



UNITS 5-7
Vanguard Trading Centre
16 Marshgate Lane
E15

London Borough of Newham

Standing building survey report

April 2008



MUSEUM OF LONDON

**Archaeology
Service**

PRE-CONSTRUCT ARCHAEOLOGY

UNITS 5-7
Vanguard Trading Centre
16 Marshgate Lane
E15

London Borough of Newham

Standing building survey report

Site Code: OL-05607
National Grid Reference: 538048 183555

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SUMMARY (non technical)

The Museum of London Archaeology Service and Pre-Construct Archaeology (MoLAS-PCA) were commissioned by the Olympic Delivery Authority (ODA) to analyse and record standing buildings at Units 5-7, Vanguard Trading Centre, 16 Marshgate Lane, London E15. The buildings were to be demolished in order to redevelop the site, and the archaeological investigation and a subsequent report were required as a condition of planning consent for the redevelopment. The investigation took place in September 2007, and comprised a measured survey and photography of the interior, exterior and setting of the buildings.

Units 5-7, constructed between 1869 and 1896 as part of Marshgate Mills, were set back from the road and the edges of the site, each unit consisting of a single building ranged from north to south, the buildings side-on to the street and to each other. They were similarly built in yellow brick with lancet windows, dressings of blue engineering brick and pitched slated roofs. Unit 7 (to the west) was on two storeys, the upper floor supported by cast-iron columns. The largest buildings were Units 5 and 6A (furthest to the east), with king-post roof trusses of iron-strapped timber. The two buildings were connected to each other and were entered from the east, where formerly a metal-framed porch had stood. Unit 6 included a tall square-section chimney stack in the south-east corner and floor-level closable vents in its side walls, later blocked. Narrow gaps between Units 6, 6A and 7 had subsequently been roofed.

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1 Introduction

1.1 Site background

The buildings surveyed were situated at No 16 Marshgate Lane, E15, in the London Borough of Newham. This address, known latterly as Vanguard Enterprise Centre, included several buildings, of which the present buildings were Units 5, 6, 6a and 7. Another building was investigated, Unit 1, which was situated further north and is reported separately. The buildings were within the area designated as Planning Delivery Zone 8 (PDZ8) of the Olympic and Paralympic Games and Legacy Facilities planning applications, in the London Borough of Newham. (See Fig 1 for site location.)

The Ordnance Survey national grid reference to the approximate centre of the site is 538048 183555. Modern ground level in Marshgate Lane on the pavement in front of the buildings was at 5m OD. The Museum of London site code, by which the records are indexed and archived, is OL-05607. For reference, this structure is known within the project as BH96.

A desktop *Archaeological and Built Heritage impact assessment* was previously prepared by MoLAS-PCA, which covers the whole area of Planning Delivery Zone 8 (MoLAS-PCA, 2007a).

This document should be referred to for information on the natural geology, archaeological and historical background of the site, and the initial assessment of its archaeological potential.

No previous description or investigation of the buildings is known, with the exception of information contained within the document noted above.

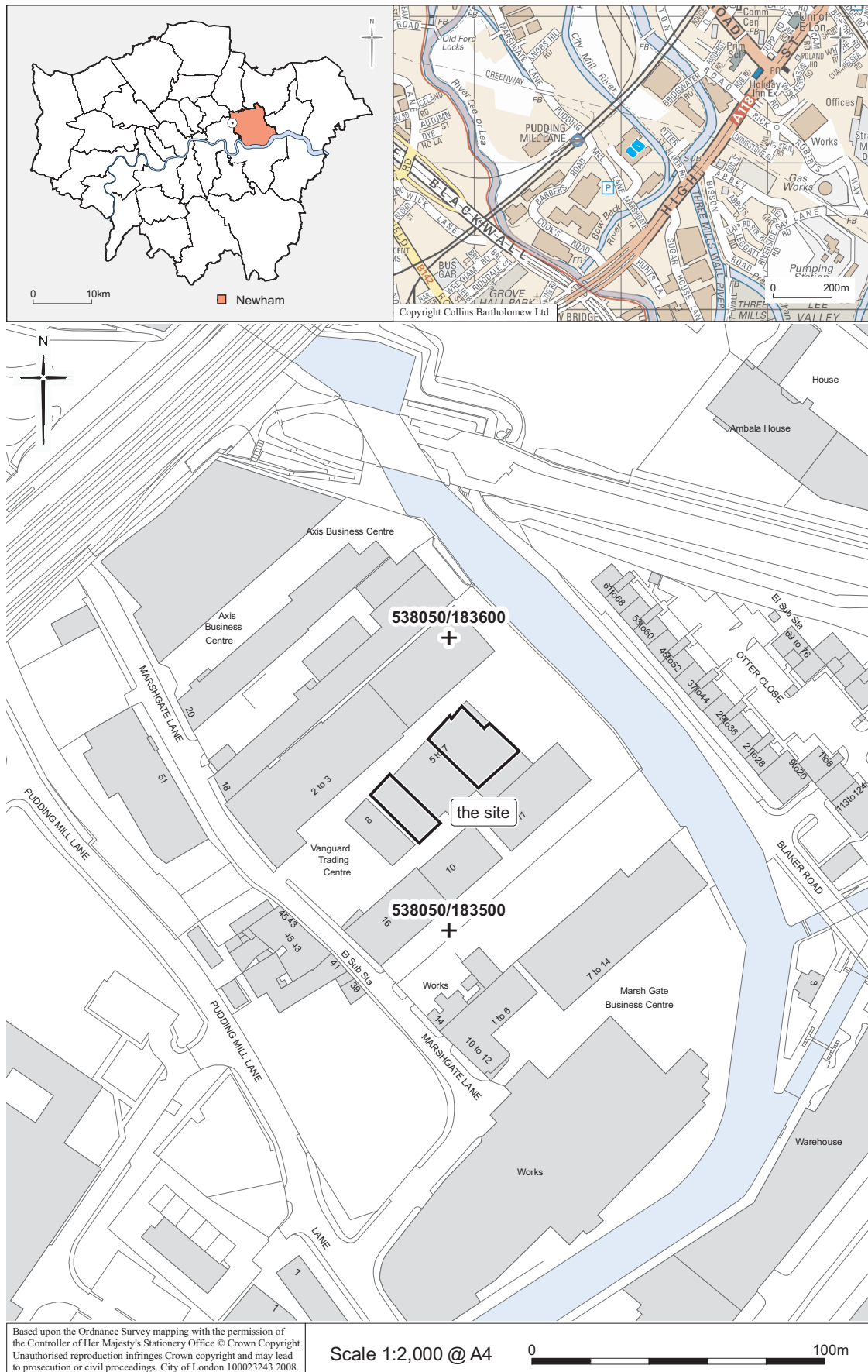
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Note: within the limitations imposed by dealing with historical material and maps, the information in this document is, to the best knowledge of the author and MoLAS-PCA, correct at the time of writing. Further archaeological investigation, or more information about the nature of the present buildings may require changes to all or parts of the document.

