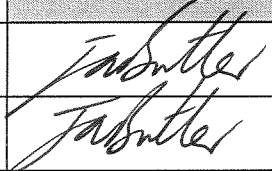



DOCUMENT VERIFICATION

419 WICK LANE
 OLD FORD
 LONDON BOROUGH OF TOWER HAMLETS
 WATCHING BRIEF

Quality Control

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**An Assessment of an Archaeological Watching Brief on Land at 419
Wick Lane, Old Ford, London Borough of Tower Hamlets**

Site Code: WKN 06

Central National Grid Reference: TQ 3733 8375

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MoLAS-PCA,
March 2008**

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March 2008**

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1 ABSTRACT

- 1.1 This report details the results and working methods of an archaeological watching brief, with limited excavation, undertaken by MoLAS-PCA Limited on land at 419 Wick Lane, Old Ford, London Borough of Tower Hamlets. The National Grid Reference is TQ 3733 8375. The watching brief was undertaken between February–May 2007 and was commissioned by London Green Developments Ltd. Gary Brown managed the project for MoLAS-PCA Ltd. Richard Humphrey and Guy Seddon supervised the site.
- 1.2 The watching brief comprised of the monitoring of the remediation of the contaminated ground of the site, with recording and limited excavation of the archaeological features revealed. The nature and intensity of the ground soil contamination significantly constrained standard archaeological methodologies.
- 1.3 The watching brief identified the presence of several phases of archaeological deposits across the site. The earliest phase consisted of the remains of a Roman structure. This large building is likely to have been a *Mansio*, or stopping-house that was one of several, positioned at regular intervals along the Roman road between London and Colchester. It consisted of large wall foundations comprised of timber stakes driven into the ground and packed with flint to ensure stability. These were of differing sizes, suggesting the presence of exterior as well as interior divisions within the structure, and therefore potentially allow separate rooms to be identified within the building. Most floor surfaces were lost although a hypocaust or floor-heating system was also observed. There was some evidence of reworking of the hypocaust later in the life of the building. Evidence for the associated Roman road, or bridge that would have been needed to cross the River Lea was not observed.
- 1.4 Thick layers of made ground, likely to have been deposited during the post-medieval period as an attempt to reclaim land from the floodplain of the River Lea sealed the phases of Roman structural remains.
- 1.5 Multiple phases of industrial activity on the site were represented initially by several phases of printing-ink industry structures dating from the mid-19th century and finally by foundation walls, basements and metal storage tanks belonging to the recently demolished late 19th to early 20th century printing-ink works of Kidd & Co. It was not possible to identify the remains of the dyehouse shown on Gascoigne's map of 1703 and presumed to have been located within the site's boundary.

2 Introduction

- 2.1 An archaeological watching brief was undertaken by MoLAS-PCA Ltd between February and May 2007, on land at 419 Wick Lane, Old Ford, London Borough of Tower Hamlets. The work was commissioned by London Green Developments Ltd prior to a residential development. The site was initially supervised by Richard Humphrey and later by Guy Seddon, project managed by Gary Brown and monitored by David Divers of English Heritage, (Greater London Archaeological Advisory Service).
- 2.2 The site is centred on National Grid Reference TQ 3733 8375. It was bounded by Wick Lane to the west, Iceland Road to the south, the River Lea to the east and a block of new flats to the north, (Fig 1). The site covered an area of approximately 4,516m².
- 2.3 The watching brief followed on from a standing building survey report (Brown, J. 2006) and the monitoring of engineering test pits (North 2006). An archaeological method statement was prepared (Brown, G. 2006), which set out the potential for archaeological deposits within the site and vicinity. The watching brief was required to establish whether there were any archaeological deposits on the site that could be affected by the remediation work and if so to ascertain the extent character, significance and condition.
- 2.4 Due to the nature and intensity of the ground soil contamination it was not possible to excavate and record features in a conventional archaeological fashion and the revised methodology is set out in Section 6.
- 2.5 The site was allocated the site code WKN 06.

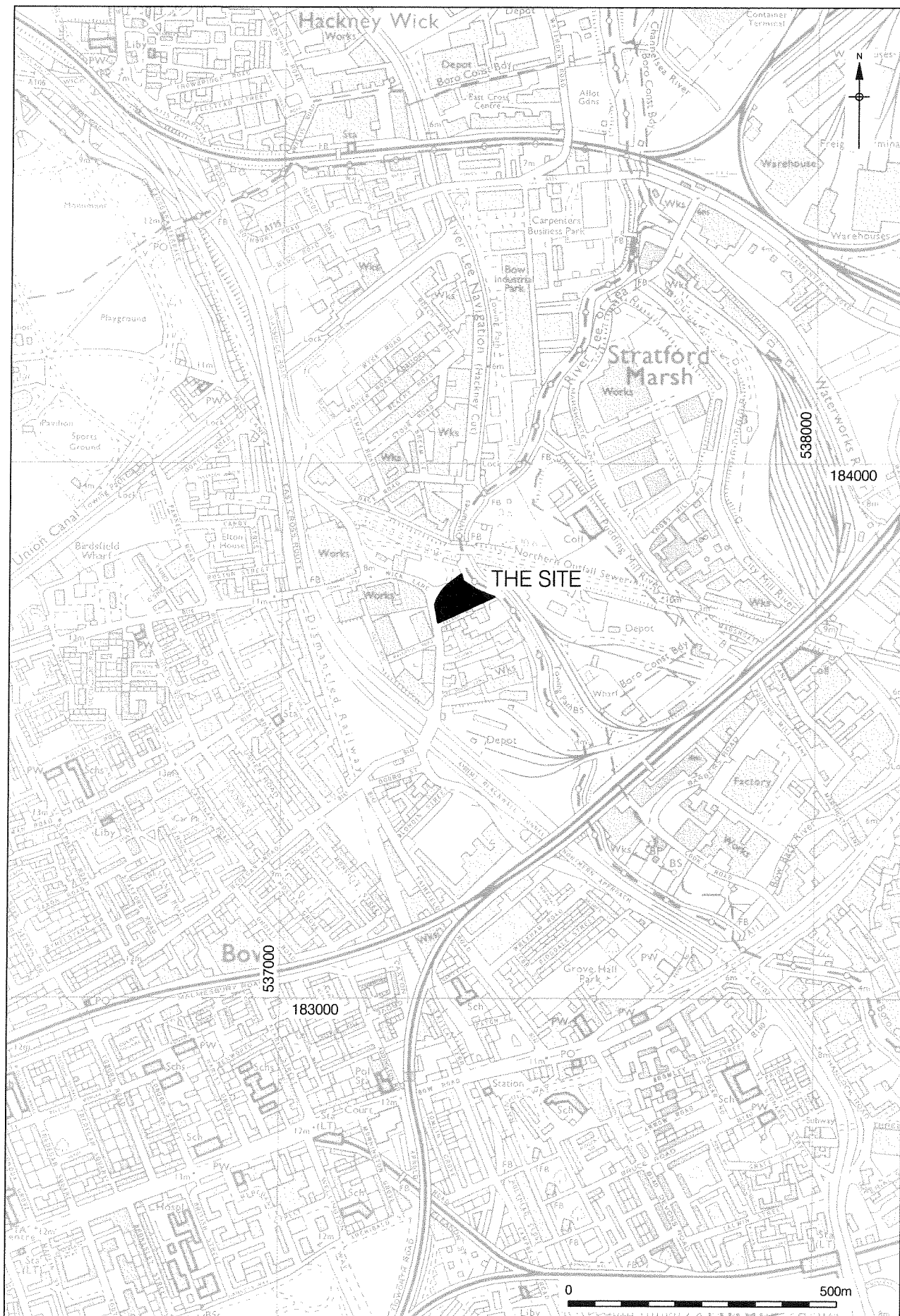


Figure 1
Site Location
1:10,000 at A4

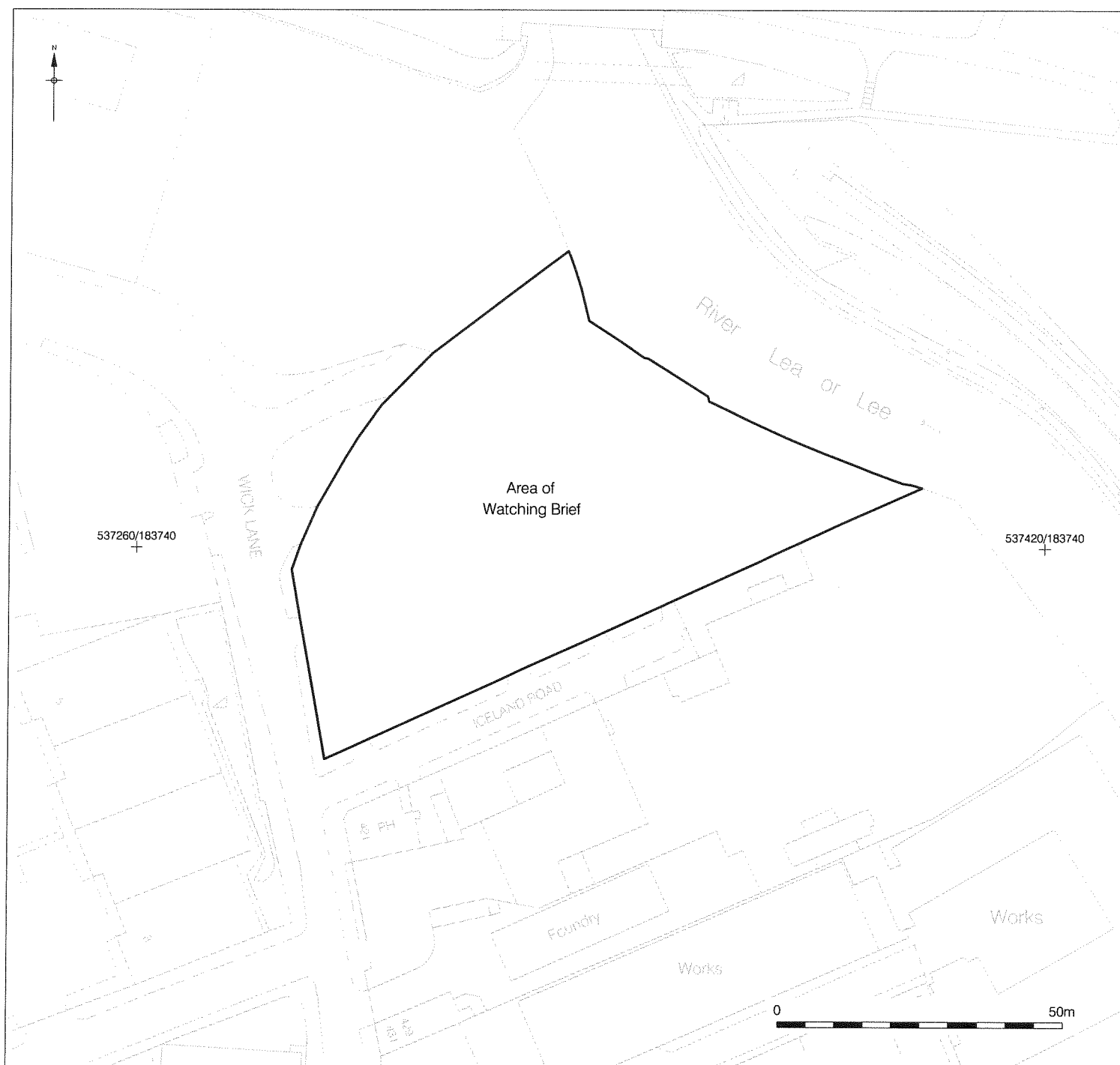


Figure 2
Location of Area of Watching Brief
1:1,000 at A4

3 PLANNING BACKGROUND

3.1 Archaeology in the London Borough of Tower Hamlets

- 3.2** The study aims to satisfy the objectives of the London Borough of Tower Hamlets, which fully recognise the importance of the buried heritage for which they are the custodians. The London Borough of Tower Hamlets Unitary Development Plan (UDP), adopted in 1998 contains policy statements in respect of protecting the buried archaeological resource.

The proposed development of the site is subject to the following Council Policies:

ARCHAEOLOGY AND ANCIENT MONUMENTS

DEV42 DEVELOPMENT WHICH ADVERSELY AFFECTS NATIONALLY IMPORTANT ARCHAEOLOGICAL REMAINS, INCLUDING SCHEDULED ANCIENT MONUMENTS, WILL NOT NORMALLY BE PERMITTED.

DEV43 DEVELOPMENT WHICH AFFECTS ANY LOCALLY IMPORTANT ARCHAEOLOGICAL SITE OR REMAINS, INCLUDING INDUSTRIAL ARCHAEOLOGY, MAY BE PERMITTED DEPENDING UPON:

1 THE IMPORTANCE OF THE ARCHAEOLOGICAL REMAINS;

2 THE NEED FOR THE DEVELOPMENT; AND

3 MEASURES PROPOSED FOR THE PROTECTION, ENHANCEMENT AND PRESERVATION OF THE SITE AND THE INTERPRETATION AND PRESENTATION OF THE REMAINS TO THE PUBLIC.

DEV44 THE PERMANENT PRESERVATION IN SITU OF NATIONALLY IMPORTANT REMAINS WILL NORMALLY BE REQUIRED. PRESERVATION OF OTHER REMAINS WILL BE A PREFERENCE, SUBJECT TO THE IMPORTANCE OF THE REMAINS AND THE NEED FOR DEVELOPMENT OF THE SITE. WHERE PRESERVATION IS NOT APPROPRIATE, EXCAVATION AND RECORDING MAY BE REQUIRED.

DEVELOPMENT OF ARCHAEOLOGICAL SITES SHOULD ADOPT SUITABLE DESIGN, LAND USE AND SITE MANAGEMENT TO ACHIEVE THESE ENDS.

DEV45 PROPOSALS INVOLVING GROUND WORKS IN AREAS OF ARCHAEOLOGICAL IMPORTANCE OR POTENTIAL, SHOWN ON THE PROPOSALS MAP, OR CONCERNING INDIVIDUAL SITES NOTIFIED TO THE COUNCIL BY ENGLISH HERITAGE OR THE MUSEUM OF LONDON WILL BE SUBJECT TO THE FOLLOWING REQUIREMENTS:

1. WITHIN AREAS OF ARCHAEOLOGICAL IMPORTANCE APPLICANTS WILL NEED TO DEMONSTRATE THAT THE ARCHAEOLOGICAL IMPLICATIONS OF THE DEVELOPMENT HAVE BEEN PROPERLY ASSESSED. A WRITTEN ASSESSMENT (ARCHAEOLOGICAL STATEMENT) BASED ON THE PROFESSIONAL ADVICE OF AN APPROVED ARCHAEOLOGY CONSULTANT

OR ORGANISATION SHOULD BE SUBMITTED AS PART OF THE DOCUMENTATION REQUIRED FOR A COMPLETE PLANNING APPLICATION.

2. WITHIN AREAS OF ARCHAEOLOGICAL IMPORTANCE, THE COUNCIL MAY REQUEST, WHERE DEVELOPMENT IS LIKELY TO AFFECT IMPORTANT ARCHAEOLOGICAL REMAINS THAT AN ARCHAEOLOGICAL FIELD EVALUATION OF THE SITE IS CARRIED OUT BEFORE ANY DECISION IS MADE ON THE PLANNING APPLICATION.

3. WHERE THE PRESERVATION OF ARCHAEOLOGICAL REMAINS IN SITU IS NOT APPROPRIATE, THE COUNCIL WILL SEEK TO ENSURE THAT NO DEVELOPMENT TAKES PLACE ON THE SITE UNTIL ARCHAEOLOGICAL INVESTIGATION, EXCAVATION AND RECORDING HAS TAKEN PLACE BY AN APPROVED ARCHAEOLOGICAL ORGANISATION.

