ARCHAEOLOGICAL RECORDING AT TUDOR STREET, EXETER, DEVON, 2005-2007

Prepared for
Gadd Homes Ltd

by

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SECTION 1: FIELDWORK REPORT

1. INTRODUCTION

This report has been commissioned by Gadd Homes Ltd and presents the results of archaeological recording at 7 Tudor Street (SX 9157 9233; Fig. 1) and the adjacent site known as the old mill and old stables (SX 9154 9235). The fieldwork was undertaken by Exeter Archaeology (EA) between December 2005 and March 2007, and followed archaeological assessments of both sites (Collings 2003; Parker and Collings 2003). These assessments had been prepared as supporting information for the planning applications for redevelopment of both sites.

Although the development of the two sites was not linked, and undertaken under separate planning permissions (see sections 1.1 and 1.2 below), the Exeter City Council Archaeological Officer (ECCAO) suggested that the reporting of both sites could be combined. The report is divided into two parts: section 1 presenting the results of the fieldwork, and section 2 providing a post-excavation assessment of those results and recommendations for further analysis and publication. The latter, which also covers both sites, was required under section 5.1.4 of the brief provided by the ECCAO (Pye 2006).

1.1 **7 Tudor Street**

The work at this site was required by Exeter City Council (ECC) under condition 7 of the grant of planning permission (No. 04/1814/03, ECC) for the redevelopment of the site. The work comprised two elements: evaluation of below-ground deposits through the machine excavation of three trenches, followed by excavation and recording. The scope of work required for each element, including both site work and off-site analysis, reporting and archiving, was set out in method statements prepared by EA (Gent 2005a and 2005b) and approved by the local planning authority. Some off-site analysis was undertaken although reporting and archiving were undertaken in conjunction with similar activities for the old mill and old stables.

1.2 **The old mill and old stables**

The work at this site was required by ECC under condition 6 of the grant of planning permission (No. 05/1633/03, ECC), and condition 2 attached to the Conservation Area Consent (No. 05/1634/14), for the partial demolition and conversion of the buildings into residential use. The project comprised four continuous fieldwork elements:

- recording of the standing buildings (adding to the record made during the 2003 assessment) prior to demolition/alteration;
- evaluation of below-ground deposits through the hand excavation of nine trenches;
- watching brief during demolition and conversion of buildings; and
- watching brief and recording during groundworks.

The scope of work required, including both site work and off-site analysis, reporting and archiving, was set out in method statements prepared by EA (Gent 2006 for the building recording, watching brief during demolition, and evaluation, and Gent 2007 for the watching brief during groundworks) that were approved by the local planning authority.

As part of this phase of work, off-site analysis, reporting (this document) and archiving was undertaken for the fieldwork on both sites.

2. THE SITE

The site, which covers and area of 0.14ha, is located on the north-east side of Tudor Street in the parish of St Edmund on the Bridge. The north-east edge of the site is defined by the Higher Leat that also forms the rear boundary of properties along Tudor Street. One of the old mill buildings spans this watercourse. The site is bounded to south-east by the 'Tudor House', a late 16th-century timber house. The north-west boundary of the site was historically formed by a weir and overflow channel connecting the Higher Leat with the Lower Leat. Tudor Street crossed this channel below the weir on a small bridge. Both the channel and the Lower Leat have now been infilled. To the north-west of this overflow channel was the site of Bonhay Mills. Excavations by Oxford Archaeology in 2000-2001 exposed remains of 17th-century and later mills and buildings including early post-medieval dumped material behind a wooden revetment (Mayes and Hardy 2004).

To the north-east the ground rises steeply from the bank of the leat towards the Roman and medieval city wall, whereas to the west and south the land is flat, forming part of the flood plain of the River Exe. This area formerly contained several leats and watercourses that were infilled in the late 20th century.

At the time of the recording project the north-west end of the site was occupied by the buildings of the old mill and old stables, the former being retained as part of the development. These were last used as a university store and a garage respectively. To the south were the 20th-century offices of Sprague and Ouseley, which were demolished prior to the start of fieldwork.

The geology of the area is alluvium overlying Carboniferous shales and mudstones of the Crackington Formation, at a point very close to its junction with the with the Permian sandstones and breccias of the Whipton Formation (Bristow et al. 1995, 16, 29, figs 2-3). The site lies at a height of 9m AOD.

3. HISTORICAL BACKGROUND

Detailed histories of both parts of the site have been presented in earlier assessment reports (Exeter Archaeology 2003, Parker and Collings 2003). A summary is presented below, and will be discussed in more detail later.

The site adjoins and partially overlies the Higher Leat, which is likely to have originated in the 11th century (the Lower Leat probably being constructed in the 14th or early 15th century). During the later medieval and post-medieval period Exeter's economic focus was on the cloth industry, with most of this activity taking place on the floodplain of the river Exe below the Higher Leat.

The whole area lay within the medieval manor of Exe Island, which during the later middle ages was owned by the Courtenay family, Earls of Devon. Following the attainder of Henry Courtenay in 1538 it reverted to the Crown, and was granted to the

City Chamber by Edward VI in 1550. It appears that while the north-west extremity of the site, occupied by the old stables, was Chamber property, the remainder of the site was occupied by free tenants, and thus is not as well documented. There are indications, however, that this part of the site was, at least by the 19th century, divided into several properties.

The site may still have been undeveloped by 1587, although the weir and the overflow channel connecting the Higher and Lower Leats were already in place by that date. Development began at the end of the 16th century: the Exe Island bailiff's account for 1599–1600 records a rent of 12*d* paid by the merchant Henry Ellacot, a member of the governing City Chamber, for 'one garden newly incroched next to Hoopern Weare on the North and the garden of Zachary Wills on the South'. On Sherwood's map of the city, dated *c*.1625, a small building with a chimney is shown on the site of the old mill and old stables, along with further buildings building to the south-east. The positions of these buildings cannot be easily established, but the map appears to depict three ranges fronting Tudor Street, with further buildings to the south-east set back against the leat.

By 1699–1700 it was Lethbridge's assigns who were paying the rent for the above-mentioned property, but in 1701 Sir Thomas Jefford was granted a reversionary lease at the much higher rent of 51*s*, reflecting the fact that he had built a dwelling house on the property. The character of the development of the rest of the site at this date has not been established, but a depiction of the area by James Crocker in 1886 (EA 2003, fig. 8) shows surviving 17th-century houses along the street frontage. Further photographs of this street frontage have recently been published by Thomas (2008, pls 307 and 308).

A rental from 1741 suggests that the lease of the Chamber property was by then held by a Mr Williams. In 1748 John Williams, described as a 'whitebread baker' of St Mary Steps, obtained a lease of the property described as 'a Tenement, with a Courtlage, situate near Tudor's Bridge', that measured 72 feet by 36 feet. These dimensions correspond roughly with the tenement now occupied by the old stables.

In 1766 a lease was granted to the dyer Zachary Turner, with the dimensions slightly amended to 74 feet by 38 feet. The southern boundary (the old mill site) was described as 'lands late of Trevil Cross Esqr' and it may well be the case that Zachary Turner was occupying them for his dyehouse. The area to the south-east seems to have been occupied by Pinhays, and also by James Worthy's dye house, the latter being superseded by Pinhays' malthouse, described in 1819, along with a 'commodious dwelling-house', as being able to wet forty quarters of barley per week. This malthouse was described in 1838 as being at the back of the site, with three dwelling houses fronting the Tudor Street.

However, the probable use of the old stables with dyeing may initially have been of limited duration. By the 19th century the Exeter cloth industry was in decline, and by 1807, when the City Chamber granted another lease, it was to the veterinary surgeons James White and Nathaniel Poole Leigh. This was also to be a short-lived use of the site.

As well as showing the detail of the buildings, John Coldridge's 1819 map of Exeter also included the names of the principal occupiers. This provides the first positive indication of the use of the old mill site for dyeing. The map is damaged, but the site is annotated 'Ben(n)… Dye…'. This is interpreted, in the light of other evidence outlined below, as 'Bennett, Dye House'. The rear part of the building extended over the Higher Leat and presumably functioned either as a wheelhouse or a wash-house.

The old mill may be the property referred to in an 1804 sale notice following the bankruptcy of the dyer John Bennett. The auction took place at his house 'in the Island' and included his stock in trade. The mention of looms, slays and harnesses in this list may indicate that Bennett was also involved in the production of textiles in addition to dying textiles.

Despite his bankruptcy Bennett seems to have been able to resume his trade, since in 1817 another sale notice showed John Bennett's utensils and stock in trade being offered.

In 1825 the Chamber granted a reversionary lease of the site of the old stables to the brewers White Pinhey Crockett and Dawe, who, as seen above, already occupied the rest of the site. In 1838 this property was described as comprising two small front cottages and a 'large back stable courtlage &c', with the leaseholders being the brewers Salter & Owen. The adjoining property – the old mill – was described as a 'spacious cellar and dye house', valued at £22, owned and occupied by Evans & Co., chemists in Fore Street. This part of the site remained as a warehouse and stables until the 20th century.

4. METHOD

4.1 **Building recording**

A written and partial photographic record of the old mill and old stables had been prepared in 2003 (Parker and Collings 2003). This record was updated in light of new observations made following the vacation of the building by its occupants, and during the stripping out and demolition of the building, in particular the first floor of the old mill. Floor plans, elevations and profiles were drawn using a reflectorless EDM, with further details and annotation made by hand. A record was made of breaks in build and surviving structural features and fixtures and fittings of historic or architectural importance.

4.2 **Excavation**

The general method employed for all the intrusive excavation was similar for each phase of fieldwork, the major difference was that at 7 Tudor Street the evaluation trenches were machine excavated to the top of archaeological deposits whereas at the old mill and old stables the trenches were hand excavated.

The procedures were set out in a series of method statements (Gent 2005a; 2005b; 2006; 2007) approved by the local planning authority as the 'written programmes of work' required under the planning conditions. The standard Exeter Archaeology recording system was employed, consisting of:

1. standardised single context recording sheets, supplemented during the watching brief at the old mill and old stables by the use of daily watching brief record sheets;
2. survey drawings in plan, section and profile at 1:10, 1:20 and 1:100 as appropriate;
3. black and white print, and colour photography, the latter initially using colour transparency film, and later a high-quality digital camera;
4. labelling and bagging of finds on site, with unstratified post-1800 pottery being discarded; and
5. the assessment of deposits on site regarding a) the potential yield (if any0 of environmental and microfaunal evidence, and b) radiocarbon dating. Sampling procedures were undertaken in line with the current English Heritage guidance (Centre for Archaeology Guidelines no. 2002/01, *Environmental Archaeology*), and following consultation with the English heritage Regional Science Advisor.

5. EXCAVATIONS AT 7 TUDOR STREET (Figs 2-5)

Natural river gravels (natural) were exposed across the site, falling in height slightly from west to east. Relatively undisturbed and well-developed cultivated soil horizons (502, 510, 525), measuring approximately 0.5m thick, and dated by pottery to the 16th century, overlay these gravels over much of the site. The finds from both 510 and 525 also contained a group of residual earlier pottery that is water-worn. It is likely that some of these deposits originate from the leat, and may have derived from a construction/repair phase or cleaning of the watercourse. To the west, pockets in the natural were filled with thin silty deposits (593).

5.1 **The buildings**

The excavation revealed foundations of the primary and secondary phases of four buildings (A, B, D and E). Building A was located at the north end of the site, with its walls mostly laid directly into exposed natural gravels and silts. Building B was located in the centre of the site and constructed on a homogeneous 17th-century occupation layer, and the foundations of buildings C and D were cut through the cultivation soils and into the earlier alluvial deposit.

5.1.1 ***Building A***

This building was located within the north-west corner of the excavation area. The majority of the north wall had been damaged by the construction of a 20th-century concrete foundation, and its eastern wall lay outside the eastern edge of the excavation. There were at least three phases of activity associated with the building, although comprehensive demolition – some walls were only one course high – and 20th-century levelling of the site made detailed stratigraphic analysis difficult. All of the walls were constructed of irregularly coursed angular and sub-angular slabs of breccia, interspersed with fragments of mudstone, bonded with a silty clay ranging from yellow to brown in colour and containing occasional, small charcoal and red brick flecks.

The earliest walls (526, 528 and 532) formed a rectangular room (I), approximately 4.5m square. Wall 526 continued for a distance of 3m to the south-east of the building, where it was abutted by a later wall. There was no evidence of a scar at the

end of the wall for a return in any direction, although it is possible the wall forms the north-east wall of a second (southern) room to the south-west.

The second phase is represented by the extension of the building to the south. The west end of wall 528 was abutted by a T-shaped length of wall (529 and 531), creating a second room (II) to the southwest of room I. Wall 529 continued for a distance of 3m to the south-east of the building, mirroring the extension projecting wall 526.

During the third phase the building was substantially enlarged, creating a structure with a central room flanked by projecting wings that partially enclosed a small courtyard that measured 5m by 4m. Wall 527 was added to the south-east of wall 526. Although heavily truncated, the wall appeared to create a room (III), measuring 9.5m by *c.* 4.5m, along the east side of the building. To the south-west, a further wall (530) was attached to the projecting end of wall 529. At its west end this wall incorporated a small basement, measuring 2.6m x 1.8m, whose base was up to 0.7m below the surface elsewhere. This wall may also have formed part of an additional room (IV) to the south-west.

No internal surfaces survived, although within the courtyard and room IV the ground level had been raised with layers of silty clay containing gravel and slate fragments (567). This material probably formed a make-up deposit for a now-removed surface.

5.1.2 ***External features to building A***

Two wells (538 and 540) lay within the courtyard. The northern well (538) measured 1.4m in diameter and was constructed of a mix of coursed breccia, mudstone and bricks laid on edge. The bricks were of a fine orange fabric and measured *c.* 240mm by 100mm x 60mm. The well appears to have been deliberately backfilled, the pottery recovered from this infilling dating to the early 18th century. Well 540 was constructed of brick, measured 1m diameter and was excavated to a maximum depth of 0.7m. The well was filled by a homogenous ashy silt (568) that contained pottery dating to the mid to late 19th century. The difference of date of the infills probably implies that well 540 superseded well 538.

5.1.3 ***Building B***

The foundations of this building were constructed on a levelling deposit (550) consisting of reddish-brown sandy clays that contained moderate amounts of unabraded late 17th to early 18th-century pottery and animal bone. The moderate bone and pottery content of 550 may suggest that this material had primarily been collected in a midden and later redeposited as make-up for the construction of the building. The source of the material within this deposit is unknown, but the pottery appears comparable in date with that found within the well (538) associated with building A.

Building B appears to have been a simple rectangular structure, although the west end of the building lay outside the area of excavation. The walls of the building were constructed of roughly coursed slabs of mudstone and breccia bonded with a yellowish-brown sandy clay containing occasional flecks of lime mortar. The building contained two rooms, although it is possible the building was originally single-celled, with a later extension. The alignment of the south wall 580/538 differs in each room,

and is indicative of one room being secondary. The fragmentary nature of the walls meant that the exact relationship of the walls forming the eastern room (557 and 558) with the dividing wall (559) could not be established. However, the presence of surviving probable Tudor buildings on the street frontage until the mid 20th century it likely to indicate that the east room was added (or rebuilt) to the west room.

The eastern room measured 4.3m by 3.7m, and contained an entrance in the south wall at the southeast corner of the building. The entrance was defined by an external lobby represented by a threshold consisting of five roughly squared blocks of breccia. In the centre of the east wall (561) was a fireplace, measuring 0.7m wide by 0.25m deep, and with a surviving projecting southern jamb. To the rear of the fireplace, outside the building, a very shallow linear trench was exposed against the wall of the building. This feature probably represented a robber trench for the removal of the projecting stack. Its fill contained two sherds of 16th/17th-century South Somerset pottery. No internal or external surfaces survived.

5.1.4 ***Building C***

This building was located to the rear of the site, and to the south-east of building B. The building comprised a single room with internal dimensions of 5m by at least 3.4m; the northeast corner of the building was not exposed during the excavation, and the west wall was truncated by a 19th-century drain (dated by an 1860 farthing within its fill) and by the foundations of the former Sprague and Ouseley property. The single course of surviving foundations (walls 553 and 554) stood to an average height of 0.3m and comprised breccia blocks bonded in sandy clay, and incorporated a buttress at the southeast corner of the building. No associated floor surfaces remained.

5.1.5 ***Building D and the tannery*** (Fig. 4)

Building D was located in the south-east corner of the side, and continued southwards beyond the site. The north wall of the building did not survive, and its west wall had been heavily truncated. The surviving walls (545, 576 and 577) were constructed of breccia bonded in off-white soft lime mortar. The building appeared to contain (at least) two rooms, the north-east room being fully exposed within the excavated area. This room measured 6.8m x 3.5m internally, and incorporated a doorway in its northeast elevation.

The dominant internal features of the building were a number of water channels and three-sided stone and brick lined troughs. Three troughs were located adjacent to the building's south-western wall and two were fairly comparable in their dimensions and structural elements. It was possible to distinguish two distinct phases.

The walls of troughs 544 and 547 were constructed of irregularly-coursed breccia and contained a brick paved base (574) and cobbled surface (571) respectively. The south-western walls of both pits were constructed of a single block of breccia that had not been not been built into their main walls. This appears to have been a blocking feature when both pits went out of use. Trough (544) was aligned roughly NE-SW, measured 1.3m by 1.2m (0.5m internally), and had been heavily disturbed with only the upper courses of walling surviving. The trough passed through the south-east wall (508) of the building, and the fabric of the wall appeared to be contemporary with the building.

Trough 547, located 1.75m to the west of trough 544, was aligned just slightly differently from trough 544, and measured 2.25m x 1.25m. Only two of its side walls survived, standing to a height of 0.4m. The north-west wall had been removed at a later date when trough 572 was constructed immediately to the west. Associated with the trough was a slightly curving narrow linear (522). This feature entered the building through the east door and joined the east side of the trough. The feature measured 3.1m x 0.35m by 0.32m deep, and contained a series of uncollared ceramic pipes placed within its base manufactured by 'Browne & Browne' each measuring 0.4m in length with a diameter of 0.1m. None of the pipes had been caulked together but were simply abutted to one another.

The third trough/feature (548 abutted the external face of the southwest wall of the building), and measured 2m by 1.3m, slightly smaller than the basement feature (530) attached to building A. This feature was positioned directly between troughs 544 and 547, but at a lower level, and although not an integral part of the wall fabric may have been an addition made during the primary phase of construction (or possibly at an early later date). The surviving lowest course was constructed of breccia, and the feature had an internal cobbled base. No specific function for this feature could be ascertained, but the external nature of the feature and its direct position between troughs 544 and 547 may indicate that both were connected in some way.

Trough 572 was located within building D and its construction had cut trough 547. The feature measured 2.2m by 1.2m (0.6m internally), and had had been heavily truncated by a later concrete stanchion. (The inside of all three troughs within building D were sealed by fine ashy deposits.)

The remains of two water channels (504 and 546) were located within the south-east part of building D. Channel 504 was aligned NW-SE, measured 1.2m x 0.8m and was constructed of red brick that survived to a height of two courses. A section of brickwork had been formed into a small central channel that terminated as a curve. The exact course of this channel could not be ascertained due to its entire south-western end having been truncated by the Sprague and Ouseley building. Drain 546, located to the south of 504, was also constructed of brick and was aligned NE-SW, at right angles to the long axis of the building. Again its south-east end had been truncated, but it is possible that it passed through the south-east wall of the building.

Two further troughs were exposed elsewhere on the site. Trough (555) was built into south-east wall of building C. This trough was aligned north-south and measured 1.5m x 1m. Two sides of the trough were of a header bond, constructed to four courses, while the other two sides had been built using a single large fragment of breccia. No part of the trough was keyed into the wall of the building. The northern end of the trough appeared to have originally extended further to the north by 0.5m but had been infilled with red brick (582) and sealed with a render. Removal of this infill revealed that the primary build of the trough was constructed of a single skin of stretcher bonded red brick. Its base was brick paved, which appeared to have not been altered when amalgamated into the present later trough. Prior to being infilled with red brick, an ashy burnt lens had initially sealed part of the paving. The infilling of the primary trough may have been included as a possible step-access into the present secondary trough, suggesting that it was used for foot-tubbing.