1.2 Planning and legislative framework

The legislative and planning framework in which the archaeological exercise took place was summarised in the *Archaeological and Built Heritage impact assessment* was previously prepared by MoLAS-PCA, which covers the whole area of Planning Delivery Zone 8 (MoLAS-PCA, 2007a) and the *Written Scheme of Investigation* for the buildings (MoLAS-PCA 2007b), which formed the project design for the survey.

Neither the buildings nor their surrounding area are a Scheduled Monument, nor are the buildings listed as of special architectural or historic interest. The structures are located in an Archaeological Priority Zone.



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Scale 1:2,000 @ A4

0 100m

Fig 1 Location map

1.3 Planning background

In accordance with local and national policies, archaeological evaluation and built heritage survey of the areas of PDZ8 to be impacted upon in advance of its redevelopment was required as part of the planning process. Evaluation is intended to define the archaeological potential and significance of any deposits present on the site, so that the local authority can formulate responses appropriate to any identified archaeological resource.

The recording of the subject site in PDZ8 will be undertaken in support of a condition required by English Heritage and attached to the consent granted by the Olympic Delivery Authority Planning Decisions Team with respect to Olympic, Paralympic and Legacy Transformation Planning Application Reference 07/90010/OUMODA and Site Preparation Planning Application Reference 07/90011/FUMODA. Condition SP.0.39 of planning permission 07/90011/FUMODA states:

Demolition of any historic building specified for recording in the submitted Built Heritage Written Schemes of Investigation shall not take place until the recording set out in the relevant Written Scheme of Investigation has been undertaken and written confirmation received from English Heritage that the recording is satisfactory and that the building can be demolished. A report detailing the recording shall be submitted to the Local Planning Authority within six months of the written confirmation received from English Heritage.

Reason: To ensure that buildings with an identified historic interest are recorded.

1.4 Origin and scope of this report

The archaeological work of analysis and recording, and the production of this report, were commissioned from the Museum of London Archaeology Service and Pre-Construct Archaeology (MoLAS-PCA) by the Olympic Delivery Authority. The work was carried out in accordance with the *Written Scheme of Investigation* (MoLAS-PCA, 2007b).

The report has been prepared within the terms of the relevant standards specified by the Institute of Field Archaeologists (IFA 2001) and corresponds to the form of record and reporting at 'Level 2', in the specifications, *Understanding historic buildings: a guide to good recording practice* recommended by English Heritage (2006).

This report presents the results of an analytical survey carried out on the site for an aggregate total of four days in September 2007, combined with the available results of documentary research.

1.5 Research aims and method of work

The research aims of this archaeological work were defined in the *Method Statement* (MoLAS-PCA, 2007b) in conformity with applicable planning policies and English Heritage guidelines (Archaeological Guidance Paper No. 3, revised June 1998).

The overall aim of the programme of work was to secure 'preservation by record' of those aspects of the standing buildings and the site that were of architectural, archaeological and historical interest. The scope of the work as defined in the *Method Statement* was as follows:

‘The exterior and interior of the structure will be viewed, described and photographed. Sketch plans of the interior and elevations of the exterior will be undertaken. A brief written description will be undertaken, and a report presenting conclusions regarding the development and use of the structure will be produced’ (MoLAS-PCA 2007b, 3.3).

The investigation satisfied the research aims, and it was determined that it would not be necessary to investigate the building further during demolition.

1.6 Organisation of this report and conventions used

Plans of the ground floor of each structure and of the 1st floor of Unit 7, and the north-facing external elevation of Units 6, 6a and 7 (*Fig 2-Fig 4*) are reproduced in this report.

All dimensions are given in metres or millimetres and in feet and inches where appropriate. Heights are given where appropriate in metres above Ordnance Datum (mean sea level), abbreviated ‘m OD’. The rooms and spaces inside the buildings are not individually numbered.

Units 5-7 were aligned roughly from south-west to north-east, but in this report and in the site records its alignment is taken to be from west to east, for simplicity.

BGS	British Geological Survey
DCMS	Department of Culture, Media and Sport
DoE	Department of the Environment
EH	English Heritage
GLAAS	Greater London Archaeological Advisory Service
MoLAS	Museum of London Archaeology Service
MoLSS	Museum of London Specialist Services
OD	Ordnance Datum (mean sea level at Newlyn, Cornwall)
ODA	Olympic Delivery Authority
OS	Ordnance Survey
PCA	Pre-Construct Archaeology
PFA	Pulverised fly ash
RCHME	Royal Commission on Historical Monuments, England
RSJ	Rolled steel joist
VCH	Victoria County History

