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MASON STREET, EDGE HILL
LIVERPOOL

Watching Brief Report

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SUMMARY

Lancaster University Archaeological Unit (LUAU) undertook a watching brief on behalf of Joseph Finney plc on a site bounded by Mason Street, Grinfield Street, and Smithdown Lane, Edge Hill Liverpool (centred on SD 354901).

The aim of the watching brief was to record any of Joseph Williamsons' tunnels, or other significant archaeological deposits exposed during groundworks associated with the construction of a new block of student flats. It also involved making a photographic record of the tunnels accessed from the former stable yard, before, and after piling, for the northern part of the new build in order to record any damage caused by piling.

No new tunnels were exposed during the groundworks, however, a pair of brick built cellars were uncovered during excavation for the ground beams. These led into passages which had previously been documented, and were themselves accessed from a passage leading from the end of the southernmost tunnel (10). A specially constructed concrete pad was constructed over the two short cellars and associated passages which were backfilled with broken polystyrene and soil. This strategy was done to allow for the safe re-excitation of the voids in the future.

The piling slightly dislodged one of the lower sandstone blocks in the southern tunnel (10), and some pieces of sandstone bedrock were dislodged into the entrance of a small dead end passage at the end of this tunnel.

ACKNOWLEDGEMENTS

Thanks go particularly to Sarah Jane Farr (Merseyside Archaeological Officer) for her assistance and support in the course of the project. Lancaster University Archaeological Unit would also like to thank John Beckett, Maurice O'Keefe, and Paul Blears (Site Engineer) of Joseph Finney Plc. Thanks also to the staff of Charles Barrow, the ground works contractors, for their assistance and co-operation during the watching brief.

The watching brief was undertaken by Peter Redmayne and the drawings were prepared by Emma Carter. The report was compiled by Peter Redmayne and was edited by Jamie Quartermaine and Richard Newman. The project was managed by Jamie Quartermaine.

1. INTRODUCTION

1.1 CONTRACT BACKGROUND

- 1.1.1 A permanent presence watching brief was undertaken by Lancaster University Archaeological Unit (LUAU) on behalf of Joseph Finney Plc in August and September 1999. The watching brief was carried out as a condition imposed by the Merseyside Archaeological Officer, and covered an area known to lie above part of the tunnel complex created by Joseph Williamson in the first half of the nineteenth century.
- 1.1.2 The watching brief involved monitoring the excavation of a series of foundation and service trenches during the construction of a new student accommodation block at the site in Edge Hill, Liverpool, centred on SD 354901 (Fig 1). A permanent presence was maintained during excavations for Units 1, 2 and 8-22 (Fig 3). Units 1, and 2 lay outside the area specified for the watching brief, however, after an initial site meeting with the contractors on 26/07/99, it was agreed that the excavation of their foundations should be subject to monitoring as information supplied by the Friends of Williamson's Tunnels showed a tunnel crossing the area. The watching brief also monitored the impact of the piling on the two tunnels accessed from the stable yard.
- 1.1.3 A full archive of the watching brief has been produced to a professional standard in accordance with current IFA and English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition 1991)

1.2 HISTORICAL BACKGROUND

- 1.2.1 **Early History:** the site lies within the medieval township of West Derby (Baines 1936, 523). West Derby contained large areas of woodland, measured at 2,880 customary acres at the time of Domesday (Farrer and Brownbill 1907,13). Successive grants made by the lords of the manor throughout the medieval period show that woodland clearance and land improvement advanced rapidly (Farrer and Brownbill 1907, 13-14). The common lands were enclosed in 1718, and a body of commissioners was set up for the management of the former wastelands in 1723. In 1753 there were still areas of common or wasteland, as it is recorded that the commissioners were given land to manage near Smeathem (Smithdown) which had been lately, and wrongly enclosed (Farrer and Brownbill 1907, 15).
- 1.2.2 By 1768 Liverpool and surrounding settlements were expanding. The study area lay close to one of the main eastwards roads from the city, the northern branch becoming Edge Lane. Smithdown led southward paralleling the Liverpool town boundary. Where the main road divided was an open area called Greenfield, and by 1768 most of this area had been enclosed and developed (Farrer and Brownbill 1907, 12).
- 1.2.3 The expansion of Liverpool resulted in part of West Derby hundred being incorporated in the municipal borough in 1835. In 1895, this ward was divided into three: Low Hill, Kensington, and Edge Hill (Farrer and Brownbill 1907, 11).
- 1.2.4 **Joseph Williamson:** Joseph Williamson was born in Warrington on the 10th of March 1769, and later moved to Liverpool to work for Richard Tate a tobacco manufacturer (Hand 1928, 106). Williamson married Tate's daughter and when

Thomas Tate died in 1803, Williamson acquired joint ownership of the business along with Tate's son, Thomas Moss Tate. He duly acquired a considerable fortune and retired at the age of 50.

- 1.2.5 In 1806 Williamson began to lease land on and around the study area (Head 1995, 4). Williamson built houses along Mason St, including his own house (number 44), using a workforce which consisted of large numbers of poor from the local area, and soldiers from the Napoleonic wars who had no work. Some detached houses already existed on the west side of Mason Street, and it seems that Williamson infilled the gaps forming a continuous terrace which is shown on maps from 1817 onwards (LRO Hf 912 1817/53).
- 1.2.6 Having completed all necessary above ground works, he started building an extensive complex of tunnels and caverns in order to keep the men employed. He started digging the tunnels out from the back of his house and in time they became increasingly ornate, complex and extensive. The most elaborate of these was the banqueting house (Tunnel 4, Fig 2), which was located under Williamson's house. The tunnels were of considerable variety, depth and size, and it can be said that no two have an identical design. Some, such as tunnels 9 and 10 incorporate a 'double tunnel' form with a high barrel vault supported on top of a lower tunnel (Plate 13), and there is even one with a triple deck form (Tunnel 7, Fig 2). There were two main focal points to the tunnel system, Williamson's own house and the second a series of complex tunnels that now radiate out from a stable yard off Smithdown Lane. The stable yard is immediately to the north-west of the study area and was constructed subsequent to the tunnels.
- 1.2.7 Following Williamsons' death in 1840, the lease expired on the land and a deliberate policy by the Liverpool Corporation was implemented to fill the tunnels with rubbish (Head 1995, 4). Williamson was reluctant to allow others to look round his network of tunnels (Stonehouse 1863, 173-4) and although they were never properly mapped in antiquity, there is a schematic map created in 1845 by Stonehouse (1863) and a further very schematic map created by the army in 1903 (Cuss 1994-5, 38). As many of the tunnels are now blocked the present mapping (Fig 2) is incomplete and may represent only a fraction of the overall complex.

