to Westminster Abbey were taken and gradually divided between the crown and various private owners. Henry VIII vacated the Palace of Westminster as a royal residence and moved the court to Whitehall, with the Palace now becoming the seat of government (House of Lords and Commons).

5.5.2 Urban expansion continues in the post-medieval period and by the 1640's Westminster had spread westwards and well south of Great Peter Street and Market Street, with the future Horseferry Road marking the approximate southern extent of expansion at this time.

5.5.3 The area of the Tate Britain site is thought to have remained undeveloped and likely still marshy waterlogged ground. Indeed Tothill Fields is recorded to have been so marshy that it was possible to go duck shooting there as late as the early 1800's (Watson, 2002, P.20), whilst it was still un-developed enough for various fringe and illicit activities and was popular for duellists in the 18th century.

5.5.4 There is evidence of Civil War defences in the area. These were found to the south of Westminster, with the route of a ditch and bank (**AOC 21**) thought to run between the Tate and Vauxhall Bridge to the south of the site. Furthermore, William Stukeley produced a plan of Civil War defences in 1720 (many of which would still have been visible) and placed a large star-fort, or tenaille fort, (**AOC 22**) on approximately the future site of Millbank Penitentiary (See Plate B, below).

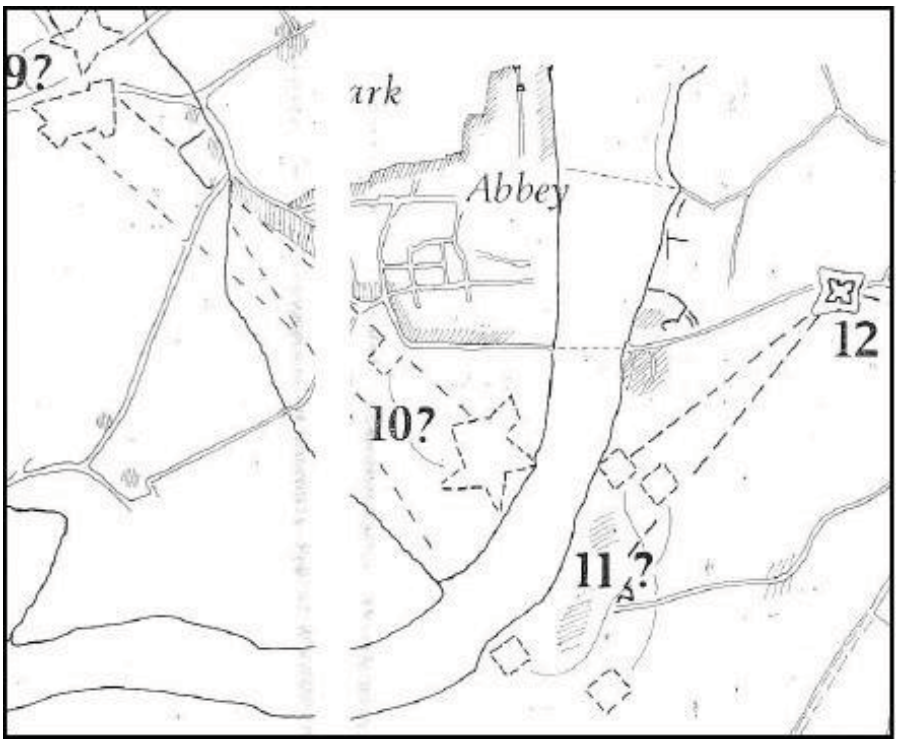

PLATE B: Extract from copy of Stukeley's Plan of Civil War Defences, 1720. Taken from "Corpus Christi College, Cambridge, MS 613"; (reproduced in Study, 1975). The numbers refer to possible fort locations.

5.5.5 The reliability of Stukeley's plan and his placing of the fort can not be guaranteed, with other maps such as Vertues Plan of 1738 (Plate C, below) or Rocque's map of 1746 (Figure 6) showing no trace of Stukeley's fort.

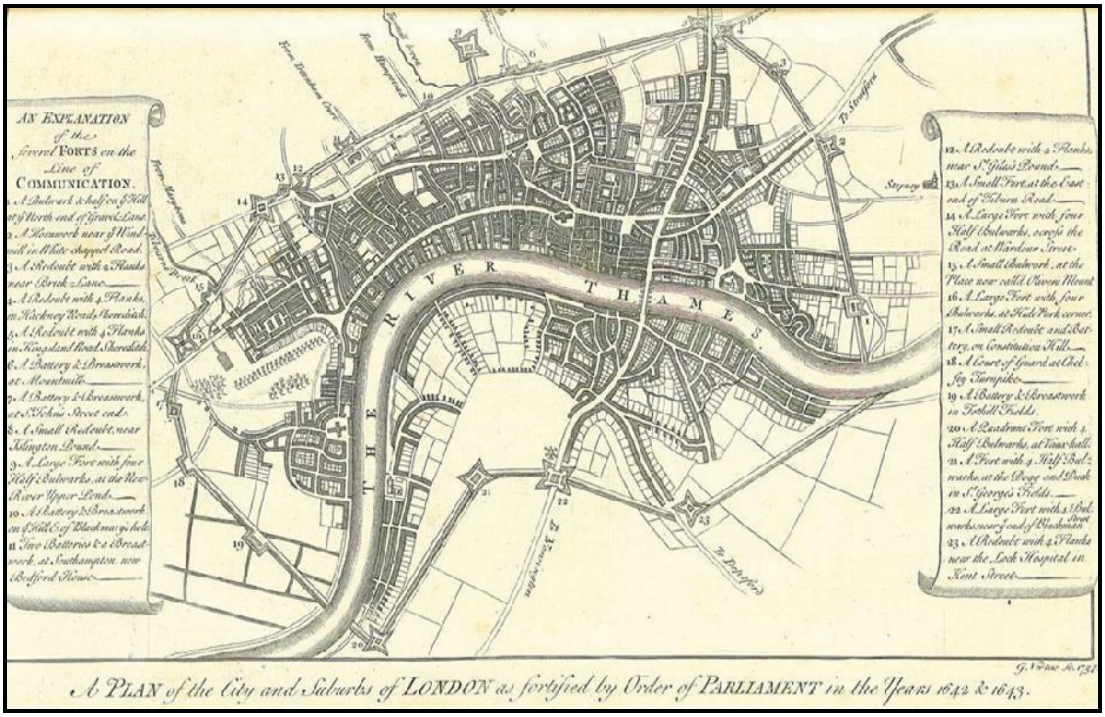

PLATE C: George Vertue's Plan of the Civil War defences of London; 1738 (www.fortified-places.com/london; 2009)

5.5.6 The development of the Millbank area started in the late 17th century with construction of a mansion (Peterborough House), half way between the Tate Britain site and Horseferry Road. This and the land to the west and north of it came into the possession of Sir Thomas Grosvenor in 1732 (AOC Archaeology, 1997).

5.5.7 The area of Millbank takes it name from the road named after Westminster Abbey Mill, which once stood to the north of the Tate Britain site. The Mill was demolished in c. 1736 by Sir Robert Grosvenor to build a large residence; however, it had been documented as early as 1566 (Alan Baxter & Associates. 2008, P.3) and was possibly of medieval origin. Millbank at this time is described as *'a lonely river road leading from Westminster to Chelsea through marshy ground and market gardens*' (Weinreb and Hibbert 1983, P. 534), suggesting little or no significant development in the Tate Britain site at this time.

5.5.8 The area of Millbank to the south of the Grosvenor estates was part of the estates of the Earl of Salisbury, within which the Tate Britain site falls (Figure 5). The assessment has identified little evidence of post-medieval domestic activity within the 250m study area, with one single site of dumped domestic material dating to the 18th and 19th Century (**AOC 23**), recorded to the east of the Tate Britain site. The assessment has identified nine sites of riverside activity, possible structures (**AOC 24 – 32**), recorded during the foreshore survey by London Archaeological Research Facility; however, further details on the date, function and significance of these are not available.

5.5.9 Overall the site appears to have remained undeveloped until the construction of the Millbank Penitentiary, which began in 1812. This extensive building (which was the largest prison in Europe at that time) was based on the 'Panopticon' model and the ideological concepts of Jeremy Bentham, allowing 1, 100 inmates to be housed under constant observation. In 1842 it became a transit point for prisoners being sent to the colonies, though it had been abandoned by 1890 and was demolished to make way for Henry Tate's National Gallery of Art and the London County Council Housing Estate in 1892 (AOC Archaeology, 1997; Alan Baxter & Associates, 2008).

5.5.10 This assessment has identified three archaeological sites relating to Millbank Prison; the site of the penitentiary burial ground (**AOC 34**), adjacent to the west of Tate Britain; remains of Millbank Penitentiary (**AOC 36**) uncovered during archaeological investigations for the Tate Britain Centenary development; and further remains of the Penitentiary (**AOC 35**), at the Chelsea College of Art and Design to the south.

6 ADDITIONAL ARCHAEOLOGICAL AND HISTORICAL RESEARCH

6.1 Millbank Penitentiary – Design and Layout

6.1.1 The original design for the Penitentiary was by William Williams in 1812. It was later adapted by Thomas Hardwick, who began the construction of the prison, but resigned soon after. John Harvey took up the role, but was dismissed in 1815, leaving Robert Smirke to oversee the completion of the project.

6.1.2 Smirke was the first British architect to use load-bearing foundations of lime concrete mixed in measured quantities, and he was certainly among the first to make consistent use of load-bearing cast-iron beams in domestic (as opposed to industrial) architecture (Crook 1965, P. 8: in AOC Archaeology, 2006).

6.1.3 Arthur Griffith's description of Millbank Prison (1875) gives a clear description of the prison's design:

> '*The Penitentiary; as it is still commonly called, looks on London maps like a six-pointed star fort. The central point is the chapel (circular building), with open space around it, covering more than half an acre. A narrow building, three storeys high, forming a hexagon, surrounds the chapel, with which it is connected at three points by covered passages. The chapel and the hexagon create the centre circle from which several bastions of the star-fort radiate. Each of these salients is pentagon in shape, of which six lie at opposite sides of the hexagon. The pentagons are the prisoners' cells, while the inner space in each is about two-thirds of an acre containing airing yards, grouped round a tall central watch-tower. The ends of the pentagon join the hexagons at certain points called junctions. The whole space equals about seven acres and something more than that amount is included between them and the boundary wall, which takes shape of an octagon and beyond which was a moat is now filled up'* (Cieszkowski, 1986, P. 40: in AOC Archaeology, 2006).

6.1.4 Whilst there is sufficient information concerning the internal arrangements of the prison building and facilities, there is a lack of documentary sources detailing what lay between the main prison building and the perimeter wall. Contemporary images of the prison, as shown Plates D & E (below), show several buildings and unidentified features within the area between Pentagon No. 1 and the perimeter wall.

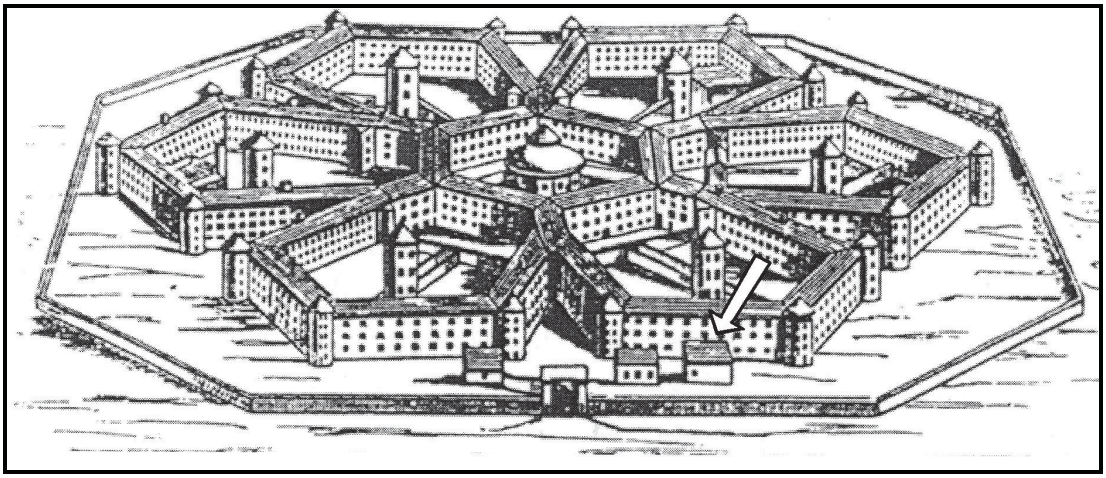

PLATE D: Extract from *'A Birds Eye view of Millbank Prison; Copied from a Model by the Clerk of Works'* (Anonymous and Undated. http://www.ph.ucla.edu/epi/snow/1859map/millbank_prison_a.html)

PLATE E: Extract from the 1st edition Ordnance Survey Plan of 1869, showing approximate area of development site located between Pentagon No. 1 and the perimeter wall

6.1.5 The function of these buildings and features are not currently known. It is thought that they are not part of the Prison's Gatehouse / Lodge, but could be a number of functions ranging from stables, storage buildings to accommodation or offices.

6.2 Summary of the Historical Development of Tate Britain

6.2.1 The full architectural and historic development of Tate Britain is detailed in '*Tate Britain Conservation Management Plan*' (Alan Baxter & Associates, 2008), '*Transforming Tate Britain: Structural Engineering Stage C Scheme Report* (Alan Baxter & Associates, 2009a) and '*Tate Britain: Gazetteer Draft* (Alan Baxter & Associates, 2009b) and is not reproduced here.

6.2.2 The first phase of construction of the Tate Gallery was completed in 1897 and was called the National Gallery. The second phase of works was completed in 1899; both phases were undertaken by Sidney R. J. Smith.

6.2.3 Further development occurred between 1897 and 1899 with the creation of the Portico Entrance, The Rotunda, the Courtyard Areas and the Sculpture Hall. New galleries were constructed on the west side of the site in 1910 (by Romaine Walker) and have different construction trenches to the other front galleries. These are now different, due to alterations during the Centenary Development.

6.2.4 The Tate was closed during the Great War and several galleries were refurbished afterwards. There was further extension along the west side in 1926 (by Romaine Walker), but the majority of it was

demolished for the Centenary Development. However, there is evidence of parts of the gallery roof and external walls surviving.

6.2.5 In 1928, the River Thames rose above the river wall, which caused a part of the embankment to collapse and flood sections of the Tate; repairs were undertaken by the Ministry of Works. Further construction was undertaken in 1937 with the addition of the Duveen Galleries – an adaptation to previous structures – and the Octagon – a completely new structure.

6.2.6 During the Second World War, the Tate Britain site suffered a degree of damage from bombing raids. The gallery itself suffered serious damage on the north-eastern side fronting on to Bulinga Street and general blast damage on the south-west side fronting on to Atterbury Street. The Census Office in the east of the Tate Britain site was damaged beyond repair and cleared following the War, whilst parts of the military college and hospital (in the north of the Tate Britain site) sustained serious damage but were repaired. This is illustrated on the Bomb Damage map on Plate F, below.

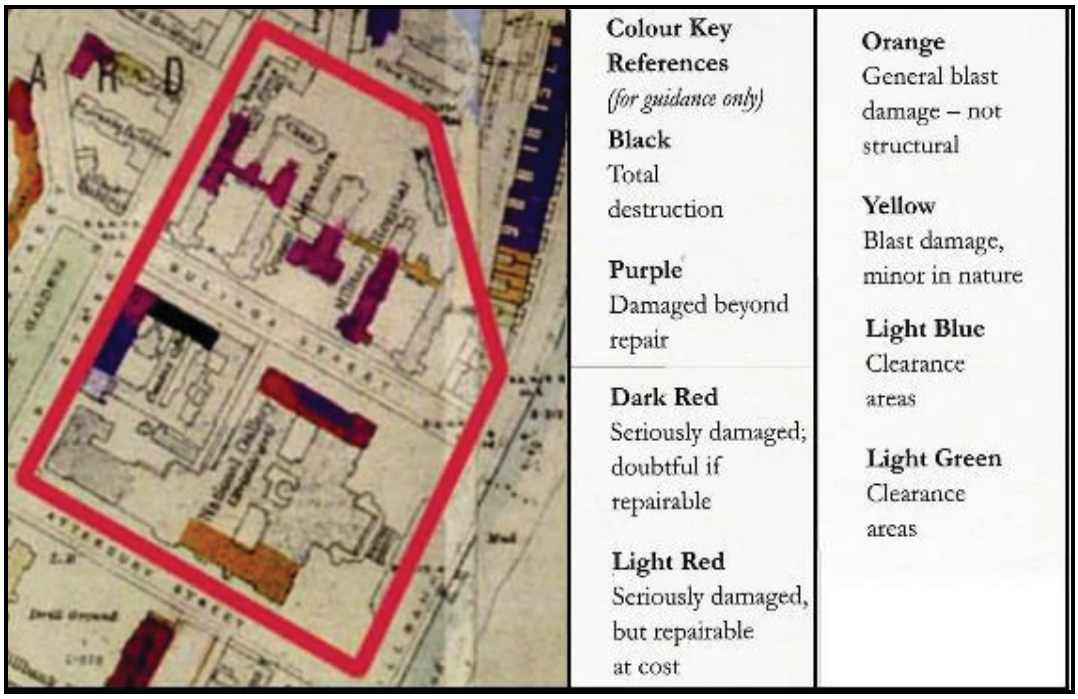

PLATE F: Extract from London County Council Bomb Damage Map

6.2.7 The Ministry of Works constructed a new office accommodation office in 1961 and in 1970, there were three new major additions to the Tate, including a new gallery in the north east quadrant; a new Conservation Tower, situated at the north end of the North Duveen; and, offices constructed over the South Duveen Slip Galleries.

6.2.8 Further alterations were then made in the 1980's and 1990's, with the major Tate Gallery Centenary Development (TGCD) completed in 2001, which comprised new galleries in the north-west quadrant of the site, located in an open area created from the demolition of galleries from the 1910 to 1926 phase.

