

Written Scheme of Investigation for Archaeological Monitoring at Great Ormond Street Hospital Children's Cancer Centre (GOSHCCC)

Report by: Jason Stewart BSc (Hons) MSc ACIfA

Issued by: Diarmuid O Seaneachain BA PhD MCIfA

Date: November 2023

Submitted to:

Prepared by:

Great Ormond Street Hospital for Children NHS Foundation Trust

RSK ADAS Limited 11D Park House Milton Park, Abingdon OX14 4RS

Tel. no:

Tel. no: 01235 355630





Quality Assurance

ADAS Contract Cod		ADAS Project Code		Document No.		Date Issued
1050689		ART69	105-368		02 (04)	13.11.2023
NGR	Sit	te Code	Plannii Permissio		Museum Accession Number.	OASIS Reference No.
TQ 30501 82029	(GTO23	2022/225	55/P	ТВС	adasuklt1-516710

Author	Technical Reviewer	Approved
J. Stewart Jason Stewart BSc Msc ACIfA	Neller Peter Vellet BA (Hons.) ACIfA	Diarmuid & Secreachan Diarmuid O'Seaneachain BA PhD MCIfA
EGISTERE LIECDD	CHURT SYSTEM CONT	

Disclaimer

Copyright RSK ADAS Limited. All rights reserved.

ILJFF

hespr.ihbc.org.uk

Quality assured

RSK ADAS Limited (ADAS) has prepared this report for the sole use of the client, showing reasonable skill and care, for the intended purposes as stated in the agreement under which this work was completed. The report may not be relied upon by any other party without the express agreement of the client and ADAS. No other warranty, expressed or implied, is made as to the professional advice included in this report.

Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by ADAS for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

No part of this report may be copied or duplicated without the express permission of ADAS and the party for whom it was prepared.

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK ADAS Limited.



Revision History

Revision	Date	Amendment
00	23.06.2023	First Draft
01	14.07.2023	Amendments following GLAAS comments
02	24.10.2023	Further update to incorporate GLAAS formal consultation response dated 06.09.2023
03	13.11.2023	Further update to incorporate GLAAS formal consultation response dated 31.10.2023
04	13.11.2023	Amendments following Client comments



Contents

1	Introduction
2	Site Location, Description of the Development and Geology4
	Site Location4
l	Description of the Development4
(Geology5
3	Planning Background5
4	Archaeological and Historical Background6
5	Aims and Objectives of the Project8
6	Methodology9
7	Procedure for Unexpectedly Complex Discovery13
8	Monitoring Arrangements15
9	Post Fieldwork Analysis, Archive Deposition and Publication15
10	Other Matters
(Communication
(Copyright
I	nsurance
	Staff and Timetable
I	Health and Safety
I	Public Engagement, Participation and Benefit
	Staff Training and CPD
(Contacts
11	Bibliography20
l	UK Legislation
Ар	pendix A: Archaeological Standards and Guidelinesi



Appendix B: Indicative Construction Contractor Programme of Works	i
Appendix b. Indicative construction contractor riogramme or works	••••••••••••••••••

List of Figures

Figure 1: Site Location

Figure 2: Archaeological Survival Plan

Figure 3: Revised Location of the Southampton Estate and English Civil War Defences in Relation to the Site Boundary

Figure 4: Level 1 fabric removal and alterations plan (Client Plan; Drawing No. GOSHCCC-BDP-ZZ-01-DR-A-2000-2051)

Figure 5: Piling Layout (Client Plan; Drawing No. GOSHCCC-BDP-ZZ-00-DR-S-2300-1090)

Figure 6: Section A-A (longitudinal) as Proposed (Client Plan; Drawing No. GOSHCCC-BDP-ZZ-ZZ-DR-A-2000-2074)

Figure 7: S278 – Proposed Street Lightwell Construction Sections (Client Plan; Drawing No. GOSHCCC-BDP-ZZ-ZZ-DR-A-2101-5050)

Figure 8: Below Ground Drainage Layout Level 01 (Client Plan; Drawing No. GOSHCCC-BDP-ZZ-ZZ-DR-C-1100-1001)

Figure 9: Project Timeline: Archaeological Attendance



1 Introduction

- 1.1 This document sets out details of a Written Scheme of Investigation (WSI) by RSK ADAS Ltd for archaeological monitoring and recording of groundworks associated with the redevelopment of the Great Ormond Street Hospital (GOSH) Frontage Building, Paul O'Gorman Building, and Entrance on Great Ormond Street WC1N 3JH (referred to hereafter as the 'Site'), to provide a new Children's Cancer Centre (CCC) as shown on Figure 1.
- 1.2 RSK ADAS Ltd were instructed to prepare this WSI by, Great Ormond Street Hospital for Children NHS Foundation Trust (referred to hereafter as the 'Client) in collaboration with the appointed design and build contractor John Sisk & Son (Holdings) Ltd (referred to hereafter as Sisk).
- 1.3 In May 2022 RSK ADAS Ltd contacted The Greater London Archaeology Service (GLAAS) in order to clarify the nature of mitigation they would request for the groundworks required for the groundworks (Phase 4). It has been recommended that the intrusive groundworks shall be subject to archaeological monitoring due to recorded post-medieval activity nearby.
- 1.4 Archaeological monitoring and recording recommended for Phase 4 of the development will be covered by this WSI. Any archaeological remains identified during the archaeological monitoring will be assessed and recorded.
- 1.5 This WSI has been guided in its composition by the Standard and guidance for an archaeological watching brief (ClfA, 2020a), the Management of Archaeological Projects 2 (English Heritage, 1991), the Management of Research Projects in the Historic Environment (MORPHE): Project Manager's Guide (Historic England, 2015), and the ADAS Technical Manual (ADAS, 2023a). This WSI has also been guided in its composition by the Historic England and Greater London Archaeological Advisory Service Guidelines for Archaeological Projects in Greater London (GLAAS, 2015) and any other relevant standards or guidance contained within Appendix A.



2 Site Location, Description of the Development and Geology

Site Location

- 2.1 The Site is located at the Great Ormond Street Hospital for Children in the Bloomsbury area of the London Borough of Camden (NGR TQ 30501 82029).
- 2.2 The majority of the Site is currently occupied by the existing GOSH Frontage Building, a five-storey building (inclusive of basement) dating from the 1950's that was constructed in two separate phases. The building is currently used by a number of GOSH departments including Audiology Department, Clinical Research Facility (CRF), Department of Child and Adolescent Mental Health and Paediatric Psychology Department.
- 2.3 The western most part of the Site is occupied by the main GOSH Entrance providing connections to the wider GOSH island site and by the northern corner of the Paul O'Gorman Building.
- 2.4 The Site is bounded by Powis Place to the west, Octav Botnar Wing to the east, the Variety Club Building and Premier Inn Clinical Building to the north and Great Ormond Street to the south.
- 2.5 Ground level at the street level of the proposed groundworks ranges from 21.57 m to 23.48 m above Ordnance Datum (aOD) (H & W Surveying and Consulting, 2020).

Description of the Development

- 2.6 The re-development of the Great Ormond Street Hospital (GOSH) Frontage Building and main Entrance will comprise the demolition of the existing building and erection of a replacement 8 storey hospital building (Class C2 Use) together with 2 basement floors, roof top, balcony and ground floor landscaped amenity spaces, cycle storage, refuse storage and other ancillary and associated works pursuant to the development.
- 2.7 It is understood that the re-development will be largely restricted to the footprint of the existing building, although the north-west face of the Frontage Building will be extended into an existing courtyard and vehicle access will be provided to the rear of the building.
- 2.8 It is understood that the Client seeks better integration of the Paul O'Gorman Building with the re-developed Frontage Building and Entrance. This would comprise the demolition of the northern corner of the Paul O'Gorman Building and the relocation of the stair and lift core to enable connect through its eastern elevation. The proposed re-development of the Paul O'Gorman Building is considered separate from the consented planning application (Planning Ref: 2022/2255/P).



Geology

- 2.9 The underlying bedrock geology is recorded as London Clay Formation Clay, Silt and Sand, which is overlain by Lynch Hill Gravel Member Sand and Gravel superficial deposits. Superficial deposits including Hackney Gravel Member Sand and Gravel and a narrow band of Alluvium Clay, Silt, Sand and Gravel are recorded to the east of the Site. There are no superficial deposits recorded immediately north-east of the Site (BGS, 2023).
- 2.10 The closest borehole data to the proposed development is located in the north-west corner of the Great Ormond Street Hospital Children's Cancer Centre (TQ38SW4277 GREAT ORMOND STREET HOSPITAL 1B). The borehole recorded 4 m of made ground overlying 14 m of brown- grey silty clay with occasional pyritised wood fragments. This in turn overlay 12 m of green and brown and locally red mottled sandy silty clay (BGS, 2023).
- 2.11 A second borehole is located approximately 80 m to the south of the proposed development (TQ38SW681 HOLBORN B C ORMOND CLOSE HOLBORN). The borehole recorded 2.44 m of made ground overlying 3.51 m of gravel and sand, 0.75 m of firm brown clay and 3.97 m of stiff blue clay (BGS, 2023).

3 Planning Background

3.1 This WSI has been prepared in accordance with Condition 20 attached to planning consent (Planning Ref: 2020/2255/P), which states:

"Archaeology No demolition or development shall take place until a written scheme of investigation (WSI) has been submitted to and approved by the local planning authority in writing. For land that is included within the WSI, no demolition or development shall take place other than in accordance with the agreed WSI, which shall include the statement of significance and research objectives, and

A. The programme and methodology of site investigation and recording and the nomination of a competent person(s) or organisation to undertake the agreed works

B. Where appropriate, details of a programme for delivering related positive public benefits

C. The programme for post-investigation assessment and subsequent analysis, publication & dissemination and deposition of resulting material. This part of the condition shall not be discharged until these elements have been fulfilled in accordance with the programme set out in the WSI.



Reason: To safeguard the archaeological and historical interest on this site in accordance with policy D2 of the Camden Local Plan"

3.2 This WSI for archaeological monitoring and recording is designed to address Condition 20 attached to planning consent (Planning Ref: 2022/2255/P) and to ensure that all impacts on the historic environment resource are mitigated or avoided.

4 Archaeological and Historical Background

- 4.1 The archaeological and historical context of the Site has been investigated in a desk-based assessment (ADAS, 2023b). It is not intended to replicate in full the findings of the desk-based assessment, but a summary of the results is provided below.
- 4.2 All heritage assets are referred to in the text by their Historic England and/or Greater London Historic Environment Record (GLHER) reference numbers.

Summary of Archaeological and Historical Background

- 4.3 The Bloomsbury Conservation Area encompasses the majority of the cityscape surrounding the Site. The dominant characteristic of the area is its original street layout, which comprised formal landscaped squares and an interrelated grid of streets (London Borough of Camden Council, 2011). Elements of the Bloomsbury, Holborn and St Pancras cityscape have been omitted from the Conservation Area, including the majority of the Great Ormond Street Hospital Children's Cancer Centre. The Site is situated on the boundary of the hospital complex and the Conservation Area, where the façade of the Frontage Building is within the Conservation Area (ADAS, 2023b).
- 4.4 The GLHER records a Tier II Archaeological Priority Area (APA), which encompasses the Site. The APA is classified as a historic urban area that contains multi-period heritage assets of archaeological interest. These include prehistoric evidence, Roman roads and associated activity, Medieval settlement, Civil War defence lines and the 17th century expansion of London's suburbs located within the south of the London Borough of Camden (ADAS, 2023b).
- 4.5 The northern extent of the APA, where the Site is located, is determined by the postulated routes of the London Civil War defences which cross and overlap with the limit of 17th century London suburbs as depicted on Roques Map of 1766 (ADAS, 2023b).
- 4.6 A series of fortifications and a defensive ditch were erected around London in 1642 to 1643 during the English Civil War, a section of which passed through the present Borough of Camden. A retrospective map from 1749 indicates that part of the defensive ditch and the Fort of Southampton (Fort 11) was located immediately south of Great Ormond Street. Following the end



of the English Civil War, the wider landscape saw a period of growth, including market gardens and grand houses. Historic mapping shows the suburban expansion of London in the immediate wider landscape from the early 18th century (ADAS, 2023b).

