



ABBNEY MILL HOUSE AND FORBURY VAULTS
Abbey Square
Berkshire

Archaeological watching brief report

April 2009

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Site Code: BR-ABB02
National Grid Reference: 471890 173450

Project Manager	Stewart Hoad
Author	Pat Miller
Graphics	Louise Davies

Summary (non-technical)

This report has been commissioned by Mildmay Partnership in order to record and assess the results of a series of watching briefs carried out at Abbey Mill House and Forbury Vaults, Abbey Square, Reading, Berkshire. The site lies within Scheduled Monument: SM19019. A medieval wall survives on the site, spanning the Holy Brook, and was preserved within the development.

This document details the various phases of the watching brief that took place on the site between November 2006 and March 2009. These were designed to investigate those areas where an earlier archaeological evaluation in 2004 was unable to obtain access to and to monitor ground works and ground reduction for the construction phase of the project.

No deposits or features of archaeological interest were exposed during the course of monitoring the trial pits, the lift shaft and the tree pit excavations. Monitoring at the north of the site for ground reduction and service investigations recorded features that are primarily thought to be of a post-medieval date. A large cut feature, possibly a back-filled quarry pit, contained two pieces of tile, one Roman the other medieval although it is more likely to post-date the medieval abbey activity and may relate to post-medieval gravel extraction on the site after Dissolution.

Natural deposits of chalk were recorded at between 38.74m OD to 39.30m OD at the north of the site and 34.2m OD to 35.5m OD further south although comparative levels of the chalk recorded during the 2004 evaluation would suggest this deposit was truncated at the south. The probable quarry pit at the north of the site was recorded at an upper height of c 38.50m OD although it was truncated by later activity of a modern date.

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1 Introduction

1.1 Site background

A series of watching briefs were carried out at Abbey Mill House and Forbury Vaults, Abbey Square, Reading, Berkshire by the Museum of London Archaeology Service (MoLAS) and more recently by Museum of London Archaeology (MOL Archaeology). Abbey Mill House and Forbury Vaults are located within central Reading and are bounded to the north by Abbey Square, to the east by Abbey Street, to the west by the Abbey Baptist Church, and to the south by the Holy Brook (see Fig 1). The Ordnance Survey National Grid Reference is 471890 173450. Within this report the property is known as 'the site'. The site code relating to archaeological works on the site is BR-ABB02.

The topography of the site drops from 41.76m OD north of St Laurence Hall and Abbey Mill House, to 37.2–38.65m OD to the south. At the east of the site the decline is from 40.89m north of the Forbury Vaults, to 37.4m OD to the south. The site was terraced during construction of the previous buildings on the site.

In the medieval period the site lay within the outer precinct of the Cluniac, subsequently Benedictine, Reading Abbey. The site is located within the site of the abbey mill and its ancillary buildings. The mill was sited on the Holy Brook, a natural tributary of the Kennet which formed the southern boundary of the Abbey. The site was subject to limited archaeological investigation in the 1960s (Slade 1972), the results of which indicated the presence of the medieval mill. The site lies within Scheduled Monument: SM19019, relating to Reading Abbey. A Grade II listed medieval wall survives on the site, spanning the Holy Brook, see front cover of this report, and was preserved within the development.

A desk top *Archaeological (impact) assessment* was previously prepared by MoLAS, which covers the whole area of the site (MoLAS/Harwood 2001). 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. A *Condition survey* of the medieval arch was carried out in 2004 prior to demolition of the 1960s buildings on the site (MoLAS/Howe 2004). A field evaluation was carried out by MoLAS between January and March 2004 and an *Evaluation report* written on the results (MoLAS/Hoad 2004). This document, and the previous *Assessment*, informed the design, *Method Statement* (MoLAS/Hoad 2006) for the watching brief.

This document details the various phases of the watching brief that took place on the site between November 2006 and March 2009. These were designed to investigate those areas where the earlier evaluation was unable to obtain access and to monitor ground works and ground reduction for the construction phase of the project. The watching briefs undertaken were:-

- Monitoring of five trial pits across the site in November 2006, opened to assess the underlying deposits and to test the degree of water inundation.
- Monitoring of a trench dug to establish the location of any live services prior to the commencement of sheet piling at the north of the site April 2007.
- Monitoring of ground reduction of a triangular area of ground within the northern perimeter of the site in May 2007 and June 2007.
- Monitoring the excavation of a lift shaft pit at the west end of the site in August 2007.

- Monitoring of the excavation of two tree pits along the sides of the Holy Brook in February 2009 and March 2009.

1.2 The planning and legislative framework

1.2.1 National planning policy guidance

Planning Policy Guidance Note 16: Archaeology and Planning (PPG16) sets out the Secretary of State's policy on archaeological remains, and provides recommendations subsequently integrated into local development plans. The key points in PPG16 can be summarised as follows:

Archaeological remains should be seen as a finite and non-renewable resource, and in many cases highly fragile and vulnerable to damage and destruction. Appropriate management is therefore essential to ensure that they survive in good condition. In particular, care must be taken to ensure that archaeological remains are not needlessly or thoughtlessly destroyed. They can contain irreplaceable information about our past and the potential for an increase in future knowledge. They are part of our sense of national identity and are valuable both for their own sake and for their role in education, leisure and tourism.

Where nationally important archaeological remains, whether scheduled or not, and their settings, are affected by a proposed development there should be a presumption in favour of their physical preservation.

If physical preservation *in situ* is not feasible, an archaeological excavation for the purposes of 'preservation by record' may be an acceptable alternative. From an archaeological point of view, this should be regarded as a second-best option. Agreements should also provide for the subsequent publication of the results of any excavation programme.

