CONVOYS WHARF
Prince Street
London SE8

London Borough of Lewisham

Evaluation report

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MUSEUM OF LONDON ARCHAEOLOGY

REGISTERED ORGANISATION IfA

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Prince Street
London SE8

London Borough of Lewisham

Evaluation report

Site Code: CVF10
National Grid Reference: 537000 178200

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Summary (non-technical)

This report presents the results of an archaeological evaluation carried out by Museum of London Archaeology (MOLA) on the site of Convoys Wharf, Deptford London. The report was commissioned from MOLA by Convoys Investment S.A.R.L..

Following the recommendations of the archaeological consultant CgMs in consultation with the London Borough of Lewisham and English Heritage, 52 evaluation trenches were excavated. Boreholes and trial pits excavated by a geotechnical contractor were also monitored.

The results of the field evaluation have helped to refine the initial assessment of the archaeological potential of the site. Three main areas have been identified as particularly important: the area of the Great Dock near the east boundary of the site; the footprint of the Grade II listed Olympia building where the evaluation demonstrated that stone slipways survive; and the area of the early 16th century Tudor storehouse, a scheduled ancient monument. Other structures identified during the evaluation included: the large mast pond and the small mast pond in the west of the site; the dockyard basin; multiphase buildings; the remains of the 18th century dockyard wall; and other slipways.

Although no archaeological structures were removed during the evaluation, there was the opportunity to identify some earlier structures – particularly those preserved in alluvial deposits – in some trenches. No remains of Sayes Court were identified and only a possible terrace that might be associated with Evelyn's Gardens. The evaluation showed that in places modern truncation was up to 4.5m deep and there was no earlier survival than the late 19th century.

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Front cover: Trench 50, showing the wall of the Great Dock, looking southwest

1 Introduction

1.1 Site background

The evaluation took place at Convoys Wharf, Deptford, Lewisham, hereafter called 'the site' (Fig 1, Fig 4). The site is bounded by the Thames to the northeast and by Watergate Street to the east, Prince Street, Sayes Court to the south, and to the west the rear of properties in Dacca Street and Grove Street, and Leeway to the east. The Ordnance Survey National Grid Reference for centre of site is 537000 178200. The level of the slab varied between *c* 3.3m OD in the west part of the site to *c* 5.0m OD in the north. The site code is CVF10.

A desk-based assessment was previously prepared, which covers the whole area of the site (Hawkins 2000). The *assessment* document and the Archaeological Resource Management Scheme for the site (Hawkins 2010b) should be referred to for information on the natural geology, archaeological and historical background of the site, and the initial interpretation of its archaeological potential.

1.2 Planning and legislative framework

The legislative and planning framework in which the archaeological exercise took place was summarised in the Scheme of Archaeological Resource Management document (Hawkins 2010b, 19–24).

1.3 Planning background

The site was evaluated prior to an application for planning consent.

1.4 Origin and scope of the report

This report was commissioned by Convoys Investment S.A.R.L. and produced by the Museum of London Archaeology Service (MOLA). The report has been prepared within the terms of the relevant Standard specified by the Institute for Archaeologists (IFA, 2001).

Field evaluation, and the *Evaluation report* which comments on the results of that exercise, are defined in the most recent English Heritage guidelines (English Heritage, 1998) as intended to provide information about the archaeological resource in order to contribute to the:

- formulation of a strategy for the preservation or management of those remains; and/or
- formulation of an appropriate response or mitigation strategy to planning applications or other proposals which may adversely affect such archaeological remains, or enhance them; and/or
- formulation of a proposal for further archaeological investigations within a programme of research

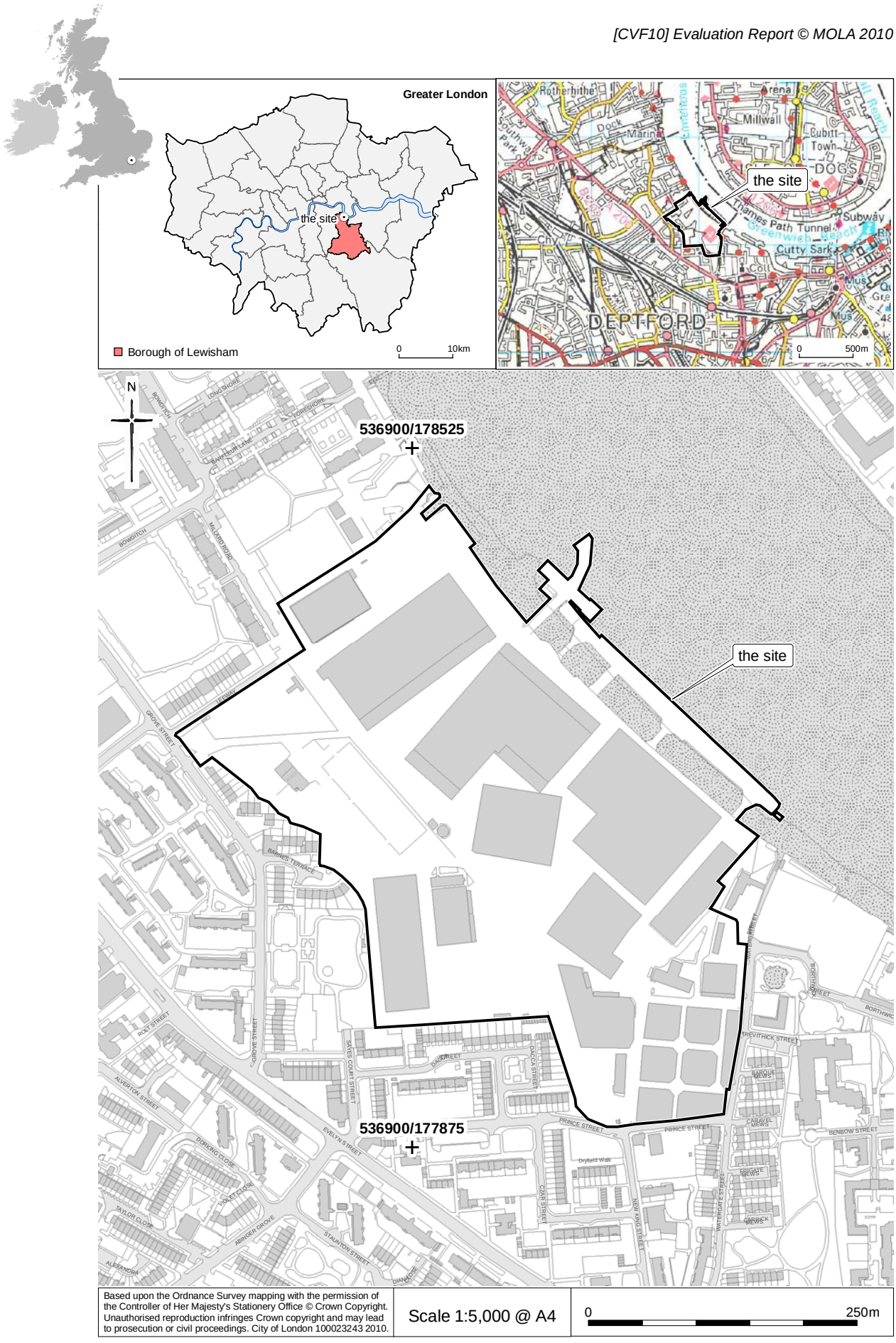

Fig 1 Site location

1.5 Aims and objectives

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

The archaeological brief is essentially limited to establishing nature of surviving archaeological deposits and structures, and to ensure that the digging of evaluation test pits and geotechnical investigations do not involve unnecessary destruction of such deposits or structures.

Nevertheless, research questions have been outlined in the proposal forming part of the written scheme of investigation (Hawkins 2010a, 5–13) and as research aims and objectives contained in the over-riding Archaeological Resource Management Scheme (Hawkins 2010b, 25–28). These involve establishing the position of key archaeological elements as well as investigating the potential for other archaeological features and structures that might be present to inform the anticipated detailed planning applications.

In summary, the aim of Trench 1 was to expose part of the east wall of the large mast pond, to assess its condition and confirm the nature of the post-1945 backfill of the mast pond. The aim of adjacent Trench 2 was to determine the level of survival of cranes and capstans serving the large mast pond and, if these structures did not survive, to investigate evidence of pre dockyard activity.

On the riverfront, Trench 3 was located over the former Tank Store with the aim of determining the level of survival of this structure, a secondary objective being to determine the position of the pre-19th century River walls. Trench 5 was targeted at the former Tank and Smiths Shop, to determine the level of survival of this structure, while the aim of Trench 6 was to determine the level of survival of the former sawmill.

Trench 4 was to locate the north wall of the small mast pond, while the objective of Trench 7 was to locate the southwest wall of the small mast pond. Trench 8 was to determine the level of survival of the former large timber shed and to identify the 1753 dockyard boundary. Trench 9 was targeted at the former long timber sheds, to determine the level of survival of these structures. The aim of Trench 10 was to identify the former steam kiln.

Trenches 11, 12 and 37 formed a combined area targeted on the former No 1 slip and its cover building to assess this structure, while the aim of Trenches 13, 14, 19 and 20 was to fix the position of the former Dockyard basin. Trenches 21, 22, 23 and 24, all located in the 19th century cover building, Olympia, were intended to identify the depth, form and fabric of No 2 and No 3 slips, while to objective of nearby Trench 25 was to investigate earlier slipways.