1.3 PREVIOUS WORK

- 1.3.1 In 1996 LUAU carried out an archaeological assessment and geophysical survey of the site on behalf of Brian Young Associates (LUAU 1996 and 1997). The purpose of the assessment was to establish the presence/absence, extent and survival of significant archaeological features, with particular reference to the tunnels and cavities created by Joseph Williamson.
- 1.3.2 The study basically confirmed previous work which had identified three main tunnels within the development area. Two tunnels (9 and 10) on an east/west alignment in the northern part of the site were accessed from the south-eastern corner of the former corporation stables yard, and a third (Tunnel 7), aligned north/south, was thought to be connected to the other two tunnels, but is currently inaccessible.
- 1.3.3 **Tunnel 10:** the southern tunnel (Tunnel 10, Fig 2) consists of a 20m long, 4.4m wide cut into the sandstone bedrock with a brick vault sprung from ledges at the top of the rock cutting. There are irregularly spaced sockets in the sides, which would have held

the wooden arch former for the vaulting. At its eastern end the tunnel widens to the north to a width of 7m and changes to a broad arch, constructed with large rectangular sandstone blocks. At the base of the vault, sockets for the arch former can be seen.

- 1.3.4 At the eastern end of the passage are two narrow entrances separated by a substantial pier of bedrock. The one to the south is narrow and roofed with a brick vault, but within a short distance comes to a dead end. The northern entrance opens into a high brick vaulted passage with other tunnel entrances leading off, including one that led to tunnels on the east side of Mason Street.
- 1.3.5 Constructed on top of the main tunnel vault is a second wide brick vault, but is accessible only from the eastern, internal end of the lower vault (Plate 12). A large section of the eastern end of the upper vault brickwork has collapsed, and a substantial tip of earth silt, broken glass bottles and other material has spread over the top of the lower vault.
- 1.3.6 Boreholes drilled in 1995 demonstrated that the fill in the main part of the tunnel was some 5.3m deep, it is thought that this obscures the entrance to a triple arched tunnel on an east/west alignment.
- 1.3.7 **Tunnel 9:** the northern tunnel (Tunnel 9; Fig 2) (known as the double tunnel) consists of a broad rock cutting with superimposed brick arches. Stonehouse on his plan (LRO 942 570 1/3) describes it as '*two tiers of vaults in a frightful labyrinth filled in*'. The apex of the top arch is relatively close to the existing ground surface and has fallen, or been broken through, causing a cone of spoil/building rubble to accumulate on top of the lower arch. This tunnel is also thought to continue beyond the boundary of the site, and to be connected with further tunnels. There is no visible direct connection with the north/south Tunnel 7, which is at a much lower level than either 9 and 10; it is possible that there is a deeper section of Tunnel 9, which although now buried, originally allowed a connection with Tunnel 7.
- 1.3.8 **Tunnel 7:** the north/south tunnel is accessible from man-holes in the stable courtyard, but were not explored as part of the present programme for health and safety reasons . It was confirmed, however, that the depth of the tunnel was considerably deeper than the foundations of the present development, and was unlikely to be impacted upon during the watching brief.
- 1.3.9 **Tunnel 11:** to the south of tunnel 10 was a further tunnel (11) which was identified by a micro-gravity survey undertaken in 1994 by R Cuss, as part of an undergraduate degree (Cuss 1994-5). This extended into the area of the study area, but the depth of the was not established by the micro-gravity survey. The tunnel was subsequently identified in the course of a geotechnical survey of the development site, which demonstrated that they were considerably deeper than the required depth of the building foundations (LUAU 1996).

2. METHODOLOGY

2.1 PROJECT DESIGN

- 2.1.1 A project design (*Appendix 2*) was submitted in July 1999 by LUAU in response to a request from Joseph Finney Plc, for an archaeological watching brief to monitor the groundworks of a residential development at Mason Street, Edge Hill, Liverpool. The project design was prepared in accordance with a project brief (*Appendix 1*) by Sarah-Jane Farr, the Merseyside Archaeological Officer.
- 2.1.2 The project design provided for a watching brief and a written report, which would interpret the data discovered during the project. The project design did not require the supervision of development excavations in the western part of the site; however, subject to discussions with the Merseyside Archaeological Officer, it was agreed that the excavations for Units 1 and 2 should be investigated as they were on the line of Tunnel 11 which had been identified by Micro-gravity survey (Cuss 1994-5).
- 2.1.3 Further to discussions with the Merseyside Archaeological Officer, and the client it was agreed that the interior of Tunnels 9 and 10 should be photographed prior to the implementation of piling. This was agreed in order to provide a pre-intervention record of the tunnels condition. Otherwise the watching brief has been carried out in accordance with the project design.

2.2 DEVELOPMENT EXCAVATIONS

- 2.2.1 The development foundation trenches were excavated using a tracked JCB S130 excavator with a 1m wide toothed bucket. The trenches were excavated down to the sandstone bedrock, and the spoil piled up on the baulks between. The trench depth increased from c1m on the western edge of the study area, to a depth of 2.1m on the eastern side. The increase in depth was due to increased amounts of dumped demolition material in the eastern part of the site. The existing topsoil had been stripped and piled up in advance of development.
- 2.2.2 Due to the trench depth, and loose spoil on the sides of the trenches it was unsafe to enter the trenches to position photographic scales, clean the base to look for tunnels, or even for the contractors to remove fallen debris in advance of pouring concrete.

2.3 ARCHAEOLOGICAL RECORDING

- 2.3.1 The stratigraphy and archaeological features were recorded using methods in accordance with those recommended by English Heritage's Central Archaeology Service (CAS). Records of the work were made using LUAU pro-forma watching brief sheets, and with building record sheets where buried structures such as nineteenth century cellars were encountered. Scale drawings (plans at 1:50) were made where appropriate. On-site assessment of the deposits suggested it was not necessary to take environmental samples. Any finds were handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.
- 2.3.2 A copy of the design plan supplied by the developer was used as a base for recording the location of buried structures, and any significant archaeological deposits (Figs 3

and 4). The archaeological features and extent of interventions were superimposed onto the base CAD mapping. The client undertook a detailed survey of tunnels 9 and 10, where health and safety guidelines permitted, and the resulting plan was incorporated onto the site base map (Fig 3).