The key to informed and reasonable planning decisions is for consideration to be given early, before formal planning applications are made, to the question of whether archaeological remains are known to exist on a site where development is planned and the implications for the development proposal.

Planning authorities, when they propose to allow development which is damaging to archaeological remains, must ensure that the developer has satisfactorily provided for excavation and recording, either through voluntary agreement with the archaeologists or, in the absence of agreement, by imposing an appropriate condition on the planning permission.

1.2.2 County Planning Policy

The Structure Plan for Berkshire was adopted in July 2005. The Planning and Compulsory Purchase Act 2004 establishes provisions that replace regional planning guidance and structure plans with regional spatial strategies. The Regional Spatial strategy for the South East Region, which includes Berkshire, is called the 'South East Plan' and is currently being prepared by the South East England Regional Assembly (SEERA), the regional planning body. Local plans are each replaced by a suite of documents referred to as 'Local Development documents' (LDDs).

In the interim, the Unitary Authorities have saved policies in the Structure Plan for up to three years after its adoption. These, with Local Plans, will form part of their Local Development Frameworks (LDFs) until their Local Plan policies are superseded by the new Act.

Policy EN4: Historic Environment

Historic features and areas of historic importance and their settings will be conserved and where appropriate enhanced. The Councils will only allow development if it has no adverse impact on features or areas of historic importance. Proposals will be expected to have regard to the wider historic

environment and will only be permitted when they would conserve or enhance the character or setting of Berkshire's historic landscape and built environment.

In line with PPG15, new development should not damage buildings or structures of historic importance or their settings, whether they are listed or not. In accordance with PPG16, where development is proposed in areas of archaeological potential, developers may be required to commission an independent assessment of the site (in consultation with the planning authority) prior to the application being determined. This will assist the Unitary Authorities in deciding whether development is appropriate. Authorities will also need to be satisfied that appropriate arrangements have been made for assessment, excavating and recording on the site. Where possible archaeological remains should be preserved in situ and should be protected from unnecessary disturbance by new development through sympathetic design.

1.2.3 Planning guidance in Reading

The main planning policy document is the Reading Borough Local Plan 1991-2006, which was adopted in 1998. A review of the Plan in 2003, the introduction of a new planning system in 2004 meant that a Local Development Framework (LDF) is currently being created to replace the Local Plan. This is made up of a number of documents rather than a single plan. The existing Reading Borough Local Plan which was adopted Oct 1998 sets out the local authority's policies in relation to archaeology. The policy adheres to the principles of national planning guidance PPG16 (see above). The relevant policies in relation to archaeology are set out below:

Policy CUD 11: Ancient monuments and other important archaeological remains. The Council will seek to ensure the preservation of sites and settings of Scheduled Ancient Monuments and remains of archaeological importance. The council will not normally permit development, which would adversely affect such sites or settings.

Policy CUD 12: Development impact upon archaeological remains. Appropriate mitigation of a development's effect on archaeological remains will be secured before any planning permission is granted and, where appropriate, this will have to be implemented before development takes place. When necessary, mitigation will include provision for archaeological work to be undertaken during development.

Policy CUD 13: Preservation of archaeological sites where appropriate. The council will seek to secure the satisfactory preservation of remains of outstanding archaeological importance in situ or otherwise in a satisfactory location on site or off site.

The following section reproduces from the local plan the reasons for the policies and how they would be put into effect:

Planning Policy Guidance Note 16 (PPG16) emphasises the need to carry out archaeological evaluation prior to granting planning permission. This allows the Council to make an informed decision and, if planning permission is granted, ensure that appropriate measures are put in hand to mitigate the effect of the development on archaeology (para 6.51).

PPG16 stresses the importance of physical preservation of remains in situ rather than archaeological excavation and recording. Appropriate methods of mitigation range from the preferred option of redesigning of the proposal to achieve physical preservation of

the archaeological remains and appropriate public access, through to provision for the archaeological recording of evidence before its destruction (para 6.52). In order to comply with PPG16, the Council will seek to retain remains in situ as found. Where this is not possible or appropriate, other measures will be investigated. In such a case, preference will be given to preservation of remains on site (albeit not in their original location) or, if more appropriate, in a suitable location off-site (para 6.53). In all appropriate cases, provision for proper investigation and recording will be made (para 6.54).

The Council will enable the maximum benefit and enjoyment possible to be obtained from Reading's archaeological heritage by:

- (i) making developers aware of a site's archaeological importance at an early stage;*
- (ii) ensuring that sites of high potential archaeological value have the benefit of a full archaeological appraisal, before any planning decision is made, and to avoid the possibility of delay and additional costs being incurred at a later stage of the development process;*
- (iii) when appropriate, safeguarding in situ finds of importance;*
- (iv) allowing information to be fully recorded and appropriate steps taken to preserve remains which might otherwise be lost, damaged or destroyed during development where the balance is in favour of granting planning permission (para 6.55)*

Management plans for remains preserved in situ might include the development of visitor and education facilities in appropriate cases and where this will contribute to the appreciation of the site (para 6.56).

Through the Council's development control powers. The Council has access to a computerised record of sites and finds within its area against which development proposals can be checked and to a map of unscheduled sites and areas of high archaeological potential where there is a strong likelihood of remains being found. The needs of archaeology and development can be reconciled and the potential for conflict reduced if developers discuss their preliminary plans for development with the planning authority at an early stage (para 6.57).