6.2.9 The area out side the front of the Tate, including the area of proposed external development works, was originally left undeveloped and un-landscaped (apart from that required during the buildings construction), with minimal changes over the years. During WWII these areas were used as

allotments (see Plate G) but returned to their previous state in 1949 (Alan Baxter & Associates, 2008, P.29).

PLATE G: Aerial Photo showing areas of Second World War Allotments within the area of external development works (Alan Baxter & Associates, 2008, P.29).

6.2.10 A Grade II Statue of Sir John Millais (**AOC 66**) was formerly situated within this area, on the edge of the development site but was moved to the corner of Atterbury Street and John Islip Street in 2000 (Alan Baxter & Associates, 2008, P.30). Minor landscaping was undertaken within these areas in the late 1980's and 1990's, and further works in 2001 to create paved areas and paths; however, there is not thought to have been significant ground reductions within the area of external development works (Alan Baxter & Associates, 2008, P.30). The changes in the landscaping are shown on Plate H.

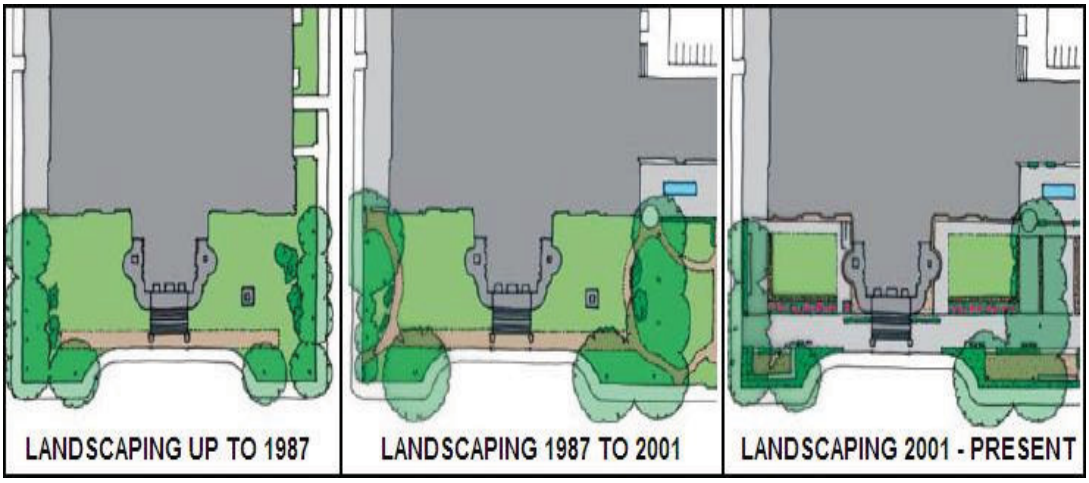

PLATE H: Plans showing landscaping within the Millbank fronting Tate Britain (Alan Baxter & Associates, 2008, P.30).

6.3 Historic Map Regression

6.3.1 The earliest available cartographic evidence clearly detailing the development site date to the mid 18th century with Ordnance Survey maps providing detailed cartography from the later 19th century onwards. Relevant maps for the development site contribute to an understanding of land use and urban growth, providing indicators of what might be located subsurface. The following maps are referenced for the detail and information they provide on the development site.

Grosvenor Estate Map of St. George's Parish, as it was in the Year 1723, Copy of original; 1822 (Figure 5)

6.3.2 The copy of the 18th century Grosvenor Estate map is the earliest available cartographic evidence to show the area of the Tate Britain site in detail.

6.3.3 Due to the early date of the original map, the scaling and accuracy of the map is likely to be imprecise (as compared with later mapping) and the iconography used, stylistic. Whilst, the general location of the Tate Britain site can be ascertained through comparison with later sources, the precise position cannot be identified and that shown is an approximation.

6.3.4 The approximate position of the Tate Britain site lies within a number of fields marked as part of the Earl of Salisbury Estate. Grosvenor House, which is thought to have been built upon the same site as the original Millbank mill, is shown to the north of Salisbury's Estate and Tothill Fields is labelled to the east (as 'Tuthil Fields').

6.3.5 No identifiable features or buildings are marked within the approximate site location and it is possible that the area of the site was agricultural land at this time.

Rocque's Map of London, John Rocque; 1747 (Figure 6)

6.3.6 Rocque's map is of greater detail than the earlier Grosvenor Estate map, though the scaling, accuracy and iconography is still likely to be imprecise (as compared with later mapping).

6.3.7 A similar pattern of field boundaries can be recognised from the earlier map, which suggests the approximate location of the Tate Britain site is still situated within what appears to be open undeveloped land. The enclosed nature of the fields over this area might suggest agricultural use, as compared with the open common land of Tothill Fields to the east, whilst the markings used suggest it is not ploughed at this time, indicating that it was possible under pasture at the time of the survey.

6.3.8 No buildings or features are shown within the approximate site area.

Horwood's Plan of London (1st Edition; 1799 & 3rd Edition; 1813), J. Horwood (Figure 7)

6.3.9 Horwood's survey of London was printed in three editions between 1799 and 1813. The scaling, accuracy and iconography is still likely to be imprecise (as compared with later mapping).

6.3.10 On the third edition of the plan (1813), the extent of the Tate Britain site can be approximately ascertained based upon the octagonal shape of the Millbank Penitentiary which is marked on the map as 'The New Penitentiary'. No buildings are shown within the Penitentiary site (construction began in 1812) and it is not possible to determine if any features / building lie within the Tate Britain site or the area of external development works (development site).

6.3.11 In the surrounding vicinity, the plan shows the beginnings of urban expansion in this area south of Westminster, with new development shown along Horseferry Road to the north, Regent Street has

been constructed to the west, further development, possible market gardens and the route of Vauxhall Bridge are shown to the south.

6.3.12 The Tate Britain site outline can be overlain in the same position on Horwood's earlier 1st Edition (1799) plan (Figure 7 insert), to illustrate the nature of the site at the end of the 18th century. The approximate site location overlies parts of four separate field plots; two of which appear to be arable and the other two under pasture, based on the iconography used. No recognisable buildings or features are shown within this area at this time.

Greenwood's Plan of London, 1824 (Figure 8)

6.3.13 Greenwood's map of London was first produced in 1824. The map shows the plan of the Millbank Penitentiary, within the large octagonal prison site, underlying over three quarters of the Tate Britain site. The scaling and accuracy of the map is not detailed enough to mark on the approximate position of the development site (area of external works).

6.3.14 The mapping shows further urban expansion to the north, east and south of the prison, though the immediate vicinity around the prison walls is still absent of development. The old field pattern shown on Grosvenor's 1723 map can still be recognised, though it is not possible to determine if these areas were still in any form of agricultural use.

Ordnance Survey Map of 1879 – 1882, 1:10,560 Scale (Figure 9)

6.3.15 The earliest used Ordnance Survey map dates from 1879 - 1882. The Milbank Prison is labelled but not shown, though it was still open at this time, and the approximate position of the development site is shown straddling what appears to be the line of the Prison wall.

6.3.16 The map shows the significant urban expansion of the surrounding area since Horwood's 1824 Plan (Figure 8), with new street patterns and development shown to the north, south and west of the site, such as Pimlico to the south / south-west.

Ordnance Survey Map of 1896, 1:2500 Scale (Figure 10)

6.3.17 By the time of the 1896 Ordnance Survey map the prison had been abandon and shut and the plan of the prison buildings are not shown on the mapping (it had been demolished by 1892). The octagonal shape of the prison site is still shown, though the prison wall is only marked along the north-west, west, south-west and southern sides of the prison site – possibly indicating the wall on the other sides had been removed by this point.

6.3.18 No identifiable buildings or features can be recognised within the Tate Britain site outline.

6.3.19 The 1:2,500 Scale mapping is of greater detail than the 1879 – 1882 OS map (Figure 9) and the nature of the urban area around the prison site can be recognised as a mix of terraced development (probably residential and / or light commercial) mixed with various industrial sites such as Gasometers to the west and yards, mills and wharfs to the north, closer to the river.

Ordnance Survey Map of 1916, 1:2500 Scale (Figure 11)

6.3.20 Millbank Prison was demolished by 1892 and gradually replaced by a new layout of streets and buildings comprising the new London County Council Millbank Estate in the west of the prison site, the Royal Army Medical College and Millbank Barracks in the south, Queen Alexander Military Hospital in the north and the new Tate Gallery in the east and central areas. The large octagon-shaped boundary of the prison site is still evident in the street pattern.

6.3.21 The map shows the Tate Britain site comprising the Tate Gallery and National Census Offices In the southern half of the site and the Queen Alexandra Military Hospital in the north; separated by Bulinga Street running north-west to south-east through the middle (probably named after Bulinga Fen – see Section 5.3)

6.3.22 The development site can be marked adjacent the Tate Gallery building on the east. No features are marked in this area apart from a statue on the eastern edge of this area; likely to be the Grade II statue of Sir John Millais (**AOC 66**), erected in 1905 and moved to a new location in 2000.

6.3.23 The surrounding area around the Tate site is largely unchanged from that shown on the 1896 OS map (Figure 10).

Ordnance Survey Map of 1951, 1:2,500 Scale (Figure 12)

6.3.24 The 1951 OS map shows little change within the Tate Britain site apart from the expansion of the western side of the gallery, including demolition of the Census Office buildings in this area, and some minor alterations / building work in the Military Hospital site in the north. The remainder of the Tate Britain site remains unchanged and the development is still absent of any recognisable form of development (apart from the Millais statue).

6.3.25 The surrounding area also appears to have remained largely unchanged, though there has been a degree of redevelopment to the north of the Tate Britain site (e.g. Millbank Tower) and on the western side of the Millbank Estate.

Ordnance Survey Map of 1973, 1:1,250 Scale (Figure 13)

6.3.26 The Tate Britain site has remained unchanged apart from some further building work amongst the Military Hospital in the north and some further small extensions to the Tate Gallery. The development site itself is unchanged.

6.3.27 The mapping shows further redevelopment of the surrounding area, such as to the north of the site. The remaining surrounding vicinity appears largely unchanged

Ordnance Survey Map of 1991, 1:1250 Scale (Figure 14)

6.3.28 By 1991, the Tate Gallery has had further expansion on the west and northern sides of the building, Bullinga Road has been removed and the area now part of the staff car park, whilst the Military Hospital site is no longer labelled; the hospital closed in 1977, was transferred to the Department of the Environment between 1979 and 1984 before becoming under the ownership of the Tate Trustees (Alan Baxter & Associates, 2008, P.59)

6.3.29 The development site itself is unchanged and the surrounding area has remained largely unchanged apart from minor alteration and piecemeal infilling development (e.g. on the site of the Royal Army Medical College to the south).

Ordnance Survey Map of 2009, 1:10,000 Scale (Figure 15)

6.3.30 The 1:10,00 Scale OS map is not detailed enough to identify specific qualities of the Tate Britain site; however, it does give some indication of the significantly urbanised nature of the surrounding area and the changes that have occurred since the earliest Ordnance Survey (see Figure 9)

6.3.31 The Tate Britain site appears as it does currently. The development site itself is absent of development.

6.4 Previous Archaeological Investigations

6.4.1 AOC Archaeology has undertaken two previous archaeological investigations within, or within the immediate vicinity, of the Tate Britain Site.

Archaeological Evaluation Report: The Tate Gallery, Millbank, London, SW1, City Of Westminster: Centenary Development (AOC Archaeology, 1998,)

6.4.2 AOC Archaeology undertook monitoring of 32 geotechnical testpits within the Tate Gallery grounds (**AOC 36**). The archaeological works encountered extensive structural remains associated with the former Millbank Penitentiary.

6.4.3 These remains extended between 3.33m OD and -1.71m OD and consisted primarily of brick foundation walls built on substantial concrete foundation slabs; interpreted as the remains of parts of Pentagon No's. 1, 5 and 6 and part of the central Hexagon of the prison building.

6.4.4 Naturally deposited alluvial material was encountered as high as 0.51 metres OD and consisted of stratified clays, silts and sands. The archaeological works noted that both the prison and the Tate foundations have truncated and cut through the underlying peats and alluvial deposits over a large area of the Centenary site, although it was stated that deposits of this kind still remain as 'islands' between the foundations.

6.4.5 Carbon ^{14} analysis of these peat deposits indicate that they are of prehistoric date, whilst the presence of charcoal in this material could be indicative of human activity in the vicinity of the site in late Neolithic / early Bronze Age; although no features or artefacts of these dates were encountered.

The Chelsea School of Art and Design, Westminster: An Archaeological Watching Brief Report (AOC Archaeology, 2002)

6.4.6 Archaeological observations (**AOC 35**) made during geotechnical investigations at the former Royal Army Medical College, on Atterbury Street, in the City of Westminster, revealed extensive remains of the Millbank Penitentiary.

6.4.7 These remains comprised red brick walls and floors supported on 'ring beam' type foundations of massed concrete and were interpreted as the foundations and below ground rooms / cells of Pentagon No. 5 and 6 of the prison. The remains survived from 0.75m below the current ground surface to a depth of 6.20m.

6.4.8 Based upon the evidence recorded, the original prison ground level immediately outside the Pentagons was determined to be approximately 4.12m OD, falling towards the perimeter wall.

6.4.9 Beyond the edges of the structure the alluvial sequence seen was similar to that seen elsewhere on this part of the Thames. These deposits likely extend across this and the Tate Britain site and have been dated to the Neolithic / Bronze Age.

6.5 Previous Geotechnical Investigations

6.5.1 Geotechnical site investigations were undertaken on the 23rd and 24th July 2008 comprising three boreholes advanced by drive-in sampler techniques, two locate within the Tate (WS1 and WS3) and the third (WS2) within the north-eastern corner of the area of external groundworks. The investigations did not comprise a comprehensive assessment of the below ground conditions across the site.

6.5.2 The investigations encountered a variable thickness of made ground, comprising dark brown clayey sandy gravel of brick, concrete and flint, ranging from *c.* 2.8 to 4.3m. The base of the made ground

was not encountered in WS3, which could not be extended beyond 4.5m. Within the area of external groundworks, the borehole encountered made ground to a depth of 2.60m with *'occasional medium gravel sized pockets of light brown peat'* (Specialist Engineering, Materials and Environmental Consultants 2008, 19). Full borehole logs are presented in Appendix B.

6.5.1 Further geotechnical trial pits were carried out by Tate's Term Contractor (Spie Mathew Hall) and recorded by Alan Baxter & Associates LLP in June 2009. Trial Pit 21 was excavated within the Tate Gallery and concrete hardcore was encountered at a depth of 1450mm below the lower level. This was interpreted (by the geotechnical engineers) as potentially being remains associated with the Millbank Penitentiary.

6.5.2 Further trial pits within the internal space of the Tate Gallery have not yet encountered any further potential remains.

6.6 Site Visit

6.6.1 A visit of the site was undertaken by Edmund Simonds, AOC Archaeology's National Head of Built Heritage, on Monday 6th March 2009.

6.6.2 The site visit comprised a brief assessment of proposed internal alterations and site walk-over of the area of external development works, to gain a greater understanding of existing land use and the potential for archaeological and / or heritage constraints.

Internal

6.6.3 A detailed assessment of the current nature, extent and state of the internal features, their history and age and their quality and significance has already been established in detail by Alan Baxter and Associates (Alan Baxter & Associates 2008, 2009a & 2009b) and is not reproduced here. However, a general overview as well as observations and recommendations have been produced, which should be read in conjunction with the Conservation Management Plan (Alan Baxter & Associates 2008) and associated documents.

6.6.4 The proposed internal alterations are centred on the south-east quadrant of the Gallery, which includes Sidney Smith's original block of 1897 as well as the slightly later addition of 1899. The work will also impact on the central galleries of 1937 and the Clore building of 1983-7.

6.6.5 The Ground Level area is used partly for staff offices / service rooms and plant and partly as the visitor cafeteria. The cafeteria is a low vaulted space surrounded by brick arches and devoid of natural light. Despite being architecturally unprepossessing the basement was vital to the functioning and day to day running of the gallery in the 19th and 20th centuries.

6.6.6 The Principal Level is the main gallery space, which is accessed from the main hallway with its glass rotunda above. The new stair will rise into the centre of this room. A new circular stair will be inserted in the space now occupied by a 20th century conventional stair in the south-east side of the inner narthex of the hall. Work in the exo-narthex will be limited to improvements to the doors. The galleries are mostly lit by glazed lantern roofs, many of which have been altered since the 19th century and no longer provide adequate light or ventilation.

6.6.7 The Upper Level will be opened to the general public for the first time since the 1960's, this will allow acess to the ambulatory of the rotunda and the former offices above the eco-natrthex. The offices will have internal walls removed, which will result in the loss of some historic doors and other fixtures. Improvement of services and plant on the north east galleries will result in the slight raising of the roof and alterations to drainage and rainwater goods.

External

6.6.8 The area of external development works is currently an open expanse of grass with paving surround, of approximate 800sqm in size. There are no indefinable above ground features of potential cultural heritage value noted during the site walk over and the area is relatively flat.

6.6.9 Recent landscaping works to the immediate north of this area reduced the ground level and exposed the brick footings of the adjacent gallery building. The reductions in this area are c.0.20 – 0.30m higher than required in the area sunken access to the café.


PLATES I & J: View of the area of external development works from the north (left) and north-eat (right)


PLATE K & L: View showing the area of previous ground reductions to the north of the proposed area of external development (left) and view showing exposed brick footings of the Tate building and the difference in height between the two areas.

7 ASSESSMENT OF EVIDENCE

7.1 Identified Cultural Heritage Features

7.1.1 The Tate Britain site overlies part of the 19th century Millbank Penitentiary site. The main prison building has been identified during previous archaeological investigations on the Chelsea School of Art and Design site (**AOC 35**) and the Tate Gallery Centenary development site (**AOC 36**).

