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ARCHAEOLOGICAL EXCAVATIONS AT THE 'WINE PRESS', BEAULIEU ABBEY, 1987–1989

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ABSTRACT

A ruined L-shaped building in the grounds of Beaulieu Abbey, known as the 'Wine Press' was excavated over three summer seasons. At the north end a complex sequence was revealed indicating a wet industrial process, initially with stone tanks and a channelled stream. It is suggested that the process was fulling, or the finishing of woollen cloth by shrinking and felting. Documentary evidence exists for fulling at Beaulieu from the mid-13th century. The other section of the building was a large hall, with an undercroft. Post-Dissolution, all parts of the site saw some demolition, and agricultural and industrial use.

INTRODUCTION

Beaulieu lies to the west of Southampton Water, in the south-east corner of the New Forest (Fig 1). The underlying geology of the area is represented by complexed clays and sands whilst the surface geology is thought to have been formed during the past 80,000 years (Middle and Upper Pleistocene). It consists of substantial deposits of gravel, sand and clays, the gravel forming flat-topped plateaux which were subsequently eroded by streams to expose the underlying strata. The resultant soils have produced three main vegetation types: heathland on the infertile ridges, mixed woodland on the gentle slopes, and marshland on ill-drained low ground. Beaulieu itself is ringed by areas of heathland, but the surrounding slopes consist of woods and farmland. The Beaulieu River winds from the north to empty into the Solent and the modern village has grown up on the south bank of the river, opposite the abbey.

The siting of the abbey was initially determined by King John's gift of the land. It is impossible to say how far the monks were involved in this decision, but the location satisfied the Cistercian Order's need for isolation. The other vital element was a good water supply. At Beaulieu, this was provided by two springs in the high ground 800 m to the east of the abbey, known as Abbots' Well and Monks' Well. The existing round well-house (Monks' Well) covered a conduit which fed into lead pipes and thence to the cistern in the infirmary. From here it was distributed to the other areas of the monastery.

In common with other monastic settlements, considerable effort was expended at Beaulieu on water management. Where the abbey lies on a bend in the river, a small tributary joins it from the north-east. This stream was extensively regulated through a series of ponds. At least eight fish stews were thought to have existed, two of them within the abbey walls. From the upper of these ran the great drain of the abbey which emptied into the river. This drain was over 0.80 m wide, with a semi-circular arched top. The base was flagged with rough stones (Hope & Brakspear 1906).

The Beaulieu River itself was dammed just south of the abbey, creating a large pond known as Mill Dam. Below this point the river is tidal and navigable. Although the monks wished to live apart from the world, they still needed access to it, in particular for the abbot's annual journey to the General Chapter at Citeaux. Building materials for the construction of the abbey were most likely brought in by water. Stone came from Binstead in the Isle of Wight, from Caen in Normandy and from Purbeck in Dorset; roofing slate probably came from Cornwall. The floor tiles seem to have been made nearby from local clay (VCH 1911, 4, 654).

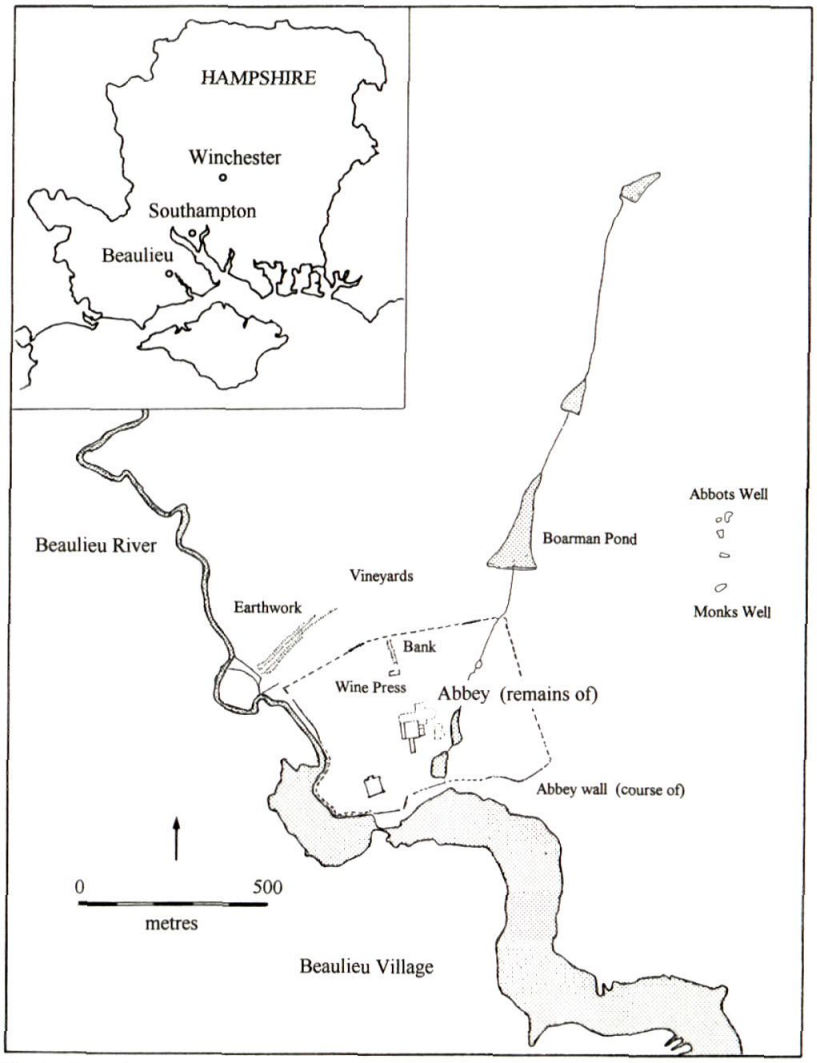

Fig 1. Location map

HISTORY

Beaulieu Abbey has been well studied over the past two hundred years. General sources include Warner (1793) and the Victoria County History series (1903, 1911). More particularly, excavations by Hope and Brakspear (1906) revealed many aspects of the abbey plan. Fowler (1911) drew together all the information available at that date; more recently Widnell (1973) and Hockey (1975; 1976) have concentrated on the documentary evidence.