4 IN APPROPRIATE CASES THE COUNCIL WILL SEEK TO ENSURE THAT ADEQUATE OPPORTUNITIES ARE AFFORDED FOR THE ARCHAEOLOGICAL INVESTIGATION OF SITES, BEFORE AND DURING DEMOLITION AND DEVELOPMENT. SUITABLE PROVISION SHOULD BE MADE FOR IN SITU PRESERVATION OF REMAINS (DEV44) AND FINDS IN THE ORIGINAL LOCATION, OR FOR REMOVING THEM TO A SUITABLE PLACE OF SAFE KEEPING.

5.62 Tower Hamlets has a long and rich history. Archeological remains are an important source of evidence of this history from Roman times to the recent industrial past. One of the principle sources of archaeological evidence is the development of sites, but this evidence is easily destroyed in the development process. The Council therefore wishes to ensure that development involving groundworks in areas which may contain archeological remains makes early and specified allowance for the investigation of the archaeological potential of the site before groundworks for the development is allowed to proceed. The Council's preference will be to seek and maintain any finds and remains in situ. The Council will seek the guidance of English Heritage and the Museum of London in determining the importance of archaeological remains.

5.63 The Council is concerned to see that sites which may be of interest are properly investigated and records made of any finds before development takes place. It is important the Borough's archaeological heritage is made accessible to the public as an educational, recreational and tourist resource. The Council will therefore support and promote measures which protect and conserve sites and which will allow the public access to sites with archaeological remains to the extent that this is compatible with the protection of the remains.

5.64 The Council will seek professional archaeological advice from English Heritage or a professionally qualified archaeological organisation or consultant as appropriate and expect applicants to do the same when proposing development which could affect archaeological remains. It is important that developers have properly assessed and planned for the implications of their proposals in terms of scheduling time and

resources for investigations to be carried out of the site. Proposals for investigation should be built into the development program at an early stage in the process. Supplementary Planning Guidance on Archaeology and Development outlines the preferred procedure for investigation before development takes place. An archaeological assessment is normally a desktop evaluation of existing information on the development site, commissioned from a professional archaeological body or consultant. Sources may include historic maps, written sources, previous finds, archaeological fieldwork and geographical surveys. An archaeological evaluation is in contrast field based, but, as distinct from a full archaeological excavation, is normally a small scale and rapid operation, entailing ground survey and limited trial trenching. It should, nevertheless, be carried out by a professionally qualified archaeological organisation or individual. An evaluation of this kind helps to define the character and extent of surviving archaeological remains in the area of a proposed development, and thus to indicate the weight that ought to be attached to their preservation.

5.65 Archeologically important areas are found throughout the Borough as shown on the Proposals Map. There are also records of numerous finds which may indicate areas of potential. The Council will consult with English Heritage and the Museum of London in the designation of areas of archaeological importance and will consult them about any areas of potential. Proposals which fall within these areas will be subject to policy DEV 42 to 66.

5.66 Areas which are of particular archaeological importance are:

- The Tower of London and surrounding area;
- The areas in Wapping shown on the Proposals Map. Parts of Wapping have revealed important finds and it is probably the richest part of the Borough in terms of known archaeological sites, including industrial archaeology sites;
- The site of the medieval hospital of St. Mary's between Bishopsgate and Spitalfields Market;
- A Roman road and cemetery in the Mansell Street area;
- **A Roman settlement and road at Old Ford;**
- A Cistercian Abbey and plague cemetery at the Royal Mint site.

5.67 Areas of potential include:

- Evidence of prehistoric occupation in the Stepney Green area;
- the Lee Valley may include well preserved objects; and

- the possibility of Roman occupation in the Poplar High Street area.

4 GEOLOGY AND TOPOGRAPHY

4.1 Geology

- 4.1.1 The British Geological Survey (Sheet 256 1:50,000 series) indicates that the site is likely to be underlain by alluvium lying over River Terrace Gravels, comprising the Kempton Park and Taplow Gravels, which are above the London Clay.
- 4.1.2 On the adjacent site at 417 Wick Lane there was a great deal of truncation with reworked natural clays and gravels being used as backfill which made identification of real natural deposits difficult to determine. However with this proviso, natural sand and gravel was recorded at a height of 2.92m OD towards the southwest of the site, whilst a mid grey sand and gravel was revealed at a depth of 1.45m OD to the north and a similar deposit was observed at 1.80m OD in the southeast part of the site. To the north of the site the apparently natural sand and gravels was covered with a mid grey silt clay, possible alluvial layer, which was recorded at atop height of 2.00m OD (Holden 2002).
- 4.1.3 The monitoring of geotechnical work on the present site also revealed large scale reworking of natural deposits but apparently showed natural sandy gravel at atop height of 6.16m OD in the southwest corner of the site falling away to the northeast towards the River Lea to a height of 1.77m OD (North 2006).
- 4.1.4 The watching brief on the pground reduction revealed natural gravels across the site with a top height of 4.77m OD in the southwest corner falling away to the northeast where they were observed at a height of 2.94m OD.

4.2 Topography

- 4.2.1 The major topographical feature on site is the River Lea which forms the northeastern boundary of the site. The site itself is located on sloping land that falls away to the east from Wick Lane, down to the River Lea. The maximum height is 7.78m OD, at the juncture of Wick Lane and Iceland Road at the southwest of the site and the minimum height is 4.64m OD in the northeastern corner of the site.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 5.1 The following is a brief summary of the known archaeological potential of the subject site:

Prehistoric

- 5.2 Prior to 1994 there was almost no evidence for prehistoric occupation on this part of the Lea valley. However since the major phases of excavation at Lefevre Walk and Parnell Road significant evidence for prehistoric occupation has been found. The majority of the evidence is for the Bronze Age and Iron Age periods and includes postholes, small structures and gully/ditch boundaries. Pottery and lithic assemblages were also recovered.

Roman

- 5.3 There is considerably more evidence for Roman occupation of the landscape than for the prehistoric. Excavations in the late 1960s confirmed the presence of the main London to Colchester road that more-or-less followed the line of the more recent and eponymous Roman Road. This was further confirmed during excavations by PCA at the Lefevre Walk Phase 1 excavations where approximately 60m of the road was excavated and recorded. The road was up to 20m wide and was flanked, on the north side at least, by ditches.
- 5.4 Extrapolating the road to the northeast suggested that it might cross close to the subject site. However, at this point it may have narrowed to account for it traversing the Lea at a ford or bridging point. Evaluation at 417 Wick Lane, northwest of the subject site, failed to record evidence for the road, although the site had been subject to deep truncation in the 19th century (Holden 2002). A possible bridge or jetty point was recorded a short distance to the north at Crown Wharf, Dace Road, but again there was no definitive evidence to link it to the London-Colchester road (Alexander & Stephenson 2004; Maloney & Holroyd 2004, 83).
- 5.5 The ford or in the Roman period more likely a bridge would have been a very strategic location as traffic in either direction could be controlled and monitored. This presumably became more important following the Boudican Revolt when the road was almost certainly used to access and then sack Londinium. There may have been provision for a quasi-official *Mansio* or more informal inn or other hostelry in the vicinity.

- 5.6 It was reported in 1910 that during dredging operations some years earlier at Iceland Wharf, immediately to the southeast of the site, fragments of a herringbone pavement (*opus spicatum*) was recovered (Smith 1910, 236). The assumption of the time was that it derived from the ford itself, and formed part of a durable road surface. However, such an interpretation is improbable. *Opus spicatum* is indeed a durable flooring and used in areas where heavy usage was likely, for example in corridors of large buildings, the cold bath of a bath complex and public buildings. It was deemed possible therefore that a masonry building of some pretension may have been present at the site.
- 5.7 Numerous Roman coins have been recovered from the vicinity of the study site and were reported on in the local press. A 3rd-century hoard was found on the site of 429-431 Old Ford Road. Charles Roach-Smith the 19th century antiquarian also reported that in the vicinity of the White Hart Hotel on Wick Lane as short distance to the north of the subject site that Roman coins were found in great abundance and that the “*tenant of one of the gardens ... told us he had dug up, within the last few years, at least 500 Roman Coins*” (Roach Smith 1844).
- 5.8 The indications were therefore that there may have been significant remains of Roman date within the immediate vicinity of the proposed redevelopment site.

Saxon/Medieval

- 5.9 There is less evidence for Saxon and medieval land use in the vicinity of the site. It is probable that the line of the Roman road remained in use, but was supplemented by others such as the Bethnal Green to Old Ford Road (now Old Ford Road). Some Middle and Late Saxon activity has been recorded at the location of the Lefevre Walk Estate (Douglas 1999) but none from the vicinity of the subject site to date.
- 5.10 Current evidence suggests that Old Ford was re-established by the late 11th century. The oldest known reference to Old Ford dates to 1293 and relates to a fulling mill owned by St Helen's Priory in the City of London. The exact location is not known but would have been adjacent to an accessible part of the river. It was referred to again in deeds dated to 1355 when it was known as *Algoldsmille*.
- 5.11 The importance of the ford was reduced in the 12th century following Queen Matilda's undignified fall into the ford. Soon after she had a new road built to the south between Bromley by Bow and Stratford and the river was traversed by bridges. From this time

on the Bow to Stratford road gained pre-eminence and the route of the Roman was less well trod.

- 5.12 The settlement area of Old Ford has not been determined but is likely to be in the general vicinity of the subject site rather than in the vicinity of the Lefevre Walk Estate where much archaeological emphasis has been placed to date. It is possible that a large medieval structure known generally as Old Place or Gissing Place, held by the Duke of Gloucester lay close by. The approximate location of this property is shown on a 1655 map of Christ Hospital lands drawn by John Jennings. The gatehouse survived into the 18th century.

Post-medieval

- 5.13 The combination of transport infrastructure, plentiful water supply and lack of residential development have always encouraged the growth of dirty industries in the Lower Lea Valley. Gascoigne's map of 1703 and Rocque's map of 1746 show a predominantly rural landscape interspersed with buildings on the main roads of Wick Lane, Old Ford Road and Tredegar Road. Indeed, the 1703 map shows the site to be occupied by a Dye House. This was in operation until 1765 when the deed for the site passed to Benjamin Smith, who established a printing-ink works. Maps from 1809 and 1819 are vague when relating to scale and development of the buildings that comprised the works. The only real development noticeable is on Cross's plan of 1847 where the west bank of the river is more industrial in character as well as there being a dye house to the south with the East London Waterworks Reservoir further to the south still.
- 5.14 Printing-ink works continued on the site when ownership was transferred to John Kidd in 1862. After Kidd's death in 1888, the company expanded considerably not only in terms of building arrangement but also in its market and product range, producing ink-rollers, black and coloured inks and varnishes for domestic and foreign markets.
- 5.15 A report by *The British & Colonial Printer*, published in 1894, details a visit to the site. As well as commenting on the erection of new structures for the factory, some detail is given about the various processes that occurred. Of considerable note is the distillation of resin. Part of this process involved the piping of refined oils to underground storage boilers. A report in *British Printer* dated to 1899 and a visit by students of the St Bride Institute in 1910 record improvements in boiler technology as well as the broadening of manufacturing to now include roller casting.

- 5.16 Additions to the factory were made in c1914 and c1926 by architect E. C. Beaumont, with further additions being made in 1935-6 by Holman and Goodrham. The merger of the company with Mander Brothers Ltd. in 1937 eventually led to the relocation of the firm to Heath Town, Wolverhampton. Production of printing-ink at the Wick Lane site ceased in c1951. After this, the factory was converted to produce Bakelite insulators. Planned additions to the site were never undertaken. In the late 1960s, the works were converted to a fur-processing factory. All structures on the site were demolished in 2006 following a detailed record by MoLAS-PCA (Brown, J. 2006).

6 METHODOLOGY

- 6.1 The watching brief and limited excavation were carried out in accordance with the method statement prepared for the works (Brown, G. 2006). Due to the heavy contamination of the site the guidelines of the Greater London Archaeology Advisory Service (GLAAS) and the standards set out in *Standard and Guidance for Archaeological Watching Briefs* (IFA 1999) could only be applied within the health and safety constraints of the site.
- 6.2 MoLAS-PCA has previously undertaken a measured building survey (Brown, J. 2006) of all structures prior to the demolition as well as monitored aspects of geotechnical investigations (North, C. 2006). Analysis of the results of these investigations revealed very high concentrations of contaminated soils throughout the sequence, including archaeological horizons. As a result, and following discussions with GLAAS, archaeological works were restricted to a watching brief during controlled reduction of the site during remediation works. If it could be demonstrated that there were less contaminated areas, these potentially could have been investigated more fully.
- 6.3 A Remediation Mitigation Strategy was prepared by London Green Developments Ltd based on the contamination report presented by Soilfix Ltd. Part of this strategy details the reduction of the site by mechanical excavator to the proposed building construction levels or the base of the contaminated soils, whichever was the lower. The removal was undertaken in controlled spits working evenly across the site and using a toothless bucket.
- 6.4 Due to the elevated levels of contamination prevalent on the site, a site-specific methodology was prepared, as part of the method statement in order to minimise hazards to archaeological site staff that may have otherwise occurred. All archaeological works were undertaken by MoLAS-PCA. All attendances, including plant, accommodation and pumping, were provided by London Green Developments Ltd.
- 6.5 Archaeological staff wore specialist Personal Protective Equipment, (PPE), the exact specifications of which were made by an external health and safety consultant and were approved by the principal contractor. The PPE consisted of breathable waterproof coveralls, £M4279 half masks, steel toecapped Wellington boots, waterproof gloves and goggles.

- 6.6 The specialist contractor commenced ground reduction in the northeast corner of the site, working back towards the southeast corner of the site. On reaching this corner, the plant returned upon itself, cutting a swathe of equal width as the first and progressing in a westerly direction with each traverse. The depth of the swathes cut were no more than 0.50m in depth and on the observation of archaeological features and deposits were less. An even and level surface was obtained by the plant operator to ensure archaeological materials were recorded in the most appropriate and safe fashion.
- 6.7 An attendant archaeologist supervised the works. On the observation of archaeological features and deposits, the plant was instructed to change the depth of swathes cut as well as excavating to the sides of features in order to expose them in greater detail. In the event of observation of archaeological materials that required greater attention, the plant was instructed to transfer to another area of site whilst this work could take place.
- 6.8 This reduction strategy was continued across the site until levels devoid of elevated ground soil contamination were reached, or the proposed construction level was reached, whichever was the lower.
- 6.9 The site was divided into 'clean' and 'dirty' zones, with access between the zones channelled through a de-contamination hut. All archaeological staff had to wear appropriate PPE, including coveralls, gloves, goggles and respirators. These were put on and taken off in the de-contamination hut and replaced every five weeks, or sooner if deemed necessary.
- 6.10 Due to the particular difficulties raised by the contamination no paperwork was allowed on the site. All on site recording was carried out using a 'dirty' Dictaphone and photographs were taken with a digital camera. The camera's memory card and the tapes from the 'dirty' Dictaphone were removed in the de-contamination hut and taken to the site office within the 'clean' zone for immediate transcription onto a site laptop, which contained pro-forma record sheets.
- 6.11 All features and deposits that were recorded were surveyed in 3D using a Total Station that was set up in the 'clean' zone.
- 6.12 Finds collection was kept to a minimum due the problems arising from transporting potentially contaminated materials off the site. Small-scale cleaning provisions were allowed for.

7 ARCHAEOLOGICAL SEQUENCE

7.1 Phase 1: Natural

- 7.1.1 Natural deposits of river terrace gravels were present across the site. They fell from a maximum height of 4.77m OD in the southwest corner, to a minimum height of 2.94m OD in the northeastern corner of the site.

- 7.1.2 Towards the east of the site, blue-grey alluvial clay, [206], was seen to overlie the terrace gravels. There are several reasons why this was not observed towards the centre and west of the site. Firstly, the Lea and its floodplain may not have extended as far in this direction and therefore the deposition of river-lain materials would not have occurred. Additionally, terracing both in prehistoric, Roman and post-medieval contexts may have removed this layer in order to create a level platform for the construction of buildings on the site.

