

A photograph of an archaeological excavation site. In the foreground, a large, semi-circular stone structure, possibly a well or a basin, is partially filled with dark water. A worker in a yellow high-visibility jacket and a blue hard hat stands on a stone ledge, using a long-handled tool to work on the structure. Another worker in a yellow jacket and a red hard hat is crouched in the water, also working. In the background, another worker in a blue jacket and a blue hard hat is crouching near a yellow bucket. The site is surrounded by dirt and various construction materials, including a large metal sheet and a green container. The overall scene depicts an active archaeological dig.

**MUSEUM OF LONDON**

# **Archaeology Matters**

No 19, March 2003





Over three million viewers heard the announcement on *Time Team* last April. The Museum would build a full-size working replica of a Roman water-lifting machine, parts of which had been discovered on the Gresham Street site in an early 2nd-century well. The task was a formidable one. It involved exhaustive study of the original iron and woodwork; careful reading of descriptions by Graeco-Roman inventors or architects; and investigation of the only other known Roman bucket-chain, which had been found at Cosa in Italy.

The actual design fell to Tony Taylor, a civil and structural engineer involved with the Gresham Street redevelopment project, and Dr Bob Spain (seen here with archaeologist, Ian Blair) – a mechanical engineer with a long-standing interest in ancient technology. Replicating the bucket chain was easy, because so much evidence survived. ‘But then’, recalls Tony, ‘came the big question. How was the water collected from the buckets?’ The ancient writers gave only a few clues. ‘We figured’, he says, ‘that the buckets must have emptied the water into compartments within

the wheel itself. Then it could be channelled out to the side.’ After this, designing the octagonal drive wheel, gears and capstan was plain sailing.

But would it work in practice? Historic timber specialists, McCurdy & Co, were charged with building a machine that only used technology available to the Romans yet would be safe enough for people to operate today. The result has surpassed all expectations. The machine raises 120 litres (25 gallons) of water per minute – enough to fill an average bath to the brim – and members of the public, three or four at a time, cheerfully exert the third of a horsepower that is needed to keep the wheel going. Why not come and take a turn yourself? For operating times, see back cover.

*The London and Middlesex Archaeological Society have announced that the Ralph Merrifield Award will this year be presented to Tony and Bob, for their work on the wheel, and to Barbara Jacobson, whose community archaeology project at Charles Rowan House featured in the March 2002 edition of Archaeology Matters.*

# A slave-girl in Roman London

*'Vegetus, assistant slave of Montanus the slave of the August Emperor, has bought the girl Fortunata, by nationality a Diablintian (from near Jublains in France), for 600 denarii. She is warranted healthy and not liable to run away ...'*

This writing tablet, unearthed at 1 Poultry in 1996, has just been read for the first time in 19 centuries. Written for a rich Roman bureaucrat, it is the only deed of sale of a slave to have been found in Britain.

It is made of silver fir and measures about 14 by 11cm. Originally it was coated with black wax in which the scribe wrote with a stylus, but now his writing survives only as scratches in the wood. The whole text was written on three tablets bound together, of which this was the first. It can be dated to around AD 80–120 and was found in rubbish beside the Walbrook.

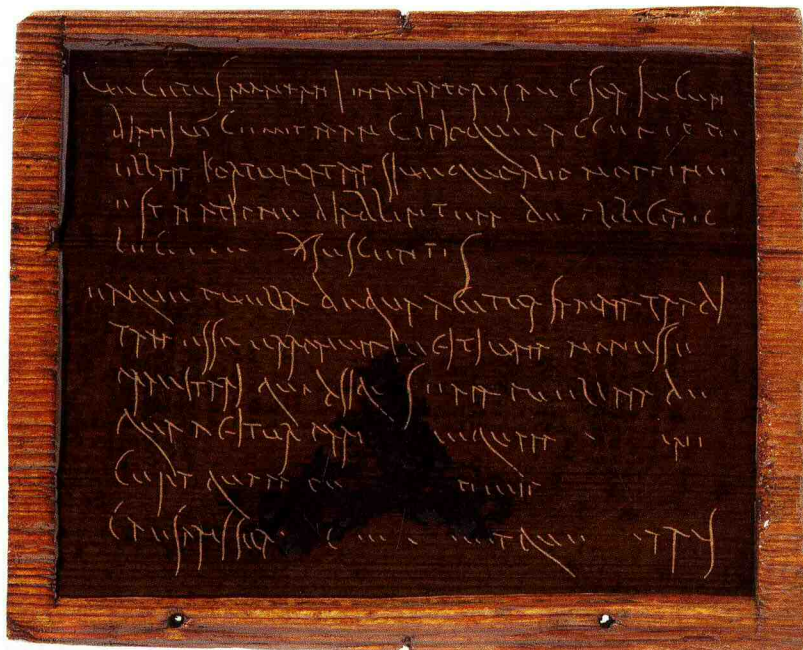
To appreciate the purchaser, we must remember how Britannia was governed. While the legate ran the army and civil administration, an independent procurator looked after imperial estates and the provincial finances. His office

was staffed by imperial slaves and freedmen who handled large sums of money, in the process making fortunes of their own. Vegetus, who was strictly speaking the property of one of these slaves, made enough to buy his own slave. She cost him 600 denarii, two years' salary for a Roman soldier.