2.3.3 **Photographic Record:** a photographic record was made using 35mm Pentax K1000 cameras with fixed 28mm, and 50mm lenses. Monochrome film was used as the basis for the photographic archive, with colour print and slide films taken for report illustration, and lecture purposes. Photographic record sheets were used with a description of the location, and orientation of each frame and cross referenced with the descriptive sheets.

2.3.4 In order to provide a mitigative record of Tunnels 9 and 10 prior to the piling, a photographic record was compiled of the tunnels as far as was possible within health and safety constraints. A further photographic record of the tunnels was undertaken following the piling to demonstrate the impact of the development. The photography was carried out using 35mm formats with black and white and colour print film. The photography was undertaken using electronic flash and generator powered floodlight illumination.

3. RESULTS

3.1 INTRODUCTION

3.1.1 The watching brief was undertaken in conjunction with the construction of the foundations for the residential units. The results of the watching brief are presented in accordance with each stage of the development, and are described on the basis of the individual units, which are shown on the attached mapping.

3.2 UNITS 1, AND 2

3.2.1 The excavation of the trenches for Units 1, and 2 (Fig 3) revealed a horizon of very dark brown sandy loam, which was typically 0.65m in depth, and overlay a deposit of bright orange/brown sandy loam, which was shown to continue to a depth in excess of 1.7m below the existing ground level. No excavation for the foundations was undertaken below this depth. No features of archaeological significance were identified during the foundation excavations.

3.3 UNITS 8-12

3.3.1 The trenches excavated for Units 8-12 (Fig 3) were excavated to an average depth of 1.4m, and showed a generally uniform stratigraphy. Directly below the ground surface was a modern brick and concrete wall footing, at the southern end of the trenches, with a layer of brick and concrete demolition rubble (average depth 0.85m) to the north. Below the rubble was a deposit of very dark brown sandy loam with an average depth of 0.3m; this overlay a 0.25m deep (average) layer of orange/brown sandy loam which then overlay the sandstone bedrock. No features of archaeological significance were identified during the foundation excavations.

3.4 UNITS 13-16

3.4.1 Units 13-16 (Fig 3) covered the south-eastern corner of the site, the foundation trenches were excavated to an average depth of 2.2m. A reinforced concrete, and tarmac raft underlay most of this area, which had been covered with demolition rubble to an average depth of 0.7m. The raft was too thick to cut through, so the modern overburden was cleared to allow it to be broken up and removed in sections.

3.4.2 Below the raft was further demolition rubble mostly comprising nineteenth century hand made brick with some more modern material.

3.4.3 In the south-eastern corner of Unit 14 (Fig 2) the north and west walls of a nineteenth century cellar with a modern concrete floor, were exposed (Plate 1). The walls were two courses thick, lime washed on the inside, and footed onto the bedrock.

3.4.4 Part of a second nineteenth century cellar ((Feature iii) Plate 2) was revealed in the east side of the trench, which was excavated for the east wall of Unit 16 (Fig 2). The cellar wall was exposed almost directly below the surface, and was 2.1m in height and was again footed onto the bedrock. The wall extended 4.4m south from the north-eastern corner of unit 16 where the return of the south wall was exposed. The cellar was backfilled with nineteenth century brick (average size 240 x 70 x 120mm or 9.5 x

2.75 x 4.75"). The wall was 0.3m wide, with the bricks laid in bands of three courses of stretchers separated by single header courses. The outer face of the brickwork had been rendered as damp proofing.

- 3.4.5 Two modern brick walls (Feature ii), aligned north/south (Fig 3, Plate 3) were exposed extending across units 14, 15, 16 and 17. The walls had reinforced concrete footings set onto the bedrock with the remains of a cement floor above. The walls were 4m apart, and the space between was filled with concrete castings and demolition rubble above a concrete floor set directly onto the bedrock.

3.5 UNITS 17-22

- 3.5.1 A substantial nineteenth century cellar wall (Feature iv) (Fig 3, Plate 4) was exposed on the northern side of the trench which was excavated for the dividing wall between Units 17 and 18. The wall had an aperture in the centre exposing brick demolition rubble. A further nineteenth century cellar wall (Feature v) was exposed in the south-eastern corner of the trenches for Unit 19 (Fig 3). The excavation trench for the walls between Units 19, and 20 crossed the line of Tunnel 10, and although the trench was excavated to a maximum depth of 1.4m, the crown of the tunnel was not exposed.
- 3.5.2 Excavation of the trench for the dividing wall between Units 20 and 21 (Fig 2; Plates 5 and 6) exposed two brick lined voids (Features vi and vii) almost immediately below the ground surface. Further excavation of the voids showed them to connect with the two narrow passages in the northern side of the north passage, that leads from Tunnel 10.
- 3.5.3 The westernmost of the two small north/south passages had a flagstone roof with an opening at the level of the cut into the bedrock and above was a brick vaulted nineteenth century cellar (Feature vi) (Plate 5) with an entrance in its western side; the cellar was 3.5m long, and 2m wide. It is possible that the walls of the cellar were constructed as a partial lining to the cut in the bedrock. The passage extended only as far as the western end of the cellar (3.5m), and ended in a vertical face of bedrock. The depth from the base of the cellar vault to the passage floor was approximately 4.5m. It is clear that the short passages were constructed in order to connect the cellars of the buildings that formerly stood on the site with the main tunnel system (*Section 4.1.2*).
- 3.5.4 The easternmost of the two north/south passages was accessed from a narrow arched doorway from the northern passage. Above the passage was the cellar (Feature vii) which extended beyond the western section of the foundation trench (Fig 4; Plate 6). This passage was the same length as that to the south, and also terminated in a vertical cut in the bedrock. The cellar was 1.2m wide, and over 2.1m in length. The brickwork of the cellar was internally rendered and whitewashed and there was a metal grating in the south-western corner. The top of the cellar had been previously truncated, and it was not possible to establish whether or not it had originally been vaulted. There was no visible evidence for a floor between the cellar and the base of the passage.
- 3.5.5 ***Protection of Features vi and vii:*** the upper levels of the cellar voids and underlying passages (Features vi and vii) were close to the present surface, and were to be directly affected by the development. It was agreed with the client, the Merseyside Archaeological Officer and LUAU that the cellars and passages should be preserved;

however, their unstable condition precluded safe access to consolidate the walls or even implement a detailed record. A methodology was agreed to provide protection for the rock cut sections of the tunnels, and to backfill them in a way that would allow them to be safely re-excavated in the future if desired. The cellars and passage were filled with broken fragments of polystyrene wall insulation and the upper part was packed with larger flat sections. The brick structures were then machined away, and the polystyrene levelled over with a layer of soil, from which large stone fragments and bricks were removed. Wooden sheets were placed on top of the soil, and a concrete cap was lain on top. This strategy allows for access to the cellars and passages from the underside following removal of the polystyrene.