7.2 Phase 2: Roman 50-140 AD

- 7.2.1 Restrictions imposed by the site-specific method statement led to limited dating evidence retrieval on site. Although narrower and more precise phasing brackets are likely to have been obtained from the analysis of finds and features under less-contaminated conditions, some generalisations have been made in this instance. The first phase of activity on site is derived from dating evidence obtained from the limited amount of ceramic building material that could be identified by a specialist (see Appendix 3). This dates the first phase of Roman activity to the mid 1st to mid 2nd century AD.

- 7.2.2 A linear cut, [208], at 2.61m OD, measuring some 15m long was observed to extend northwest to southeast in the northeast corner of the study area. On the east of the cut were natural terrace gravels, with traces of alluvium to the right of the cut. Due to the nature of the work, the potential location of the westerly side of this cut was obscured by contaminated overburden that was yet to be reduced. When it was removed, there was no apparent cut. This can be explained by several reasons. Differential machining strategies could have lost this edge. It also possible that the cut line represents the terracing of the site, as a precursor to the construction of the Roman structure. However, it would seem that this cut was not a structural component of the building due to its different alignment.

- 7.2.3 The rectangular remains of a large Roman building were observed towards the east of the site. This was recorded as structure [154]. Of what was seen, it measured 31.40m on its northwest by southeast side and 12m on its northeast by southwest side. The function of this building will be examined in greater detail in the discussion of this report. Truncation by late post-medieval industrial activity on the site accounts for the loss of much of this structure, including continuous walls linking the north and south of the building as well as floor layers and significant finds evidence.
- 7.2.4 The southern extremity of the building was delineated by a wall foundation on a northeast by southwest alignment. Feature [199] was a construction cut, made through natural deposits. Within this cut, oak piles of varying sizes (contexts [300] to [315]) were driven into the ground, then surrounded by flint and chalk nodules within a clayey matrix, [217], at a height of 3.12m OD, creating what would have been a solid wall foundation. It is likely, although not observed in entirety, that the timber piles [210] to [216] in the southeast corner of the building and posts [300-315] in the southwest corner represent the continuation of this foundation, and possibly where the wall would have turned towards the northwest.
- 7.2.5 Two more features, representing probable ditches, were seen to the south of this wall, extending approximately parallel with it. Cut [240], at a height of 3.34m OD, was roughly rectangular in plan. Although of a similar construction technique to foundation [199], the absence of timber piles in the fill [241] suggests that it was not used as a main foundation wall for the structure. Similarly, cut [238] shared the same lack of timber piles in fill [239] and therefore is unlikely to be a major load-bearing wall of the structure. This fill was seen at a height off 3.17m OD. These two parallel cuts do suggest, however, that if their function was as internal wall foundations, that the southern extremity or extension of the structure was not fully recorded.
- 7.2.6 To the south of the cuts [238] and [240] was a shallow, square, timber lined pit, [262]. This was on a similar alignment to the structure and was made by the lining of a cut with oak planks and their support by vertically driven shafts [254] to [257]. It was recorded at a height of 3.32m OD. The organic-rich fill, [259] of this feature contained butchered animal bone as well as Roman building material. It can be presumed that the function of this feature was as a rubbish-pit for domestic waste that had also accumulated some demolition material during its backfilling. Its location suggests that it would have been outside of the structure by some distance, adding credence to foundation [199] representing the southern extremity of the building. A smaller timber lined pit, [129], was recorded to north of foundation [199], at a height of 3.34m OD. Its construction technique was different from [262] in that the stakes, [233], [234] and

[235], within the pit weren't supporting the timber lining, suggesting that they were not part of the structure and from a later phase. Fill [231] of this feature was devoid of animal bone and building material, instead being comprised of sandy-gravel, implying that the function of this pit was not for rubbish disposal and possibly as a drain. If it was not a rubbish pit, then it could have quite conceivably been located within the structure, rather than outside like feature [262].

7.2.7 Two large wall foundations were recorded extending from wall foundation [217] towards the northwest of the site, representing the longer axis of the building. Cut [205] was seen to extend from approximately the middle of the north side of wall [199]. It was of a similar construction and had timber piles [422] to [434] within its flint-packed fill, [203]. It was recorded at a height of 2.76m OD. Measuring approximately 1m in width, it was only seen to be 5m in length before its full extent was lost as a result of modern truncation. Its construction technique suggests that it was a load bearing wall and would have formed an interior 'spine' of the structure, creating a division between east and west elements of the building and perhaps supporting the roof of the building.

7.2.8 Seen to the northeast of foundation [205] was cut [198]. Timber piles [218] to [229] were made through the cut and the clay fill [209] packed with flint nodules. Its height was recorded at 3.01m OD. This wall foundation was seen to run parallel with foundation [205]. However, it is unlikely that this was an interior division of the structure, instead possibly representing the eastern exterior wall of the building and a northwesterly turn of foundation [217].

7.2.9 To the north it is possible that wall foundation [209] continued as wall foundation [182] within cut [183], although modern disturbance prevented a physical link being made. The cut was of a similar size and on a similar alignment to [198], again containing flint and clay within the fill [182], at a height of 2.18m OD. The foundations were not supplemented by timber piles. Although the dimensions of this foundation suggest it to be a continuation of the buildings external wall, there remains the possibility that it has turned to the east from its northerly extension and that foundation [182] represents an interior division of the structure where timber piles were not required.

7.2.10 The possibility of foundation [182] being an internal wall division is perhaps emphasised by the two walls that appear to extend from it at right-angles. Foundation cut [175] was over 0.5m wide and approximately 4m long. It extended towards the northeast and was densely packed with flint nodules within a clayey matrix, [174], at 1.98m OD. Towards the eastern limit of the foundation were two timber posts,

although these might not have formed part of the foundation. To the north of the wall was a cluster of timbers (piles [155] to [173]). These were of a similar shape and dimension as the timbers that were used in foundation trenches. It is possible that piles [155] to [173] represent the remnants of an exceptionally wide foundation trench, that would have run parallel to the projected wall of [182]. A possible explanation for the loss of the cut edge and the absence of flint and clay packing material is truncation that would have only left the deeper driven stakes. If so, then this suggests the possibility of a more substantial outer wall than the one already proposed. It is also possible that these piles were used to stabilise the ground closer to the river edge.

7.2.11 Also extending at a right angle to foundation [182] was the foundation cut [419], filled by [418] at 2.18m OD. The recorded fragment measured approximately 4m long by 0.5m in width. As with the above walls, there was a notable absence of timber piles in its construction suggesting that this was an internal division within the structure rather than an external or load-bearing wall.

7.2.12 Surviving approximately 1m due west of the end of foundation [418] were the remains of a hypocaust or under-floor heating system, indicating a certain prestige for the structure. It is almost certain the wall foundation [418] would have southwestwards and separated the heated floor from a room without. Post-medieval intrusions, however, removed all such evidence at this crucial juncture. The hypocaust was built upon a foundation raft of flint nodules within a clay matrix, recorded as [360] at a height of 2.88m OD, within cut [366], in the west of the floor and as [416] (at 2.69m OD), within cut [405], in the east of the floor, due to being revealed at different stages of the remediation works. Only part of this foundation was exposed, so its complete dimensions are unknown, although the assumption is that it would have extended perhaps not just under the area of hypocaust stacks but also throughout the building for other floor surfaces. Laid directly on top of the flint foundations was a layer of red concrete (*opus signinum*), measuring a minimum of 3.35m east-west by 4m north-south. Again, this was recorded as two contexts, [384] in the west and [365] in the east, at heights ranging from 3.04 to 2.92m OD. Layer [384] measured 3.35m east-west by 2.60m north-south. [365] was slightly smaller, measuring approximately 2.5m east-west by 4m north-south.

7.2.13 Built upon surface [365] were *pilae* stacks [367] to [380] at heights ranging from 3.12m OD to 2.94m OD. These were stacks of square tiles, each measuring approximately 30cm by 30cm, and 3cm deep. They were observed as ranging between one and two tiles high in this area, and were bonded by a solid mortar containing fragments of shell and crushed brick. These stacks would have originally been several courses higher.

Their regular arrangement across the crushed floor in evenly spaced rows and columns would have supported a floor. A minimum of 10 rows east-west and 6 rows north-south survived.

7.2.14 Directly adjacent to the west of these *pilae* stacks were the remnants of a brick and tile structure, [363], at 3.10m OD. Measuring approximately 1.5m east-west and 0.60m north-south, it consisted of a burned tile floor, with a raised tile wall along its southern extent. Due to the concentration of burning in this area, there is the possibility that this represents a flue or possibly the location of the furnace or *praefurnium*, and that the function of the raised tiles was to channel hot gases in or out of the hypocaust system. Feature [362] consisted of two 0.40m by 0.30m tiles and was seen to north of floor [365], at 2.98m OD. It too, can also be interpreted as a flue. Approximately 1.5m west of [363], the heavily truncated linear remains of a crushed mortar feature [381] were recorded at a height of 3.05m OD. It was aligned on an approximate northwest to southeast axis and was truncated on the west and east sides by late post-medieval industrial intrusions. It measured roughly 3m long by 0.8m in width. The appearance of this feature suggests it runs parallel with the walls of the structure, although as it was truncated on both sides, its original orientation remains unknown. Whilst there is the possibility that it is the mortar remains of a collapsed wall, it could also be from an *opus signinum* floor, similar to that seen as part of the hypocaust system.

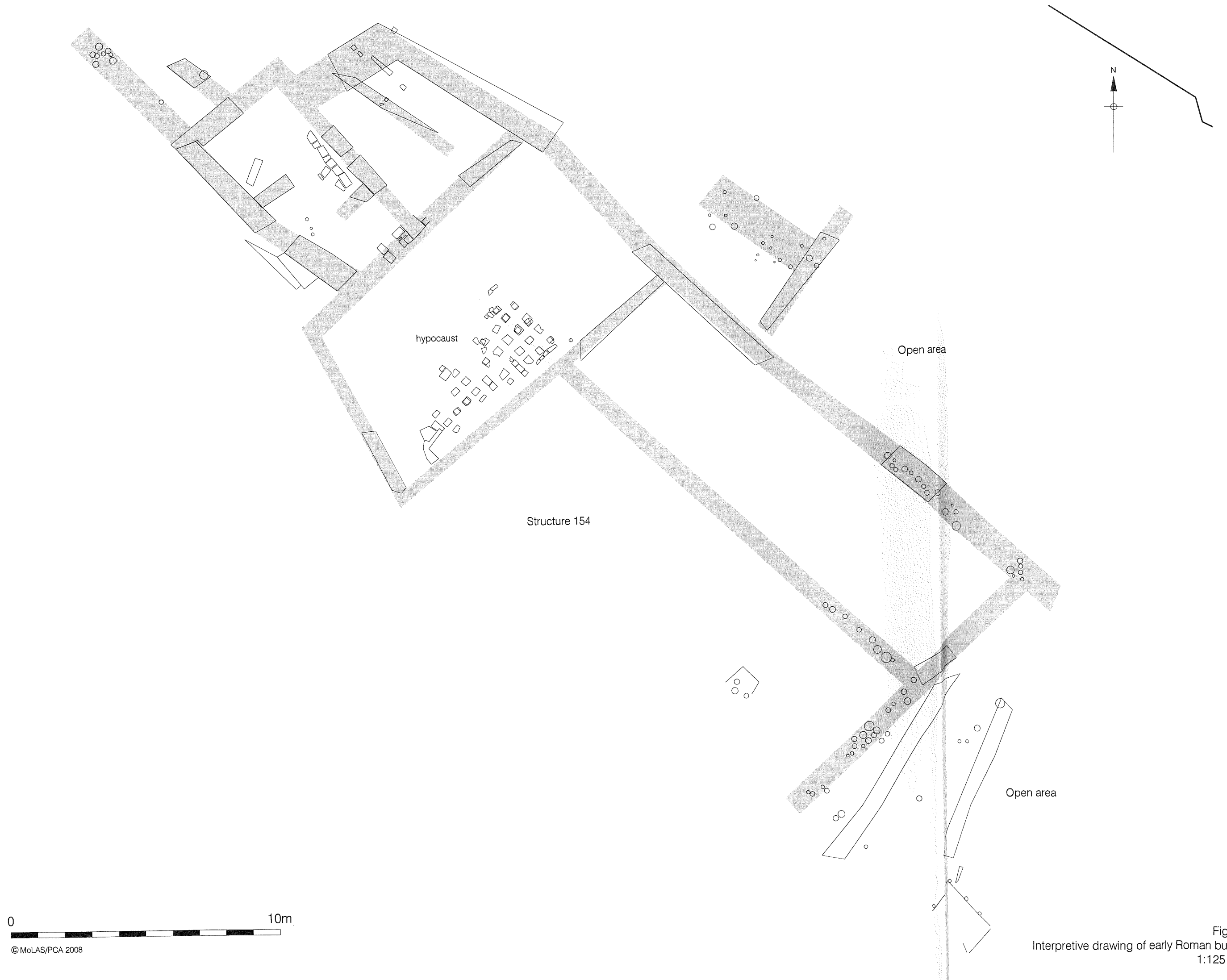
7.2.15 As with [365], layer [384] had *pilae* stacks [385] to [395], [408] and [409] placed upon it at heights ranging from 3.05 to 2.91m OD. These were arranged in a similar alignment as the stacks seen on floor [365] and ranged between one and four tiles high, being bonded with a similar style mortar as before. A short length of wall made from tiles, [396], measuring 0.98m long by 0.22m wide at 3.04m OD represented an edge to the feature and was part of a load bearing element of the hypocaust. A 0.25m thick deposit of ash, [403], sealed all 32 *pilae* stacks of the hypocaust system.

7.2.16 A large truncation to the north of the floor surfaces [365] and [384] had removed all traces of the hypocaust system. However, it is reasonable to presume that it would have extended further in this direction to supply further rooms with heat. In support of this supposition was a similar flooring of *opus signinum* [421] upon which were constructed features [352] and [353]. These were stacks of masonry, two tiles wide and four high and, like [362] and [365], they may represent a channel, or flue, for the release of hot air from the system. This area of flooring measured approximately 2.5m northwest-southeast and 2m northeast-southwest.

- 7.2.17 Adjacent to and extending northeast of this feature were three surviving remnants of an internal wall, [293], [350] and [414], the tops of which were recorded at heights of 2.58 to 2.89m OD. The wall foundation comprised ceramic tiles measuring approximately 0.3m by 0.3m by 0.08m bonded with a pinkly-white mortar with flint, chalk and shell fleck inclusions. Aligned roughly northwest by southeast, the combined wall measured around 5m in length and 1m wide. It also appears to be parallel with the projected wall of foundations [182], [209] and [178]. Indeed, a projected northerly extrapolation of foundation [205] would continue on the same alignment as this wall with the hypocausted room in between, although there is no other evidence for an internal division of this length throughout the main part of the structure.
- 7.2.18 Associated with this wall was the tile surface composed of features [320], [321] and [322] at heights of 2.61m, 2.59m and 2.71m OD. This is most likely to have been of a contemporary construction date to the wall and represents a floor surface within a room to the west of the division. There is the possibility that wall [417] (at 2.71m OD) marks the southern interior division of this room. It is constructed with similar materials as [414], [350] and [293] and, although only observed as a 0.50m sided square of mortar, would have extended to the west and making a division of space within the structure.
- 7.2.19 Running parallel to wall [417] was foundation cut [298] seen approximately 2m to the northwest. It was of a similar style to other interior divisions within the building and was made from inserting large nodules of flint and chalk within a clayey matrix [295] into a construction cut. This potentially creates an additional room in the northwest of the building. The surviving foundation wall fragment measured 2m long by 0.80m wide at a height of 2.57m OD and was seen as a northeasterly projection from the larger foundation wall [296] within cut [299]. This was of a similar construction technique to other foundation cuts, although both [206] and [295] were lacking in timber piles, suggesting their function to be as internal walls rather than exterior or load-bearing features. It measured 8m long and roughly 1m wide and was parallel with the combination of walls [293], [350] and [414] as well as the large wall, [182] and [178] to the east. The height of the fill, [296], was 2.64m OD. To the east of the southern end of wall [296] was the remainder of an apparent wall foundation consisting of large flint and chalk nodules set within a clay matrix within construction cut [359]. It measured 2.3m long by a maximum width of 0.4m and cut through a Roman layer of dark grey brown sandy silt [407]. This may be the tantalising remains of a structure to the west of the main building. However, its close proximity to wall [296] might suggest that it was either a separate building or a different phase of building.