Trenches 30, 31, 32, 38 and 39 were positioned in an area outside the Dockyard in the Sayes Court estate and the gardens of the horticulturalist and diarist John Evelyn with the aim of determining the presence or absence of evidence for the gardens and associated structures. A secondary objective was to examine any evidence for earlier activity in this area. The aims of Trenches 33 and 34 were to refine and fix the position of the Mansion House of Sayes Court.

The aim of Trenches 27, 28 and 29 was to define the location of the demolished 17th to early 19th century Dockyard boundary wall and assess the level of survival of

stores and timber sheds, with a secondary aim to investigate earlier activity. Trenches 35 and 36 were targeted at the former Royal Marine Barracks, with the aim of assessing the survival of these buildings. Trenches 51 and 52 were targeted at the former No 4 and No 5 slips and their cover buildings, with the aim of assessing their survival.

The aim of Trenches 47, 48 and 49 was to map the extent of survival and form and fabric of the Tudor storehouse and boat store. Trench 50 was targeted on the Great Dock, to fix the position of the dock, examine its structural condition and determine the nature of its backfill. The objective of Trenches 41, 42 and 45 was to determine the level of survival of the Smithy complex, its form and fabric. The aim of Trenches 43, 44 and 46 was to assess the level of survival of the former officers' quarters, their form and fabric. In the west part of the site, Trench 40 was targeted on horticultural land, to identify the nature of land use.

The results of observations obtained from the evaluation will be used to gauge the character, extent and importance of archaeological survival. This information will be used to inform a decision on what further archaeological mitigation will be required under the planning consent, the form such mitigation will take and will be used in detailed design and construction programming in order to achieve any mitigation required.

2 Topographical and historical background

The archaeological and historical background to the site, including the results of a previous field evaluation of the site, is contained in the following documents:

- Hawkins, 2000 – the desk-based assessment
- Lowe, 2000 (edited and updated, Hawkins, 2008) – a preliminary assessment of surviving historic fabric
- Divers 2001 – archaeological evaluation report
- Hawkins, 2003 – an independent appraisal of the archaeological importance
- Hawkins, 2010a – a proposal for the current phase of evaluation work
- Hawkins 2010b – the Archaeological Resource Management Scheme for the site.

3 The evaluation

3.1 Methodology

All archaeological excavation and monitoring during the evaluation was carried out in accordance with the preceding *Method Statement* (Nielsen 2010), and the *Archaeological Site Manual* (MoLAS 1994).

A total of 52 evaluation trenches were excavated across the site, varying in size from 5m square to 90m by 10m. The location of each trench was targeted at a particular structure or group of structures identified from historic maps. The concrete slab or ground was broken out and modern deposits cleared by machine under MOLA supervision. Trenches were excavated by machine by the contractors, monitored by a member of MOLA staff, and by MOLA archaeologists by hand when archaeological structures or deposits were encountered. Archaeological structures were left *in situ*. Occasionally, 'windows' of modern backfill or deposits of low significance allowed deeper excavation by machine to uncover deeply buried structures. In many of the trenches modern services, including live electric cables, water and gas pipes were identified either by CAT scan or exposed through careful hand digging. Once a service had been identified, no further excavation took place in the area of the service.

The locations of evaluation trenches were recorded and temporary bench marks were established across the site by MOLA's survey team. Location information was plotted onto the OS grid. A written and drawn record of all archaeological deposits encountered was made in accordance with the principles set out in the MOLA site recording manual (MOLAS 1994).

The site has produced: 520 trench plans (individual permatrace sheets); 974 context records; 44 section drawings (individual permatrace sheets); and 874 photographs. Five boxes of finds were recovered from the site. The site finds and records can be found under the site code CVF10 in the MoL archive.

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Fig 2 Trench location plan

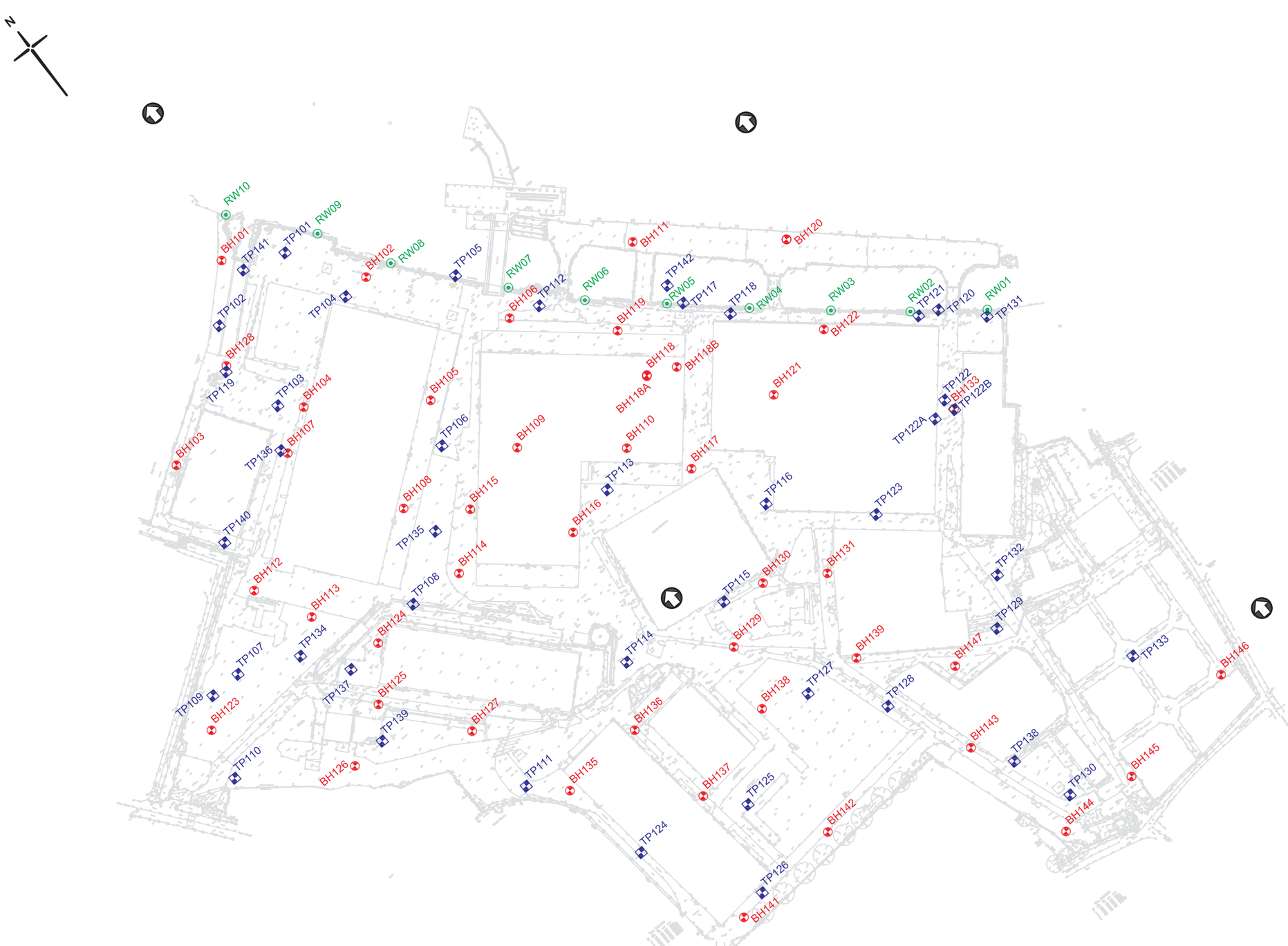

Fig 3 Borehole and trial pit location plan (Mott MacDonald Limited, Exploratory Hole Location Plan, Project No F15742, Drawing No 1)

Fig 4 Convoys Wharf from the air, looking west, with Warehouse numbers marked

3.2 Results of the evaluation

For trench locations see Fig 2

3.2.1 Trench 1

Trench 1	
Location	In north of site, near Shed 50 and MT Garage
Dimensions	25m by 10m by *c* 3.06m max depth
Modern ground level/top of slab	4.49m – 4.52m OD
Base of modern fill/slab	4.42m OD
Depth of archaeological deposits seen	*c* max 1.46m deep
Level of base of deposits observed and/or base of trench	2.96m OD
Natural observed	Not seen

The principal structure in Trench 1 (Fig 5) consisted of a multi-phase wall (Fig 6) running the length of the trench, with a stone capstan base (Fig 8). This NW-SE wall was interpreted as that of the Great Mast Pond, the fill of the pond lying to the southwest of the wall. The wall was subsiding heavily into the Mast Pond fill.

The earliest exposed part of the wall was built of red bricks set in a crumbly yellow-white mortar [553]/[558]. The top of the wall was recorded at 3.80m OD. A test pit was excavated by machine along the southwest face of wall [558]. Ingress of water and the reach of the machine arm prevented excavation below a depth of 2.75m and the lowest part of the wall was seen at 1.77m OD.

Walls [553] and [558] had been heightened by the addition (respectively) of narrower walls [543] and [564], built of red and yellow bricks set in very white lime mortar. These latter walls contained built-in openings at relatively regular distances, that had subsequently been bricked-up by blockings [563]G, [561]J, [559]H, [552]N and [550]P. Blockings [563]G and [559]H were both built of yellow and red brick set in brown sandy mortar – the same build as walls [554]A and [557]D that flanked the stone-built capstan base [555] (Fig 8). The stones of the capstan base were also bonded in brown sandy mortar, suggesting it was added in the same era as walls [554]A and [566]B and blockings [563]G and [559]H. The northwest part of the capstan base [555] had been lost – many of the stones were recovered from the fill of the Mast Pond – but the southeast part survived to a height of 4.14m OD. Wall [566]B, also built of red and yellow bricks set in brown sandy mortar also seemed to belong to the same phase.