- 4.7 Recent research published in 2023 has re-evaluated the surviving evidence and accepted locations for English Civil War Defences. In particular, the research has demonstrated that the accepted locations of the Forts and Defensive Lines interpreted from historical maps are generally wrong. This difference may be up to 200m in parts (Mills, 2023). Based on this latest research, there is the potential that Great Ormond Street Hospital could be located along, or in very close proximity to Defensive Lines between Grays Inn lane to Southampton House (ibid, 2023) (Figure 3).
- 4.8 Furthermore, the research carried out indicates that these Civil War Defences comprised not only a single set of linked structures, but also entailed secondary archaeological features which were directly and indirectly related to the War. The construction and maintenance of the Civil War Defences entailed a wider zone of quarries, ditches, roads and other logistical support networks. All of these have potentially left traces in the archaeological record as a 'Landscape of War'. In the past, some of these features have been mistakenly attributed to the principal defences as a result of flawed analysis of Vertue's map of 1738, but these can now be recognized as forming part of a wider archaeological record of the impact of the English Civil War in this part of London (Mills, 2023). Traces of these types of associated 'Landscape of War; features may also survive in places in the area of modern Great Ormond Street Hospital.
- 4.9 Great Ormond Street Hospital (01973/00/00), originally known as the Hospital for Sick Children, opened in 1852. It was equipped with 20 beds, in two 10 bed wards, but there were so few inpatients initially that only one ward was used for the first 2 months. The first purpose-built clinical block was opened in 1875, constructed on the back garden space of the original converted houses, with a linked block to the north containing four wards for housing infectious diseases cases opening in 1879/80. The original houses Nos. 48 and 49 Great Ormond Street were demolished in the 1880's, and the new South Wing (now Paul O'Gorman Building) constructed on their site, opening in 1893 and linked to the 1875 building on the north side. The main entrance returned to Great Ormond Street, having been from Powis Place from 1875 to 1893 (Mr Nick Baldwin, Archivist, GOSH Foundation Trust 2022, Planning Application Comments Feedback 31.01.22).
- 4.10 Powis Place is named after the Welsh aristocrat The Earl of Powis' who built Powis House to be his London mansion. It was to the north-west of the proposed development at the northern end of Powis Place. Powis House was built in 1696, partially rebuilt following fire damage in 1713 and demolished in 1784. A regular Georgian townhouse of similar design to many of the other local



properties was built on the site and became No. 11 Powis Place. When the Hospital for Sick Children opened in 1852, the property was acquired by the Hospital, and used as accommodation by the Hospital manager, becoming known as 'The Secretary's House'. It was demolished in 1907 when GOSH built a new boiler house on the site. (Mr Nick Baldwin, Archivist, GOSH Foundation Trust 2022, personal correspondence 15.06.22).

- 4.11 The 1875 building and Infectious Diseases block were designed by Edward Middleton Barry. He died in 1880, and the South Wing (now Paul O'Gorman Building, opened 1893) was designed by his older brother Charles Barry Jnr. (They were the sons of the more celebrated Sir Charles Barry, architect of the Houses of Parliament). It is a 5-storey red brick and stone building with Mansard roof with subtle decorative features, including stone balustrades and copings in a terracotta colour, a rounded end and rectangular oriels (Mr Nick Baldwin, Archivist, GOSH Foundation Trust 2022, Planning Application Comments Feedback 31.01.22). It is located on the site of the original 'Hospital in a House' and originally formed the main entrance to the hospital.
- 4.12 There were bomb strikes on Great Ormond Street adjacent to the project site during the 1940 Blitz, and although the South Wing (Paul O'Gorman Building) did not suffer a direct hit, it did suffer quite severe blast damage the shrapnel marks were still visible until in-filled in the 1990's, and traces can still be seen on the wall behind the ground level railing (Mr Nick Baldwin, Archivist, GOSH Foundation Trust 2022, Planning Application Comments Feedback 31.01.22).
- 4.13 The location attributed to the hospital by the GLHER is located 68 m to the north-west of the Site, although the original location of the hospital is located within Site boundary (ADAS, 2023b).
- 4.14 There is a time capsule located within the northern part of the Site boundary. It was put in place by Diana, Princess of Wales, in 1991 and is located behind the extant foundation stone plaque for the Variety Club Building (personal correspondence, 21.06.2023).

5 Aims and Objectives of the Project

- 5.1 The aims of the archaeological monitoring and recording are:
 - to ensure that any archaeological features/deposits exposed during groundworks associated with the development are identified, recorded, and interpreted to an acceptable standard;
 - b. to ensure that any significant discoveries of artefactual evidence are recorded and analysed to an acceptable standard; and
 - c. to inform a strategy to avoid or mitigate the impacts of the proposed development on any surviving archaeological remains identified.



- 5.2 The specific aims of the archaeological monitoring and recording are:
 - a. to identify and record any archaeological features/deposits associated with Civil War
 Defensive works and/or any features associated with the wider mid-17th century
 'Landscape of War';
 - b. to identify and record any archaeological features/deposits associated with the postmedieval urban expansion in the area;
 - c. to identify and record any post-medieval or modern archaeological features/deposits
 which may be encountered during the groundworks;
 - d. to inform a strategy to avoid or mitigate the impacts of the proposed development on surviving archaeological remains; and
 - e. to disseminate the results through appropriate reporting, which will also include a summary report and wider publication if the results merit it, and the production of a site archive for deposition with the relevant local museum and digital archive repository, in line with paragraph 205 of NPPF 2023.
- 5.3 The fieldwork takes place within, and will contribute to the goals of the regional frameworks set out in the London Archaeology (MOLA, 2002).
- 5.4 Specifically, archaeological investigation at Great Ormond Street Hospital may further the understanding of Question: L5.01 *Establishing how well the various defence systems around London from the 16th century to the beginning of the 20th century survive.*
- 5.5 The results will be reported as appropriate (see Section 9 below).

6 Methodology

- 6.1 In order that the investigation supplies information of the required quality, the Code of Conduct (2022) and the *Standard and guidance for an archaeological watching brief* (2020a) issued by the Chartered Institute for Archaeologists (CIfA) form a requirement of this WSI. The archaeological works will also adhere to the *Guidelines for Archaeological Projects in Greater London* issued by Greater London Archaeological Advisory Service (GLAAS, 2015).
- 6.2 It is proposed that no archaeological monitoring will take place during the demolition of existing structures, and/or any subsequent construction of secant piling and rotary load bearing piles within the redline boundary (Figure 5).



- 6.3 Archaeological monitoring is proposed for the following elements of the planned groundworks:
 - Archaeological Monitoring of the removal of existing slab at Level 1 due to the potential for archaeological deposits of Civil War remains and of significant Georgian era buildings to survive directly beneath the slab.
 - Task ID 49360 Bulk dig excavation to a depth of 7.5 to 8 m below the existing ground bearing slab at Level 1. Archaeological monitoring of these groundworks will be carried out until undisturbed natural geology is encountered or until the groundworks reach 3 m below the existing ground bearing slab at Level 1, whichever is encountered first (Figures 4-7).
 - Task ID 50740 Drainage attenuation slit trench (Figure 8).
- 6.4 In addition, an indicative programme of works summarising the planned Construction Contractor activities associated with the basement slab removal and excavation warranting archaeological monitoring is detailed in Appendix B.
- 6.5 Prior to the commencement of fieldwork, ADAS contacted the Museum of London to obtain a site code for the project. The site code GTO23 was issued on 20.06.2023 by the London Archaeological Archive and Research Centre.
- 6.6 The Construction Contractors, the landowner and all other relevant third parties will be notified by the commissioning organisation of the need for the archaeological monitoring and recording to be undertaken.
- 6.7 The Construction Contractors will allow the archaeologist conducting the archaeological monitoring and recording access to their works for the purpose of recording archaeological remains. In some circumstances, if important archaeological remains are found, works may have to cease while archaeological recording/sampling is completed. All works will be undertaken in accordance with the ClfA's *Standard and guidance for an archaeological watching brief* (2020a).
- 6.8 Excavation will be by hand, or mechanical excavator fitted with a toothless bucket if hand digging is not possible. The mechanical excavator will be used only for the removal of nonarchaeologically significant material. Machining should stop at the first archaeological horizon. All archaeological material will be excavated by hand.
- 6.9 The site archaeologist will examine all exposed surfaces, cleaning as required.
- 6.10 The location of the area of the works shall be identified on a site plan that has been related to the OS National Grid. North shall be clearly indicated. Any archaeological features identified will be cleaned and recorded in plan at an appropriate scale.



6.11 Should there be unsupported sections deemed unsafe by the onsite staff, no member of staff will enter the excavated area. In this instance recording of the excavated areas will be conducted from ground level unless shoring has been installed by a competent person.

Sampling Method

- 6.12 The various types of features and deposits revealed following the removal of non-significant overburden during archaeological monitoring will be subject to the following sampling levels;
 - Any deposits relating to domestic/industrial activity (post holes, hearths, floor surfaces/floor make up deposits) will be sampled to a degree that is sufficient to characterise them and achieve the objectives of the evaluation. Where appropriate, excavation will not compromise the integrity of the archaeological record and will be undertaken in such a way as to allow for their subsequent protection or through the opportunity for better excavation under the conditions pertaining to investigation of a larger area.
 - Discrete features will be subject to the following sampling levels. Pits will require a minimum of a 50% sample of the deposits from each feature. Linear features (e.g., ditches/gullies, paths/tracks) will require a minimum of a 10% sample or 1m wide section of these deposits from each feature and all terminals, junctions and relationships will be investigated.
- 6.13 Additional excavation up to complete removal may be required of any features should the excavated samples fail to provide the necessary information to enable their purpose or date to be ascertained.
- 6.14 There may be cases when individual features do not merit these sampling levels. Any sampling variation would be agreed following discussion with the Client and GLAAS.
- 6.15 All archaeological material will be excavated by hand.
- 6.16 The development of an appropriate environmental sampling strategy will depend upon the survival and condition of the deposits identified. GLAAS will be consulted for site-specific guidance at the earliest possible opportunity. In general terms, should any archaeological deposits be identified which merit environmental sampling it is anticipated that the following strategies will be followed;
 - Bulk environmental soil samples for plant macro-fossils, small animal and fish bones and other small artefacts will be taken from appropriate, well-sealed and dated/datable archaeological deposits. The collection and processing of environmental samples will be undertaken in accordance with Historic England guidelines (English Heritage, 2011).
 - The residues and sieved fractions of the bulk environmental soil samples will be recorded and retained with the project archive. For charred material, bulk samples of 40-60 litres in volume



will be taken for processing by flotation. All samples will be floated on a 250-300µm mesh and the heavy residues washed over a 0.5-1mm mesh. The heavy residues will be scanned with a magnet to recover micro-slags.

6.17 Other samples will be taken, as appropriate, in consultation with appropriate specialists, the Historic England Regional Adviser in Archaeological Science and with GLAAS (e.g., dendrochronology, soil micromorphology, monolith samples, C14, etc.). Samples will be taken for scientific dating where necessary for the development of subsequent mitigation strategies.

Recording Systems

- 6.18 Context sheets should include all relevant stratigraphic relationships and for complex stratigraphy a separated matrix diagram should be employed. This matrix should be fully checked during the course of the investigation.
- 6.19 The site archive will be so organised as to be compatible with other archaeological archives produced in Greater London. Individual descriptions of all archaeological strata and features excavated or exposed will be entered onto prepared pro-forma recording sheets. Sample recording sheets, sample registers, finds recording sheets, access catalogues and photo record sheets will also be used. This requirement for archival compatibility extends to the use of a computerised database.
- 6.20 Plans of each area showing the extent of the area (tied to Ordnance Survey National Grid and located on a 1:2,500 plan), should be produced which also show the extent of all stratigraphic units, and appropriate details within stratigraphic units. Overall site plans should be drawn at 1:100. Plans of archaeological features should be drawn at 1:20. Sections should be drawn at 1:10 or 1:20 depending on the complexity of the feature.
- 6.21 All archaeological plans and sections will be produced in either digital form or in a format that will be scanned and will include context numbers and Ordnance Datum (OD) spot heights for all principal strata and features.
- 6.22 A digital photographic record of the project is required, illustrating in both detail and general context the principal features and finds discovered. The photographic record will also include working shots to illustrate more generally the nature of the archaeological operation mounted. A photographic scale (including north arrow) shall be included in the case of detailed photographs. The photographic record shall be accompanied by a photographic register detailing as a minimum feature number, location and direction of shot.



- 6.23 All finds deriving from stratified deposits will be retained for post-excavation reporting and analysis. In the case of abundant quantities of a common material occurring a representative sample only will the retained, following consultation with GLAAS.
- 6.24 All artefacts and ecofacts identified during the monitoring will be handled according to the requirements of the *General Standards for the Preparation of Archaeological Archives Deposited* with the Museum of London (Museum of London, 2009).
- 6.25 All finds and samples will be treated in a proper manner and to the standards of the CIfA and the Institute of Conservation (ICON) guidelines (CIfA, 2020b; ICON, 2020). They will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the appropriate CIfA and ICON guidelines (See Appendix A).

Archaeological Contractor

6.26 The field team deployed by ADAS will include only full time professional archaeological staff. All staff in supervisory positions should be members, at the appropriate level, of the Chartered Institute for Archaeologists (CIfA).