- 7.2.20 Whether foundation [296] extended further to the north is uncertain due to a large post-medieval truncation. If the foundation was projected, a large cluster of timber piles, [279] to [286] could represent where it met a larger, possibly external wall of the building. However, a turn towards the northeast of [296], becoming foundation [356] within cut [357], again suggests division of the internal space of the structure. Its height was 2.43m OD. The northerly edge of this foundation was lost to truncation, but it was seen to extend to the northeast for a distance of approximately 3m. The build methods for the foundation are the same, flint nodules within a clay-rich matrix, [356]. By the creation of a room in this part of the structure, it is possible to interpret the tiled feature [297] (at 2.59m OD) as either the remnants of a floor surface or, more likely, demolition rubble from either the collapse of the building or as part of a ground raising phase as a pre-cursor to the laying of a higher floor.
- 7.2.21 If foundation wall [278] within cut [292] represented a return of wall [356], it suggests a narrow corridor projecting north from wall [356] and thus the position of a portal. The fill [278] was identical to the other fills of these construction cuts, although in this instance, a large oak pile, [288] had been driven through it.
- 7.2.22 On the eastern side of the structure c.4.5m east of wall [414] was wall foundation [178] within cut [179]. It was roughly parallel to walls [414], [350] & [293] but with an inclination, at foundation level at least, to the northwest. It measured some 7m in length and was over 1.0m wide and was recorded at 2.13m OD. As with [182], there were no apparent timber piles in the fill. It is possible, therefore, that this was an internal division rather than part of the exterior wall of the structure. However, its size was notably larger in this part of the building. It returned to the southwest as foundation [176] within cut [177]. This shared a similar width as [179] but only extended for a distance of less than 3m. Its height was 2.01m OD.
- 7.2.23 4.5m to the south was a second wall [180] within cut [181]. This was an interior wall division forming the southern limit to the room. It was constructed of flint packing (without timber piles) and measured roughly 3m long by 0.70m wide at a height of 2.19m OD. Its extent to the southwest would lead it to join another interior dividing wall, namely [414], and creates another room within the structure. Although apparently trapezoid in plan, it may have been more regular at superstructure level. As recorded the internal dimensions of the wall were 4.5m by 4.5m at the south narrowing to 3.5m wide to the north.
- 7.2.24 The slight remains of a probable foundation cut were seen running parallel with wall [178] in the room created by feature [180]. The structural element [185] was a linear

cut with similar packing, [184], to other interior walls. There were a few sporadic timber stakes seen driven through the fill [184], but these didn't form a convincing structural arrangement. The height of the fill [184] was 2.09m OD. Several oak piles were recorded in this area; however, none seem related to any of the foundation cuts. Stakes [145], [146] and [148] appear to be squared whereas the timbers used in the foundation cuts are all circular. There is thus the possibility of them dating rather to the post-medieval period.



0 10m
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Figure 4
Interpretive drawing of early Roman building
1:125 at A3

7.3 Phase 3: Roman 140-300 AD

- 7.3.1 As with Phase 2, evidence for the differentiation of separate building episodes in the life of the structure is based on tentative spot dates from the limited ceramic building material that was available for analysis. Phase 3 is marked by redevelopment of the hypocaust system, strongly implying the continued use and importance of the structure as an operating centre of occupation in the locale. Whether the later building modifications are as a result of damage by fire, or simply as the repair of a faulty system is unascertainable from the evidence presented.
- 7.3.2 The phase 2 *opus signinum* floor, [384], to the east of the hypocaust, was covered in a 0.25m thick layer of a charcoal-rich silt, [403]. Its height ranged from 3.02 to 3.07m OD. Whilst it is not unusual to find an accumulation of burnt material in a hypocaust system, several structural features were cut through this horizon that were not contemporary with the original build. Feature [336] was a linear construction cut for the walls [400], [401] and [404]. These were arranged as a broken feature, that would have formed a wall measuring at least 3.30m long by a maximum of 0.60m wide and aligned on a northwest to southeast orientation. Heights ranged from 3.15m to 2.93m OD. The wall fragments were constructed of stacked tiles bonded with a hard grainy mortar containing flint, chalk and shell. The mortar was also noticeably more pink in colour than early examples of mortar seen, suggesting the addition of ground and crushed brickwork possibly to assist with bonding. Within masonry [400] was ceramic building material that was dated to AD 140-300. Rather than serving as a support wall for an overlying wall, although undoubtedly it would have supported the floor above, it appeared that this was a modification to the design of the system in terms of heat transference.
- 7.3.3 Additional modifications to the hypocaust system were seen to the north. The phase 2 flue masonry features ([352] and [353]) were covered by a layer [410] at 3.07m OD, which shared the same properties as [403] to the south. It measured approximately 1m by 0.50m and was seen to fill the flue, hence being aligned northwest to southeast. As with [403], it is understandable that a hypocaust system will have become filled with ashy material as part of its everyday usage. Two features were recorded built onto a deliberate levelling of this material. At 2.82m OD, masonry [354] was seen as a series of ceramic tile stacks each measuring 400mm by 290mm by 40mm. Each was 2 tiles wide and four high and the stacks were arranged in a 'T'-shape, with three stacks in a row aligned northwest to southeast and a single stack extending on the west side. These were too close together to be considered as *pilae*

for the hypocaust, as no air would have been able to flow between them. Possible functions of this feature include as a support for an overlying wall or division but more likely relates to the flow of air through the system. The most northerly stack was seen to abut the earlier stack [352]. However, this would not have stopped the flow of exhaust gases through the flue, though perhaps channeling them more effectively. Truncation to the south and east prevented the full exposure of this feature.

- 7.3.4 Masonry [355] was a smaller stack of tiles as those seen in [354], built upon layer [410]. It was seen on its own rather than forming a larger feature, although its close proximity to the eastern side of [354] suggests it was conceivably related. It was recorded at 2.91m OD. The tiles were smaller though, measuring 210mm by 210mm by 30mm. These tiles have been recorded as appearing smaller than the phase 2 *pilae*, but possibly serving the same function and reflecting on changing technological considerations and construction techniques of the later inhabitants of the building. Unfortunately, as this stack exists in isolation, whether repetitions across the rest of the system were used is unknown.
- 7.3.5 The construction of these new stacks, as well as indicating modifications to the transference of hot air within the building, suggests that part, or all, of the overlying floor had been removed or replaced.
- 7.3.6 For the purposes of this study all other features were retained, although in reality a building of this size and complexity presumably underwent a number of minor and possibly major modifications.



Figure 5
Phase 3: Late Roman
1:125 at A3

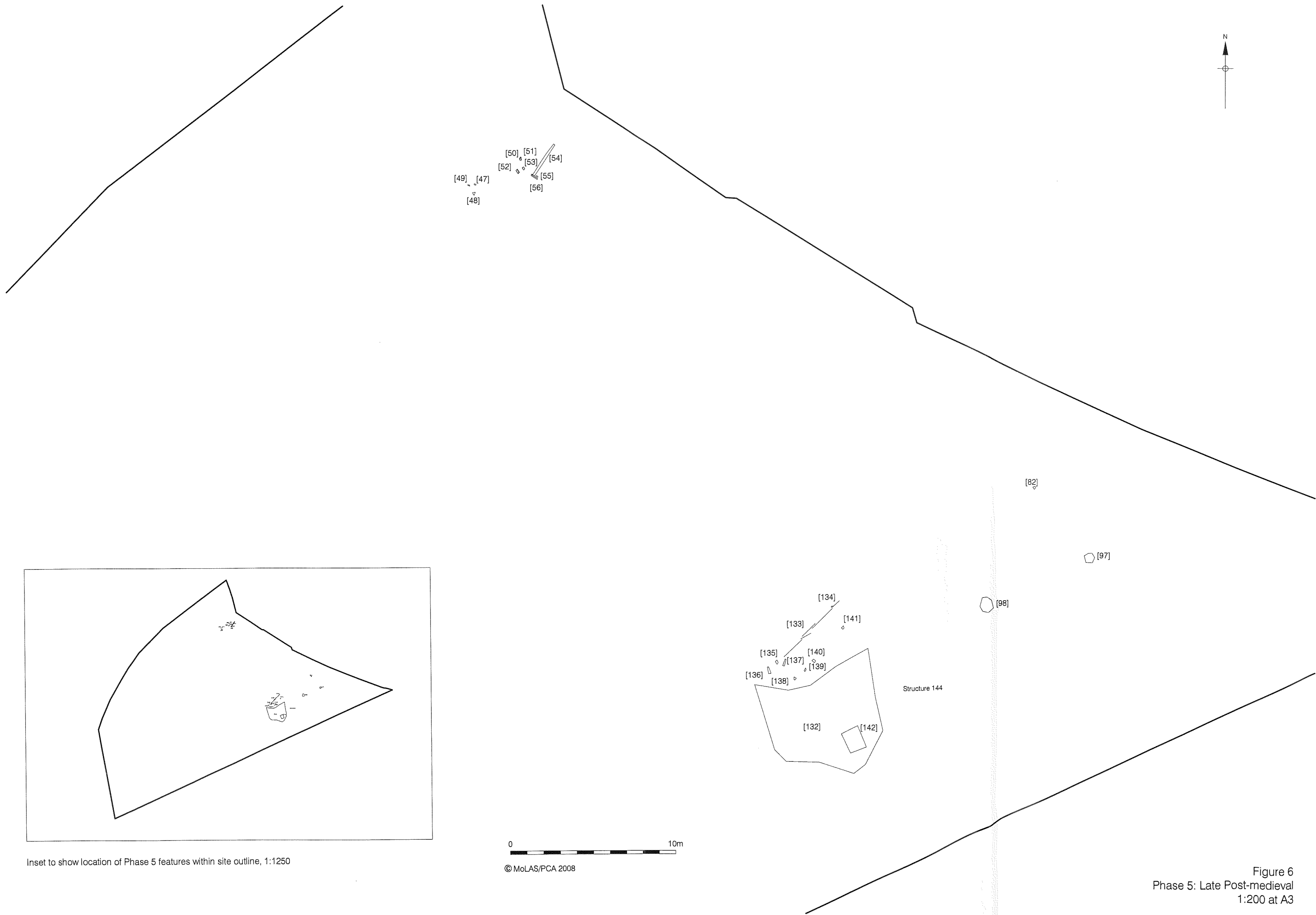
7.4 Phase 4: Anglo-Saxon to Early Post-Medieval

- 7.4.1 A thick layer of grey-blue alluvial clay, [193], was observed across the entire eastern half of the site at a maximum height of 4.21m OD. This sealed the structure [154] and represents a change in the environment following the cessation of Roman occupation. The deposition of this material is symptomatic of a sequence of flooding events from the adjacent River Lea. It's possible that this layer was once much thicker than recorded but that grading and truncation occurred following the ground reclamation. This would also account for the lack of any Saxon or medieval archaeological features having been observed.

7.5 Phase 5: Late Post-Medieval

- 7.5.1 Layers [130], [131] and [191] were large dumped deposits containing late post-medieval ceramic building material that overlay the alluvium [193]. Heights ranged from 2.72m to 5.74m OD, reflecting the sloping topography of the site from west to east towards the river. These were relatively thick, measuring between 0.5m and 0.7m deep. Also contained within these layers were animal bones, timber piles and flint nodules. Whether the flint inclusions are related to the flint packing seen in the foundations of the Roman structure [154] is unknown due to the methodology of ground reduction.
- 7.5.2 The deposition of these layers suggests that the area was too wet for building on and that in order to elevate the ground to a suitable height above the damp and prevent potential damage by flooding, some degree of ground-raising was required. This activity would presumably have been as a precursor to the establishment of industrial buildings such as the Dye Works seen on Gascoigne's map of 1703. Analysis of the masonry seen across the site suggests that the structures from this date are not represented in the archaeological record. However, it is plausible that the timber piles recorded in the northeast corner of the site represent underpinning of a building located in this area. Whilst no buildings are seen on the maps of the early 18th to mid 19th centuries, it is possible that less permanent structures were not recorded. With materials for the dye and printing-ink works known to have arrived at the site via the canal to the east, a mooring point, jetty or boathouse could be represented here. Indeed, reused timber [54] was recorded as being approximately 2.20m long and curved and appeared to have once been part of a boat.

- 7.5.3 Additional timbers, randomly interspersed, were also seen towards the southeast corner of the site. As stated above, these potentially represent the underpinning of foundations for buildings associated with industrial activity on site.
- 7.5.4 A timber barrel [98] was recorded within a cut towards the southeast of the site at a height of 4.22m OD. The top of this was lost to truncation, and the barrel base was missing. There is the possibility that this was once part of a barrel-lined well, dating from the post-medieval phase of industrial activity on site. A similar barrel feature, [97], was seen approximately 5m due east of [98] at 2.19m OD. It seems unlikely that the water-demanding industrial processes would have been supplied by these sources, given the proximity of the river, so they potentially represent a water source for human or animal consumption, or as part of a drainage system.
- 7.5.5 In the southeast corner of the site, a timber 'wall' [84] was recorded at 3.35m OD in the southwest facing section. This was formed by five timber planks, stacked on top of each other and nailed to vertical posts. The appearance of this feature indicated a high quality and well built river defence, similar to others seen in the Lea valley. This feature presumably extended towards the north and south, although its further exposure did not occur due to the close proximity of the present day river wall.
- 7.5.6 Another timber revetment was recorded towards the southern central area of the site. It consisted of timbers [133], [134] and [135] arranged horizontally with associated timber stakes [135], [136] and [137] supporting them. Heights ranged from 2.77m to 2.60m OD. Machine damage to this feature was significant and a black covering of the timbers either shows a treatment having been applied or is from the heightened levels of hydrocarbon contamination that was prevalent in this part of the site. As this revetment was recorded at right angles to the course of the main river channel to the east, it suggests that there was a separate watercourse, such as a drain, or that its function was to support a terrace on the site. Should the feature have represented a drain, then a parallel series of timber planks may have been expected. There are timber stakes [138], [139], [140] and [141] seen towards the south that may be remnants of such an arrangement.



Inset to show location of Phase 5 features within site outline, 1:1250

0 10m

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Figure 6
Phase 5: Late Post-medieval
1:200 at A3

7.6 Phase 6: Mid 19th Century

- 7.6.1 The rectangular outline of a structure was recorded in the northwest corner of the site. It consisted of two parallel northwest to southeast walls, [245] and [247], measuring approximately 9m long, and two shorter walls, [244] and [246], built at right angles to the first two. Heights ranged from 4.12m to 5.16m OD. These were constructed from red and yellow frogged bricks, bonded with a sandy-lime mortar. It is possible that wall [117], seen towards the northeast, represents a northern extremity to this building although the difference in brick fabric used would suggest otherwise. To the south of this range, a series of walls and a floor surface were recorded as structure [273]. This consisted of two parallel walls, [268] and [269], that were joined on their south sides by wall [267], at heights around 3.60m OD. These were aligned on a northeast to southwest direction. To the northeast of this masonry were the remains of a brick floor surface, [266]. Fabric analyses of the bricks of both of these buildings suggest they date to the mid 19th century. The first structure is similar in size and alignment to a building shown on the OS map of 1867. This would confidently identify it as being part of the Kidd's printing-ink works, although its exact function in part of the manufacturing process is unknown. The second structure is not visible on this map, but what could be interpreted as a corresponding building as seen on the OS map of 1894. It is built on a similar alignment and is the same shape, though once again, its function within the part of the factory is unknown. Whether this second building is part of the modifications that were made to the factory following the death of Kidd in 1888, built from reusing earlier bricks, is also a distinct possibility.
- 7.6.2 The northeastern, [46], northwestern, [43]/[44], and southeastern, [45] walls of a small square feature were recorded on the extreme east of the site, close to the river wall. The sides of this square measured approximately 3m in length and extended to a depth in excess of 4m. Heights were around the 4.20m to 4.30m OD mark. It was constructed from yellow frogged brick. The OS map of 1867 shows a large rectangular building that would have fronted the river to the east to be positioned over the location of these remains. It's possible that these remains represent part of a basement or a cellar feature, the full westerly extent of which has been lost to later truncation. Clearly the depth to which this feature was constructed would have had a damaging effect on any underlying archaeological features. A similarly sized and aligned frogged-yellow brick feature was recorded to the southeast as rectangular feature comprised of walls [66], [67], [68] and [69]. The heights of these walls ranged between 3.60m and 3.80m OD and it measured approximately 3m by 2.5m. There remained the fragments of a wooden floor inside it.