The openings in the walls may have held horizontal supports that braced the walls against the weight of the ground behind them. The removal of these supports may explain the severe slumping into the Mast Pond. The openings in the southwest part of the Mast Pond wall corresponded to two timber fenders [551] and [547]. A brick surface was observed to the east of the Mast Pond wall, at 2.89m OD, and a stone base [975] (Fig 9), perhaps part of a crane base, at 3.06m OD.

A further wall [548] (Fig 7) was identified in the trench edge in the south corner of the trench, built of red and orange brick set in white mortar. In the 1808 map, a canal is shown connecting the Great Mast Pond to the Small Mast Pond, and this may correspond to wall [548]. The wall survived to a height of 4.06m OD.

Fig 5 Trenches 1 and 2

Fig 6 The Great Mast Pond wall in Trench 1, looking north

Fig 7 Wall [548] in Trench 1, looking north

Fig 8 Capstan base [555] in Trench 1, looking south

Fig 9 Stone base [975] in Trench 1, looking northwest

A 2.0m deep slot was excavated into the mast pond backfill [567] that consisted of largely of 20th century brick rubble, but the base of the fill was not seen.

3.2.2 Trench 2

Trench 2	
Location	In north of site, near Warehouse 15
Dimensions	25m by 5m by 0.5m depth
Modern ground level/top of slab	4.74m OD
Base of modern fill/slab	4.44m OD
Depth of archaeological deposits seen	Max 0.5m deep
Level of base of deposits observed and/or base of trench	4.24m OD
Natural observed	Not seen

The concrete slab of Trench 2 (Fig 5) was broken out, but further excavation was halted after a live electricity cable and water pipes running the length of the trench were identified.

3.2.3 Trench 3

Trench 3	
Location	In north of site, by riverfront
Dimensions	25m by 10m by *c* 3.2m max depth
Modern ground level/top of slab	4.88m – 5.01m OD
Base of modern fill/slab	*c* 4.71m OD
Depth of archaeological deposits seen	Max *c* 2.9m deep
Level of base of deposits observed and/or base of trench	*c* 1.81m OD
Natural observed	Not seen

The principal structures in Trench 3 (Fig 10, Fig 11) consisted of a northwest-southeast running wall, interpreted as the Small Mast Pond wall, and, in the central part of the trench that was excavated deeper, a series of timber tie-backs associated with the timber predecessor to the Small Mast Pond wall.

The upper part of the trench was filled with building demolition, with the top of the alluvium encountered *c* 1.50m below modern ground level at 3.45m OD. The central part of Trench 3 was excavated below the alluvium to a depth of 2.22m OD, about 2.7m below modern ground level. Five active oak-log land ties running northeast-southwest ([678], [693], [697], [701], [708]) were exposed, with one apparently loose parallel log [694]. The arrangement of the locking cross bars and anchor stakes indicated they resisted pressure on a frontage to the south. The southwest end of land tie [708] was exposed, and the land tie was seen to connect to a timber frontage (Fig 12). This timber frontage [942]/[943] (Fig 12), surviving 0.06m wide, was presumably the forerunner to – and was replaced by – the brick wall 0.7m to the southwest, interpreted as the Small Mast Pond wall. The tie backs could not be dated any more precisely than 16th- to early 19th-century (Damian Goodburn pers comm.). On one of the anchor stakes clear manual (pit-sawing) marks were identified. A small number of assorted oak uprights along the northeast side of the trench did not form any clear pattern.