7.1.2 During these previous investigations alluvial and peat deposits were encountered. These deposits have been dated to the late Neolithic / early Bronze Age.

7.2 Past Impacts Within the Site Boundary

7.2.1 The available evidence has been assessed to attempt to determine the nature and extent of any previous impacts upon any below ground archaeological deposits that may survive within the bounds of the development site.

7.2.2 The cartographic sources suggest the site was undeveloped until the construction of the Millbank Penitentiary in the early 19th Century. Prior to this, the Tate site appears to have been within an area of undeveloped land, which the geological and historical sources suggest was likely to be particular marshy and therefore possibly waste ground. The enclosing of fields as shown on the earliest cartographic evidence suggests these areas were later likely used as agricultural land.

7.2.3 Millbank Penitentiary is likely to have had a significant impact upon the below ground deposits. The building was vary large, described by one prison historian '*hidden amongst its hundreds of cells, its length of corridor and passage, beneath its acres of roof, are, without exaggeration, miles of lead piping, hundreds of tons of iron, immense iron girders, gates in dozens, - some of wrought iron, some of cast - flagstones without end, shiploads of timber, millions of bricks. If ever the old place comes to be pulled down, the anxious enquirer may perhaps understand why it was that it cost half a million of money*' (Cieskowski, 1986: 39-40 in AOC Archaeology, 2006).

7.2.4 The past impact of the main prison buildings and any associated ground works is likely to be significant, with the remains encountered upon the Chelsea School of Art and Design site (**AOC 35**) surviving to a depth of 6.20m below current ground surface. However, it was further noted during the Tate Centenary works that underlying peats and alluvial deposits still remain as 'islands' between the foundations (AOC Archaeology, 1998).

7.2.5 The suppositional position of the Millbank Penitentiary (based on cartographic evidence and results of AOC Archaeology's previous investigations) has been overlain upon a plan of the current Tate Britain gallery showing the area of external development works (Figure 16). This suggests the development site lies outside the main Prison buildings. However, a recent trial pit (Trial Pit 21) encountered concrete under brick corbel at a depth of 1450mm below the lower level of the Tate, which may be the top of the Penitentiary footings (Alan Baxter & Associates: drawing 1504/01/1102).

7.2.6 The available cartographic evidence showing the prison is not accurate enough to determine if the development site lies between the main prison building and the outer wall, or straddles the penitentiary wall, as is shown on the 1:10,000 Scale 1879 – 1882 OS map. If lying within the wall the site may overlie the position of several buildings shown on contemporary images of the prison, as shown in Plates D & E, above. The function of these buildings is not currently known.

7.2.7 The Tate Britain site is likely to have been impacted by the demolition of the prison in the late 19th century, which was demolished to below ground level, and the later construction of the Tate gallery with its various extensions and alterations over the last 112 years.

7.2.8 The Conservation Management Plan (Alan Baxter & Associates, 2008) states that the rubble from the prison was used to level the site and the alluvial deposits are overlain by between 1.5m to 6m of made ground (Alan Baxter & Associates, 2008, P.4). The external development site lies adjacent the eldest part of the Tate gallery and may have been impacted either though ground reductions or land build up during construction works.

7.2.9 A geotechnical borehole investigation in the north-east corner of the area of external development works encountered made ground to a depth of 2.60m below ground level (see Appendix B), however this is the only investigation recorded and the full extent of made ground deposits across this area is currently not known.

7.3 Assessment of Archaeological Potential

7.3.1 The available evidence suggests the wider landscape around this area of Westminster has seen a degree of prehistoric activity and land utilisation. Carbon dating evidence of peat deposits encountered during the Tate Centenary development indicated a prehistoric date and the presence of charcoal in the material could be indicative of human activity in the wider area of the Tate Britain site during the late Neolithic / early Bronze Age (AOC Archaeology, 2006). However, at the time of writing, there is no evidence to suggest *significant* prehistoric activity (e.g. settlement, industrial or ritual sites) within the Tate Britain or the development site itself.

7.3.2 During the Roman, early medieval and medieval periods, the Tate Britain site is likely to have been situated in low lying, relatively waterlogged or marshy ground. Whilst the land could possibly have been unlisted for agricultural purposes, it is unlikely that it would have been suitable of permanent habitation.

7.3.3 The available evidence suggests a definite degree of human activity and utilisation of the wider landscape during these periods, and the presence of Roman material found within the vicinity of the Millbank Penitentiary site (e.g. **AOC 18 & 19**) could suggest nearby Roman activity. However, at the time of writing, there is no evidence to suggest *significant* human activity within the Tate Britain area or the development site itself during these periods.

7.3.4 It is thought the area around the Tate Britain site retained its undeveloped, marshy nature through the early post-medieval period and it is not until the latter half of this period that that market gardens and settlement activity appears along the Thames waterfront in this area south of Westminster. It is possible that the Tate Britain site was part of Westminster's agricultural hinterland at this time and the cartographic evidence shows no identifiable features or buildings within the site until the construction of the Millbank Penitentiary in the early 19th century.

7.3.5 18th century mapping evidence suggests a possible location of a Civil War fort situated over the area of the Millbank Penitentiary site (see plates B & C). No evidence of this has been encountered during previous investigations.

7.3.6 Previous archaeological investigations have shown a varied degree of survival of the prison remains. For example at the Chelsea School of Art and Design site (**AOC 35**) the areas of greatest survival were shown to be the corner towers, whilst the poorest survival appeared to be the long stretches of straight wall; in places these entirely missing and only the foundation slab remained (AOC Archaeology, 2002). Conversely, the remains encountered during the Centenary development (**AOC 36**) were found to be relatively well preserved with the need of pneumatic hammer in the removal of the concrete foundations (AOC Archaeology, 1998).

7.3.7 The previous archaeological works at the Tate Britain site suggest that groundworks within the footprint of the main prison building are likely to encounter remains; with the shallowest remains previously recorded at 3.33m AOD. The position of the development site is believed to be outside of the main prison building; however, remains may still be encountered of the unidentified buildings, as shown on Plate D & E, or the prison wall (depending on the extent of modern made ground) – though the foundations of these structures may not be as extensive or deep as the main prison building.

7.3.8 Therefore, based on the available evidence there is considered to be a Low Potential for evidence of *significant archaeological activity* dating from the Prehistoric to early-post-medieval periods.

7.3.9 Evidence that may be encountered may comprise environmental evidence preserved in potential alluvial deposits dating from all periods and possible Neolithic / Bronze Age environmental evidence from potential preserved peat deposits. If encountered, evidence of this nature is likely to be of Local Importance at most, in line with the criteria set out in Section 2.

7.3.10 Based on the available archaeological evidence, there is further considered to be a Medium to High Potential for significant below ground archaeological evidence dating to the late post-medieval period, likely related to the site of Millbank Penitentiary (depending on the extent of modern made ground). This evidence may comprise remains of building foundations or deposits associated with the outer yard area of the prison.

7.3.11 If present, such remains are likely to be of between Local - Regional Significance at most, depending on the nature and survival of the remains uncovered, in line with the criteria set out in Section 2.

8 DEVELOPMENT PROPOSAL & ASSESSMENT OF IMPACTS

8.1 Development Proposal

8.1.1 The proposed development works comprises a number of internal alterations and an area of external groundworks.

Internal Alterations

8.1.2 The internal alterations will be centred around the south-east quadrant of the gallery which includes the original block of 1897 and 1899 later addition, as well as impacting on the central galleries of 1937 date and the Clore Building of 1983-7.

8.1.3 The nature and extent of internal alterations are explained and detailed in full in 'Tate Britain Conservation Management Plan' (July 2008), 'Transforming Tate Britain: Structural Engineering Report For Planning (January 2010) and 'Tate Britain: Gazetteer Draft (May 2009) produced by Alan Baxter and Associates. The internal alterations can be summarised as follows:

- The opening up of a blocked arch in the rear of the round room to the west of the cafeteria on the Tate's Ground Level, and the insertion of a spiral staircase which will rise to the centre of the circular hall above. The work will also see improvements to services and the creation of a new cafeteria in the north-eastern part of the Lower Level requiring opening up several blocked archways, the removal of existing walls and extending of existing arched windows in the cafeteria downwards to become doorway.
- The Principal Level alterations will comprise the installation of the new stair rising from the Lower Level, the insertion of a new circular stair in the space now occupied by a 20th century conventional stair and improvements to the existing doors. Work on the galleries will include the removal of a number of partition walls and improvement to services and environmental control.
- The Upper Level will be opened to the general public for the first time since the 1960's.
- The offices on this level will have internal walls removed and improvement of services and plant on the north east galleries.

Internal Groundworks

8.1.4 The internal alterations will also include groundworks comprising the excavation of approximately 3m of deposits in the area of the new lift pit (see Alan Baxter & Associates: drawing 1504/01/1101 and 1504/01/1102), approximately 1m of deposits for a new service trench and below ground deposits excavated to the level of natural gravel (*c.* 4m) for a new pad footing below the area of the Rotunda.

External Groundworks

8.1.5 The external groundworks, located in the area to the east of the main Millbank entrance to the Gallery, comprise landscaping to create sunken access to the café area located on the Lower Level of the Gallery. The current development scheme proposes the retention of the existing lawn area and the removal of c.1000mm of material in the area immediately around the café and schools reception doors, in order to lower ground level of this area down to the same height as the adjacent café, to provide sunken access (Figure 17).).

8.1.6 Temporary café tables may be placed in this sunken area to provide an outdoor café area. A densely planted flower bed, approximately 1500mm wide, is planned between the lawn and sunken area to guard the 1000mm drop. Hand rails will also surround this area to guard the drop.

8.1.7 The current designs include the demolition of the existing circular steps in the north-west of this area to make way for a new ramp to provide disabled access to the café and schools reception, while the existing granite ramp in the south-east corner of this area will be removed and replaced with new steps. The existing paving will then be extended to meet these.

8.2 Forms of Heritage Impact

8.2.1 An archaeological resource can be affected by development in a number of ways: the removal of material during works; the destruction to sensitive deposits caused by heavy plant; and the alteration of stable ground conditions that may lead to degradation of the quality and survival of archaeological remains.

8.2.2 Equally, the built heritage can be affected by development, typically in the form of possible demolition or loss of part of a structure or its grounds; increased visual intrusion; effects from noise or vibration; changes in the original landscape; severance from linked features (gardens or outbuildings etc.); or through the loss of an amenity.

8.2.3 The Scale of Importance (the Cultural Heritage Value of the site) was assessed in line with the methodology shown in Section 2. Based upon this value a determination as to the Significance of Impact upon the Cultural Heritage Resource of the application site was given.

8.3 Impacts of Proposed Development

External Groundworks

8.3.1 Although a geotechnical borehole investigation has recorded 'made ground' to a depth of 2.60m in the north-east corner of the area of external development works (see Appendix B); the full nature and extent of the existing below ground deposits this area, including the extent of potentially historical made ground and likely nature of potential archaeological remains and deposits, is unknown.

8.3.2 Previous archaeological investigations have shown that the Tate Britain site may contain areas of preserved alluvial and possible peat deposits and a potential for surviving remains from the Millbank Penitentiary site. Whilst remains of the Penitentiary buildings have previously been encountered at depths from 3.33m AOD, the alluvial deposits were previously encountered from a lower depth of 0.51 AOD.

8.3.3 With this in mind, it can be stated that the required groundworks for the sunken access to the adjacent café area extending to a depth of c. 3.15m AOD may potentially constitute a between a Low and Medium Magnitude of Impact upon possible preserved archaeological evidence relating to Millbank Penitentiary.

8.3.4 The Magnitude of Impact will be determined by the nature and extent of the potential archaeological deposits in these areas which, if significant remains of the penitentiary are encountered, are considered to be of Local to Regional Importance, at most.

Internal Alterations

8.3.5 The internal alterations will entail intervention into the historic fabric of the building.

8.3.6 The architectural and historical significance of the different phases of the Tate have been assessed as part of the Conservation Management Plan (Alan Baxter & Associates, 2008). The levels of significance stated in the Conservation Management Plan (CMP) have been internally reviewed by

Edmund Simons, AOC Archaeology's National Head of Built Heritage, and are used within this assessment. The significance of the building's phases can be summarised as follows:

- The original 1897-9 phases are of high significance;
- The 1910 and 1926 upper Duveen galleries are of high significance;
- The 1937 Duveen sculpture gallery is of high significance;
- The 1979 Llewelyn-Davies quadrant and conservation is of medium to low significance;
- The 1987 Clore Gallery is of high significance; and
- The 2001 Centenary Development is of medium significance.

8.3.7 The Tate Britain: Gazetteer Draft (Alan Baxter & Associates, 2009b) compliments the CMP and gives further detailed assessment of the significance of walls, floors and ceilings and architectural features within each area of the Tate. These documents should be read in conjunction with this assessment.

8.3.8 The Magnitude of Impact from the internal works will vary depending on the size and extent of the alteration or removal required for each individual feature or area. In many cases this can not be quantified until modern alterations and modifications are removed and the nature and state of original or significant features can be fully assessed.

8.3.9 However, in line with the criteria set out in Section 2, it can be stated that that:

- Where impacts fundamentally change the baseline condition of identified original or significant features, leading to total or considerable alteration of character, this will likely constitute a High Magnitude of Impact;
- Where impacts change the baseline condition of identified original or significant features materially but not entirely, leading to partial alteration of character, will likely constitute a Medium Magnitude of Impact;
- Where detectable impacts alter the baseline condition of identified original or significant features to a small degree will likely constitute a Low Magnitude of Impact; and
- Where barely distinguishable adverse change from baseline conditions of identified original or significant features occur, this will likely constitute a Negligible Magnitude of Impact

Internal Groundworks

8.3.10 Previous archaeological investigations have shown that the Tate Britain site may contain areas of preserved alluvial and possible peat deposits and a potential for surviving remains from the Millbank Penitentiary site.

8.3.11 The alluvial deposits were previously encountered from a depth of 0.51 aOD. Remains of the Penitentiary buildings have previously been encountered at a shallower depth from 3.33m aOD and possible remains were encountered during the recent geotechnical trial pit investigations at a depth of 1450mm below the lower level.

8.3.12 Consultation with Paul Ragsdale of Alan Baxter Associates (*pers. comm.* 20-11-09) indicted the groundworks for the proposed service trench are not expect to extend below the depth of the potential Penitentiary remains encountered in the trial pitting. Excavations for the lift pit and beneath the rotunda will extend below this level.

8.3.13 The concrete encountered in the trial pitting may relate to the concrete base of the Penitentiary, which was retained and reused for the construction of the original Tate. As this is just the base of the Penitentiary levels, there may be archaeological evidence above this; though there is likely to have been a degree of truncation from the subsequent redevelopment.

8.3.14 Therefore, it is considered that required internal groundworks extending between *c.* 1m – 4m in depth are considered to potentially constitute between a Low and Medium Magnitude of Impact upon possible preserved archaeological evidence relating to Millbank Penitentiary.

8.3.15 The Magnitude of Impact will be determined by the nature and extent of the potential archaeological deposits in these areas (which, if significant remains of the penitentiary are encountered, are considered to be of Local to Regional Importance, at most) and the nature of past impacts.

8.4 Significance of Effects

External Groundworks

8.4.1 In-line with the methodology set out in Section 2 and, based upon professional judgment, it is considered that, where development extends below the depth of the modern made ground within the boundaries of the development site (area of external groundworks), it will potentially constitute a Minor Adverse Effect upon any potential below ground archaeological evidence, dating from prehistoric to early post-medieval periods and a Minor to Moderate Adverse Effect upon potential below ground archaeological evidence, dating to the late post-medieval period.

Internal Alterations

8.4.2 Significance of areas or individual internal features has been assessed as part of the CMP and Gazetteer Draft (Alan Baxter & Associates). Please refer to these documents.

Internal Groundworks

8.4.3 In line with the methodology set out in Section 2 and, based upon professional judgment, it is considered that, where development extends below the depth of the modern made ground within the Tate (area of internal groundworks), it will potentially constitute a Minor Adverse Effect upon any potential below ground archaeological evidence, dating from prehistoric to early post-medieval periods and a Minor to Moderate Adverse Effect upon potential below ground archaeological evidence, dating to the late post-medieval period.

9 FURTHER WORK AND / OR MITIGATION

9.1 Further works / Mitigations

Groundworks

9.1.1 Tate commits to carrying out a programme of mitigation works for this scheme based on AOC Archaeology's recommendations, and subject to review and approval from Diane Abrams of the Greater London Archaeology Advisory Service; archaeological advisors to Westminster City Council.

9.1.2 Due to the unknown nature of the below ground deposits and the unknown extent and quality of potential archaeological remains within the area of external development; a programme archaeological works will be undertaken to assess and record any potential archaeological remains or deposits encountered during groundworks.

9.1.3 Due to the relatively small size of the areas being subject to groundworks, and logistics of the internal groundworks, it is felt the most effective form of mitigation would be a programme of archaeological monitoring / watching brief to be undertaken during ground reductions across these areas, with sufficient time allowed for the identification and recording of any archaeological remains encountered, if present.

9.1.4 The required groundworks (both internal and external) will expose the lower footings of the Tate gallery and, as part of this watching brief, any areas exposed will be recorded during the archaeological works.

9.1.5 If required, the watching brief could be complimented by the archaeological monitoring of any future geotechnical trial pits which are planned on extending below the level of the potential Penitentiary remains encountered in previous investigations. This could be used to assess the nature and provenance of this potential evidence and aid in the development of an appropriate mitigation strategy.

Internal Alterations

9.1.6 With regards to the internal built heritage alterations, Tate commits to undertake historic building / archaeological investigation and recording of any areas that are to undergo alteration. Fixtures such as doors and door frames should be recorded prior to any work being carried out.

9.1.7 Within the galleries on the Principal Level, the detail and decoration has been much altered and features relating to earlier schemes and configurations are likely to remain hidden within the historic fabric. Paint sampling and analysis is to be carried out and will reveal much about earlier schemes. Archaeological recording, additional historical research and analytical work is likely to allow a greater understanding of how the galleries have been developed and changed to suit changing tastes and display needs.