- 7.6.3 Approximately 4m to the south of walls [43], [44], [45] was the larger remains of a basement. It consisted of wall, [96], on a similar alignment to wall [45] of the feature above and measured 7.5m long with a return both on the south [87], and north, [415]. The top of [96] was recorded at 4.22m OD. Wall [71] demarked the northwesterly limit of this feature. This was constructed from red and yellow frogged bricks and although badly truncated, showed evidence of being part of an industrial building by the presence of cast iron pipe work entering the feature from the south. As with the above feature, this could represent the basement or cellar of the large rectangular building that fronted the river to the east as shown on the Ordnance Survey map of 1867. The depth of the basement was at least 2m at approximately 2.22m OD. Although the brickwork was of a similar appearance to some of the later buildings on the site, it sat well outside of the footprint for the larger building that was built later in the 19th century towards the west.
- 7.6.4 Four parallel walls [73], [74], [75], [76] and [77] were recorded to the southeast of the basement above. They averaged 4m in length, were about 3.90m to 4.10m OD in height, and were made from red and yellow frogged bricks. They had the appearance of being foundation walls of part of a structure on the same alignment as the larger basement. A square feature is shown on the 1867 map that is separate from the larger building to the north and may be represented by these walls. Once again, the processes of the printing-ink industry that were performed in this structure remain unknown.
- 7.6.5 To the northwest of the basement feature, a similar set of parallel walls to the above arrangement was recorded. It consisted of a northeast-southwest aligned wall, [36], with walls [33], [34] and [35] all extending from it, towards the northwest, forming an 'E'-shaped arrangement, at a height of c. 4.00m OD. Walls [37] and [38] both appear to be related to these as well. This was constructed from similar fabric bricks to the above features and was on an identical alignment, strongly suggesting that they were all contemporary. This building would have been located within the large structure that is seen to front the river to the east on the 1867 OS map.
- 7.6.6 A series of red and yellow brick floors were observed as features [60], [61], [62] and wall [65] at heights between 3.60m and 3.70m OD. Combined, these formed a rectangular shape measuring approximately 6m northwest to southeast and 4m northeast to southwest. Features [58] and [59] are similar and also part of this floor. From the size, shape and rigidity of this masonry, it can be inferred that it represents a floor within a structure or a load-bearing part of a building. As with walls [73] to [77], it would appear that this feature corresponds well with the square-shaped structure

shown to the south of the waterfront building on the 1867 OS map. A brick drain, [63], was seen to cut through it, in the direction of the river. Several timber stakes were seen driven into the made ground that underlay the masonry in this area. These most likely represent piles from this or an earlier phase of industrial building on site.

- 7.6.7 Several wells, drains and soak-aways were also seen across the site. The remnants of the circular feature [42] were built from red and yellow frogged bricks and measured approximately 1.5m in diameter at a height of 3.88m OD. This would have been positioned either immediately to the south of the large mid-19th century building that fronted the Lea or to the north of the early 20th century building, although brick fabrics suggest the former. A plentiful supply of water would have been required for the printing-ink industry, and it therefore seems unlikely that this feature would have serviced its demands. In addition, its usage as a drinking water seems unlikely too. Consequently, this masonry may be best interpreted as a drain or soakaway.
- 7.6.8 A single course of brickwork from what was recorded as well [201] was seen towards the centre of the site. It measured 1.05m in diameter and was constructed from badly damaged redbrick. Its height was 5.37m OD. There are no historical records of this feature, although it is notable that it would have been located inside any one of the structures built on the plot since the mid 19th century. As with other similar features on site, there remains the strong possibility that the function of this masonry was not to draw water for industrial use on site, but rather for the disposal of fluids as a drain or as a soak-away.
- 7.6.9 Well [90] was constructed from red and yellow brick and measured 0.86m in diameter. It was located to the north of barrel well [98] and to the east of barrel well [97]. Only a single course of brickwork was observed. Although certainly dating to the mid 19th century, whether or not its function was as a well or part of a drainage or soakaway feature is again unknown.
- 7.6.10 A series of red brick walls, floor surfaces and a well were observed towards the northeast of the site. At a height of 3.05m OD, well [32] was constructed from red brick and measured approximately 1m in diameter. It was not fully exposed due to the remediation strategy employed on site, but certainly seems contemporary with the walls seen to its east. Nearest to [32] was a northwest by southeast aligned red and yellow brick wall, [8], at 4.13m OD, which most likely continued as [9] further to the north and [6] to the south. The combined length of this masonry was just under 8m long by 0.5m in width. It is conceivable that wall [11], built from similar bricks and on a similar alignment to the above, represents an internal division of a structure. The two

parallel walls would have been joined to the north by wall [10], built on a northeast - southwest alignment. Although a southern return for this structure was not observed, what could be interpreted as internal divisions were recorded as walls [2], [4] and [5] at a height of c. 3.99m OD. However, the alignment of these walls was slightly different from the above features, giving rise to the possibility that it dated from earlier industrial practices on site. Whether or not these internal divisions create what can be interpreted as rooms is debatable, although what was recorded as floor surfaces, [13] and [15], are certainly not. Floor [13] measured 3m by 4m at 4.03m OD, its northwesterly edge seen on the same alignment as wall [5] and its southerly side lost to truncation by later building. It consisted of a black, hard tar covering of red and yellow bricks. It remains a possibility that the tar observed is not an intentional deposition but a product of the leaching of industrial wastage that has later solidified, into this area. Floor [15] (4.05m OD) was seen to the southwest. It measured 2m by 1.5m and abutted wall [6]. Unlike [13], it was composed of hard clay, suggesting that it was some form of bedding layer, deposited as a precursor to the laying of a brick floor. A drain, [12], was also recorded towards the centre of this building, as were a series of timber piles, most likely from attempts at underpinning the building as an act to increase structural integrity of the foundations. As with similar masonry of this phase, comparisons with the 1867 OS map places it firmly within the footprint of the large building that fronts the river. The exact function of these divisions and floors, as part of the printing-ink manufacturing process is unknown.

- 7.6.11 A square, yellow and red brick feature, [89], was seen towards the southeast of the site at 4.22m OD. It measured some 4m on each side. Unusually, it had what appeared to be a flue extending from its northern edge. Although no comparable structures are identifiable on cartographic sources, its form suggests the flue would have acted as an exhaust for hot gases created during heating or boiling. This is supported by the isolated nature of the building, suggesting that if fire were to occur, nearby buildings would not be liable to damage.
- 7.6.12 The remnants of a mid 19th century, red and yellow brick wall, [70], was seen in the southeastern corner of the site, representing the isolated edge of a building, the remainder of which had been truncated away by later activity. Its height was recorded at 3.76m OD.

7.7 Phase 7: Late 19th to Early 20th Century

- 7.7.1 Before the demolition of the last buildings that stood on the site, a Standing Buildings Survey Report was conducted by MoLAS-PCA, (Brown, J. 2006). The results of this detailed the exact arrangement of the range of buildings across the site as well as the floor plans and wall layouts within the structures. Of the six buildings recorded during the survey, three of these were identifiable from the remains of foundation walls and floor surfaces recorded during the remediation works.
- 7.7.2 To the north of the site, the remains of what has been recorded as building 'B6' were identified. It consisted of a large, frogged redbrick wall, [115], measuring some 14m in length, approximately 2m in depth and extending from the northeast to the southwest at a height of 4.15m OD. This was built upon a large timber beam that presumably acted as a foundation within the damp conditions prevalent on the site. This masonry equates to the northern exterior wall of the building, the southern side of which was shown by wall [111] at 4.40m OD high. It was constructed from similar bricks to [115] and was on an identical alignment, though truncation had reduced its overall length to 6m. A smaller, parallel wall, [110], represents an internal corridor of the building. Similarly, walls [21] and [23] were northeast-southwest aligned and seen towards the northeast of the building. Floor [22] (3.67m OD) sat between these two walls and was made from red and yellow bricks. Other divisions in this building were recorded as walls [116], [16] and [17], all of which were set perpendicular to [115] and would have created at least three rooms within the building. Much of the centre and the entire south of this building was lost, presumably as a result of the recent demolition activities on the site.
- 7.7.3 The Standing Building Report describes the 'B6' building as being a two-storey structure, with two bays north to south and eight bays east to west, the east end of the structure being the earliest part of the construction, with later modification occurring as the western extension. The walls described above represent evidence of these divisions. The 1916 OS map identifies the eastern end of this building to have served as laboratories and offices on the first floor, with the drum washing room located on the ground floor.
- 7.7.4 The remains of building 'B1' were recorded across much of the site. This was a large structure and represents the main factory building on site. It consisted of a late 19th century core of buildings, flanked by early 20th century additions. The building would have consisted of several ranges of buildings of varying extensions and storeys.

Yellow stock brick walls, in some cases built upon concrete foundations, represented the remaining foundations.

- 7.7.5 To the south of the structure, the walls [132] and [86] (4.16m OD), both aligned on a northeast by southwest direction, formed the southern extent of what would have been the Colour Grinding Mill, or room 7 as it is referred to in the Standing Building Report. This room was bounded by a return on the eastern side, recorded as walls [85] and [39] and on the northern side by wall [40] and would have measured approximately 25m by 16m. This room is one of the earliest parts of the late 19th to early 20th century factory building, visible on the 1894 OS map.
- 7.7.6 Room 8b was not observed to the east of this room, although wall [41], to the north, most likely represents room 8. This was a toilet block and a later, early 20th century addition to original wall [39]. It would have measured 10m by 4m and was recorded at around 4.00m OD. To the west of this room, the northwestern extension of the building became apparent. Room 6 was formed by wall [39] turning towards the southwest, wall [40] extending parallel to it, further to the south. Wall [39] existed to a height of nearly 5.00m OD. This room was bounded by either wall [122] or [124] to the west, wall [124] being the more likely candidate and wall [122] representing an earlier or interior division within the room. It measured 13m by 11m. As with room 7, the bounding by the wall [39] suggests that this is from the original late 19th century phase of the buildings development. Historical sources suggest that the function of this room was as a coloured ink store.
- 7.7.7 Immediately to the west, room 5 was identified by the extension of wall [39] becoming walls [121] and [113] to the north and wall [332] demarking its westerly extent. A southern boundary is partially revealed by wall [344]. This room would have formed a 10m by 10m-square division and its function is recorded as being another colour ink store. Several redbrick walls and floor surfaces were seen within this room and represent an earlier phase of usage, most likely to date from the late 19th century.
- 7.7.8 Room 4 was immediately to the west of room 5. It was of identical size and was bounded to the east by wall [322], (at 5.01m OD high), to the west by wall [265] and the partial remains of wall [327] to the north. The Standing Buildings Report suggests that wall [332] may have originally been external, proposing that this may have represented an isolated structure, later amalgamated as the B1 building. As with room 5, fragmentary remains of former floor surfaces and short walls were recorded. Walls [277] and [335] ran parallel with each other, and although their function is unknown, probably served as a division of this room prior to it becoming more open

plan and used as a location for wet processes related to roller casting. Contexts [274] and [277] have been interpreted as flue hubs, suggesting the transference of hot exhaust gases from part of the ink manufacturing process. Red brick features [339] and [340] are most likely late 19th century and have been interpreted as the part of a housings or stanchions that would have supported heavy industrial machinery. They were seen at heights of 4.65m and 4.60m OD respectively.

7.7.9 The northern boundary of room 3 was recorded as wall [264] at a height of 5.92m OD. A continuation to the west of wall [344] formed the southern boundary of the room, recorded as wall [348]. It was situated to the west of room 4, being divided by wall [265]. This room marks the westerly extent of the observed foundations of the main factory building on the site. It measured approximately 10m by 10m although a dividing wall between rooms 2 and 3 was not recorded. Raised footings, [347] and [349], extending east-west along the southern wall were associated with heavy machinery which was located here. Heights were recorded at 4.27m and 4.23m OD. An architect's plan of 1935 labels this rooms function as part of the Forwarding Department, responsible for the delivery of completed orders to be passed onto customers of the ink works.

7.7.10 To the south of building B1, the rectangular masonry remains of building B4 were revealed. This was an extension to the main factory building and dates to 1914-1916. Wall [99] was a northeast-southwest aligned, yellow frogged brick wall that was seen to turn to the south and then to the west, becoming wall [109] and forming a rectangular shape. It measured approximately 7m by 4m and was parallel to the southern exterior wall of B1, [86]. Wall [100] was possibly related to this structure, though it seems too far north when compared to the twentieth century plans. The height of this masonry were in excess of 5.50m OD.

7.7.11 Historical records list the function of this room as being a Boiler House with an associated chimney as well as a water tank, dating from the late 19th century. It seems that that early 20th century walls that entomb it may have been replacements of an original extension from the B1 building. In addition, this structure's use as a locker room and as a carpenter's workshop would have been a later function. Of particular interest was the discovery of a large iron shaft, [103], to the northeast of the building. This extended to a depth of approximately 6m below the ground surface and was built from six identical component parts. The sturdiness and rigidity of this feature suggest its usage in the boiling process that would have occurred in this building.

7.7.12 The absence of surviving archaeological remains in the southwest corner of the site is due to the removal of a large basement feature as part of the recent demolition works (Perkins, 2007. *pers. comm.*). The Standing Building Report identifies a structure (B2) over this area as being a double-range of general-purpose storage sheds, built between 1948 and 1962. There is, however, no mention of a basement. As no record was seen, dating is impossible, although the assumption is that it belonged to the printing-ink works.



Figure 8
Phase 7: Late 19th - early 20th century
1:200 at A3

8 DISCUSSION

- 8.1 There is well-documented evidence for the location of the Roman road that would have connected London and Colchester to the west of the River Lea through the Bethnal Green, Bow and Old Ford areas of East London. Extrapolation of the course of the road to the northeast suggests it must have crossed the Lea in one or more places. In addition, a multitude of Roman finds, such as a herringbone floor (*opus spicatum*) at Iceland Wharf and a coin hoard at 429-431 Wick Lane, have always strongly suggested the presence of Roman occupation in the locality.
- 8.2 The Roman structure on site was heavily truncated by late post-medieval industrial activity and terracing of the site. The remains of the wall foundations, part of a hypocaust system, occasional timber features and some very limited finds were all that survived. However, the presence of a structure in this location is incredibly significant as it has wider implications for our understanding of the nature and extent of Roman occupation in the locality and the importance it played in connecting the established *colonia* of Colchester, with the developing settlement of London.
- 8.3 Numerous roadside settlements existed alongside Roman roads. A *Mansio* was a stopping-point for an overnight stay, in particular, a halting-place for an Emperor or an important relay. In addition, a number of private dwellings existed including *deversorium* (private hostelrys, often built by wealthy Romans on the way to their estates), *stabulum* (an inn with a stable) and *taberna* (inns), (Chevallier 1989). Combined, the position of the building on the projected extension of the Roman road, the size of the settlement and the hypocaust system all strongly suggest that this structure was a *Mansio*.
- 8.4 Identification of different construction methods as well as the extrapolation of walls and foundations allow for the crude division of the building into several rooms. Of the remains observed, the building seemed to form a rectangular shape and was aligned on a northwest by southeast alignment.
- 8.5 The south of the structure may have been divided into two large rooms, each measuring 14m by 5m. There is the possibility that further rooms were created by subdividing this space though evidence of such has been lost to post-medieval truncation. Similarly, there is potentially another similar sized room on the north side of the building, as suggested by the presence of what has been interpreted as subdividing walls. No hypocaust system was seen in these areas of the building, although as before, this is not to say that it did not exist.