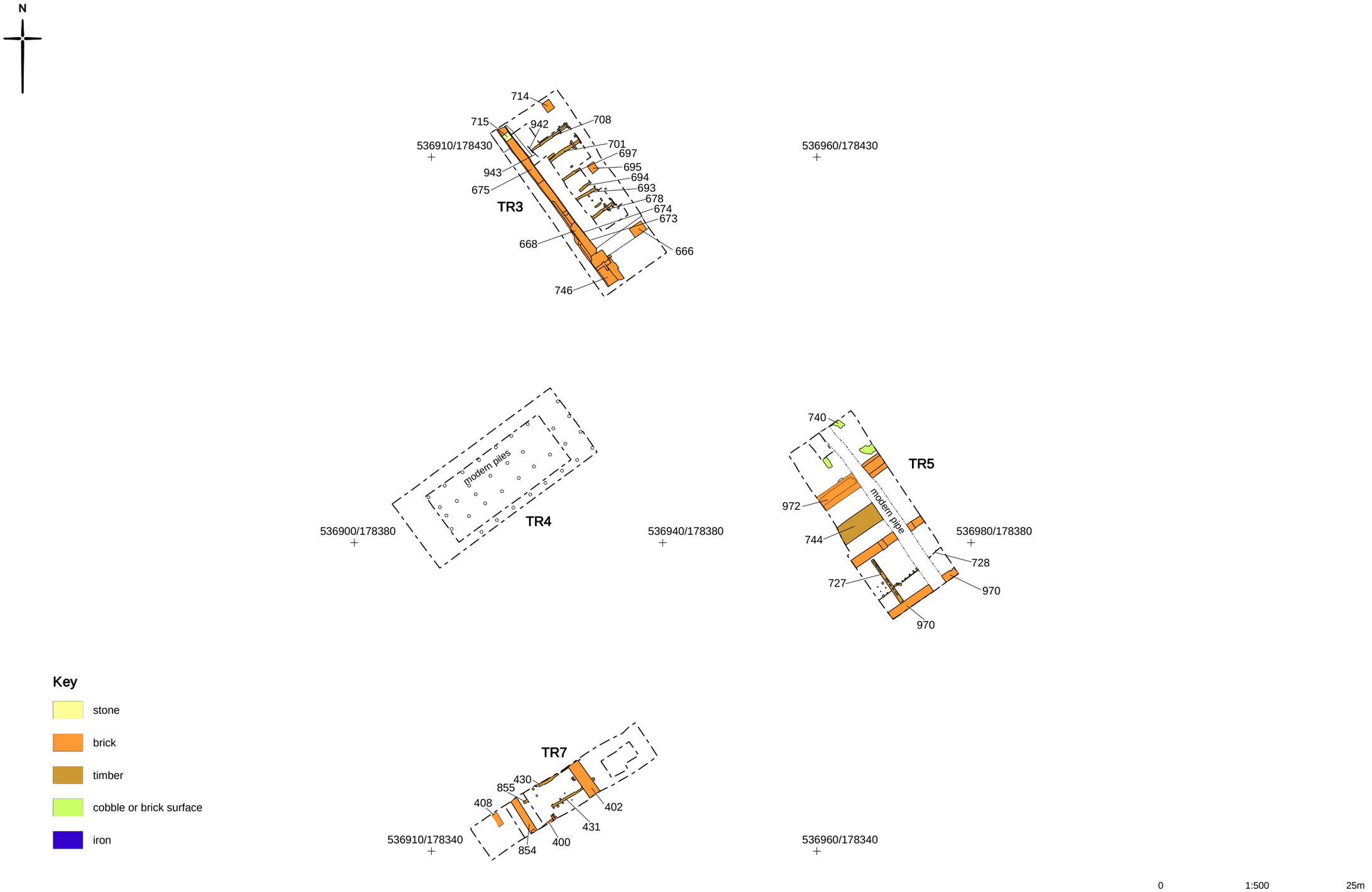

Fig 10 Trenches 3, 4, 5 and 7

Fig 11 Trench 3, looking west

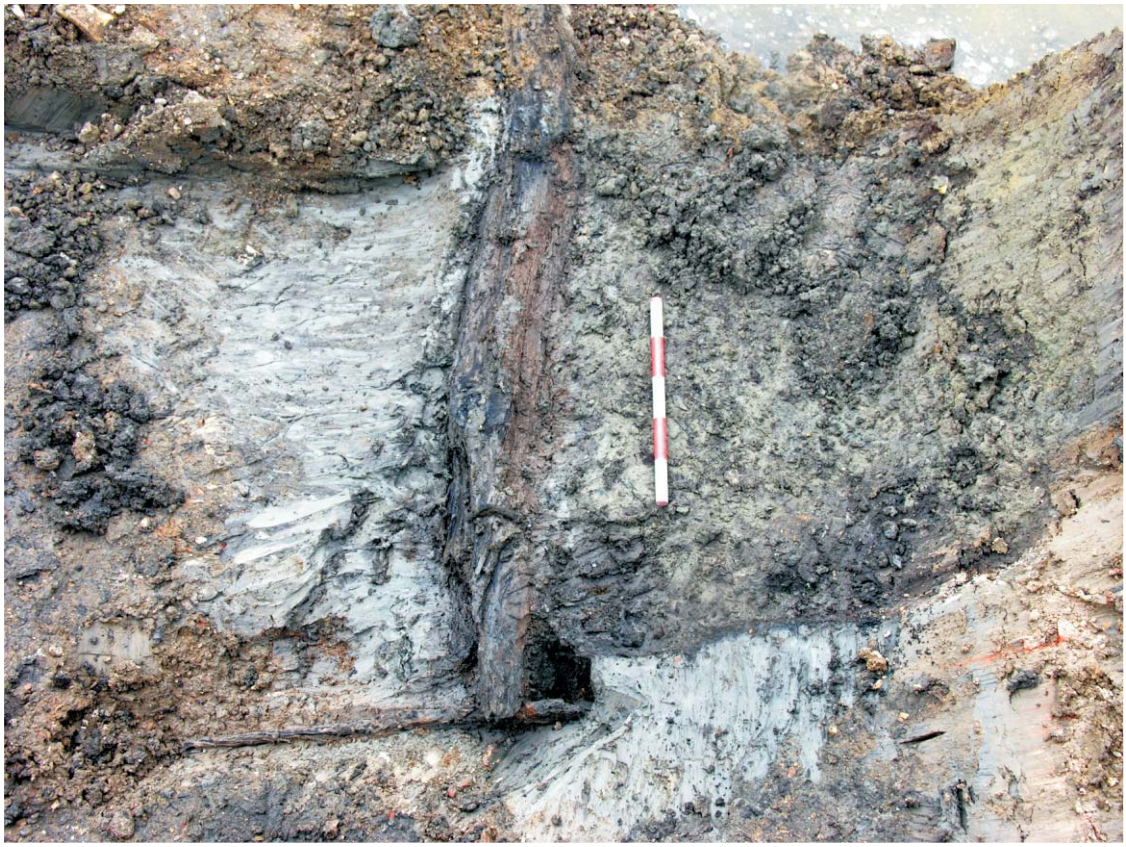

Fig 12 Tie-back [708] and early Small Mast Pond timber wall [942] (running from left to right) in Trench 3, looking northeast

The Small Mast Pond wall consisted of a number of phases. The earliest exposed wall [673] was visible in the northeast (landward) face and was built of orange, yellow and red bricks set in white lime mortar. Wall [674], that extended wall [673] to the northwest, was built of yellow brick set in brown sandy mortar. Both walls were heightened by 0.50m by a wall [675] built of orange bricks set in white mortar-like cement. Wall [675] had itself been heightened by the addition of a 0.15m skim of white concrete. At the northwest end of the wall, a square stone base [715], with a square recess cut into its upper face, was set in the concrete. This was presumably the base for a machine, perhaps a crane. At the opposite end of the wall, in the south part of the trench, an area of brick masonry [746] may also have been a machine base. This area of masonry was abutted by a later concrete wall which encompassed brick base [666]. Two other brick bases [695] and [714] were also recorded in the northeast part of the trench that may have been plinths for an open-sided building fronting the Thames.

A deeper slot was excavated by machine in the west corner of the trench, with the aim of gauging the depth of the Small Mast Pond wall. The slot was excavated 3.2m deep (to 1.75m OD), but ingress of water and trench collapse prevented further excavation and the base of the wall was not seen.

Yellow and red bricks set in white cement [668] had been added to the southwest face of the Small Mast Pond wall and rendered with cement to create a battered profile. This battering was more complete to the southeast.

3.2.4 Trench 4

Trench 4	
Location	In Warehouse 15
Dimensions	25m by 10m by *c* 2.37m max depth
Modern ground level/top of slab	5.06m OD
Base of modern fill/slab	4.81m OD
Depth of archaeological deposits seen	No deposits observed
Level of base of deposits observed and/or base of trench	2.69m OD
Natural observed	Not seen

Trench 4 (Fig 10) was located within the fill of the Small Mast Pond, and no structures were identified apart from a series of modern concrete mini piles. The stepped trench was excavated to a maximum depth of 2.69m OD.

3.2.5 Trench 5

Trench 5	
Location	In north of site, to the east of Warehouse 15, by riverfront
Dimensions	25m by 10m by 1.37m depth
Modern ground level/top of slab	4.91m OD
Base of modern fill/slab	4.71m OD
Depth of archaeological deposits seen	Max 1.17m deep
Level of base of deposits observed and/or base of trench	3.54m OD
Natural observed	Not seen

In the west part of Trench 5 (Fig 10), a substantial oak beam [727] was uncovered which had many redundant peg holes and large mortices in it. It lay at 3.69m OD,

and ran northwest-southeast (Fig 13). It is likely that this second-hand timber was reused as a foundation beam for a building fronting the Thames. An oak post base near the sill beam [729] had been wedged in place by ramming chocks against the sill beam. Beneath these timbers lay decayed traces of a revetment [728] running at right angles to the sill beam at 3.58m OD, towards the river. This comprised planking on edge with regular, small, squared uprights with clay packed around them implying that the plank sheathing was nailed on the fronts of the posts, common from the 17th century along the Thames (Damian Goodburn pers comm.). The heads of several oak piles could also be seen forming no clear pattern.

The beam had been cut by a culvert [971] built of red brick set in white mortar. Small areas of angular cobbles [737], [738] and [740] lay in the northwest part of the trench, at 3.80m OD, 4.10m OD and 4.17m OD.

A wall, built of yellow brick set in white cement on a concrete foundation presumably dated from the use of the site in the early 20th century. A large concrete base in the central part of the trench presumably dated to the same period. The concrete base included an area of closely-packed timber sets at [744] at 4.86m OD, lying on top of the concrete.

3.2.6 Trench 6

Trench 6	
Location	In Warehouse 15
Dimensions	25m by 5m by *c* 2.53m max depth
Modern ground level/top of slab	5.05m OD
Base of modern fill/slab	*c* 4.75m OD
Depth of archaeological deposits seen	*c* 2.23m deep
Level of base of deposits observed and/or base of trench	*c* 2.52m OD
Natural observed	Not seen

The principal structures identified in Trench 6 (Fig 14) were two parallel walls [832] built of frogged yellow brick set in light brown mortar, connected by a shorter wall of the same build. The top of the walls lay at 3.78m OD. The base to an opening in the easternmost wall was flagged, with two small iron spikes protruding from the northern stopped end. A timber tie-back [833] ran at right angles to the walls in the west part of the trench, at 3.25m OD, and presumably braced an earlier timber structure which the walls had replaced. The west part of the trench was excavated to 3.99m OD. The east of the trench was filled with brick and stone rubble, glass, boilerplate and other iron debris, excavated to 2.56m OD presumably filling a feature only backfilled in the late 19th century or later.

The parallel walls correspond to walls to a sawmill shown on the 1868 map (Fig 69). The opening, with its flagged base, is more difficult to interpret. The opening may have housed a machine or allowed access from an upper level to this part of the sawmill.

Fig 13Timber baseplate [727] in Trench 5, looking northwest

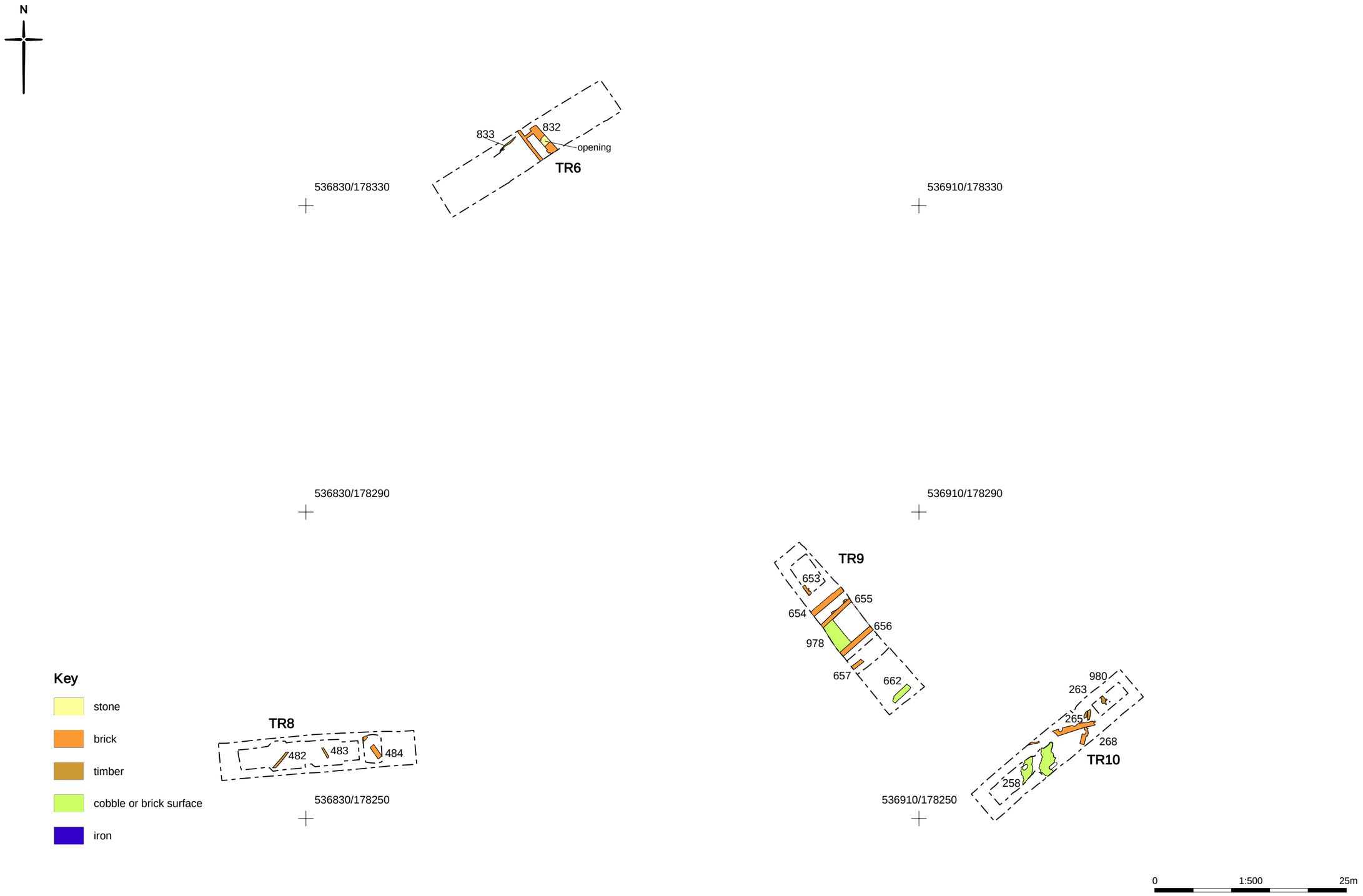

Fig 14 Trenches 6, 8, 9 and 10

3.2.7 Trench 7

Trench 7	
Location	In Warehouse 15
Dimensions	25m by 5m by *c* 2.26m max depth
Modern ground level/top of slab	5.03m – 5.05m OD
Base of modern fill/slab	4.75m OD
Depth of archaeological deposits seen	1.59m deep
Level of base of deposits observed and/or base of trench	2.79m OD
Natural observed	Not seen