The abbey was founded by King John in 1204, allegedly as a placatory gesture to the Cistercian Order and in popular myth after a bad dream, at a site in the New Forest. The name, which was originally *Bellus Locus,* seems to have been a ge-

neric term given to monastic foundations. Historically, there is no evidence for an existing settlement prior to the abbey's appearance, and Cistercian regulations required uninhabited and remote locations for their colonies. King John already had a hunting-lodge in the forest, however, which would have served as temporary accommodation for the monks, another pre-condition that the Cistercians were careful to demand. These buildings were in good order, for considerable sums had been spent on their repair during the previous five years. After the founding of Beaulieu, King John used to stay at Romsey in order to visit his new monastery.

Following further benefactions by Henry III, the church was finished in 1227, and the cloister and conventual buildings in 1246. Edward I frequently stayed at Beaulieu, and historical evidence of its trading importance is shown by a grant of protection given to the abbey in 1281, for taking a ship laden with corn and other goods to Gascony and other places within the king's power, and bringing back wine and other produce (VCH 1903, 2, 143).

A significant Cistercian precept (frequently broken in later years) was that the monks were to be independent of kings, Church and feudal society. They were to take no manorial or ecclesiastical revenue, and conversely were not bound to hand over any income (or hospitality) to patrons who had given them land. All the monks' needs were to be met through their own endeavours, and choir monks (or white monks) were obliged to undertake some manual labour. The crux of the Cistercian system, however, was the development of a workforce of *conversi*, or lay-brothers (usually illiterate, but often skilled craftsmen or former peasants). Lay-brothers worked the land, both near the abbey and on outlying self-contained granges. Beaulieu is unusual in this regard, in that it is one of the few abbey sites still surrounded by all the farms which had formed its earlier grange system (Hockey 1976). Cistercian estate management was efficient and innovative, not only in agricultural matters, but also in industrial development.

The 'Great Close' of Beaulieu consisted of more than 8,500 acres (3,440 ha) within a boundary probably fixed by the 14th century. The delineating earth bank remains almost intact today, but the main monastic site was much smaller. The Abbey was originally surrounded by a precinct wall enclosing a rough square of 58 acres (23.5 ha) entered from the south. Within this large self-contained complex a division could be made between the church and monastic buildings proper, where the choir-monks prayed and studied in an atmosphere of quiet sanctity (the inner court), and the guest houses, and the industrial and agricultural outbuildings where the lay-brothers worked (the outer or great court).

The 14th century was a time of trouble at Beaulieu; the Black Death led to difficulty in finding paid workers, and a consequent rise in wages. The price of wool also dropped to its lowest figures for the century in 1350–51. Documentary sources indicate a record of debt, bad administration and extravagance. Added to this were natural disasters such as pestilence and unusually high winds, which caused serious damage to the buildings of the abbey and its granges (Hockey 1976, 115). By 1424 after William Sulbury became abbot, life was on a more normal course. But there was further trouble in 1438 when a royal writ of protection was served for the keeping of Beaulieu's possessions, which had been wasted by misrule.

In 1536 Henry VIII began the process of the Dissolution of the Monasteries. On April 2, 1538 the last abbot, Thomas Stevens, surrendered Beaulieu Abbey and all its possessions to the crown. The abbot and seventeen of the monks obtained small pensions, and several 'sanctuary men' (people who had committed crimes but were seeking a safe haven within the Great Close) were allowed to remain there. Three months later, the New Forest lands of Beaulieu were granted to Thomas Wriothesley, later to be made Earl of Southampton.

Demolition and alteration of the monastery began almost immediately; the roofs of the abbey were stripped for lead by Michaelmas of that year. Stone and other materials from the dissolved abbeys were needed to build fortifications along the south coast against a threat from France. These included castles at Sandown, Calshot, East and West Cowes, Hurst and Yarmouth. It would seem that Thomas Wriothesley made his manor house

out of the Lady Gate of the monastery and adjacent lodgings, but his main dwelling was at Titchfield, and hence there was no need for another major conversion at Beaulieu. The refectory was also retained to provide a parish church.

On the death of the fourth earl in 1667 Beaulieu passed through marriage to Ralph, first Duke of Montagu. The Montagu family has therefore been associated with the management of the manor and estate for well over three hundred years.

Industrial Activity

There is little direct evidence for industrial processes at Beaulieu, considering their importance to the daily life of the abbey, but a number of references do create a general impression of such activity.

At an early date the monks had a water mill operating within the walls, used for grinding corn and beans, on the east side of the lane inside the outer gatehouse. This was despite the Cistercian statutes of 1157 forbidding the acquisition of mills 'because of danger of chatter and other abuses', which were widely flouted (Bond 1989, 103). At some point, possibly before the Dissolution, the mill was moved out to its position on the bridge over the river. Hope and Brakspear reported that the structures within the earlier mill were all of wood, and considerable remains were found in a decayed state (1906, 144).

A rare surviving Account Book of 1269–70 reveals that there was a fulling mill, a wool-store, a tannery, a piggery with more than 200 pigs, a slaughter-house, a brewery, a fishmongery, a forge, a granary, a bake-house and two separate stables which must have taken up a large area (Hockey 1975; 1976). Between the different workshops, spaces were devoted to growing vegetables, and for bee-keeping. Stonecutters, builders, plumbers, slaters and carpenters were also employed, and limestone was converted to lime at a kiln.

There is evidence from the Account Book that wine was purchased and carted to Beaulieu, and mass wine was guaranteed by the grant of an annual tun by King John out of the royal cellars. In addition, however, the forester supplied vine-stakes to the abbey, so it may well be that the monks made some wine, but this is not found in the receipts, whereas cider is. Various workshops cultivated vines at this time, but there does not appear to have been one single vineyard. Possibly the grapes were grown just for table fruit.