3.6 PILING

- 3.6.1 The northern part of the new build was constructed using piled foundations, which were intended to a) minimise the disturbance to the tunnels and b) take the weight of the new build off the crowns of the underlying tunnels (Tunnels 9 and 10). The southern tunnel (10) was surveyed, and the plan marked on the surface to ensure that the piles would not cut through them. One unit at the northern end of the proposed new build was entirely removed from the design plan, as it would have directly overlain the narrower part of the double arched tunnel (9).
- 3.6.2 Before piling commenced a site meeting was held with the contractors, (Joseph Finney Plc), the Merseyside Archaeological Officer, and the LUAU Project Manager, to discuss the implications of the proposed development. As a result of the meeting the positions of four of the piles were slightly altered, in order to minimise their direct impact upon Tunnel 9. It was further agreed that the drilling rig, generator and other heavy equipment would be positioned away from the area of the tunnels during operation.
- 3.6.3 At the eastern end of the northern passage of Tunnel 10, was a further section of passage, which had restricted access, as a result of local collapse. This passage beyond the collapse was a small flag roofed passage (Douglas 1999), but as a result of explorations by the Friends of Williamson's Tunnels it was reported that the entrance to a further narrow rock cut tunnel had collapsed since the contractors had started work. LUAU was advised by the Joseph Finney Plc site engineer that this section of the tunnel was unstable and therefore, because of health and safety restrictions, it was not possible to confirm the condition of the eastern section of the passage in the course of the present project.
- 3.6.4 The site of the collapse appears to lie close to the positions of two of the boreholes (Nos 4, and 4A) drilled in 1995 by Strata Surveys on behalf of Joseph Finneys which may have weakened the flags, which subsequently collapsed due to vibration caused by heavy machinery in the course of the present development.

4. CONCLUSIONS

4.1 DEVELOPMENT TRENCHES

- 4.1.1 Excavation of the foundation trenches did not expose any tunnels in the western or southern parts of the site. The stratigraphy was generally consistent with a layer of very dark brown loam over a possibly natural, yellowish brown sandy loam overlying the sandstone bedrock. To the east these deposits became increasingly truncated and were overlain with substantial deposits of demolition rubble, which in places lay directly on the upper surface of the bedrock.
- 4.1.2 The cellar (Feature i) in the south-eastern corner of the site (Fig 3) probably relates to the Raffles Public House constructed in the late eighteenth century (Friends of Williamson's Tunnels pers comm). The other nineteenth century cellar walls (Features iii-v) may relate to one of the detached houses in existence before Williamson built on the site, or to a cellar associated with one of the houses built by Williamson himself. These structures are shown on an 1823 estate map (Hf 912 1823).
- 4.1.3 The two cellars (Features vi and vii) above the small passages probably relate to houses built by Williamson himself. Access from the cellars to the passages below would have been by ladder as there was no evidence for steps. The fact that the two short passages extended only as far as the cellars above, would seem to indicate that they were intended to provide discrete access between the cellars and the tunnel complex.
- 4.1.4 The modern walls and concrete raft (Feature ii) almost certainly relate to a factory which was producing reinforced concrete mouldings (friends of Williamson's tunnels pers comm), and appears to have occupied the area covered by units 14-18 (Fig 3).

4.2 PILING

- 4.2.1 Some disturbance was caused by the piling, a block on the northern side of the stone vault of Tunnel 10 (Plate 11) was moved out a short distance by one of the piles, and a pile drilled into the sandstone pier between the two narrow tunnel entrances (Tunnel 10) dislodged some pieces of sandstone into the entrance of the southern passage (Plates 7 and 8). In the northern passage of Tunnel 10 (Plates 9 and 10) were relatively minor amounts of grout penetrated into the passages, but a more substantial amount of penetration was observed from the entrance of the southern passage.

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APPENDIX 1
PROJECT BRIEF

APPENDIX 2
PROJECT DESIGN

July 1999

Lancaster
University
Archaeological
Unit

MASON STREET / GRINFIELD STREET,

LIVERPOOL

ARCHAEOLOGICAL WATCHING BRIEF

Proposals

The following project design is submitted in response to a request from Mr John Beckett of Joseph Finney Plc, in accordance with a brief by the Merseyside Archaeological Officer, for an archaeological watching brief in the course of the groundworks for the construction of student accommodation and car parking areas, at Mason Street / Grinfield Street, Liverpool.

1. INTRODUCTION

1.1 CONTRACT BACKGROUND

1.1.1 Joseph Finney Plc, on behalf of Seymour Properties, is constructing student accommodation at Grinfield Street/Mason Street, Liverpool, comprising 21 shared student houses, a site manager's house and car parking facilities. Lancaster University Archaeological Unit have been invited to submit a project design and costs for a watching brief during the ground works for this housing development.

1.1.2 The housing development is located over a series of tunnels constructed by an eccentric Liverpool philanthropist, Joseph Williamson, in the first half of the nineteenth century. An assessment and geophysical survey undertaken by LUAU confirmed the survival of the tunnels (LUAU 1996a and b). Subject to the depth of the foundations the development has the potential to impact on a long tunnel extending parallel to Smithdown Lane and also on a series of three smaller tunnels extending north from that principal tunnel. Many of the tunnels are now blocked or unsafe to enter and the full extent of the tunnel complex is unknown; there is therefore the possibility that further tunnels exist within the study area that have not been documented. Because of the archaeological potential of the area the Merseyside Archaeological Officer has recommended the implementation of an archaeological watching brief during the groundworks for the development in those areas that are identified as on or near known/possible tunnels or voids.

1.2 LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT

1.2.1 The Lancaster University Archaeological Unit has considerable experience of the evaluation and excavation of sites of all periods, having undertaken a great number of small and large scale projects during the past 18 years. Fieldwork has taken place within the planning process and construction programmes, to fulfil the requirements of clients and planning authorities, to very rigorous timetables. Numerous watching briefs have been undertaken during initial site preparations for both landscape projects (eg the North West Ethylene Pipeline for Shell UK Limited etc) and construction (eg Lancaster Market Hall). LUAU undertook the programme of assessment and geophysical survey of the Mason/Grinfield tunnels in 1996 (LUAU 1996 and 1997).