9.1.8 This form of work could be satisfied though a historic building recording 'watching brief' undertaken during works, with time allowed for the recording of any identified built heritage features exposed.

9.2 Residual Effects

9.2.1 It is considered likely that implementation of any required mitigation strategy, as agreed with the Greater London Archaeology Advisory Service, should ensure that adverse effects upon the below ground archaeology and built heritage are generally restricted in scope by one; with, for example, Minor Adverse Effects being reduced to a Negligible effect.

10 CONCLUSION

10.1 Project Summary

10.1.1 Drivers Jonas LLP, on behalf of the Board of Trustees of the Tate Gallery have commissioned AOC Archaeology Group to produced an Archaeological Desk-Based Assessment (DBA) of the works to the South-east Quadrant of Tate Britain, located in the City of Westminster: National Grid Reference **TQ 301 785**.

10.1.2 The proposed development works comprises a number of internal alterations centred on the south-east quadrant of the gallery and an area of external groundworks located to the east of the main Millbank entrance to the gallery.

10.1.3 The Tate Britain Site is located within the Millbank Conservation Area (**AOC 71**), as defined in the City of Westminster Unitary Development Plan. The area of external groundworks does not lie inside, adjacent to, or within 250m of any identified designated Areas or Sites of Archaeological Priority / Importance, Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields or World Heritage Sites.

10.1.4 The assessment has identified a total twenty-eight Statutory Listed Buildings within the 250m study radius; Tate Britain itself (**AOC 46**) is Grade II* Listed.

10.1.5 The assessment has identified no known or previously identified below ground cultural heritage features within the *area of external groundworks.* The Tate Britain site does, however, overlie part of the 19th century Millbank Penitentiary site, identified during the Tate Gallery Centenary development, which likely extends across this area. During these previous investigations, archaeologically important alluvial and peat deposits were also been encountered, dated to the late Neolithic / early Bronze Age.

10.1.6 The cartographic sources suggest the Tate Britain site likely remained undeveloped until the construction of the Millbank Penitentiary in the late 19th century. The prison was demolished in 1892 with the Tate Gallery constructed in the southern half of the [Tate Britain] site and the Queen Alexander Military Hospital in the north.

10.2 Potential & Impacts

10.2.1 Based on the available evidence there is considered to be a:

- Low Potential for evidence of *significant archaeological activity* dating from the Prehistoric to early-post-medieval periods.
- Medium to High Potential for significant below ground archaeological evidence dating to the late post-medieval likely related to the site of Millbank Penitentiary (depending on the extent of modern made ground).

10.2.2 If present, such remains are likely to be of between Local - Regional Significance at most, depending on the nature and survival of the remains uncovered, in line with the criteria set out in Section 2.

10.2.3 In-line with the methodology set out in Section 2 and, based upon professional judgment, it is considered that, where development extends below the depth of the modern made ground within the boundaries of the development site (area of internal and external groundworks), it will potentially constitute a Minor Adverse Effect upon any potential below ground archaeological evidence, dating from prehistoric to early post-medieval periods and a Minor to Moderate Adverse Effect upon potential below ground archaeological evidence, dating to the late post-medieval period.

10.3 Recommendations

10.3.1 Tate commits to carrying out a programme of mitigation works for this scheme based on AOC Archaeology's recommendations, and subject to review and approval from Diane Abrams of the Greater London Archaeology Advisory Service; archaeological advisors to Westminster City Council.

10.3.2 Such works are likely to include an archaeological monitoring / watching brief undertaken during ground reductions across the area of groundworks (internal / external), with sufficient time allowed for the identification and recording of any archaeological remains encountered, if present.

10.3.3 The required groundworks will likely expose the lower footings of the Tate gallery and, as part of this watching brief, any areas exposed will be recorded during the archaeological works.

10.3.4 With regards to the internal built heritage, Tate commits to undertake archaeological investigation and recording of any areas that are to undergo alteration. This form of work could be satisfied though a Historic Building Recording 'watching brief' undertaken during works, with time allowed for the recording of any identified built heritage features exposed.

10.3.5 It is considered likely that implementation of any required mitigation strategy, as agreed with the Greater London Archaeology Advisory Service, should ensure that adverse effects upon the below ground archaeology and built heritage are generally restricted in scope by one; with the likely Minor Adverse Effect upon any potential prehistoric to early post-medieval below ground archaeological evidence reduced to a Negligible Adverse Effect and the likely Minor to Moderate Adverse Effect upon potential late post-medieval below ground archaeological evidence reduced to a Negligible to Minor Adverse Effect.

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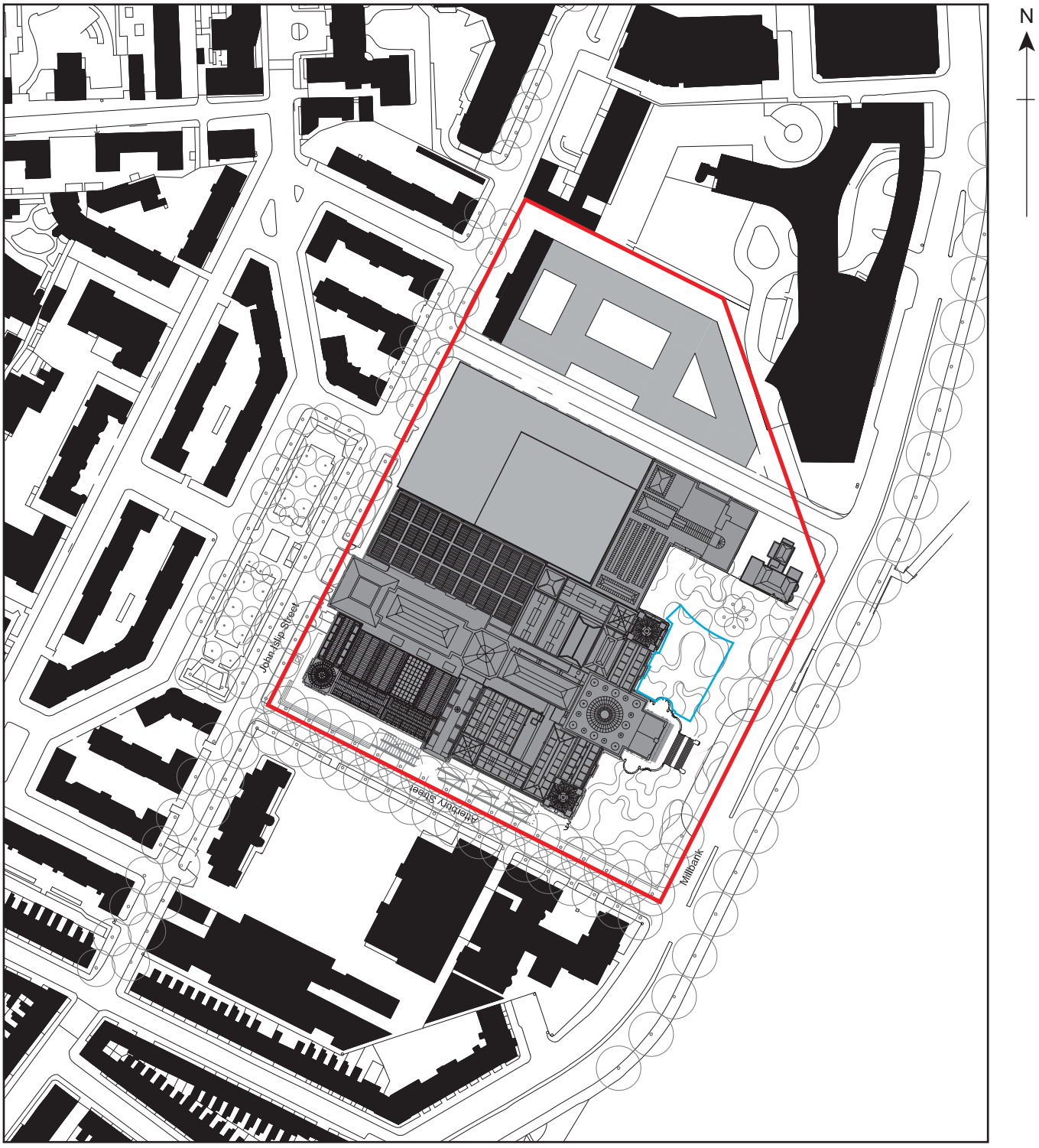
11.4 Consultation

- Telephone consultation with Diane Abrams, Greater London Archaeology Advisory Service Advisor on 6th July 2009.
- Telephone consultation with Paul Ragsdale, Structural Engineer of Alan Baxter & Associates between 16th and 17th November 2009.
- Telephone consultation with Vicki Woollett, Graduate Planner for Drivers Jonas LLP, on 21st December 2009.

Figure 1: Site Location



Not To Scale

Figure 2: Detailed Site Location

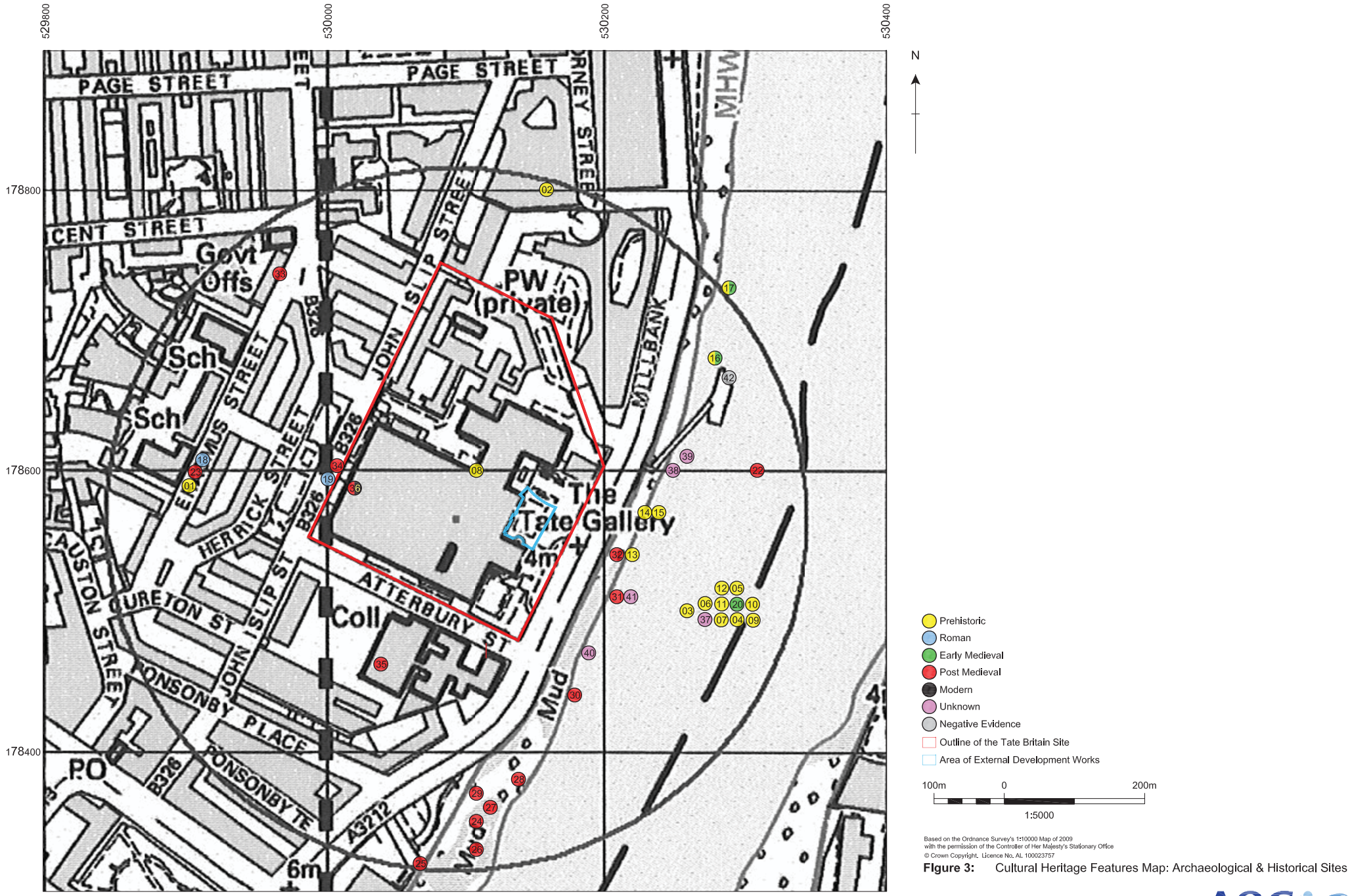


Figure 3: Cultural Heritage Features Map: Archaeological & Historical Sites

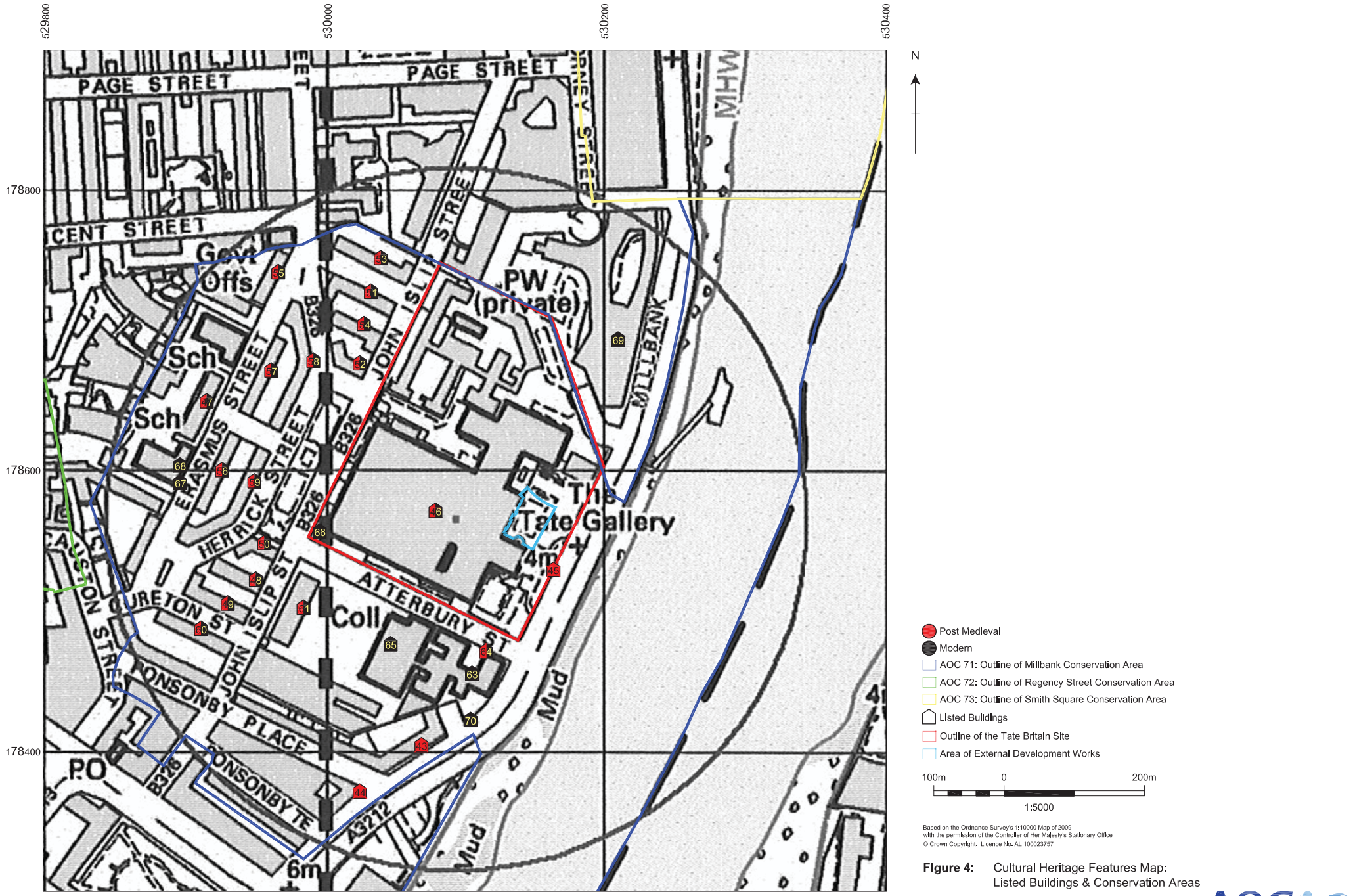


Figure 4: Cultural Heritage Features Map: Listed Buildings & Conservation Areas

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Not To Scale

Figure 5: Extract from the Grosvener Estate Map of St George's Parish, as it was in the Year 1723 (Anon; 1822)