Applications likely to affect known archaeological sites or areas of high archaeological potential must be accompanied by an appropriate level of information and this will be a material consideration in judging the merits of the scheme. The Council's Archaeological adviser and other expert bodies as necessary will determine the scope and nature of the information required for each application. Sites of scheduled ancient monuments and of known archaeological interest are identified on the Proposals map (para 6.58).

Depending on the archaeological evidence, the Borough Council may apply conditions to planning permission for development in order to secure archaeological protection and recording of finds. Where the evidence points to the discovery of a site of great or national importance planning permission for development may be refused. Where archaeological excavation is agreed as an acceptable solution in conjunction with planning permission the Council will seek to enter into a Section 106 Agreement with the developer to ensure that a detailed independent archaeological excavation of the site is carried out prior to the commencement of development and at the developer's expense (para 6.59).

Where enhancement of archaeological sites is required this will be achieved through Reading Borough Council's Museums Service and with the cooperation of other site owners and those carrying out the investigation of the site. Facilities may be of a temporary nature during site excavation or of a permanent nature on sites such as the Abbey Ruins. In appropriate cases, the Borough Council will seek the assistance of the developer in displaying archaeological finds, either on site or elsewhere and in drawing up appropriate management plans (para 6. 60).

1.3 Planning background

The archaeological investigations undertaken on the site were carried out in response to archaeological conditions attached to the planning permission for the site.

1.4 Origin and scope of the report

This report was commissioned by Mildmay Partnership and produced by the Museum of London Archaeology Service (MOL Archaeology). The report has been prepared within the terms of the relevant Standard specified by the Institute for Archaeologists (IFA, 2001).

The purpose of the watching brief was to determine whether archaeological remains or features were present on the site and, if so, to record the nature and extent of such remains. A number of more site-specific research aims and objectives were established in the preceding *Method Statement* and are outlined in the following section.

The purpose of the present report is to analyse the results of the excavation against the original research aims, and to suggest what further work, including analysis or publication (if any), should now take place.

1.5 Aims and objectives

The following research aims and objectives were established in the *Method Statement* for the watching brief (Section 2.2):

- What is the nature and level of natural topography?
- What are the earliest deposits identified?
- What are the latest deposits identified?
- Can the pre-monastic topography and environment of the area be reconstructed using the alluvial deposits of the Holy Brook?
- Does any of the fabric of the medieval abbey mill house survive? Can the plan be further refined, and can Slade's findings be linked to Ordnance Datum and OS grid?
- Does any evidence survive of other waterfront activities or revetments on the site?
- Do any post-medieval deposits survive?

2 Topographical and historical background

2.1 Topography

The site lies on a ridge of well-drained gravel (Reading Beds) over chalk, with a natural slope from north to south down to a natural stream channel, the Holy Brook (British Geological Survey Sheet 268, Drift).

A borehole survey on the site indicated that alluvial clays survive on the southern part of the site adjacent to the Holy Brook at 35.80m OD in the west and rising to 36.54m OD to the east in the area of the ramp access. Elsewhere on the site the natural chalk is at 38.6m OD to the north of Abbey Mill House falling to 36.64m OD in the south-east of the site.

A survey of the site shows the topography of the site as dropping from 41.76m OD north of St Laurence Hall and Abbey Mill House, to 37.2–38.65m OD to the south (LBH Wembley October 2001). At the east of the site the drop is from 40.89m north of the Forbury Vaults, to 37.4m OD to the south. The site was terraced during construction of the previous buildings on the site.

2.2 Prehistoric

Prehistoric evidence has come to light from the immediate vicinity of the site, and the area does appear to be reasonably attractive for settlement as it is located on a well-drained ridge overlooking two river valleys. Flint flakes were recovered from a trench next to the Abbey inner gatehouse (Vince et al 1982, 38). Sixteen possible Neolithic flints were found in the area of the east end of the former Abbey church. Also recovered was a single sherd of Early Bronze Age pottery and part of a globular later Bronze Age ceramic vessel (Slade 1976, 61, 64). Two fragments of Neolithic ground stone axes are noted to the north of the site by Berkshire Sites and Monuments Record (SMR) (SMR 2017 and 2035).

2.3 Roman

Roman material is rare in this part of Reading. The Berkshire SMR records one sherd of Roman pottery and three pieces of Roman tile from the site of the Abbey Mill (SMR 2107, RD 11353). A mortarium sherd and a single sherd of Nene Valley ware were recovered from deposits near the Abbey church (Slade 1976, 61).

2.4 Saxon and Danish

A Saxon settlement at Reading seems very likely: the name Reading is considered to be a corruption of Readingas, or the followers of a certain Reada, 'the Red'. This name is considered to have been obsolete before AD 900. Twenty-two sherds of pottery and two metal objects may indicate a settlement of Saxon date in the vicinity of the Abbey church (Slade 1976, 61, 63-4).

Probable Saxon burials also lie to the north, where a 'pagan' Saxon date is suspected for the body of a 40 to 60-year-old woman found near the Plummery Wall of the Abbey; further burials have been found south of the Holy Brook.

The encampment of a Viking army in Reading in the winter of AD 870 may have materially affected the site. They constructed a rampart between the Thames and the Kennet. Two plan sources have been found for the extent of the camp so created. Astill (1978) indicates that the rampart may have run down the later west side of the Abbey precinct. This would carry the bank and ditch to the west of the site. A more recent plan (Slade in Petyt 1993, 9) suggests that a north-south line

running from the mouth of the Holy Brook to the Thames would encompass the smallest area necessary to serve an army of up to 5000 men and horses. This would run immediately to the east of the site.

Pottery recovered from the alluvial deposits on the north side of Holy Brook is considered to date to between the 10th and 12th centuries on the basis of its fabric (Hawkes 1991, 70).