1.2.2 LUAU has the professional expertise and resource to undertake the project detailed below to a high level of quality and efficiency. LUAU is one of the few registered organisations with the Institute of Field Archaeologists (IFA) (Registration No 27) and all members of staff operate according to their Code of Conduct

2. OBJECTIVES

2.1 The following programme has been designed, in accordance with a project brief produced by the Merseyside Archaeological Officer, to provide a suitable level of archaeological observation, recording, and response during the excavation works for the proposed development groundworks. The purpose of the programme is:

- to provide for the recording of archaeological deposits and structures that were either not identified or were imprecisely documented prior to the implementation of the development.
- to provide the opportunity for the recording of any complex archaeological resource, should this be identified.
- to alert the Archaeological Officer, client and planning authority of the needs for *insitu* preservation of tunnels by means of appropriate rafting foundation methods.

2.2 The required stages to achieve these ends are as follows:

2.3 PERMANENT PRESENCE WATCHING BRIEF

- 2.3.1 A watching brief will monitor all groundworks in the area defined (see attached map). This will provide for the accurate recording of any surviving archaeological features or deposits and record the presence of buried features by appropriate recovery techniques, where applicable. There is a defined stoppage time for ground works for up to four hours. In the event of identifying significant archaeological deposits, the Archaeological Officer, client and planning authority will be informed

2.4 ARCHIVE/REPORT

- 2.2.1 A written report will assess the significance of the data generated by the entire programme of work, in a local and regional context, and will be suitable for deposition as a permanent archive of the work undertaken. It will include appropriate plans and sections, as well as a concise summary of the project results.

3. METHOD STATEMENT

- 3.1 The following work programme is submitted in line with the stages and objectives of the archaeological work outlined above.

3.2 PERMANENT PRESENCE WATCHING BRIEF

- 3.3.1 **Methodology:** a permanent programme of field observation will accurately record the location, extent, and character of any surviving archaeological features during the groundworks for the proposed residential development. This work will comprise the observation of the process of excavation for these works, the systematic examination of any subsoil horizons exposed during the course of works, and the accurate recording of all archaeological features and horizons, and any artefacts, identified during observation. A record will be maintained of the time and duration of the archaeological presence.
- 3.3.2 During this phase of work, recording will comprise a full description and preliminary classification of features or materials revealed, and their accurate location (either on plan and/or section, and as grid coordinates where appropriate). All archaeological information collected in the course of fieldwork will be recorded in standardised form, and will include accurate national grid references. Features will be planned accurately at appropriate scales and annotated on to a large scale plan provided by the Client. A photographic record will be undertaken simultaneously. The recording techniques and procedures employed by LUAU for such detailed recording represent current best practice.
- 3.3.3 It is assumed that LUAU will have the authority to stop works for up to four hours to enable the recording of important deposits, and to call in additional archaeological support if a find of particular importance is identified. This latter element would only be called into effect in agreement with the Client and the Archaeological Officer and will require a variation to costing. In normal circumstances, field recording will also include a continual process of analysis, evaluation, and interpretation of the data, in order to establish the necessity for any further more detailed recording that may prove essential.
- 3.3.4 **Finds:** finds recovery and sampling programmes will be in accordance with best practice (current IFA guidelines) and subject to expert advice. Finds storage during fieldwork and any site archive preparation will follow professional guidelines (UKIC). Emergency access to conservation facilities is maintained by the Unit with the Department of Archaeology, the University of Durham, and the English Heritage contract worker at York Archaeological Trust, and, in addition, employs artefact and palaeoecology specialists with considerable expertise in the investigation, excavation, and finds management of sites of all periods and types, who are readily available for consultation. All material will be collected and identified by stratigraphic unit. All finds will be treated in accordance with LUAU standard practice, which is cognisant of IFA and UKIC Guidelines. In general this will mean that (where appropriate or safe to do so) finds are washed, dried, bagged and packed in stable conditions.
- 3.3.5 **Environmental Sampling and Analysis:** where appropriate a programme of environmental sampling will be undertaken. Areas of the site that contain waterlogged deposits will be sampled and if a sufficient section of the stratigraphy is exposed a box core will be taken. Other scientific samples will

be taken as the opportunity arises. The analysis of the samples is costed as a contingency and the implementation of any analysis will be subject to agreement with the client and the Archaeological Officer.

- 3.3.6 **Health and Safety:** full regard will, of course, be given to all constraints (services etc), as well as to all Health and Safety regulations. LUAU provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Unit Managers (1991) and risk assessments are now being implemented for all projects. All operatives would be fully aware of the particular needs of working in conjunction with plant.

3.4 ARCHIVE/REPORT

- 3.4.1 **Archive:** the results of all archaeological work carried out during fieldwork will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. It will include summary processing and analysis of all features and finds. Palaeoenvironmental analysis will be subject to the results and is costed as a contingency. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's code of conduct. LUAU conforms to best practice in the preparation of project archives for long-term storage. LUAU practice is to deposit appropriate elements of the original record archive of projects (paper, magnetic and plastic media) with the appropriate County Record Office, and a copy of the record archive together with the material archive (artefacts, ecofacts, and samples) with an appropriate museum. The National Museums and Galleries on Merseyside (Ms C Longworth) have been approached and agreed that any material should be deposited at the museum with a charge of £13.79 per box. The costs for this accession of the archive are not incorporated within the day-rate as it is dependent upon the amount of material recovered. The actual details of the arrangements for the deposition/loan and long term storage of this material will be agreed with the landowner and the receiving institution.
- 3.4.2 **Report:** one bound and one unbound copy of a written synthetic report will be submitted to the client and the Merseyside Archaeological Officer within four weeks of completion of fieldwork. The report will consist of an acknowledgements statement, list of contents, introduction, methodology, summary assessment of the results, gazetteer of features/sites and conclusions. The report will include a copy of the agreed project design. It will indicate any agreed departure from that design, and will outline any restrictions of access or safety. It will present, summarise, and interpret the results of the programme detailed above and will include a full index of archaeological features identified in the course of the project, with an assessment of the overall stratigraphy, together with appropriate illustrations, including detailed plans and sections indicating the locations of archaeological features. The section and plan drawings will be output at appropriate scales, and the sections will be referenced with respect to Ordnance Datum. Any finds recovered from the excavations will be assessed with reference to other local material and any particular or unusual features of the assemblage will be highlighted and the potential of the site for palaeoenvironmental analysis will be considered. The report will also include a complete bibliography of sources from which data has been derived.
- 3.4.3 This report will identify areas of defined archaeology. An assessment and statement of the actual and potential archaeological significance of the site within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map, section drawings, and plans. This report will be in the same basic format as this project design.
- 3.4.4 **Confidentiality:** all internal reports to the client are designed as documents for the specific use of the Client, for the particular purpose as defined in the project brief and project design, and should be treated as such. The report is not suitable for publication as academic documents or otherwise without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third parties beyond the project brief and project design, or for any other explicit purpose can be fulfilled, but will require separate discussion and funding.