Table 1 abbreviations used in this report

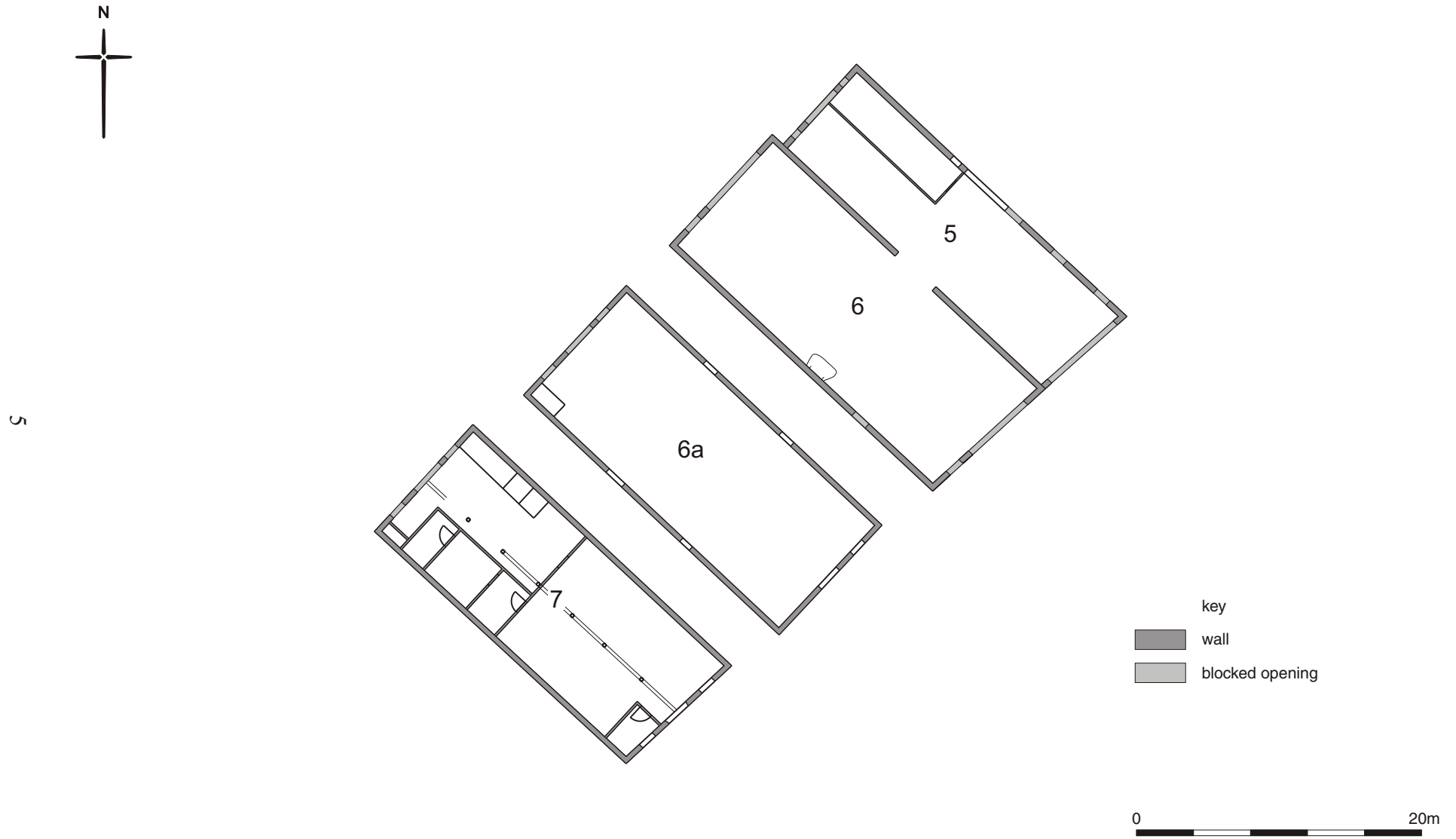


Fig 2 Plan of Units 5-7 at ground level

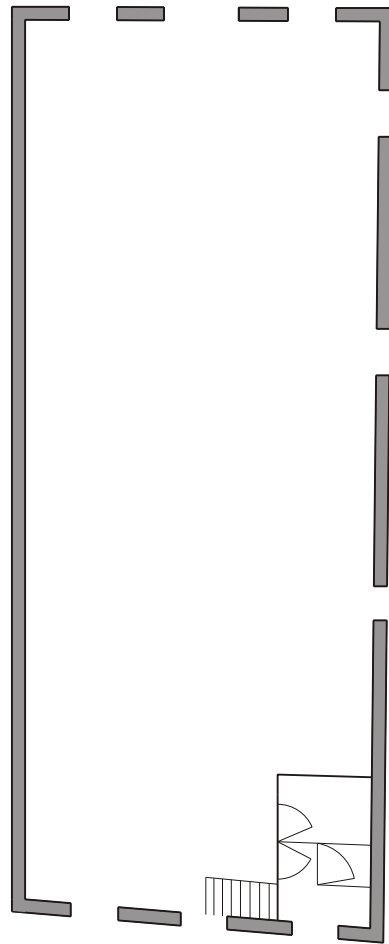


Fig 3 Plan of Unit 7 at 1st-floor level

7



Fig 4 North-facing elevation of Units 6-7

2 Topographical and historical background

2.1 Geology and natural topography

The site is located in the middle of the valley floor of the River Lea, c 3km north of its confluence with the River Thames. The site lies on the south-eastern part of the grid-like network of river channels known as the Bow Back Rivers.

The site lies on alluvium, which represents a range of different wetland and dryland environments existing on the floodplain of the Lea from the Mesolithic period onwards. The alluvium is underlain by the Lea Valley Gravels, deposited during the scouring-out of the valley floor during the Pleistocene.

Modern ground level at the east side of the site was at a height of 5m OD.

2.2 Early history of the site

During the Middle Ages three water-mills can be identified from maps and documents on sites north of Stratford High Street. The mills on the River Lea and its branches were tidal, and for most of their history they depended solely on water power. The mills were employed mainly in grinding grain for flour, although in the 13th and 14th centuries there were references to fulling mills on two sites, and in the late 16th and early 17th centuries several mills were manufacturing gunpowder. The marshes by the River Lea provided ample room for industry; the river was navigable and furnished power for a group of tidal mills. The large number of water-mills on the Bow Back Rivers meant that there were fierce struggles for control of this valuable resource (Powell 1973, 89–93). A number of windmills were constructed to counter this problem, of which one was constructed adjacent to the present site (*Fig 5*).

Milne's land use map of 1800 (not shown) confirms that the site was located on what was a marsh, adjacent to a short un-named lane, later Marshgate Lane, which extended north of the High Street. Stanford's *Library map of London and its suburbs* of 1862 (not illustrated) shows that the site was still an area of open ground, which was situated north of the confluence of the Pudding Mill, City Mill and Waterworks Rivers. A number of mills, chemical works and iron foundries and forges had developed around this particular area. The 'Patent Tanning Works' were located to the east of the site, on the west bank of the City Mill River. The 1st edition Ordnance survey map of 1869 (*Fig 6*) shows that these tanning works had been cleared, leaving an open area of ground ready for redevelopment. This area was bounded to the north by the embankments carrying the Great Eastern Railway and the Northern Outfall Sewer, to the west by Marshgate Lane, and to the south and east by the City Mill River. A garden with trees and a fountain, connected to the City Mills by a footbridge, was located in the south-eastern corner of this area.



Fig 5 The site in 1746 (Rocque)