2.5 Medieval

In the medieval period the site lay within the outer precinct of the Cluniac, subsequently Benedictine, Reading Abbey. The site is within the site of the Abbey Mill and its ancillary buildings. The mill was sited on the Holy Brook, a natural tributary of the Kennet which formed the southern boundary of the Abbey. The mill is to the east of the stable blocks, and to the west of the bridge. The mill and stables form part of the outer precinct, to the southwest of the main monastic complex.

The mill was a single, undershot, wheel within a two storey flint and Caen stone mill house. Built between 1121 and 1164, the mill house straddled the Holy Brook. Two north-south walls of the medieval mill house survived to the early 1960s, with arches over the Holy Brook and to allow east-west access. The eastern wall was demolished prior to construction of the present Abbey Mill House. The western wall survives and will be incorporated into the proposed scheme. The upstanding fabric of the Abbey Mill is original 12th/13th-century flint in mortar (Slade 1972, 77).

Adjacent to the mill was a dovecote however its exact location is unknown, it is most likely to be to the north of the site as it was not observed during excavations of the stable block. A survey of the demolition of Reading Abbey in 1549 gives an impression of more buildings than the conjectured stables, mill and dovecote. A slaughterhouse and a 'little' house are listed. In the 1860s building work to the north of the site revealed evidence of a medieval bakehouse.

The site was subject to limited archaeological investigation in the 1960s (Slade 1972), the results of which indicated the presence of a medieval mill, which served the abbey. Excavations revealed that the mill house is of several phases, initially built integrally with the Abbey wall along the Holy Brook. The excavation report does not include OD heights, but instead indicates heights relative to street level. Given that the site appears to have been terraced by approximately 1m at this time, it is not possible to assign OD heights with any accuracy to the excavated remains.

2.6 Post-medieval

Following the Dissolution, the land of the Abbey, including that of the site, was handed back to Royal ownership. Lord Protector Somerset filled the interregnum between Henry VIII's death and Edward VI's coming of age. It was he who was instrumental in the first major phase of destruction of the Abbey.

A charter of Elizabeth I made in 1560 referred to permission "*...also to take, pull down and carry away one house greatly ruined situate near the mill called the Abbey Mill...*" (Charter 2nd Eliz I, Clause 52, quoted by Slade & Kemp (nd), II, n5).

The mill however appears to have continued working throughout this period.

In 1610, John Speed produced his map of Reading. There appear to be two versions in print. The first examined has been published in Cram (Cram 1988, 33). The stable court appears to contain a building on the south side, labelled with a 'G' referring to the Queen's Stables, with a smaller structure between the stable and the gatehouse. The mill does not appear to be shown, however its position above the mouth of the Holy Brook suggests that it may be one of the buildings by The Queen's Stables. It would be likely that the mill continued in use throughout the post-medieval period, and alterations and repairs could still survive below ground where not truncated by later activity. The surviving arches of the mill house have rebuilds and repairs in 2" brick, suggesting maintenance and use of the mill in the 17th century.

In 1642, the Civil War erupted around the town. The town was fortified as a map of this date attests. It is particularly sketchy in details, but shows the former Abbey mill along with the stable block, along the bank of the Holy Brook. Parts of the Abbey ruins were criss-crossed with defensive ditches and ramparts built by Parliamentary forces.

The 18th century brought relatively few changes to the area of the site shown on Speed's map. Sir Henry Englefield (1779) surveyed the visible remnants of the Abbey along with the Civil War ramparts still surviving; these may link with those crossing the great yard. Englefield's comments on the outer wall of the enclosure (probably meaning the Forbury wall) indicate that substantial Tudor (re)builds of parts of the boundary survived until late in the 18th century. A survey of 1725 of the Belgrave estate shows the Abbey Mill, with buildings, possibly an inn and its courtyard, on the corner of Abbey Street and Abbey Square.

Gravel extraction is known to have taken place in various open areas around the former Abbey (Cram 1988, 33), and while there is no direct archaeological evidence of such activity on the site, it is possible that Pit 1 recorded on site by Slade is a gravel quarry. The Abbey Mill underwent extensive improvement and reconstruction during this time (Slade 1972, 67).

Development of the site took place in earnest in the 19th century. On the site the mill buildings appear to have expanded, with open yards to the east and west. The buildings on the corner of Abbey Square and Abbey Street have developed, and Ordnance Survey maps show this layout broadly lasting to the 1960s.

The Goad Fire Insurance Map of 1895 shows the mill as a 3 ½ to 4 ½ storey brick and timber building. Excavations at on the site revealed large brick stanchion bases from this phase of the mill. The buildings are all likely to have been terraced into the slope to the north.

Ordnance Survey maps and the Goad Survey show a collection of two storey buildings, including two pubs in 1895, constructed of brick and timber, on the corner of Abbey Square and Abbey Street.

2.7 Previous archaeological evaluation of the site in 2004

Following the recommendations of an archaeological impact assessment report (Harwood 2001) and the requirement of the archaeological brief (Babtie August 2002), a number of evaluation pits/trenches were also excavated on the site, both prior to and following the demolition of the standing buildings (MoLAS/Hoad 2004).

The results of the field evaluation carried out between January and March 2004 revealed that present buildings on the site had been constructed using terrace construction techniques. The northern half of the site was cut straight into the underlying chalk, and no overlying stratigraphy survived. Archaeological survival was limited to three features cutting into the chalk; two were identified as pits, the third as a possible quarry pit. It is possible that the quarry pit was the same feature noted during earlier excavations in the 1960s. This pit contained large quantities of floral and faunal remains, and pottery dating to the medieval period.