3.5 PROJECT MONITORING

- 3.5.1 **Merseyside Archaeological Officer:** any proposed changes to the project design will be agreed with the Merseyside Archaeological Officer in coordination with the Client. The Merseyside Archaeological Officer will be informed at the commencement of the project.
- 3.5.2 **Joseph Finney Plc:** an initial meeting of all parties will be arranged at the commencement of the project, if the Client so desires. LUAU will consult regularly with the Client during fieldwork, and this will include the attendance of a representative of the Client, if required, at any meetings convened with the Merseyside Archaeological Officer, to discuss the report or any other matter. Any decision to invoke a rapid response team would be taken with the Client and the Merseyside Archaeological Officer.

4. WORK TIMETABLE

- 4.1 The phases of work will comprise:

4.2 PERMANENT PRESENCE WATCHING BRIEF

- 4.2.1 Monitoring of groundworks, and observation and recording of any archaeological features and materials revealed. The timescale of this phase will be dictated by the construction programme.

4.3 ARCHIVE/REPORT

- 4.3.1 LUAU generally calculates a 1:0.5 ratio of fieldwork:post-fieldwork (archive, analysis, and report preparation). The cost of the post-fieldwork element is included within the day-rate provided.

4.4 TIMETABLE

- 4.4.1 LUAU can execute projects at very short notice once an agreement has been signed with the client and the Merseyside Archaeological Officer has approved the project design. The date for completion of the works would be dictated by the site construction programme. The report will be submitted to the Client within five weeks of the completion of field work.

4.5 STAFF

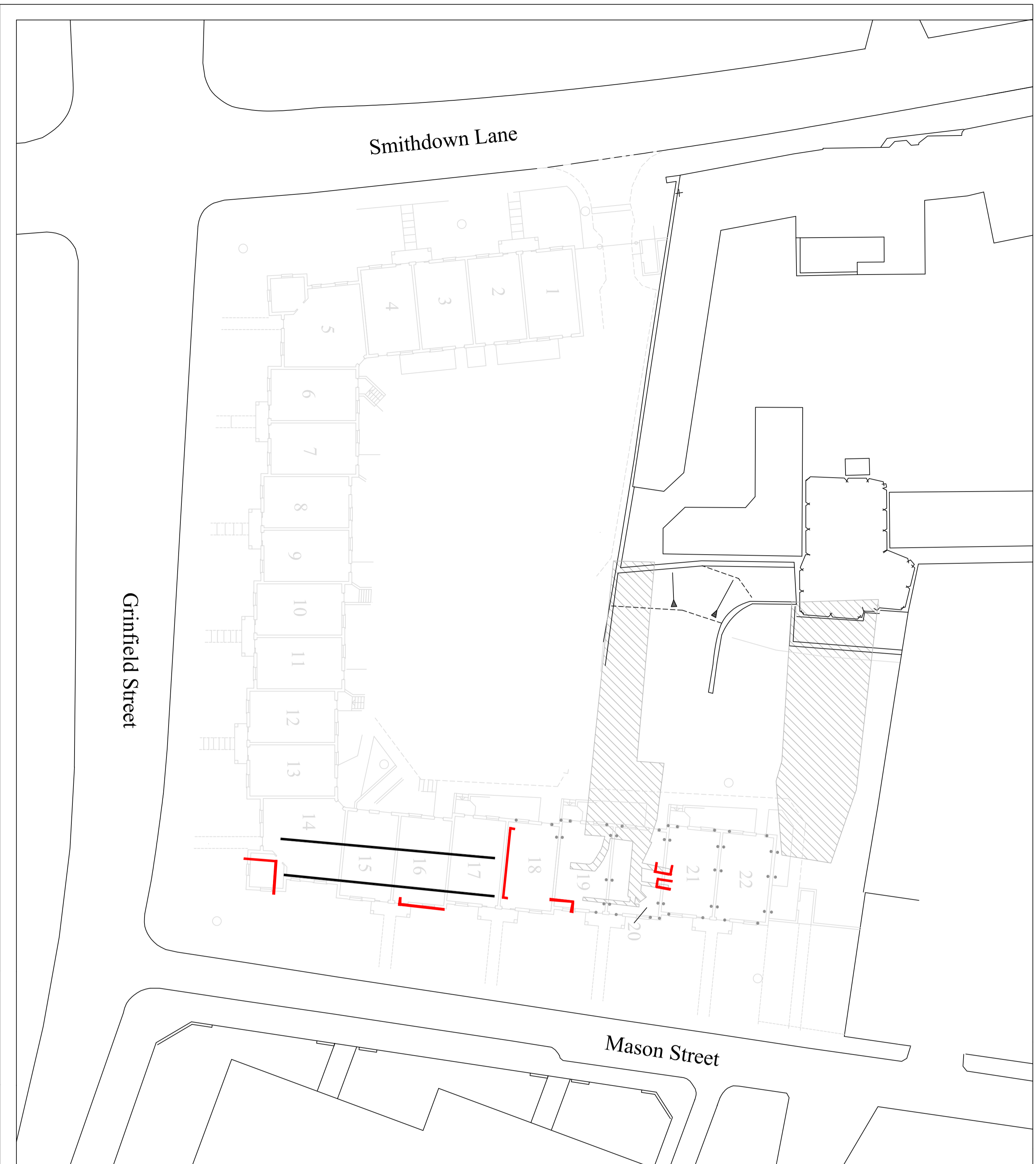
- 4.5.1 The project will be managed by **Jamie Quartermaine BA SurvDip** (Unit Project Manager), to whom all correspondence should be addressed. All Unit staff are experienced, qualified archaeologists, each with several years professional expertise. The watching brief will be undertaken by **Peter Redmayne BA**, who has considerable experience of this type of work.