To the north-west of building C, and parallel with it, were the truncated remains of another trough (551). This was constructed of red brick laid in a header bond, aligned northeast-southwest, parallel to wall 553, and measured 2.1m in length. Only the south-east side of the feature survived with a maximum width of *c*. 0.25m. The depth of the trough varied from one to two red brick courses, built upon a brick paved base that showed signs of having been exposed to heat. Patches of an ash deposit, comparable to that found within trough 555 to the south-east, sealed the base. Within the southern part of the trough was a slightly curved channel, 0.2m wide internally and 0.06m deep.

A large refuse pit (520) was exposed 10m to the west of the remains of building D. This pit was a minimum of 2.3m long by 1.2m wide by 1m deep, and contained two fills. The lowest (509) produced a large quantity of animal bone, horn cores, shell, and a sherd of 17th/18th-century South Somerset coarseware.

5.2 **The leat** (Figs 3 and 5)

A watching brief was maintained during works to the retaining wall of Higher Leat. This area was located to the north-east of the excavation described above and had not been excavated as, at the time, it was reported to be outside the area of disturbance from the new build. At least three main phases of leats pre-dating the 20th-century were exposed, with the earliest two phases represented by a series of a series of wooden stake revetments. A total of 403 pieces of wood were exposed, a small number of which were recorded in detail and sampled. The limited exposure of associated deposits has precluded a detailed stratigraphic analysis of the leat, and a summary of the results is presented below.

In general the stakes were orientated east-west along the line of the current leat edge, with rows of timbers clearly present at the centre and northern end of the site. In a deeper trench in the centre of the site a shallow feature (776), possibly representing one phase of the leat, had been excavated into an earlier alluvial deposit (777). The trench had been filled with silty sand (775). Along the edge of the feature was a series of vertically-set stakes (e.g. 700, 701), of which a total of 16 in the vicinity of the trench, appeared to form a row. Further stakes to the north and south may also form part of this sequence. The stakes measured up to 1.31m long with profiles of up to 135mm by 94mm, and each had an axe-shaped point. A variety of conversion methods (radially cleft, axe split, quartered, and whole converted) had been employed. Stake 772 was found within later bank material and may have been associated with this phase of revetment. The stake contained an iron rivet that passed through the timber, and also had a series of pegholes running along its length.

At the south end of the excavations a group of horizontally-laid wattles were exposed (e.g. 706, 812), located away from the present leat edge. Their position away from other stakes may indicate they are earlier and relate to feature 777. Wattle 812 was sampled, and produced a radiocarbon date (see appendix 1) of 521±53BP (1380-1460 AD at 95.4% probability).

These stakes were sealed by a 0.48m thick levelling layer (723) comprising redeposited gravel that contained a number of corroded iron nails and objects (small finds 101-108, as well as a strip of a lead window came. This deposit probably represents a levelling layer prior to the driving of the later wooden timbers.

The later revetment wall defined by stakes driven though deposit 723 was only partially exposed, generally in the north-east section of the excavation, although many more were found at the south end where the full width of this revetment (*c*. 2m), was exposed. The revetment was located approximately 0.4m to the east of the earlier revetment. The character of the stakes was identical to those described above. A number of the stakes were sampled, and a radiocarbon date of 484±36BP (1390-1470AD at 95.4% probability) was obtained from stake 712 (appendix 1). The stakes were covered by a series of bank deposits forming the side of the leat. These deposits were formed from silty clays and silty sands (741, 743).

The third phase of leat wall was constructed to the north-east of the earlier wooden stakes. In the centre of the site the side of the leat was defined by a wall (785) constructed of breccia blocks bonded in lime mortar. This wall was partially sealed by a cobbled surface (790). Either side of this fabric were dumps clay and silty sand (722, 729,744, 740, 727, 746), interpreted as bank material associated with the stone wall, and repairs to such a wall.

At the south end of the site the bank deposits were truncated by a series of mostly brick masonry (e.g. 781) that included a series of brick-lined culverts taking water from the Higher Leat into the site. Two of the larger culverts (762 and 786) were open, whereas the smaller culvert 760 retained a breccia capstone. A late brick surface (779, 789) was exposed at the south end of the site.

6. FINDS, *by J Durrant*

6.1 **Introduction**

The finds assemblage includes pottery, glass, animal bone, clay pipe and metals. These range in date from the Roman to modern periods. Most of the context groups are small in size, with context 509 a noteworthy exception. This context produced a large assemblage of post-medieval pottery, clay pipe, glass and animal bone. All the finds are summarised by quantity in Table 1, and described below. The finds were processed and catalogued by EA staff.

Finds category	Quantity	Weight
Roman pottery	5	34
Medieval pottery	88	1164
Post-medieval pottery	374	16400
Modern pottery	4	36
Animal Bone	349	5431
Clay pipe	31	322
Ceramic Building Material (CBM): Roman	4	156
Ceramic Building Material (CBM): medieval and post-medieval	34	2296
Glass	5	926
Metals	28	110
Shell	100	589
Worked bone	1	20

Table 1: Quantity and weight of finds by class of material. Weights to nearest 2 grams.

6.2 **Roman pottery and tile**
Five sherds of Roman pottery, weighing 34 grams, were recovered. These include samian and a flagon rim (context 723), which is in a very good condition. Three fragments of Roman tile were also recovered; weighing 156g. Only one is large enough to be identified; a fragment of tegula.

6.3 **Medieval pottery**
In total 88 sherds with a total weight of 1.164 kg were recovered. Eight contexts in total, together with pottery recovered form unstratified sources, provided material which is medieval in character. Cultivation soils, contexts 510 and 525, are 14th- or 15th-century in date, but contain residual 13th-century wares. Sherds from context 510 are water worn indicating that they have either been redeposited or have come downstream. Similar pottery to this was encountered from excavation deposits during 1988-90 at Cricklepit Mill. Imported sherds, dating to the 13th century, include a French Rouen jug, a North French green-glazed jug and a redware jug from Hampshire. There are at least two Saintonge green-glazed jugs, *c.* 1250-1450 from South-west France. Local Exeter ware jugs include vessels with thumbed bases and decorated iron stripes of mid 13th- to late 14th-century date. Chert-tempered ware cooking pots present have a long production life, dating from the 11th to late 14th centuries. There are Exeter and South Somerset products that are evidently 15th-century types in these groups.

6.4 **Post-medieval pottery**
A much larger sample of post-medieval wares (see Table 1 above) is available to study from this site compared to the medieval assemblage. In total there are 19 contexts with groups dating from the 16th to 19th centuries.

Occupation of the site continues from the late medieval period into the 16th century. Stratified imports include a Raeren stoneware mug sherd and a Beauvais yellow-glazed drinking jug. Amongst the unstratified pottery is a late 16th-century Frechen stoneware jug rim, a Tudor green-glazed cup and a 15th- or 16th-century Merida-type vessel handle, possibly from a costrel or jug. Stratified local coarsewares are South Somerset or Coarse Sandy ware products, and there is a single Totnes-type coarseware cistern.

There are four contexts that have ceramics that are 17th-century in character (501, 504, 513, 550). Two vessels are new South Somerset vessel forms - a ?water pot rim (504) and a thumbed rim jar with a horizontal handle (501). Two imported unstratified vessels of this period are significant. The first is a mid 17th-century continental decorated tin-glazed vessel and the second is an Italian tin-glazed polychrome decorated dish rim. This sherd from Montelupo in Tuscany is late 16th- or early 17th-century in date and is only the eighth excavated example found in Exeter.

Pottery from the 18th century is best represented by context 569, the fill of well 538. Containing 203 sherds, and weighing 11.678 kg, it is by far the largest single assemblage from the excavations and of some importance. The pottery, together with the clay tobacco pipes, date this feature to *c*. 1720-40 and it is obviously a domestic deposit. Notably, there are very few imported wares, with only five decorated tin-glazed Delft types. A single Dutch Delft lid (*c*. 1680) is perhaps a curated vessel.

Three vessels, including a punch bowl, are English delft dating to the 1st quarter of the 18th century. The fifth vessel is also English delft and dates between the years 1720-40. There are two German Westerwald stoneware forms (a mug and chamberpot), a plain English delft chamber pot, a Staffordshire salt-glazed tankard and a single large English stoneware vessel. This group is dominated by local coarsewares from the South Somerset kilns. Forms, some with diagnostic profiles, include numerous bowls, a chamber pot, cups, jugs and a colander. Both plain as well as slip and sgraffito decorated wares are present. There is a single North Devon sgraffito decorated dish, which is reconstructable. Groups of this period are not well represented amongst Exeter's archaeological collections, with only a single sizeable assemblage published (Allan 1984, 209). The pottery from this feature is therefore a significant assemblage and provides an insight into households and the local ceramic market at this time.

Three contexts (541, 568, 744) have pottery that post-dates *c.* 1780 and contain wares that are of little archaeological significance and do not warrant further attention.

6.5 **Tile (post-Roman)**

In total there are only 34 fragments of post-Roman tile, weighing 2.296 kg, all of which are roof furniture. Medieval ridge tile is represented by two examples, one from context 525, the second unstratified. Both are 14th- or 15th-century in date. Two further fragments (569, unstratified) are either late medieval or early post-medieval, and include a micaceous Totnes-type. Based on fabric and glaze, the rest of the collection is post-medieval in character. There is a single North Devon gravel-tempered ware type and several South Somerset products. The general lack of diagnostic features, such as crests, prohibits any close dating. Therefore the post-medieval assemblage is broadly 16th- to 18th-century in date.

6.6 **Animal bone**

A large quantity of animal bone was recovered, weighing 5331g. A significant proportion of the assemblage is comprised of horn core, with a large proportion from context 509, and a significant proportion of what are thought to be sheep long bones. This is an unusual assemblage thought to indicate an industrial process, possibly tanning.

6.7 **Shell**

Context 509 produced a significant amount of shell, preliminarily identified as four species: oyster, periwinkle, cockle and mussel. This is a large volume for a single context and it is currently uncertain if these result from domestic or industrial activity.

6.8 **Glass**

Five fragments of glass are present. A single sherd from context 510 is the base of a pale blue bottle and may be of Roman date. The remaining four fragments were recovered from context 509, and are all fragments of post-medieval green bottle glass.

6.9 **Clay pipe**

There are very few clay tobacco pipes present, 30 bowls and one stem in total. Apart from a single unstratified example, manufactured *c*. 1800-30, all derive from context 569, the fill of well 538. This feature contained 29 bowls and a single mouth piece. There is only one bowl type of *c.* 1690-20 date, the other 28 fall between the years

1720-50. Interestingly several appear to be unsmoked and one has the Exeter castle mark in relief on the left hand side of the bowl. This single marked example has a warped, perhaps as a result of over firing in the manufacturing process, and therefore a potential waster.

6.10 **Metals**
The copper alloy objects are all indicative of domestic use, including pins and a lace tag. Context 723 produced a number of iron objects of an industrial or architectural function, thought to include nails and pegs. Two items of lead were also recovered, a fragment of window came (context 723) and a token or seal (context 510).

6.11 **Worked bone**
A bone knife handle was recovered from context 556. It is well preserved and of post-medieval or modern date.

7. THE OLD MILL AND OLD STABLES (Figs 6-16

7.1 **The buildings**

7.1.1 ***The old mill*** (Figs 6-8)
The old mill consists of a two-storey brick warehouse aligned at right angles to the road, with gabled façade facing Tudor Street. At the rear of this range is a lean to with a mono-pitched roof, and beyond this a low, single-storey range bridging the leat.

South-east elevation
The old mill is constructed of brick under a pitched slate roof running from south-west to north-east. At the north-east end the roof terminates at a gable and the lean-to behind is roofed by a mono-pitched cover against the old mill roof. The ridge of the lean-to rises higher than the eaves of the old mill matching the eaves line of the adjacent old stables. The walls of the old mill, the lean-to and the old stables have been constructed on footings of breccia.

The old mill wall itself is constructed of red brick laid in English bond, bonded with an orange/brown sandy mortar containing occasional flecks of lime. The pointing of the brickwork varies across the elevation, with relatively modern pointing running the length of the elevation above first-floor level, and extending to the ground in a broad strip several metres wide at the south-western end. The remaining area of the wall has not been repointed and has a rough texture, suggesting that the building formerly abutted (or was abutted by) a single-storey structure set back from the street frontage. This conjecture is borne out by the OS 1st edition 1:500 map, surveyed in 1876. A small window lighting the first floor appears above the former roofline of the demolished building, roughly in the centre of the façade. This has a shallow arched head of brick. An original doorway communicating with the building survives below the window. The door itself is a modern replacement.

Beyond the doorway, an exceptionally rough area of brickwork, forming a vertical strip down the wall, may represent a wall scar, again connected with an adjacent building as it does not correspond with the north-eastern termination of the old mill. The roofline of this building forms an obvious smooth scar running horizontally across the elevation of both the old mill and the lean-to building. The walling to the

north-east of the scar is of better quality brick and seems to have been rebuilt. Following the demolition of the adjacent structures, the wall was been painted with cream masonry paint, and at the north-east end of this wall a doorway was inserted at a high level (the inside floor level) into the lean-to. This door was approached by modern, metal steps that were removed as part of the recent development of the adjacent site.

Beyond this the small, single-storey structure over the leat projects to the south-east. This building has a low-pitched slate roof and crosses the leat on a broad segmental arch of brick. The banks of the leat have been narrowed in the late 20th century by rock-filled wire 'gabions' against the leat walls.

South-west elevation
The south-west elevation is constructed of higher quality brick and represents a rebuilding of the frontage. There are no stone footings on this elevation. The brickwork is laid in Flemish bond with a grey lime mortar. This elevation has been painted with masonry paint.

The façade is of two storeys, with an additional storey in the gable. It is divided into three bays, with wide central loading doors on the ground and first floors served by an iron crane. The lower doors have been replaced and the lintels are obscured, but the original granite threshold survives, cut down at the centre to accommodate the modern doorway. This shows that the ground level has dropped slightly since the building was constructed. The first–floor loading door has a narrower opening, and this too has been replaced, with a modern window. Above the loading doors is a wide window in the gable with a shallow segmental arch of brick. The window has been replaced by modern ventilation grilles, but shows that there may formerly have been lofts within the roof.

The windows on either side of the doorways are also wide openings with arched brick heads, and were probably originally of three lights. Only the northern first-floor window retains a window frame of this type. The others are all replacements. The window to the north of the main ground-floor doorway has been cut down to the ground and converted into a wide doorway; only the southern jamb survives.

The crane is a good example of its kind and a rare survival in Exeter. It pivots on a vertical axis to enable it to be swung into any position and can be set flat against the wall when not in use. In addition to the main central pulley at the end of the boom, there is a further pulley set within an arched opening in the wall, by which the crane would be operated from the interior of the building. There are two subsidiary, horizontal, pulleys on either side of the opening, perhaps to prevent the rope from slipping from the pulley or abrading, or being abraded by, the side of the opening when the crane was used obliquely. The boom is braced by a curving bracket strengthened by a circular roundel and additional arched braces; the whole composition resembling a gothic spandrel. This detail is very similar to the spandrel ornaments of the cranes on the 1830s warehouses at Exeter Quay and Canal Basin. The crane may thus date from the early 19th century.

North-east elevation
The north-east wall of the old mill was formerly obscured by adjacent buildings and is now mostly covered with modern render. The wall is constructed of red brick, laid in English bond. On the ground floor a large, modern, metal-framed window has been inserted.

Interior
The interior of the building has been almost entirely obscured by modern cladding. Some small areas of exposed brickwork are visible; these have been painted with modern paint. The ground floor is divided into four bays by three ceiling beams, originally supported by cylindrical iron columns, without moulded capitals. These terminate at plain, square plates by way of imposts. Four such columns remain, although sockets within the ceiling beams provide evidence for a further two columns. The columns are divided into two rows, one along the central east-west axis of the building, the other to the south. There is no evidence that a corresponding northern row of columns existed. There are later partitions in the western corner of the room, defining a small office and the entrance and staircase to the upper floor. A further partition defining modern lavatories lies against the north-west wall, lit by a modern window from the courtyard. There are no other internal divisions.

The rear wall of the main old mill has been rebuilt. The wall is pierced by a tall, narrow opening with a semi-circular arched head, hidden above the false ceiling of the lean-to. Beyond this opening is a wide flight of slate steps that gives way to a later extremely narrow flight running at right angles to the earlier flight along the rear wall of the old mill. The floor area within the lean-to is approximately 1m above that of the old mill. To the north of the opening are two blocked large flat-headed windows. Near the top of the wall original wooden wall plates survive. Above this level the gable has been heightened to the apex, indicating that at one time the roof was hipped.

The roof of this area is partly visible above a false ceiling inserted within the lean-to. This roof has three bays supported by trusses resting on braces springing from the rear wall of the old mill, and resting on piers forming part of the north-east wall of the lean-to. The roof is neither plastered nor whitened, although the walls are whitewashed to the roof showing that the roof was formerly open. An iron skylight in the roof has closely spaced glazing bars of an unusual flat profile and is fitted with extremely thin glass. This may be contemporary with the building. There was formerly access between the piers through the north-east wall into the building overlying the leat, but this has been blocked. There was also, formerly, access from the lean-to into the old stables, but this has also been blocked off with the insertion of a brick wall.

The first floor is approached by a staircase rising from a small hallway in the western corner of the building. This floor has been entirely refurbished and few original features and finishes are now visible. The walls are now mostly obscured, although some unplastered areas remain which show that this plaster may not have been the original treatment. All of the existing internal partitions are modern. The pulley system for the operation of the crane remains in the front wall.

The ceiling to the fist floor is supported on four unmoulded beams crossing the width of the building and dividing this storey into five bays. These form the tie-beams of the

roof trusses, into which a king post is tenoned and secured by wedges. Shallow-pitched principal rafters run from the tie-beam to meet the sides of the king post. There is a plank ridge and two rows of through purlins. Most unusually, the roof timbers appear to be neither pegged nor bolted. The lack of straps or bolts securing the base of the king post, together with the use of wedges may indicate that the king post is treated here as a compression member, a feature of early king post roofs. Several braces are visible in the ceiling, and these provide reinforcement at weak spots in the masonry. The roof is lit by skylights, which were visible on the exterior.

7.1.2 **The stables** (Figs 6, 9-11)
The stables consist of a two-storey, double-gabled range facing the courtyard and backing onto the Higher Leat. The property extends into part of the lean to at the rear of the old mill, and incorporates the range bridging the leat. The courtyard in front was formerly occupied by industrial and domestic premises. These have all been demolished, with the exception of the 19th-century boundary wall with the former overflow channel to the north-west.

South-west elevation
The main front of the building is of good quality brickwork laid in Flemish bond and bonded with a soft, light-brown sandy lime mortar, and represents a rebuilding of an earlier elevation. It presents a double-gabled elevation to the courtyard with relatively low-pitched slate roofs. The area of the fenestration is small in proportion to the size of the building, the windows tending to be small and almost square in shape. Each gable originally contained a ground- and a first-floor window roughly central to the gable. The two openings in the northern gable survive intact, whereas the windows in the southern gable have both been enlarged.

The first floor window in the southern bay has been converted into a loading door by extension both above and below the original lintel and sill. This opening now contains a reused, 19th-century, five-panelled door that is too large for the opening. The adjoining window in the northern bay is a simple casement window, probably a 19th-century replacement.

The ground-floor window in the south bay has been enlarged sideways, with some sympathy for the original character of the opening. The flat-arched brick head has been extended to the south and the original window frame left in place, with a modern window inserted alongside to light a lavatory. The early window frame is of pegged construction with a central mullion forming a two-light window. Each light is closed by three closely-spaced vertical bars. The interior of the window is chamfered and its exterior rebated, yet there is no evidence for primary glazing.