Leather working must have been important as each monk received two pairs of shoes a year, and large numbers of shoes were also given away as presents. The brother in charge of shoemaking also managed the tannery. The brother in charge of clothing also had to supervise the weaving and fulling of cloth. The brethren were provided with a new winter tunic each year, and blankets were distributed in the dormitory. Slippers and lamb-skin hoods were also issued to monks (*ibid.* 1976, 73).

At the Dissolution, the Augmentation Office copied all the Beaulieu leases and indentures into a book and this gives details of many activities on the estate, often carried out by lay-men; stewards, bailiffs, etc (*ibid.,* 165–7). The butler was to live in 'le Palepondchamber' within the walls, receiving fuel, three yards of woollen cloth and 26s 8d every year. Thomas Page was to live in the 'lyme howse', and Thomas Browne in a lodging at the end of the horses' stable in the 'lyme howse'. John Warde was granted a tenement within the abbey enclosure, next to the 'grett Tannehowse'. There is also evidence for salt-production on the river flats and the existence of rabbit warrens at Warren Farm. A map dated to 1718 of the manor of Beaulieu (Beaulieu ref. MP/E6) shows within the Great Close a large number of named smaller holdings which probably originated in the monastic period.

Soon after the Dissolution, in December 1543, all the land within the precincts of the abbey was leased to a Robert Bracy (Hockey 1976, 200). Weeds and thistles had to be cleaned up, indicating that the area had become overgrown. Many of the former monastic workshops had been converted into dwellings, however, before the monks had left. In the same year, a John Franklyne was leased a cottage and garden rent-free 'because it is held on condition of remaking le Fuller Rack' (Beaulieu ref. EI/SR 1). A short time later, in 1575, an indenture of demise was granted to Henry Wells, to erect a corn-mill at the 'fulling-mill pond' (Beaulieu ref. EI/LE 1). In 1578, Henry Wells,

gentleman, is described as holding land at 'fulling-mill pounde for one fulling mill to be made by himself' (Beaulieu ref. EI/SR 3).

The 'Wine Press' is the only utilitarian building at Beaulieu that has substantial upstanding remains. Its name can be first attributed to Warner (1793) and he presumably used it because of the proximity of the known early 18th century vineyard. This interpretation was taken up and amplified by Hope and Brakspear (1906, 174). The structure's survival may have resulted, however, from the use of the larger part as the Parsonage Barn in the 16th and 17th centuries. Widnell (1973, 60) concludes this is the building referred to as such in 1694 and 1700, because the parson then lived in the nearby Domus and Cloisters, and the 'Wine Press' was not referred to by any other name.

THE SITE

The ruined 'Wine Press' complex lies 100 m to the north of the original Abbey Church (NGR SU 3880 0275), halfway between it and the precinct wall. It is L-shaped in plan, comprising a large barn-like structure – the East-West Range; and a now separated wing – the North-South Annexe (Figs 2, 3 & 6).

All that remains upstanding of the East-West Range (28 m × 15 m) are the east gable wall and the west gable wall to which are attached parts of

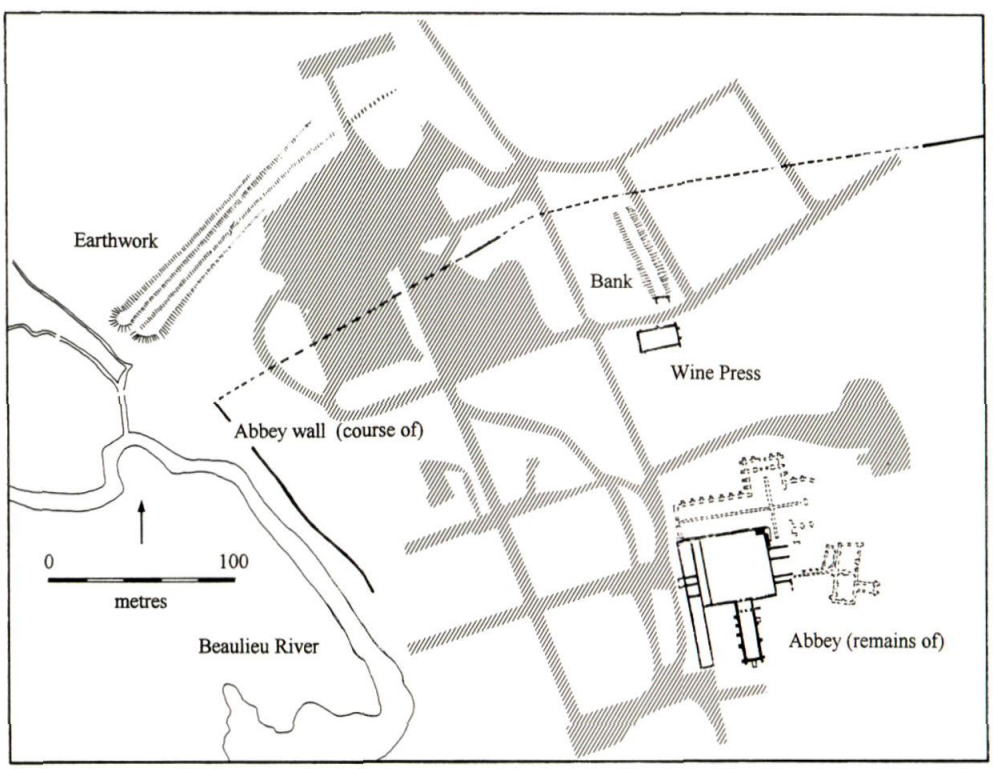

Fig 2. Plan showing the 'Wine Press' in relation to the remains of the Abbey Church and cloisters, the north west corner of the abbey precinct and the large earthwork. The shaded area represents the layout of the National Motor Museum.

Fig 3. View of the 'Wine Press' site from the south during the 1988 excavations.

the south wall. In addition, two buttresses and adjoining masonry of the north wall survive. The North-South Annexe (15 m × 10 m) consists of three connecting walls of which the northern most is the best preserved. The walls are all constructed of roughly dressed limestone, bonded with a yellow-white lime mortar which contains small yellow-brown flint gravel.