ILLUSTRATIONS

- Fig 1 Mason Street, Liverpool: Location Plan
- Fig 2 Layout of Williamson's Tunnels
- Fig 3 General Site Plan
- Fig 4 Detail Plan of Tunnels 9 and 10



Fig 1: Mason Street, Liverpool Location Plan



LANCASTER UNIVERSITY
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STOREY INSTITUTE
 MEETING HOUSE LANE
 LANCASTER
 LA1 1TF

TEL: 01524 848666

PROJECT:
 Mason Street/Grinfield Street,
 Liverpool
 Archaeological Watching Brief

DRAWING No:
 2

0
 20m

N

DRAWN BY: ELC
 DATE: 29.10.99

LOCATION:

KEY	
	New build
	existing build
	Tunnels (accessible)
	19th century walls
	20th century walls
	Hedge

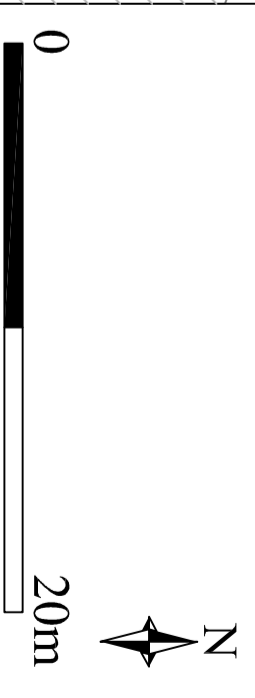
TITLE: Developers Plan showing structures recorded during watching brief

COMMISSIONED BY:
 Joseph Finney PLC

Fig 2 Plan showing structures recorded during watching brief

PROJECT:
 Mason Street/Grinfield Street,
 Liverpool
 Archaeological Watching Brief

DRAWING No:
 3



DRAWN BY: ELC
 DATE: October 1999
 LOCATION:

KEY

- New build
- existing build
- Tunnels (accessible)
- 19th century walls
- 20th century walls
- Hedge
- Foundation Piles

TITLE: Developers Plan showing structures recorded during watching brief

COMMISSIONED BY:
 Joseph Finney PLC

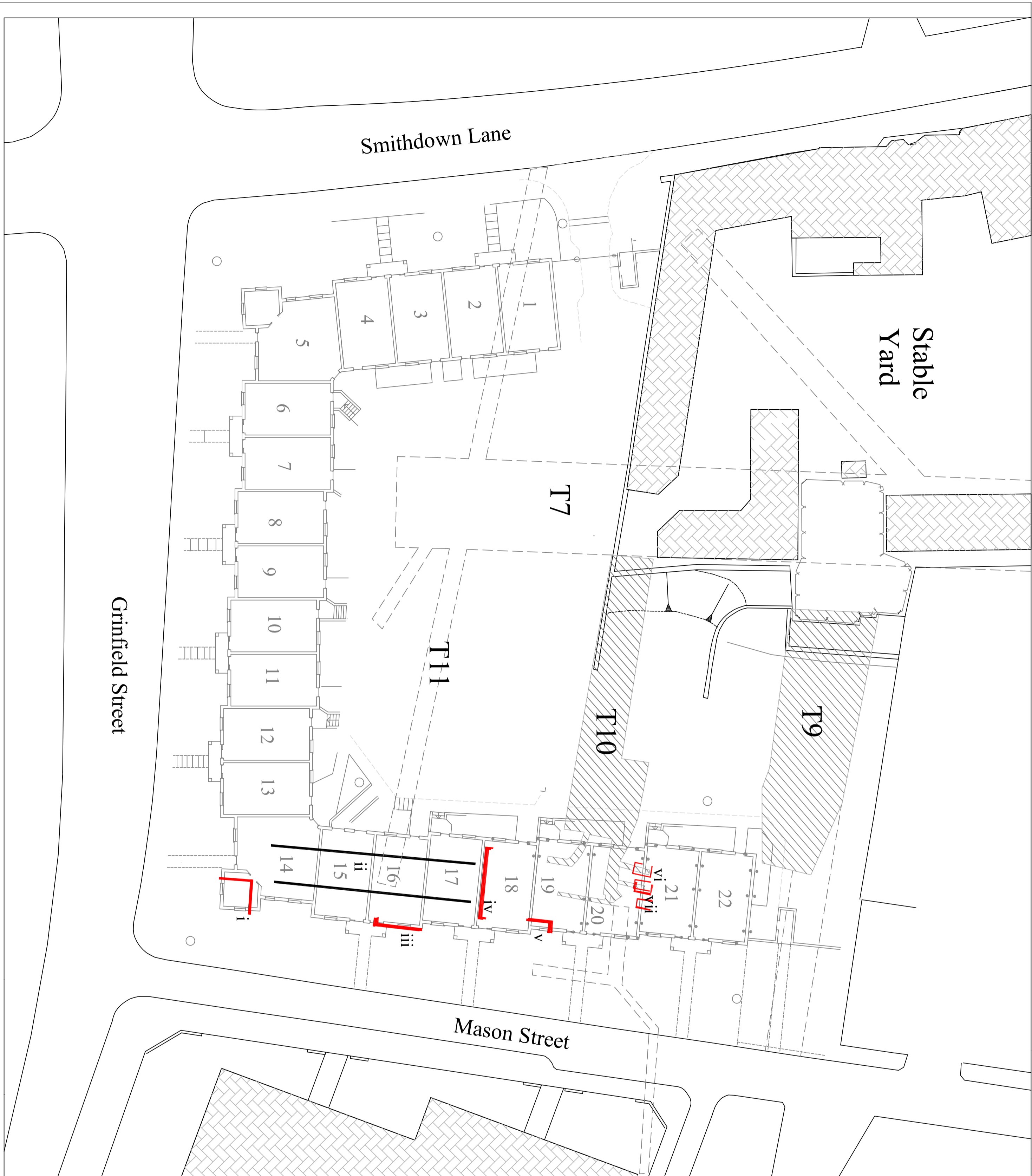
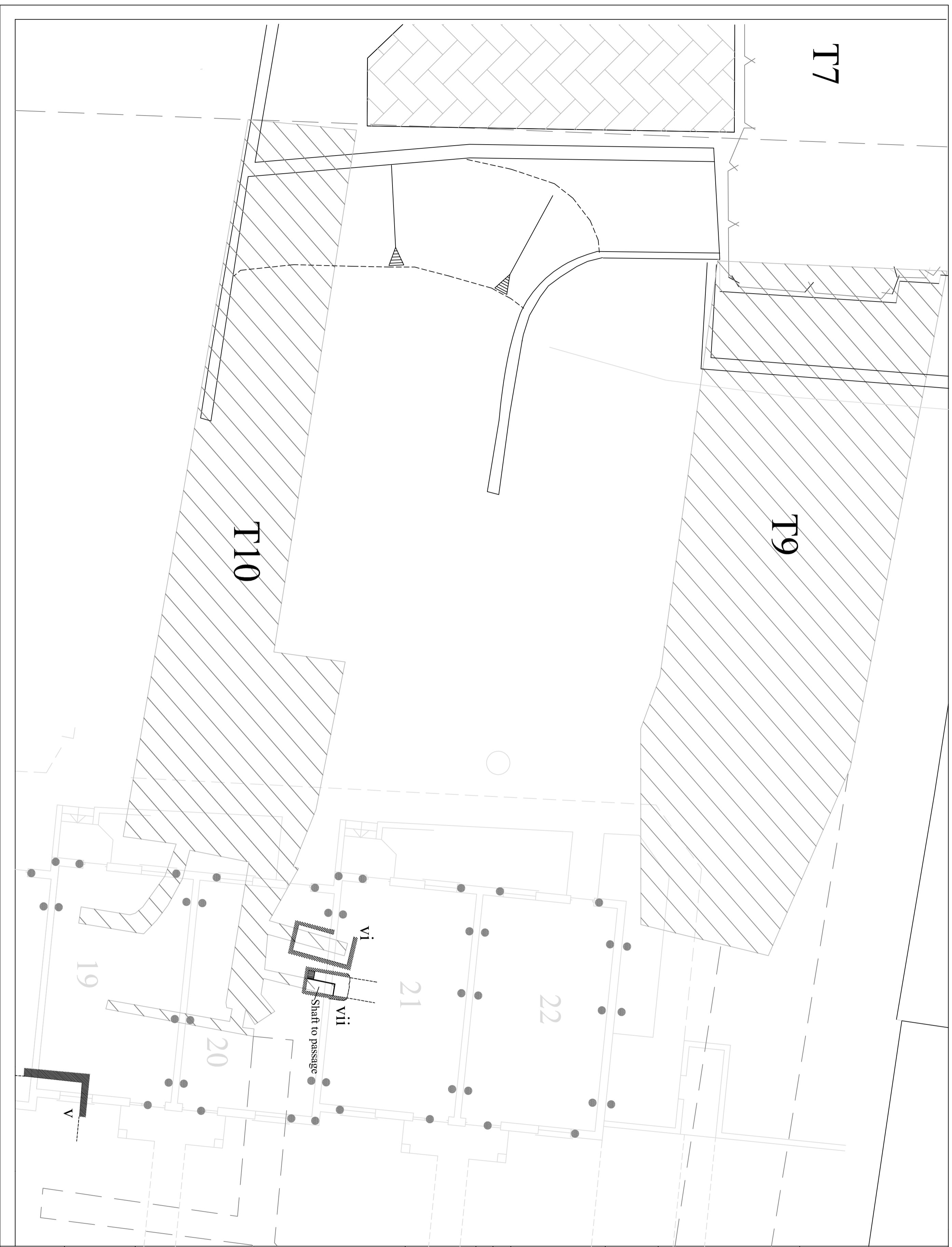