Not To Scale

Figure 6: Extract from Rocque's Map of London; J.Rocque, 1747

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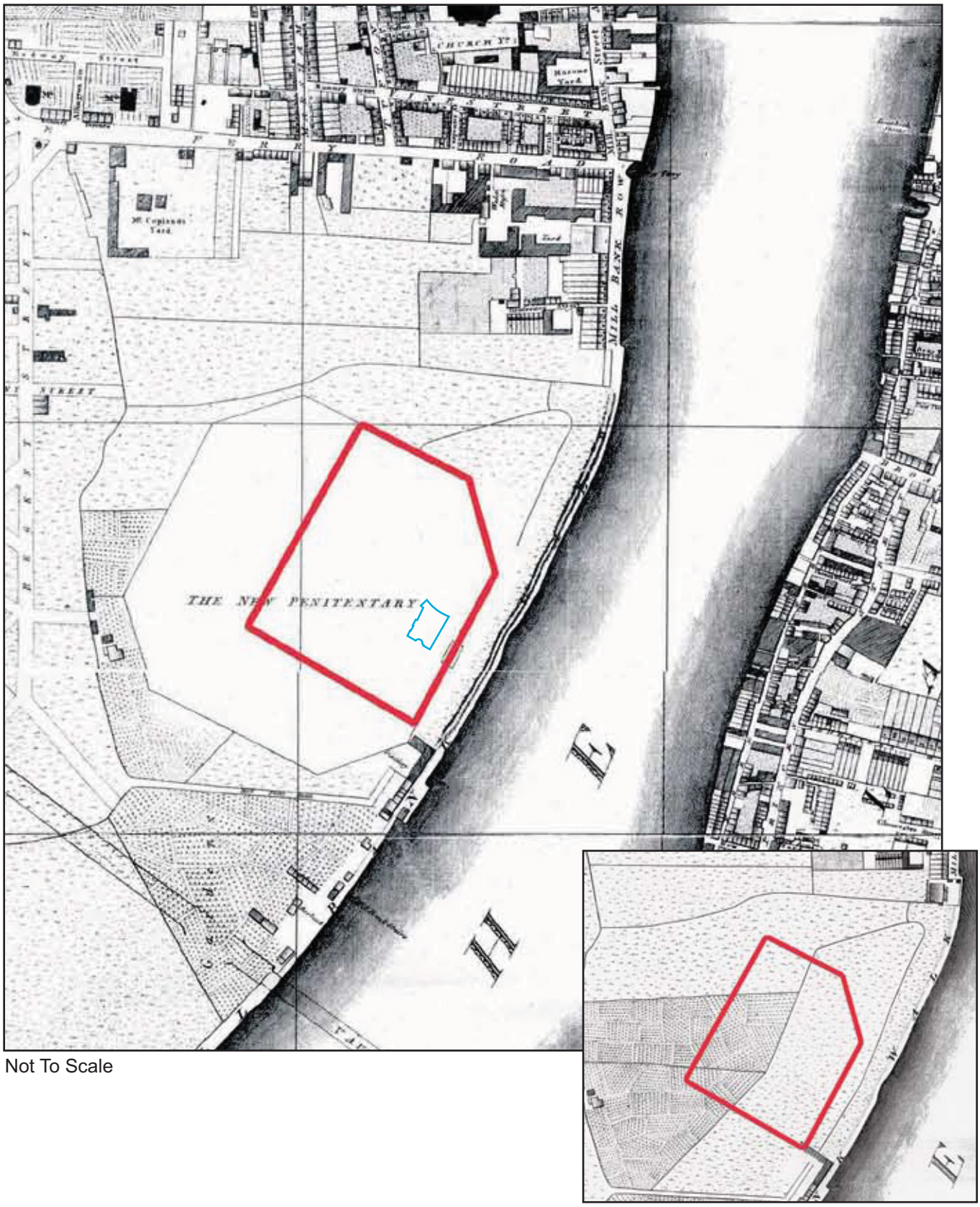

Not To Scale

Extract from Horwood's Plan of London
(1st Edition); R.Horwood, 1799 (Not To Scale)

Approximate Outline of the Tate

Outline of Area of External Development Works

Figure 7: Extract from Horwood's Plan of London (3rd Edition); R.Horwood, 1813

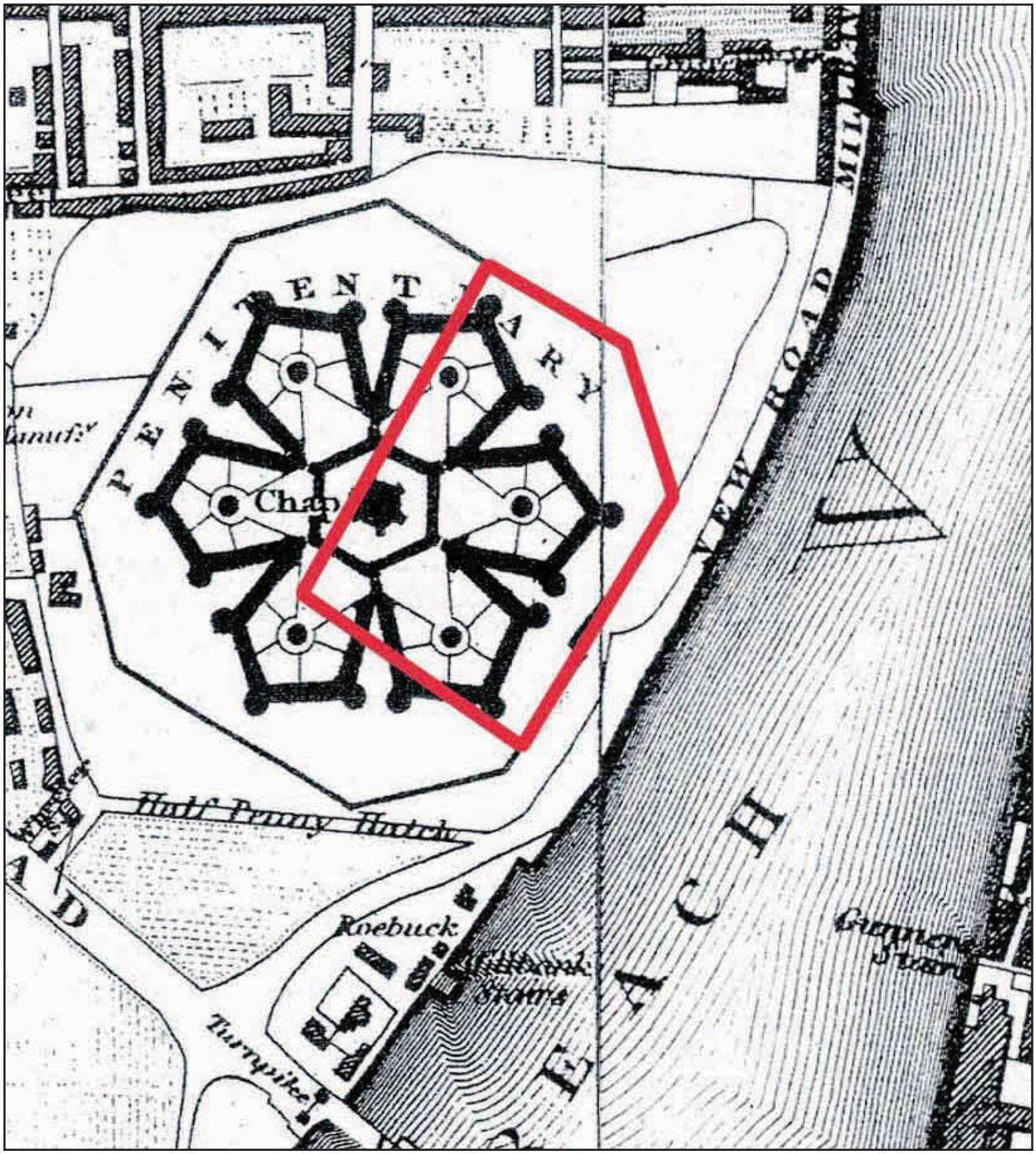

Figure 8: Extract from Greenwood's Plan of London 1824

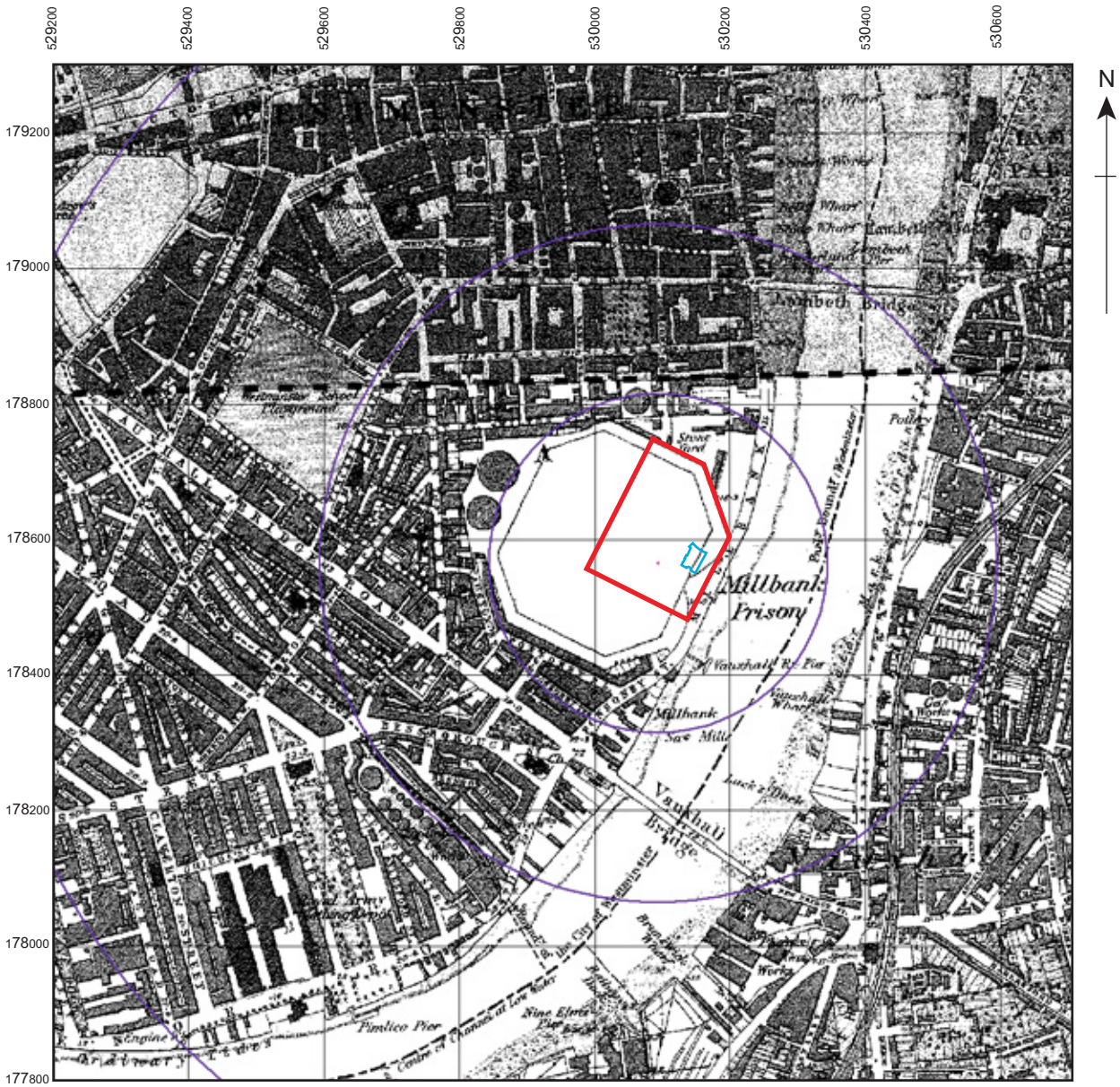

Figure 9: 1:10560 Ordnance Survey Map of 1875-1882

Based on the Ordnance Survey's 1:2500 map of 8966
with the permission of the Controller of Her Majesty's Stationery Office,
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100m 0 100m

1:4000

Outline of the Tate

Outline of Area of External Development Works

Figure 10: 1:2500 Ordnance Survey Map of 1896

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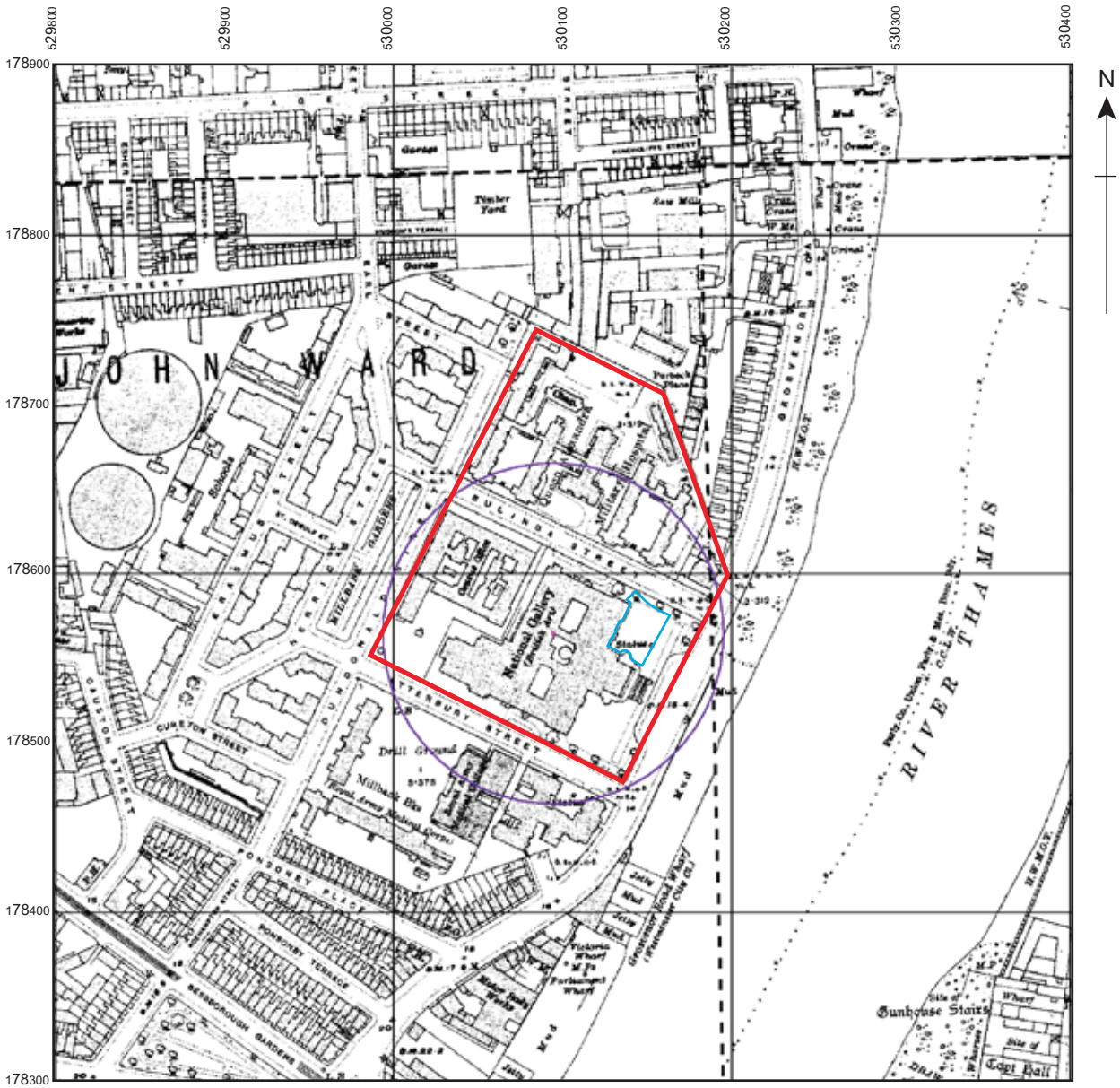