THE EAST-WEST RANGE

The east gable wall

This stands approximately 10 m high, and has lost its upper north quarter. A ledge on the inner face indicates the position of the first floor at a height of 2.20 m. Beneath this ledge, beam settings and corbels provide further evidence of how the floor was supported. Two metres above the first floor are three more corbels in the surviving section of wall.

There are three windows in this wall, one above the ledge and two below. The latter are currently filled with masonry and have been badly damaged. Sufficient evidence remains to show them as splayed internally, with a maximum width of 2 m for each light. They stand at about 0.50 m above ground level. There is no evidence for their glazing or screening. At about 1 m above the first floor is a large window with a pointed arch. It is about 2 m wide at its base, and has a similar splay to the lower windows. About half of this window survives, and its limestone quoins show good quality workmanship. The internal moulding is chamfered to take a shutter, and it also has a glazing slot.

Putlog holes occur irregularly in this wall. In every case they go right through the structure which indicates that they were part of the building

process rather than for an episode of repair. On the outer face of the east wall are two buttresses, with another present at the south-east corner of the building.

The west gable wall

This structure is entirely different in character to the rest of the building. That it was a modification of the west end of the range was first commented on by Hope and Brakspear (1906, 173). The wall is remarkably complete with only the pinnacle of the gable missing. It is plain, without any corbels, but with many putlog holes in it. One interesting detail is that the internal ledge was apparently built too low for the existing first floor level and the beam settings are therefore placed above it, rather than below as in the east wall.

There are two windows in this wall, one above and one below the internal ledge. The lower is infilled with masonry, but the evidence shows that it was splayed from 2 m maximum internally, to a narrow lancet externally. The upper window was built as an arched square 2 m × 2 m. The quoins have some pieces of finely worked limestone down one side only. There is no evidence of fitted closures or glazing. The window was secured by iron bars set in the quoins in pairs in a 'Union Jack' pattern.

Externally the west wall is decorated with a chamfered limestone string course running across the base line of the gable, but pierced in the middle by the upper window arch. Immediately above this is a springing arch which carries the weight of the top of the gable.

The south wall

Small fragments of the south wall survive at the junction with the east and west walls. A modern field wall 1.75 m in height has been built onto its foundations.

The north wall

This is represented by two fragments, one of which is attached to the west wall, and the other to the buttress at the junction with the North-South Annexe. A modern wall separating the range from the annexe was demolished to make way for the 1989 season of excavation.

THE NORTH-SOUTH ANNEXE

This is represented only by the north wall and fragments of the east and west walls. The north wall, set into the bank, has external corner buttresses and an internal ledge at a height of 2.50 m. The wall does not run at right angles to the rest of the building, but at a variance of six degrees (Fig 7). Most of the east and west walls of the Annexe have been demolished, and the foundations were sealed by a road, known to have been in use by 1725.

The only apparent aperture in this part of the building is located in the east wall. It is a narrow structure splayed both internally and externally, with a minimum width of 0.75 m. It is too small for a door and is most likely to be a window after the style of those in the east wall of the East-West Range. At one time it was fitted with a chamfered limestone cill which was lost in subsequent modifications.

THE AQUEDUCT BANK

Associated with the Annexe is a linear mound running north-south for at least 50 m. This bank has a semi-circular section with a flattened top, and is currently 2 m high and 12 m wide at its base. These measurements do not reflect the original width of the feature which was substantially increased by a deposit of clay during the construction of the National Motor Museum in 1971. The bank is generally accepted as an aqueduct, capable of carrying water to the 'Wine Press' site from a source further north.

The most obvious supply would have come from the ponds in the valley to the north-east (Fig 1), but in July 1970 the Ordnance Survey noted the continuation of a broad ramp westwards to terminate at the Beaulieu River as a deep ditch between two massive banks, 5 m high (marked as 'Earthwork' on Fig 2). They speculated that this earthwork might represent the means of conveying water, backed up from a reservoir at the riverside, in an easterly direction to the aqueduct bank. Both arrangements would have required an abrupt change of direction in the flow of water to align with the bank, however, something which was normally avoided (G Bowie, pers. comm.).

EARLY EXCAVATIONS

Hope and Brakspear

W H St John Hope and Harold Brakspear excavated extensively at Beaulieu Abbey in the early years of the century. Under the heading of 'The Wine Press', they described and delineated an L-shaped building, inferring that the East-West Range had been shortened by 34 feet (10.36 m), at the western end. They identified the existence of post supports, and envisaged five pairs of posts on either side of a central aisle. They concluded that the structure was a 'hay loft' raised on a wooden floor over a cellar, 'probably (with) stone piers to support the posts above' (Fig 4).

The northern wing was also thought to have been raised upon a cellar, again divided into bays. Hope and Brakspear noted the existence of the 'raised earthen causeway to the upper floor (at the end of this wing) from the higher lands to the north, called 'the vineyards". This, together with the historical association of the name the 'Wine Press', led them to conclude that the Beaulieu wine-presses and fermenting vats were housed in this part of the building, and wine was stored in the two cellars. They cited the example of a Cistercian wine press at Clairvaux, with a comparable, if larger, ground plan.

Poole Museums

In August and September 1973, Poole Museums, under the direction of John Dockerill, Curator, carried out trial excavations at the Beaulieu 'Wine Press', 'to determine the nature of the site and such details as occupation depth, subsoil and drainage'. From their initial survey (Fig 4), the complex was thought to be a rectangular building, with an 'addition' to the north (Poole Museums 1973).

Two trial sections in Building I, revealed four main layers of deposit. Finds included a sherd of a Polychrome jug, imported from south-western France between 1275–1325, and other pottery from the late–13th to mid-14th century, but these were mixed in layers 2, 2A and 3 with an iron spur of 16th-century date and late–18th century dishes and dairy pans. Structural material (roof tiles, slates and fragments of dressed stone) was also found.