In the northern gable the ground-floor window is of similar form, but is turned through 90° so that the mullion becomes a transom running horizontally across the window. The bars also run horizontally. The upper half of the window has a tilting subsidiary frame that is hinged at the transom to open inwards. This is divided into two glazed panes. The lower light has a crude, inserted mullion and is also glazed. It is interesting to note that the present glazing appears to be tertiary; traces of a mortise for a glazing bar are visible in the present sill, transom and in the soffit of the frame. This would allow the window to be glazed by the insertion of four small panes in the external rebate in front of the bars. It is probable that this window has been reset in

this position; that it was originally unglazed like the southern window, was then glazed while in its original position and subsequently rotated, reset and reglazed with an opening light to provide a ventilator. This adaptation was possible because the window is so nearly square. In its present position the sill is slightly obscured, which strengthens the conjecture that this is a reused primary window frame.

At the centre of the façade is a wide, double door, which has been cut through the wall, replacing two earlier doorways that related to the division of the interior by a spine wall. The flat-arched brick head of one of these doorways is visible from the inside, above the modern steel lintel. The present wide doorway is probably a 20th-century addition.

Part of the façade of this building, including the unglazed window in the southern part, was formerly covered by a lean-to against the wall of the adjacent old mill. The scars of three separate rooflines relating to this building may be traced on the elevation of the old stables, suggesting that it may have had a long life. The façade has been painted with masonry paint.

North-west elevation
The north-west wall of the old stables is very plain and contains no window or door openings. This wall formerly looked out onto the weir and overflow channel connecting with the Lower Leat. The channel has been infilled and any early masonry in the leat walls has therefore been buried. The wall is constructed of a mixture of header bond and English bond and the brickwork is very crude. The eaves and the south-western façade are of much higher quality brick and are clearly part of a later rebuilding.

North-east elevation
This elevation is very difficult to approach, since the northern bank of the leat is overgrown, and the wall rises directly over the leat wall. The wall is constructed of irregular, red-brown bricks, and is contemporary with the crude brickwork of the north-west elevation. It is clear that the gables of the building were rebuilt in a higher quality brick when the present roof was constructed. The openings in this elevation are much larger than those in the main elevation to the yard. Both the northern and southern sections of the building appear to be of the same phase.

Despite documentary evidence for a large wheel of 18 feet diameter there are no obvious axle holes or scratch-marks which might relate to such a device. Neither is any evidence currently visible of sluices, bridges or other features connected with the control of the water flow. Two blocked doorways in the wall suggest that the leat was directly accessible from this part of the building and that water management features of the kind mentioned may well have existed. It is possible that the wheelhouse occupied the site of the present building overlying the leat. The leat walls beneath the arch are not obscured by modern gabions and it is possible that such evidence may survive here. A step, offset or chase in the leat walls can just be made out at the junction of the two buildings.

Interior
The interior of the building was formerly divided into two halves by a brick spine wall. This is not bonded into the rear wall of the building, showing that the two halves

of the building were constructed in one phase. This detail also suggests that the spine wall is a later addition to the original structure. The spine wall may be contemporary with the rebuilding of the roof, which is supported upon it, and also of the main frontage and gables.

The spine wall has been partially demolished to allow the insertion of the wide, central doorway in the south-west elevation. A girder has been inserted at first-floor level, to support the remains of the wall above on the first floor. The end of this girder rests upon the steel girder forming the lintel of the doorway. The ceiling beams and joists pre-date this alteration and formerly rested in the spine wall; they are now supported upon the inserted girder.

The ceiling beams divide each half of the interior into three bays. Several of them contain redundant sockets for earlier joists and have been reused in this context, perhaps from earlier floor structures within the present building. One of the beams is badly cracked and is supported by a modern prop. The joists are exposed and aligned NE-SW, resting on the tops of the beams and staggered in each bay. These beams have been reused and are associated with the insertion of the spine walls and the rebuilding of the south-west elevation. The earlier joists were situated at a slightly lower level and were aligned NE-SW, resting on the north-east elevation of the building. It is possible that some of the beams in the current ceiling were reused from the earlier building. The boards of the floor are exposed and the whole ceiling structure has been coated with many layers of whitewash. Hatches are incorporated into the ceiling immediately within the present entrance, one in each half of the building. These hatches are extremely complex and seem to be secondary features. They incorporate several (possibly) reused timbers, one of which is cut into a scalloped edge and fixed diagonally across part of the ceiling. This is certainly not intended as a decorative feature, but its function either in this or any other context is unknown.

The rear wall of the building is clay-bonded and represents one of the earliest parts of the present building. In the rear wall of the northern half of the building is a large window with an ovolo-moulded frame and, adjacent to this, a very low doorway opening into the leat. There is an identical doorway in the southern half, but both have been infilled using concrete blocks. These doorways must have led to bridges over the leat, and could have given access to sluices associated with the waterwheel, possibly located downstream (see above). There must have been several sluices controlling water (a) to the waterwheel, and (b) around the waterwheel in a bypass channel to mills further down the leat. Additionally, the bridges may have provided access to the hillside between the leat and the city wall, which historic maps such as John Roque's 1774 map (Exeter Archaeology 2003, Fig. 4) show as supporting tenterhooks for drying cloth. This interpretation is supported by the fabric of the buildings, which do contain evidence for drying lofts used in the dying process.

Close to the southern jamb of this latter doorway is a vertical chase in the wall, which seems to have housed a vertical post. This might have been a bridge post connected with some form of machinery; unfortunately neither the post itself nor any other evidence for further timbers survives. Near this is a small, arched opening in the wall surmounted by a raised pier of masonry forming a chimney shaft. The opening is probably not a 'domestic' fireplace for heating, but may be connected with a furnace

or forge. The feature is integral to the original fabric of the elevation. It was later partially buried by the raised floor level in this area (see below).

The low height of the lintels of the doorways in the rear wall suggests that the levels of the floors may have been raised. The present floors are probably of late 19th- and early 20th-century date and show much evidence of the layout of the building at that time. The scar of the demolished part of the spine wall is clearly visible in the floor, infilled with concrete blocks. The two halves of the building were themselves divided into two sections by central drains. The innermost areas of the floor, flanking the spine wall and immediately within the entrance, are of grooved granite blocks. The flooring in the north-western part of the northern half of the building was of granite stone setts, divided into four stalls, each with a central drain. The divisions between the stalls had been removed, but had brick footings. The corresponding section of the southern part of the building is of a patent 'metallic' flooring, having the appearance of raised, square paviours and providing an extremely durable surface. This had a manufacturer's stamp of 'Hamblet'. In the south-eastern corner of the building is a small area of cobbled flooring. The drains in both parts of the building are also formed of metallic flooring, but have been infilled with concrete. At the southern end of the building the floor is raised into a platform, with retaining walls of concrete blocks and concrete floors. The small lavatory in the southernmost corner also has a concrete floor.

At the junction of the two old stables and the old mill is a brick pier that seems to abutt the rear wall and has a pale-coloured sandy mortar. At its summit this pier supports a timber lintel thrown across to an adjacent, but more modern pier built against the wall of the old mill. A further lintel links this to another pier beyond. These lintels are just below eaves-height and support the ends of the tie-beams in the roof. The doorway linking through into the lean-to at the rear of the old mill is a 19th-century opening, modified during the 20th century, and has rounded brick corners. This is closed by a glazed door, reused and cut down at the base. To the west of this opening is a blocked doorway into the old mill, below a similar opening on the first floor (see below).

First floor

The first floor is approached by modern metal steps from the platform in the eastern corner of the building. At this level the side wall of the adjacent old mill and lean-to are visible and openings between the buildings can be discerned. In the middle bay is a hatch or doorway that communicated with the lean-to at a high level. This hatch appears to retain its door, but is concealed by shelving. The floor in front of this opening is secondary, at a raised level. The roofline of the lean-to can also be observed in this bay. In the adjacent south bay a blocked doorway formerly communicating with the first floor of the old mill is visible. These openings imply that the buildings shared a common owner and use at certain periods, and that goods, materials or people could circulate from one building to another.

The first floor is still divided by the spine wall, which is pierced by a narrow doorway with a timber lintel. The jambs of this doorway have been cut back to widen the doorway, forming a curious corbelled arch. The northern part of the first floor consists of a single large room, from which a small office has been subdivided in the western corner by a modern screen. In the north-east wall are the remains of a two-light

mullioned window. This has a stout wooden lintel, probably of oak, and a substantial timber frame. The frame is ovolo-moulded and apparently of softwood, onto which are attached a pair of internal shutters. These do not cover the full height of the window, and are probably secondary features. No trace of any glazing is visible, but the frame contains notches for removed glazing bars.

The roofs of both parts of the old stables are divided into three bays by trusses of the same design as the old mill. There are four trusses in total, and a plank ridge and a single set of slightly trenched through-purlins in each plane of the roof. The two trusses in the northern part of the building are racking badly towards the south-west. The south-western of these trusses has a bracket fitted to the tie-beam with a housing for a transmission shaft. A corresponding bracket may be seen on the front wall of the building just below the gable; however this is offset slightly to the north-west and was perhaps moved as a result of the construction of the office in the western corner of the room.

Lean-to
The property boundary of the old stables currently wraps around the rear of the adjoining old mill to include part of the lean-to and also the small building standing over the leat. The lean-to is entered by a wide doorway with rounded brick corners, as described above. This part of the structure has been converted into an office and its walls and roof are obscured by modern cladding. There is a further wide opening, with similar rounded brick corners, survives between this building and that over the leat. The wall with this opening is a late 19th-century feature.

7.1.3 **Building over the leat** (Fig. 12)
This is a small, rectangular structure of a single storey only, latterly used as a workshop and store. This room originally contained a single space, but is now subdivided by modern partitions. The walls on all four sides of this room are of brick, in English bond, and represent an addition to the old mill building; however there are vertical breaks in the south-western wall, parts of which are in a different bond. These sections of wall represent infilled openings between brick piers. They may have been inserted to separate this building from the lean-to, with which it had been fully integrated. A blocked doorway in the centre of one of the panels, however, shows that communication between the two areas was retained for a period.

There are window openings, with wide relieving arches, in the north-western and south-eastern walls. The latter is blocked, and the former has been altered to create a smaller window, probably when a spray booth was added in the 20th century. The floor is covered with patent ‘metallic’ flooring, with a drain offset to the south-west and running north-west/south-east. The room retains some stable fittings; it was at one time divided into stalls by large, lightly chamfered timber posts. One such post survives, with the remains of a mortise for the stall work in its north-eastern face. The scars of seven further posts have been identified in the floor; these appear to have formed part of a partition defining two loose boxes at the south-eastern end of the room. Curiously, the door of the loose box remains *in situ*, folded against the south-west wall. This is an excellent piece of joinery with a diagonal brace and a metal grille in its upper part.

The roof of this building is a low-pitched slate cover supported on four king-post trusses of conventional form. These trusses have tie-beams supported by king posts to which they are attached by vertical bolts from the undersides of the ties. The principal rafters meet at the sides of the king posts and are braced by diagonal braces from the feet of the posts. There is one level of purlins on each side of the roof. These are simply rested on the upper surfaces of the principal rafters and supported by triangular cleats.

7.2 **The excavations at the old mill and old stables**

7.2.1 ***The old mill*** (Figs 13-14)

Four evaluation trenches (nos 4-7) were excavated within this area. These were followed by a watching brief during the construction phase, which comprised minimal reduction of the uppermost archaeological deposits (to avoid impacting on the buried archaeology), and excavation of deeper service trenches in the northern part of the building.

The earliest deposit, dated to the 16th or early 17th century, was exposed in trench 7 and consisted of a dark brown silty clay garden soil (1037). In the adjacent trench 6, a further garden soil (1041) was exposed, probably dating to the second half of the 17th century. These deposits predate the construction of the old mill.

Layer 1041 was overlain by a wall (1017), constructed of breccia with a little brick. The wall aligns with a brick pier within the fabric of the old mill and probably represents the footings for a removed internal division. To the north, and following the construction, of wall 1017 the ground level had been raised by at least 0.4m. No contemporary surface within the old mill was located.

The earliest industrial features were a series of surfaces, exposed in various parts of the building. In trench 6, to the north of wall 1017 was a cobbled surface (1016) that probably dated to the late 18th century. In trench 5 a surface of brick and cobbles (1008/1009) was exposed. The surface rose uphill away from Tudor Street, and had a brick edging on its eastern side. This edging would imply that the surface formed a deliberate pathway within the building, and may perhaps reflect the position of a loading door in the former elevation of the building. This surface probably dates to the (?early-mid) 18th century. Between these trenches a small area of cobbles (1113) was exposed within a service trench.

In trench 4 part of a base for a copper vat was exposed (1025). The rectangular flue end, which measured 0.86m long by 0.4m wide by 0.34m deep, was fully excavated, and the curving support for the vat was partially uncovered. The support was blocked off from the flue by a block of breccia and a piece of tile. The vat base was constructed of bricks, four-five courses high, laid on a brick base. This size and construction technique is comparable with other excavated examples in Exeter (as at Exe Street, Shooting Marsh Stile and Lower North St). No dating evidence for the construction of this feature was recovered. Finds from its infill (1021) included a large glass bottle and stoneware cider jars, the latter dating from the mid 19th century. The presence of these vessels is consistent with the abandonment of the dye works and the use of the site by the City Brewery.

To the south and west of the vat base a brick surface was partially exposed (1026). To the west of the vat base the surface incorporated an L-shaped void. This void had been partially infilled with brick. The surface appeared to be contemporary with the vat base and probably represents an associated (?raised) working area or platform.

In trench 7 part of a structure (1035) constructed of breccia and brick was partially exposed; the southern end had been truncated by the construction of a later service trench. The structure comprised an east-west aligned wall with projections, two of which were uncovered, to the south. The structure survived to a maximum height of 0.45m. The structure was crudely, though solidly, constructed, without bases between the projections. The feature is therefore unlikely to represent a vat base, but may form a footing for associated machinery. The feature could not be directly dated, although it had been constructed through 1037, dated to the 16th or early 17th century, and was overlain by deposits of 19th-century date. To the north of the structure was a parallel wall, 0.2m wide, constructed of breccia and brick. This may represent a buttress supporting 1035, or part of a raised working surface similar to 1026.

Across the southern half of the building the various features described above were sealed by a brick surface (1000-1002). In the north-western part of the building the surface had been removed when the ground level was reduced during the 20th century; to the north of this area (the bricks had been replaced with concrete). The bricks were stamped 'J Manley', and were laid in stretcher bond. Set within this surface were two features, a socket for a former partition, and remains of industrial scales (1004). These comprised a cast-iron box, with internal spring mechanism, and socket for a post and gauge. Adjacent to the scales was a brick- and wood-lined pit. There was no direct dating evidence for the surface and a rapid investigation of documentary sources has not identified the manufacturer. However, the surface appears to be contemporary or later than the granite base (1004) supporting columns associated with the 19th-century refurbishment of the old mill. The bricks were overlaid by a thin modern bitumen surface.

In the south-western part of the building part of a brick surface (1110) was exposed in a service trench. The surface was uncovered a depth of 0.5m below the level of ground reduction elsewhere. Its relationship to other features is unknown, although its depth relative to brick surface 1000-1002 indicates some form of split level during the later use of the building. (This could explain why this area was lowered during the 20th-century use of the site.)

7.2.2 ***Area behind the old mill*** (Fig. 14)
Due to the presence of a thick concrete slab this area could not be evaluated. During construction, the area was machine excavated under direct archaeological control, with hand excavation and recording of features.

The earliest deposit in this area was a dump of blue slate fragments in mid brown clay (1137), partially exposed in the foundation trench for a new retaining wall. This deposit may represent early bank material against the side of Higher Leat. This was overlain by a thick levelling layer comprising reddish-brown silty clay with abundant volcanic trap fragments, and occasional slate, charcoal and blue slate fragments (1136). At this level a 4.35m length of brick wall (1133) was exposed. Against the south-east side of this wall was a hard mortar floor surface (1134). The wall had been

truncated by the construction of the south-east elevation of the stables, and must therefore pre-date the known industrial activity on the site. It is possible that the wall forms part of a short-lived building constructed in the 17th century.

The wall forming the south-east elevation of the stables overlay a NW-SE aligned wall (1128) constructed of volcanic stone with rare use of breccia and brick. This wall probably forms one side of the leat, but since its south-west elevation was rendered may also have formed the rear wall of a building now partially defined by the old mill. To the south-east of this wall a small brick pit was partially exposed (1126); the feature continued under the edge of the excavation to the north-east and must have been constructed against the side of the leat. The pit was constructed of brick, three courses high, with the sides capped with pan tiles of 18th-19th century date. A contemporary brick and cobble surface (1125) was exposed, incorporating a drain along the south-east side of the feature.

The pit and surface were overlaid by a thick band of levelling material derived from a ?16/17th-century cultivation soil that incorporated some demolition material. This soil was truncated by a large circular feature (1116) with an internal diameter of 1.3m. The feature was constructed of brick with a bonded in a soft light yellow lime mortar; the inside face was angled, with a blocked opening on its south-east side. The base was curved. As with the earlier pit 1126, this feature was only partially exposed, and must have been constructed against the side of the leat.

The pit was truncated by one of two contmeporary brick culverts (1118 and 1120) taking water from the leat onto the site. The former was aligned at a right-angle to the leat, with its south-west end truncated by the 19th-century rebuilt north-east gable wall of the old mill. The capstones of the leat were breccia blocks, but two pieces of a broken limestone artefact (small find 151) were also used. These pieces displayed a small groove and may have formed part of a small crushing implement. Culvert 1120 initially followed the same alignment before turning 90^0 to the north where it had been truncated.

These drains were sealed by a brick surface (1115) that sloped downhill to the northwest. The surface was heavily truncated including by the 19th-century rebuilt north-east gable wall of the old mill. This was sealed by a distinctive levelling layer of light orange stiff clay (1124) that might have been a make-up layer for a removed surface. This layer was truncated by the construction trench (1129) for a small northeast-southwest aligned brick culvert. Above this was another surface of cobbles (1109) that were contemporary with the rebuilding of the northeast gable wall of the old mill. The surface incorporated a flight of brick stairs with slate treads down into the old mill. This surface was directly overlaid by the concrete slab.

7.2.3 ***Old stables and courtyard*** (Figs 6 and 16)
Five evaluation trenches (Nos 8-12) were excavated within this area, followed by a watching brief during the construction phase. Limited ground reduction took place only along the front half of this area in order to avoid an impact on the buried archaeology), followed by excavation only of deeper service and foundation trenches.

The earliest deposit was exposed in trench 9 an consisted of a compact mid brown clay and blue slate fragments (1058). This deposit may represent the tail of a bank of

the leat. This deposit was overlain by a series of cultivation soils (1055 and 1056, and 1049), the former dating to the 16th and early 17th century, the latter to the period 1620-1650. Cultivation soils pre-dating the industrial activity on the site were also exposed in trench 10 (context 1075 dating to the period 1680-1720), and trench 8 (context 1054 dating to the period 1680-1720).

Within the old stables, no early industrial surfaces were exposed. However several levelling layers (1046, 1052, 1056, 1061, 1062, 1063, 1073 and 1076) associated with industrial activity were exposed, dating from 1690-1720 onwards. In trench 9 part of a small pit (1048), contemporary with the earliest deposits, was exposed. The pit was filled with brick rubble and fragments of lime mortar (1049), and was probably associated with the construction of one of the earliest industrial buildings on the site.

In trench 10 parts of a pit (1067) and a posthole (1064) were exposed. The former may relate to industrial activity, whilst the latter may have been associated with an early phase as a stable.

The only surface within this building was the 19th-century stable surface described above. Contemporary with this surface was a well, constructed of brick and capped with two large slate slabs.

The courtyard is depicted on 19th-century maps as containing a covered entrance from Tudor Street flanked by two buildings, to the rear of which was another building along the side of the old mill. Further structures were attached to the north-west boundary wall.