Figure 11: 1:2500 Ordnance Survey Map of 1916

Figure 12: 1:2500 Ordnance Survey Map of 1951

Figure 13: 1:1250 Ordnance Survey Map of 1973

Figure 14: 1:1250 Ordnance Survey Map of 1991

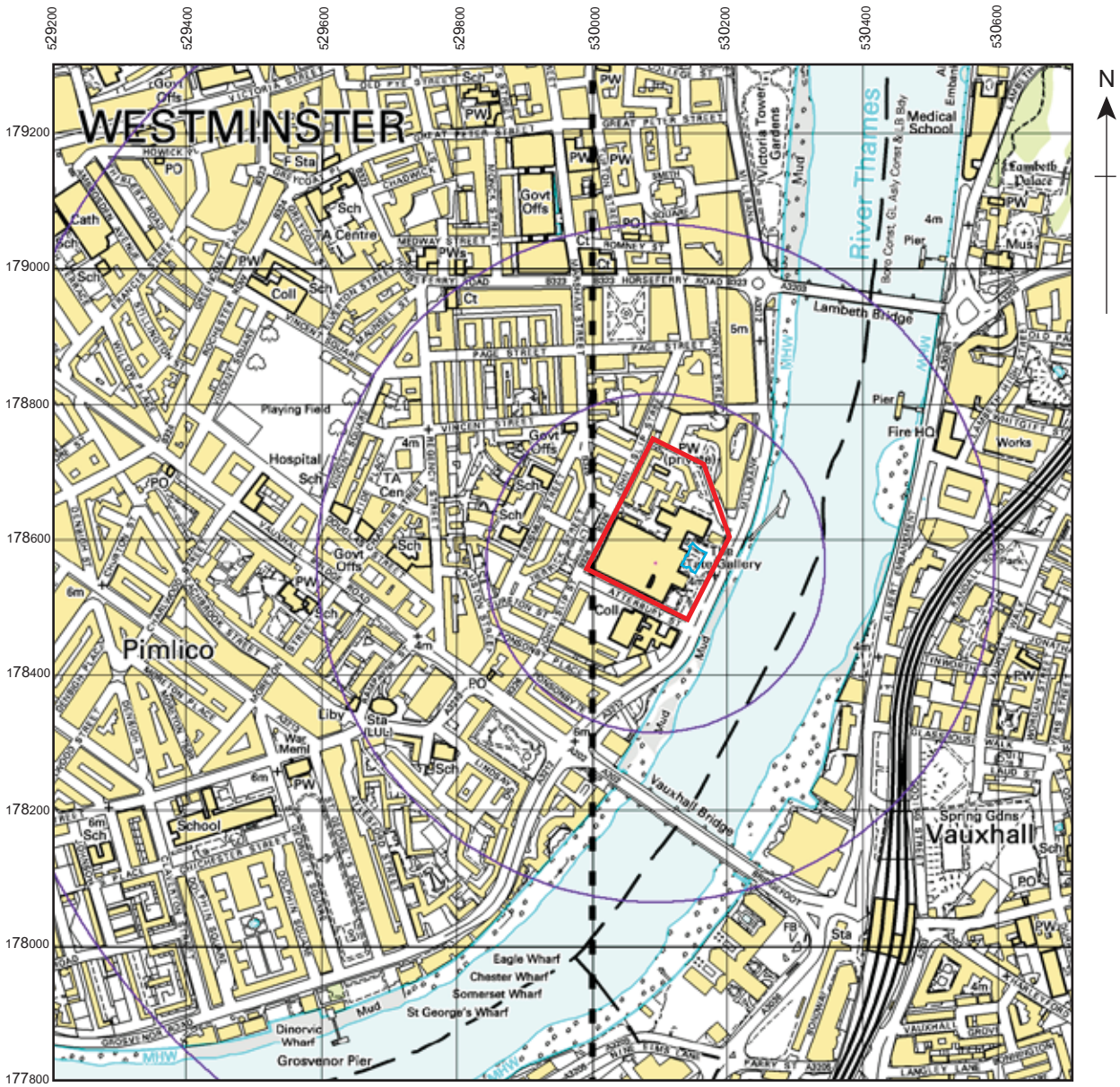

Figure 15: 1:10000 Ordnance Survey Map of 2009

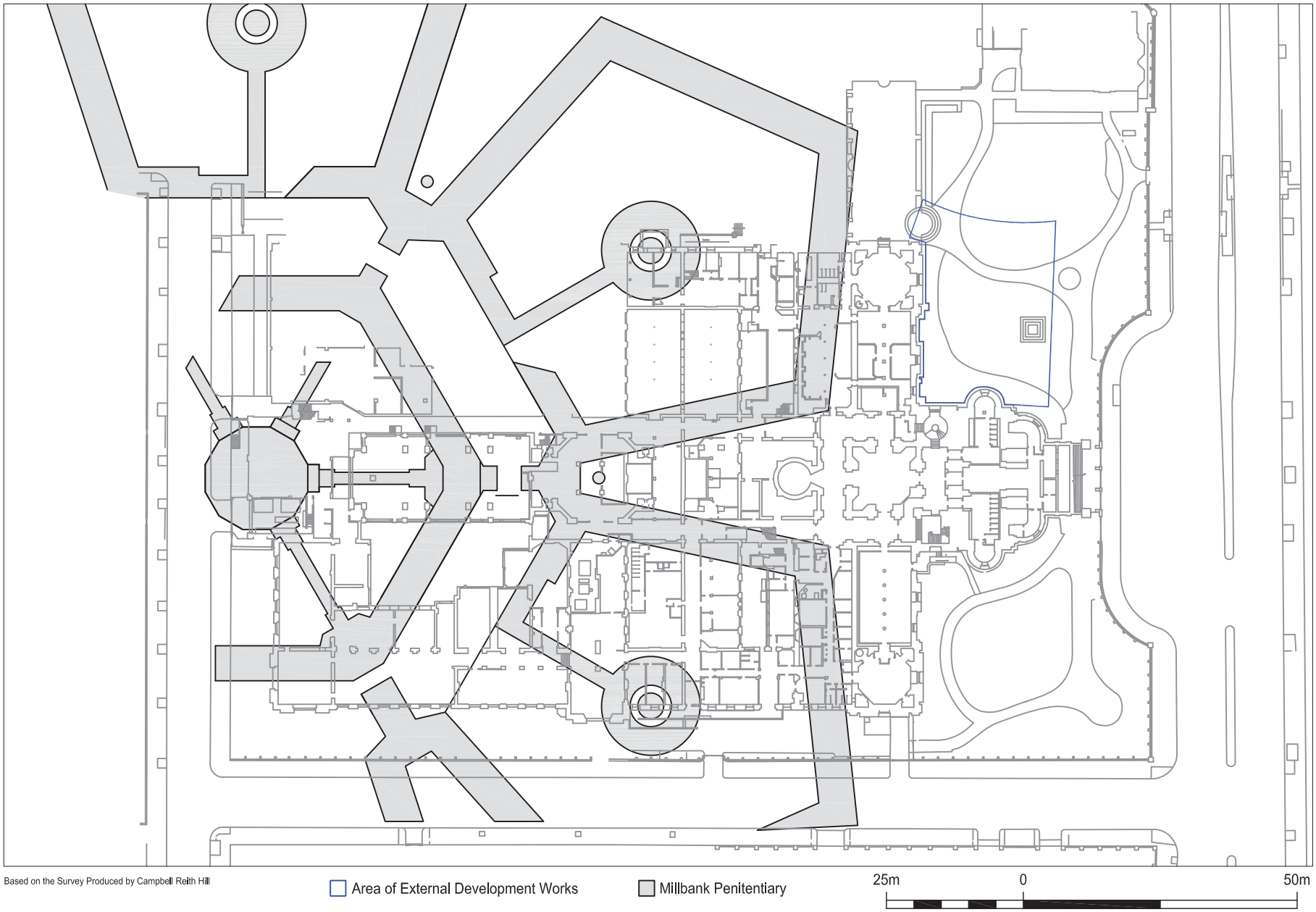

Figure 16: Current Development Plan with the Suppositioned Outline of the Millbank Penitentiary Based Upon Greenwoods Map of London, 1824 & AOC Archaeology's Archaeological Investigations

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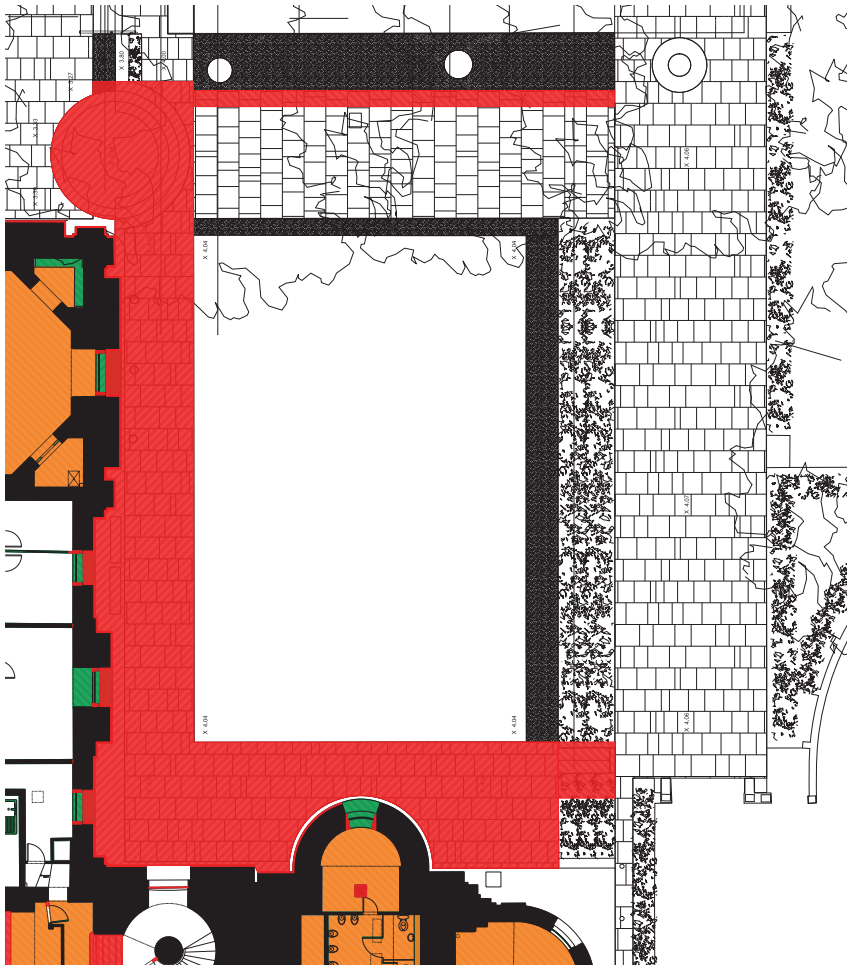
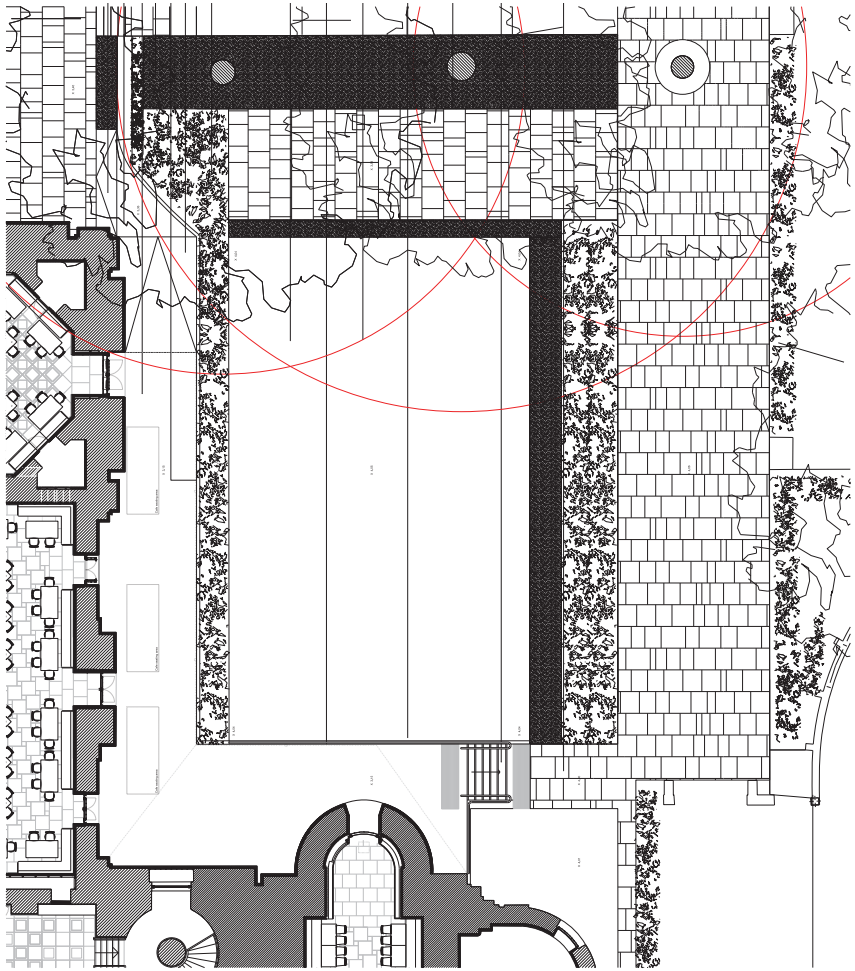


Existing External Landscaping



Proposed External Landscaping

Based on Plans Provided by Caruso St John Architects

Figure 17: External Groundworks: Wxisting & Proposed (Not To Scale)

Appendices

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APPENDIX A: Gazetteer of Cultural Heritage Features.

This gazetteer incorporates all features identified on the sources examined, relating to archaeological and historical sites (Table A1) and designated Listed Buildings (Table A2) for the study area, which is defined as a 250m radius from the centre of the site of the area of external development works.

Abbreviations:

AOC No.: Number assigned to sites, monuments, buildings etc. referred to in the text in round brackets e.g. (AOC 1)

GLSMR: Greater London Sites and Monuments Record.

MBR: Minimum Bounding Rectangle – the extent of the area in which the cultural heritage feature is located

NGR: National Grid Reference.

Table A1: Identified Archaeological Sites, Monuments, Features and Designations (Figure 3)

AOC NO.	PERIOD	TYPE	NAME & DESCRIPTION	N.G.R.	REF.	DESIGNATION
1	PREHISTORIC (PALAEOLITHIC)	UNASSIGNED	ARCHAEOLOGICAL INVESTIGATION:47 VINCENT ST POSSIBLE PALAEOCHANNEL A Possible palaeo-channel was recorded during an Archaeological Watching Brief and Evaluation. Within its alluvial deposits Burnt flint was recovered. A single flint flake, characteristic of later prehistoric industries, was also recovered from an alluvial deposit	TQ 2990 7860 (MBR: 10M BY 10M)	GLSMR: MLO75512	
2	PREHISTORIC (EARLY MESOLITHIC TO LATE BRONZE AGE)	GEOARCHAEOLOGICAL	ARCHAEOLOGICAL INVESTIGATION: CITY INN, THORNEY STREET, ALLUVIAL DEPOSITS A geo-archaeological evaluation on the site of City Inn, Throney Street demonstrated a sequence of alluvial deposits which spanned the Late Glacial (Mesolithic) to Iron Age. No cultural material was found,	TQ 30150 78800	GLSMR: MLO75553	
3	PREHISTORIC (EARLY NEOLITHIC TO EARLY BRONZE AGE)	GEOARCHAEOLOGICAL	ARCHAEOLOGICAL INVESTIGATION: THE CHELSEA SCHOOL OF ART AND DESIGN (MILLBANK PENITENTIARY) ALLUVIAL DEPOSITS The naturally lain alluvial deposits seen away from the prison remains have been dated during work to the north of the site as dating from the late Neolithic/Early Bronze Age.	TQ 3025 7850 (MBR: 10M BY 10M)	GLSMR: MLO76234	

AOC NO.	PERIOD	TYPE	NAME & DESCRIPTION	N.G.R.	REF.	DESIGNATION
4	PREHISTORIC (NEOLITHIC)	FINDSPOT	NEOLITHIC STONE AXE, MILLBANK	TQ 3030 7850 (MBR: 10M BY 10M)	GLSMR: 112013/00/00	
5	PREHISTORIC (NEOLITHIC)	FINDSPOT	POLISHED NEOLITHIC STONE AXE, MILLBANK Found in the River Thames	TQ 3030 7850 (MBR: 10M BY 10M)	GLSMR: 112014/00/00	
6	PREHISTORIC (NEOLITHIC)	FINDSPOT	FLINT KNIFE, RIVER THAMES (OPPOSITE TATE GALLERY)	TQ 3030 7850 (MBR: 10M BY 10M)	GLSMR: 114003/00/00	
7	PREHISTORIC (NEOLITHIC)	FINDSPOT	POLISHED STONE OR FLINT AXE, RIVER THAMES (OPPOSITE TATE GALLERY)	TQ 3030 7850 (MBR: 10M BY 10M)	GLSMR: 114038/00/00	
8	PREHISTORIC (BRONZE AGE)	FINDSPOT	LEAF SHAPED SWORD, MILLBANK PENITENTIARY (SITE OF) Found whilst digging the foundations of Millbank Penitentiary	TQ 3010 7860 (MBR: 10M BY 10M)	GLSMR: 081252/00/00	
9	PREHISTORIC (BRONZE AGE)	FINDSPOT	BRONZE DAGGER BLADE, RIVER THAMES (VAUXHALL) Bronze dagger blade with slight mid rib & one side worn	TQ 3030 7850 (MBR: 10M BY 10M)	GLSMR: 114024/00/00	
10	PREHISTORIC (BRONZE AGE)	FINDSPOT	DIRK (SHORT DAGGER), RIVER THAMES (OPPOSITE TATE GALLERY) With wide mid-rib & 2 remaining rivets	TQ 3030 7850 (MBR: 10M BY 10M)	GLSMR: 114025/00/00	
11	PREHISTORIC (BRONZE AGE)	FINDSPOT	BRONZE SPEARHEAD, RIVER THAMES (OPPOSITE TATE GALLERY)	TQ 3030 7850 (MBR: 10M BY 10M)	GLSMR: 114011/00/00	
12	PREHISTORIC (IRON AGE)	FINDSPOT	Socketed Axes, RIVER THAMES (OPPOSITE TATE GALLERY) Two socketed bronze axes with ribs on blades	TQ 3030 7850 (MBR: 10M BY 10M)	GLSMR: 114004/00/00	
13	PREHISTORIC	GEOARCHAEOLOGICAL	DEPOSITS, THAMES FORESHORE Deposit of yellow clay, some hardened. Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM05	TQ 3020 7854 (MBR: 10M BY 10M)	GLSMR: 083867/00/00	

AOC NO.	PERIOD	TYPE	NAME & DESCRIPTION	N.G.R.	REF.	DESIGNATION
14	PREHISTORIC	GEOARCHAEOLOGICAL	DEPOSITS, THAMES FORESHORE Deposit of peat/organic clay. Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM05	TQ 3022 7857 (MBR: 10M BY 10M)	GLSMR: 083868/00/00	
15	PREHISTORIC	UNASSIGNED	UNIDENTIFIED TIMBER Structure, THAMES FORESHORE Unidentified timber structure. Recorded during foreshore survey undertaken by LARF in 1996; survey zone FWM05	TQ 3023 7857 (MBR: 10M BY 10M)	GLSMR: 083869/00/00	
16	PREHISTORIC / MEDIEVAL	GEOARCHAEOLOGICAL	DEPOSITS, THAMES FORESHORE Sequence of peat, sand and clay deposits. Recorded during foreshore survey undertaken by LARF in 1996; survey zone FWM05	TQ 3027 7868 (MBR: 10M BY 10M)	GLSMR: 083872/00/00	
17	PREHISTORIC / MEDIEVAL	GEOARCHAEOLOGICAL	PEAT DEPOSITS, THAMES FORESHORE Peat with well-preserved organic matter. Possibly a reed-bed or rootlets. Recorded during foreshore survey undertaken by LARF in 1996; survey zone FWM05	TQ 3028 7873 (MBR: 10M BY 10M)	GLSMR: 083873/00/00	
18	ROMAN	FINDSPOT	ROMAN POTTERY, 47 VINCENT STREET Roman Pot found during Archaeological Watching Brief and Evaluation	TQ 2990 7860	GLSMR: MLO77645	
19	ROMAN	FINDSPOT	ROMAN POTTERY, MILLBANK PENITENTIARY (SITE OF) A possible Antonine greyware vessel with a fine, sandy fabric that was partially burnished, was found sometime between 1901 and 1910 in Millbank Prison	TQ 3000 7860 (MBR: 10M BY 10M)	GLSMR: 081204/00/00	
20	EARLY MEDIEVAL	FINDSPOT	VIKING SPEARHEAD Thought to be of Petersen's Type K.	TQ 3030 7850 (MBR: 10M BY 10M)	GLSMR: 114005/00/00	
21	POST-MEDIEVAL	MILITARY / DEFENCE	CIVIL WAR DEFENCES: BUCKINGHAM PALACE GARDENS TO VAUXHALL Ditch & bank civil war defences. The route is uncertain although it is thought to run between Vauxhall Bridge and the Tate Gallery	TQ 2931 7915 (CENTRED ON)	GLSMR: 081639/00/00	
22	POST-MEDIEVAL	MILITARY / DEFENCE	SITE OF CIVIL WAR FORT The location of this fort is uncertain, but Stukely's plan shows a very large star-fort on the river and shows the line of the defences reaching the Thames between the Tate Gallery and Vauxhall Bridge.	TQ 303 786 (MBR: 500M BY 500M)	GLSMR: 081641/00/00	