Two oak log land tie beams [430] and [431] were exposed in the south part of Trench 7 (Fig 10), running northeast-southwest. The iron spikes that once held the timber lock bars to the main beams were visible. A brick wall [402] that crossed the trench was likely to be the southwest wall of the Small Mast Pond (Fig 15, Fig 16). The wall had been widened by the addition of a single width of brick to the northeast face. The opposite (landward) face of the wall, the top of which was recessed for a pipe and lay at 4.32m OD, appeared to have been built around the land ties. As in Trench 3, the land ties would have been connected to a timber frontage (although this was not seen, perhaps coinciding with the brick wall that replaced it). On the northeast face, the wall had two brackets for the original timber fendering, coinciding with the position of the tie backs. A pair of oak uprights [434], [438] in the south part of the trench may have been relict land tie anchor stakes (Damian Goodburn pers comm.).

A deeper machine slot was excavated through alluvium in the west of the trench, revealing a wall [854] crossing the trench, its top at 3.06m OD. The wall seemed to be part of a building, its return [400], [401], [435] partially obscured in the southeast section. The walls were built of red brick in white mortar. The slot also revealed the west end of a deeper land tie [855] at 3.34m OD.

The fill [448] of the Mast Pond to the northeast of wall [402] consisted of grey silty sand with some broken brick rubble. This deposit was excavated to 3.82m OD. A deeper machine slot in the fill was excavated to 2.79m OD, but the base of the fill was not seen.

3.2.8 Trench 8

Trench 8	
Location	In east of site, to west of Warehouse 15
Dimensions	25m by 5m by 3.89m depth
Modern ground level/top of slab	4.11m – 4.48mm OD
Base of modern fill/slab	*c* 3.83 - 4.2m OD
Depth of archaeological deposits seen	Max 2.75m deep
Level of base of deposits observed and/or base of trench	0.59m OD
Natural observed	Not seen

Trench 8 (Fig 14) was stepped, with the central part excavated to a depth of up to 3.5m deep (0.59m OD). Two timbers were identified [482] and [483] at 0.92m OD and 0.70m OD respectively. It was not clear whether these timbers were the *in situ* remains of a structure or structures or simply loose within the alluvium. In the east part of the trench a wall built of red brick set in white mortar was identified [484]. The

Fig 15 Small Mast Pond wall [402] in Trench 7, looking west

Fig 16 Small Mast Pond wall [402] and timber tie backs [431] and [429] in Trench 7, looking north

northwest-southeast running wall had been cut by a modern service pipe and its broken top lay at 1.49m OD. The wall was on the same alignment as the 1753 dockyard boundary. The top of the alluvium lay at 2.16m OD and was sealed with building demolition rubble, which itself was sealed by a 0.5m depth of concrete and granite setts.

3.2.9 Trench 9

Trench 9	
Location	In north of site, between Warehouse 14 and Warehouse 15
Dimensions	25m by 5m by *c* 2.66m max depth
Modern ground level/top of slab	4.82m OD
Base of modern fill/slab	4.64m OD
Depth of archaeological deposits seen	Max *c* 2.23m deep
Level of base of deposits observed and/or base of trench	2.16m OD
Natural observed	Not seen

An early structure observed in Trench 9 (Fig 14, Fig 17) was a timber baseplate [977] at 3.05m OD. This lay below but was not on the same line as overlying a brick wall [655], suggesting the baseplate may originally have been the foundation to an earlier structure and had been reused. Wall [655] was built of red brick set in white lime mortar, its broken top lying at 3.88m OD. Wall [656] that was roughly parallel to wall [655] and built of purple-red bricks set in white lime mortar, was also supported on a timber baseplate at 3.22m OD. Wall [656] survived to a similar height to wall [655] and although its build was similar it was not identical. However, the two walls are likely to have been the external walls to separate but parallel buildings during the same period as an external, cobbled surface [978] at 3.69m OD abutted both walls. A more fragmentary wall [657] to the east of wall [656] was revealed in a deeper machine slot and survived only three courses high to 3.52m OD. Further east, the trench was heavily truncated by modern services, although another patch of cobbles [662] – also representing an external surface – was identified at 3.90m OD.

A wall built of frogged yellow bricks set in hard brown yellow mortar [654] lay in the west part of the trench, its top surviving to 4.15m OD. Two further machine slots were excavated – one alongside cobbles [978] through alluvium to a depth of 2.93m OD (no other structures were identified in this slot), the second at the west end of the trench to a depth of 2.16m OD that revealed part of a red brick-built drain [653] running south.

The top of the alluvium in the trench lay at *c* 3.68m OD, but was undoubtedly redeposited to at least 2.82m OD as it contained occasional thin bands of brick demolition debris above this. The alluvium was sealed by cement, concrete and modern make-up deposits below the *c* 0.20m deep concrete slab.

Fig 17 Trench 9, looking southeast

Fig 18 Steam kiln building [268] and cobbled surface [258] in Trench 10, looking southeast

3.2.10 Trench 10

Trench 10	
Location	In Warehouse 14
Dimensions	25m by 5m by *c* 4.1m max depth
Modern ground level/top of slab	4.99m OD
Base of modern fill/slab	4.78m OD
Depth of archaeological deposits seen	Max 3.40m deep
Level of base of deposits observed and/or base of trench	0.49m OD
Natural observed	Not seen

Most of Trench 10 (Fig 14) contained structures, but an area of alluvium in the northeast end of the trench provided the opportunity to excavate a deeper machine slot. The *c* 4.1m deep slot revealed an area of chalk rubble [980] overlying a horizontal timber, and two *in situ* piles [981] at 1.39m OD. Northeast of this, the slot was excavated deeper to 0.49m OD, but no further structures were encountered and the base of the alluvium was not seen. The chalk and the timbers may represent a structure on an inlet from the river, but no dating material was recovered. Deep alluvium was also encountered in Trench 16, suggesting the presence of a silted-up watercourse running northeast towards the river in the area of these two trenches.

The results from a nearby geotechnical borehole BH109 (Fig 3) also indicate deep alluvium in this area. This borehole found that the base of the alluvium lay at 9.2m below modern ground level (-4.25m OD).

In the central part of the trench, a north-south wall built of red brick set in lime mortar [268] rested on a timber baseplate [263] (Fig 18). The broken top of the wall lay at 3.68m OD. The wall is likely to have been part of the steam kiln known in this area of the site from map evidence. A cobbled surface [258] sloped away from the wall to the southwest, probably the result of subsidence, to a minimum height of 3.07m OD. The wall had been truncated by a brick culvert [265], built of frogged yellow bricks and reused unfrogged red bricks, set in brown sandy mortar.

The top of the alluvium lay at 3.59m OD, although thin bands of demolition suggested the alluvium had been redeposited. The top of cleaner alluvium lay at 2.59m OD. The alluvium was sealed by demolition from the Dockyard, consisting of brick rubble with frequent cobbles, that was itself sealed by the 0.25m slab and 0.5m additional depth of bedding deposits.

3.2.11 Trench 11

Trench 11	
Location	In north of site, to north of Warehouse 14, on riverfront
Dimensions	25m by 10m by 1.87m depth
Modern ground level/top of slab	5m – 5.17m OD
Base of modern fill/slab	*c* 4.74m - 4.91m OD
Depth of archaeological deposits seen	Max 1.1m deep
Level of base of deposits observed and/or base of trench	3.3m OD
Natural observed	Not seen

Trench 11 (Fig 19) was located immediately northwest of Trench 37 and north of Trench 12. The fragmentary timbers and walls identified in the trench did not form any clear pattern. Wall [933] was built of yellow bricks set in brown cement, and survived to a height of 4.13m OD. A broken culvert [916] in the north part of the trench was built of red bricks set in white mortar.