7 Procedure for Unexpectedly Complex Discovery

- 7.1 In the event that human remains, treasure or potentially nationally significant archaeological remains are encountered, the Principal Contractor and any sub-contractors would be required to cease all works at that location until further instruction is provided by the project archaeologist.
- 7.2 The project archaeologist would inform the ADAS project manager who would inform the Client. GLAAS will then be informed as soon as is practically feasible by phone or in person. ADAS would also confirm the circumstances of the discovery in writing within twenty-four hours, providing digital photographs and as much information as is available that would assist in determining the heritage significance of the discovery.

Human Remains

- 7.3 Any human remains discovered would in the first instance be left in situ, covered and protected. ADAS will inform the Coroner within fourteen days (if appropriate). Advice would be sought by ADAS from the Ministry of Justice as to whether a licence may be required to exhume any or all remains. Where possible, preservation in situ would be preferred to exhumation.
- 7.4 Where possible, visible grave goods and other obvious artefacts would be recorded and removed before the end of the day of discovery, to avoid the risk of vandalism or theft.



7.5 All treatment of human remains would follow best practice guidance (Historic England, 2018; Mitchell and Brickley, 2017).

Treasure

- 7.6 Under the Treasure Act 1996 (and amendments) 'treasure' can be summarised as any object at least 300 years old when found which is not a coin but has metallic content of which at least 10 per cent by weight is precious metal, when found, is at one at least two coins in the same find which are at least 300 years old at that time and have that percentage of precious metal, when found, is one of at least ten coins in the same find which are at least 300 years old at that time and have that percentage of precious metal, when found, is one of at least ten coins in the same find which are at least 300 years old at that time, any object at least 200 years old when found which belongs to a class designated by the Secretary of State considers to be of outstanding historical, archaeological or cultural importance, any object found associated with treasure except unworked natural objects, and any other object that would have been Treasure Trove before the 1996 Act. Subject to the Provisions of the Treasure Act, all material that is defined as Treasure is vested in the franchisee or, if none, the Crown.
- 7.7 Any finds made that are identified under this Act would be reported to ADAS, who would inform the local Coroner.
- 7.8 To protect the finds from theft, where possible, the archaeological contractor would record the finds and remove them to a safe place on the day of discovery.

Potentially nationally significant archaeological remains

- 7.9 In the event that unexpected, potentially nationally significant archaeological remains are identified, ADAS would immediately inform the Client. Historic England and the Local Authority Archaeologist would then be informed as soon as is practically possible. ADAS would investigate whether preservation in situ is feasible and any other constraints.
- 7.10 If preserving archaeological remains (*preservation in-situ*) is not feasible, ADAS would produce an updated WSI to include works appropriate to conduct a targeted archaeological excavation on that area and achieve preservation by record. The Client would allow a time period for archaeological recording and excavation, which would be determined in consultation with the Statutory Consultee, but shall not be less than 14 days.
- 7.11 In the event that well-preserved, waterlogged remains are located (e.g., preserved boats), consideration would be given, in consultation with Historic England and the Local Authority Archaeologist, for the appropriateness (or otherwise) and feasibility of their removal and conservation.



8 Monitoring Arrangements

8.1 Internal monitoring will be the responsibility of the ADAS Project Manager. Historic England and GLAAS will be informed of the start of the programme of archaeological work. They will be kept informed of any unexpected discoveries and regularly updated on the project's progress, and will be free to carry out site visits during the construction programme.

9 Post Fieldwork Analysis, Archive Deposition and Publication

- 9.1 All post-excavation procedures, archiving and report production (including publication as appropriate) will be in accordance with the CIFA *Standard and guidance for an archaeological watching brief* (2020a) and GLAAS *Guidelines for Archaeological Projects in Greater London* (2015).
- 9.2 If appropriate, the findings will be subject to the requirements of the Management of Research Projects in the Historic Environment (MORPHE) guidance (Historic England, 2015).

Report

- 9.3 Upon completion of the fieldwork a fully illustrated report will be prepared in accordance with current guidelines. As a minimum requirement the final report will include:
 - i. A non-technical summary of the project's background
 - ii. Museum accession number (if required)
 - iii. The site location
 - iv. The archaeological and historical background
 - v. A statement of aims and objectives of the project
 - vi. A methodology
 - vii. A description of the project's results
 - viii. An interpretation of the results in the appropriate context
 - ix. A summary of the contents of the project archive and its location (including summary catalogues of finds and samples)
 - x. Site location plan with an OS base-map, with the location of the areas monitored clearly shown at a minimum scale of 1:10,000
 - xi. Scale plans of each area in which archaeological features were recognised
 - xii. Scaled section drawings (with OD heights)
 - xiii. Site matrices where appropriate
 - xiv. A consideration of the evidence within its wider context



- xv. A summary table and descriptive text showing the features, classes and numbers of artefacts located, and soil profiles, with interpretation
- xvi. Specialist artefact and environmental reports, as necessary, with reference made to appropriate published type-series.
- xvii. Colour photographs, including general views and appropriate details
- xviii. Acknowledgements
- xix. A bibliography of sources used
- xx. Archive deposition location and agreed deposition date
- xxi. A summary of the report's presence and location on the OASIS online database
- xxii. A summary table and descriptive text showing the features, classes and numbers of artefacts located, and soil profiles, with interpretation
- 9.4 Digital pdf copies of the final agreed archaeological report arising out of the project shall be forwarded to all relevant parties within three months of the completion of fieldwork.
- 9.5 The results of the report will be published and disseminated in an appropriate form. Deposition of the report will be with the Greater London HER, where it will be incorporated into their datasets for public consultation. Uploading the project data to OASIS will be considered as placing the results of the project in the public domain. However, wider publication of the results will be considered, although the content and place of publication will be dependent on what is found, and be subject to discussion with GLAAS. For example, where a significant discovery is made, consideration will be given to the preparation of a summary note for inclusion in a Local Authority round up.
- 9.6 An allowance shall be made within the costs for the report to be published in an adequately peer reviewed journal or monograph series in the event that a significant discovery is made during the fieldwork.

Archive

- 9.7 As a minimum standard the site archive will be produced to the specifications set out in *Archaeological Archives: A guide to best practice in the creation, compilation, transfer and curation* (Brown, 2011) and in specifications produced by the Museum of London (2009).
- 9.8 All digital records made during the project will be securely stored in an appropriate format and media which can be maintained in perpetuity in their original form and in line with current best practice detailed in *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* (Brown, 2011).



- 9.9 An ordered and indexed project archive will be prepared in accordance with the guidelines contained in *Conservation and Care of Archive and Library Collections* (ICON, 2017); *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC, 1990); *Standards and Guidance in the Care of Archaeological Collections (Society for Museum Archaeology, 2020)*; and *Standard and Guidance for the Creation, Compilation, Transfer, and Deposition of Archaeological Archives (ClfA, 2020c)*.
- 9.10 The archive will be submitted to the Museum of London (MoL, 2009), whose requirements will be followed. The archive will be submitted within one month of the completion of the final publication report with a summary of the contents of the archive supplied to the Historic Environment Advisor.
- 9.11 Geo-referenced ArcGIS shapefiles defining the locations of the monitored intrusive works will be provided to GLHER.
- 9.12 An OASIS form will be completed initially prior to commencement of the project and submitted to the Archaeological Data Service (ADS).

10 Other Matters

Communication

10.1 All queries and communication are to be directed through ADAS. No comment is to be made about this WSI or project to the media or other parties.

Copyright

10.2 Working under the terms of the Copyright, Design and Patents Act 1988, RSK ADAS Ltd shall retain full copyright with regard to written, digital and graphic material. However, following project completion, the Client, the Greater London HER, the Museum of London and the Archaeology Data Service (ADS) may, in the interest of informing and advancing the profession, make responsible use of the data, provided that any material copied or cited in reports is duly acknowledged and all copyright conditions observed.

Insurance

- 10.3 RSK ADAS Ltd has the following insurance cover:
 - Employers Liability: £25,000,000
 - Public Liability: £15,000,000
 - Professional Indemnity: £5,000,000



Staff and Timetable

- 10.4 The field team will consist of a project leader, who will carry out the day-to-day monitoring, supplemented by additional archaeologists if required. The duration of the fieldwork will be dependent upon the Construction Contractor's programme.
- 10.5 The following external specialists may be invited to advice and report on specific aspects of the project as necessary.
 - Dr. A. Irving specialising in the identification and assessment of Roman and post-Roman pottery.
 - Dr. K. Leahy specialising in the identification and assessment of post-Roman and early medieval artefacts, particularly metalwork.
 - Dr. R. Mackenzie specialising in the identification and assessment of waste metalworking residues.
 - *Q. Mould specialising in the identification and assessment of leather artefacts.*
 - Sarah Percival specialising in the identification and assessment of prehistoric pottery and ceramics.
 - I. Rowlandson specialising in the identification and assessment of Iron Age and Roman pottery.
 - J Rylatt/Dr. D. Underhill specialising in the identification and assessment of lithic materials and tools.
 - J. Stewart, Specialist in London Geoarchaeology
 - M. Taylor/M. Bamforth specialising in the identification and assessment of waterlogged wood.
 - Dr. R. Tyson specialising in the identification and assessment of glass.
 - J. Wood specialising in the identification and assessment of animal bone & human remains.
 - J. Young specialising in the identification and assessment of post-Roman pottery, ceramic building material and fired clay.
- 10.6 Depending upon the nature of the deposits and artefacts encountered or the availability of specialists, it may be necessary to consult other specialists not listed here.

Health and Safety

10.7 RSK ADAS Ltd will carry out all works in accordance with the Health and Safety at Work Act 1974 and all subsequent health and safety legislation. RSK ADAS Ltd staff and sub-contractors will also adhere to the Principal Contractor's policies and procedures. A site-specific risk assessment will be prepared prior to commencement of the contract and included in the project file.



10.8 In the unlikely event of any munitions or unexploded ordnance being uncovered, all works shall cease within the area, which will be fenced off. Their presence will immediately be reported to the local police authorities, the developer and ADAS. No works will continue in the area until it has been made safe.

Public Engagement, Participation and Benefit

- 9.13 Due to the limited predicted area of archaeological survival, there is minimal potential for public participation during the fieldwork. However, ADAS will explore potential for public education on the methodology of commercial archaeology, especially relating to desk-based map regression and the built heritage aspect of the redevelopment. Discussions will take place post fieldwork with GLAAS and the Client as to the appropriateness of any public outreach and the precise nature of that outreach.
- 9.14 The results will be made publicly available on the ADS in due course. If interesting discoveries are made information relating to these finds may be disseminated to the wider public via ADAS social media channels.

Staff Training and CPD

10.9 ADAS has a fully documented mandatory Performance Management system for all staff which reviews personal performance, identifies areas for improvement, sets targets and ensures the provision of appropriate training. As part of the company's requirement for Continuous Professional Development, all members of staff are also required to maintain a Personal Development Record (PDR) which is reviewed within the Performance Management system.

Contacts

10.10 Principal contacts are as below:

•	Diarmuid O Seaneachain	Associate Director ADAS	07720 497142
•	Peter Vellet	Senior Archaeology Consultant ADAS	07993 365861

- Jason Stewart Senior Geoarchaeology Consultant ADAS 07768 560231
- Mr Sandy Kidd
 Archaeology Advisor GLAAS
 020 7973 3215



11 Bibliography

ADAS (2023a) Archaeological Standards Manual, Internal Document.

ADAS (2023b) Archaeological Desk-Based Assessment: Great Ormond Street Hospital Children's Cancer Centre (GOSHCCC). Unpublished Client Report (Document Ref: ART69105-368-01 (05)).

BGS (2023) British Geological Society – Geology of Britain Viewer, Available at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html [accessed November 2023].

Brown, D.H (2011) *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation, Archaeological Archives Forum, Available at:*

https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-799-

1/dissemination/pdf/AArchives_v2.pdf [accessed November 2023].

CIFA (2020a) *Standard and Guidance for an archaeological watching brief*, Available at <u>https://www.archaeologists.net/sites/default/files/CIFAS&GWatchingbrief_2.pdf</u> [accessed November 2023].

CIFA (2020b) Standards and Guidance for the collection, documentation, conservation and research of archaeological materials, Available at:

https://www.archaeologists.net/sites/default/files/CIfAS&GFinds_1.pdf [accessed November 2023].

CIFA (2020c) Standard and guidance for the creation, compilation, transfer and deposition of the archaeological archives, Available at:

https://www.archaeologists.net/sites/default/files/CIFAS%26GArchives_3.pdf [accessed November 2023].