And what about his purchase, this girl from Gaul? Fortunata ('lucky') may have been a foundling brought up in slavery, but paradoxically her sale might have led to freedom – even marriage – if Vegetus himself was promoted out of slavery.

The tablet will be displayed in the Museum until 27 April 2003. The 1 Poultry excavation project is funded by CAPIT and English Heritage. Peter Rowsome's book, *Heart of the City: archaeology at 1 Poultry*, is available from our shop, price £5.99.

Roger Tomlin  
Wolfson College, Oxford





# Roman baths at Shadwell

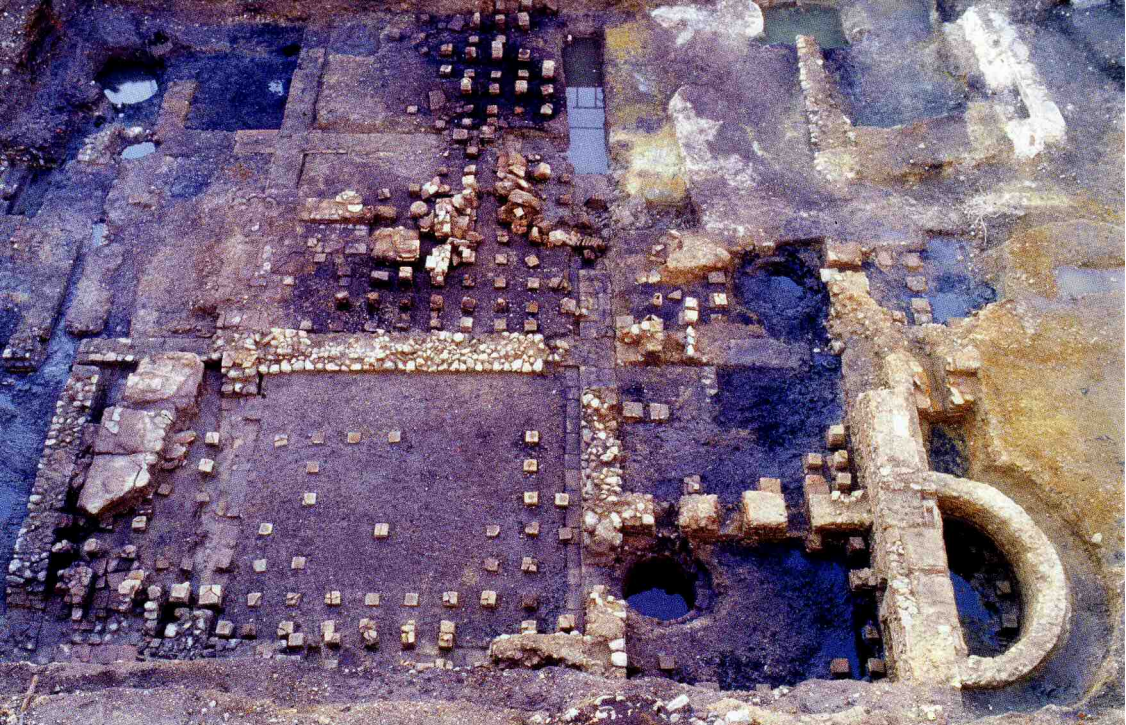


Photo: Pre-Construct Archaeology

The discovery of a large bath-house at Shadwell, nearly a mile outside the eastern wall of Londinium, is revolutionising ideas about the Roman period in that area. The excavations, for Wimpey Homes, took place at 172–176 The Highway, just to the west of a Roman tower and burials investigated in 1974–6, and to the east of terraces and buildings at Tobacco Dock that were recorded by Pre-Construct Archaeology last year. In Roman times the flood-plain of the Thames reached almost to the southern edge of the site. Was Shadwell a thriving port at the head of a small creek?