The only evidence for the range of buildings along Tudor Street was exposed in a service trench in the south-east corner of the courtyard. Under the pavement a NW-SE aligned wall constructed of large breccia blocks (1143) may represent the footings of the front wall. To the east, a parallel wall (1142) was constructed of breccia and brick. This wall abutted the north-west wall of the mill, and may represent a rebuild of the front wall of the courtyard. This wall was superseded by an L-shaped wall constructed of brick (1141).

The footings of the building behind this range, and attached to the old mill were exposed. These footings (1145) were constructed of brick laid in Flemish bond, and appeared to post-date an earlier wall (1146) that was constructed of bricks laid in header bond. A heavily-truncated wall constructed of brick and breccia (1097) in evaluation trench 11 may form part of the same structure. Part of an internal concrete surface of this building survived, and was exposed in a single service trench.

The boundary wall between the site and the leat overflow channel was a brick wall laid in stretcher bond (1139). The northeast end of this wall had been truncated by the refacing of the south-west wall of the old stables. Two structures had been constructed against this wall. The western building (1144) measured up to 1.8m long by 1.4m wide, and was constructed of irregularly-laid brick. The lowest two courses of the building survived. Fragments of the eastern building were exposed. The south-west wall (1140) was constructed from frogged red bricks and large breccia stones. The latter may have formed pads for removed timber piers with the bricks being later infilling. The south-east wall of the building was only exposed in evaluation trench

11, and was constructed of a mixture of granite, breccia, limestone and pebbles. Following demolition of the building this wall appeared to have been retained as a kerb within the courtyard surface. A modern concrete surface (1081/1147) was exposed within this building, overlying earlier services.

Within the courtyard, a series of brick (1079, 1086, 1084), cobbled (1060, 1083, 1101) and granite sett (1059) surfaces were exposed. All dated to the period after the late 18th century. The granite setts survived outside the entrance to the old stables, and may be contemporary with the granite setts used inside this building.

8. FINDS, *by J. Durrant*

8.1 **Introduction**

The finds assemblage includes pottery, glass, animal bone, clay pipe and metals. The finds are summarised by quantity in Table 2, and described below. The finds were processed and catalogued by EA staff.

Finds category	Quantity	Weight
Roman pottery	1	2
Medieval pottery	6	14
Post-medieval pottery	103	1612
Modern pottery	84	1838
Animal Bone	108	1642
Clay pipe	74	270
Ceramic Building Material (CBM)	18	8870
Glass	6	1912
Metals	2	2
Shell	3	20
Slate	1	50

Table 2: Quantity and weight of finds by class of material. Weights to nearest 2 grams.

8.2 **Roman pottery**

A single sherd of a fine ware beaker rim was recovered from context 1049. It is probably mid- to late-Roman in date. It is small in size and slightly worn.

8.3 **Medieval and post-medieval pottery**

There are only six medieval sherds present in this collection, all of which are residual in later contexts. The post-medieval assemblage derives from only 25 contexts, and although modest in size (see Table 2 above), provides sufficient dated material to gain an overview into the occupation of this site. The earliest indications of use, late 16th or early 17th century, derive from contexts 1037 and 1055. A decorated tin-glazed earthenware dish rim of probable Spanish origin (1037) is unusual. The main phase of activity, based on the finds evidence, begins in the late 17th century. Groups containing imported North Holland slipware, German Westerwald stoneware, decorated Delft tin-glazed earthenware and local South Somerset wares are typical products for collections of this period. There are two tobacco clay pipes of *c*. 1690-1720 date associated with these contexts. At least 15 contexts produced material of a later date. The presence of Creamwares and Transfer Printed wares and a clay pipe of *c*. 1800-30 manufacture indicate continued use into the late 18th and 19th centuries.

8.4 **Tile**
All but one of the tile fragments are glazed roof/ridge tiles, probably made in South Somerset area and of post-medieval date. A single fragment of modern pantile was also recovered.

8.5 **Clay pipe**
A total of 7 clay tobacco pipe bowls and 64 stems, with a weight of 270 grams, were recovered from 15 contexts. Only the bowls are closely datable and have an overall range of the mid-17th to early 18th centuries. Two, from contexts 1046 and 1049, are *c*. 1640-60 in date, two are *c*. 1690-1720 (1024, 1075), one is *c*. 1720-50 (1007) and one is *c*. 1800-30 (1144).

8.6 **Animal bone**
Animal bone was recovered from many of the contexts and is thought to derive from a variety of species including cattle and sheep. The bones are probably domestic refuse, although one fragment retains a yellow stain, possibly a pigment.

8.7 **Glass**
The glass assemblage is small and mostly comprises green bottle glass of post-medieval date. A single sherd of window glass was found in context 1024.

8.8 **Metal**
A single copper alloy pin was recovered from context 1031. It is of domestic use.

9. DISCUSSION

9.1 **7 Tudor Street**
The watching brief exposed a series of deposits and structures associated with the development of the Higher Leat, which had not been previously investigated at the adjacent Bonhay Mills site. The earliest exposed leat took the form of a bank lined with wooden stakes dated to the period *c.*1380-1470. At this date the leat served three mills downstream of the site – City Mills, Cricklepit Mill and Lower Mills. The context for this episode of activity is unknown, but could include general maintenance and repair, expansion and or redevelopment of the above-mentioned mills, alterations following the construction of the Lower Leat and its associated link channels from the Higher Leat, or development of properties adjacent to the leat downstream of the site.

The excavation provides evidence for the sequence of development on the site. The ground plans of four structures were revealed, as well as evidence of the method and sequence of their construction and their relationship with the natural gravels and raised ground levels. Although precise dating evidence for every phase was not obtained, the sequence and nature of the developments in this area has been clarified. In addition, a range of other industrial structures and features associated was revealed. There was no survival of primary surfaces, both internal and external to any of the buildings.

From the archaeological evidence, the site was undeveloped until the 17th century, and prior to that date the land has been used for agricultural purposes. Sherwood's map of *c*. 1625 depicts large group of buildings in the centre of the site that match up

with the plans of buildings A and B, and, superficially, their appearance on later prints and photographs. Buildings C and D may also represent the buildings depicted on Sherwood's map towards the rear of the site. With the exception of building B, which was probably built in the late 17th century, there is no clear archaeological dating evidence for the construction of the buildings. This date for building B contradicts the map evidence of Sherwood. However, this may be reconciled if the building had been repaired after the Civil War of the 1640s. Stoyle (1995 19-30, 40) has demonstrated that the suburbs outside the city walls were deliberately levelled in 1645, and stated that the surviving Tudor House in Tudor Street was constructed on a 'cleared' site. However, it is known that medieval houses – such as The House That Moved – outside the city walls, and in particular outside the West Gate, survived the Civil War. There is also no archaeological evidence from the excavations that the site itself was cleared. It is possible therefore that the site, and Tudor Street itself, developed piecemeal during the 17th-century, probably with a major phase of construction and repairs following the Civil War.

It is unclear whether all the buildings date to the earliest occupation of the site. Buildings A and B both displayed evidence for phases of enlargement and are probably early in origin. Building C may also be early, but had gone out of use whilst building D was still occupied. The excavated remains of some of the building elements can be reconciled with parts of larger structures depicted on the 1891 OS map (Exeter Archaeology 2003, Fig. 9). In addition, buildings A and B were depicted on late 19th-century prints, and early 20th-century photographs, of Tudor Street. Room II in building A was depicted with a gable end fronting Tudor Street., and room III was depicted fronting the road. Both ranges were two storied with a third storey located partially within the attic, in the south range (above room IV) lit by gable windows. This façade of this range was almost identical, although lower, than the surviving Tudor House to the southeast of the site. At ground floor level the façade incorporated two adjacent doors, one of which must have led to an alley leading to the rear of the site. The site of this alley corresponds with a gap between A and B. During the excavation a number of phases for the development of building A were put forward. The pictorial evidence however, indicates that the façade along Tudor Street (incorporating rooms II and IV) was of one phase. Since only scant remains of the footings survived, it is possible that much of building A was in fact of one phase, with some alterations to the rear of the structure.

Building B had its gable end facing the road, and comprised three stories, again with further accommodation in the attic. Later buildings were situated on the south-east corner of the site, but had been completely removed.

Buildings A and B both appear to have been domestic houses. The former was the most elaborate of the buildings on the site, and had undergone the most changes. No internal features such as fireplaces were exposed however. The building was serviced by two wells of different phases, with their position lying within the wings most likely given over to a yard. Pottery recovered from the earlier well dated from the early 18th-century and be related to some of the earliest, post-Civil War, occupation. It is possible that building B may have been extended, possibly to the rear, to accommodate a shop fronting Tudor Street.

Building D was associated with the industrial activity represented by water channels and the troughs. This activity appears to have been long-lived. Documentary evidence records that both brewing and dying took place on the site. Pit 520 containing horn cores provides probable evidence for tanning. Since this was an isolated feature, it is possible that this pit was associated with nearby activity rather than tanning on the site. It is possible that the troughs associated with building D could be tanning pits, but it is equally, or possibly more, likely they were used in the dying process.

9.2 **The Old Mill**

Unlike the adjacent site this site was not fully excavated, and nowhere was the excavation taken down to the level of natural gravels. Deposits pre-dating the old mill and old stables were rarely exposed. The earliest deposits were exposed at the rear of the site and may have been associated with the Higher Leat. In one area these deposits were overlain by cultivation soils dating to the 16th and 17th centuries. Later cultivation soils were also found towards the front of the site, nearer Tudor Street.

No clear evidence was found for the building depicted on Sherwood's 1625 map or for the dwelling house of Sir Thomas Jefford described in 1701. Wall 1133 and the adjacent surface 1134 located to the rear of the old mill may be associated with one of these buildings, although these features were not clearly dated. Other features may survive in unexcavated areas.

The building described as the old stables and old mills may have been constructed in the late 17th century or the early 18th century. The excavated evidence indicates that within the footprint of the buildings cultivation had ceased by *c.*1650, although within the courtyard it continued until *c*. 1720. This date would be consistent with the use of thick ovolo-moulded window frames in the rear elevation of the stables. The buildings functioned at various times (sometimes concurrently) as stables, dyeworks and a warehouse. Most of the industrial activity, or processes, appear to have taken place in the old mill and the area behind the old mill (that was formerly part of the same structure), although it is possible that further features survive below the level of excavation within the old stables. A single vat base was exposed within the old mill, and as with the troughs in the adjacent site, its end had been blocked. Other industrial features included a stone structure that may have represented another vat base or machinery base, and circular and square pits, as well as evidence for water extraction from the Higher Leat. Both buildings were altered in the 19th century. The rear of the old mill and the building over the leat were converted to stables, a function also carried out in the old stables and the old mill itself converted to a warehouse.

The courtyard to the north-west of the old mill contained several small structures, including a range along the street frontage. Fragments of these buildings and a succession of courtyard surfaces were exposed.

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of this report. The trench evaluation and excavation of the 7 Tudor Street site were supervised by the second author. The subsequent watching brief alongside the leat was undertaken by Simon Hughes and work at the old mill and stable site was overseen by the first author. Illustrations were prepared by Sarnia Blackmore, Tony Ives and M. Leverett.

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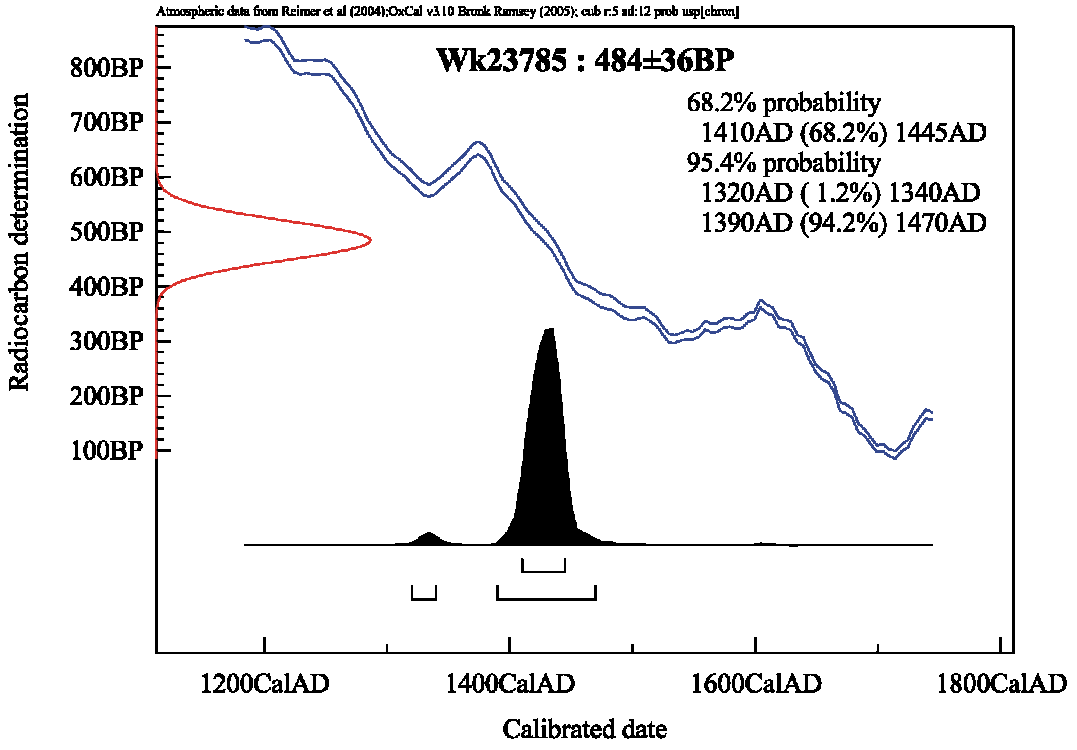
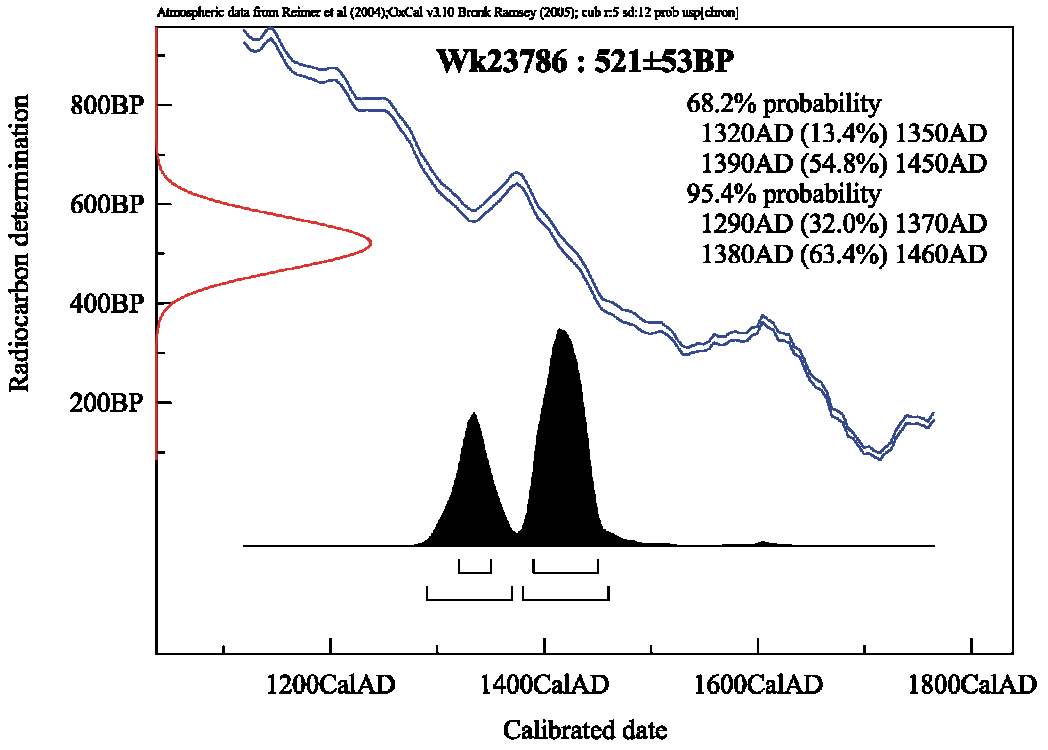
APPENDIX 1: RADIOCARBON DATES

Lab No.	EA Sample No.	Context No.	Sample Material	Radiocarbon age	Calibrated radiocarbon date (2σ - 95.4%
WK23785	5548712	712	Oak	484±36BP	1390AD-1340AD
WK23786	5548812	812		521±53BP	1380AD-1460AD





SECTION 2: POST-EXCAVATION ASSESSMENT

1. INTRODUCTION

This section of the report summarises the results of the archaeological recording at 7 Tudor Street and the adjacent old mill and old stables undertaken by Exeter Archaeology (EA) between December 2005 and March 2007, and assesses the potential of the site for further publication, and sets out a publication proposal. The production of this assessment complies with section 5.6 of a written programme of archaeological work produced by EA (Gent 2005) in relation to Condition 7 of the planning permission (No. 04/1814/03) granted by Exeter City Council (ECC) for the redevelopment of the 7 Tudor Street Site and section 6.5 of a similar document (Gent 2006) produced in response to condition 6 attached to the grant of planning permission (No. 05/1633/03, ECC) and condition 2 attached to the Conservation Area Consent (No. 05/1636/14) for conversion and alteration of the old mill and stable site.

2. SUMMARY OF EXCAVATION RESULTS

Both sites were unoccupied until the 17th century, when a series of five industrial and domestic buildings were constructed. Prior to that date the site was given over to agricultural use, perhaps reflecting its position on an active floodplain. However, fabric of the Higher Leat adjoining the site was exposed, and wooden stakes and wattles associated with a repair of its walls have been radiocarbon dated to the period 1380-1470.

The buildings on 7 Tudor Street may have been constructed, and perhaps repaired, sporadically during the 17th century, with development of the old mill and old stables perhaps occurring in the early 18th century. The buildings at 7 Tudor Street were a mixture of domestic and industrial, the latter probably associated with the dying of textiles, and also possibly brewing. Some evidence for tanning, although possibly not actually taking place on the site, was also recovered. The old mill and stables were entirely industrial in function, and housed a dyeworks, as well as being used as stables and a warehouse. Water was taken from the Higher Leat at both sites to provide water for the dying process.

The excavations have produced good evidence for one of Exeter's major industries, of which little is known archaeologically, and even less published. The old mill and old stables were two of the few surviving industrial buildings of this period associated with textile manufacture in Exeter, and the demolition of the old stables makes the survival of the old mill even more important.

3. ASSESSMENT

The following presents an assessment of the industrial features and buildings, and the finds from the two sites, which have been prepared by specialists in the analysis and reporting of these materials.

3.1 **Industrial buildings and features**

At present, none of the three excavations in Exeter where dying of textile has been located (Exe Street, Shooting Marsh Stile and Lower North St) have been published

and a summary report only appears for the latter site (Simpson 1987). Research Aim 45 of the recently-published *South West Archaeological Research Framework* (Webster 2008) is headed "[to] broaden our understanding of Post-Medieval to modern technology and production". Under this research aim, for the period 1550-1750, further research is needed on "the regulation, products and structures of textile manufacture". Publication of elements of the archaeological work at Tudor Street would go some way to achieving this aim.

3.2 **Pottery, tile and glass** *by J. Durrant, G. Langman and J. Allan*

A significant volume of finds was recovered with the majority in a very good state of preservation. Most of the finds date from the medieval and post-medieval periods (15th to 19th centuries), with an important large assemblage from context 569 (*c*. 1720-40). The assemblage also has a small quantity of residual Roman material. The quantities of finds are summarised in Table 3, with details of specific categories below.

Finds category	Quantity	Weight
Roman pottery	6	36
Medieval pottery	94	1178
Post-medieval pottery	477	18012
Modern pottery	88	1874
Animal Bone	457	7073
Clay pipe	102	592
Ceramic Building Material (CBM): Roman	4	156
Ceramic Building Material (CBM): medieval and post-medieval	52	11166
Glass	11	2838
Metals	30	112
Shell	103	609
Slate	1	20
Worked bone	1	50

Table 3: Quantity and weight of finds by class of material. Weights to nearest 2 grams.