English Heritage (1991) The Management of Archaeological Projects 2. Historic England Guidance

English Heritage (2011) *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition),* Available at: <u>https://historicengland.org.uk/images-books/publications/environmental-archaeology-2nd/</u> [accessed November 2023].

Getmapping (2023) Getmapping.com. Available at:

https://www1.getmapping.com/Webshop/Web/CommonPages/Main/preview.aspx?srid=27700& x=489627&y=128475&searchType=pafpostzon_placenameµsite=none [accessed November 2023].

GLAAS (2015) Guidelines for Archaeological Projects in Greater London, Available at:

https://historicengland.org.uk/images-books/publications/glaas-standards-for-archaeological-work/ [accessed November 2023].



H and W Survey and Consulting (2022) *Topographic Survey, Great Ormond Street Hospital*, Drawing *Number* 50984 / 3.

Historic England (2015) *Management of Research Projects in the Historic Environment, The MoRPHE Project Managers' Guide*. Historic England Guidance.

Historic England (2018) The Role of the Human Osteologist in an Archaeological Fieldwork Project. Historic England Guidance.

Mitchell, P.D and Brickley, M. (eds.) (2017) *Updated Guidelines to the Standards for Recording Human Remains*. Chartered Institute for Archaeologists (Reading).

MoLAS (2000) The archaeology of Greater London: An assessment of archaeological evidence in the area now covered by Greater London. Lavenham press (Lavenham).

ICON (2017) Conservation and Care of Archive and Library Collections. The Institute of Conservation.

ICON (2020) Icon Professional Standards and Judgement & Ethics. The Institute of Conservation.

NHLE (2023) *Search the List*, Available at: <u>https://historicengland.org.uk/listing/the-list/</u> [accessed November 2023].

Mills, P. (2023) The Civil War Defences of North London reviewed: Hoxton to Bloomsbury. London Archaeologist. Winter 2023 pp. 295-306.

MOLA (2002) A research framework for London archaeology Available at: <u>https://www.mola.org.uk/sites/default/files/downloads/Research%20framework%20for%20London%20</u> <u>Archaeology%20MOLA%202002.pdf</u> [accessed November 2023].

Museum of London (2009) *General Standards for the Preparation of Archaeological Archives Deposited* with the Museum of London.

Research Frameworks (2023) *Research Framework for London Archaeology*, Available at: https://researchframeworks.org/rfla/ [accessed November 2023].

Society for Museum Archaeology (2020) *Standards and Guidance in the Care of Archaeological Collections,* Available at: <u>https://326gtd123dbk1xdkdm489u1q-wpengine.netdna-ssl.com/wp-</u> <u>content/uploads/2020/04/Standards_and_Guidance_in_the_Care_of_Archaeological_Collections.pdf</u> [accessed November 2023].

UK Legislation

Burial Act 1857. Available at: <u>http://www.legislation.gov.uk/ukpga/Vict/20-21/81/contents</u> [accessed November 2023].



Health and Safety at Work etc. Act 1974. Available at: <u>https://www.legislation.gov.uk/ukpga/1974/37</u> [accessed November 2023].

Planning (Listed Buildings and Conservation Areas) Act 1990. Available at: <u>http://www.legislation.gov.uk/ukpga/1990/9/contents</u> [accessed November 2023].

Treasure Act 1996 (amended 2023). Available at:

https://www.legislation.gov.uk/ukpga/1996/24/contents [accessed November 2023].

Treasure (Designation) Order 2002. Available at:

https://www.legislation.gov.uk/ukdsi/2002/0110424700/contents [accessed November 2023].



Appendix A: Archaeological Standards and Guidelines

- AAF 2011 Archaeological Archives. A guide to best practice in creation, compilation, transfer and curation. Archaeological Archives Forum
- AAI&S 1988 The Illustration of Lithic Artefacts: A guide to drawing stone tools for specialist reports. Association of Archaeological Illustrators and Surveyors Paper 9
- AAI&S 1994. The Illustration of Wooden Artefacts: An Introduction and Guide to the Depiction of Wooden Objects. Association of Archaeological Illustrators and Surveyors Paper 11
- AAI&S 1997. Aspects of Illustration: Prehistoric pottery. Association of Archaeological Illustrators and Surveyors Paper 13
- AAI&S An Introduction to Drawing Archaeological Pottery. Association of Archaeological Illustrators and Surveyors, Graphic Archaeology Occasional Papers 10
- ACBMG 2004 Draft Minimum Standards for the Recovery, Analysis and Publication of Ceramic Building Material. (Third edition) Archaeological Ceramic Building Materials Group
- AEA 1995 Environmental Archaeology and Archaeological Evaluations. Recommendations concerning the environmental archaeology component of archaeological evaluations in England. Working Papers of the Association for Environmental Archaeology No. 2
- BABAO and CIfA, 2004 Guidelines to the Standards for Recording Human Remains. British Association for Biological Anthropology and Osteoarchaeology and Chartered Institute of Field Archaeologists. Chartered Institute of Field Archaeologists Technical Paper 7 (Reading)
- Barber, B., Carver, J., Hinton, P. and Nixon, T. 2008 Archaeology and development. A good practice guide to managing risk and maximising benefit. Construction Industry Research and Information Association Report C672
- Bayley, J. (ed.) 1998 Science in Archaeology. An agenda for the future. English Heritage (London)
- Bewley, R., Donoghue, D., Gaffney, V., Van Leusen, M., Wise, M., 1998 revised by Bewley, R and Niven, K
 2011 Archiving Aerial Photography and Remote Sensing Data: A guide to good practice. Archaeology
 Data Service
- Blake, H. and P. Davey (eds.) 1983 Guidelines for the processing and publication of Medieval pottery from excavations, report by a working party of the Medieval Pottery Research Group and the Department of the Environment. Directorate of Ancient Monuments and Historic Buildings Occasional Paper 5, 23-34, DoE, London
- Brickley, M. and McKinley, J.I. (eds) 2004 Guidelines to the Standards for Recording Human Remains. IfA Paper No 7, Chartered Institute of Field Archaeologists (Reading)
- Brickstock, R.J. 2005 The Production, Analysis and Standardisation of Romano-British Coin Reports. English Heritage (Swindon)
- Brown, A. and Perrin, K. 2000 A Model for the Description of Archaeological Archives. English Heritage Centre for Archaeology/ Chartered Institute of Field Archaeologists (Reading)
- Buikstra, J.E. and Ubelaker D.H. (eds.) 1994 Standards for Data Collection from Human Skeletal Remains. (Fayetteville, Arkansas)
- CIfA, 1992, Guidelines for Finds Work. Chartered Institute of Field Archaeologists (Reading)



CIfA, 2019, Code of Conduct. Chartered Institute for Archaeologists (Reading)

- CIFA, 2020, Standard and Guidance for Archaeological Desk-based Assessment. Chartered Institute for Archaeologists (Reading)
- CIFA, 2020, Standard and guidance for an archaeological watching brief. Chartered Institute for Archaeologists (Reading)
- CIFA, 2020, Standard and Guidance for Archaeological Field Evaluation. Chartered Institute for Archaeologists (Reading)
- CIFA, 2020, Standard and Guidance for Archaeological Excavation. Chartered Institute for Archaeologists (Reading)
- CIFA, 2020, Standard and Guidance for Archaeological Investigation and Recording of Standing Buildings or Structures. Chartered Institute for Archaeologists (Reading)
- CIFA, 2020, Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials. Chartered Institute for Archaeologists (Reading)
- CIFA, 2020, Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives. Chartered Institute for Archaeologists (Reading)
- Clark, J, Darlington, J. and Fairclough, G. 2004 Using Historic Landscape Characterisation. English Heritage (London)
- Jones, D 2010 Waterlogged Wood: guidelines on the recording, sampling, conservation and curation of structural wood. English Heritage (London)
- Dawson, A and Hillhouse, S 2011 Spectrum 4.0. The UK Museums Documentation Standard. Second edition. Museums Documentation Association
- Cox, M., 2002 Crypt Archaeology: an approach. Chartered Institute of Field Archaeologists Technical Paper 3 (Reading)
- Darvill, T. and Atkins, M., 1991 Regulating Archaeological Works by Contract. ClfA Technical Paper No 8, Chartered Institute of Field Archaeologists (Reading)
- Davey P.J. 1981 Guidelines for the processing and publication of clay pipes from excavations. Medieval and Later Pottery in Wales, IV, 65-87
- Eiteljorg, H., Fernie, K., Huggett, J. and Robinson, D. 2002, Revised by Dobson, S, Lancia, R and Niven, K 2011 CAD: A guide to good practice. Archaeology Data Service (York)
- EA 2005 Guidance on Assessing the Risk Posed by Land Contamination and its Remediation on Archaeological Resource Management. English Heritage/ Environment Agency Science Report P5-077/SR (Bristol)
- EH 2012, Guidelines for the recovery, analysis and conservation of Waterlogged Organic Artefacts
- EH 1998a, Dendrochronology. Guidelines on producing and interpreting dendrochronological dates. English Heritage (London)
- EH 1998b, Identifying and Protecting Palaeolithic Remains. Archaeological guidance for planning authorities and developers. English Heritage (London)



- EH 2000, Managing Lithic Scatters. Archaeological guidance for planning authorities and developers. English Heritage (London)
- EH 2011 Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation. English Heritage Centre for Archaeology Guidelines (London)
- EH, 2004 Human Bones from Archaeological Sites. Guidelines for producing assessment documents and analytical reports. English Heritage (London)
- EH 2002 With Alidade and Tape: graphical and plane table survey of archaeological earthworks. English Heritage (Swindon)
- EH 2003 Twentieth-Century Military Sites. Current approaches to their recording and conservation English Heritage (Swindon)
- EH 2006 Archaeological Science at PPG16 interventions: Best Practice Guidance for Curators and Commissioning Archaeologists. English Heritage (Swindon)
- EH 2006a Guidelines on the X-radiography of Archaeological Metalwork. English Heritage (Swindon)
- EH 2006b Archaeomagnetic Dating. English Heritage (Swindon)
- EH 2006c Science for Historic Industries: Guidelines for the investigation of 17th- to 19th-century industries. English Heritage (Swindon)
- EH 2014 Our Portable Past. English Heritage (Swindon)
- EH 2007 Understanding the Archaeology of Landscapes. A guide to good recording practice. English Heritage (Swindon)
- EH 2008 Luminescence Dating. Guidelines on using luminescence dating in archaeology. English Heritage (Swindon)
- EH 2008 Geophysical Survey in Archaeological Field Evaluation. English Heritage Research and Professional Services Guidelines No 1 (second edition). English Heritage (Swindon)
- EH 2008 Research and Conservation Framework for the British Palaeolithic. English Heritage/Prehistoric Society (Swindon)
- EH 2008 Investigative Conservation. Guidelines on how the detailed examination of artefacts from archaeological sites can shed light on their manufacture and use. English Heritage (Swindon)
- EH and Church of England, 2005, Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England. English Heritage (London)
- Gaffney, C. and Gater, J., with Ovenden, S., 2002, The Use of Geophysical Techniques in Archaeological Evaluations. CIfA Technical Paper 9, Chartered Institute of Field Archaeologists (Reading)
- Gillings, M. and Wise, A., 1999 revised by Evans, T, Halls, P and Niven, K 2011, GIS: A guide to good practice. Archaeology Data Service (York)
- Gurney, D.A., 1985, Phosphate Analysis of Soils: A Guide for the Field Archaeologist. ClfA Technical Paper 3, Chartered Institute of Field Archaeologists (Reading)
- Handley, M., 1999, Microfilming Archaeological Archives. ClfA Technical Paper 2, Chartered Institute of Field Archaeologists (Reading)



- Historic England 2015 Geoarchaeology. Using earth sciences to understand the archaeological record. (London)
- Historic England, 2015 Where on Earth are we? The role of Global Navigation Satellite Systems (GNSS) in Archaeological Field Survey
- Historic England, 2015, Metric Survey Specifications for Cultural Heritage
- Historic England, 2015, Management of Research Projects in the Historic Environment: The MoRPHE Project Manager's Guide
- Historic England, 2015, Guidelines for the best practice Archaeometallurgy
- Historic England, 2016, Understanding historic buildings
- ICON, 2011, Main General Terms and Definitions
- ICON, 2012, Guidelines for Management of Environmental Conditions. Open Storage Facilities: Definitions and Characteristics of Collection Centres Dedicated to the Preservation and Management of Cultural Heritage
- ICON, 2014, The Professional Standards of the Institute of Conservation (Icon)
- ICON, 2017, Conservation and care of archive and library collections
- ICON, 2017, Conservation Process. Decision Making, Planning and Implementation
- Mays, S., 1991, Recommendations for Processing Human Bone from Archaeological Sites. Ancient Monuments Lab Report 124/91 (London)
- McKinley, J.I. and Roberts, C. 1993 Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains. Institute of Field Archaeologists Technical Paper No. 13 (Reading)
- Mitchell, P.D and Brickley, M. (eds.) 2017 Updated Guidelines to the Standards for Recording Human Remains. Chartered Institute for Archaeologists (Reading)
- MPRG 2000. A Guide to the Classification of Medieval Ceramics. Medieval Pottery Research Group Occasional Papers No. 1.
- MPRG 2001, Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics. Medieval Pottery Research Group
- Owen, J., 1995, Towards an Accessible Archaeological Archive. The Transfer of archaeological archives to museums: guidelines for use in England, Northern Ireland, Scotland and Wales. Society of Museum Archaeologists
- PCRG 2010 3rd Edition, The Study of Later Prehistoric Pottery: General polices and guidelines for analysis and publication. Prehistoric Ceramics Research Group Occasional Paper 12
- Philo, C. and Swann, A., 1992, Preparation of Artwork for Publication. Chartered Institute of Field Archaeologists Technical Paper No. 10 (Reading)
- RCHME 1999, Recording Archaeological Field Monuments: A descriptive specification. RCHME (Swindon)