3.2.12 Trench 12

Trench 12	
Location	In Warehouse 14
Dimensions	25m by 5m by 2m depth
Modern ground level/top of slab	5.01m – 5.07m OD
Base of modern fill/slab	c 4.8m
Depth of archaeological deposits seen	Max c 1.17m deep
Level of base of deposits observed and/or base of trench	3.07m OD
Natural observed	Not seen

A series of timber beams [106] that crossed Trench 12 (Fig 19, Fig 20) were likely to be part of a slipway (Fig 21). The height of the timbers fell from 3.64m OD in the southwest end of the trench to 3.12m OD in the northeast end where the timbers were only exposed in a deeper machine slot. A machine slot in the northeast end of the trench was excavated to 3.07m OD but failed to locate any further timbers. The timbers consisted of substantial fast-grown oak beams and most likely dated to the 18th to early 19th centuries (Damian Goodburn pers comm.). Some iron spikes were visible in the timbers.

Two later pillar bases, [106] and [107], both built of yellow brick set in cement were recorded in the east part of the trench. The structures in the trench were sealed by brick rubble with frequent cobbles, itself sealed by a 0.5m depth of bedding deposits below a 0.25m slab.

3.2.13 Trench 13

Trench 13	
Location	In Warehouse 14
Dimensions	25m by 5m by *c* 2.37m max depth
Modern ground level/top of slab	4.97m OD
Base of modern fill/slab	*c* 4.69m OD
Depth of archaeological deposits seen	Min 2.69m deep
Level of base of deposits observed and/or base of trench	2.6m OD
Natural observed	Not seen

Trench 13 (Fig 27) was located within the Dockyard Basin. The trench was stepped, with the central part of the trench excavated to a depth of 2.60m OD. No structures were seen and the trench was filled with brick, chalk and cobble rubble [105]. A deeper machine slot in the north end of the trench failed to locate the Dockyard Basin wall (which presumably lies to the north, perhaps under the wall of the modern warehouse), but identified the base of the rubble deposit at 2.31m OD sealing alluvium.

Fig 19 Trenches 11, 12 and 37

Fig 20 Trench 12, looking northeast

Fig 21 Remains of a timber slipway [106] in Trench 12, looking east

3.2.14 Trench 14

Trench 14	
Location	In Warehouse 14
Dimensions	25m by 5m by 3.27m depth
Modern ground level/top of slab	4.93m – 5.02m OD
Base of modern fill/slab	c 4.77m OD
Depth of archaeological deposits seen	Max 1.96m deep
Level of base of deposits observed and/or base of trench	1.75m OD
Natural observed	Not seen

A stone and brick wall interpreted as the Dockyard Basin wall was identified in the west of Trench 14 (Fig 27) after deeper machine excavation. The earliest structure, however, seemed to be a timber tie back [838]/[839], presumably originally for a timber forerunner to the stone and brick wall. The wall seemed to be consist of more than one phase, with the earliest wall [848] built of stone, running northeast-southwest (Fig 26). A later stone wall [846] seemed to overlie wall [848], but ran at right angles to it on a northwest-southeast course. A brick wall [845], consisting of orange brick in yellow mortar, had then been built against and partially over stone wall [846]. This complicated arrangement may have been due to a channel shown in the 1808 map running northwest-southeast in the area of Trench 14, with the walls on this alignment part of this channel. The top of wall [848] lay at 2.82m OD, that of wall [846] at 2.86m OD and that of wall [845] at 3.02m OD.

A timber fender or pile [851] was located against the wall, and another pile [853] was identified in the fill of the Basin. The Basin fill of silty clay with frequent brick and stone rubble was excavated deeper by machine in the are of this latter pile, to depth of 2.50m OD, but the base of the fill was not seen.

3.2.15 Trench 15

Trench 15	
Location	In east of site, to east of Warehouse 14
Dimensions	25m by 5m by 1.92m depth
Modern ground level/top of slab	4.42m OD
Base of modern fill/slab	*c* 4.12m
Depth of archaeological deposits seen	Max *c* 1.91m deep
Level of base of deposits observed and/or base of trench	2.5m OD
Natural observed	Not seen

Much of the archaeology in Trench 15 (Fig 22) had been truncated by modern services, although some structures were still visible. Brick walls [517] (Fig 23) were likely to be the brick linings for two saw pits and were built of frogged yellow bricks set in grey mortar. The top of the walls lay at *c* 4.10m OD, close to the modern ground surface. The western saw pit was excavated to the base of the brick lining at 2.11m OD. A recess set around the inside of the brick lining at 2.50m OD may originally have held a presumably timber floor. Cobbled surfaces [516], [518] and [520] abutted the edges of the walls and another patch of cobbles [512] survived further east.

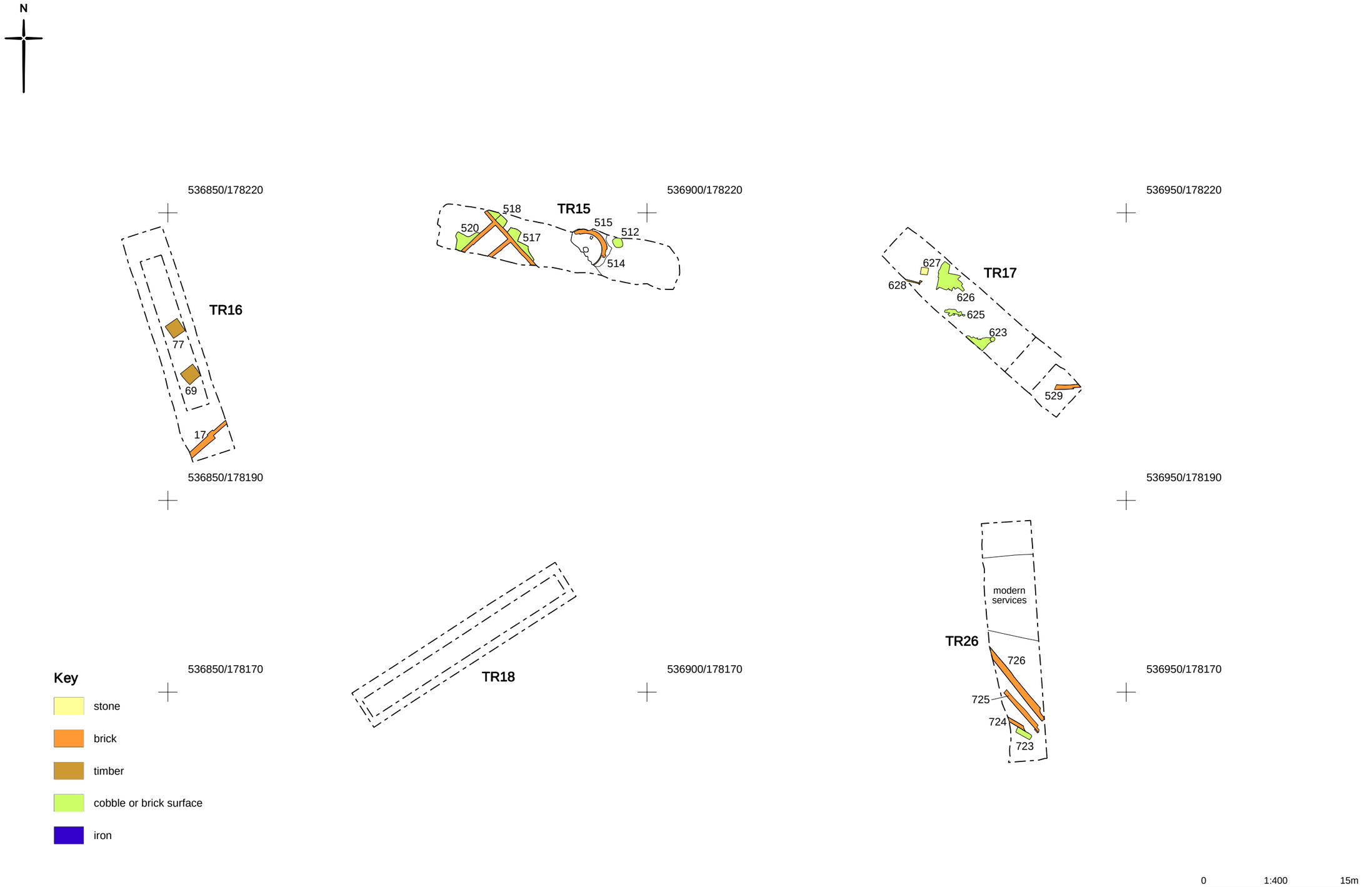

Fig 22 Trenches 15, 16, 17, 18 and 26

Fig 23 Brick sawpit [517] in Trench 15, looking east

Fig 24 Timber platform [069] in Trench 16, looking south

In the east part of the trench, the remains of a turntable [515] was built of a curved iron rail within a curving wall built of frogged orange bricks set in cement on top of a concrete base [514].

3.2.16 Trench 16

Trench 16	
Location	In east of site, within footprint of demolished Warehouse 22
Dimensions	25m by 5m by *c* 2.68m max depth
Modern ground level/top of slab	3.37m OD
Base of modern fill/slab	*c* 3.15m OD
Depth of archaeological deposits seen	Max *c* 2.43m deep
Level of base of deposits observed and/or base of trench	Max *c* 0.69m OD
Natural observed	Not seen

A 7.0m deep machine slot was excavated in the central part of Trench 16 (Fig 22) to a depth of -3.63m OD, but gravel natural was not encountered and the base of the grey silty clay alluvium that occupied the lower part of the trench was not seen. The very deep alluvium in this part of the site suggests that there may be a natural watercourse running northeast towards the river. The results of a nearby geotechnical borehole BH127 (Fig 3) indicated that the base of the alluvium lay at 5.45m below modern ground (-2.08m OD).