- 8.6 A northeast to southwest internal division was recorded towards the centre of the structure. To the north side of this were the remnants of the hypocaust system. Supporting short walls as part of the arrangement of *pilae* stacks suggest the splitting of the above floor surface into different rooms. However, these features may be purely for structural integrity.
- 8.7 Post-medieval truncation has removed what would have been the rest of the hypocaust system to the immediate north, although partial remains of a flue were seen to the south of the four rooms identified in the north of the building. It would appear that these rooms didn't benefit from the heated floor system, as the survival of *pilae* stacks would have been expected with the tops of the foundations remaining undisturbed. A northeast-southwest aligned wall, parallel with one seen to the south, divides this area from the rest of the structure. At right angles to it, two internal walls are seen to extent toward the northwest. Broadly speaking, these would have created three divisions within this area. A further subdivision was created in the westerly room of the three by the presence of a short wall.
- 8.8 The possible functions of any of these subdivisions is merely speculation. However, as discussed in the revised research questions, comparisons with known *Mansio* floor plans may allow for the recognition of distinct functions within the structure.
- 8.9 Presuming the structure is a *Mansio*, the course of the road must have been very close by. Whether it was positioned to the north, south or branched into several components remains speculation. However, it seems a certainty that this road must have crossed the river near to the building. This gives rise to the potential of finding one or more bridges or crossing points that would have enabled the road to continue.
- 8.10 The lack of evidence for the road on the east bank of the river is possibly because the landscape consisted of several raised islands in the river valley, rather than being a single channel to cross, as is seen today. An important consideration is also the tidal nature of the river. A single crossing point may have become inundated throughout the day. Therefore, a potential model for the course of the road may be better visualized by a series of smaller crossing points consisting of both bridges and fords existing between discrete islands in the river valley.
- 8.11 There is further potential to find additional Roman buildings that would have been associated with the structure revealed. It has been suggested that the herringbone

floor, seen at Iceland Wharf to the south, may be from an outhouse or bathhouse related to the larger building.

- 8.12 The absence of Saxon or medieval archaeology across the site is not necessarily surprising. Whilst there is the suggestion that the road continued to be used, several more substantial crossing points are known from historical sources. The settlement of Old Ford is in the general rather than the immediate vicinity and evidence for the large medieval structures of *Algoldsmill* and *Gissing Place* were not observed. Whilst there is the potential for some of the timber stakes recorded having been medieval, it seems more likely that they represent underpinning as part of the construction of industrial buildings on the site.
- 8.13 The thick horizons of post-medieval made ground represent a precursor to the establishment of industrial structures on site. No surviving archaeological finds, features or deposits were recorded that relate to the earliest phase of industry on site, namely the Dye Works as recorded on Gascoigne's 1703 map. Even though manufacturing of dyes and inks continued all throughout the 18th and 19th centuries, the earliest recorded industrial features date from the mid 19th to early 20th centuries. These were generally large buildings and their construction techniques recorded showed the terracing of the site to create flat surfaces for which to build upon. Such building activities would have truncated any earlier underlying archaeological remains.

9 CONCLUSIONS

- 9.1 The construction of a large Roman building on the site in the mid 1st century AD, recorded as foundation walls, masonry and timber, represents the first phase of human occupation on the site. Evidence from the projected course of a Roman road between London and Colchester, the scale of the building and its prestigious nature (demonstrated by the inclusion of a hypocaust system) all strongly propose it to be a *Mansio*. Additional archaeological finds and features in the area support this theory.
- 9.2 Re-structuring of the hypocaust during the second to third century AD confirms that the building was still in use during this period. Late post-medieval building works are responsible for the truncation and loss of much of this structure.
- 9.3 No evidence for the Roman London to Colchester road was uncovered during the works. The presence of the building, however, strongly suggests that it would have been in the immediate vicinity. In addition, no evidence was observed to suggest the presence of a bridge, ford or other crossing point over the River Lea.
- 9.4 No Saxon or medieval archaeological finds, features and deposits were observed across the site.
- 9.5 The earliest phase of post-medieval archaeology is seen as a phase of ground raising across the site. Material was dumped in order to elevate early 18th century structures above the threat of water logging, although the only potential evidence for these exists as the remains of timber piles. The Dye Works seen on Gascoigne's 1703 map were not observed.
- 9.6 Development of the site throughout the 18th and early 19th centuries was not observed. These structures were most likely demolished in order to create room for later buildings. Redbrick floors, foundations and timber features all dating to the mid 19th century were seen towards the east of the site. These are comparable with two structures, seen on an 1867 OS map. One is a large 'L'-shaped structure that would have fronted the River Lea to the east. To the south of this was a square shaped building, the basement of which was recorded. It is likely that the site was terraced during this phase or earlier in order to construct these features and as a result, much of the underlying archaeological resource was lost.
- 9.7 Several phases of development occurred to the main factory building, situated over most of the site. This dated from the late 19th to early 20th century and included the

amalgamation of several of the mid 19th century structures into one large building. A recently commissioned Standing Buildings Survey of this structure allowed the identification of several of the key features recorded. In particular, three separate structures were identified. The function of these were all related to the printing ink industry and included colour-grinding mills, black-grinding mills, colour ink stores, roller casting, a forwarding department and the offices and toilets of the factory. The absence of archaeological features in the far west of the site is due to the removal of a large basement feature in this area as part of the recent demolition works

9.8 Put in context, the detection of the Roman building on the site is one of the most significant finds in the area for many years. The implications it has on our understanding of the Roman landscape both in the immediate vicinity and the on a more national level are immense. Because of the momentous nature of this find, several issues are raised concerning the methodology employed in its recording. It is important to remember that the method statement details the archaeological works as being a 'watching brief with limited excavation', a methodology agreed by all parties involved with the project. Whilst it would have been possible to conduct a full-scale excavation, the time and costs involved may have prevented any work being done at all. Undoubtedly, the highly contaminated nature of the site was what caused most problems in terms of fieldwork. Generally, this was because the only way that archaeological features were exposed was via the removal of contaminated materials with a machine bucket, the inability to make detailed plans and records using conventional methods and the inability to remove important dating evidence off site for the attention of specialist analysis. With the benefit of hindsight several recommendations can be made-

- Removal of larger swathes of contaminated materials in order to reveal archaeological features in a similar phase as opposed to smaller 'pockets'
- The increased detailed recording of post-medieval brick fabrics in order to reliably ascertain differing phases of construction
- The ability to wash safely and remove from site limited quantities of important dating material
- The ability to produce coherent section and elevation drawings via Total Station.

This having been said, the overall strategy employed was a success and hopefully will act as a benchmark for the approach and treatment of archaeological works necessary on contaminated sites in the future.

10 RESEARCH QUESTIONS

10.1. ORIGINAL RESEARCH QUESTIONS

The original research questions were laid out in the archaeological method statement (Brown, G. 2006):

- 10.1.1 Is it possible to verify that marsh deposits began to accumulate at the west of the site in the Mesolithic era?

There was no evidence of marsh deposits dating to the Mesolithic era on the site. Later flood deposits however raise the possibility that these horizons may have been eroded out. Blue-grey alluvial clay was seen to overlie natural terrace gravels

- 10.1.2 What evidence is there, particularly from the plant and insect record, for the migration of the main river channel?

No evidence of for the migration of the main river channel was found on the site. The extremely hazardous nature of the contaminants on the site meant that it was impractical to take soil samples for the plant and insect record.

- 10.1.3 What evidence is there for exploitation from the later prehistoric eras of the river margin and do they support the evidence recorded further up the west valley slope?

There was no evidence from the later prehistoric period on the site. If any had existed it may well have been eroded out by seasonal flooding of the site.

- 10.1.4 What evidence is there for the Roman London – Colchester road and or fording/bridging point on the site?

Although no evidence for the Roman road was discovered on the site the presence of the large Roman building suggests that the road and crossing point lay in the immediate vicinity.

- 10.1.5 What evidence is there for Saxon or medieval exploitation of the area?

No evidence of either Saxon or medieval exploitation was evidenced on the site. This may however be a result of the massive horizontal truncation of the site during terracing work in the late 19thC.

10.1.6 Is there any evidence for the dye works shown on Gascoigne's map of 1703?

There was no evidence of the dye works. This could be as a result of their demolition and subsequent terracing of the site in order to create suitable building land.

10.1.7 Are there any in situ deposits of archaeological significance within the made ground or is it all of 19th/20th century dump and make-up deposits?

The remains of a large and imposing Roman building were discovered on the site. This had suffered considerably from the late 19th century truncations of the site and not a lot could be ascertained for certain as to the exact dates and function of the structure. This does however indicate that pockets of in situ archaeology do survive in the area despite its heavy development over the past 200 years.

10.2 REVISED RESEARCH QUESTIONS:

A series of additional research questions may be posed following the results of the archaeological investigation. Further analysis will attempt to answer these questions at the publication and analysis stage of the post-excavation work.

10.2.1 What is the extent and nature of the Roman building located on the site, how does it relate to the London – Colchester road and the river crossing?

10.2.2 Can the dates for the construction and re-development of the Roman building be refined?

10.2.3 What is the location of the Roman road in the immediate vicinity of this site and where does it cross the river?

10.2.4 What comparisons can be made with other *Mansio* buildings in Britain and Europe and from the room layout, can similar arrangements, and therefore functions, be determined?

10.2.5 Were any of the timber piles representative of drainage channels or attempts at water management of the Lea e.g. revetting?

10.2.6 Were any of the timber piles observed from Saxon or medieval activity of the site?

10.2.7 Do any of the post-medieval industrial remains define the nature of the processes that would have occurred within the different component buildings of the factory?

11 PUBLICATION PROPOSAL

- 11.1 The importance of both the Roman archaeological features and the industrial structures observed at 419 Wick Lane have been deemed significant enough to require further dissemination of these results. The dissemination will take the form of two separate publications
- 11.2 The newly obtained information relating to the position of settlement and the inferred position of the Roman road changes the current thinking on the nature of Roman archaeology both locally and regionally. Comparisons with related archaeological data in the area is necessary to fully understand the repercussions of this discovery. The archaeological sequence relating to the structure will be included in the forthcoming Pre-Construct Archaeology monograph for the Bow area. This Monograph whilst concentrating on the Roman road and settlement at Old Ford will be the most appropriate outlet to discuss the postulated continuation of the road, the crossing of the river Lea and the nature of the Roman hypocausted building found on the present site. This will allow the findings to be placed within the context of Roman finds in the vicinity.
- 11.3 A comparable detailing of the archaeological sequence concerning the post-medieval industrial phases will be published by MoLAS in the Industrial Archaeological Review. This is to better understand the nature of the development of industrial activity in the locality. The publication will consist of linking the post-medieval archaeological remains with the results of the standing building survey to provide a synthesis of the available evidence for industrial working on the site.

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APPENDIX 1: CONTEXT INDEX

Site Code	Context No.	Plan	Type	Description	Phase
WKN 06	1	Surveyed In	Wall	PM Wall	6
WKN 06	2	Surveyed In	Wall	PM Wall	6
WKN 06	3	Surveyed In	Wall	PM Wall	6
WKN 06	4	Surveyed In	Wall	PM Wall	6
WKN 06	5	Surveyed In	Wall	PM Wall	6
WKN 06	6	Surveyed In	Wall	PM Wall	6
WKN 06	7	Surveyed In	Wall	PM Wall	6
WKN 06	8	Surveyed In	Wall	PM Wall	6
WKN 06	9	Surveyed In	Wall	PM Wall	6
WKN 06	10	Surveyed In	Wall	PM Wall	6
WKN 06	11	Surveyed In	Wall	PM Wall	6
WKN 06	12	Surveyed In	Masonry	PM Threshold	6
WKN 06	13	Surveyed In	Floor	PM Bitumen Floor	6
WKN 06	14	Surveyed In	Floor	PM Bitumen Floor	6
WKN 06	15	Surveyed In	Floor	PM Mortar Floor	6
WKN 06	16	Surveyed In	Wall	PM Wall	7
WKN 06	17	Surveyed In	Wall	PM Wall	7
WKN 06	18	Surveyed In	Floor	PM Flagstone Floor	7
WKN 06	19	Surveyed In	Wall	PM Wall	7
WKN 06	20	Surveyed In	Wall	PM Wall	6
WKN 06	21	Surveyed In	Wall	PM Wall	7
WKN 06	22	Surveyed In	Floor	PM Brick Floor	7
WKN 06	23	Surveyed In	Wall	PM Wall	7
WKN 06	24	Surveyed In	Wall	PM Wall	7
WKN 06	25	Surveyed In	Stake	PM Revetment	6
WKN 06	26	Surveyed In	Stake	PM Revetment	6
WKN 06	27	Surveyed In	Stake	PM Revetment	6
WKN 06	28	Surveyed In	Stake	PM Revetment	6
WKN 06	29	Surveyed In	Stake	PM Revetment	6
WKN 06	30	Surveyed In	Stake	PM Revetment	6
WKN 06	31	*	Void	*	*
WKN 06	32	Surveyed In	Masonry	PM Soakaway	6
WKN 06	33	Surveyed In	Wall	PM Wall	6
WKN 06	34	Surveyed In	Wall	PM Wall	6

WKN 06	35	Surveyed In	Wall	PM Wall	6
WKN 06	36	Surveyed In	Wall	PM Wall	6
WKN 06	37	Surveyed In	Wall	PM Wall	6
WKN 06	38	Surveyed In	Wall	PM Wall	6
WKN 06	39	Surveyed In	Wall	PM Wall	7
WKN 06	40	Surveyed In	Wall	PM Wall	7
WKN 06	41	Surveyed In	Wall	PM Wall	7
WKN 06	42	Surveyed In	Well	PM Well	6
WKN 06	43	Surveyed In	Wall	PM Wall	6
WKN 06	44	Surveyed In	Wall	PM Wall	6
WKN 06	45	Surveyed In	Wall	PM Wall	6
WKN 06	46	Surveyed In	Wall	PM Wall	6
WKN 06	47	Surveyed In	Stake	PM Revetment	5
WKN 06	48	Surveyed In	Stake	PM Revetment	5
WKN 06	49	Surveyed In	Stake	PM Revetment	5
WKN 06	50	Surveyed In	Stake	PM Revetment	5
WKN 06	51	Surveyed In	Stake	PM Revetment	5
WKN 06	52	Surveyed In	Stake	PM Revetment	5
WKN 06	53	Surveyed In	Stake	PM Revetment	5
WKN 06	54	Surveyed In	Beam	PM Revetment (Re-Used)	5
WKN 06	55	Surveyed In	Stake	PM Revetment	5
WKN 06	56	Surveyed In	Plank	PM Revetment	5
WKN 06	57	*	Void	*	*
WKN 06	58	Surveyed In	Wall	PM Wall	6
WKN 06	59	Surveyed In	Floor	PM Brick Floor	6
WKN 06	60	Surveyed In	Wall	PM Wall	6
WKN 06	61	Surveyed In	Wall	PM Wall	6
WKN 06	62	Surveyed In	Floor	PM Brick Floor (Bitumen Surface)	6
WKN 06	63	Surveyed In	Timber Drain	PM Timber Drain	6
WKN 06	64	Surveyed In	Brick Drain	PM Brick Drain	6
WKN 06	65	Surveyed In	Wall	PM Wall	6
WKN 06	66	Surveyed In	Wall	PM Wall	6
WKN 06	67	Surveyed In	Wall	PM Wall	6
WKN 06	68	Surveyed In	Wall	PM Wall	6
WKN 06	69	Surveyed In	Wall	PM Wall	6
WKN 06	70	Surveyed In	Wall	PM Wall	6
WKN 06	71	Surveyed In	Cut	PM Pit Cut	6