The Poole excavations within Building I finally amounted to nearly a third of the interior. Nine column plinths were found, in varying states of repair. From their position, the Hope and Brakspear theory of rows of paired posts was amended to that of three rows of posts. A limestone slab floor was also uncovered in the south-east corner of the building 0.16 m below current ground level, and a possible entrance assigned to the north wall.

In Building II a 4 m × 2 m trench revealed six stratigraphical layers, with finds of mixed date including a fine 17th-century dairy pan. At a depth of 1.30 m a half-round mortared feature was exposed, 0.95 m high with a diameter of *c.* 1.86 m, and running diagonally. This was conjectured to be a large covered water culvert, although the report noted that 'its alignment in relation to Building II would tend to argue against this possibility'.

The Poole report also referred to a number of banks and depressions, suggesting structural remains, in the adjoining field to the south – the Donkey Field.

The preliminary conclusions drawn from these trial excavations were that Building I was raised in the latter stages of the Abbey's construction, and that its architecture (particularly the windows) indicated a late–13th century domestic function. It was rebuilt in the late 14th/early 15th century, when the three rows of column bases were crudely constructed out of re-used material. Large quantities of orange clay were also deposited on the floor at this time to raise the level.

This phase was associated with agricultural or industrial use, and was considered to be contemporary with the construction of Building II and the aqueduct mound. A third phase could be dated to the late 17th/early 18th century, when the floor was again built up, and flagstones and land drains laid. It seemed likely that Building I was the 'Parsonage Barn' referred to in the documentary record of this period.

Few conclusions were drawn about Building II, other than that it was of later construction than Building I, and associated at some time with the aqueduct mound running from the north stream. Its quality of construction indicated an unknown industrial or agricultural use, although kiln activity was suggested as a possibility.

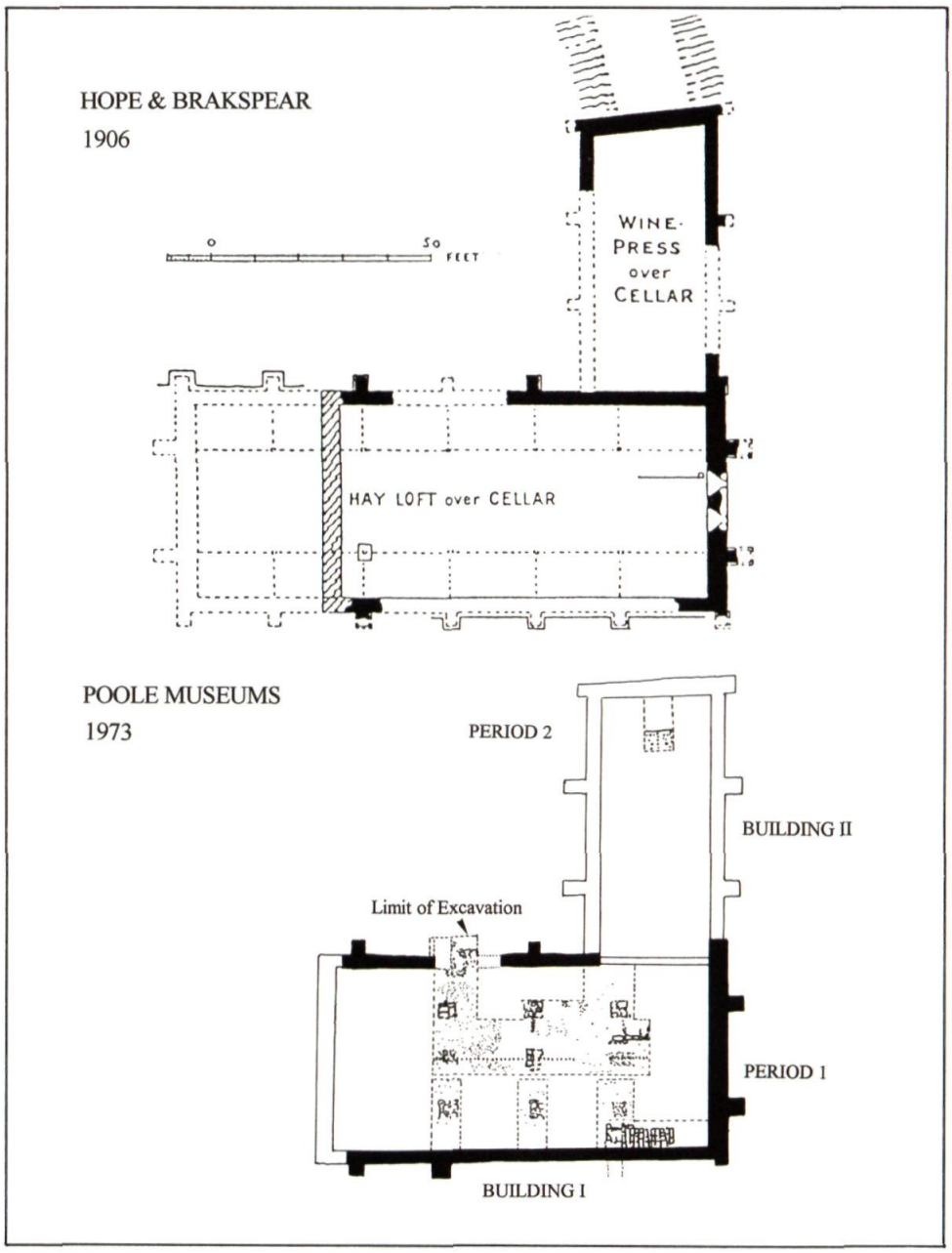

Fig 4. Previous excavations: the plans produced by Hope & Brakspear and Poole Museums.

THE EXCAVATIONS

INTRODUCTION

The object of the HCMS excavations was to determine the date of the 'Wine Press' building and associated structures, and above all, to ascertain their function. Modern landscaping of the abbey grounds meant that there were several physical constraints to the project, including a road, fences, and buried service trenches, but the Beaulieu estate spared no efforts to afford access to all parts of the site. The excavations were financed by the Beaulieu estate and directed by Kenneth Barton, assisted by Robert Burns and David Allen. The labour force was made up of volunteers and students.