A deposit of peat [079] up to 0.42m thick, was identified at -0.02m OD and sampled. The peat was sealed by a further thick deposit of alluvium, the top of which lay at 2.37m OD, and which was itself sealed by a consolidation layer of brick rubble and modern overburden below the concrete slab.

Two timber platforms were found cut into the alluvium, [069] (Fig 24) in the south end of the trench and [077] in the centre. Both were similarly built, consisting of two layers of thick oak planks treenailed and bolted at right angles to each other. Platform [069] measured 1.64m by 1.46m its top at 0.93m OD, [077] was 1.50m square, its top slightly lower at 0.69m OD. In platform [069], the upper layer of timbers was decayed and had been roughly salvaged in the past, but the lowest was little decayed. The five planks or thin beams were probably longitudinal stringers or 'wale strakes' in a medium sized or largish carvel built ship. Relict features of ship origin included a small number of oak treenails, some of which were split and caulked. However, most of the fastening holes were clearly for the use of large 'clench bolts'. These ship fastening took the form of a round shaft with forged head on one end the other peened or 'clenched' over a washer. In one case the washer was left *in situ* and was seen to be of copper alloy. This would indicate the use of nonferous bolts. One of the planks also had a double line of truncated copper nails, left from attaching copper sheathing of some kind (Damian Goodburn pers comm.).

Such structures may have been one of two types of typical shipyard furniture. The first possibility is the structures are ‘deadmen’ which were a simple form of land-anchor made of tough scrap or second hand materials for anchoring cranes or winches. A second possibility is that they are part of the sub-ground support for a capstan used or hauling timber and gear into place.

The range of fastenings used, such as the great number of clench bolts used and presence of copper sheathing nails suggests an original date not earlier than the late 18th for the parent vessel construction possibly much later up to around the mid 19th century. The reuse of the timbers was probably not earlier than the early 19th but could run as late as the late 19th century.

A wall [017], built of yellow brick set in cement and crossing the south end of the trench, probably dated to the early 20th century.

3.2.17 Trench 17

Trench 17	
Location	In central part of site, to south of Warehouse 14
Dimensions	25m by 5m by 1.41m depth
Modern ground level/top of slab	4.95m OD
Base of modern fill/slab	*c* 4.65m OD
Depth of archaeological deposits seen	Max *c* 0.36m deep
Level of base of deposits observed and/or base of trench	*c* 3.54m OD
Natural observed	Not seen

The structures in Trench 17 (Fig 22) consisted largely of a fragmentary cobbled surface [623], [625], [626] (Fig 25) at *c* 3.75m OD. Lines of longer cobbles seemed to form an east-west running kerb in two of the patches of cobbles, suggesting the presence of a roadway 3.8m wide. An east-west running timber [628] at a similar level may have been part of a structure of unknown function, perhaps associated with nearby flagstone [627].

The southeast part of the trench had been truncated by an electric cable, but in the southeast end a wall [529] built of orange-red bricks set in white mortar running east-west was identified. The broken top of the wall lay at 3.55m OD.

Trench 17 was filled with brick rubble, with timber to a height of 4.28m OD. This deposit – presumably building demolition – was sealed by modern gravel bedding for the 0.30m deep concrete slab.

3.2.18 Trench 18

Trench 18	
Location	In east of site, within footprint of demolished Warehouse 22
Dimensions	25m by 5m by 0.99m depth
Modern ground level/top of slab	*c* 3.42m OD
Base of modern fill/slab	*c* 2.81m
Depth of archaeological deposits seen	Max *c* 1.10m deep
Level of base of deposits observed and/or base of trench	1.71m OD
Natural observed	Not seen

The character of Trench 18 (Fig 22) was very similar to that of nearby Trench 16, although timber structures were not encountered. A 4.6m deep machine slot was excavated in the west end of the trench which revealed a deep deposit of alluvium, the top of which lay at 2.67m OD. The upper part of the alluvium was redeposited as it contained bands of brick rubble. Cleaner alluvium was recorded at 0.52m OD. A

Fig 25 Cobbled surface [626] in Trench 17, looking northwest

Fig 26 Dockyard Basin Wall in Trench 14, looking west. Brick wall [848] to right, stone wall [846] left

peat deposit [089] was identified in the base of the machine slot at -1.08m OD, and sampled. The alluvium was sealed by modern gravel below the 0.16m deep concrete slab.

3.2.19 Trench 19

Trench 19	
Location	In central part of site, to north of Warehouse 24 (Olympia)
Dimensions	25m by 5m by *c* 2.34m max depth
Modern ground level/top of slab	4.94m OD
Base of modern fill/slab	*c* 4.66m OD
Depth of archaeological deposits seen	Max *c* 1.75m deep
Level of base of deposits observed and/or base of trench	2.6m OD
Natural observed	Not seen

Trench 19 (Fig 27) was located over the wall and the fill of the Dockyard Basin. Modern services crossed the trench, although it was possible to excavate between the services in places. Two machine slots, excavated to 2.60m OD and 2.84m OD encountered presumably redeposited alluvium at 3.48m OD.

A wall interpreted as that of the Basin was identified in the west end of the trench [478] (Fig 28). Only the east face was exposed as the wall was partially concealed below an electricity cable. The wall was built of red bricks set in grey sandy mortar and ran northeast-southwest. The remainder of the trench was filled with brick rubble and clay, material used to backfill the Dockyard Basin. The concrete slab sealing this fill was 0.30m thick.

3.2.20 Trench 20

Trench 20	
Location	In central part of site, to north of Warehouse 24 (Olympia)
Dimensions	25m by 5m by 2m depth
Modern ground level/top of slab	5.04m OD
Base of modern fill/slab	*c* 4.78m OD
Depth of archaeological deposits seen	Max *c* 1.51m deep
Level of base of deposits observed and/or base of trench	3.04m OD
Natural observed	Not seen

Trench 20 (Fig 27) was located within the Dockyard Basin. A single timber pile [477] was identified in a machine slot in the central part of the trench. The top of the 0.30m square pile lay at 3.44m OD. The trench was filled with demolition consisting of brick and cobble rubble in a clay matrix, presumably material used to backfill the Basin. The machine slots were excavated to 2.74m OD and 2.62m OD, but, unlike in Trench 19, no alluvium was identified. A modern pipe crossed the east end of the trench and two modern concrete piles lay along the south edge. The concrete slab was 0.26m thick, overlying a 0.50m depth of modern make-up.

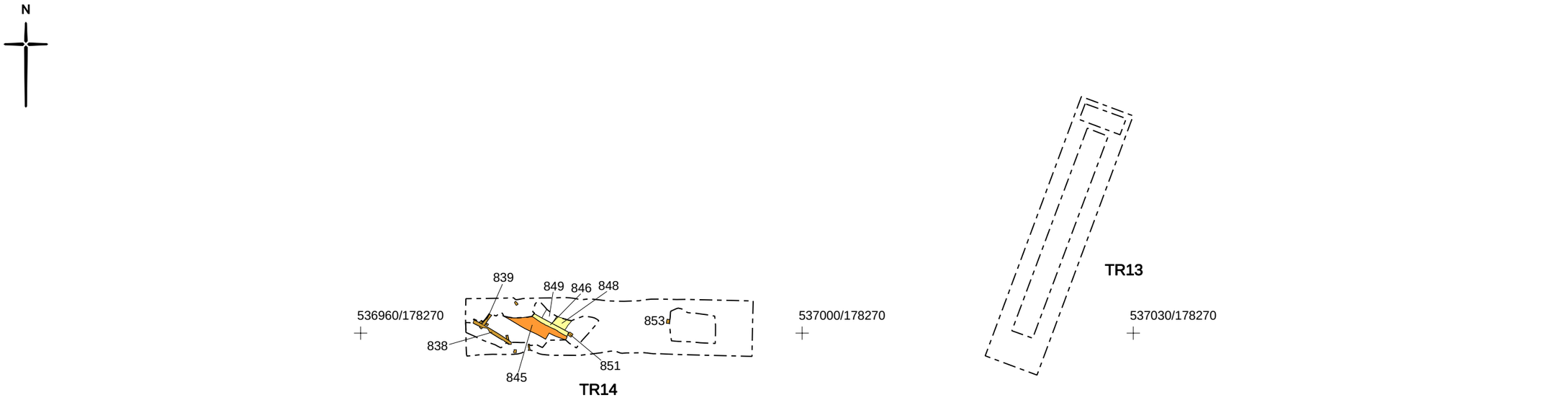

Fig 27 Trenches 13, 14, 19 and 20

Fig 28 The Dockyard Basin wall [478] in Trench 19, looking northeast

3.2.21 Trench 21

Trench 21	
Location	In Warehouse 24 (Olympia)
Dimensions	5m by 5m by *c* 2.24m depth
Modern ground level/top of slab	3.60m OD
Base of modern fill/slab	*c* 3.38m
Depth of archaeological deposits seen	Max *c* 1.64m deep
Level of base of deposits observed and/or base of trench	1.36m OD
Natural observed	Not seen

Trench 21 (Fig 29) was one of four trenches located in the 19th century cover building, Olympia, currently used as a warehouse. A granite wall [488] (Fig 30), interpreted as the wall to a slipway, ran north-south along the east edge of the trench. The top of this 1.14m wide wall lay at 3.00m OD. The foundation of one of the columns to the cover building lay within the trench. The iron column was supported on a series of concrete slabs (with some brick), a total of 0.90m thick [487]. The base of the concrete slabs lay at 2.06m OD.