AOC NO.	PERIOD	TYPE	NAME & DESCRIPTION	N.G.R.	REF.	DESIGNATION
23	POST-MEDIEVAL	DOMESTIC	ARCHAEOLOGICAL INVESTIGATION: 47 VINCENT ST DOMESTIC MATERIAL Watching brief on a geotechnical investigation (site code VTF00). 18th century to 19th century dumps of domestic rubbish and building materials and 19th century and 20th century foundations to gasometers and buildings were recorded.	TQ 2990 7860 (MBR: 10M BY 10M)	GLSMR: 084918/00/000	
24	POST-MEDIEVAL	MILITARY / DEFENCE	RIVERFRONT DEFENCE, THAMES FORESHORE Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM04	TQ 3010 7835 (MBR: 10M BY 10M)	GLSMR: 083851/00/00	
25	POST-MEDIEVAL	MARITIME	POSSIBLE RIVERFRONT STRUCTURE, THAMES FORESHORE Timber structure, possibly a bank revetment or a bargebed. Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM04	TQ 3006 7832 (MBR: 10M BY 10M)	GLSMR: 083857/00/00	
26	POST-MEDIEVAL	MARITIME	POSSIBLE RIVERFRONT STRUCTURE, THAMES FORESHORE Timber and chalk construction: bargebed. Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM04	TQ 3010 7833 (MBR: 10M BY 10M)	GLSMR: 083858/00/00	
27	POST-MEDIEVAL	MARITIME	POSSIBLE RIVERFRONT STRUCTURE, THAMES FORESHORE Vertical timber, perhaps an anchor point. Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM04	TQ 3011 7836 (MBR: 10M BY 10M)	GLSMR: 083859/00/00	
28	POST-MEDIEVAL	MARITIME	POSSIBLE RIVERFRONT STRUCTURE, THAMES FORESHORE Timber and chalk construction: bargebed. Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM04	TQ 3013 7838 (MBR: 10M BY 10M)	GLSMR: 083860/00/00	
29	POST-MEDIEVAL	MARITIME	POSSIBLE RIVERFRONT STRUCTURE, THAMES FORESHORE Brick structure, 3m in front of modern river wall. Possibly a river defence or a foundation. Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM04	TQ 3010 7837 (MBR: 10M BY 10M)	GLSMR: 083861/00/00	
30	POST-MEDIEVAL	MARITIME	POSSIBLE RIVERFRONT STRUCTURE, THAMES FORESHORE Horizontal timber, perhaps the remains of a revetment. Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM04	TQ 3017 7844 (MBR: 10M BY 10M)	GLSMR: 083862/00/00	
31	POST-MEDIEVAL	MARITIME	POSSIBLE RIVERFRONT STRUCTURE, THAMES FORESHORE Unidentified structure, possibly an anchor point or 'bloke'. Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM05	TQ 3020 7851 (MBR: 10M BY 10M)	GLSMR: 083865/00/00	

AOC NO.	PERIOD	TYPE	NAME & DESCRIPTION	N.G.R.	REF.	DESIGNATION
32	POST-MEDIEVAL	MARITIME	POSSIBLE RIVERFRONT STRUCTURE, THAMES FORESHORE Structure consisting of a line of six large, squared timbers. Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM05	TQ 3020 7854 (MBR: 10M BY 10M)	GLSMR: 083866/00/00	
33	POST-MEDIEVAL	DOMESTIC	POST-MEDIEVAL FLATS, ERASMUS ST, MILLBANK ESTATE	TQ 2996 7874 (MBR: 10M BY 10M)	GLSMR: 204571/04/00	
34	POST-MEDIEVAL	FUNERARY	MILLBANK PENITENTIARY BURIAL GROUND The burial ground covered 432 square yards. In 1830-33 there were an average of 14 interments per annum. Current OS maps indicate that this area is near Millbank Gardens	TQ 3000 7860 (MBR: 10M BY 10M)	GLSMR: 083906/00/00	
35	POST-MEDIEVAL	CIVIL	ARCHAEOLOGICAL INVESTIGATION: CHELSEA COLLEGE OF ART AND DESIGN REMAINS OF THE MILLBANK PENITENTIARY An Archaeological Watching Brief (Site Code ATT01) indicated the existing buildings of the Chelsea College of Art and Design were constructed over the 19th century remains of the Millbank Penitentiary. The watching brief recorded parts of the prison moat and foundations.	TQ 30032 78462 (MBR: 202M BY 152M)	GLSMR: MLO98081	
36	POST-MEDIEVAL – MODERN	CIVIL	ARCHAEOLOGICAL INVESTIGATION: SITE OF MILLBANK PENITENTIARY, THE TATE GALLERY Archaeological trial trenching by AOC Archaeology has recorded extensive structural remains associated with the prison buildings. The remains consisted of foundation trenches, concrete footings, brick footings and occasional floor surfaces. Further work across the site by AOC Archaeology has recorded a large, early, concrete raft composed of gravel and sand, with inclusions of brick and tile. Evidence relating to the superstructure of the prison was recorded as walls, wall surfaces and floors of internal corridors, for both the inner hexagon and pentagonal wing. Internal dividing walls were recorded within the buildings excavated. Extensive culverts and drains were recorded throughout the archaeological investigations.	TQ 3001 7859 (MBR: 363M BY 365M)	GLSMR: 084320/00/00	
37	UNKNOWN	FINDSPOT	PART OF IRON SWORD, RIVER THAMES (OPPOSITE TATE GALLERY)	TQ 3030 7850 (MBR: 10M BY 10M)	GLSMR: 114012/00/00	

AOC NO.	PERIOD	TYPE	NAME & DESCRIPTION	N.G.R.	REF.	DESIGNATION
38	UNKNOWN	UNASSIGNED	UNIDENTIFIED DUMP, THAMES FORESHORE Agradation. Concrete rubble dump. Recorded during foreshore survey undertaken by LARF in 1996; survey zone FWM05	TQ 3024 7860 (MBR: 10M BY 10M)	GLSMR: 083870/00/00	
39	UNKNOWN	UNASSIGNED	POSSIBLE RIVERFRONT STRUCTURE, THAMES FORESHORE Structure consisting of two halved vertical timbers. Recorded during foreshore survey undertaken by LARF in 1996; survey zone FWM05	TQ 3025 7861 (MBR: 10M BY 10M)	GLSMR: 083871/00/00	
40	UNKNOWN	GEOARCHAEOLOGICAL	DEPOSITS, THAMES FORESHORE Agradation of sand over large area of foreshore. Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM04	TQ 3018 7847 (MBR: 10M BY 10M)	GLSMR: 083863/00/00	
41	UNKNOWN	MARITIME	POSSIBLE RIVERFRONT STRUCTURE, THAMES FORESHORE Angled timber post, possibly a mooring post. Identified during foreshore survey undertaken by LARF in 1996; survey zone FWM05	TQ 3021 7851 (MBR: 10M BY 10M)	GLSMR: 083864/00/00	
42	NEGATIVE EVIDENCE	GEOARCHAEOLOGICAL	GEOTECHNICAL GROUND INVESTIGATION Two boreholes were drilled. Borehole 3 produced only deposits of geological significance, including Lower Eocene London Clays and Devensian gravels that are normally considered to be of low archaeological potential.	TQ 30280 78666	GLSMR: MLO75524	

Table A2: Listed Buildings and Built Heritage Designations (Figure 4)

AOC NO.	PERIOD	TYPE	NAME & DESCRIPTION	N.G.R.	REF.	DESIGNATION
43	POST-MEDIEVAL	DOMESTIC	NO. 48 MILLBANK Terrace of houses. c.1843-45, 3 storeys and basement with the corner pavilion blocks of 4 storey.	TQ 30061 78403	GLSMR: MLO95080	GRADE II LISTED BUILDING
44	POST-MEDIEVAL	COMMERCIAL	MORPETH ARMS PUBLIC HOUSE Corner public house. c.1845 as early part of Thomas Cubitt's Pimlico development with design either by Thomas or his brother Lewis Cubitt. 4 storeys and basement.	TQ 30017 78370	GLSMR: MLO97091	GRADE II LISTED BUILDING
45	POST-MEDIEVAL	CIVIL	TATE GALLERY GATES, RAILINGS AND GATEPIERS Railings and gate piers. 1897 as part of Sidney R.J. Smith's overall gallery design.	TQ 30155 78528	GLSMR: MLO97728	GRADE II LISTED BUILDING

AOC NO.	PERIOD	TYPE	NAME & DESCRIPTION	N.G.R.	REF.	DESIGNATION
46	POST-MEDIEVAL / MODERN	CIVIL	TATE GALLERY (Tate Britain) Public gallery. 1897, by Sidney R.J. Smith, additions in 1909, 1926 by W Romaine Walker, Duveen Galleries added by John Russell Pope with Romaine Walker and Jenkins opened in 1937, 1970s rear extension in galleries 25-30 and Turner (Clore) Gallery wing to north by James Stirling (1984-85). This was the first purpose-built gallery in the country devoted to national art. It was erected as the gift of Sir Henry Tate. (see Section 6.2)	TQ 30071 78570	GLSMR: MLO94657	GRADE II* LISTED BUILDING
47	POST-MEDIEVAL / MODERN	DOMESTIC	HOGARTH HOUSE, MILLBANK ESTATE LCC housing estate block of flats. 1899-1902 by Spalding and Cross. 5 storeys plus a dormered mansard storey	TQ 29908 78648	GLSMR: MLO97039	GRADE II* LISTED BUILDING
48	POST-MEDIEVAL / MODERN	DOMESTIC	LANDSEER HOUSE, MILLBANK ESTATE LCC housing estate block of flats. 1897-1902. 5 storey gabled pavilion wings and 4 storeys and attic between them.	TQ 29943 78521	GLSMR: MLO96543	GRADE II LISTED BUILDING
49	POST-MEDIEVAL / MODERN	DOMESTIC	LAWRENCE HOUSE, MILLBANK ESTATE LCC housing estate block of flats. 1897-1902. 5 storey gabled-end pavilion-wings and 4 storeys and attic between	TQ 29923 78504	GLSMR: MLO97062	GRADE II LISTED BUILDING
50	POST-MEDIEVAL / MODERN	DOMESTIC	LEIGHTON HOUSE, MILLBANK ESTATE LCC housing estate block of flats. 1897-1902. 5 storey gabled end pavilions , 4 storeys and attic in between them.	TQ 29949 78547	GLSMR: MLO97519	GRADE II LISTED BUILDING
51	POST-MEDIEVAL / MODERN	DOMESTIC	MACLISE HOUSE, MILLBANK ESTATE LCC housing estate block of flats, 1897-1902. 5 storey gabled pavilion wings and 4 storeys and attic between	TQ 30025 78726	GLSMR: MLO94451	GRADE II LISTED BUILDING
52	POST-MEDIEVAL / MODERN	DOMESTIC	MILLAIS HOUSE, MILLBANK ESTATE LCC housing estate block of flats, 1899-1900. 5 storey gabled end pavilions; 4 storeys and attic in between.	TQ 30017 78675	GLSMR: MLO94448	GRADE II LISTED BUILDING
53	POST-MEDIEVAL / MODERN	DOMESTIC	MORLAND HOUSE, MILLBANK ESTATE LCC housing estate block of flats. 1897-1902. 5 storeys	TQ 30032 78750	GLSMR: MLO96786	GRADE II LISTED BUILDING
54	POST-MEDIEVAL / MODERN	DOMESTIC	MULREADY HOUSE, MILLBANK ESTATE, JOHN ISLIP STREET LCC housing estate block of flats. 1897-1902. 5 storey gabled pavilion-wings and centre break with 4-storeys and attic between them	TQ 30020 78703	GLSMR: MLO94449	GRADE II LISTED BUILDING

AOC NO.	PERIOD	TYPE	NAME & DESCRIPTION	N.G.R.	REF.	DESIGNATION
55	POST-MEDIEVAL / MODERN	DOMESTIC	REYNOLDS HOUSE (SOUTH BLOCK), ERASMUS STREET LCC housing estate block of flats. 1897-1902. One of 2 blocks of 5 Storey pavilions with 4 storeys and steep mansarded attic in between, forming an L plan with common courtyard behind.	TQ 29959 78740	GLSMR: MLO96797	GRADE II LISTED BUILDING
56	POST-MEDIEVAL / MODERN	DOMESTIC	ROMNEY (STUBBS) HOUSE, MILLBANK ESTATE, ERASMUS STREET LCC housing estate block of flats. 1897-1902. 5 storeys.	TQ 29919 78599	GLSMR: MLO94190	GRADE II LISTED BUILDING
57	POST-MEDIEVAL / MODERN	DOMESTIC	ROSSETTI HOUSE MILLBANK ESTATE, ERASMUS STREET LCC housing estate block of flats. 1897-1902. 5 storeys.	TQ 29954 7867	GLSMR: MLO95778	GRADE II LISTED BUILDING
58	POST-MEDIEVAL / MODERN	DOMESTIC	RUSKIN HOUSE, MILLBANK ESTATE, HERRICK STREET LCC housing estate block of flats, 1897-1902. 4 storeys and attic with 5 storey central and terminal pavilion	TQ 29984 78677	GLSMR: MLO96445	GRADE II LISTED BUILDING
59	POST-MEDIEVAL / MODERN	DOMESTIC	TURNER HOUSE, MILLBANK ESTATE, HERRICK STREET LCC housing estate block of flats. 1897-1902. 4 storeys and attic with 5 storey central and terminal pavilion	TQ 29942 78591	GLSMR: MLO96039	GRADE II LISTED BUILDING
60	POST-MEDIEVAL / MODERN	DOMESTIC	WILKIE HOUSE, MILLBANK ESTATE, JOHN ISLIP STREET LCC housing estate block of flats. 1897-1902. 5 storeys	TQ 29904 78486	GLSMR: MLO97744	GRADE II LISTED BUILDING
61	POST-MEDIEVAL / MODERN	MILITARY	MILLBANK BARRACKS NORTH WEST RANGE, JOHN ISLIP STREET Former Married Quarters for the Royal Army Medical Corps. C. 1898, by the Royal Engineers. 4 storeys.	TQ 29977 78501	GLSMR: MLO97340	GRADE II LISTED BUILDING
62	POST-MEDIEVAL / MODERN	MILITARY	MILLBANK BARRACKS SOUTH WEST RANGE, JOHN ISLIP STREET Royal Army Medical College Barrack block. C. 1898, by the Royal Engineers	TQ 29998 7844	GLSMR: MLO95363	GRADE II LISTED BUILDING
63	MODERN	MILITARY	OFFICERS MESS AND COMMANDANTS HOUSE ROYAL ARMY MEDICAL COLLEGE Officers' Mess and Commandant's House at medical college. 1904-7 by J.H.T Wood and W. Ainslie for the Royal Army Medical Corps. 2 storeys with full basement and attic storey to Mansard roof. 3-storey Atterbury Street elevation	TQ 30097 78454	GLSMR: MLO97339	GRADE II LISTED BUILDING
64	POST-MEDIEVAL / MODERN	CIVIL	STATUE OF SIR JAMES ROBERT MCGRIGOR B.G , M.D IN FORECOURT OF ROYAL MEDICAL COLLEGE, ATTERBURY STREET 1885 by Walter Noble. Erected at Chelsea Hospital and removed to present site in 1909.	TQ 30107 78470	GLSMR: MLO97404	GRADE II LISTED BUILDING

AOC NO.	PERIOD	TYPE	NAME & DESCRIPTION	N.G.R.	REF.	DESIGNATION
65	MODERN	MILITARY	ROYAL ARMY MEDICAL COLLEGE SOUTHERN BLOCK FACING COURTYARD, ATTERBURY STREET Medical college. 1904-7 by J.H.T Wood and W. Ainslie for the Royal Army Medical Corps. Principal NW elevation has 3-storey.	TQ 30039 78475	GLSMR: MLO97403	GRADE II LISTED BUILDING
66	MODERN	CIVIL	STATUE OF SIR JOHN MILLAIS IN NORTH FORECOURT OF TATE GALLERY Erected 1905, by Thomas Brock.	TQ 30155 78560	GLSMR: MLO96590	GRADE II LISTED BUILDING
67	MODERN	CIVIL	MILLBANK PRIMARY SCHOOL AND ADULT EDUCATION CENTRE, ERASMUS STREET Adjacent to North of Hogarth House. Former Infants School. 1901 by the London School Board architects as part of the LCC Millbank Estate. 1 storey block on shallow L plan	TQ 29889 7859	GLSMR: MLO96828	GRADE II LISTED BUILDING
68	MODERN	CIVIL	MILLBANK PRIMARY SCHOOL AND PLAYCENTRE, ERASMUS STREET Millbank Primary School and Playcentre, adjacent to south of Hogarth House. 1901 by the London School Board architects as part of the LCC Millbank Estate. 2 storey block on shallow L plan	TQ 29889 78598	GLSMR: MLO94191	GRADE II LISTED BUILDING
69	MODERN	CIVIL	MILLBANK TOWER Office, formerly Vickers Tower. 1959-63. Designed by Ronald Ward and Partners	TQ 30201 78692	GLSMR: MLO97657	GRADE II LISTED BUILDING
70	MODERN	COMMUNICATION	K2 TELEPHONE BOX ADJACENT TO NUMBER 48 MILLBANK Telephone Kiosk. 1927. By Giles Gilbert Scott	TQ 30096 78421	GLSMR: MLO94580	GRADE II LISTED BUILDING
71	POST-MEDIEVAL / MODERN	DESIGNATION	MILLBANK CONSERVATION AREA Designated in 1969 and extended in 1990. The conservation area is formed of four distinct character areas: the late 19th and early 20th century cultural and military complex including the Tate Gallery and former Royal Army Medical College; the red brick Millbank Estate to the northwest, one of London's earliest council estates; mid 19th century terraced houses centered around Ponsonby Terrace To the east; and the River Thames frontage and the Embankment to the southeast.	/	UDP	CONSERVATION AREA
72	POST-MEDIEVAL / MODERN	DESIGNATION	REGENCY STREET CONSERVATION AREA Regency Street was designated a conservation area in 1990. Edwardian built form and character, today it is almost entirely residential character, with yellow and red brick residential flat blocks set in quiet streets. Almost all the flats occupy single blocks and are detailed as groups; the larger blocks being set around private open spaces and courtyards.	/	UDP	CONSERVATION AREA