The 1987 excavation set out to examine the northern end of the North-South Annexe. The areas excavated were the interior, and parts of the

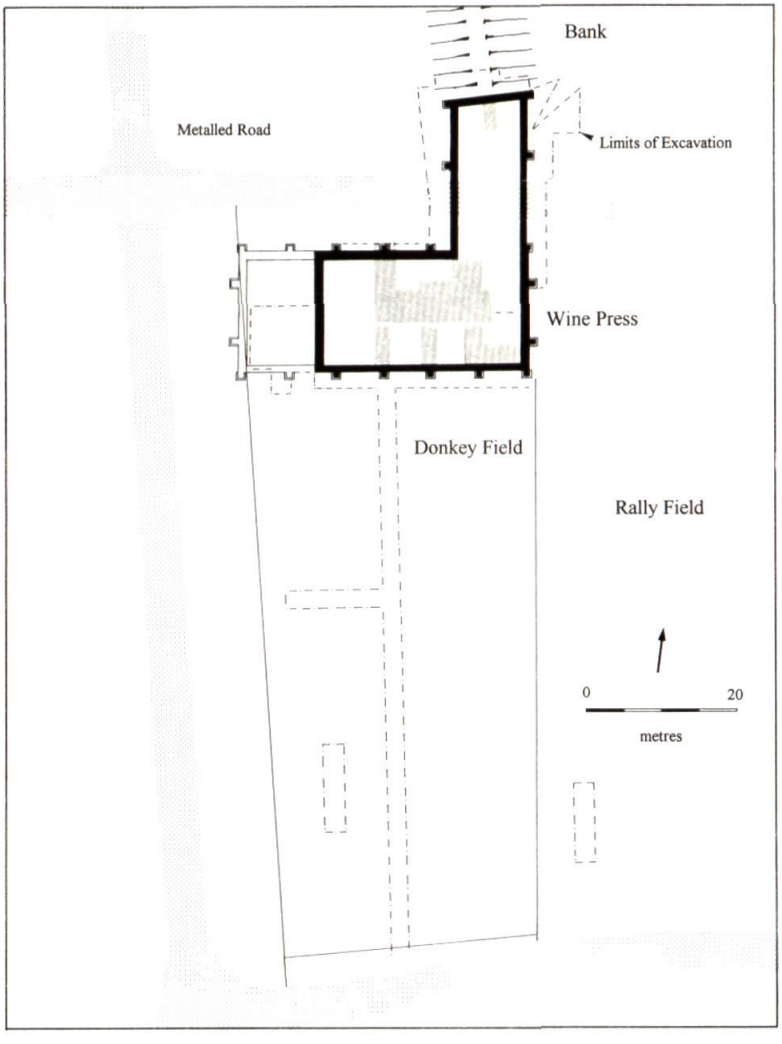

Fig 5. Plan showing total areas excavated 1987–89.

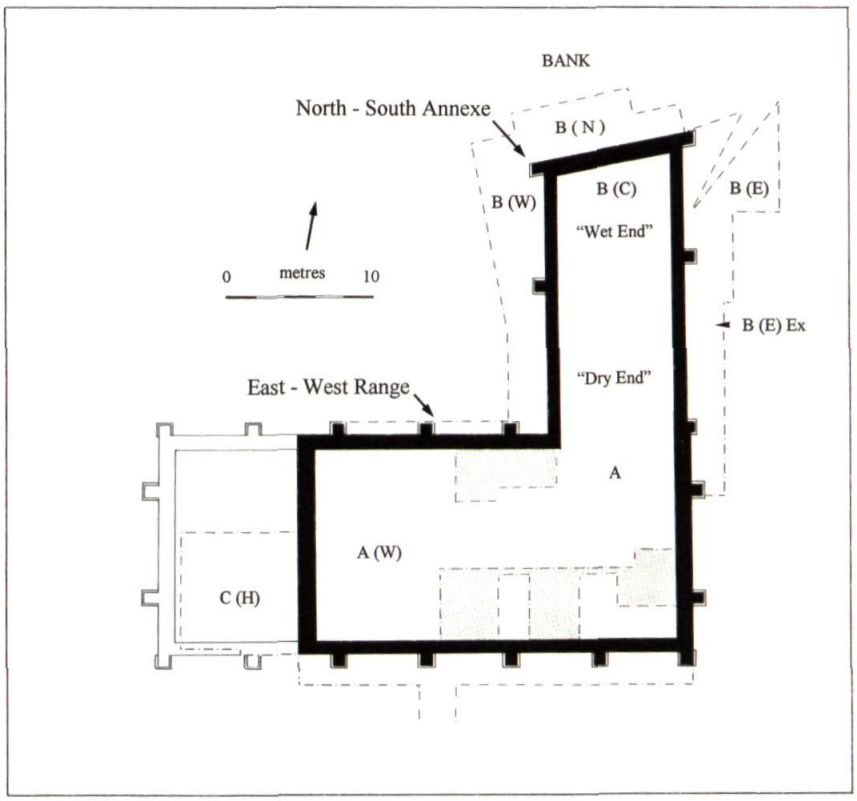

Fig 6. Plan showing the area codes used 1987–89.

Table 1 Terms of reference for the 'Wine Press' complex

	Structure	*Structure*
Hope & Brakspear	Hayloft over Cellar	Wine-press over cellar
Poole Museums	Building I	Building II
H C M S	East-West Range	North-South Annexe

Table 2 Area Codes used by HCMS in excavations 1987–1989

A East-West Range – A(W) West End

B North-South Annexe – B(C) 'Wet End'
B(W)
B(E)
B(E)Ex
B(N) Bank
B(C)S 'Dry End'

C Donkey Field – C(A–J, omitting I)
Area west of East-West Range – C(H)
Rally Field – C(K)

exterior, both east and west. In addition the north-east corner of the East-West Range was examined down to 18th-century levels. In the following year the bank to the north of the annexe and the ditch to the east were examined, as well as archaeological features in the Donkey Field. The aim of the final year's excavation was to determine the complete plan of the building and the date of its construction. The part of the annexe lying beneath the road was exposed, and the west end of the range excavated on both sides of the west gable wall (see Figs 5 & 6; Table 2).