WKN 06	72	Surveyed In	Fill	Fill Of Pit [71]	6
WKN 06	73	Surveyed In	Wall	PM Wall	6
WKN 06	74	Surveyed In	Wall	PM Wall	6
WKN 06	75	Surveyed In	Wall	PM Wall	6
WKN 06	76	Surveyed In	Wall	PM Wall	6
WKN 06	77	Surveyed In	Wall	PM Wall	6
WKN 06	78	*	Stake	PM Stake	6
WKN 06	79	*	Stake	PM Stake	6
WKN 06	80	*	Beam	PM Beam	6
WKN 06	81	*	Stake	PM Stake	6
WKN 06	82	Surveyed In	Stake	PM Stake	6
WKN 06	83	*	Beam	PM Beam	6
WKN 06	84	Surveyed In	Timber Wall	PM Revetment	5
WKN 06	85	Surveyed In	Wall	PM Wall	7
WKN 06	86	Surveyed In	Wall	PM Wall	7
WKN 06	87	Surveyed In	Wall	PM Wall	6
WKN 06	88	Surveyed In	Wall	PM Wall	6
WKN 06	89	Surveyed In	Brick Flue	PM Brick Flue	6
WKN 06	90	Surveyed In	Well	PM Well	6
WKN 06	91	Surveyed In	Stake	PM Revetment	6
WKN 06	92	Surveyed In	Stake	PM Revetment	6
WKN 06	93	Surveyed In	Beam	PM Revetment	6
WKN 06	94	*	Void	*	*
WKN 06	95	Surveyed In	Stake	PM Revetment	6
WKN 06	96	Surveyed In	Wall	PM Wall	6
WKN 06	97	Surveyed In	Barrel Well	PM Well	5
WKN 06	98	Surveyed In	Barrel Well	PM Well	5
WKN 06	99	Surveyed In	Wall	PM Wall	7
WKN 06	100	Surveyed In	Wall	PM Wall	7
WKN 06	101	Surveyed In	Wall	PM Wall	7
WKN 06	102	Surveyed In	Wall	PM Wall	7
WKN 06	103	Surveyed In	Cast Iron Pipe	Cylinder Tank, Buried Upright	7
WKN 06	104	Surveyed In	Stake	Support For Tank [103]	7
WKN 06	105	Surveyed In	Floor	PM Wall	6
WKN 06	106	Surveyed In	Wall	PM Wall	7
WKN 06	107	Surveyed In	Wall	PM Wall	7
WKN 06	108	Surveyed In	Floor	PM Wall	7

WKN 06	109	Surveyed In	Wall	PM Wall	7
WKN 06	110	Surveyed In	Wall	PM Wall	7
WKN 06	111	Surveyed In	Wall	PM Wall	7
WKN 06	112	Surveyed In	Wall	PM Wall	7
WKN 06	113	Surveyed In	Wall	PM Wall	7
WKN 06	114	*	Timber (Worked)	Hollowed Timber (Part of Machinery)	6
WKN 06	115	Surveyed In	Wall	PM Wall	7
WKN 06	116	Surveyed In	Wall	PM Wall	7
WKN 06	117	Surveyed In	Wall	PM Wall	6
WKN 06	118	Surveyed In	Brick Tank	PM Brick Tank	7
WKN 06	119	Surveyed In	Fill	Fill Of Tank [118]	7
WKN 06	120	Surveyed In	Wall	PM Wall	6
WKN 06	121	Surveyed In	Wall	PM Wall	7
WKN 06	122	Surveyed In	Wall	PM Wall	7
WKN 06	123	Surveyed In	Wall	PM Wall	7
WKN 06	124	Surveyed In	Wall	PM Wall	7
WKN 06	125	Surveyed In	Wall	PM Wall	7
WKN 06	126	Surveyed In	Wall	PM Wall	7
WKN 06	127	Surveyed In	Wall	PM Wall	7
WKN 06	128	Surveyed In	Structure	PM Brick Structure	*
WKN 06	129	Surveyed In	Cut	PM Pit Cut	5
WKN 06	130	Surveyed In	Layer	PM Layer	5
WKN 06	131	Surveyed In	Layer	PM Layer	5
WKN 06	132	Surveyed In	Layer	PM Layer	5
WKN 06	133	Surveyed In	Timber Revetment	PM Revetment	5
WKN 06	134	Surveyed In	Stake	PM Revetment	5
WKN 06	135	Surveyed In	Stake	PM Revetment	5
WKN 06	136	Surveyed In	Stake	PM Revetment	5
WKN 06	137	Surveyed In	Stake	PM Revetment	5
WKN 06	138	Surveyed In	Stake	PM Revetment	5
WKN 06	139	Surveyed In	Stake	PM Revetment	5
WKN 06	140	Surveyed In	Stake	PM Revetment	5
WKN 06	141	Surveyed In	Stake	PM Revetment	5
WKN 06	142	Surveyed In	Layer	PM Layer	5
WKN 06	143	Surveyed In	Fill	Fill Of Pit [129]	2
WKN 06	144	Surveyed In	Structure	PM Revetment	5

WKN 06	145	Surveyed In	Stake	Roman Stake	2
WKN 06	146	Surveyed In	Stake	Roman Stake	2
WKN 06	147	Surveyed In	Stake	Roman Stake	2
WKN 06	148	Surveyed In	Stake	Roman Stake	2
WKN 06	149	Surveyed In	Stake	Roman Stake	2
WKN 06	150	Surveyed In	Stake	Roman Stake	2
WKN 06	151	Surveyed In	Stake	Roman Stake	2
WKN 06	152	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	153	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	154	Surveyed In	Structure	Roman Structure Consisting Of [152]-[185]	2
WKN 06	155	Surveyed In	Stake	Roman Stake	2
WKN 06	156	Surveyed In	Stake	Roman Stake	2
WKN 06	157	Surveyed In	Stake	Roman Stake	2
WKN 06	158	Surveyed In	Stake	Roman Stake	2
WKN 06	159	Surveyed In	Stake	Roman Stake	2
WKN 06	160	Surveyed In	Stake	Roman Stake	2
WKN 06	161	Surveyed In	Stake	Roman Stake	2
WKN 06	162	Surveyed In	Stake	Roman Stake	2
WKN 06	163	Surveyed In	Stake	Roman Stake	2
WKN 06	164	Surveyed In	Stake	Roman Stake	2
WKN 06	165	Surveyed In	Stake	Roman Stake	2
WKN 06	166	Surveyed In	Stake	Roman Stake	2
WKN 06	167	Surveyed In	Stake	Roman Stake	2
WKN 06	168	Surveyed In	Stake	Roman Stake	2
WKN 06	169	Surveyed In	Stake	Roman Stake	2
WKN 06	170	Surveyed In	Stake	Roman Stake	2
WKN 06	171	Surveyed In	Stake	Roman Stake	2
WKN 06	172	Surveyed In	Stake	Roman Stake	2
WKN 06	173	Surveyed In	Stake	Roman Stake	2
WKN 06	174	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	175	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	176	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	177	Surveyed In	Construction Cut	Roman Construction Cut	2

WKN 06	178	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	179	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	180	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	181	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	182	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	183	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	184	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	185	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	186	Surveyed In	Stake	Roman Stake	2
WKN 06	187	Surveyed In	Stake	Roman Stake	2
WKN 06	188	Surveyed In	Stake	Roman Stake	2
WKN 06	189	Surveyed In	Stake	Roman Stake	2
WKN 06	190	Surveyed In	Stake	Roman Stake	2
WKN 06	191	Surveyed In	Dump Layer	PM Dump Layer	5
WKN 06	192	*	Stake	PM Pile	5
WKN 06	193	Surveyed In	Alluvium	Alluvial Deposit	4
WKN 06	194	Surveyed In	Stake	PM Revetment	5
WKN 06	195	Surveyed In	Foundation	PM Concrete Foundation	7
WKN 06	196	Surveyed In	Foundation	PM Concrete Foundation	7
WKN 06	197	Surveyed In	Foundation	PM Concrete Foundation	7
WKN 06	198	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	199	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	200	Surveyed In	Floor	PM Brick Floor	7
WKN 06	201	Surveyed In	Brick Well	PM Brick Well	6
WKN 06	202	Surveyed In	Wall	PM Wall	7
WKN 06	203	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	204	Surveyed In	Stake	Roman Stake	2
WKN 06	205	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	206	Surveyed In	Layer	Natural Alluvium	1
WKN 06	207	Surveyed In	Drainage Fill	Fill Of Ditch [263]	2
WKN 06	208	Surveyed In	Timber Lining	Lining Of [263]	2

WKN 06	209	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	210	Surveyed In	Stake	Roman Stake	2
WKN 06	211	Surveyed In	Stake	Roman Stake	2
WKN 06	212	Surveyed In	Stake	Roman Stake	2
WKN 06	213	Surveyed In	Stake	Roman Stake	2
WKN 06	214	Surveyed In	Stake	Roman Stake	2
WKN 06	215	Surveyed In	Stake	Roman Stake	2
WKN 06	216	Surveyed In	Stake	Roman Stake	2
WKN 06	217	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	218	Surveyed In	Stake	Roman Stake	2
WKN 06	219	Surveyed In	Stake	Roman Stake	2
WKN 06	220	Surveyed In	Stake	Roman Stake	2
WKN 06	221	Surveyed In	Stake	Roman Stake	2
WKN 06	222	Surveyed In	Stake	Roman Stake	2
WKN 06	223	Surveyed In	Stake	Roman Stake	2
WKN 06	224	Surveyed In	Stake	Roman Stake	2
WKN 06	225	Surveyed In	Stake	Roman Stake	2
WKN 06	226	Surveyed In	Stake	Roman Stake	2
WKN 06	227	Surveyed In	Stake	Roman Stake	2
WKN 06	228	Surveyed In	Stake	Roman Stake	2
WKN 06	229	Surveyed In	Stake	Roman Stake	2
WKN 06	230	Surveyed In	Pit Cut	Roman Pit Cut?	2
WKN 06	231	Surveyed In	Fill	Fill Of Pit [230]	2
WKN 06	232	Surveyed In	Timber Lining	Lining Of [230]	2
WKN 06	233	Surveyed In	Stake	Stake In Pit [230]	2
WKN 06	234	Surveyed In	Stake	Stake In Pit [230]	2
WKN 06	235	Surveyed In	Stake	Stake In Pit [230]	2
WKN 06	236	Surveyed In	Stake	Stake In Pit [230]	2
WKN 06	237	Surveyed In	Stake	Stake In Pit [230]	2
WKN 06	238	Surveyed In	Ditch Cut	Roman Ditch	2
WKN 06	239	Surveyed In	Fill	Fill Of Ditch [238]	2
WKN 06	240	Surveyed In	Ditch Cut	Roman Ditch	2
WKN 06	241	Surveyed In	Fill	Fill Of Ditch [240]	2
WKN 06	242	Surveyed In	Stake	Stake	2
WKN 06	243	Surveyed In	Wall	PM Wall	7
WKN 06	244	Surveyed In	Wall	PM Wall	6

WKN 06	245	Surveyed In	Wall	PM Wall	6
WKN 06	246	Surveyed In	Wall	PM Wall	6
WKN 06	247	Surveyed In	Wall	PM Wall	6
WKN 06	248	Surveyed In	Wall	PM Wall	6
WKN 06	249	Surveyed In	Timber Plank	Part Of Roman Pit [262]	2
WKN 06	250	Surveyed In	Timber Plank	Part Of Roman Pit [262]	2
WKN 06	251	Surveyed In	Timber Plank	Part Of Roman Pit [262]	2
WKN 06	252	Surveyed In	Timber Plank	Part Of Roman Pit [262]	2
WKN 06	253	Surveyed In	Timber Plank	Part Of Roman Pit [262]	2
WKN 06	254	Surveyed In	Retaining Stake	Part Of Roman Pit [262]	2
WKN 06	255	Surveyed In	Retaining Stake	Part Of Roman Pit [262]	2
WKN 06	256	Surveyed In	Retaining Stake	Part Of Roman Pit [262]	2
WKN 06	257	Surveyed In	Retaining Stake	Part Of Roman Pit [262]	2
WKN 06	258	Surveyed In	Drain Cut	Drain (Feeding into [262]	2
WKN 06	259	Surveyed In	Fill	Fill Of [262]	2
WKN 06	260	*	Void	Same As [206]	*
WKN 06	261	Surveyed In	Fill	Fill Of Drain [258]	2
WKN 06	262	Surveyed In	Structure	Timber Lined Roman Pit	2
WKN 06	263	Surveyed In	Drain Cut?	Possible Roman Drain	2
WKN 06	264	Surveyed In	Wall	PM Wall	7
WKN 06	265	Surveyed In	Wall	PM Wall	7
WKN 06	266	Surveyed In	Brick Floor	PM Brick Floor	6
WKN 06	267	Surveyed In	Wall	PM Wall	6
WKN 06	268	Surveyed In	Wall	PM Wall	6
WKN 06	269	Surveyed In	Wall	PM Wall	6
WKN 06	270	Surveyed In	Stake	PM Stake	6
WKN 06	271	Surveyed In	Stake	PM Stake	6
WKN 06	272	Surveyed In	Stake	PM Stake	6
WKN 06	273	Surveyed In	Structure	Walls [266]-[269]	6
WKN 06	274	Surveyed In	Brick Flue Hub	PM Brick Flue Hub	7
WKN 06	275	Surveyed In	Brick Flue	PM Brick Flue	7
WKN 06	276	Surveyed In	Brick Stanchion	PM Stanchion Base	7
WKN 06	277	Surveyed In	Wall	PM Wall	7

WKN 06	278	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	279	Surveyed In	Stake	Roman Stake	2
WKN 06	280	Surveyed In	Stake	Roman Stake	2
WKN 06	281	Surveyed In	Stake	Roman Stake	2
WKN 06	282	Surveyed In	Stake	Roman Stake	2
WKN 06	283	Surveyed In	Stake	Roman Stake	2
WKN 06	284	Surveyed In	Stake	Roman Stake	2
WKN 06	285	Surveyed In	Stake	Roman Stake	2
WKN 06	286	Surveyed In	Stake	Roman Stake	2
WKN 06	287	Surveyed In	Stake	Roman Stake	2
WKN 06	288	Surveyed In	Stake	Roman Stake	2
WKN 06	289	Surveyed In	Stake	Roman Stake	2
WKN 06	290	Surveyed In	Stake	Roman Stake	2
WKN 06	291	Surveyed In	Stake	Roman Stake	2
WKN 06	292	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	293	Surveyed In	Tile Foundation	Roman Foundation (Part Of [350])	2
WKN 06	294	Surveyed In	Pilae Stack?	Possible Pilae Stack	2
WKN 06	295	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	296	Surveyed In	Flint Foundation	Roman Foundation (Possibly Same As [360])	2
WKN 06	297	Surveyed In	Tile Surface?	Line Of Roman Tiles (May be Coincidence)	2
WKN 06	298	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	299	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	300	Surveyed In	Stake	Roman Stake	2
WKN 06	301	Surveyed In	Stake	Roman Stake	2
WKN 06	302	Surveyed In	Stake	Roman Stake	2
WKN 06	303	Surveyed In	Stake	Roman Stake	2
WKN 06	304	Surveyed In	Stake	Roman Stake	2
WKN 06	305	Surveyed In	Stake	Roman Stake	2
WKN 06	306	Surveyed In	Stake	Roman Stake	2
WKN 06	307	Surveyed In	Stake	Roman Stake	2
WKN 06	308	Surveyed In	Stake	Roman Stake	2
WKN 06	309	Surveyed In	Stake	Roman Stake	2