The southern half of the site, as it dipped towards Holy Brook, revealed evidence for the survival of natural sand and gravel overlying the chalk. A subsoil and evidence for alluvial silting was also noted above the natural deposits. This indicated that the area was prone to flooding in the past, and also showed that there is a potential for the survival of archaeological deposits adjacent to Holy Brook.

The results of this exercise confirmed that the site had been severely truncated by the construction of the 1960s buildings. Areas of archaeological survival were noted with a deeply cut feature located towards the eastern end of the site. Although it was not possible to investigate the area alongside the Holy Brook it was noted during the evaluation (MoLAS/Hoad, 2006, section 3.2.6 TP6) that natural deposits overlying the chalk survived *in situ*.

3 The Watching Briefs

3.1 Methodology

All archaeological excavation and recording during the watching brief was done in accordance with the *Method Statement* (MoLAS/Hoad 2006) and the *Archaeological Site Manual* (MoLAS, 1994).

The slab/ground was broken out and cleared by contractors under MoLAS supervision. Trenches were excavated by hand and by machine by the contractors, and monitored by a member of staff from MoLAS.

The locations of the areas of excavation were recorded by both by the MoLAS surveying team, and offsetting from adjacent standing walls and plotted on to a client drawings and MoLAS site plans.

The heights of observations and/or archaeological remains were recorded relative to Ordnance Datum. Levels were calculated by a traverse from a bench mark on the arch at Abbey Walk, which had a value of 45.17m OD. In the case of the ground reduction works levels were calculated from the adjacent road level, the OD level of which was provided by the client's onsite engineer.

Where relevant, sections were drawn at a scale of 1:10 or 1:20; numbered contexts were allocated where appropriate.

The site has produced a number of location plan; context records; 1:20 and 1:10 section drawings; and photographs. A small amount of finds were recovered from the site.

The records are currently housed under the site code BR-ABB02 at MOL Archaeology. However the site archive will be eventually be deposited with the local archival repository, which in this case will be Reading Museum, Reading, Berkshire under the Accession number REDMG.2004.10.

3.2 Results of the watching briefs

This various phases of the watching brief took place on the site between November 2006 and March 2009 to investigate those areas where the earlier evaluation was unable to obtain access and to monitor ground works and ground reduction for the construction phase of the project. The watching briefs undertaken were:-

3.2.1 Trial pit watching brief

An archaeological watching brief was undertaken by MoLAS on trial pits excavated by GallifordTry on 13th November, 2006. A total of five pits were opened to assess the underlying deposits and to test the degree of water inundation. No deposits or features of archaeological interest were noted during the course of the watching brief. The details of the trial pits are listed below and their locations shown on Fig 2.

Trial pit 1 – 2.5m x 0.80m x 2.10m deep. This trial pit was located at the western end of the site adjacent to the adjoining building. A natural grey white chalk deposit was observed at a depth of 1.40m overlain by natural orange brown gravel 0.40m thick. A relatively undisturbed garden soil was evident above the gravel. This was up to 0.80m thick and was mid brown in colour. It was composed of fine clayey silt, with occasional brick and tile inclusions.

Trial pit 2 – 2.0m x 0.50m x 2.0m deep. This trial pit, located in the central part of the site, revealed natural chalk deposits at a depth of 1.0m below the modern ground surface. The chalk was overlain by up to 1.0m of modern rubble.

Trial pit 3 – 2.0m x 0.80m x 2.10m deep. This trial pit, located in the central part of the site (to the east of TP2), revealed natural chalk deposits at a depth of 1.30m below the modern ground surface. The chalk was overlain by up to 1.30m of modern rubble and made ground.

Trial pit 4 – 1.20m x 0.80m x 2.05m deep. Trial pit 4 was located close to the Holy Brook. Natural chalk was observed at the base of the pit c 2.0m deep. This was overlain by a natural deposit of mid brown/orange clay and gravel c 1.0m thick. Overlying this was a sequence of modern make up comprising of demolition rubble 1.0m thick.

Trial pit 5 – 1.80m x 0.80m x 1.70m deep. Trial pit 5 was located at the eastern end of the site. Natural chalk was revealed at a depth of 1.70m. It was truncated by a service pipe at the eastern end of the pit, which was aligned approximately NWSE. The chalk was overlain by modern rubble and make up deposits 1.70m thick.

No archaeological features were noted during the course of the watching brief. Observations of trial pit 4 indicate that the area, adjacent to the Holy Brook is relatively undisturbed. Trial pit 1 to the west of the site, revealed garden soils below the modern rubble. It is uncertain as to whether these soils are a remnant of the ground disturbance caused during 1960s construction work, or whether they predate this. Trial pits 2 and 3 confirmed that this area of the site has suffered extensive truncation into the natural ground surface. Trial pit 5 did not reveal any archaeological deposits of note, and appeared to be located directly over the position of an earlier archaeological trial pit, monitored prior to demolition of the previous structure. Remnants of organic deposits were noted in the modern make up that was removed from the pit. These almost certainly originated from the large pit noted in this area in both the 1960s and the more recent archaeological investigations.

3.2.2 Services clearance watching brief

An archaeological watching brief was undertaken by the MoLAS on the 2nd and 3rd April, 2007 to monitor a 30m long east/west trench that was excavated by the contractors in the extreme north of the site close to the south side of Abbey Square Road. The trench was 0.50m wide and 1.20m to 1.50m deep, and was excavated to establish the location of any live services prior to the commencement of sheet piling, see Fig 2.