THE NORTH-SOUTH ANNEXE

The northern third/'Wet End' of the Annexe B(C)

Excavations of the northern end of the Annexe began with re-examination of the Poole Museums trench (**02**), which served as a useful guide to the stratigraphy. Eventually deposits to a depth of 1.80 m were removed from this area. This part of the building had thick external walls with deep foundations and substantial internal structures.

Upon clearing the topsoil, a dump of 0.50 m of modern gravel (**01**) was revealed, containing a mix of stone, slate, tile, glass and some pottery. Below this was a brown loamy layer (**03**). The top of the large arched structure first noted by Poole was further revealed (**09**); this turned out to be a linear covered drain running across the interior of the building. It was 1.75 m in width, and the mortared roof was a maximum of 0.50 m in height above vertical stone-built side walls. Close examination suggested that this feature had been modified more than once during its period of use.

As layer **03** was removed, two massive internal walls were revealed. One (**05**) ran from the north wall south to touch the top of the drain. The other (**06**) ran from the east wall, turned at right angles, and also finished on the surface of the drain, although on a slightly different alignment. These walls were similar in build and width, and were composed of mortared stone faces with a rubble infill. The tops of the walls appeared to be original, being level throughout. This would have provided an L-shaped platform or base within the building. Alternatively, the walls created a 'tank' 5 m square in the north-east corner of the Annexe (Fig 7).

Excavation to the west of wall **05** involved the removal of a light brown stony fill of uniform colour and texture (**07**), which showed clear evidence of slumping. Beneath this was a soft brown soil layer (**14**). At the southern edge of this material, the line of the drain continued, but its arched roof had here been replaced by a horizontal capping of re-utilised worked stone slabs (**10**). The area above these slabs was disturbed, and among the finds were two sherds of Raeren stoneware. The five capping stones were rectangular, and 120 mm thick, averaging 0.90 m in length and 0.40 m in width. One face was roughly finished, but the other had finely worked chamfers on each long side.

The removal of **14** exposed a thick black soil with some stones (**17**). This highly organic layer contained vegetable matter including a bundle of twigs and a quantity of animal bone. It also produced several sherds of stoneware dating to the last quarter of the 15th century, fragments of roof tile, nails and a limestone sconce, or bracketed candle-holder. This deposit lay on a dished floor (**20**) measuring 2 m × 2.70 m, which showed signs of scouring and had cut into the yellow clay subsoil to a depth of 300 mm.

To the east of wall **05**, in the area of the 'tank', removal of layer **07** revealed a deposit of compacted broken slate (**08**), which was thin to the north of the drain cover but up to 0.50 m thick to the south. This in turn overlay a yellow clay (**13**) which was conversely much thicker to the north than the south (Fig 9).

Excavation of all the deposits within the tank exposed a number of stone-built structures (Figs 8 & 10). These clearly preceded the walls of the 'tank' in date, but apparently continued in use after its construction. They consisted of six rectangular foundations or 'vats' (**19**), the smallest *c.* 1 m × 0.60 m × 0.40 m deep, three to each side of the central drain. These vats had slab stone floors which sloped towards the drain. They would have been capable of holding water, but holes in the side walls of the central drain would have allowed them to be emptied. Between the north wall and the vats was a long 'trough' (**24**), measuring 4.50 m × 1 m but of unknown depth. Its fill consisted of fine yellow clay (**16**).

Excavation of the lower levels of the Annexe

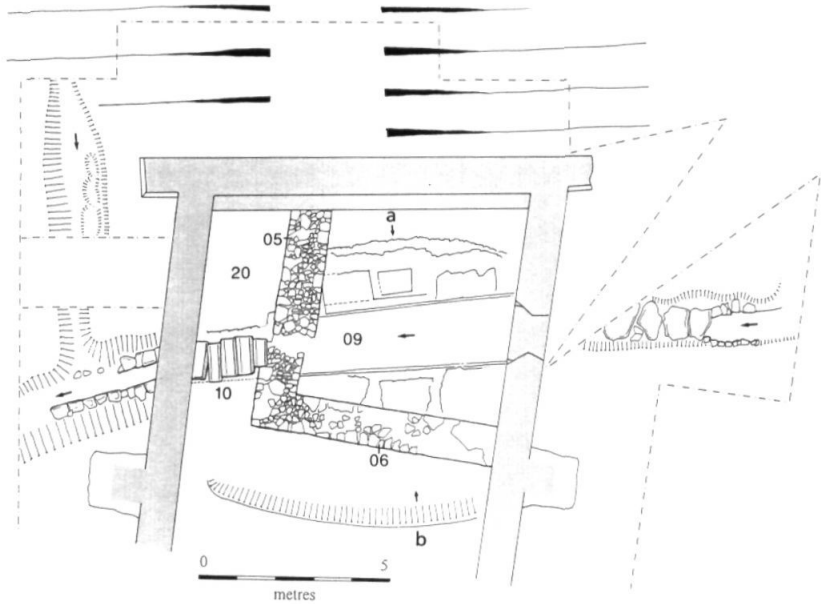

Fig 7. Detailed plan of the north end of the Annexe showing the internal modifications (Phases II and III).