RCHME 2007, MIDAS: A manual and data standard for monuments inventories. RCHME (Swindon) Schofield, A J, (ed.) 1998, Interpreting Artefact Scatters. Oxbow Monograph 4 (Oxford)

Richards, J. and Robinson, D. (eds.), 2001, Digital Archives From Excavation and Fieldwork: A guide to good practice. Archaeology Data Service



Robinson, W., 1998, First Aid for Underwater Finds. Archetype Books (London)

- RFG and FRG, 1993, Guidelines for the Preparation of Site and Assessments for all Finds other than Fired Clay Vessels. Roman Finds Group and Finds Research Group
- Schmidt, A., 2001 (2Nd Edition), Geophysical Data in Archaeology: A guide to good practice. Archaeology Data Service
- SGRP, 1994, Guidelines for the Archiving of Roman Pottery. Study Group for Roman Pottery
- SMA, 1993, Guidelines on the Selection, Retention and Dispersal of Archaeological Collections. Society of Museum Archaeologists
- UKIC, 1983, Packaging and Storage of Freshly Excavated Artefacts from Archaeological Sites. (United Kingdom Chartered Institute for Conservation, Conservation Guidelines No 2)
- UKIC, 1984, Environmental Standards for Permanent Storage of Excavated material from Archaeological Sites. (United Kingdom Chartered Institute for Conservation, Conservation Guidelines No 3)
- UKIC, 1990, Guidance for Conservation Practice. United Kingdom Chartered Institute for Conservation
- UKIC, 1990, Guidelines for the Preparation of Excavation Archives for Long-term Storage. United Kingdom Chartered Institute for Conservation Archaeology Section
- UKIC, 2001, Excavated Artefacts and Conservation. (United Kingdom Chartered Institute for Conservation, Conservation Guidelines No 1, revised)
- Watkinson, D.E., and Neal, V., 1998, First Aid for Finds. (3rd edition) RESCUE/United Kingdom Chartered Institute for Conservation, Archaeology Section and Museum of London
- Willis, S., 1997, (ed.) Research Frameworks for the Study of Roman Pottery. Study Group for Roman Pottery
- World Archaeology Congress 1989. The Vermillion Accord Human Remains. Motion Approved at the First Inter-Congress on the Disposal of the Dead (Vermillion)
- Young C., 1980, Guidelines for the Processing and Publication of Roman Pottery. Department of the Environment



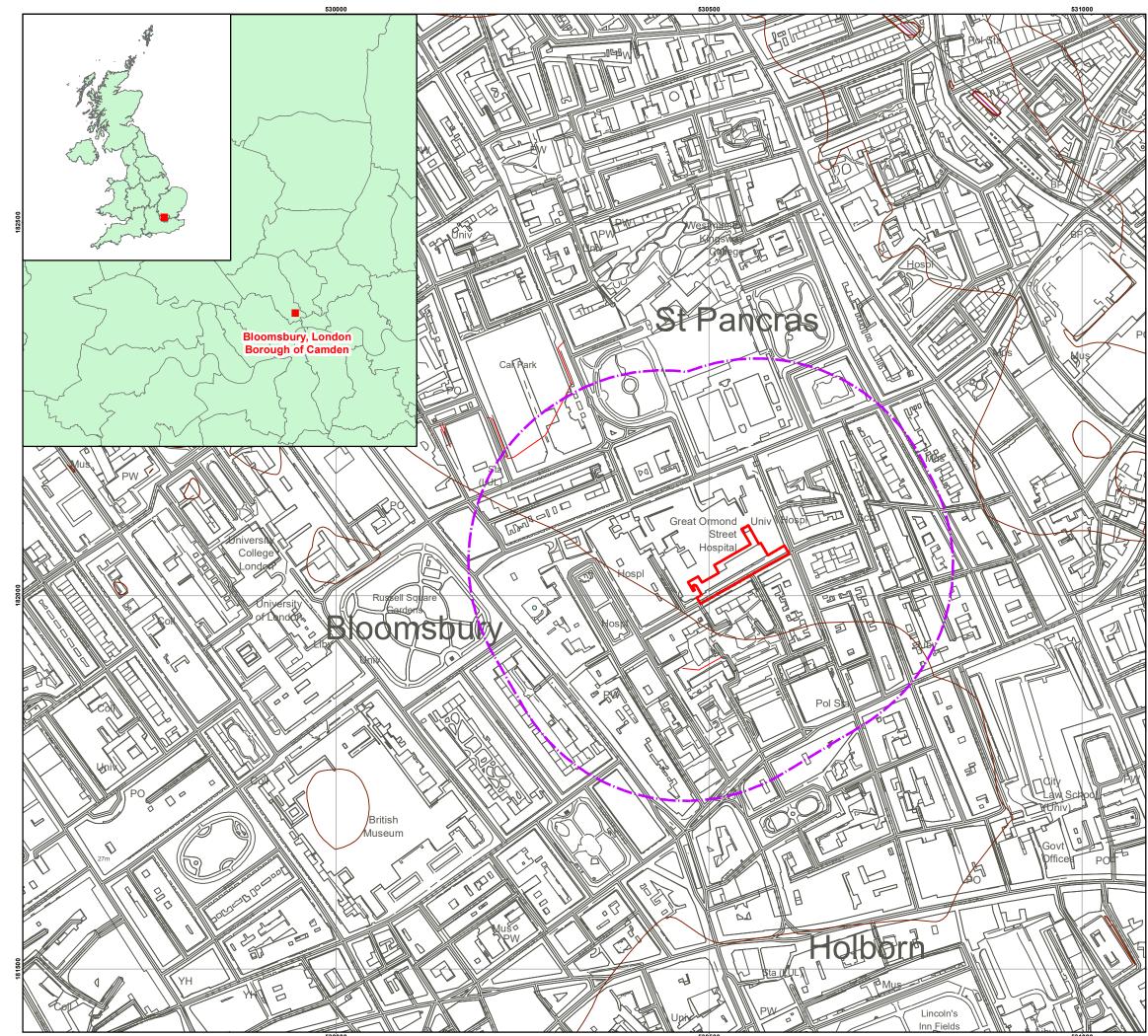
Appendix B: Indicative Construction Contractor Programme of Works

Task Description	Start Date	Duration	Finish Date	Archaeological Monitoring
Interface 63 excavation of new below ground surface water attenuation #1	18.04.2024	2wk 3d	07.05.2024	Archaeological monitoring of groundworks until undisturbed natural geology is encountered or groundworks reach 3 m below the existing ground level, whichever is encountered first
Interface 63 excavation of foul pumping chamber	11.06.2024	2wk	24.06.2024	Archaeological monitoring of groundworks until undisturbed natural geology is encountered or groundworks reach 3 m below the existing ground level, whichever is encountered first
Interface 63 excavate trench in front of PICB to new pumping chamber	08.05.2024	2wk	21.05.2024	Archaeological monitoring of groundworks until undisturbed natural geology is encountered or groundworks reach 3 m below the existing ground level, whichever is encountered first
West core base excavation	18.07.2025	1wk	25.07.2025	Archaeological monitoring of groundworks
West Core Base: Groundworks – Excavate / Blind / Bored Piles	18.07.2025	2w	31.07.2025	No archaeological monitoring

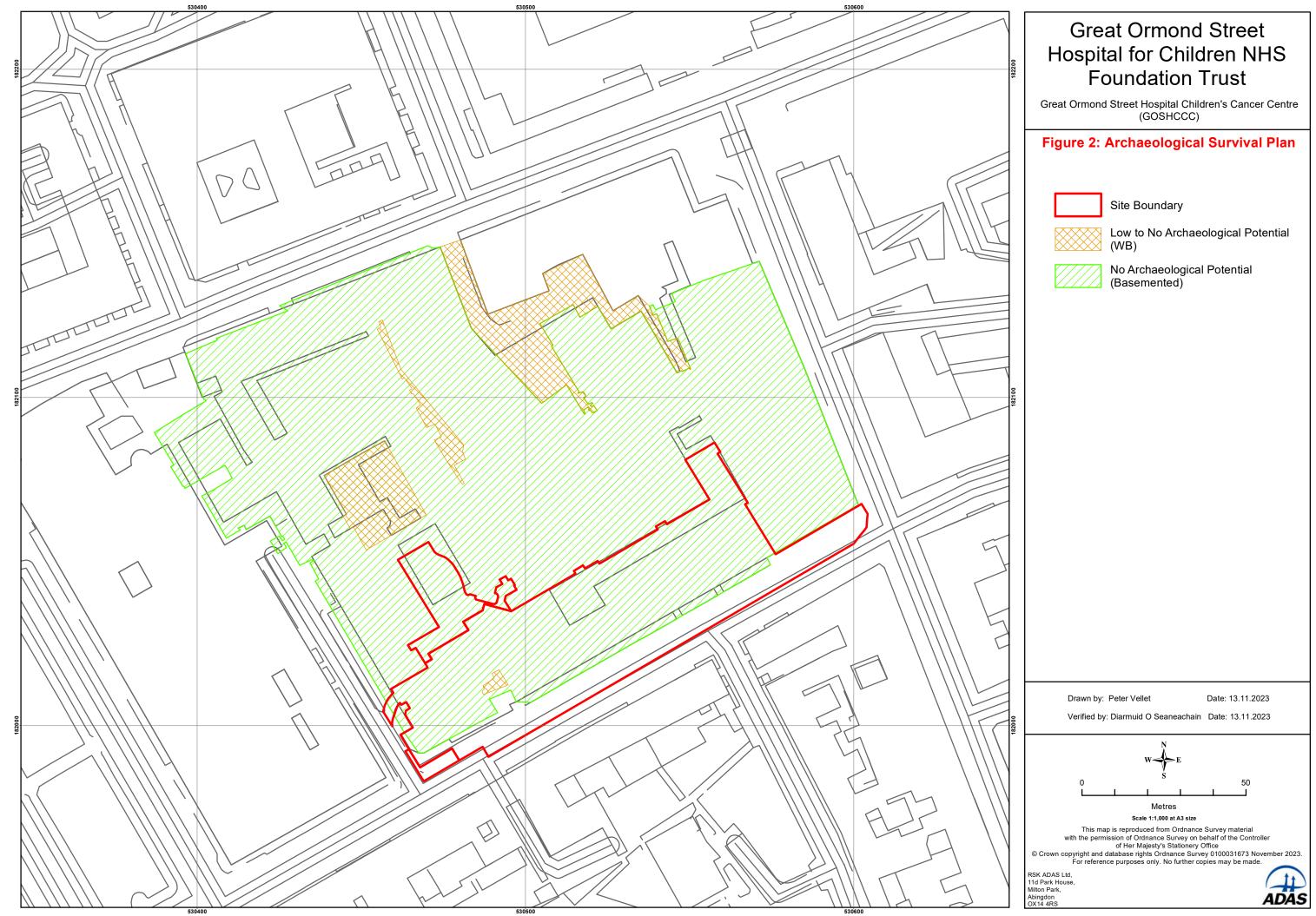


Remove existing basement slab, foundations & GOSH P100 Buttress (basement slab and foundations to be broken out progressively over the 6-week duration of work programme)	10.04.2025	6w	27.05.2025	Archaeological monitoring of groundworks
LL Piling Platform Level (19.860) to Lvl 00 (13.370) Finished Level (12.370) +300mm	08.08.2025	7w	26.09.2025	Archaeological monitoring of groundworks