The stone, brick and tile remains of the bath-house were uncovered about 5m below present ground level. Measuring at least 19m north-south by 16m east-west, only the northern edge of the building was fully established, as rooms elsewhere continued beyond the limits of excavation. At least two main phases of construction could be distinguished. The earlier scheme comprised a grid of at least eight rooms,

including an apse on the northern side. There were both unheated and hypocaust-heated rooms. In a second phase, walls were partly demolished, new rooms built and the hypocaust extended over a greater area. There were now at least nine rooms. The building was in use between the 2nd and the 4th centuries, but was systematically demolished shortly after AD400. All the remains will be preserved in situ beneath the new development.

To the north lay an area of packed gravel and stone surfaces, probably a yard. Immediately to the west, and on the same alignment as the bath-house was a sequence of clay and timber buildings, of which eight phases were recorded. Buried within the successive floors was an excellent sequence of artefacts including pottery, coins, jewellery and hair pins.

Peter Moore  
Pre-Construct Archaeology

# London stone

*'To the Divine Powers of the Emperors and to the god Mars Camulus, Tiberinius Celerianus, citizen of the Bellovacii, moritix of the people of London first ...'*

North Londoners will be shocked to learn that the first stone tablet to name 'London' – one of the most important Roman inscriptions to have been found in Britain for years – comes from south of the river, not north. Discovered last autumn during a dig on Tabard Street, Southwark, it had been buried in a pit early in the 4th century AD, its surface carefully protected by a tile.

The tablet had been concealed with such care because it was a religious offering, made during a period when two emperors were in power, possibly the 160s. The man responsible, Tiberinius Celerianus, was a full Roman citizen (he had two names, not one) and came from around Beauvais in northern France, the territory of the Bellovacii. Mars Camulus seems to have been a god of his homeland, rather than a local London god or one associated with Camulodunum, Roman

Colchester. He was much worshipped in Reims, not far east of Beauvais, and Celerianus may well have visited his shrines there.

Why was the offering made? Celerianus was either 'the first of the Londoners' to do something, or he was their 'first moritix'. Moritix is not regular Latin but a rare word of Celtic origin, meaning 'seafarer'. Roman Southwark was a Venetian-style town of imposing buildings on barely-reclaimed islands in the Thames. At Tabard Street itself large stone structures are coming to light. The tablet, of white marble imported from north-western Turkey, was perhaps set into the wall of a shrine. Had Celerianus been the 'first Londoner' to make a special trip of some kind? Did he make this offering in gratitude for a safe return?

*The excavation, by Pre-Construct Archaeology, is being funded by Berkeley Homes. Information from Roger Tomlin (Wolfson College, Oxford) and Gary Brown (PCA).*





## Learning about Bermondsey



Last summer 300 schoolchildren from Barking, Dagenham and Southwark abandoned their desks for a day to learn archaeology the hard way – by digging. Their task? To excavate three 19th-century brick-lined rubbish pits along Frean Street in Bermondsey. Tutored by Museum of London archaeologists and specialist staff, in class-groups from year 6 (aged 10–11) or 9 (13–14), they learned to handle a trowel, to wash, bag and identify different categories of artefact and, most important of all, to remain cheerful when it rains. Part of the Bermondsey Spa regeneration programme, the scheme also included recording the memories of people who had lived here before the Second World War.

Frean Street was laid out in the middle of the 19th century. With the nearby church of St James as a focus, the community was sandwiched between the fast-developing civic buildings at the southern end of Spa Road and the bustling docks to the north. Many of the street's small terraced houses were home to people employed in local workshops and factories.

The contents of the rubbish pits that the schoolchildren unearthed are a unique and fascinating reminder of lifestyles around 1865–75. Among the discoveries were a bronze candleholder, glass and stoneware bottles, tobacco pipes, teacups and plates – one of which commemorated the coronation of Queen Victoria in 1838. But perhaps the most evocative testimony came from someone who had lived in Frean Street in the 1930s. 'You can't imagine the smell round here', she said. 'The stink of leather-tanning, Peak Frean's biscuits, Hartley's jam, Sarson's vinegar and Yardley's perfume!'

The project will continue this summer, and will be extended to include a wider range of schoolchildren and family groups. For further information, contact the Southwark Culture, Arts and Heritage Services Education department (tel: 020 7525 3644).

*The scheme was commissioned by the London Borough of Southwark and supported by English Heritage. Information from Sarah Gibson (Southwark) and Bruce Watson (Museum of London Archaeology Service).*



## Roman Southwark reviewed

The Roman settlement south of the Thames has traditionally been described as a 'suburb' of Londinium. Now, thanks to the publication of the Museum's excavations here in the 1990s, that opinion must be revised. Roman London, like Roman Paris, was a city that spanned a river and had that character from the start. Southwark was as much part of Londinium as was the land west of the Walbrook. With 70 acres on the south bank added to 330 acres on the north, the city sprawled over twice the area of any other in Roman Britain.