3.2.22 Trench 22

Trench 22	
Location	In Warehouse 24 (Olympia)
Dimensions	5m by 5m by *c* 4.5m max depth
Modern ground level/top of slab	3.45m OD
Base of modern fill/slab	*c* 3.23m OD
Depth of archaeological deposits seen	Max *c* 3.34m deep
Level of base of deposits observed and/or base of trench	- 1.05m OD
Natural observed	Not seen

Trench 22 (Fig 29) was also located in the Olympia building. This 4.50m deep trench was machine excavated to the surface of a granite slipway [527] at -1.05m OD. The trench was filled with gravel and building demolition over redeposited alluvium.

3.2.23 Trench 23

Trench 23	
Location	In Warehouse 24 (Olympia)
Dimensions	5m by 5m by 1.97m depth
Modern ground level/top of slab	3.59m OD
Base of modern fill/slab	*c* 3.37m OD
Depth of archaeological deposits seen	Max *c* 1.27m deep
Level of base of deposits observed and/or base of trench	1.65m OD
Natural observed	Not seen

Trench 23 (Fig 29) was located in the Olympia building, and the southern end of the granite slip wall seen in Trench 21 was identified [492] (Fig 31). Its top lay at 2.92m OD and it was supported on a foundation of red and yellow bricks set in cement [493] which continued south as brick foundation wall [494]. A machine slot excavated

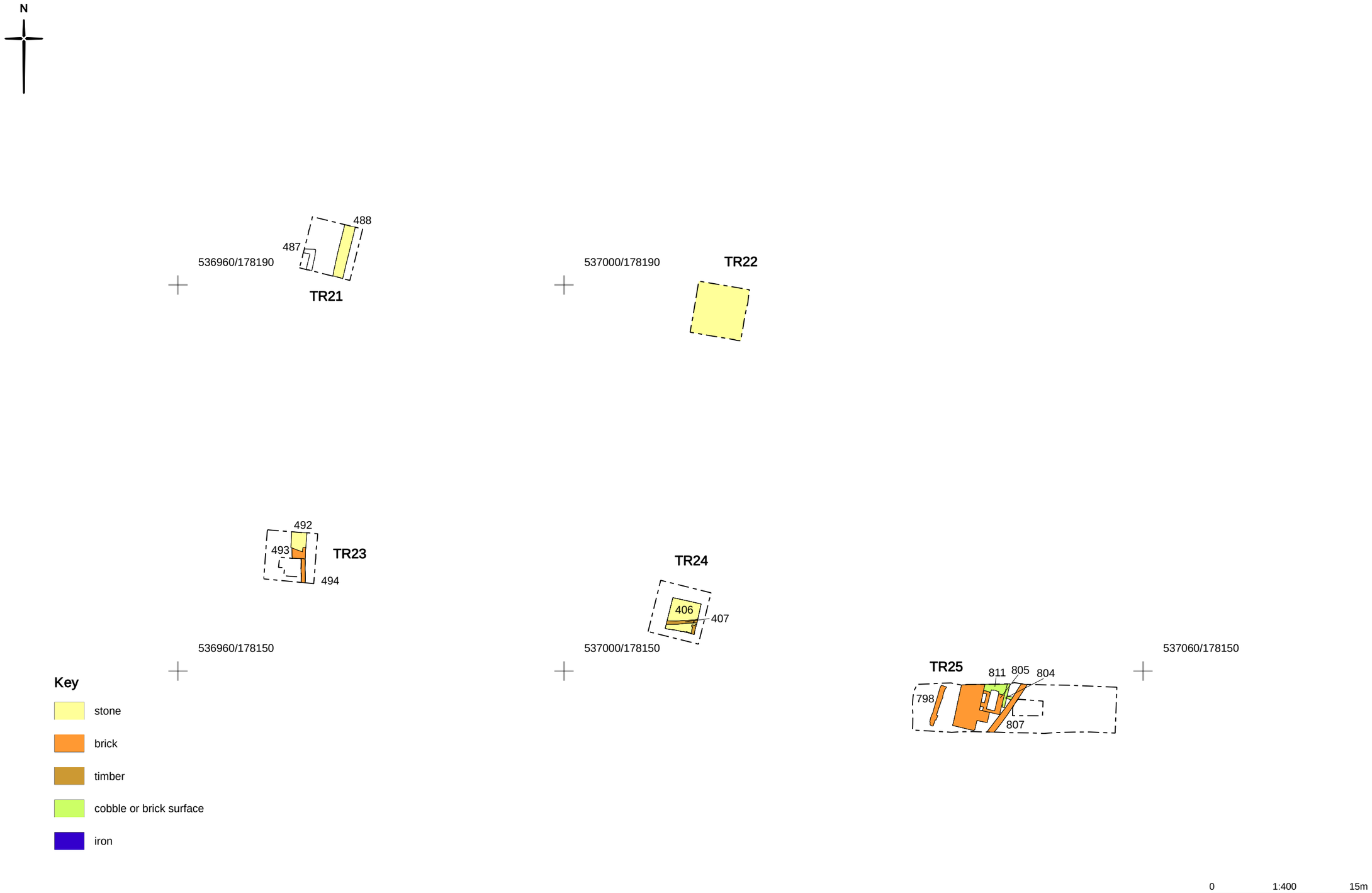

Fig 29 Trenches 21, 22, 23, 24 and 25

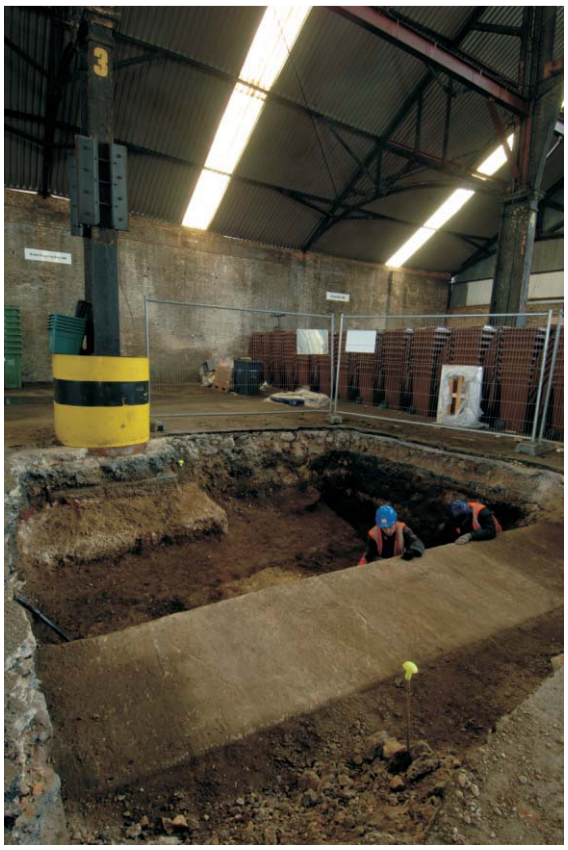

Fig 30 Part of stone slipway [488] and Olympia building foundations [487], seen in Trench 21, looking west

Fig 31 Part of stone slipway[492] in Trench 23, looking northwest

in the central part of the trench identified redeposited alluvium at 1.65m OD below a demolition deposit of brick rubble in gravel and silt.

3.2.24 Trench 24

Trench 24	
Location	In Warehouse 24 (Olympia)
Dimensions	5m by 5m by c 2.27m depth
Modern ground level/top of slab	3.66m OD
Base of modern fill/slab	*c* 3.44m
Depth of archaeological deposits seen	Max *c* 1.02m deep
Level of base of deposits observed and/or base of trench	1.39m OD
Natural observed	Not seen

Trench 24 (Fig 29) was located in the southeast corner of the Olympia cover building. The granite floor to a slipway was identified [406], in a machine slot in the centre of the trench, at 1.50m OD. A 0.30m wide slot [405] running northwest-southeast across the granite contained some fragments of timber. The slipway was overlain by a mixed gravel deposit below the concrete slab.

3.2.25 Trench 25

Trench 25	
Location	In central part of site, east of Warehouse 24 (Olympia)
Dimensions	25m by 5m by *c* 1.5m max depth
Modern ground level/top of slab	2.97m OD
Base of modern fill/slab	*c* 2.71m OD
Depth of archaeological deposits seen	Max *c* 1.23m deep
Level of base of deposits observed and/or base of trench	1.47m OD
Natural observed	Not seen

Gravel was identified in a machine slots to the east of a north-south running wall [798] at 1.00m OD in Trench 25 (Fig 29, Fig 32). The depth of the machine slot prevented hand excavation, but at least the upper part of the gravel may have been redeposited. The machine slot was excavated to 0.10m OD. A 0.50m depth of alluvium was observed above the gravel, directly below brick structure [801] (Fig 33), and may also have been redeposited.

Wall [798] was built of red brick set in sandy yellow mortar and appeared to be the sloping east wall of a slipway. The base was not seen in a machine slot excavated to the west of the wall to a depth of 0.00m OD. Brick structure [801] was 2.4m wide and built of red brick set in white mortar and included a buttress-like structure on its east face. The structure appeared to be a large platform, rather than a wall, as its south end was stopped and it was only 1.10m deep. The structure may have been a massive base for a crane or other machine.

Walls abutting the east face of structure [801] may also have been the remains of the bases for a crane or other machines. Wall [804] was built of yellow and orange brick set in grey cement. An area of flagstones [811] to the north of this wall may have been the floor to an underground room of which walls [805] and [812], both built of red brick in white mortar, may also have been a part. These structures had fallen