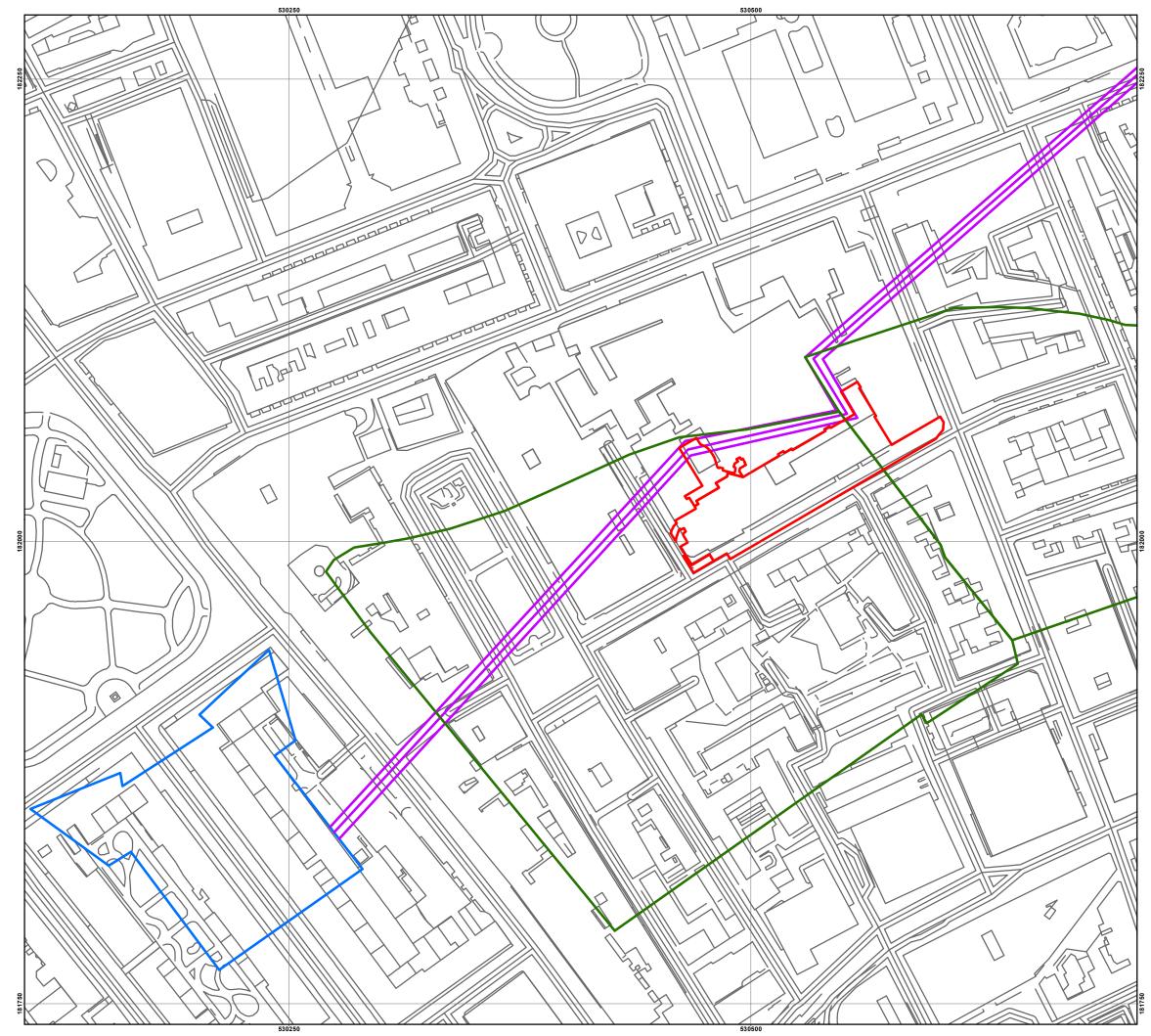


Great Ormond Street Hospital for Children NHS Foundation Trust Great Ormond Street Hospital Children's Cancer Centre (GOSHCCC)
Figure 1: Location of the Proposed Development
Site Boundary 250 m Study Area
Drawn by: Jason Stewart Date: 13.11.2023 Verified by: Diarmuid O Seaneachain Date: 13.11.2023
W→S E 0 250 ⊥ ⊥ ⊥ ⊥ ⊥ ⊥ ⊥ ⊥ ⊥
Scale 1:5,000 at A3 size This map is reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of His Majesty's Stationery Office © Crown copyright and database rights November 2023 Ordnance Survey 0100031673
RSK ADAS Ltd, 11d Park House, Milton Park, Abingdon OX14 4RS ADAS

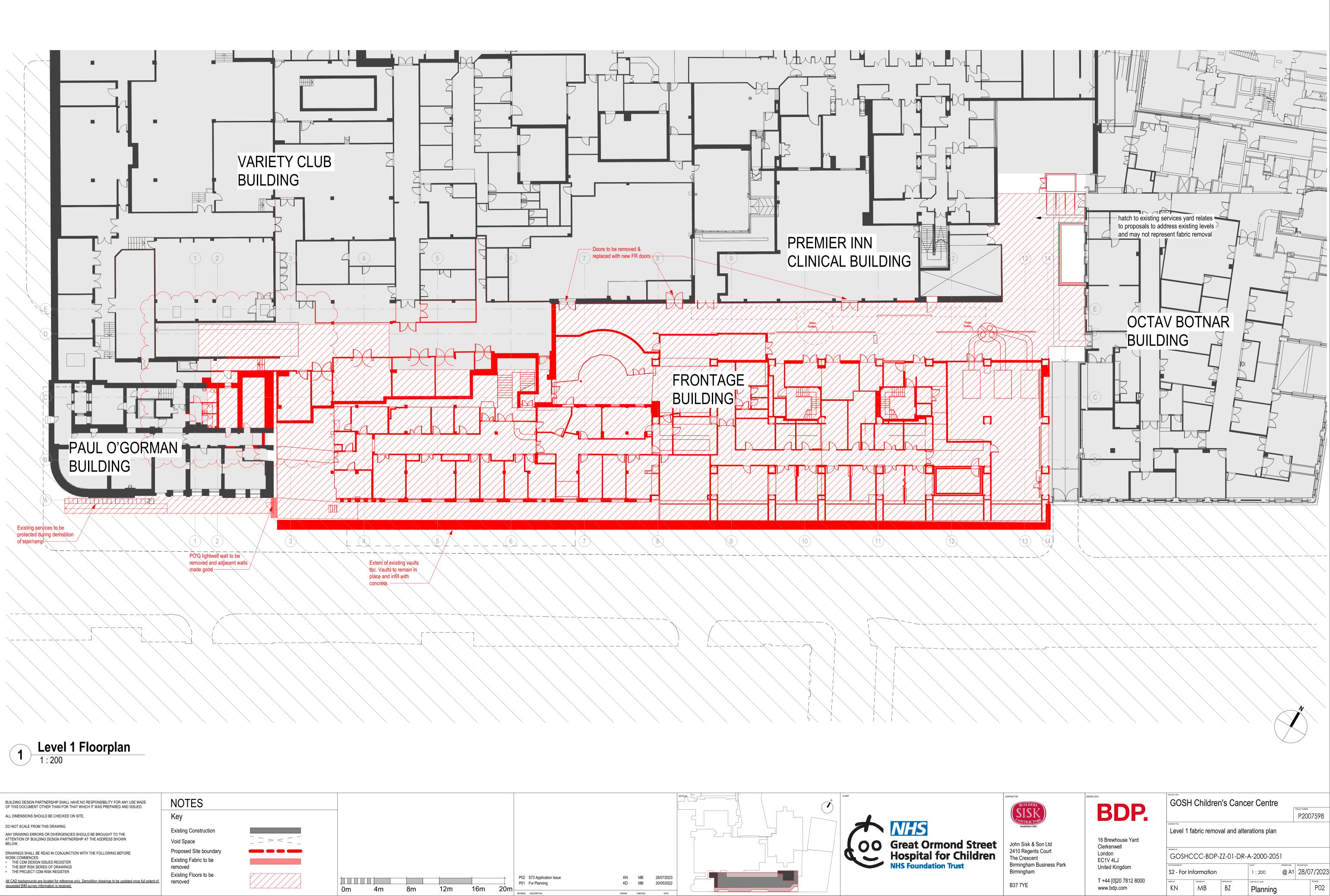




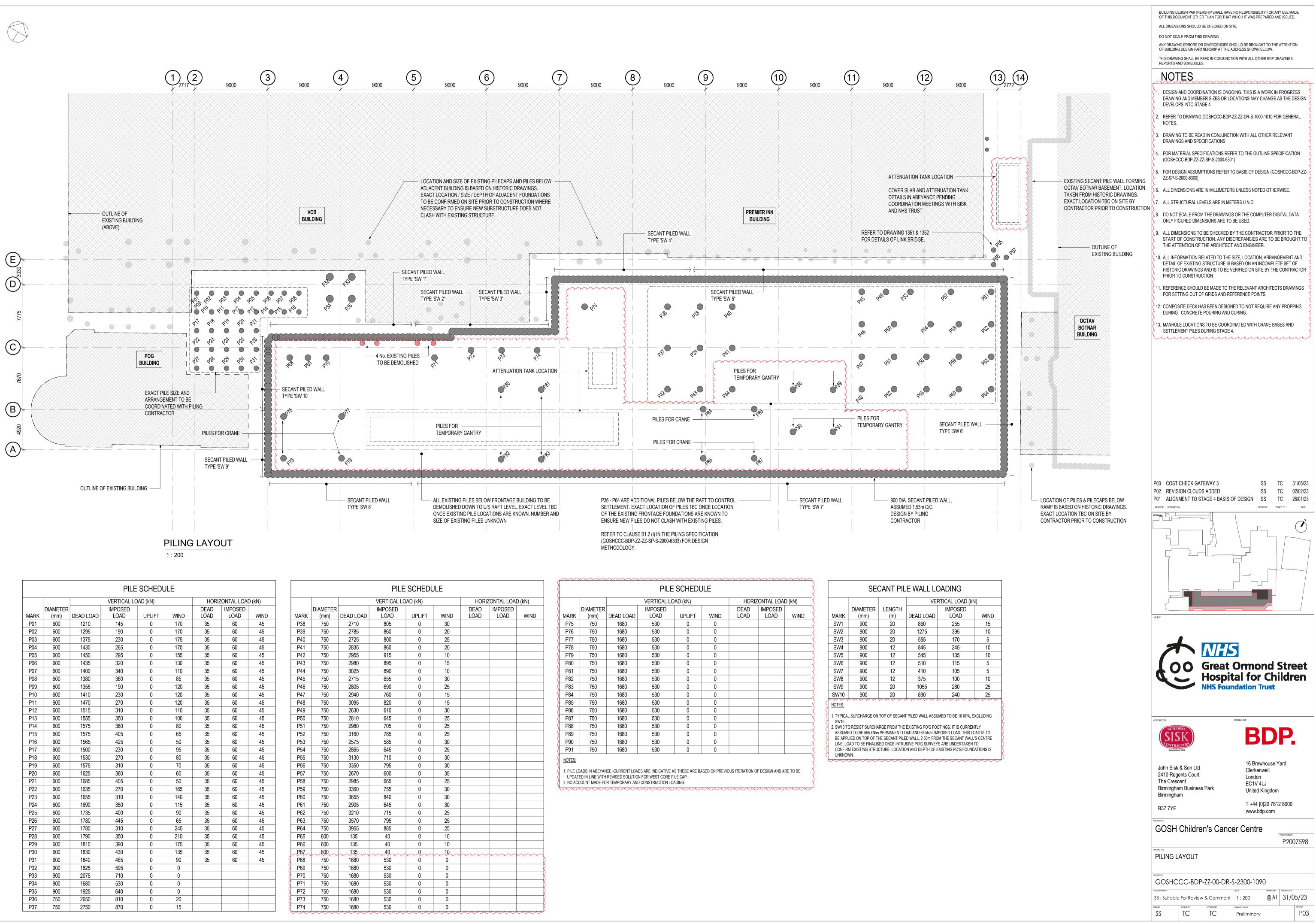




Great Ormond Street Hospital for Children NHS Foundation Trust
Great Ormond Street Hospital Children's Cancer Centre (GOSHCCC)
Figure 3: Revised Location of the Southampton Estate and English Civil War Defences in Relation to the Site Boundary
Site Boundary
Southampton Estate
Lines of Communication
Southampton Fort
n.b., revised location of the Southampton Estate and English Civil War defences informed by Figures 14 and 15 in the journal article produced by Peter Mills.
(London Archaeologist, Vol. 16 (11) Winter 2023: Civil War Defences of North London reviewed: Hoxton to Bloombury)
Drawn by: Peter Vellet Date: 10.11.2023 Verified by: Diarmuid O Seaneachain Date: 10.11.2023
W E S
0 100 Metres Scale 1:2,000 at A3 size
This map is reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of His Majesty's Stationery Office © Crown copyright and database rights November 2023 Ordnance Survey 0100031673
Milton Park, Abingdon OX14 4RS