At the eastern end of the trench brick walls of a 19th to 20th century date, possibly a cellar, were observed for a length of 3.30m. These extended below the limit of excavation. The west wall truncated a chalk-built structure comprised of irregular chalk fragments up to 150mm wide by 100mm thick by 250mm long, bonded with a mid brown fine sandy mortar. This chalk feature was generally only visible in the south facing section and its function was not determined.

With the exception of a section of the trench 5m long, which was not excavated due to a large number of service pipes, the remainder of the trench revealed natural chalk at approximately 39.30m OD, overlain by 300mm of sand and gravel, which was in turn overlain by modern made ground.

3.2.3 Ground reduction watching brief

The first phase of ground reduction monitoring occurred at the site on the 25th of May 2007. The slab/ground was broken out and cleared by contractors under MoLAS supervision. Ground level was reduced from c 40.74m OD - 40.64m OD, the height of neighbouring Abbey Square Road, to 38.74m OD-38.64m OD.

Natural chalk was encountered along the northern edge of excavation from approximately 38.74m OD.

At the east end of the excavation a large feature approximately 9.5m east-west, truncated along eastern edge, and 6.5m north-south running into the northern limit of excavation was identified. This large feature had been truncated by modern dumps to a level of c 38.50m OD. The feature was excavated as a series of slots (each backfilled prior to the excavation of the next) owing to the lack of room on site for spoil removal. These slots covered approximately 98% of the feature. The base of the feature was recorded at c 37.60m OD at its western edge sloping to 35.60m OD at its eastern edge. It had two main fills, the first c 0.3-1m thick, comprised a dark grey silty clay with organic matter, animal bone, occasional oyster shell and wood fragments. Two fragments of ceramic building material were recovered from this deposit. The first was identified as Roman and the second as an early 12th century floor tile, possibly from the former Abbey building (Fig 3). The second fill was a silty clay with organic matter, flint, and occasional animal bone fragments. This feature may represent a quarry which had subsequently been backfilled with inclusions of domestic waste. This was overlain by modern deposits. The top of the excavation was recorded at a level of 40.74m OD to 40.64m OD.

Further ground reduction was monitored on the 26th, June, 2007 by MoLAS. During this phase of the watching brief a 20m long section of ground behind the modern retaining wall was exposed by the contractors in the north east of the site close to the south side of Abbey Square Road.

This area was exposed to establish whether the location of any archaeological remains were present in the 'assumed' natural chalk behind the visible modern

foundations, prior to the commencement of ground reduction. The eastern end of the exposed area abutted areas already evaluated for archaeological remains.

Along the entire length of the exposed area no deposits or features of archaeological interest were exposed. The ground consisted of truncated chalk surviving to a height of 38.85m OD

The location of ground reduction on the site is shown on Fig 2.

3.2.4 Lift shaft watching brief

On 15th August, 2007 the excavation of a lift shaft at the west of the site was monitored by MoLAS, see Fig 2. The lift shaft trench measured c 2m by 4.7m and was excavated to a depth of c 3m. At the base of the trench natural white chalk was observed from the limit of excavation at 34.2m OD to 35.5m OD. Above the natural deposits a mid brown silt sandy layer containing occasional post-medieval ceramic building material and gravel was observed however this is believed to represent modern made ground. The top of the trench was recorded at a height of 37.2m OD. No features or artefacts of archaeological significance were identified during the course of this investigation.

3.2.5 Tree pit watching brief

Archaeological monitoring by MOL Archaeology took place on 18th February, 2009 and 20th March 2009 to monitor the excavation of tree pits along the south and north sides of the Holy Brook.

The area had recently been built up with modern made ground in order to create an elevated, even surface between the newly constructed building and the watercourse. The ground in the position of Tree Pit 1 was raised by c 0.8m in relation to the previous level of c 37.2m OD. The new surface level was 37.92m OD, see Fig 4. The ground in the area of Tree Pit 2 had been raised by c 0.5m in relation to the pre-construction level of c 37.2m OD. The new surface level was 37.72m OD. The location of the tree pits monitored is shown on Fig 2.

Tree Pit 1 was located adjacent to the Holy Brook retaining wall and measured 2m by 2m by 1.4m. The earliest deposit encountered comprised a dark grey, moderately loose, silty sandy soil, 0.4m thick. Sealing this was a deposit consisting of chalk fragments in dark grey sandy soil. This deposit was c 0.2m thick. Covering this was a 0.8m deep layer of modern made ground. No archaeological finds or deposits were observed in this pit.

Tree Pit 2 was located south of the Holy Brook bank edge and east of the Forbury Arch. It comprised a concrete ring measuring 1.2m in diameter, inserted into the ground to a depth of 1.1m. The earliest deposit encountered comprised a dark brownish grey, compacted soil of clayey consistency. It was recorded at the base of the pit, at 1.1m below top ground level. Sealing this was brown loose sandy soil, presumably a previous construction phase backfill, up to 1m thick. This was overlain by modern pavement slabs. No archaeological finds or deposits were observed.

4 Potential of archaeology

4.1 Original research aims

The following research aims and objectives were established in the *Method Statement* for the evaluation (Section 2.2):

- What is the nature and level of natural topography?

The natural topography comprised of chalk, overlain by gravel or clay in places particularly towards the Holy Brook. At the north of the site natural chalk was recorded at between 38.74m OD to 39.30m OD during ground reduction and service clearance monitoring. Further south in the area of the lift pit natural chalk was recorded at a height of 34.2m OD to 35.5m OD although comparative levels of the chalk recorded during the 2004 evaluation would suggest this deposit was truncated. Previous evaluation on the site in 2004 recorded natural chalk at between 36.27m OD rising to 36.99m OD at its highest point, sand and gravel was recorded at a height of 36.54m OD.