3.2.1 ***Roman pottery, tile and glass***

The assemblage of Roman pottery is small, totalling 6 sherds weighing 36 grams. It includes samian, a flagon and coarseware. Five of the sherds are in an abraded condition, but are identifiable to fabric and form. The sixth is a well-preserved rim of a flagon. Four fragments of Roman tile and a sherd of glass of probable Roman date are also present. Whilst the finds are not of intrinsic interest themselves, their presence on this site is not wholly unexpected, lying outside the military and civil defences. The finds merit only a very short mention in a publication.

3.2.2 ***Medieval pottery***

The medieval pottery is a very modest collection of 94 sherds, weighing 1.178 kg from eight contexts in total.

The earliest material is 13th-century in date, but this is residual in 14th/15th-century cultivation soils. Imported French sherds include a Rouen whiteware jug, a North

French green-glazed whiteware jug (both 13th-century), Saintonge wares (c. 1250-1450) and a 13th-century redware jug sherd from Hampshire. Local Exeter ware jugs have form and decorative traits that belong to the mid 13th late 14th centuries. Later medieval South Somerset and Exeter jug fabrics belonging to the 15th century are evident in the cultivation soils. Of some interest is the presence of water-worn sherds indicating probable re-deposition, although this is perhaps not unexpected in a floodplain location. These finds merit only a very short summary description in a publication.

3.2.3 ***Post-medieval pottery***

The main post-medieval assemblage consists of groups dating from the 16th to 18th centuries. In total there are 477 sherds, weighing 18.012 kg, from 22 contexts.

Amongst the 16th- and 17th-century wares there are some noteworthy ceramics. There are continental imports from Italy, Iberia, France and Germany. Stratified wares include Raeren stoneware, Beauvais yellow-glazed whiteware and a probable Spanish tin-glazed earthenware. Unstratified wares consist of a Montelupo tin-glazed dish, a Merida-type vessel handle, a Tudor Green-glazed cup and a mid 17th-century decorated tin-glazed earthenware. Local coarsewares, for the most part, are South Somerset products, with some Coarse sandy ware, North Devon and Totnes-type wares.

There is one 18th-century group that is of some significance. Well 538 contains a large group of domestic pottery of *c*. 1720-40 date, with 16 vessels requiring illustration and eight needing to be photographed. There are 203 sherds, weighing 11.678 kg, which include Dutch and English decorated tin-glazed Delftwares, two German Westerwald vessels, a North Devon sgraffito decorated dish and South Somerset decorated or plain coarsewares. There are very few sizable groups of this date from Exeter (see section 6.3 above), and this assemblage presents an opportunity to study the pottery market and household usage of ceramics during this period.

Material which post dates the late 18th-century, of which there are 88 sherds from 16 contexts, is of little archaeological significance and does not warrant further attention.

The post-medieval assemblage contains pottery of archaeological interest that merits further study and publication. A full quantification and catalogue of fabrics will be required for a publication report. This will consist of a discussion, tabulations, and two specialist contributions to the study of the Spanish tin-glazed dish and Montelupo tin-glazed dish. There are approximately 24 vessels to illustrate (with accompanying catalogue) and 10 decorative wares requiring photography.

Statement of potential

The analysis of this assemblage has the potential to provide useful dating evidence, which will inform the interpretation of the development and use of the site. A study of the manufacturing origins and form of the pottery will inform discussion of the economic status of those living on and using the site.

Recommendations for further work:

1. To produce a full catalogue of pottery with specialist input (GL and JA), to include dating and quantities per fabric.

2. To produce a publication report of the pottery to include tabulation of totals, catalogue of illustrations, photographs, illustrations, discussion and specialist reports.

3.3 **Clay pipe** by J. Durrant, G. Langman and J. Allan
The tobacco clay pipe assemblage consists of 37 bowls and 65 stems with an overall date range of the mid 17th- to early 19th-centuries. The fill of well 538 is the largest single group and contains examples of possible wasters. These merit further study and publication including illustration by a specialist.

Statement of potential
This study has the potential to provide information that will assist the interpretation of the possible manufacturing activity on the site and the economic status of the occupants.

3.4 **Metals** *by J. Durrant, G. Langman and J. Allan*
Copper alloy objects and the ironwork will need x-raying and a short report should be prepared, including a specialist report on the lead seal.

Statement of potential
Information from this study has the potential to assist in the interpretation of the use and development of the site.

3.5 **Faunal remains** *by L. Higbee*

3.5.1 ***Quantity and provenance***
A small assemblage of animal bone was recovered from the site during the normal course of hand-excavation; in total 898 fragments or 5.4kg. The assemblage is quantified in Table 3 by broad chronological period and context. Approximately 36% of the fragments are identifiable to species, a large proportion (*c.* 72%) of which is from just one feature; post-medieval pit 520.

Period	Feature/Deposit	Total Frag. Count	No. Identified Frags.	% Identified Frags.
late medieval	deposit 512	3	3	0.3
post-medieval	pit 520 (fill 509)	664	232	25.8
	well 569	22	15	1.6
	made ground 723	51	14	1.5
	layer 1007	6	-	-
	bedding for cobbles 1024	1	1	0.1
	deposit 1027	1	-	-
	layer 1040	32	10	1.1
	garden soil 1041	6	2	0.2
	levelling 1049	18	1	0.1
	make up layer 1053	1	-	-
	garden soil 1054	1	1	0.1
	levelling 1055	14	3	0.3
	garden soil 1075	6	3	0.3
	levelling/make up deposit 1087	14	2	0.2
	levelling for cobbles 1103	5	-	-

	layer 1122	5	3	0.3
post-medieval/modern	levelling for cobbles 1046	1	1	0.1
	metalled surface 1062	1	1	0.1
US	unstratified	46	29	3.2
Total		**898**	**321**	**35.7**

Table 3. Quantity and provenance of animal bone. % based on total identified fragments.

3.5.2 ***Method of assessment***

This account follows general guidelines for the assessment of environmental remains outlined by English Heritage (2002). The assemblage was rapidly scanned and the following information noted; species, skeletal element, age related features, completeness for biometric analysis, butchery, taphonomy, pathology and non-metric traits.

Quantification methods take into account the recommendations of Davis (1992). In summary, a selected suite of skeletal elements was counted in order to assess the potential of the assemblage for further analysis. These elements are generally those which show a good survival and recovery rate in most assemblages, and also provide detailed information (e.g. age and biometric data). Bones that could not be assigned to species, mostly fragments of long bone shaft, rib and vertebra, have been quantified into general size categories and small splinters into more general taxonomic categories. This information is presented in order to provide an overall fragment count.

3.5.3 ***Results***

Condition of material

Bone preservation is variable; differences in preservation state were noted between fragments from single contexts and between fragments from different types of context. For example, only 18% of bone fragments from pit 509 are poorly preserved, whilst the proportion of poorly preserved fragments from deposit 723 is much greater, at 65%.

Only three bones were recorded with gnaw marks and a small number of fragments from pit 509 were charred or calcined.

Range and variety

The number of specimens identified to species is listed in Table 4 and briefly described in the following sections.

Species	**late medieval**	**post-medieval**	**post-medieval/modern**	**unstrat.**	**Total**
cattle	-	44	-	7	51
sheep/goat	3	226	2	22	253
pig	-	4	-	-	4
horse	-	6	-	-	6
fish	-	7	-	-	7
Total identified	**3**	**287**	**2**	**29**	**321**
bird	-	3	-	-	3
large mammal	-	241	-	11	252
medium mammal	-	101	-	5	106
mammal	-	215	-	1	216

Total unidentified	**0**	**560**	**0**	**17**	**577**
Grand total	**3**	**847**	**2**	**46**	**898**

Table 4. Number of specimens identified to species (or NISP) by period.

Late medieval
Three sheep/goat metacarpals were recovered from late 15th/early 16th-century deposit 512.

Post-medieval
As already indicated above, the vast majority of identified bones are from 17th/18th-century pit 520 (fill 509). The bone group from this feature includes 22 horn cores with a complete basal circumference; these can be measured in order to establish gender. Other cattle bones from this feature include a loose tooth, phalanx, calcaneus and a small number of metapodia. At least three of the metapodia are from a calf. The pit also includes a large number of sheep/goat bones, mostly loose teeth, mandibles, metapodia and phalanges. The body part distribution for both cattle and sheep/goat indicates that the pit assemblage includes a high proportion of waste from the tanning of cattle, calf and sheepskins (see Serjeantson 1989).

A small number of pig, horse and fish bones were also identified from the post-medieval assemblage. The pig bones are scattered between contexts and include, a tibia, humerus and two radii. The horse bones include an articulating lower hind-limb from well 596 and a loose tooth from deposit 1040. All of the fish bones are from pit 520.

Post-medieval/modern
A sheep/goat metatarsal and ulna were identified from broadly dated contexts.

Unstatified
The unstratified group is similar to that from pit 520 in that it includes mostly cattle and sheep/goat horn cores and metapodia.

3.5.4 ***Statement of Potential***
The post-medieval group from pit 520 offers the most potential for further analysis. Measurements taken on the basal circumference of cattle horn cores can be used to establish the gender of cattle (Sykes and Symmons 2006). Whilst further analysis of the sheep/goat bones and teeth will establish mortality profiles, withers heights and conformation, the horse bones from well 569 can also be analysed to establish withers height.

The cattle horn cores and sheep/goat metapodia can be compared with similar data from other sites in Exeter. For example, the early 18th-century deposit of cattle horn cores from Shooting Marsh Stile (Levitan 1985), the horn cores and metapodia from post-medieval deposits at the Princesshay site (Higbee 2007a) and the 19th century deposit of over 200 sheep metapodia from Goldsmith Street (Maltby 1979: 86). Comparison with other regional sites might also be worthwhile, for example, the large collection of tanning waste from Shepard's Wharf, Plymouth (Higbee 2007b).

This information will assist in the interpretation of tanning activity taking place on the site, or in close proximity. The study also has the potential to provide evidence of

other economic activities on site, and possibly including the nutrition of the occupants.

3.5.5 ***Summary of recommendations***

- measure horn cores from pit 520
- record tooth wear, epiphyseal fusion and biometric data for sheep/goat teeth and bones from pit 520
- measure horse bones from well 569
- summarise data investigate data to inform on tanning processes on site and tanning process of the period, and compare with other sites
- prepare report for publication

3.6 **Shell** *by Gregory Campbell*

The majority of the shell from the excavation was the assemblage weighing 610g from a 17-18th Century pit fill (509). The potential of this assemblage can be satisfied by detailed identification of the species present and an examination of the surface features and morphologies of the oysters, leading to conclusions regarding the types of habitats exploited for harvesting at the time.

Statement of potential

This study has the potential to provide useful information regarding an aspect of the economy and nutrition of those occupying the site.

4. PUBLICATION

It is proposed that further publication would take the form of a short article in the Proceedings of the Devon Archaeological Society. This would summarise the results of the excavations and building recording, and would include the following elements:

- *Introduction and planning/historical background (4 pages and 4 figures - location and historic maps)*. To include planning background and summary historical background to the site.
- *Summary development of 7 Tudor Street (3 pages and 7 illustrations – 2 general ground plans, phased plans of the industrial features and the timber revetments, a historic photograph or sketch of buildings fronting Tudor Street and 2 photographs of the excavated remains).* To include a basic description, phasing and interpretation of the development of the leat, buildings and industrial features.
- *Summary development of the old mill and old stables (9 pages and 6 illustrations - ground floor and excavation plans with comparable images of vat bases and 2 photographs of the buildings).* To include a basic description, phasing and interpretation of the buildings (with reference to the more detailed account given above) and summary of earlier development (leat and building to rear) and main industrial features with the old mill, and comparison of vat bases to other Exeter sites.
- *Finds 1: results of pottery analysis (6 pages and 3 illustrations – a photograph of the sherds and line drawings of diagnostic sherds).* To include general discussion as well as the results of the analysis of the pottery assemblage from well 538 and the imported ware.

- *Finds 2: results of bone analysis (4 pages).* To include a report including the results of analysis of the material described in 3.5.
- *Finds 3: Results of shell analysis (2 pages).*
- *Finds 4: other finds (3 pages and 1 illustration).* To include reports on Roman pottery, clay pipe and metal
- *Discussion, acknowledgements and sources consulted (3 pages).* To include summary development of site and local context (immediate environment and industry and economy in Exeter.

A short entry for the journal *Post-Medieval Archaeology*, providing a brief summary of the results presented in the above publication, would also be produced.

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archaeological resource framework, resource assessment and research design (Taunton: Somerset County Council).

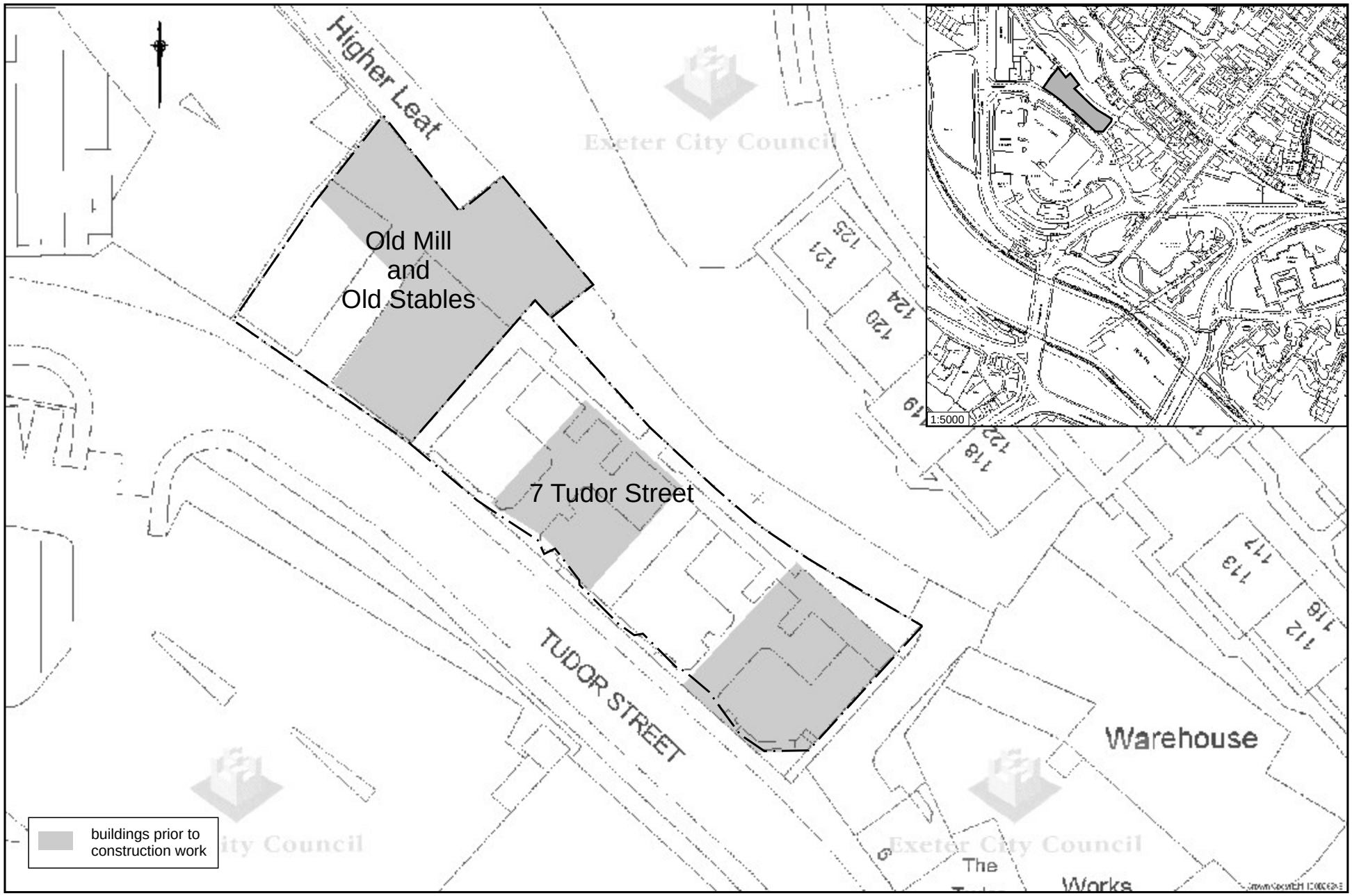


Fig. 1 Location of site. Scale 1:500.

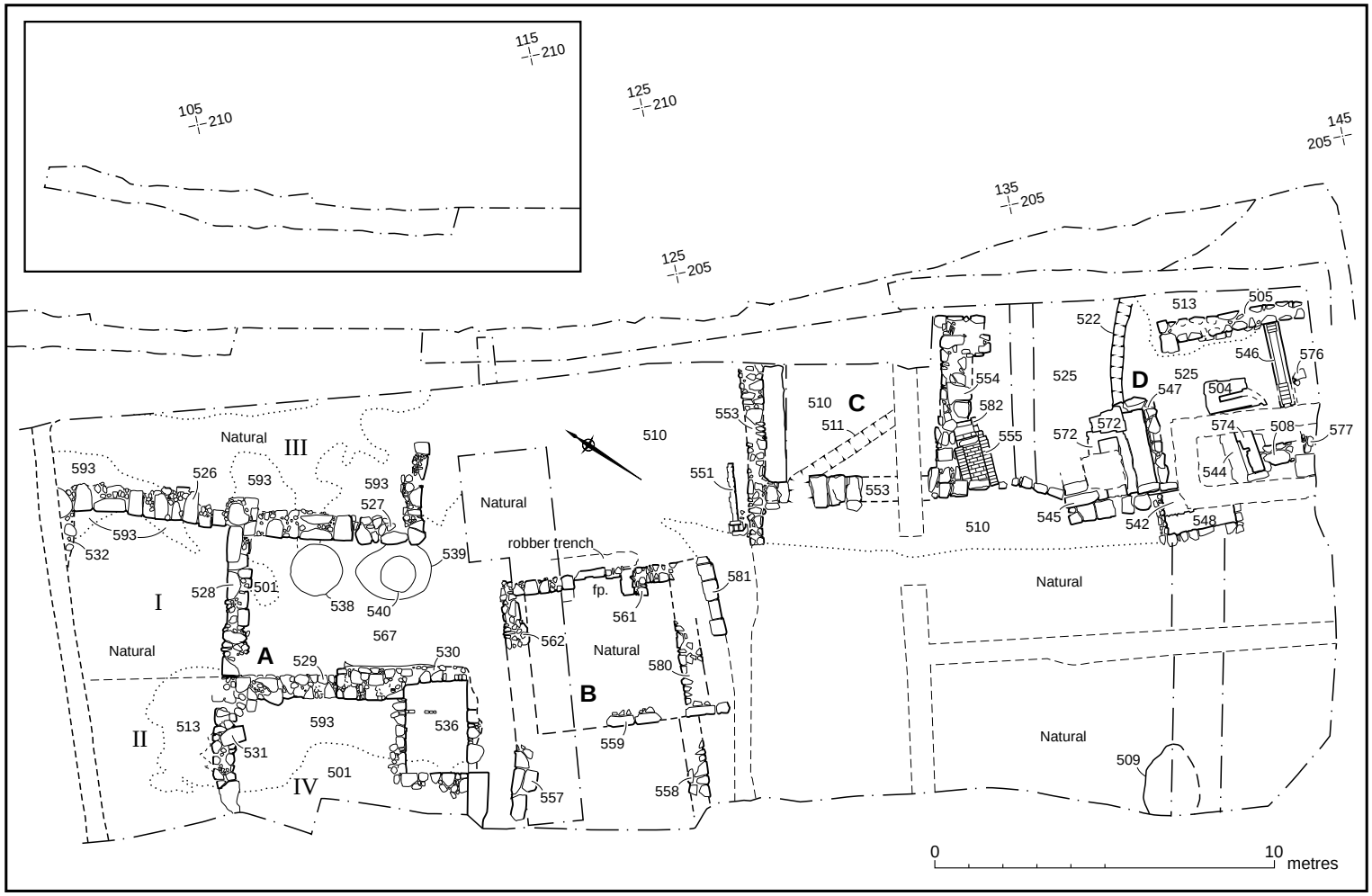


Fig. 2 Plan of excavations at 7 Tudor St.