	CC-BDP-2	ZZ-01-DR-	A-2000-205	1		
status/suitability S2 - For Inf	formation		scale 1:200	(Q) A1	revision date	7/2023
draw by KN	снескер ву МВ	APPROVED BY BZ	PURPOSE OF ISSUE Planning	0	/-	P02

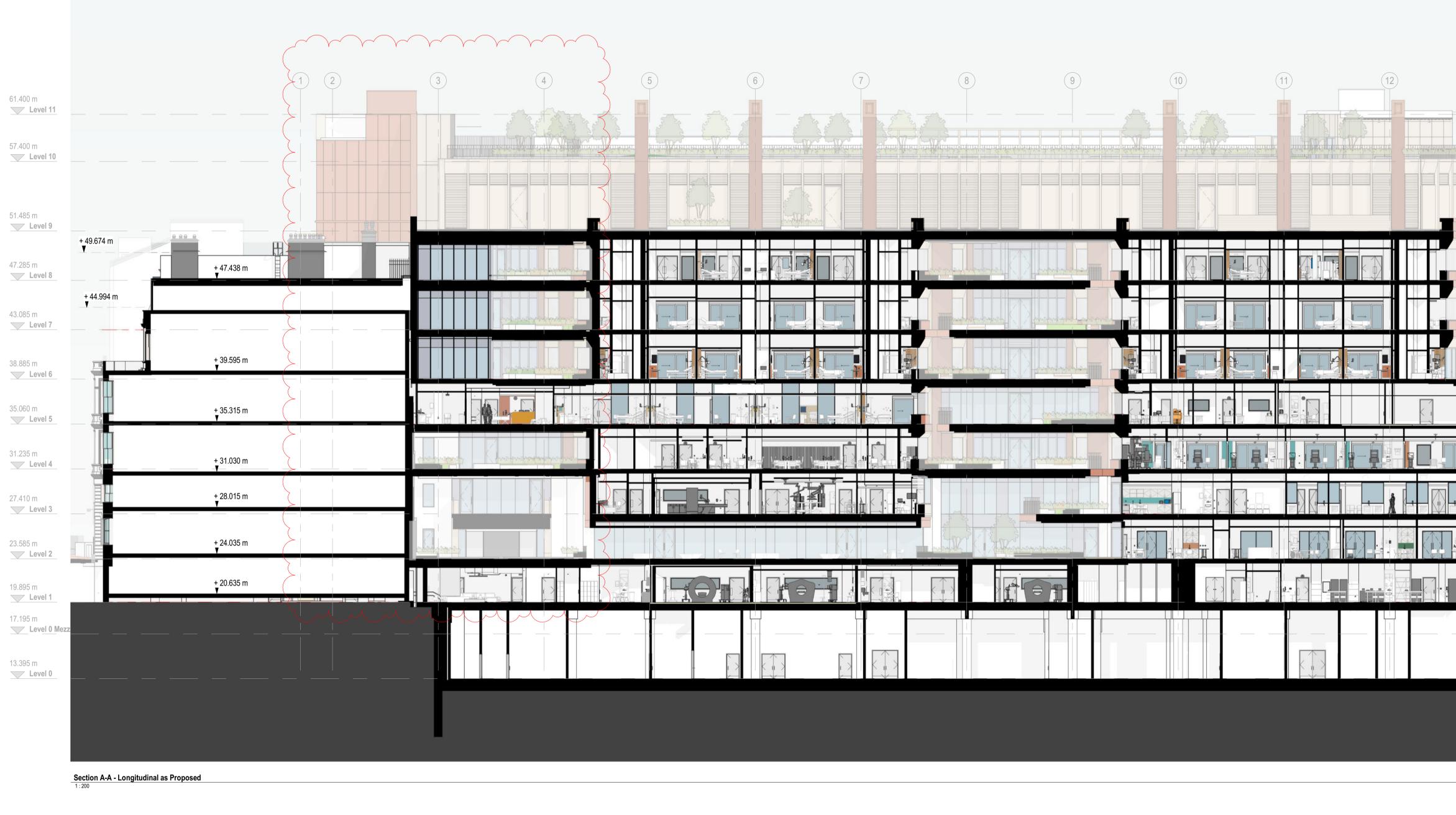


				SCHEDU				
			VERTICAL LO	HORIZONTAL LOAD (kN)				
MARK	DIAMETER (mm)	DEAD LOAD	IMPOSED LOAD	UPLIFT	WIND	DEAD LOAD	IMPOSED LOAD	WIND
P01	600	1210	145	0	170	35	60	45
P02	600	1295	190	0	170	35	60	45
P03	600	1375	230	0	175	35	60	45
P04	600	1430	265	0	170	35	60	45
P05	600	1450	295	0	155	35	60	45
P06	600	1435	320	0	130	35	60	45
P07	600	1400	340	0	110	35	60	45
P08	600	1380	360	0	85	35	60	45
P09	600	1355	190	0	120	35	60	45
P10	600	1410	230	0	120	35	60	45
P11	600	1470	270	0	120	35	60	45
P12	600	1515	310	0	110	35	60	45
P13	600	1555	350	0	100	35	60	45
P14	600	1575	380	0	80	35	60	45
P15	600	1575	405	0	65	35	60	45
P16	600	1565	425	0	50	35	60	45
P17	600	1500	230	0	95	35	60	45
P18	600	1530	270	0	80	35	60	45
P19	600	1575	310	0	70	35	60	45
P20	600	1625	360	0	60	35	60	45
P21	600	1685	405	0	50	35	60	45
P22	600	1635	270	0	165	35	60	45
P23	600	1655	310	0	140	35	60	45
P24	600	1690	350	0	115	35	60	45
P25	600	1735	400	0	90	35	60	45
P26	600	1780	445	0	65	35	60	45
P27	600	1780	310	0	240	35	60	45
P28	600	1790	350	0	210	35	60	45
P29	600	1810	390	0	175	35	60	45
P30	600	1830	430	0	135	35	60	45
P31	600	1840	465	0	90	35	60	45
P32	900	1825	595	0	0			
P33	900	2075	710	0	0			
P34	900	1680	530	0	0			
P35	900	1925	640	0	0			
P36	750	2650	810	0	20			
P37	750	2750	870	0	15			

			PILE	SCHEDU	JLE				
		VERTICAL LOAD (kN)				HORIZONTAL LOAD (kN)			
	DIAMETER		IMPOSED			DEAD	IMPOSED	. ,	
MARK	(mm)	DEAD LOAD	LOAD	UPLIFT	WIND	LOAD	LOAD	WIND	
P38	750	2710	805	0	30				
P39	750	2785	860	0	20				
P40	750	2725	800	0	25				
P41	750	2835	860	0	20				
P42	750	2955	915	0	10				
P43	750	2980	895	0	15				
P44	750	3025	890	0	10				
P45	750	2715	655	0	30				
P46	750	2805	690	0	25				
P47	750	2940	760	0	15				
P48	750	3095	820	0	15				
P49	750	2630	610	0	30				
P50	750	2810	645	0	25				
P51	750	2980	705	0	25				
P52	750	3160	785	0	25				
P53	750	2575	585	0	30				
P54	750	2865	645	0	25				
P55	750	3130	710	0	30				
P56	750	3350	795	0	30				
P57	750	2670	600	0	35				
P58	750	2985	665	0	25				
P59	750	3360	755	0	30				
P60	750	3655	840	0	30				
P61	750	2905	645	0	30				
P62	750	3210	715	0	25				
P63	750	3570	795	0	25				
P64	750	3955	885	0	25				
P65	600	135	40	0	10				
P66	600	135	40	0	10				
P67	600	135	40	0	10				
P68	750	1680	530	0	0		rrrr		
P69	750	1680	530	0	0				
P70	750	1680	530	0	0				
P71	750	1680	530	0	0				
P72	750	1680	530	0	0				
P73	750	1680	530	0	0				
P74	750	1680	530	0	0				

			VERTICAL LO	VERTICAL LOAD (kN)			HORIZONTAL LOAD (kN)		
MARK	DIAMETER (mm)	DEAD LOAD	IMPOSED LOAD	UPLIFT	WIND	DEAD LOAD	IMPOSED LOAD	WIND	
P75	750	1680	530	0	0				
P76	750	1680	530	0	0				
P77	750	1680	530	0	0				
P78	750	1680	530	0	0				
P79	750	1680	530	0	0				
P80	750	1680	530	0	0				
P81	750	1680	530	0	0				
P82	750	1680	530	0	0				
P83	750	1680	530	0	0				
P84	750	1680	530	0	0				
P85	750	1680	530	0	0				
P86	750	1680	530	0	0				
P87	750	1680	530	0	0				
P88	750	1680	530	0	0				
P89	750	1680	530	0	0				
P90	750	1680	530	0	0				
P91	750	1680	530	0	0				

SECANT PILE WALL LOADING							
			VERTICAL LOAD (kN)				
	DIAMETER	LENGTH		IMPOSED			
MARK	(mm)	(m)	DEAD LOAD	LOAD	WIND		
SW1	900	20	860	255	15		
SW2	900	20	1275	395	10		
SW3	900	20	555	170	5		
SW4	900	12	845	245	10		
SW5	900	12	545	135	10		
SW6	900	12	510	115	5		
SW7	900	12	410	105	5		
SW8	900	12	375	100	10		
SW9	900	20	1055	280	25		
SW10	900	20	890	240	25		
		$\gamma \gamma $		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	$\gamma \gamma \gamma \gamma \gamma \gamma$		



BUILDING DESIGN PARTNERSHIP SHALL HAVE NO RESPONSIBILITY FOR ANY USE MADE OF THIS DOCUMENT OTHER THAN FOR THAT WHICH IT WAS PREPARED AND ISSUED.	NOTES	
ALL DIMENSIONS SHOULD BE CHECKED ON SITE.		
DO NOT SCALE FROM THIS DRAWING		
ANY DRAWING ERRORS OR DIVERGENCIES SHOULD BE BROUGHT TO THE ATTENTION OF BUILDING DESIGN PARTNERSHIP AT THE ADDRESS SHOWN BELOW.		
DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE FOLLOWING BEFORE WORK COMMENCES: • THE CDM DESIGN ISSUES REGISTER • THE BDP RISK SERIES OF DRAWINGS • THE PROJECT CDM RISK REGISTER		