- What are the earliest deposits identified?

The earliest feature that contained datable material on the site revealed during the watching brief was the large cut feature, possibly a back-filled quarry pit located at the north of the site. One of the backfills contained two fragments of ceramic building material, one Roman and the second early 12th century floor tile, possibly from a former Abbey building (see Fig 4). Gravel extraction is known to have taken place in various open areas around the former Abbey after Dissolution and during the post-medieval (Cram 1988, 33) and it is probable that this feature is evidence of such although it may possibly be earlier in date.

Additionally a small area of a chalk built feature was recorded during service clearance monitoring although this feature was not dated, no fills were recorded in association with it and its function was obscure. Medieval chalk-built cesspits have been recorded in the vicinity such as one excavated at the rear of 26 The Forbury to the north of the site (Foundation Archaeology 2002) thought to be associated with Reading Abbey.

- What are the latest deposits identified?

The latest deposits identified comprised of make up and building debris most probably associated with the construction of Abbey Mill House and Forbury Vaults in the 1960s.

- Can the pre-monastic topography and environment of the area be reconstructed using the alluvial deposits of the Holy Brook?

Unfortunately not enough comprehensive data on the alluvial deposition of the site was recorded during the phases of the watching brief to be able to reconstruct the pre-monastic topography and environment of the area.

- Does any of the fabric of the medieval abbey mill house survive? Can the plan be further refined, and can Slade's findings be linked to Ordnance Datum and OS grid?

No further evidence for the fabric of the medieval abbey mill house was uncovered.

- Does any evidence survive of other waterfront activities or revetments on the site?

No evidence for waterfront activity or revetments was uncovered.

- Do any post-medieval deposits survive?

Post-medieval deposits in the form of the quarry pit fills discussed above and later activity in the form of a 19th to 20th century probable cellar were recorded at the north of the site. At the western end of the site a relatively undisturbed garden soil was evident above the gravel in Trial Pit 1 which may represent an earlier soil horizon. The origin of this layer was uncertain and it was thought to be a possible remnant of the ground disturbance caused during 1960s construction work.

4.2 New research aims

The results of the watching brief have not raised any addition research aims.

4.3 Significance of the data

Whilst the archaeological remains are undoubtedly of local significance there is nothing to suggest that they are of regional or national importance.

5 Publication and archiving

Information on the results of the excavation 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 the area.

The site archive containing original records and finds will be stored in accordance with the terms of the *Method Statement* (MoLAS/Hoad, 2006) with the Museum of London within 12 months of the end of the works.

In view of the limited potential of the material (Sections 4) and the relatively limited significance of the data (Section 4.3) it is suggested that a short note or summary on the results of the watching brief should appear in the round up of the *Berkshire Archaeological Societies Journal*.

6 Conclusions

No deposits or features of archaeological interest were exposed during the course of monitoring the trial pits, the lift shaft and the tree pit excavations. Monitoring at the north of the site for ground reduction and service investigations recorded features that are primarily thought to be of a post-medieval date. A large cut feature, possibly a back-filled quarry pit contained two pieces of tile, one Roman the other medieval. This pit is more likely to post-date the medieval abbey activity and may relate to post-medieval gravel extraction on the site. A small section of a chalk-built feature was also recorded, but its function and date remains uncertain.

Previous archaeological evaluation of the site in 2004 recorded archaeological survival limited to three features cutting into the chalk; two were identified as pits, the third as a possible quarry pit. It is possible that the quarry pit was the same feature noted during earlier excavations in the 1960s. This pit contained large quantities of floral and faunal remains, and was dated by four sherds of pottery, to the medieval period. The watching brief recorded further localised evidence of probable quarrying at the north of the site.

The watching brief also recorded further, the high degree of truncation by terracing on the site that has removed much of the earlier deposits although some cut features remained, the greatest survival occurring at the north of the site.

7 Acknowledgements

MOL Archaeology would like to thank Mildmay Partnership for commissioning this report.

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9 NMR OASIS archaeological report form

OASIS ID: molas1-57737

Project details

Project name Abbey Mills House and Forbury Vaults, Abbey Square, Reading

Short description of the project A watching brief took place during redevelopment of Abbey Mills House, Abbey Square Reading between Nov 2006 and March 2009 to investigate areas where an earlier archaeological evaluation in 2004 was unable to obtain access to and to monitor ground works and ground reduction for the construction phase of the project. The site lies within Scheduled Monument: SM19019. A medieval wall survives on the site, spanning the Holy Brook, and was preserved within the development. No deposits or features of archaeological interest were exposed during the course of monitoring the trial pits, the lift shaft and the tree pit excavations. Monitoring at the north of the site for ground reduction and service investigations recorded features that are primarily thought to be of a post-medieval date. A large cut feature, possibly a back-filled quarry pit contained two pieces of tile, one Roman the other medieval although is more likely to post-date medieval abbey activity and may relate to post-medieval gravel extraction on the site after Dissolution. Natural deposits of chalk were recorded at between 38.74m OD to 39.30m OD at the north of the site and 34.2m OD to 35.5m OD further south although comparative levels of the chalk recorded during the 2004 evaluation would suggest this deposit was truncated at the south. The probable quarry pit at the north of the site was recorded at an upper height of c 38.50m OD although was truncated by later activity of a modern date.