Fig 3 General Site Plan



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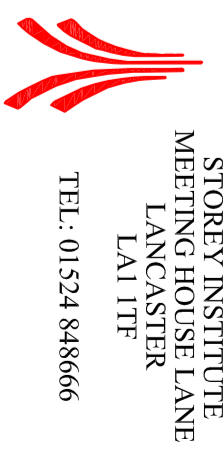
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Shaft to passage

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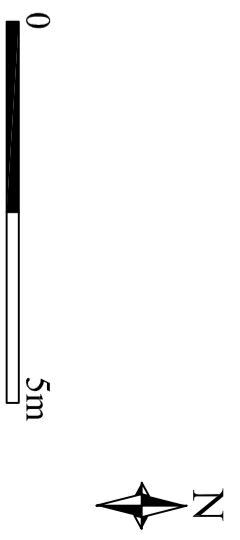
LANCASTER UNIVERSITY
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TEL: 01524 848666

PROJECT:
Mason Street/Grinfield Street,
Liverpool
Archaeological Watching Brief

DRAWING No:
4



DRAWN BY: ELC
DATE: November 1999
LOCATION:

KEY
New build
existing build
Tunnels (accessible)
19th century walls
Foundation Piles

TITLE:
Detailed plan of exposed
structures
COMMISSIONED BY:
Joseph Finney PLC

Fig 4 Detailed Site Plan

PLATES

- Plate 1 Cellar walls (Feature i) in south-east corner of Unit 14 - looking north-west
- Plate 2 Cellar wall (Feature iii) at eastern end of unit 16 - looking north
- Plate 3 Modern wall, and infill of former concrete moulding works (Feature ii) - looking east
- Plate 4 Cellar Wall (Feature iv) between Units 17, and 18 looking north-east
- Plate 5 Upper part of vaulted cellar (Feature vi) after removal of the vault
- Plate 6 Upper part of cellar showing bedrock cut and metal grating (Feature vii)
- Plate 7 Interior of Tunnel 10, southern passage entrance, taken prior to piling
- Plate 8 Interior of Tunnel 10, southern passage entrance, taken following the piling - looking east
- Plate 9 Tunnel 10, entrance to the northern passage prior to piling
- Plate 10 Tunnel 10, entrance to the northern passage after piling - looking east
- Plate 11 Dislodged block on the north side of Tunnel 10.
- Plate 12 General view of tunnel 10 and passages post-piling - looking east
- Plate 13 Entrance to double tunnel 9 - looking east
- Plate 14 Arch former sockets in the south side of tunnel 10
- Plate 15 Entrance to Tunnel 10 - looking east



Plate 1 Cellar Walls (Feature i) in south-east corner of Unit 14 – looking north-east



Plate 2 Cellar wall (Feature iii) at eastern end of Unit 16 – looking north



Plate 3 modern wall, and infill of former concrete moulding works (Feature ii) – looking east



Plate 4 Cellar wall (Feature iv) between Units 17 and 18 looking north-east



Plate 5 Upper part of vaulted cellar (Feature vi) after removal of the vault



Plate 6 Upper part of cellar showing bedrock cut and metal grating (Feature vii)



Plate 7 Interior of Tunnel 10, southern passage entrance, taken prior to the piling



Plate 8 Interior of Tunnel 10, southern passage entrance, taken following the piling – looking east



Plate 9 Tunnel 10, entrance to the northern passage prior to piling



Plate 10 Tunnel 10, entrance to the northern passage after piling – looking east



Plate 11 Dislodged block on the north side of Tunnel 10



Plate 12 General view of the Tunnel 10 and passages, post piling – looking east



Plate 13 Entrance to double tunnel 9 – looking east



Plate 14 Arch former sockets in the south side of Tunnel 10



Plate 15 Entrance to Tunnel 10 – looking east