WKN 06	310	Surveyed In	Stake	Roman Stake	2
WKN 06	311	Surveyed In	Stake	Roman Stake	2
WKN 06	312	Surveyed In	Stake	Roman Stake	2
WKN 06	313	Surveyed In	Stake	Roman Stake	2
WKN 06	314	Surveyed In	Stake	Roman Stake	2
WKN 06	315	Surveyed In	Stake	Roman Stake	2
WKN 06	316	Surveyed In	Structure	Consists Of Wall [217] & Piles [300]-[315]	2
WKN 06	317	Surveyed In	Pilae Stack?	Possible Pilae Stack	2
WKN 06	318	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	319	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	320	Surveyed In	Tile Foundation	Roman Tile Foundation	2
WKN 06	321	Surveyed In	Tile Buttress	Roman Tile Buttress Against [320]	2
WKN 06	322	Surveyed In	Tile Buttress	Roman Tile Buttress Against [320]	2
WKN 06	323	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	324	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	325	*	Void	*	*
WKN 06	326	*	Void	*	*
WKN 06	327	Surveyed In	Wall	PM Wall	7
WKN 06	328	Surveyed In	Wall	PM Wall	7
WKN 06	329	Surveyed In	Wall	PM Wall	7
WKN 06	330	Surveyed In	Wall	PM Wall	7
WKN 06	331	Surveyed In	Wall	PM Wall	7
WKN 06	332	Surveyed In	Wall	PM Wall	7
WKN 06	333	Surveyed In	Flue	PM Brick Flue	7
WKN 06	334	Surveyed In	Brick Flue & Stanchion	PM Flue & Stanchion Base	7
WKN 06	335	Surveyed In	Wall	PM Wall	7
WKN 06	336	Surveyed In	Construction Cut	Roman Construction Cut	3
WKN 06	337	Surveyed In	Brick Stanchion	PM Stanchion Base	7
WKN 06	338	Surveyed In	Wall	PM Wall	7
WKN 06	339	Surveyed In	Concrete	PM Concrete Foundation	7

WKN 06	340	Surveyed In	Wall	PM Wall	7
WKN 06	341	Surveyed In	Brick Stanchion	PM Stanchion Base	7
WKN 06	342	*	Void	*	*
WKN 06	343	Surveyed In	Wall	PM Wall	6
WKN 06	344	Surveyed In	Wall	PM Wall	7
WKN 06	345	*	Void	*	*
WKN 06	346	*	Void	*	*
WKN 06	347	Surveyed In	Brick Stanchion	PM Stanchion Base	7
WKN 06	348	Surveyed In	Wall	PM Wall	7
WKN 06	349	Surveyed In	Brick Flue	PM Brick Flue	7
WKN 06	350	Surveyed In	Tile Foundation	Roman Tile Foundation (Same As [293])	2
WKN 06	351	Surveyed In	Construction Cut	Roman Construction Cut For [350]	2
WKN 06	352	Surveyed In	Flue?	Part Of Possible Roman Flue With [353]	2
WKN 06	353	Surveyed In	Flue?	Part Of Possible Roman Flue With [352]	2
WKN 06	354	Surveyed In	Flue?	Part Of Possible Roman Flue?	3
WKN 06	355	Surveyed In	Pilae Stack	Pilae Stack	3
WKN 06	356	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	357	Surveyed In	Construction Cut	Roman Construction Cut For [356]	2
WKN 06	358	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	359	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	360	Surveyed In	Flint Foundation	Roman Foundation (Possibly Same As [296])	2
WKN 06	361	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	362	Surveyed In	Flue?	Roman Flue	2
WKN 06	363	Surveyed In	Flue/Fornix?	Possible Roman Flue Or Remnant Of Fornix	2
WKN 06	364	*	Void	Same As [365]	*
WKN 06	365	Surveyed In	Op Sig Surface	Op Sig Base For Hypocaust Same As [384]	2

WKN 06	366	Surveyed In	Construction Cut	Roman Construction Cut For [365] Same As [405]	2
WKN 06	367	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	368	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	369	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	370	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	371	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	372	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	373	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	374	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	375	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	376	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	377	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	378	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	379	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	380	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	381	Surveyed In	Demo Layer	Roman Demolition Layer	2
WKN 06	382	Surveyed In	Limestone Slab	Probable Remnant Of PM Floor Surface	6
WKN 06	383	*	Void	Same As [384]	*
WKN 06	384	Surveyed In	Op Sig Surface	Op Sig Base For Hypocaust Same As [365]	2
WKN 06	385	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	386	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	387	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	388	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	389	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	390	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	391	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	392	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	393	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	394	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	395	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	396	Surveyed In	Partition Wall	Dividing Wall In Hypocaust System	2
WKN 06	397	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	398	Surveyed In	Pilae Stack	Pilae Stack	2

WKN 06	399	Surveyed In	Tiled Surface	Tiled Edge To Op Sig Surface [384]	2
WKN 06	400	Surveyed In	Partition Wall	Later Roman Re-Working Of Hypocaust	3
WKN 06	401	Surveyed In	Partition Wall	Later Roman Re-Working Of Hypocaust	3
WKN 06	402	Surveyed In	Pilae Stack	Pilae Stack	3
WKN 06	403	Surveyed In	Burnt Layer	Roman Burnt Layer Same As [410]	2
WKN 06	404	Surveyed In	Partition Wall	Later Roman Re-Working Of Hypocaust	3
WKN 06	405	Surveyed In	Construction Cut	Construction Cut For Op Sig Base [384] Same As [366]	2
WKN 06	406	Surveyed In	Stake	Roman Stake	2
WKN 06	407	Surveyed In	Soil Horizon	Remnant Of Roman Soil	2
WKN 06	408	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	409	Surveyed In	Pilae stack	Pilae Stack	2
WKN 06	410	Surveyed In	Layer	Roman Burnt Layer Same As [403]	2
WKN 06	411	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	412	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	413	Surveyed In	Pilae Stack	Pilae Stack	2
WKN 06	414	Surveyed In	Wall	Roman Wall	2
WKN 06	415	Surveyed In	Wall	PM Wall	6
WKN 06	416	Surveyed In	Foundation	Foundation For Op Sig [384]	2
WKN 06	417	Surveyed In	Foundation	Foundation Of A Buttress For [350]	2
WKN 06	418	Surveyed In	Flint Foundation	Roman Foundation	2
WKN 06	419	Surveyed In	Construction Cut	Roman Construction Cut	2
WKN 06	420	Surveyed In	Wall	PM Wall	5
WKN 06	421	Surveyed In	Op Sig Surface	Op Sig base for Roman flue	2
WKN 06	422	Surveyed In	Stake	Roman Stake	2
WKN 06	423	Surveyed In	Stake	Roman Stake	2
WKN 06	424	Surveyed In	Stake	Roman Stake	2
WKN 06	425	Surveyed In	Stake	Roman Stake	2
WKN 06	426	Surveyed In	Stake	Roman Stake	2

WKN 06	427	Surveyed In	Stake	Roman Stake	2
WKN 06	428	Surveyed In	Stake	Roman Stake	2
WKN 06	429	Surveyed In	Stake	Roman Stake	2
WKN 06	430	Surveyed In	Stake	Roman Stake	2
WKN 06	431	Surveyed In	Stake	Roman Stake	2
WKN 06	432	Surveyed In	Stake	Roman Stake	2
WKN 06	433	Surveyed In	Stake	Roman Stake	2
WKN 06	434	Surveyed In	Stake	Roman Stake	2
WKN 06	435	Surveyed In	Stake	Post Med Stake	5
WKN 06	436	Surveyed In	Stake	Post Med Stake	5
WKN 06	437	Surveyed In	Plank	Post Med Plank	5
WKN 06	438	Surveyed In	Plank	Post Med Plank	5
WKN 06	439	Surveyed In	Stake	Post Med Stake	5
WKN 06	440	Surveyed In	Stake	Post Med Stake	5
WKN 06	441	Surveyed In	Stake	Post Med Stake	5
WKN 06	442	Surveyed In	Stake	Post Med Stake	5
WKN 06	443	Surveyed In	Stake	Post Med Stake	5
WKN 06	444	Surveyed In	Stake	Post Med Stake	5
WKN 06	445	Surveyed In	Plank	Post Med Plank	5

APPENDIX 2: ROMAN POTTERY REPORT

Pottery from Wick Lane, Old Ford (WKN06)

James Gerrard

The excavations recovered 20 sherds of Romano-British pottery. This material was mainly of Late Roman date and adds little to our knowledge of Old Ford's pottery supply in the third and fourth centuries. No further work is required and no pottery report is needed. Sufficient detail can be incorporated into the stratigraphic discussion.

Due to the heavily contaminated nature of the finds they were discarded after examination. A photographic record was made and is available in the archive.

[193]

1 X AHFA Beaded and flanged bowl with internal lattice decoration (Lyne and Jefferies 1979, 5B10). Large, fresh sherd. AD270-420

1 X SAND micaceous storage jar rim. Essex? C2-C4

3 X indeterminate white ware body sherds

3 X TSK body sherds with lattice decoration and scorching

4 X SAMCG?: Dr 18/31 base, Dr 31 rim, decorated frag

SPOTDATE: 270-420

[407]

1 X OXRC bowl base, v abraded

2 X indeterminate micaceous white ware sherds

1 X SAND lid seated globular jar with external sooting. Large, fresh sherd

SPOTDATE: 240-400+

[400]

1 X beaker sherd with barbotine dot decoration

SPOTDATE: 50-250

[+] OXRC C97 Mortarium

[207] SAMIAN AD 50-250

[178] BAET AMPH 50-400

APPENDIX 3: BUILDING MATERIALS REPORT

ASSESSMENT OF STRUCTURAL REMAINS AND LOOSE BUILDING MATERIAL

By Berni Suds

The following assessment is based upon a brief site visit to observe the in-situ masonry remains and an analysis of the samples collected during the archaeological investigation.

Structural remains

Context	Feature type	Material		Date	Re-use
		Form	Provenance		
174	Wall	Brick	London, North Kent/ Weald	100 – 120/60	-
178	Foundation	Brick: <i>Lydion</i>	London	50 – 160	-
320	Foundation	Brick: <i>Lydion</i>	London	55 – 160	-
322	Buttress	Brick: <i>Lydion</i>	London	50 – 160	-
352; 353	Flue	Brick: <i>Lydion</i>	London	55 – 160	Yes
370; 371; 375	1.1.1 Pilae	Brick: <i>Bessalis/ Pedalis/ Lydion</i>	London, Hertfordshire.	50 – 160	Yes
400	Partition wall	Brick	Non-local	140 – 300	-
401	Partition wall	Brick	London	50 – 160	Yes

Table 1: Samples taken from in-situ masonry remains

It is evident that at least some of the remains identified form a substantial and well built heated structure. The building material used in construction is largely of the local London 2815 group, dating from the mid 1st to mid 2nd century. It is apparent, however, that at least some of this material is re-used, particularly in the flue abutments and *pilae* stacks. Wall [174], although of uncertain relationship to the hypocaust system, also includes material post-dating c.AD100 from North Kent or the Weald (3018).

The *pilae* stacks survive to a height of from one to three courses and are set onto an *opus signinum* surface. The *pilae* themselves were constructed using *bessalis* and *pedalis* bricks, manufactured for this particular purpose, but also include complete and fragmented *lydion* bricks intended for the construction of walls and evidently re-used in this setting. Although comprised primarily of flint the walls also incorporate some brick and tile coursing and brick abutted openings, likely flues. A further structure, directly adjacent to the area containing the

pilae, demonstrates heavy burning perhaps indicating the location or direction of the furnace or *praefurnium*. The presence of a later tiled surface and later partition walls also reveal that the building underwent more than one phase of construction or re-modelling. Partition wall [400] included the latest bricks identified in the assemblage dated from c.AD140 to 300.

Loose building material

The loose assemblage is similarly dominated by the local London 2815 fabric group. A small amount of 1st century material from Kent and the Weald (3022; 3238) and some late 1st to early 2nd century examples from Hertfordshire were also identified. As in the structural remains, however, other examples from Kent or the Weald are present that post date c.AD100 in addition to material from London or Essex that was produced from c.AD120 to 250.

Context	Feature type	Material		Date
		Form	Provenance	
0	Unstratified	Brick: <i>Lydion/ Pedalis</i> . Roof tile: <i>Tegula/ Imbrex</i> . Box-flue tiles.	London, London/ Essex, Hertfordshire, North Kent/ Weald.	-
259	Fill of pit	Brick. Roof tile: <i>Tegula/ Imbrex</i> .	London, Hertfordshire, North Kent/ Weald.	100 – 120/60
403	Layer	Brick: <i>Bessalis</i> . Roof tile: <i>Tegula</i> . Box-flue tiles. Unfaced stone.	London, London/ Essex, Kent, Hertfordshire.	120 – 160

Table 2: Loose and unstratified building material

Both brick and roof tile was recovered, at least some of the latter demonstrating evidence for re-use. A proportionally significant number of box flue tiles were also present. The majority of these were produced in London, although one example came from Hertfordshire (3060), and all have combed keying. They would have been manufactured between the late first to mid 2nd century and although demonstrate no evidence of having been fragmented for re-use in more general masonry construction could have been salvaged from an earlier building for re-use in the *hypocaust* system identified on site.

APPENDIX 4: OASIS FORM

OASIS ID: preconst1-32968

Project details

Project name	419 Wick Lane, Old Ford, London Borough of Tower Hamlets
Short description of the project	An archaeological watching brief with limited excavation was conducted on land at 419 Wick Lane as part of the site's remediation works. During this time, the structural remains of a large Roman building, suggested to be a Mansio or stopping house were revealed. There was no evidence of the associated road. No Saxon or medieval remains were observed. Made ground was dumped on the site in the post-medieval period as a precursor to the building of industrial structures, initially as a Dye House (though not observed) and later becoming a printing-ink factory. Several phases of the printing-ink works were recorded, the development of which continued until the mid-20th century.
Project dates	Start: 23-02-2007 End: 04-07-2007
Previous/future work	Yes / Not known
Any associated project reference codes	WKN06 - Sitecode
Type of project	Recording project
Site status	Local Authority Designated Archaeological Area
Current Land use	Industry and Commerce 1 - Industrial
Monument type	HYPOCAUST Roman

Monument type INK WORKS Post Medieval

Monument type WALLS Roman

Monument type TIMBER PILES Roman

Investigation type 'Field observation','Part Excavation','Watching Brief'

Prompt Planning condition

Project location

Country England

Site location GREATER LONDON TOWER HAMLETS BOW 419 Wick Lane

Postcode E3 5**

Study area 4516.00 Square metres

Site coordinates TQ 3733 8375 51.5354295151 -0.01972881128280 51 32 07 N
000 01 11 W Point

Height OD Min: 2.94m Max: 4.77m

Project creators

Name of MoLAS-PCA Ltd
Organisation

Project brief originator	Gary Brown
Project design originator	Gary Brown
Project director/manager	Gary Brown
Project supervisor	Guy Seddon
Type of sponsor/funding body	Developer
Name of sponsor/funding body	London Green Developments Ltd
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Former Factory Complex at 419 Wick Lane, London E3
Author(s)/Editor(s)	Brown, J.
Date	2006
Description	Standing Building Report

Project

bibliography 2

Publication type	Grey literature (unpublished document/manuscript)
Title	An Assessment of an Archaeological Watching Brief on Land at 419 Wick Lane, Old Ford, London Borough of Tower Hamlets
Author(s)/Editor(s)	Seddon, G. and Humphrey, R.
Date	2007
Issuer or publisher	PCA
Place of issue or publication	London
Description	A4 Bound
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