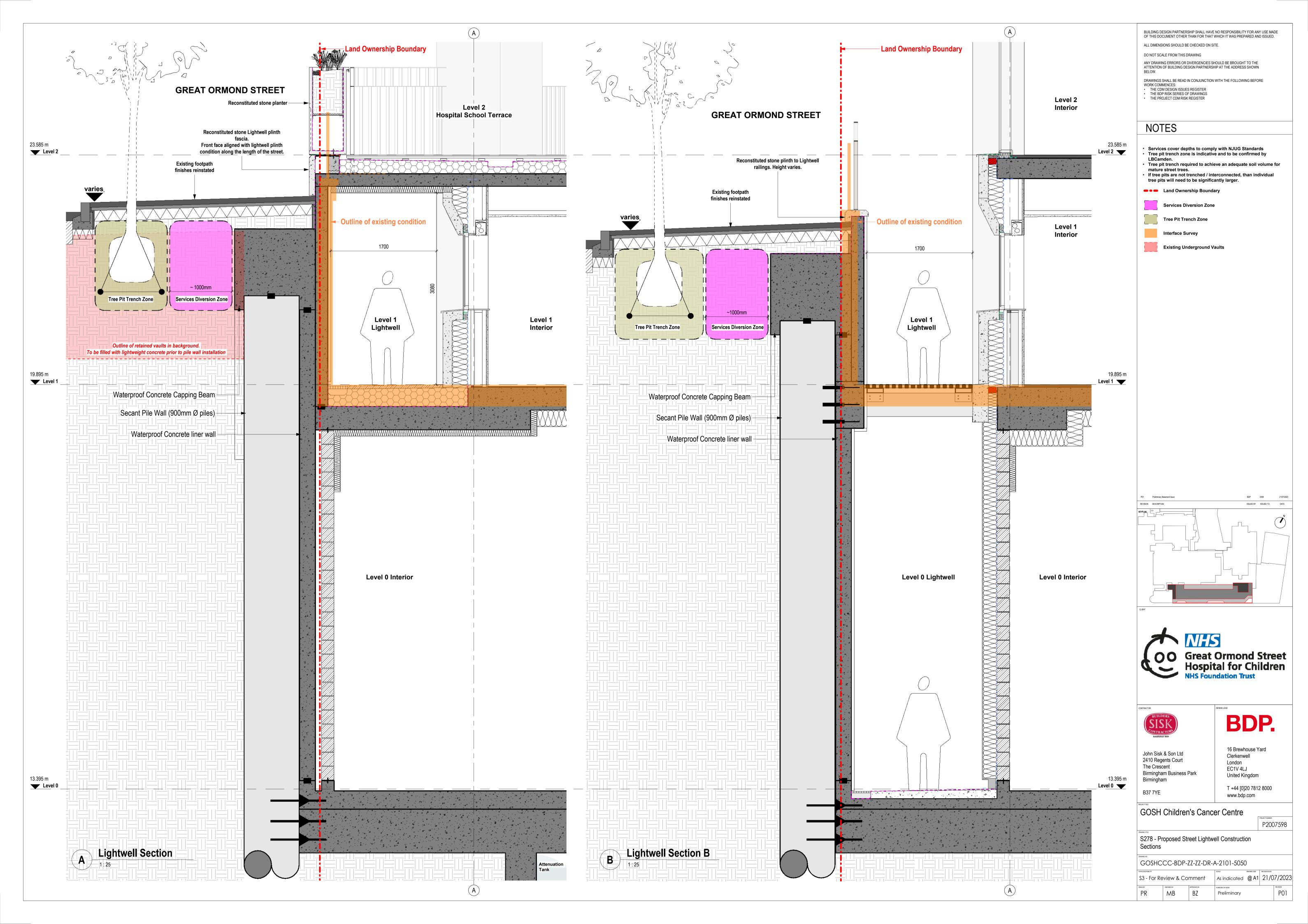


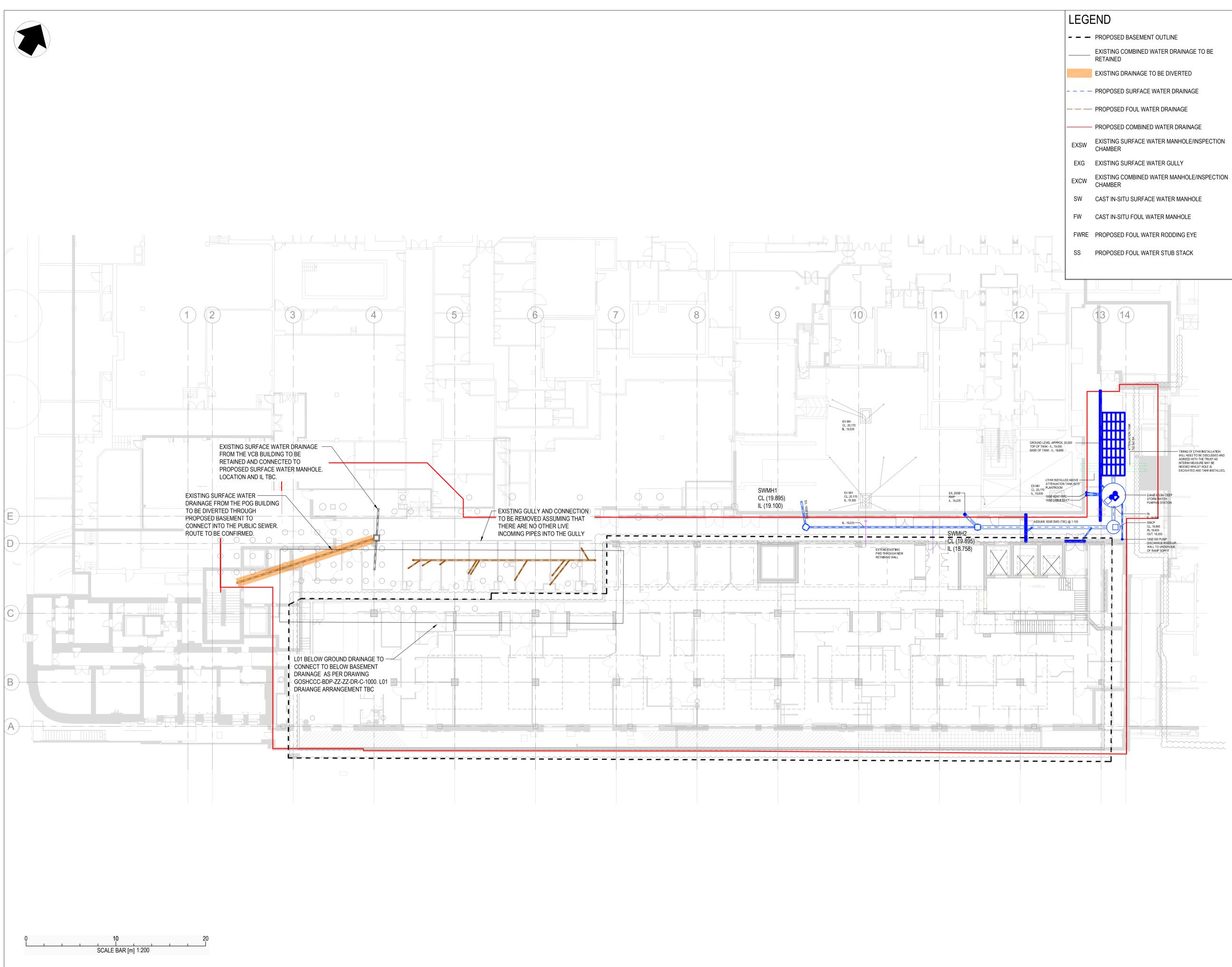
	+ 61.620 m		61.400 m
	+ 58.020 m		Level 11 57.400 m Level 10
	+ 52.705 m		51.485 m
			Level 9
			47.285 m
	+ 43.085 m		43.085 m
+ 38.885	m 		38.885 m
			35.060 m Level 5 31.235 m
			Level 4
			Level 3 23.585 m
			19.895 m
	Level 0 I		Level 1
			13.395 m Level 0
	0m 4	lm 8m 12n	n 16m 20m
CONTRACTOR BUILDERS SISK	BDP.	GOSH Children's Ca	ancer Centre Project MAMER P2007598
John Sisk & Son Ltd	16 Brewhouse Yard Clerkenwell	Section A-A (longitudinal) a	
2410 Regents Court The Crescent Birmingham Business Park Birmingham	London EC1V 4LJ United Kingdom	GOSHCCC-BDP-ZZ-ZZ-I STATUBUTALITY S2 - For Information	DR-A-2000-2074

B37 7YE

EC1V 4LJ United Kingdom T +44 [0]20 7812 8000 www.bdp.com

					P200)7598
Section	A-A (longit	udinal) as l	Proposed			
		77 77 רס	A 2000 20 ⁻	7 /		
GOSHCCC-BDP-ZZ-ZZ-DR-A-2000-2074						
S2 - For Information		1:200	@ A1	28/0	7/2023	
KN	снескер ву MB	APPROVED BY BZ	PURPOSE OF ISSUE Planning			PO2





NOTES 1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED. WHERE THERE APPEARS TO BE A CONFLICT BETWEEN DIMENSIONS OR WHERE DIMENSIONS CANNOT BE DETERMINED FROM THE DRAWINGS, CONSULT THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ARCHITECTS, ENGINEERS AND SPECIALIST DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL: 3.1. VERIFY EXISTING UTILITIES BEFORE STARTING WORKS. 3.2. VERIFY THE DIMENSIONS SHOWN ON THE DRAWINGS BEFORE FABRICATION, SETTING OUT OR EXCAVATION OF THE WORK, AND SHALL BE HELD RESPONSIBLE FOR ANY ERRORS OR INACCURACIES RESULTING FROM FAILURE TO DO SO. 3.3. CHECK AND VERIFY THE LOCATION AND LEVELS ALL EXISTING DRAINS, SEWERS, INSPECTION CHAMBERS AND MANHOLES AGAINST DRAWINGS

BUILDING DESIGN PARTNERSHIP SHALL HAVE NO RESPONSIBILITY FOR ANY USE MADE OF THIS DOCUMENT OTHER THAN FOR THAT WHICH IT WAS PREPARED AND ISSUED.

ANY DRAWING ERRORS OR DIVERGENCES SHOULD BE BROUGHT TO THE ATTENTION

OF BUILDING DESIGN PARTNERSHIP AT THE ADDRESS SHOWN BELOW.

ALL DIMENSIONS SHOULD BE CHECKED ON SITE.

DO NOT SCALE FROM THIS DRAWING.

- AND REPORT ANY DISCREPANCIES TO THE ENGINEER. 4. THE SURFACE WATER NETWORK HAS BEEN DESIGNED TO RESTRICT THE DISCHARGE RATE FROM THE SITE TO 0.8 I/s (GREENFIELD RUN-OFF RATE) AND NO FLOODING FOR
- A 1 IN 100 YEAR PLUS 40% ALLOWANCE FOR CLIMATE CHANGE. 5. CONNECTIONS TO THE PUBLIC SEWER ARE SUBJECT TO SECTION 106 OF THE WATER INDUSTRY ACT 1991 APPROVAL. NO WORKS AFFECTING THE PUBLIC SEWER MAY BE
- CARRIED OUT WITHOUT THAMES WATER'S WRITTEN CONSENT. 6. ALL DRAINAGE POINTS/COVERS SETTING OUT TBC BY THE ARCHITECT. 7. ALL DRAINAGE BELOW SLAB AND ALL DRAINAGE OUTSIDE BUILDING
- FOOTPRINT IN PROXIMITY OF FOUNDATIONS TO BE CAST IRON. 8. ROCKER PIPES ARE TO BE PROVIDED AT ALL CONCRETE CASED INTERFACES. 14. ALL INTERNAL MANHOLES TO HAVE DOUBLE SEAL, RECESSED COVERS.
- INTERNAL MANHOLES TO BE CAST IN-SITU WITH SLAB. 15. ALL PROPRIETARY PRODUCTS / SYSTEMS TO BE VERIFIED BY THE MANUFACTURER AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION / DETAILS.
- 16. ALL DRAINAGE TO BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH BS EN 12056-1:2000, BS EN 752:2017, AND BS EN 1610:2015.
- 17. AN ASSUMPTION HAS BEEN MADE THAT DRAINAGE FROM HOT AREAS IS NOT NEEDED TO BE TEMPORARILY HELD TO REDUCE ITS LIFE EXPECTANCY. 18. EXISTING SURFACE WATER TANK AND PUMP CHAMBER DIMENSIONS AND CHARACTERISTICS ARE INDICATIVE ONLY AND SHOULD BE INVESTIGATED
- FURTHER. 19. DRG. NO. RACP-0020-001 REV G ISSUED BY SKANSKA SHOWS A 7.0m X 2.5m X 2.4m DEEP POLYSTORM ATTENUATION STORAGE COMPRISING OF 210 CRATES (0.4 X 0.5 X 1.0 m). ACTUAL STORAGE = 39.3m³. TOP OF CRATES 0.8m BGL (19.000). BOTTOM OF CRATES 3.2m BGL (16.000).
- 19. DRG. NO. RACP-0020-001 REV G ISSUED BY SKANSKA SHOWS A 2.4m DIAMETER X 2.8m DEEP SURFACE WATER PRE-FABRICATED GRP PUMP CHAMBER. DISCHARGE RATE 6.6 I/s AGAINST 1m HEAD (3 NO. PUMPS AND 1 NO. STAND-BY PUMPS). 20. DRG. NO. RACP-0020-001 REV G ISSUED BY SKANSKA SHOWS AN EXISTING
- FOUL WATER PUMP CHAMBER INTO THE FRONTAGE BUILDING WHICH SERVES THE ADJACENT VOC BUILDING. THE CHARACTERISTICS OF THE PUMP CHAMBER ARE UNKNOWN. HOWEVER, AN ALLOWANCE SHOULD BE MADE TO RELOCATE THE EXISTING FOUL WATER PUMP CHAMBER AT LEVEL 00.

203	QA CORRECTIONS MADE	S7	тс	01/02/23
	ALIGNMENT TO STAGE 4 BASIS OF DESIGN	SZ		30/01/23
	STAGE 3	ALC	10	22/04/22
EVISION	DESCRIPTION	DRAWN	CHECKED	DATE



BUILDERS	John Sis
SISK CONTRACTORS	2410 Re The Cre Birmingh Birmingh B37 7YE
Established 1859	

GREAT ORMOND STREET

HOSPITAL

STATUS S3 FOR REVIEW AND COMMENTS

Sisk & Son Ltd Regents Court resent gham Business Park ham



1:200@A1

01.02.23

P03

16 Brewhouse Yard Clerkenwell London EC1V 4LJ United Kingdom

T +44 [0]20 7812 8000

www.bdp.com

BDP JOB NUMBER

LEVEL 01

ISO 27001 CLASSIFICATIO

GOSHCCC-BDP-ZZ-ZZ-DR-C-1100-1001

BELOW GROUND DRAINAGE LAYOUT