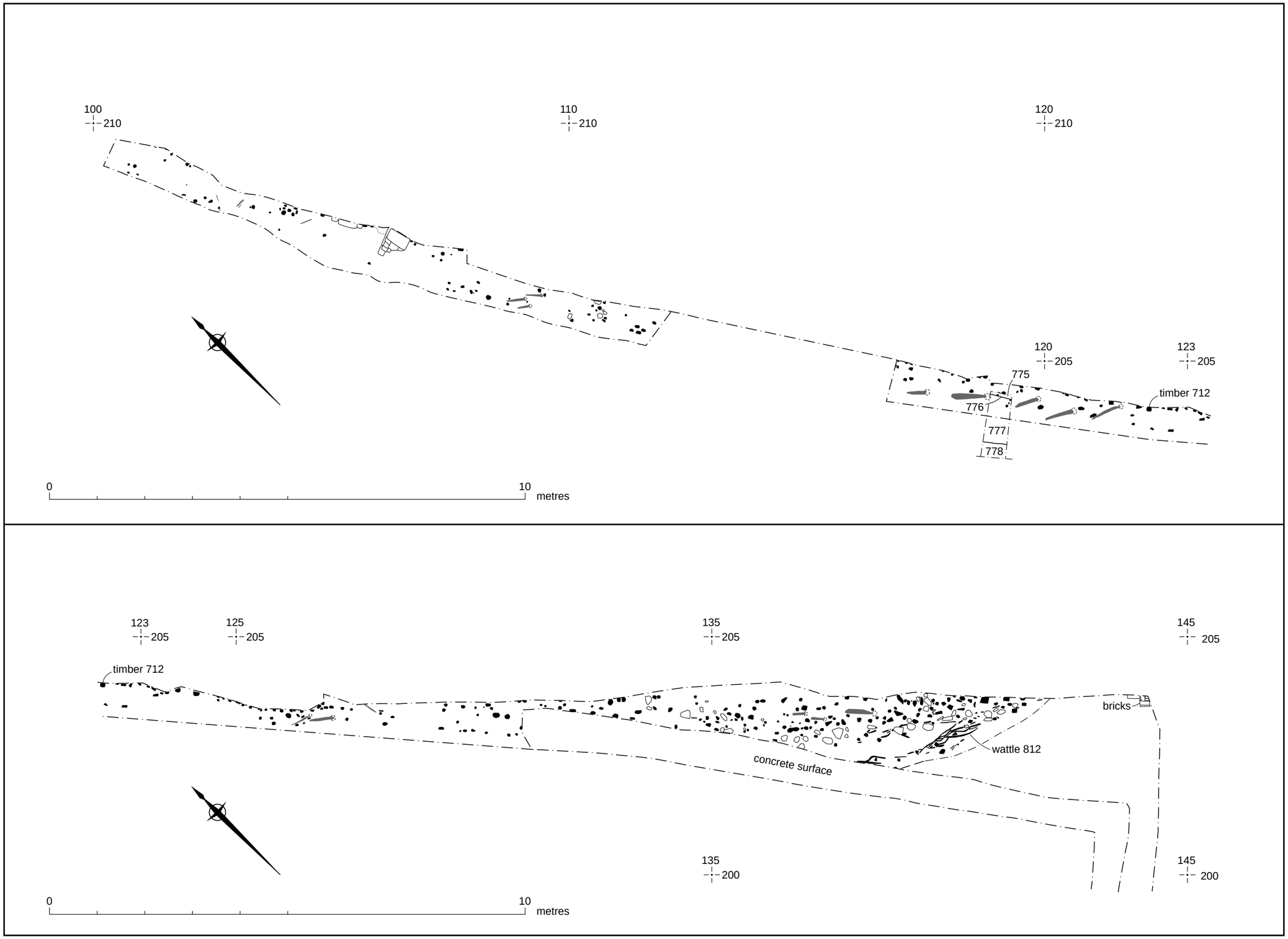


Fig. 3 Plan of leat timbers at 7 Tudor St (fallen timbers shaded grey). Scale 1:80.

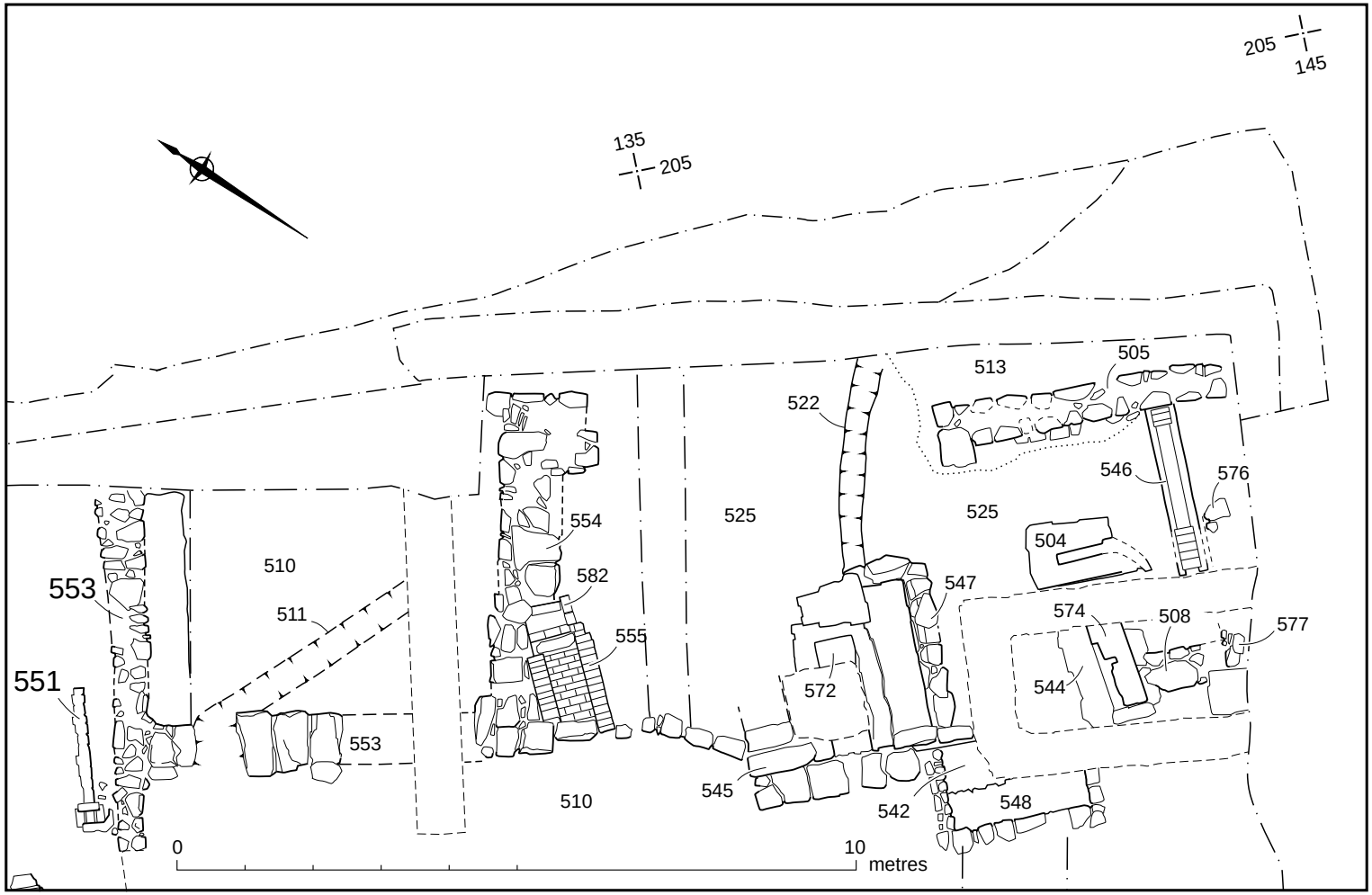


Fig. 4 Detailed plan of industrial features at 7 Tudor St.

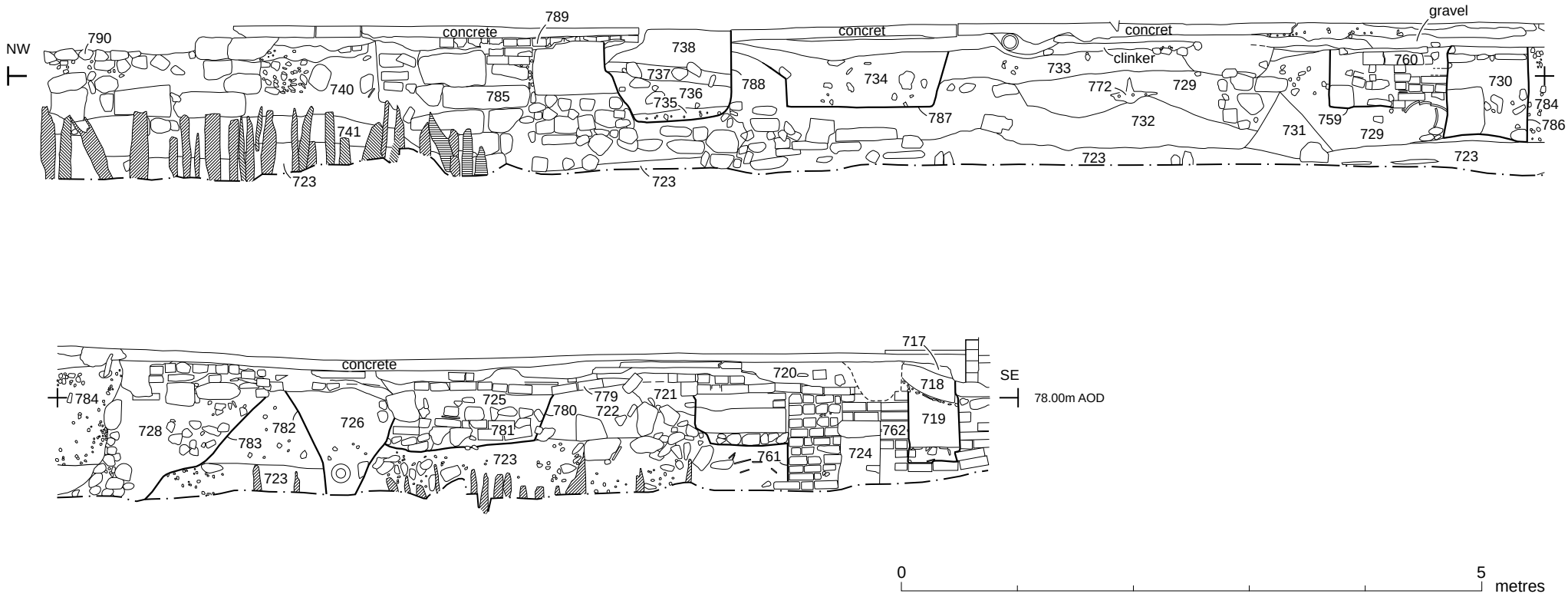


Fig. 5 Section of leat wall at 7 Tudor St.

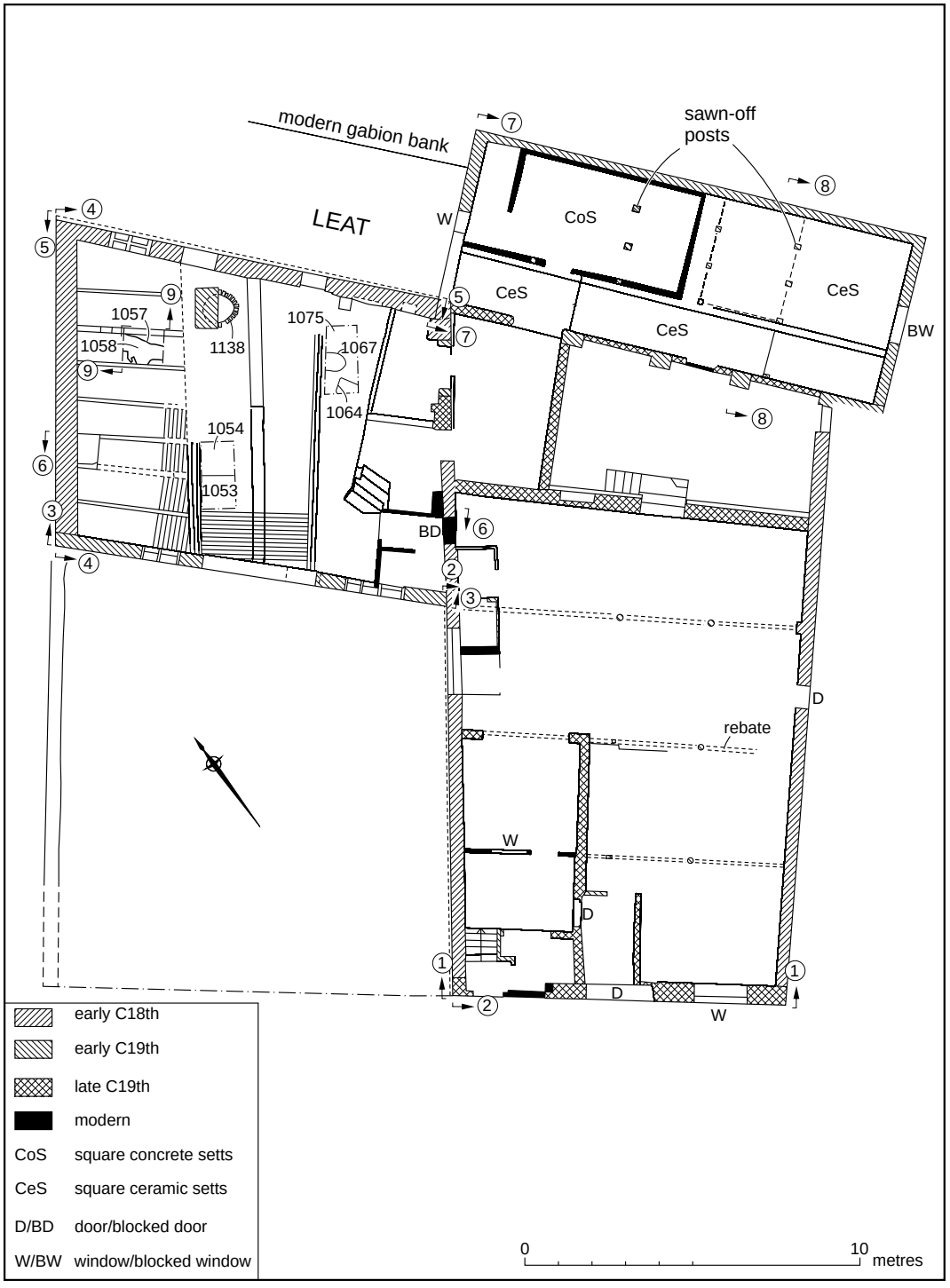


Fig. 6 Phased ground floor plan of the old mill and old stables.

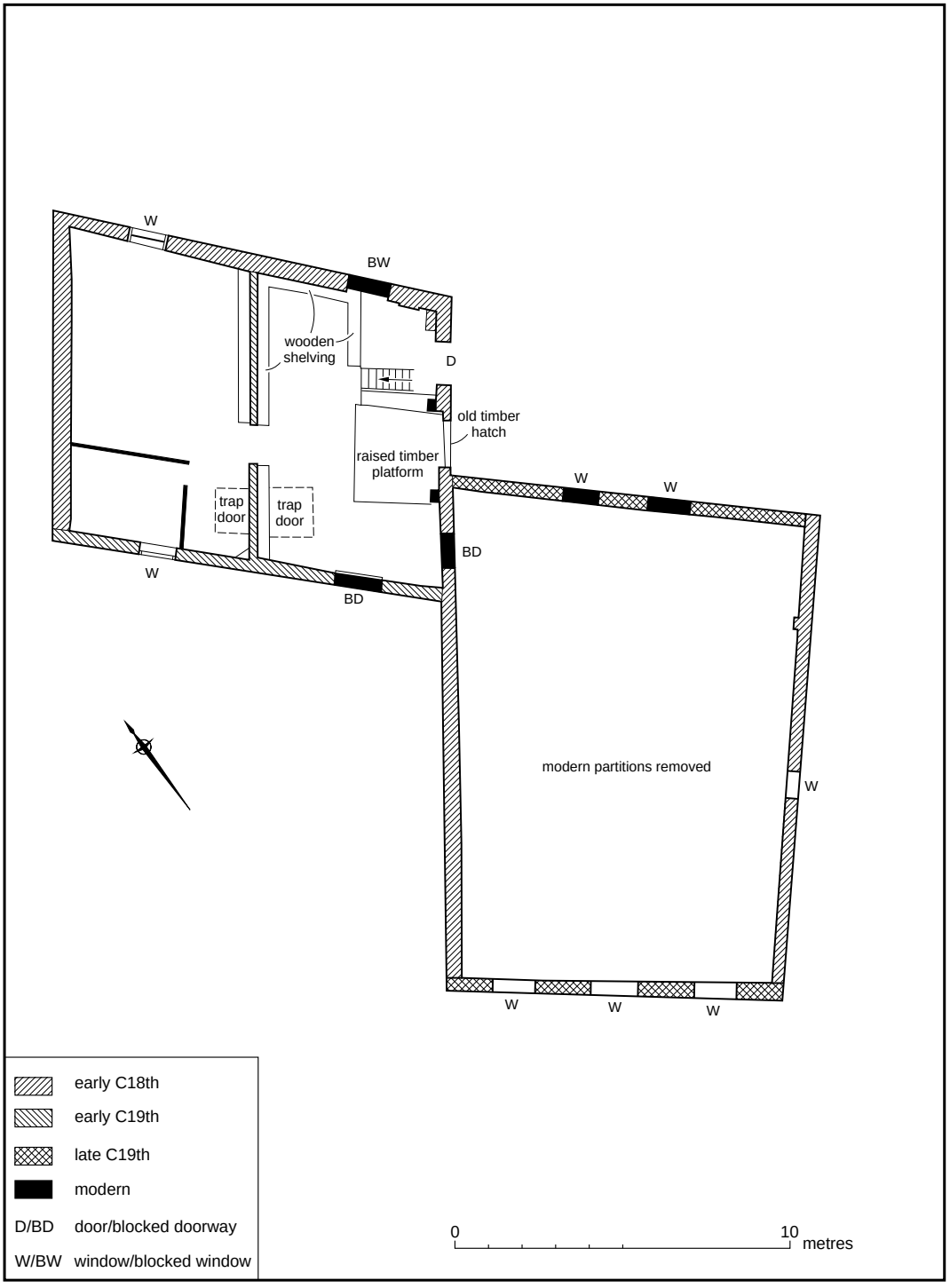
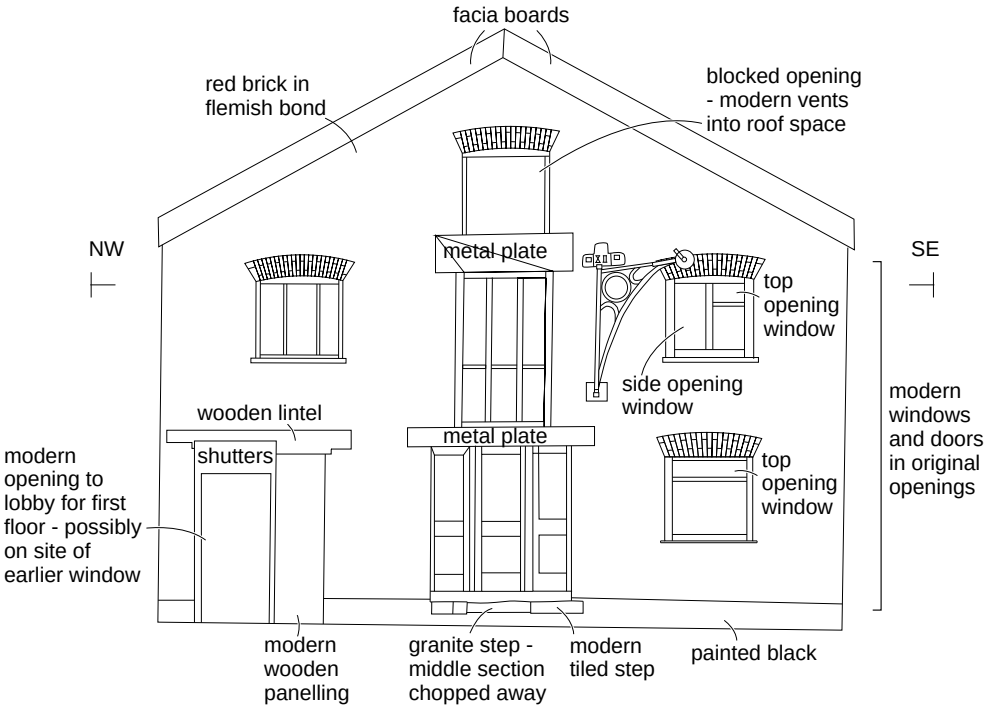


Fig. 7 Phased first floor plan of the old mill and old stables.