AOC NO.	PERIOD	TYPE	NAME & DESCRIPTION	N.G.R.	REF.	DESIGNATION
73	POST-MEDIEVAL / MODERN	DESIGNATION	SMITH SQUARE CONSERVATION AREA The Smith Square Conservation Area was designated in 1969 as part of the larger Government Precinct Conservation Area. It was redesignated in 1987 as the Smith Square Conservation Area. The square is dominated by the former Church of St John the Evangelist, built between1713-1728; to the north is a network of streets lined with a mix of 18th century terraced townhouses interspersed with early 20th century neo-Georgian buildings. The area also includes a small section of riverside south of Lambeth Bridge.	/	UDP	CONSERVATION AREA

APPENDIX B: Ground Investigation Borehole Logs (STATS 2008)

STATS *Specialist Engineering, Materials and Environmental Consultants*

BOREHOLE RECORD (Window Sampler)

Borehole Number: WS1

Site: Tate Britain

Location: Millbank, London SW1

Client: Tate Britain

Ground Level: GL not measured

Dates: 23 Jul 08

Job No.: 36420

Sheet 1 of 3

GROUND WATER			SAMPLES/TESTS				STRATA RECORD		
Strike	Well	Depth (m)	Type/Depth (m)	In-situ Tests	Depth (m)	Level (mAOD)	Key	Description	
					0.05			MADE GROUND: Paving slab.	0.05
					0.10			MADE GROUND: Light yellow fine to coarse SAND.	0.05
					0.15			MADE GROUND: Concrete.	0.10
					0.25			MADE GROUND: Void.	
								MADE GROUND: Dark brown clayey sandy GRAVEL of fine to coarse angular brick, concrete and rounded flint. Sand is fine to coarse.	0.45
					0.70			MADE GROUND: Concrete.	0.10
					0.80			MADE GROUND: Dark brown clayey sandy GRAVEL of fine to coarse angular brick, concrete and rounded flint. Sand is fine to coarse.	
		1							
					1.60			MADE GROUND: Soft dark blue grey CLAY. (REWORKED ALLUVIUM).	0.80
		2							
					2.50			MADE GROUND: Dark brown slightly clayey slightly gravelly fine to coarse SAND. Gravel is fine angular ceramic and brick fragments.	0.90
					2.80			Blue grey mottled brown peaty CLAY. (ALLUVIUM).	0.30
		3							
		4							

Continued next sheet

Remarks and Water Observations

Hand dug inspection pit to 1.2m, no services encountered. Hand held window sampler refused at 6.0m. Dyamic probing from 6.0m to 11.8m - geology inferred from results of DP01. Samples wet from 4.8m. Hole collapsed to 4.8m prior to dynamic probing. Driven steel piezometer installed to 7.3m with slotted tip from 7.0 to 7.3m. Level troll installed to 7.3m depth.

Key for Insitu tests
HV-Hand Vane (kN/m2)
PP-Pocket Penotometer (kN/m2)
MP-Mackintosh Probe (N150)

Scale: 1:25

Logged by: SL

Figure: A

STATS *Specialist Engineering, Materials and Environmental Consultants*

BOREHOLE RECORD (Window Sampler)

Borehole Number: WS1

Site: Tate Britain

Location: Millbank, London SW1

Client: Tate Britain

Ground Level: GL not measured

Dates: 23 Jul 08

Job No.: 36420

GROUND WATER | **SAMPLES/TESTS** | **STRATA RECORD** | Sheet 2 of 3

Strike	Well	Depth (m)	Type/Depth (m)	In-situ Tests	Depth (m)	Level (mAOD)		Key	Description
									Blue grey mottled brown peaty CLAY. (ALLUVIUM).
					5.20		2.40		Yellow brown mottled grey blue slightly clayey fine to coarse SAND with occasional decaying reddy brown wood fragments. (ALLUVIUM).
		6			5.90		0.70		Light brown very gravelly fine to coarse SAND. Gravel is fine to medium angular flint. (RIVER TERRACE DEPOSITS). From 6.0m to 8.5 loose to medium dense RIVER TERRACE DEPOSITS inferred from dynamic probing values DP01.
		7							
		8			8.50		2.60		Firm grey brown CLAY (LONDON CLAY FORMATION). (Inferred from dynamic probing values DP01)
		9							

Continued next sheet

Remarks and Water Observations

Hand dug inspection pit to 1.2m, no services encountered. Hand held window sampler refused at 6.0m. Dyamic probing from 6.0m to 11.8m - geology inferred from results of DP01. Samples wet from 4.8m. Hole collapsed to 4.8m prior to dynamic probing. Driven steel piezometer installed to 7.3m with slotted tip from 7.0 to 7.3m. Level troll installed to 7.3m depth.

Key for Insitu tests
HV-Hand Vane (kN/m2)
PP-Pocket Penotometer (kN/m2)
MP-Mackintosh Probe (N150)

Scale: 1:25

Logged by: SL

Figure: A

STATS *Specialist Engineering, Materials and Environmental Consultants*

BOREHOLE RECORD (Window Sampler)

Borehole Number: **WS1**

Site: Tate Britain

Location: Millbank, London SW1

Client: Tate Britain

Ground Level: GL not measured

Dates: 23 Jul 08

Job No.: 36420

GROUND WATER | **SAMPLES/TESTS** | **STRATA RECORD** | Sheet 3 of 3

Strike	Well	Depth (m)	Type/Depth (m)	In-situ Tests	Depth (m)	Level (mAOD)		Key	Description
		11							Firm grey brown CLAY (LONDON CLAY FORMATION). (Inferred from dynamic probing values DP01)
					11.80		3.30		***End of Borehole at 11.80 m***
		12							
		13							
		14							

Remarks and Water Observations

Hand dug inspection pit to 1.2m, no services encountered. Hand held window sampler refused at 6.0m. Dyamic probing from 6.0m to 11.8m - geology inferred from results of DP01. Samples wet from 4.8m. Hole collapsed to 4.8m prior to dynamic probing. Driven steel piezometer installed to 7.3m with slotted tip from 7.0 to 7.3m. Level troll installed to 7.3m depth.

Key for Insitu tests
HV-Hand Vane (kN/m2)
PP-Pocket Penotometer (kN/m2)
MP-Mackintosh Probe (N150)

Scale: 1:25

Logged by: SL

Figure: A

STATS

Specialist Engineering, Materials and Environmental Consultants

BOREHOLE RECORD (Window Sampler)

Borehole Number: WS2

Site: Tate Britain

Location: Millbank, London SW1

Client: Tate Britain

Ground Level: GL not measured

Dates: 23 Jul 08

Job No.: 36420

GROUND WATER | **SAMPLES/TESTS** | **STRATA RECORD** | Sheet 1 of 2

Strike	Well	Depth (m)	Type/Depth (m)	In-situ Tests	Depth (m)	Level (mAOD)		Key	Description
									MADE GROUND: Grass over dark brown slightly clayey slightly gravelly fine to coarse SAND. Gravel is fine to coarse rounded flint. Frequent rootlets.
					0.40		0.40		MADE GROUND: Dark brown slightly clayey gravelly fine to coarse SAND. Gravel is fine to coarse angular brick, concrete and ash fragments. Occasional pockets of red brown gravelly clay.
		1							
					1.40		1.00		MADE GROUND: Soft to firm dark brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is fine to coarse angular brick, concrete and flint.
		2							
		3							…between 3.00m and 4.00m occasional medium gravel sized pockets of light brown peat.
		4			4.00		2.60		Soft blue green mottled orange brown CLAY with orange brown decayed rootlets. (ALLUVIUM).
				HV@ 4.25=28					
				HV@ 4.50=24	4.50		0.50		Soft dark brown peaty CLAY. (ALLUVIUM).
									Continued next sheet

Remarks and Water Observations

Hand dug inspection pit to 1.2m, no services encountered. Hand held window sample hole completed at 10.0m. Groundwater encountered at 7.5m. Driven steel piezometer installed to 8.3m with slotted tip from 8.0 to 8.3m. Level troll installed to 8.3m depth.

Key for Insitu tests
HV-Hand Vane (kN/m2)
PP-Pocket Penotometer (kN/m2)
MP-Mackintosh Probe (N150)

Scale: 1:25

Logged by: SL

Figure: A

STATS *Specialist Engineering, Materials and Environmental Consultants*	**BOREHOLE RECORD (Window Sampler)**	**Borehole Number:**
Site: Tate Britain	**Location:** Millbank, London SW1	**WS2**
Client: Tate Britain	**Ground Level:** GL not measured / **Dates:** 23 Jul 08	**Job No.:** 36420
GROUND WATER / **SAMPLES/TESTS**	**STRATA RECORD**	Sheet 2 of 2

Strike	Well	Depth (m)	Type/Depth (m)	In-situ Tests	Depth (m)	Level (mAOD)		Key	Description
		6		HV@ 6.00=22					Soft dark brown peaty CLAY. (ALLUVIUM).
				HV@ 6.50=14					…between 6.00m and 7.20m becomes blue grey.
		7			7.20		2.70		Green brown sandy fine to coarse angular to subrounded flint GRAVEL. Sand is fine to coarse. (RIVER TERRACE DEPOSITS).
		8							
		9			9.10		1.90		Firm grey brown CLAY. (LONDON CLAY FORMATION).
				HV@ 9.50=60					

Remarks and Water Observations

Hand dug inspection pit to 1.2m, no services encountered. Hand held window sample hole completed at 10.0m. Groundwater encountered at 7.5m. Driven steel piezometer installed to 8.3m with slotted tip from 8.0 to 8.3m. Level troll installed to 8.3m depth.

End of Borehole at 10.00 m

Key for Insitu tests
HV-Hand Vane (kN/m2)
PP-Pocket Penotometer (kN/m2)
MP-Mackintosh Probe (N150)

Scale: 1:25
Logged by: SL
Figure: A

STATS

Specialist Engineering, Materials and Environmental Consultants

BOREHOLE RECORD (Window Sampler)

Borehole Number: WS3

Site: Tate Britain

Location: Millbank, London SW1

Client: Tate Britain

Ground Level: GL not measured

Dates: 24 Jul 08

Job No.: 36420

GROUND WATER | **SAMPLES/TESTS** | **STRATA RECORD** | Sheet 1 of 2

Strike	Well	Depth (m)	Type/Depth (m)	In-situ Tests	Depth (m)	Level (mAOD)		Key	Description
									MADE GROUND: Reinforced concrete. (18mm diameter steel bars).
					0.28		0.28		MADE GROUND: Light brown clayey sandy fine to coarse angular brick, concrete and subrounded to angular flint GRAVEL. Sand is fine to coarse.
		1							
					1.50		1.22		MADE GROUND: Soft brown CLAY. (REWORKED ALLUVIUM).
					1.60		0.10		MADE GROUND: Light brown sandy fine to coarse angular brick, concrete and subrounded to angular flint GRAVEL. Sand is fine to coarse.
		2							
		3							
		4							
					4.50		2.90		Unknown MADE GROUND or RIVER TERRACE DEPOSITS. (Inferred from dynamic probing results DP03).

Continued next sheet

Remarks and Water Observations

Hand dug inspection pit to 1.2m, no services encountered. Hand held window sample hole terminated at 4.5m due to refusal. Dynamic probing from 4.0m to 9.8m - geology inferred where possible from results of DP03. Driven steel piezometer installed to 7.3m with slotted tip from 7.0 to 7.3m. Level troll installed to 6.1m depth due to apparent blockage in piezo pipe.

Key for Insitu tests
HV-Hand Vane (kN/m2)
PP-Pocket Penotometer (kN/m2)
MP-Mackintosh Probe (N150)

Scale: 1:25

Logged by: SL

Figure: A

STATS *Specialist Engineering, Materials and Environmental Consultants*

BOREHOLE RECORD (Window Sampler)

Borehole Number: WS3

Site: Tate Britain

Location: Millbank, London SW1

Client: Tate Britain

Ground Level: GL not measured

Dates: 24 Jul 08

Job No.: 36420

GROUND WATER | **SAMPLES/TESTS** | **STRATA RECORD** | Sheet 2 of 2

Strike	Well	Depth (m)	Type/Depth (m)	In-situ Tests	Depth (m)	Level (mAOD)		Key	Description
		6							Unknown MADE GROUND or RIVER TERRACE DEPOSITS. (Inferred from dynamic probing results DP03).
		7							
		8			8.00		3.50		Soft to firm grey brown CLAY. (LONDON CLAY FORMATION). (Inferred from dynamic probing values DP03).
		9			9.80		1.80		***End of Borehole at 9.80 m***

Remarks and Water Observations

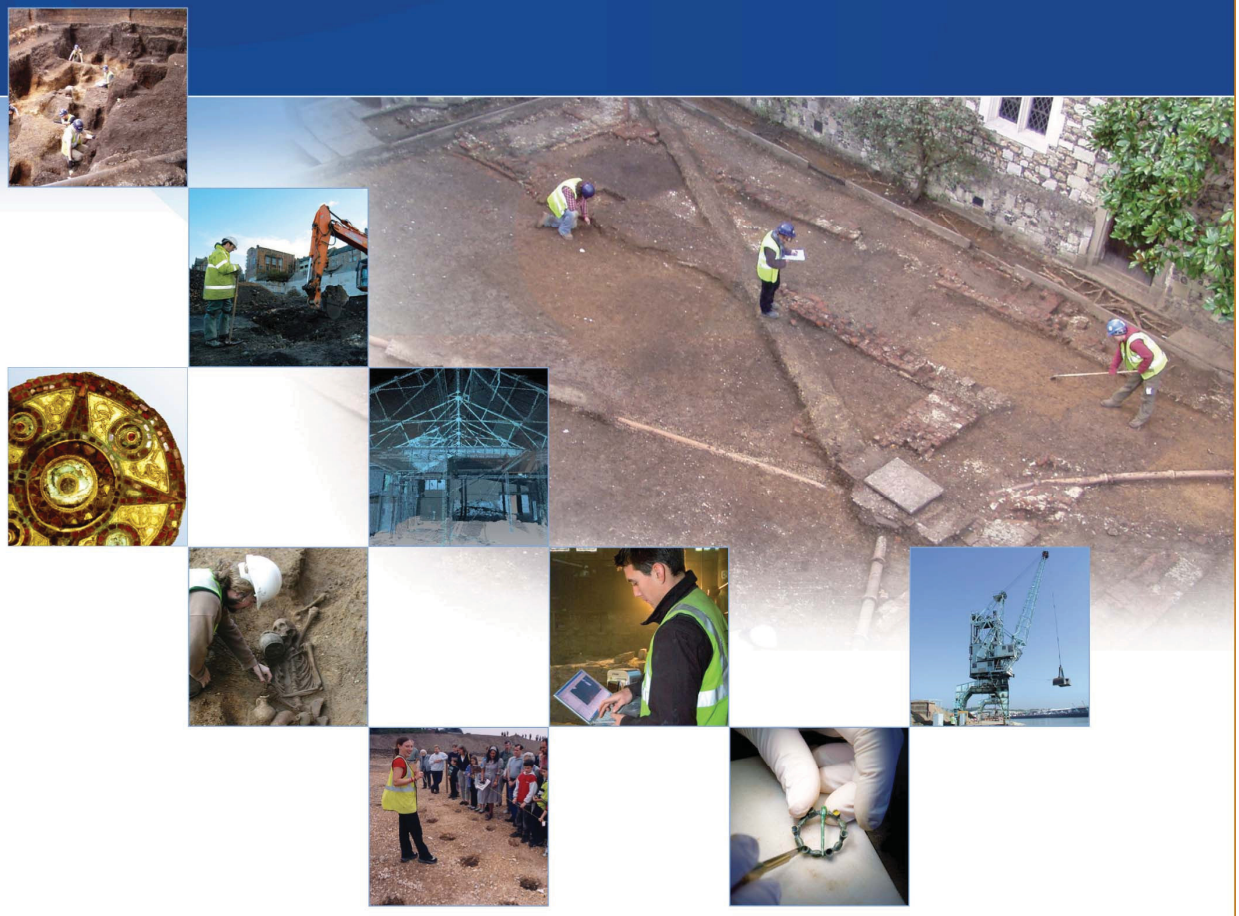
Hand dug inspection pit to 1.2m, no services encountered. Hand held window sample hole terminated at 4.5m due to refusal. Dynamic probing from 4.0m to 9.8m - geology inferred where possible from results of DP03. Driven steel piezometer installed to 7.3m with slotted tip from 7.0 to 7.3m. Level troll installed to 6.1m depth due to apparent blockage in piezo pipe.

Key for Insitu tests
HV-Hand Vane (kN/m2)
PP-Pocket Penotometer (kN/m2)
MP-Mackintosh Probe (N150)

Scale: 1:25

Logged by: SL

Figure: A



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