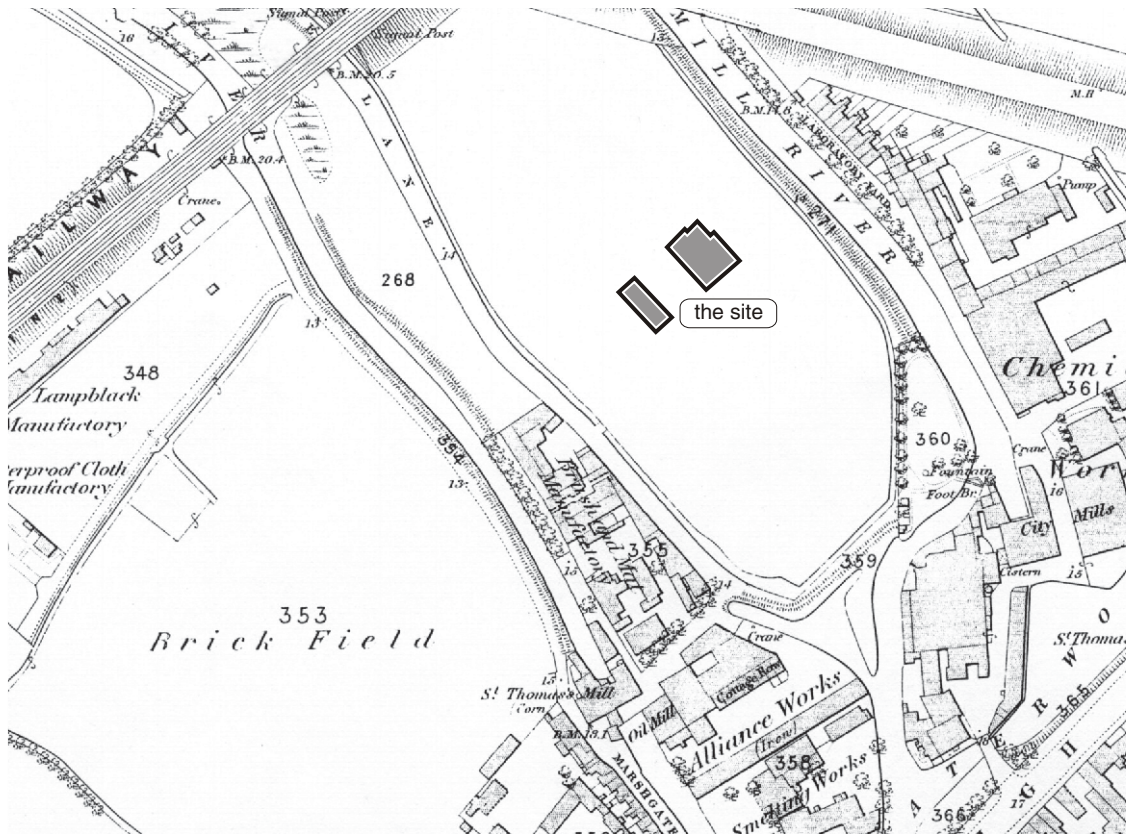


Fig 6 The site in 1867 (OS 1869)

2.3 Development, function and occupants of the standing buildings

The buildings on the present site are first shown on the 2nd edition Ordnance Survey map of 1897 (Fig 7). The map shows that industrial development around Marshgate Lane had intensified; the area between Stratford High Street and the Great Eastern Railway line was filling with mills and factories. The previously open area now occupied by the site had been heavily built upon, with the construction of the Marshgate Mills. The Mills comprised three rows of buildings set within a large yard, with two entrances from Marshgate Lane. One of the buildings shown on this map, a rectangular range on a north-west – south-east alignment adjacent to Marshgate Lane, is the present site. The 3rd edition Ordnance Survey map of 1916 (Fig 8) shows that some changes to the layout of the Mills had been made, with the infilling of vacant areas between some of the buildings.

The Marshgate Mills are first mentioned in an advertisement from Kelly's *Directory of Merchants, Manufacturers and Shippers* of 1882. It advertises the products and services of Slater & Palmer Ltd, printing ink manufacturers who had their offices and warehouses at 8 Wine Office Court, off Fleet Street, as well as their original manufacturing premises in Iceland Road, Old Ford and a previously unmentioned factory at Marshgate Mills. Slater & Palmer were manufacturers of various specialised kinds of black and coloured printing inks as well as varnishes, colours and paints. They also imported the 'finest German lithographic stones'.

The Marshgate Mills were just one part of the large-scale industrialisation taking place in the lower Lea Valley, which occurred in three successive periods; about 1800–1859, 1860–1919 and 1920–1969. The main factors encouraging this continual industrial development and redevelopment were:

- Noxious industrial processes were excluded from London, while local controls on them in Essex were relatively lax; between 1856 and 1886 the local board exercised little control over industry. A stricter policy would have affected the Borough's income from rates and have aggravated the high level of unemployment in the area. Indeed, the council actively attracted industry, including German firms before the First World War (Powell, 1973 76-89).
- Transport connections with the area were good, both by water through the Lea and Thames, and Victoria Docks (which opened in 1855), and by rail, which extended across the Lea valley from 1839.
- Abundant local labour; chronic underemployment in the area suggests that there was an employers' market.
- A huge market for consumption nearby, in London, and local facilities for redistribution of goods both nationally and globally.

Many kinds of industry were attracted to the area from about 1800, especially chemicals, and engineering and metals, followed by many more in the period from 1860 onwards, when the pace of economic and industrial development was remarkably even, with about 50 permanent new firms in each decade' until 1900, when 'there was little room left'. The chemical industry in all its branches was pre-eminent in Stratford and West Ham by 1900, with more than 100 chemical firms out of a total of more than 330 companies with premises in the area. The most important chemical factories produced sulphuric acid, paint, printing ink, matches, fertiliser and soap.

There were several chemical works in Marshgate Lane before the late 1860s; J P Murphy (c.1818–63) and Smith Bros. and Co (c.1866–1967) distilled tar and turpentine, and T D Scott and Co ran the Crown Sulphur Works (c.1866–86), as later did Johnson and Hooper (c.1890–1906). There were also several factories making printing ink in West Ham, not least to serve printers in Plaistow and the newspaper presses in Fleet Street.

Slater and Palmer, of 8 Wine Office Court, off Fleet Street, began their printing ink company at a factory in Iceland Road, Old Ford, and had expanded into new premises on the present site at Marshgate Mills by 1882.

Other chemical factories manufactured paint, varnishes, glue, fertiliser and sulphuric acid (the last being a major ingredient in other processes). To make printing ink, generally a pigment such as carbon black is mixed and finely ground with a carrier substance, often linseed oil. The oil was usually boiled for hours, to make a viscous paste. Carbon black was often obtained as the residue of burning bones or similar organic matter, which had then to be purified by washing with lye (caustic soda, i.e. sodium hydroxide). Manufacture seems to have entailed processes of boiling, grinding and mixing, which generated noxious fumes, smell, heat and hazards.

Slater & Palmer Ltd and their premises at the Marshgate Mills were taken over by Usher Walker Ltd in 1945. Usher Walker had previously run a printing ink factory in Sugar House Lane, to the south of the High Street, Stratford, from 1892 until it was bombed in 1940. They rebuilt part of the factory in Marshgate Lane in 1948–54 to accommodate their premises; Ordnance Survey mapping from 1955 (not shown) indicates that some buildings at the eastern end of the mill had been demolished. Usher Walker appear to have vacated the site in the 1970s; the company was bought by Sun Chemicals in 1993 (www.sunchemical.ch/geschichte). The Usher Walker site became the Vanguard Trading Centre, and Units 5-7 were let out for use by a variety of businesses.