Project dates Start: 13-11-2006 End: 20-03-2009

Previous/future work Yes / Not known

Any associated project reference codes BR-ABB02 - Sitecode

Type of project Recording project

Site status Scheduled Monument (SM)

Site status Listed Building

Current Land use Industry and Commerce 2 - Offices

Monument type ?QUARRY PIT Post Medieval

Monument type	?CESS PIT Uncertain
Significant Finds	TILE Roman
Significant Finds	FLOOR TILE Medieval
Investigation type	'Watching Brief'
Prompt	Scheduled Monument Consent

Project location

Country	England
Site location	BERKSHIRE READING READING Abbey Mills House and Forbury Vaults, Abbey Square
Postcode	RG13
Study area	2000.00 Square metres
Site coordinates	SU 471890 173450 50.9530552922 -1.3281108879 50 57 11 N 001 19 41 W Point
Height OD / Depth	Min: 34.20m Max: 39.30m

Project creators

Name of Organisation	MoL Archaeology
Project brief originator	MoLAS project manager
Project design originator	MoL Archaeology
Project director/manager	Stewart Hoad
Project supervisor	Stewart Hoad

Project supervisor Stewart Hoad

Project supervisor Stewart Hoad

Project supervisor Stewart Hoad

Type of sponsor/funding body Client

Name of sponsor/funding body Mildmay Partnership

Project archives

Physical Archive recipient Reading Museum

Physical Archive ID BR-ABB02 and REDMG.2004.10

Digital Archive recipient Reading Museum

Digital Archive ID BR-ABB02 and REDMG.2004.10

Paper Archive recipient Reading Museum

Paper Archive ID BR-ABB02 and REDMG.2004.10

Project bibliography 1

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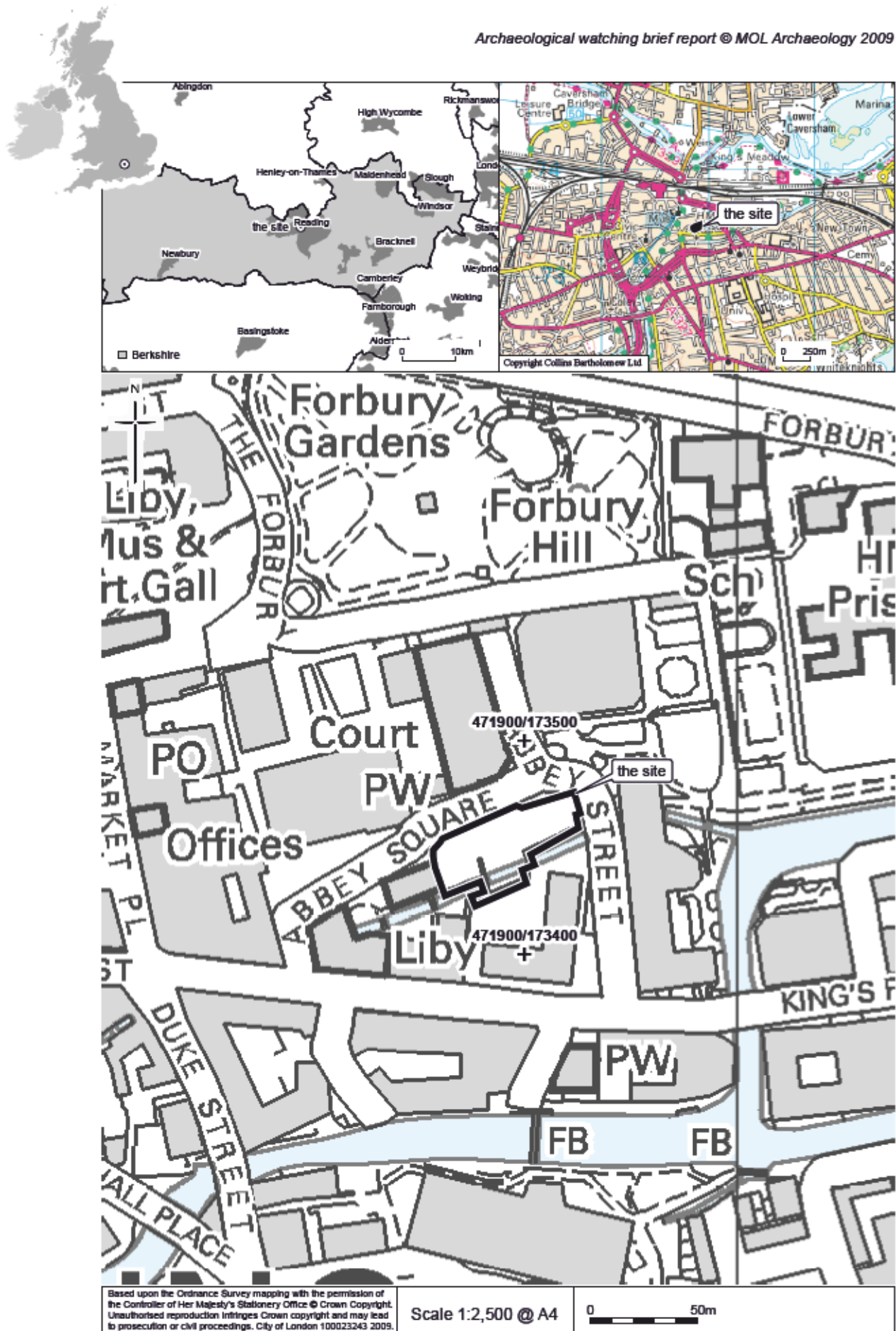


Fig 1 Site location



Fig 2 Watching brief areas on the site



Fig 3 Roman and medieval tile retrieved from ground reduction watching brief



Fig 4 Area for Tree Pit 1 north of the Holy Brook