Building in Southwark was difficult in the extreme. Low sandy islands barely poked their heads above the Thames at high tide. Yet as early as the 50s AD the settlers constructed not only a main road leading to the bridge but also timber-framed buildings alongside it. Boudica's followers considered them 'Roman' enough to burn them down in AD60–1.

Reconstruction followed swiftly. Among the new buildings were a butcher's shop and a smithy; a market hall constructed at least partly in stone (see picture). Botanical remains and

animal bones provide detailed evidence for food preparation. Wheat and barley was brought in unprocessed, and dried to produce grain for milling. Beef was butchered in great quantities, almost to the exclusion of pork or mutton. Many customers may have come from the poorer classes, who could only afford cheaper joints and tough meat from older animals.

By the late 2nd century a visitor to south London could have recognised different districts, each with its own character. If the high street remained commercial, the area to the east seems to have been residential. The district to the west may have been governmental, with an important military establishment at one end and an elaborately decorated official inn at the other.

The report, *Settlement in Roman Southwark: archaeological excavations (1991–8) for the London Underground Limited Jubilee Line Extension Project*, by James Drummond-Murray and Peter Thompson with Carrie Cowan, is available from our bookshop (for ordering information, see back cover).



## EVENTS

### Working Water: Roman technology in action

Until 1 June

Help operate the replica Roman water-lifting machine. Take a look at the original iron and wooden parts in the Museum foyer.

Trained demonstrators will operate the machine at 12pm and 1pm on weekdays, and at 1pm, 2pm and 3pm at weekends (weather permitting). For up-to-the-minute information, please telephone the Box Office: 020 7814 5777.

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### Behind the scenes at the Museum

Monday 12 – Saturday 17 May

During Adult Learners Week we are opening up the Museum to let you go behind the scenes. Each day you can visit a different area and meet some of the carpenters, photographers, press officers, designers, conservators, curators or box office staff who work there.

Admission free (tickets to be collected from the front desk 30 minutes before the start of the event). Please telephone the Box Office for further information: 020 7814 5777.

## EXHIBITIONS

### Pepys' London

Opens Thursday 8 May

Celebrating the achievements of Samuel Pepys, on the 300th anniversary of his death, this exhibition will unite the famous diarist's words with curiosities and paintings from the Museum of London and other collections. Quill pens and inkpots, scientific instruments and model ships, illustrate themes as diverse as health and war, court politics and gentlemen's fashion.

### Settlement in Roman Southwark

By James Drummond-Murray and Peter Thompson, with Carrie Cowan  
Archaeological excavations (1991–8) for the Jubilee Line Extension Project  
MoLAS Monograph 12, £22.95

### Middle Saxon London

By Gordon Malcolm and David Bowsher, with Robert Cowie  
Excavations at the Royal Opera House, 1989–99  
MoLAS Monograph 15, £26.95

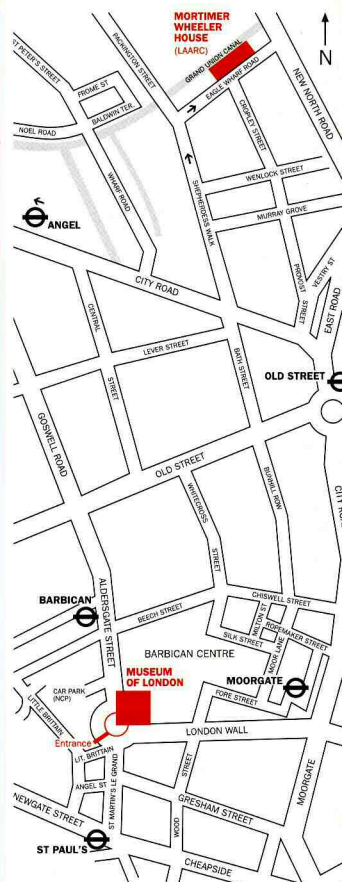
### The London Millennium Bridge

By Julian Ayre and Robin Wroe-Brown  
Excavations of the medieval and later waterfronts at Peter's Hill, City of London, and Bankside, Southwark  
MoLAS Archaeology Studies Series 6, £9.95

### An excavation in the western cemetery of Roman London

By Sadie Watson  
The excavations at Atlantic House, City of London, revealed two uniquely preserved wooden coffins, together with other cremation and inhumation burials.  
MoLAS Archaeology Studies Series 7, £8.95

**Book orders:** please phone **020 7814 5600**. Payment by credit or debit card. Prices as stated, plus post and packing.



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