1. Old Mill: South-west Elevation



2. Old Mill: North-west Elevation

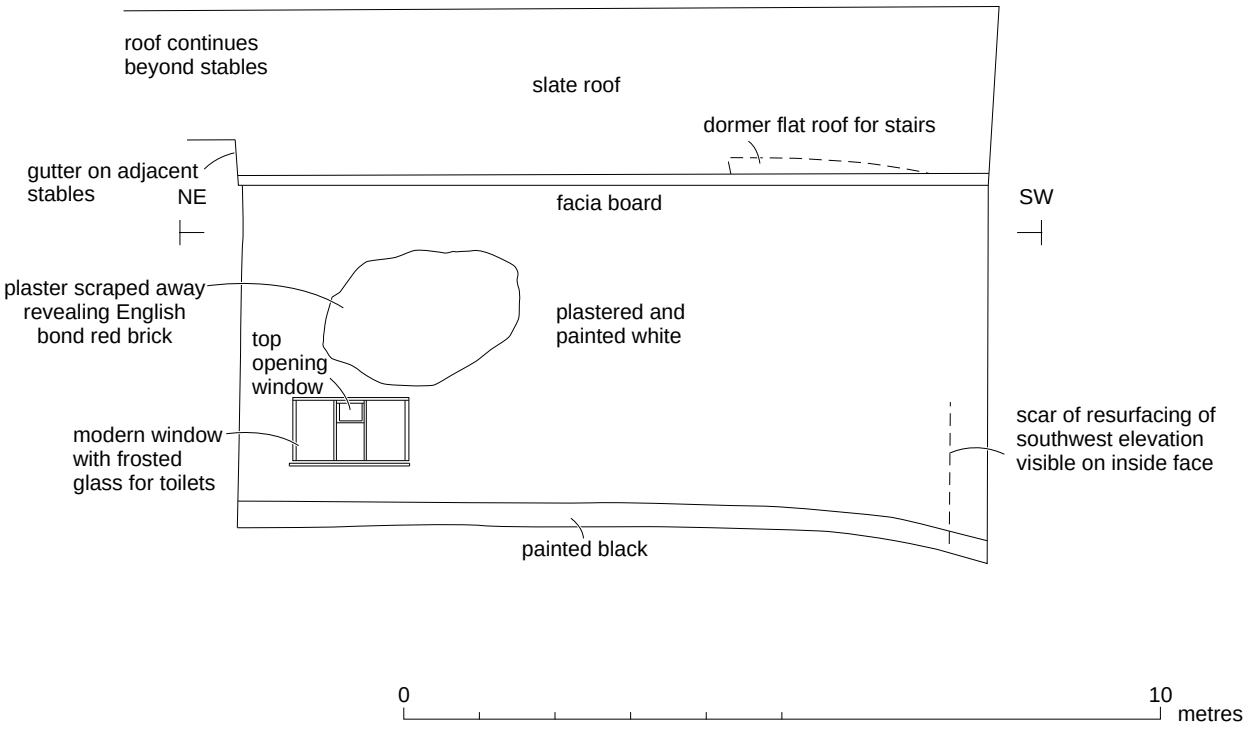
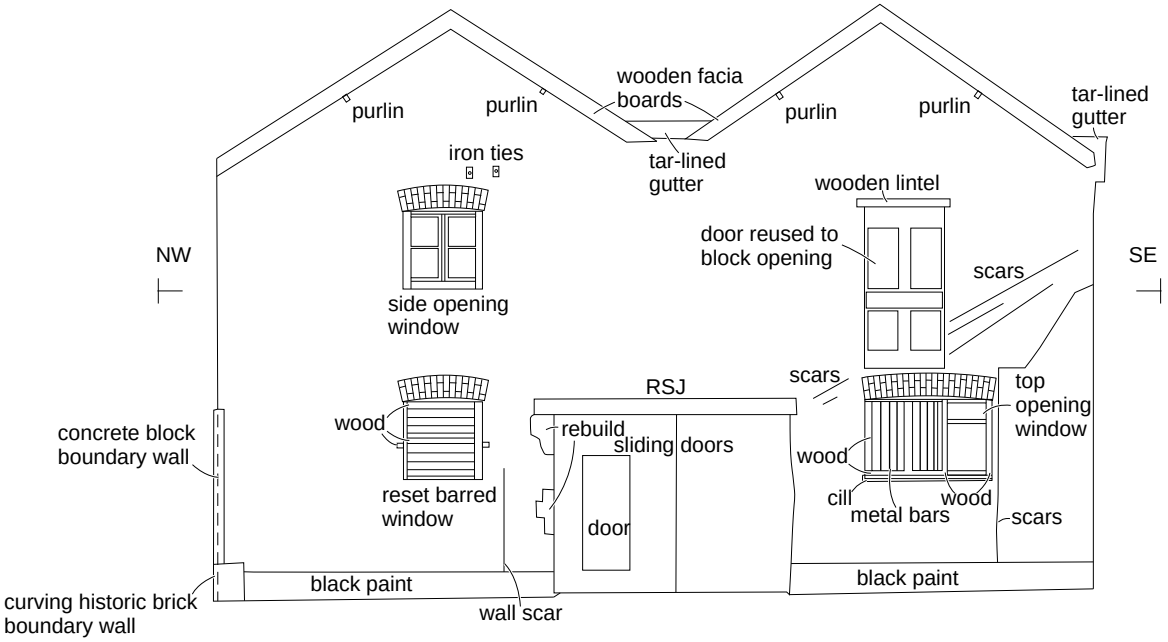


Fig. 8 The old mill: elevations.

3. Old Stables: South-west Elevation



4. Old Stables: North-west Elevation

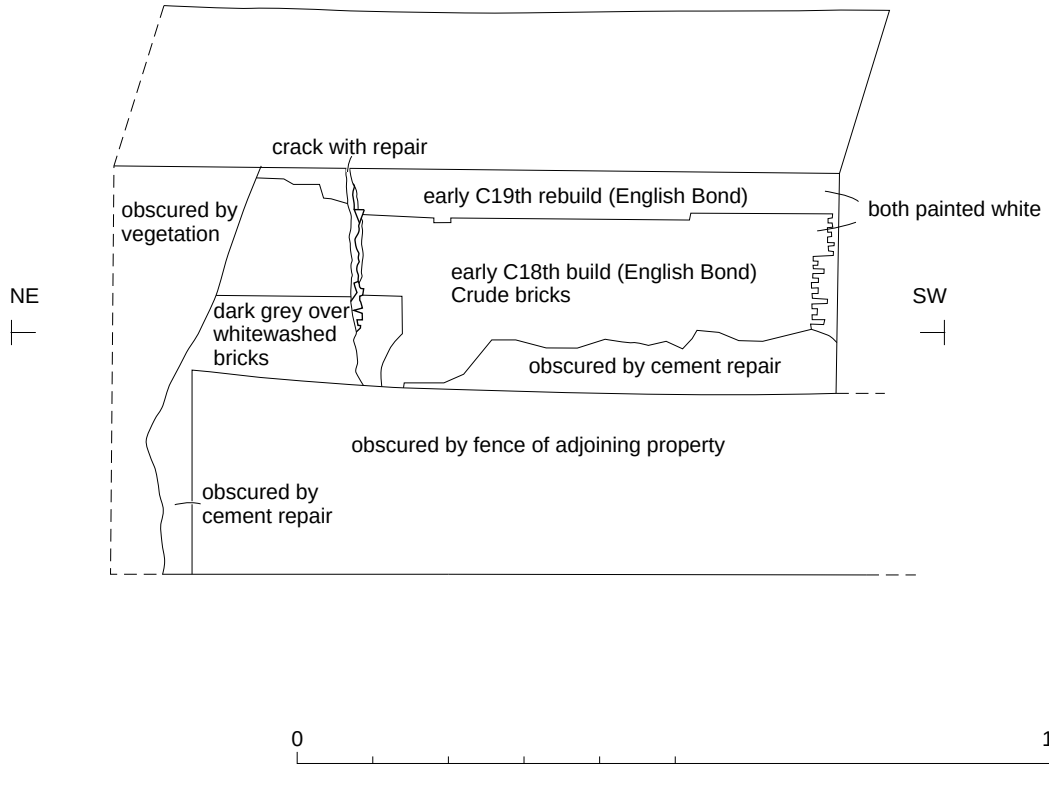
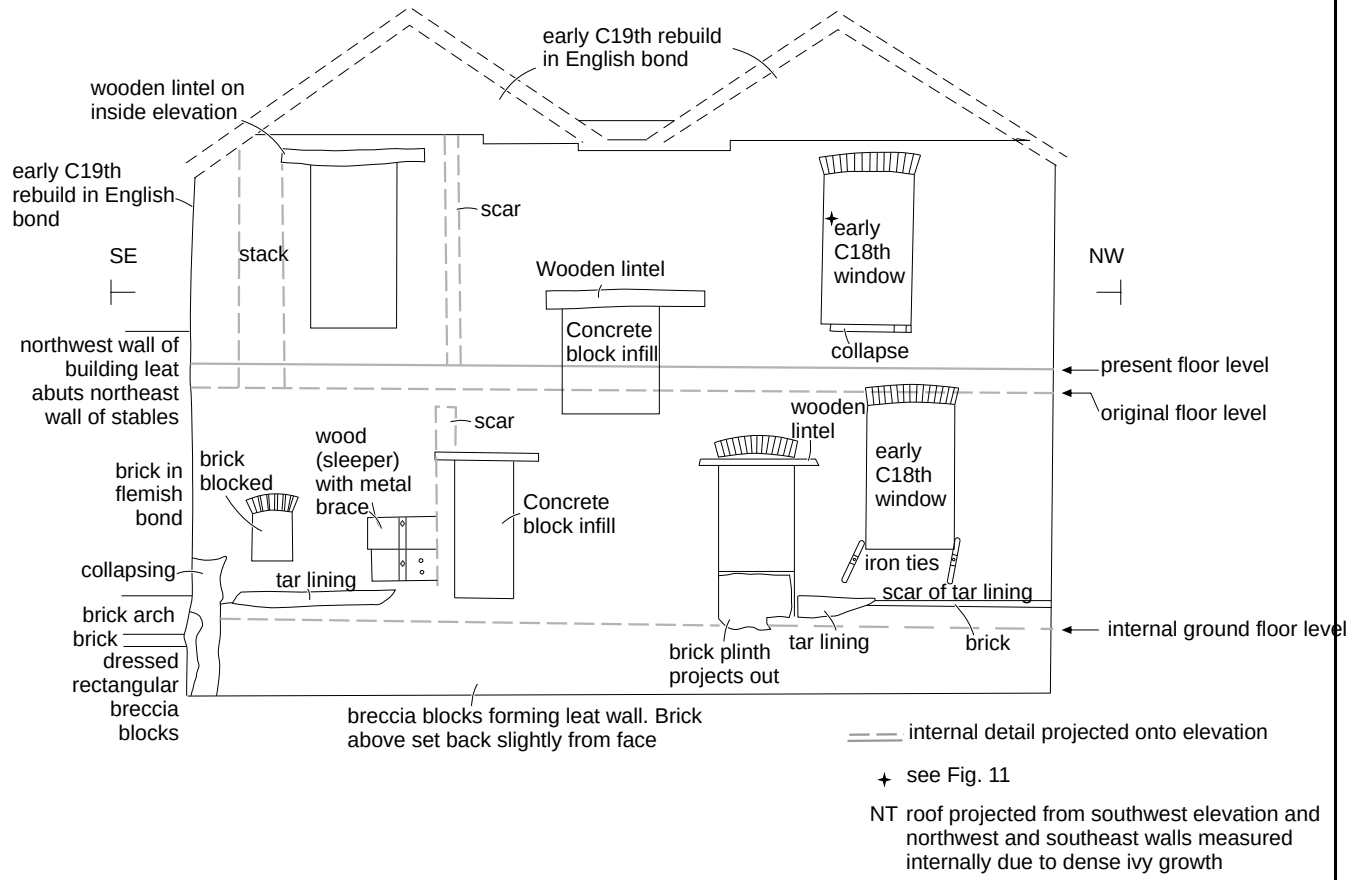


Fig. 9 The old stables: elevations.

5. Old Stables: North-east Elevation



6. Old Stables: South-west Profile

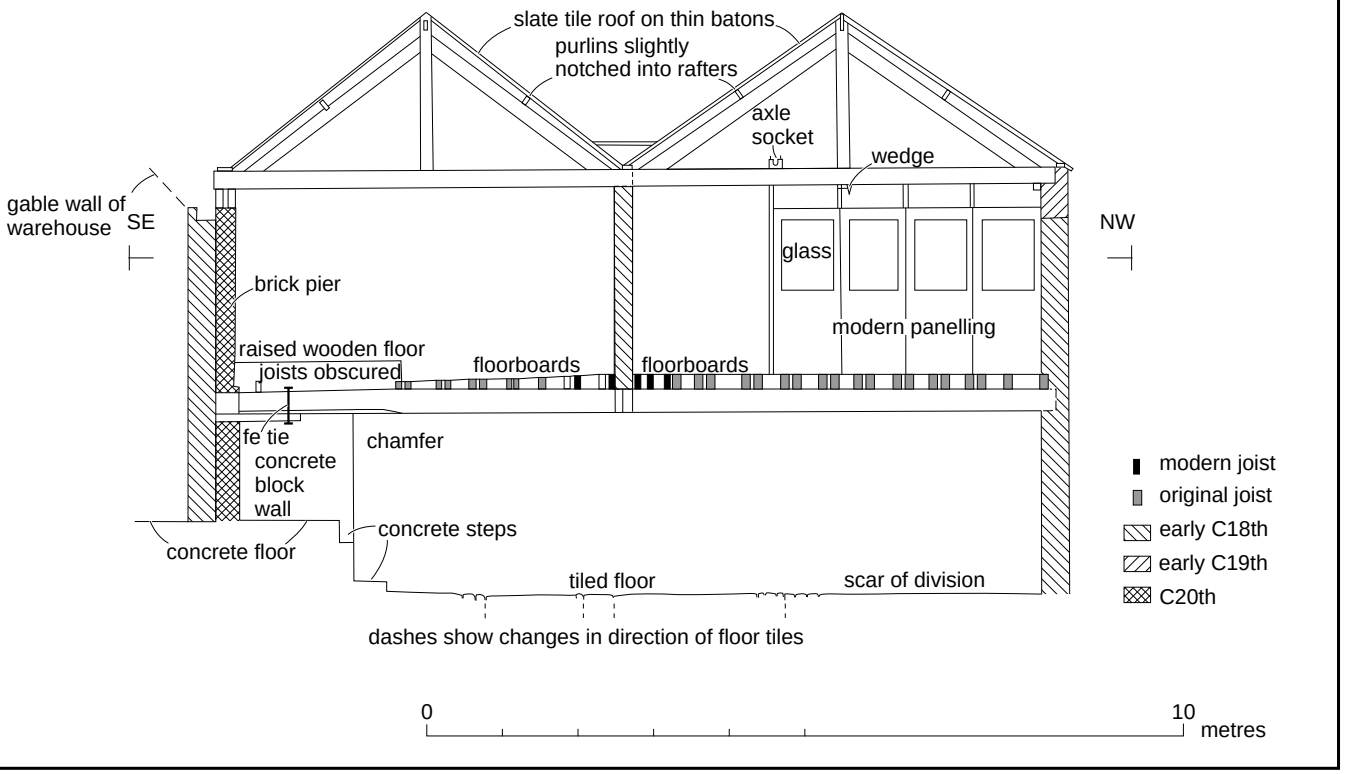


Fig. 10 The old stables: elevation and profile.

Old Stables: First Floor Window

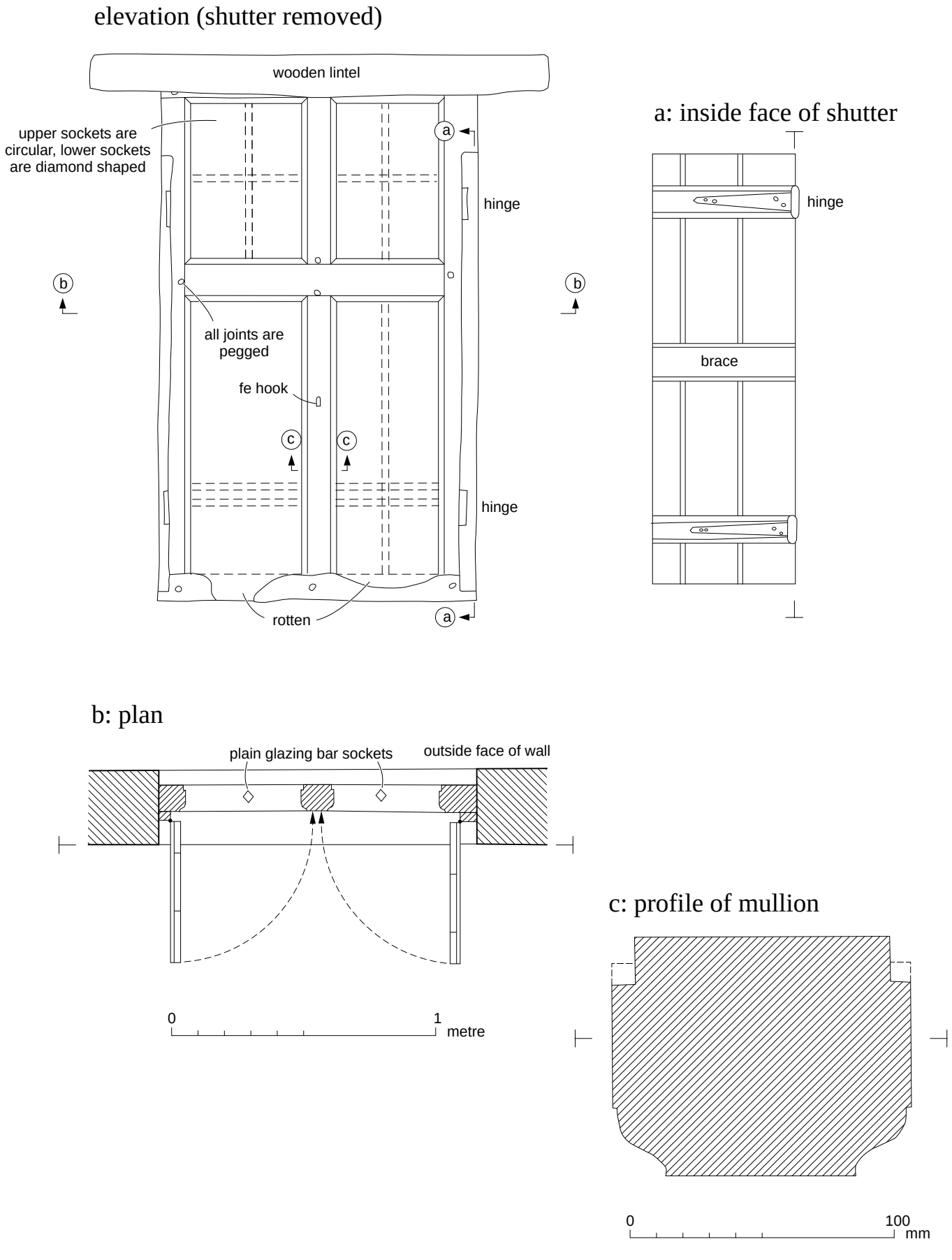
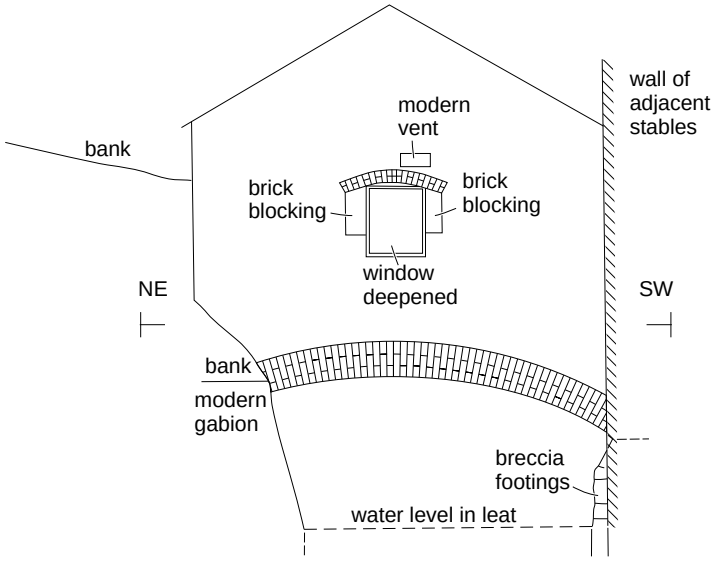


Fig. 11 Elevation and profile of first floor window in the old stables.