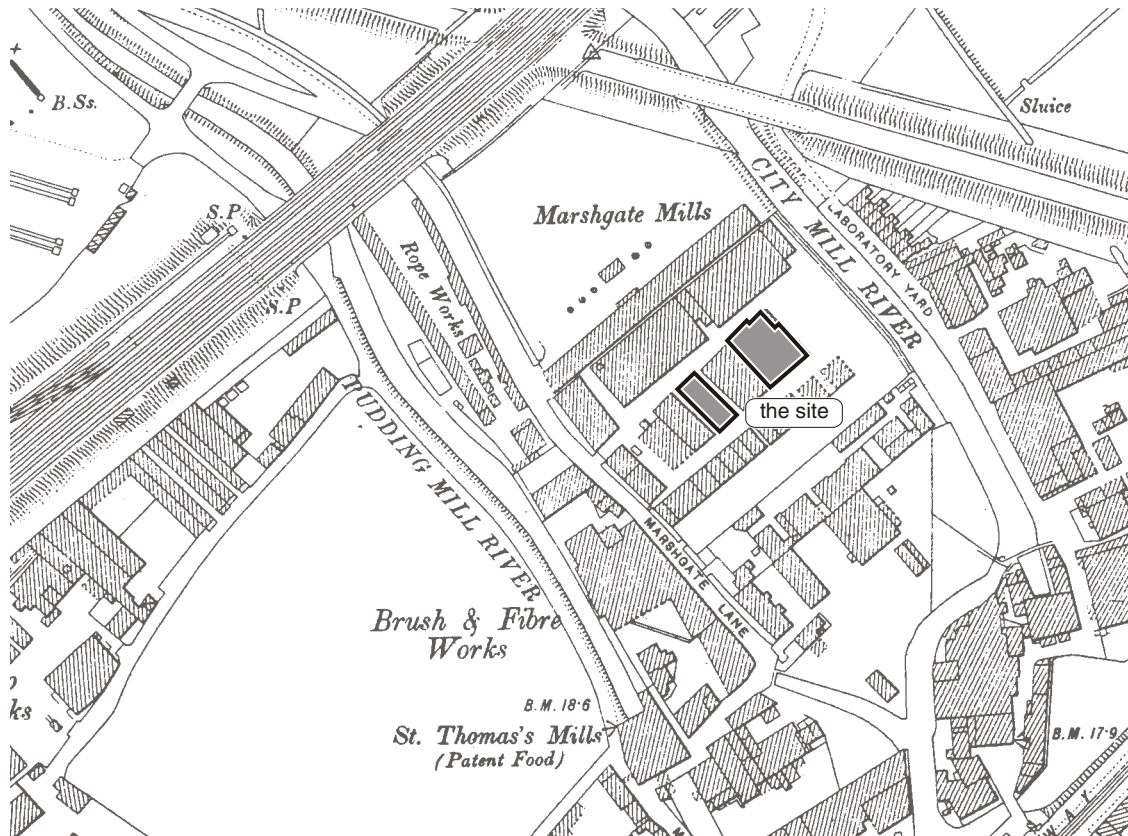


Fig 7 The site in 1893 (OS 1897)

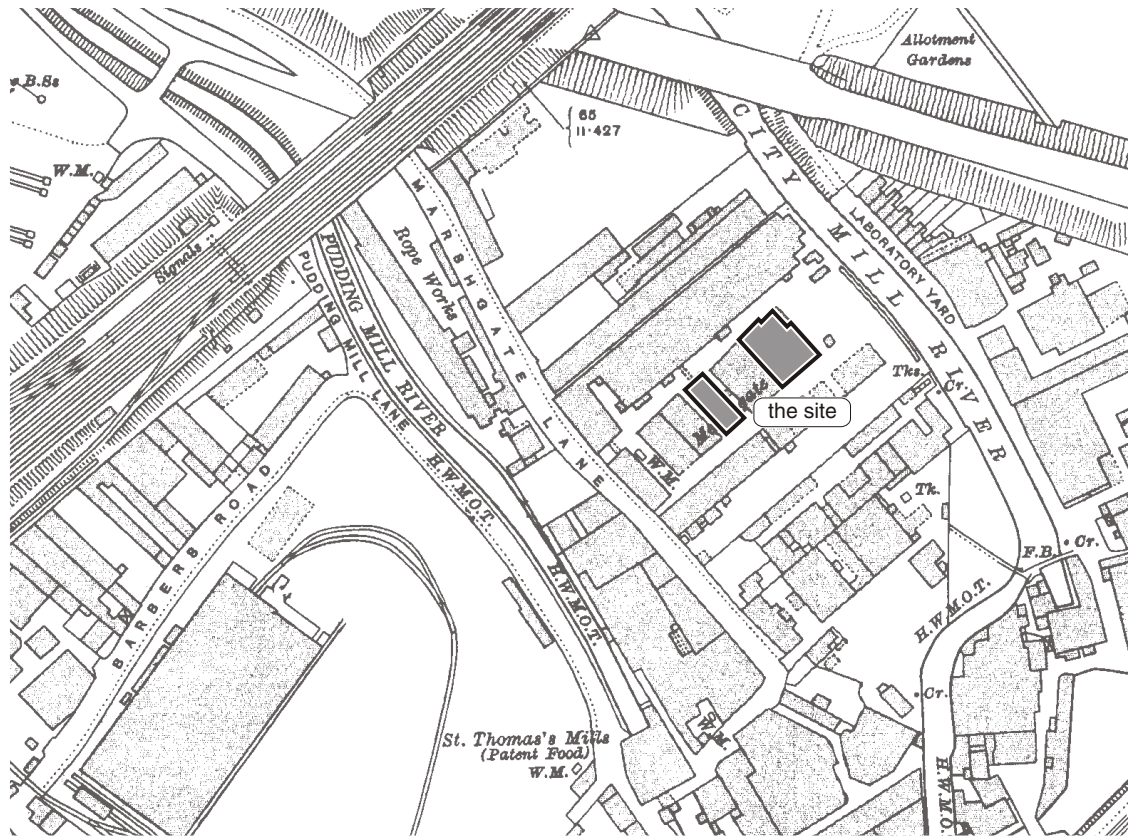


Fig 8 The site in 1914 (OS 1916)

3 The standing building survey

3.1 Methodology

All archaeological analysis and recording during the investigation on site was done in accordance with the Written Scheme of Investigation (MoLAS-PCA 2007b), the Museum of London *Archaeological Site Manual* (1994) and MoLAS *Health and safety policy* (2006).

The location and exterior of the standing buildings was determined in outline on the modern Ordnance Survey plan. Sketch plans of the ground floor and upper floor in Unit 7, and the north-facing elevations of Units 6, 6a and 7 were drawn, to which dimensions were added. These drawings have subsequently been redrawn accurately in AutoCAD, in which form they can be reproduced at any scale (*Fig 2-Fig 4*). Details of the construction, development and function of the internal and external elements of the building were noted.

The site records comprise a total of 16 photographic images in 35mm format, 23 site drawings, site notes and notes on the documentary evidence. No objects or samples were collected. The site records will be deposited and indexed in due course in the Museum of London archaeological archive under the site code OL-05607.

3.2 Description of the standing building

This description should be read in conjunction with the plans and elevation (*Fig 2-Fig 4*) and selected photographs taken in September 2007 (*Plate 1-Plate 7*)

3.2.1 Exterior

Units 5, 6, 6A and 7 formed a series of buildings ranged side-by-side from west to east, each building itself being orientated from north to south. The buildings were numbered from east to west, from 5, through 6 (sometimes known as '6B'), 6A to 7, this numbering being recent, possibly dating from establishment of the Vanguard Training Centre.

The three eastern buildings, Units 5, 6 and 6A, were large, single-storey buildings constructed with load-bearing brick walls (*Plate 1*). Unit 7 was of similar construction, but within the same height of roof it had in addition an upper floor, which was supported on three centrally-positioned cast-iron columns (*Plate 2*). Every building had a simple pitched roof, its ridge running from north to south. The original roofs were probably slated, and Unit 6 had a roof which was slightly raised along its ridge with skylights, but subsequently the roofs had been replaced and at the time of survey were covered partly with slates, tiles and corrugated asbestos sheeting. The range of four buildings was situated at the centre of the Vanguard Trading Centre, with a later building, Unit 8, situated to the west and the City Mill River flowing beyond a substantial brick wall to the east.