8. Building over leat: North-east Elevation



8. Building over leat: Profile

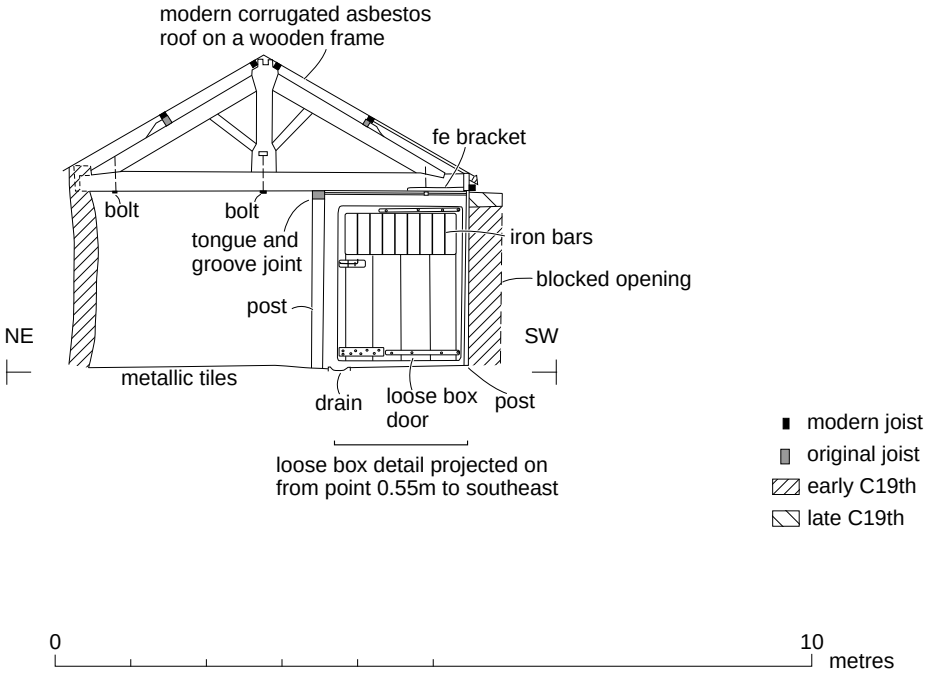


Fig. 12 Building over leat: elevation and profile.

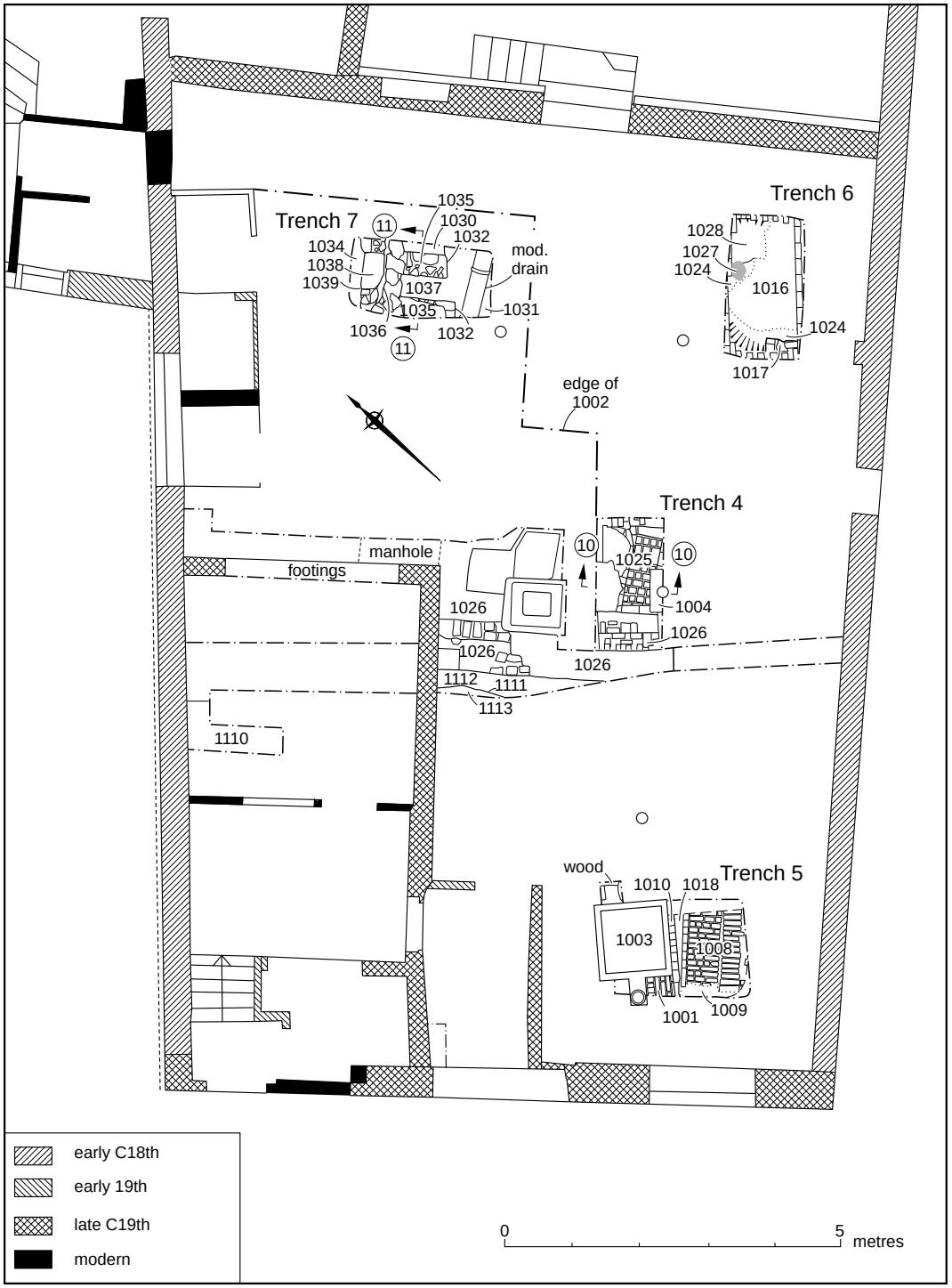


Fig. 13 The old mill: excavation plan.

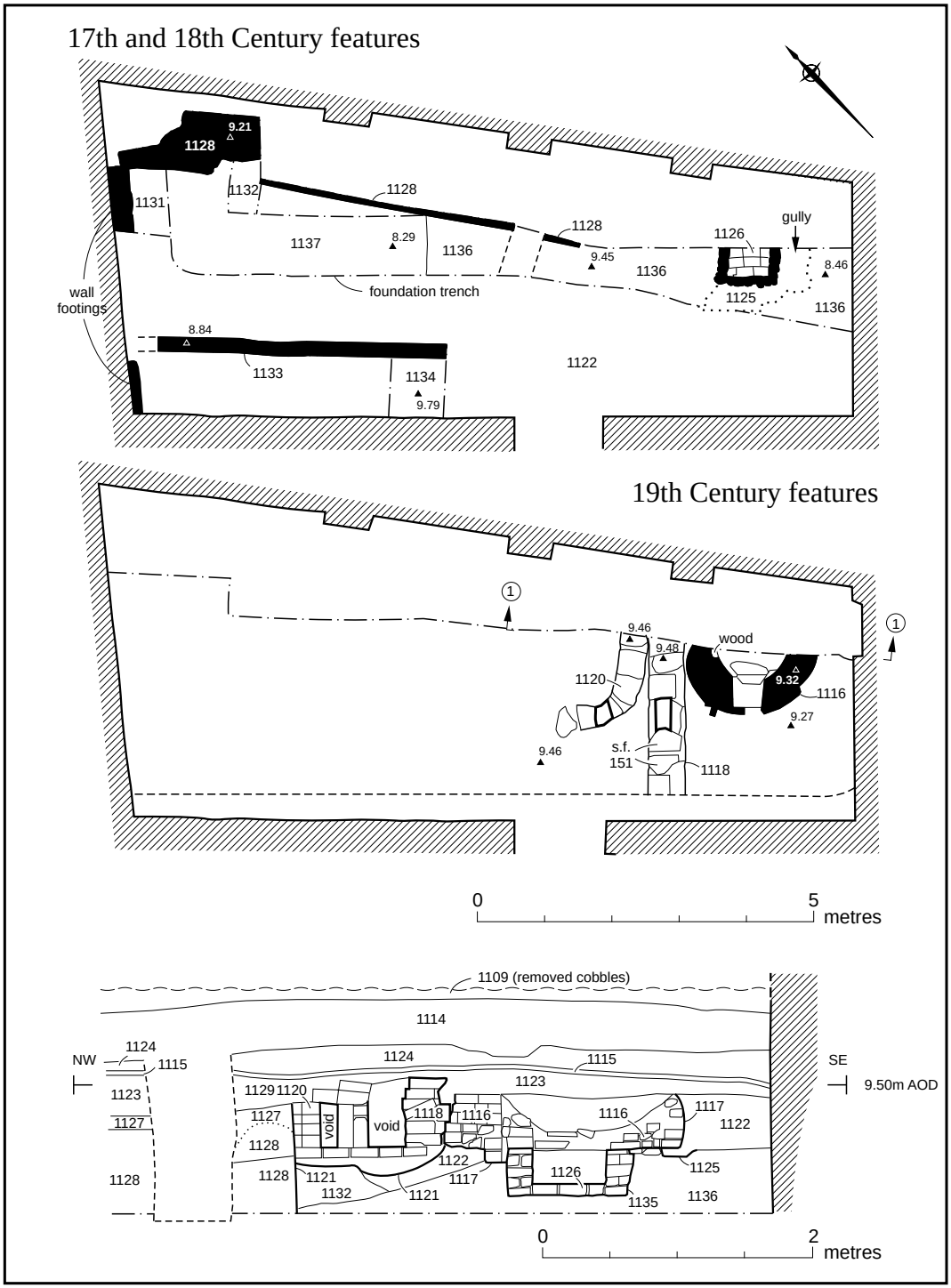


Fig. 14 Excavations in the area behind the old mill.

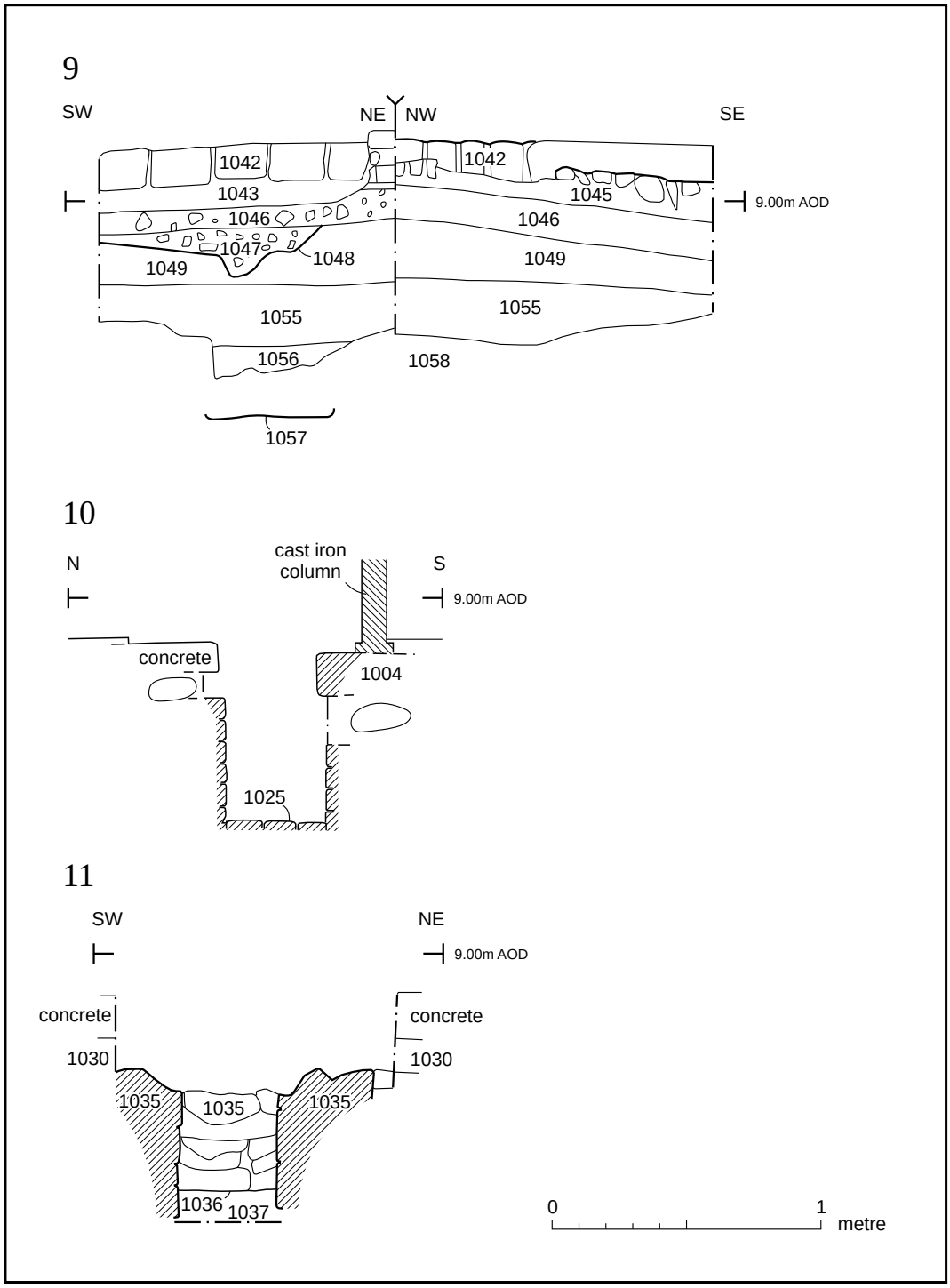


Fig. 15 The old mill and old stables: sections.

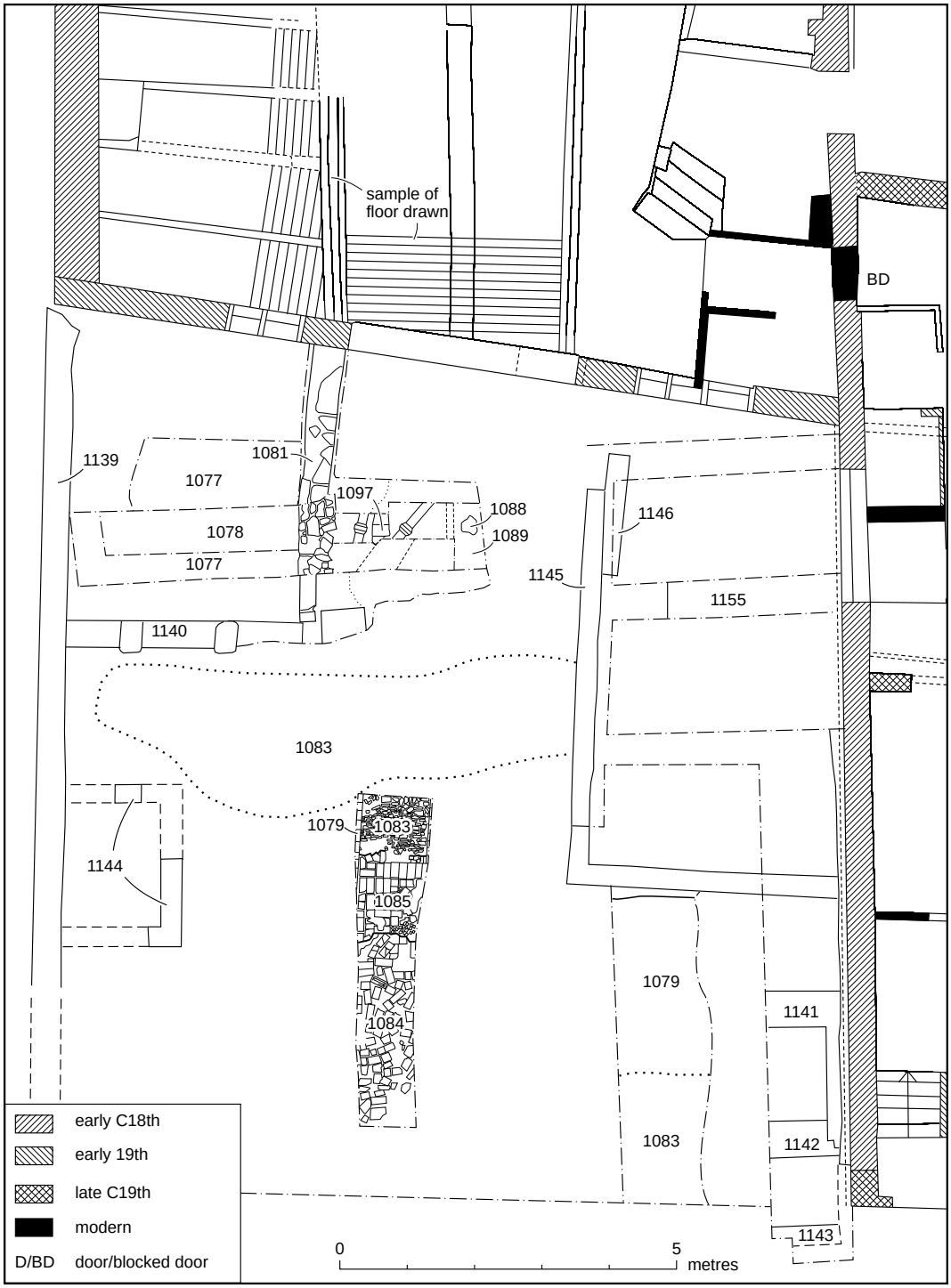


Fig. 16 The old mill: excavation plan of the courtyard.