The bricks in the walls were generally yellow and brown stocks, laid to English bond except in the gables of the single-storey buildings, where the bond was Flemish. The latter difference, seen in other buildings of this type, may indicate that the gables were expected to carry a lesser structural load; the gables in Unit 6 at least were thinner than the lower part of the end-walls. Unit 7 was two-storey, and its end walls were built in English bond all the way up. In Units 5, 6 and 6A, lancet window openings were dressed with dark blue engineering bricks, bull-nosed at projecting corners. Unit 7 had segmental-arched window

openings, similarly dressed. A number of original door and window openings had been blocked and new openings made in the external walls.



Plate 1 Exterior of Units 5-7, looking south-west (MoLAS 318/07/015)



Plate 2 Exterior of Unit 7, looking south (MoLAS 318/07/016)

3.2.1.1 Unit 5

Unit 5 was situated at the eastern end of the site and contained blocked window openings in its east-facing external elevation, marking six bays (*Plate 3*). The three northernmost lancet window openings retained their dressings of engineering bricks, but the three southernmost windows had been enlarged, probably at an early date, with the addition of concrete lintels. All six window openings in this façade were subsequently blocked with PFA cement blocks, and the blockings in all but the two windows at the north end of the elevation had then been rendered with cement. Two door openings with RSJs for lintels were made in the east-facing elevation, partially truncating the earlier window openings, including one wide roughly central opening. Traces of a steel-framed canopy or porch, since removed, were observed to the east of Unit 5, which would have sheltered the entrance to the building and provided additional open-sided storage space.

The north-facing external elevation had a blocked opening at the centre, flanked on each side by a lancet window opening. The southern side of Units 5 and 6 was abutted by a later brick shed.



Plate 3 Exterior of Unit 5, looking west (MoLAS 318/07/001)

3.2.1.2 Unit 6

Unit 6 was situated immediately to the west of Unit 5, and they shared a common side wall, in which was a wide opening between the two buildings. Units 5 and 6 are therefore interpreted as contemporary with each other. The north-facing external elevation of Unit 6 would probably have originally had a central door flanked on each side by a lancet window. A large door opening with a concrete lintel and blue engineering brick dressings was inserted, probably in the mid to late 20th century, replacing the eastern window (*Plate 4*). The door, the remaining flanking window, and a much smaller lancet window in the gable above, lighting the roof, were all later blocked and the blocking rendered with cement.



Plate 4 Exterior of Unit 6, looking south (MoLAS 318/07/007)

3.2.1.3 Unit 6A

Unit 6A was constructed separately from Units 5 and 6, possibly although not necessarily at a different time. The east wall of Unit 6A was physically separated from the western wall of Unit 6 by a gap varying in width between about 3m and 4m. This gap could originally have provided light and access to the sides of both buildings. Although this passage had been roofed with a metal and timber frame, probably in the late 20th century, there were traces of an earlier roof frame, entirely of timber, carried on brick corbels opposite each other in the walls of both Units 6 and 6A. To judge by the old and new profiles visible in the southern end wall, both roof frames took the form of simple lean-tos, with a central valley. The east wall of Unit 6A contained at least eight small square openings at ground level, at regular intervals, interrupted by doorways with segmentally-arched heads. All these openings had subsequently been blocked with brick.

The north-facing elevation of Unit 6A would have been largely identical to that of Unit 6, notably including lancet window openings. This elevation retained a small central door, though altered by the addition of a concrete lintel, flanked by lancet windows. A major internal modification, the addition of an upper floor over an office on the ground floor, was reflected externally by the insertion of two small windows at the eastern end of the north-facing external façade (*Plate 5*). The south-facing external elevation was largely identical to

the north-facing elevation, with the addition of a short square-section internal chimney stack in the south-eastern corner. This chimney would have served a furnace, presumably for some industrial purpose, but all evidence of openings or flues was absent from the base of the stack.



Plate 5 Exterior of Unit 6a, looking west (MoLAS 318/07/017)

3.2.1.4 Unit 7

Unit 7, to the west, was constructed as a two-storey building, and may have been built at a different time from Units 5, 6 and 6A, or at least was built to different specifications and with a different style of window opening. Like Unit 6A, the building was originally an isolated structure, a gap varying in width from 3m to 4m separating it from Unit 6A to the east; this gap was infilled in the late 20th century, being occupied by a brick and timber shed to the north. This infill shed contained a small cold store with well insulated walls, floor and ceiling, entered from the south, and a store-room, entered from the north. A steel-framed external staircase to the upper floor of Unit 7 was also in this gap, at its southern end.

The window and door openings in Unit 7 were headed with segmental arches, rather than pointed arches as in the case of Units 5, 6 and 6A. Subsequently these openings had been blocked with PFA cement blocks in the east- and west-facing external elevations. The north-facing external elevation had a central door opening flanked by segmentally arched

windows at ground-floor level, and identical windows above at 1st-floor level. A squared opening with a concrete lintel was situated centrally above the main entrance, and the remains of an iron bracket on the eastern side of the lintel suggested that there had formerly been a crane fixed there to raise materials to and from the upper floor level. The opening may have been an enlargement of an earlier opening or window.

3.2.2 Interior

3.2.2.1 Units 5 and 6

Both these buildings were characterised by the presence of substantial timber roof frames, which were probably original. The roof frame of Unit 5 contained five king-post trusses, situated between each of the six window bays (*Plate 6*). The base of each king post was slightly jowled to support an angled side-strut on each side, running up to a blade (rather than a principal rafter), with a side-purlin being on the outer edge of the blade. The common rafters were fixed to the outer edge of the purlins, both side purlins and ridge purlin. The upper ends of the blades were strapped and bolted to the jowled top of the king posts, while the bottom of the king posts was bolted to the tie-beam with an iron stirrup. The roof was boarded under tiles and slates.



Plate 6 Interior of Unit 5, looking north (MoLAS 374/07/01)

The roof frame of Unit 6 was slightly more complicated, mainly to allow for inclusion of skylights to either side of the ridge (*Plate 7*). There were five trusses, spaced as in Unit 5, the tie-beam in each truss supporting two queen posts, one to either side of the central pair of skylights. From the base of the outer faces of the queen posts, which were not jowled, angled side-struts ran up to the blade, as in the roof of Unit 5. The queen posts were attached with iron stirrups to the tie-beams, fixed with cottered pins. The tops of the queen posts were connected by a straining beam, fixed with bolted iron straps, and longitudinal braces ran from each straining beam up to the ridge piece. A single such brace bore off the brick gable at the end of each roof frame, and simple, rather slight timber ties ran from the tie-beams in the end trusses to the brick end-walls. The roof pitches to either side were felted and probably boarded, while the former skylights had been replaced with corrugated asbestos sheeting.



Plate 7 Interior of Unit 6, looking south (MoLAS 374/07/02)

A wide opening had been made in the north end of Unit 6, connecting with a brick-built shed further to the north, probably of mid-20th-century construction, and subsequently this opening had been blocked with PFA cement blocks. A wide opening between Units 5 and 6 had been inserted, or possibly enlarged, after original construction, and was marked by a RSJ lintel. Presumably the relative absence of natural light in Unit 6, which had fewer windows than Unit 5, accounted for the construction of skylights in its roof.

A small internal shed, serving as an office, was situated inside the north-east quarter of Unit 5. The interior of both these buildings was otherwise plain and devoid of fixtures and fittings.

3.2.2.2 *Units 6A and 7*

The interior of these buildings was not obviously industrial in character. The openings in the east wall of Unit 6A were not visible internally, as they had been completely bricked up and the walls partly boarded. An upper floor covering about half the building was inserted at some recent date inside Unit 6A, entirely of timber, accessed by an internal staircase.

The upper floor in Unit 7 was of timber, although the details of its construction were not visible above a plaster-board ceiling, and was supported by six cast-iron columns in a line positioned centrally on the ground floor. Small ground-floor partition walls of match-boarding were built forming cubicles or small offices and store-rooms. The upper floor was plain and devoid of fixtures and fittings.

3.2.3 *Surrounding area*

The site, of which Units 5–7 formed a part, along with Unit 1 (reported separately) and other structures on the site, was entered from the street, Marshgate Lane, by a gate immediately to the south of Unit 1. An irregular open area extended from the gate eastwards and southwards, giving access to several other buildings which were generally joined together in groups running from west to east, or adjoined further to the east of Unit 1.

The south and east edges of the site were defined by a high brick wall, probably of a similar date to that of the buildings, with the City Mill River just behind this wall to the east of the site. The site was bounded immediately to the north of Unit 1 by other buildings, which all faced north on to a different open area, accessible from the street by a different gate situated some 18 metres to the north of Unit 1. A trace of a gate at the east end of the buildings along the north side of this site suggested that the whole of the area to the north may have been connected with this site at one time, but latterly was separate.

3.2.4 *Discussion*

The site was occupied, probably from its inception at some time after 1869 and before 1882, by Slater and Palmer's printing ink factory. This factory would probably have been equipped initially with furnaces and boilers to generate steam, presumably the original motive power to operate mills and other machinery where the ingredients of printing ink were ground and mixed. Furnaces would also have been required to heat the mixtures of materials, usually for long periods of time.

If carbon black was manufactured on this site, by burning animal bone and other carbon-based organic matter, one would expect to find some evidence of it. This and other ink-manufacturing processes would presumably have generated much soot, probably rather oily soot, which is not apparent in the interior of any of the buildings. This fact suggests either that these processes were carried on elsewhere, in other buildings on this site, or that the processes were not as dirty as might be thought. Unit 1, in the north-west corner of the site, was very likely to have served as a warehouse, rather than housed manufacturing processes, but this is not so likely of Units 5 to 7.

Furnaces and engines for heat and motive power may have been located at the southern side of the mill complex, or in buildings to the east of Unit 1, which have since been demolished. Alternatively, power and heat may have been provided by electricity. Substantial switchgear was seen in the southern end of the east wall of Unit 1, and at the

south-west end of Unit 7, although not of a very old-fashioned type. Electricity could well have been used to heat the boilers in which linseed oil, and mixtures of linseed oil and carbon black, were boiled, the advantage of this being that electricity was very precisely controllable and ideally suited to provide relatively low amounts of heat for long periods of time. Presumably the printing ink, which was advertised as being of several different types, was made in batches, rather than in any more continuous kind of process; numerous pieces of machinery, each fairly small, could have been situated in any of these buildings, except possibly Unit 7 and Unit 1. Such an arrangement of machinery would suit electricity as the main source of power, and would also have been fairly easy to remove without leaving obvious traces behind. Electricity was used for heating in industrial processes, such as steel conversion, from the 1880s onwards, although it was expensive. It would have been generated locally, either in the factory where it was used or in a small area; Stratford may have been one of the few places where there the concentration of industrial plant that could have made use of electricity at such an early date was enough for a local and non-proprietary supply of electricity to have been generated, although this has not been confirmed.

The processes involved in making printing ink may have been relatively self-contained; although in themselves extremely dirty, they may have been contained in such a way that their surroundings were not made so very dirty. Perhaps gases and fumes from the boiling of linseed oil were recovered, and all the containers in which materials were ground, mixed and boiled were scrupulously cleaned between batch-uses.

3.2.5 Conclusions

Units 5 and 6 were built at the same time, probably also with Unit 6A, to house some kind of relatively small-scale manufacturing process that did not require specialised buildings or fixtures. The manufacture of printing ink, documented as having taken place on this site from at least 1882, would have been such a process, especially if power was supplied in the form of electricity.

Unit 7 seems more likely to have been built at a different time, or under different auspices, and architecturally more closely resembles Unit 1 than the other units. Unit 7 was probably for storage or for offices.

All the buildings, in their materials, method of construction and style, are likely to have been constructed in the third quarter of the 19th century. The timber roof frames of Units 5 and 6 and unlikely to have been constructed later than about the 1880s, when steel-framed roofs became cheaper and much more usual. Similarly the pointed arched heads of the windows in Units 5, 6 and 6A are unlikely to have been built any later than about 1880, on stylistic grounds. Precise dating of such structures as these is made rather more difficult because it is unlikely that they were constructed to designs by a professional architect. It is entirely possible that they were designed, as well as constructed, by a firm of builders acting alone. The builders (and their client) would have to have satisfied local building regulations, such as those enforced by district surveyors under the applicable Metropolitan Building Acts, but it is known that these requirements were not particularly onerous in this part of London in the second half of the 19th century.

The printing ink firm of Slater and Palmer Ltd operated from this site until it was taken over by Usher-Walker Ltd in about 1945. Rationing of building materials in the immediate post-war period would have prevented construction of new buildings until about 1950 at the earliest. After Usher Walker Ltd vacated the building in the 1970s, the buildings were made into separate storage spaces. Names inscribed or painted on and around the buildings included 'E Abrahams and Co', in Unit 7, and 'Free Trade Beers and Minerals Ltd' in Unit 5.

4 Potential of the archaeology

4.1 Original research aims

The archaeological investigation has fulfilled the original research aims through the creation of a photographic and drawn record and written description of Unit 1 of the Vanguard Centre, 16 Marshgate Lane.

4.2 New research aims

More documentary evidence in the form of photographs, plans and company brochures and catalogues may exist for the construction and use of the building in other public and private archives. Further research may enhance the current understanding of this structure.

4.3 Significance of the data

The standing buildings are undoubtedly of significance for the history of the immediate locality, but nothing was found to suggest that it is of wider regional or national importance. The academic requirement to publish the results of the investigation will be met by reporting the results in summary form in *Post-Medieval Archaeology*, in the annual excavation round-up in *London Archaeologist*, and in a project monograph on the built heritage.

4.4 Salvaged fixtures, fittings and materials

There was no archaeological requirement to salvage any of the materials or fittings during the compilation of this report.

5 Publication and archiving

The site archive containing original records will be stored in accordance with the terms of the *Written Scheme of Investigation* (MoLAS-PCA, 2007b).

Information on the results of the survey will be made publicly available by means of a database in digital form, to permit inclusion of the site data in any future academic researches into the development of London.

In view of the limited potential of the material and the relatively limited significance of the data (Section 4.3) it is suggested that a short article on the results of the survey should appear in the *London Archaeologist* or the *Transactions of the London & Middlesex Archaeological Society*.

It is also recommended that the results of this recording exercise are assimilated into a site-wide assessment of all archaeological interventions to assign contextual significance and further refine the importance of the archaeological survival, and thereafter assimilated into any publication discussing/disseminating the results.

6 Acknowledgements

The archaeological survey and this report were commissioned by The Olympic Delivery Authority, whom the project manager and author wish to thank. They are grateful especially to Steve Hann of Edmund Nuttall for facilitating access to the building, and to colleagues at Capita Symonds Ltd, both in and out of the field. They also thank the staff of Newham Archives and Local Studies Library and the London Metropolitan Archive for providing historic maps and information.

Archaeological analysis and recording, and pencil drawings, were by Andrew Westman and Maria Utrero. The archaeological photographs of the standing building were taken by Maggie Cox, assisted by Maria Utrero, and off-site were scanned and printed by Maggie Cox. CAD drawings were by Monica Cortelletti.

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8 Appendix 1: NMR OASIS archaeological report form

OASIS ID: molas1-41141

Project details

Project name Units 5-7, Vanguard Trading Centre, 16 Marshgate Lane, E15

Short description of the project The Museum of London Archaeology Service and Pre-Construct Archaeology (MoLAS-PCA) were commissioned by the Olympic Delivery Authority (ODA) to analyse and record standing buildings at Units 5-7, Vanguard Trading Centre, 16 Marshgate Lane, London E15. The buildings were to be demolished in order to redevelop the site, and the archaeological investigation and a subsequent report were required as a condition of planning consent for the redevelopment. The investigation took place in September 2007, and comprised a measured survey and photography of the interior, exterior and setting of the buildings. Units 5-7, constructed between 1869 and 1896 as part of Marshgate Mills, were set back from the road and the edges of the site, each unit consisting of a single building ranged from north to south, the buildings side-on to the street and to each other. They were similarly built in yellow brick with lancet windows, dressings of blue engineering brick and pitched slated roofs. Unit 7 (to the west) was on two storeys, the upper floor supported by cast-iron columns. The largest buildings were Units 5 and 6A (furthest to the east), with king-post roof trusses of iron-strapped timber. The two buildings were connected to each other and were entered from the east, where formerly a metal-framed porch had stood. Unit 6 included a tall square-section chimney stack in the south-east corner and floor-level closable vents in its side walls, later blocked. Narrow gaps between Units 6, 6A and 7 had subsequently been roofed.

Project dates Start: 01-08-2007 End: 30-09-2007

Previous/future work No / No

Any associated project codes reference OL-05607 - Sitecode

Type of project Building Recording

Site status Area of Archaeological Importance (AAI)

Current Land use Industry and Commerce 4 - Storage and warehousing

Monument type PAINT FACTORY Post Medieval

Monument type LIGHT INUDUSTRIAL UNIT Modern

Methods techniques & 'Annotated Sketch', 'Measured Survey', 'Photographic Survey', 'Survey/Recording Of Fabric/Structure'

Prompt Planning condition

Project location

Country England
 Site location GREATER LONDON NEWHAM STRATFORD Units 5-7, Vanguard Trading Centre, 16 Marshgate Lane, E15
 Postcode E15
 Study area 500.00 Square metres
 Site coordinates 538048 183555 538048 00 00 N 183555 00 00 E Point
 Height OD Min: 5.00m Max: 5.00m

Project creators

Name of MoLAS/PCA Organisation

Project originator brief ODA

Project originator design MoLAS/PCA

Project director/manager Alex Rose-Deacon

Project supervisor Andrew Westman

Type sponsor/funding body of ODA

Name sponsor/funding body of Olympic Delivery Authority

Project archives

Physical Exists? Archive No

Digital recipient Archive LAARC

Digital Archive ID OL-05607

Digital available Media 'Images raster / digital photography'

Paper recipient Archive LAARC

Paper Archive ID OL-05607

Paper available Media 'Drawing', 'Notebook - Excavation', 'Research', 'General Notes', 'Photograph', 'Report'

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title Units 5-7, Vanguard Trading Centre, 16 Marshgate Lane, E15: a Standing Building Survey Report

Author(s)/Editor(s) Westman, A

Date 2008

Issuer or publisher MoLAS-PCA

Place of issue or publication London

Description A4 paper/pdf report

Entered by Andrew Westman (awestman@molas.org.uk)

Entered on 23 April 2008

9 Appendix 2: list of archaeological photographs

Image number	Description
31807001	Exterior of Unit 5, looking south-west
31807002	Exterior of Unit 5 and the road to the north of Units 5-7, looking south-west
31807007	Exterior of Unit 6, looking south
31807009	Exterior of Unit 5, looking south
31807011	External view of the late 20th century infill between and repair between Units 6 and 6a, looking south
31807012	External view of the late 20th century infill and repair between Units 6a and 7, looking south
31807014	Exterior of Units 5-7, looking north-east
31807015	Exterior of Unit 5, looking south-west
31807016	Exterior of Unit 7, looking south
31807017	Exterior of Unit 6a, looking south
31807019	Exterior of Unit 5, looking south-west
31807020	Interior of Unit 6a, looking south
37407001	Interior of Unit 5, looking north
37407002	Interior of Unit 6, looking south
37407003	Interior of Unit 6, looking north
37407004	Interior of Unit 6, looking north

10 Appendix 3: list of working drawings made on site

Drawing	Description
1	Schematic sketch plan of Units 5, 6, 6a and 7, Vanguard Trading Centre, 16 Marshgate Lane
2	Schematic sketch plan of the Vanguard Trading Centre, 16 Marshgate Lane
3	North-facing elevation of Units 6, 6a and 7
4	South-facing elevation of Units 6a and 7
5	North and east-facing elevations of Unit 5
6	Measured sketch of roof truss from Unit 5
7	Measured sketch of lancet windows in Unit 5
8	Measured plan of Units 5 and 6
9	Measured plan of Unit 6a
10	South-facing elevation of Unit 6a
11	Sketch plan of mezzanine floor in Unit 6a
12	Measured sketch detail of a lancet window in north-facing elevation of Unit 6a
13	Details of east-facing elevation, Unit 6a
14	Sectional elevation of infill between Units 6 and 6a
15	Measured plan of passage between Units 6 and 6a
16	Sectional elevation through Unit 6
17	Sectional elevation through Unit 6
18	Longitudinal sectional elevation through Unit 6
19	Detail of roof truss in Unit 6
20	Measured plan of ground floor of Unit 7
21	Measured plan of 1st floor of Unit 7
22	Detail of door in north wall, 1st floor, Unit 7
23	Sketch of east-facing elevation, Unit 7