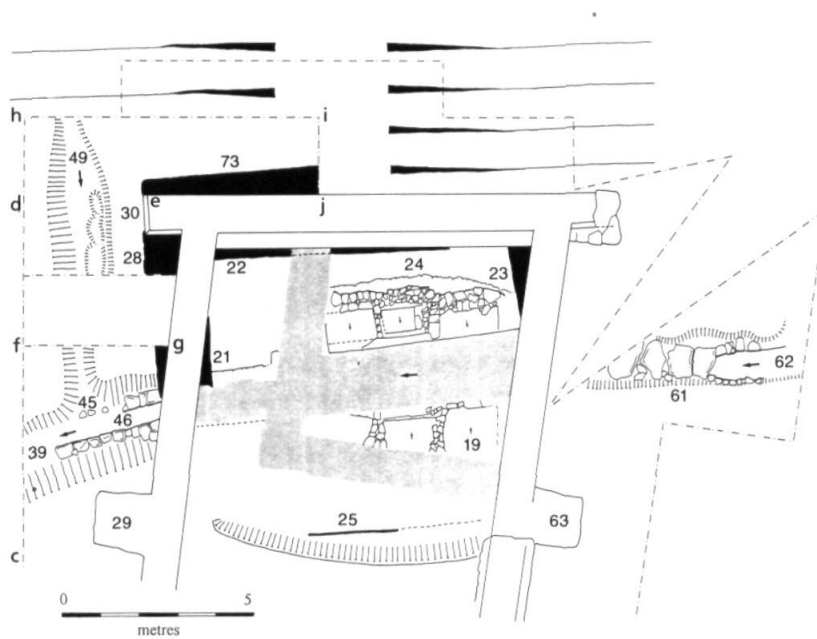

Fig 8. Detailed plan of the north end of the Annexe showing the features – water course, tanks and foundations – which may represent the earliest building (Phase I).

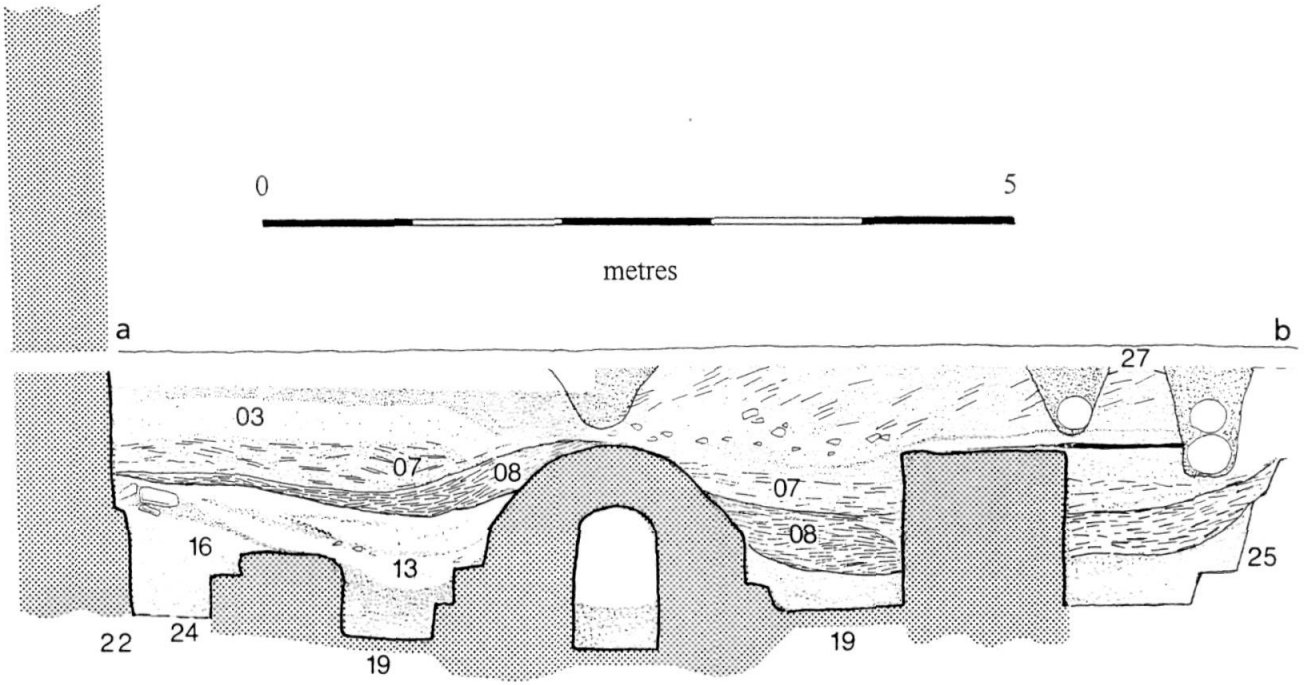

Fig 9. Composite section across the interior of the 'Wet End' showing the principal features and the main episodes of infilling – see Fig 7 for location.

Fig 10. Aerial view of the 'Wet End' of the Annexe during 1987. The L shaped internal wall, arched and capped drain, and 6 rectangular 'vats' are exposed.

walls revealed masonry footings (**21, 22** and **23**) built on a different axis to the main work. These footings were parallel with or at right angles to the central drain and the internal vats, indicating that an earlier structure may have existed here. The southern limit to the 'wet end' of the Annexe, a scarp or gully (**25**) (see p 125) shared this axis.

The interior of the central drain was examined by removal of the flat slabs (**10**). It consisted of a channel, rectangular in section, 1 m deep and 0.50 m wide. The fill of silts and yellow clay (**15**) was at least 0.75 m in depth. It contained five sherds of pottery, some roof tile, nails and small pieces of wood (Fig 11).

The area west of the Annexe end B(W)

A rectangular area 4 m × 10 m was excavated here. Service trenches (three slots with plastic pipes and a modern land drain) ran across the south end of the site (**27**).

The first layer encountered was a tough fibrous soil (**26**) beneath the turf, with recent disturbances and tipping at the south end. The removal of this material revealed the west wall foundations, the chamfered plinth of the north-west buttress and another large buttress 7m further south (**29**). Elsewhere a slate filled layer (**36**) was uncovered.

The buttress, as indicated by the moulding on its plinth, was set higher than the general ground level. A narrow trench (about 0.60 m deep) existed against the side of this buttress. This was presumably a robber trench (**30**), and the head of an iron spade and sherd of Verwood pottery of 18th-century date were found in it. The foundations of the building were encased on this side with the local orange clay, probably as a deliberate attempt at waterproofing.

At the south end of the trench layers of limestone fragments (**33**) containing butchered animal bone and blue grey clay (**32**) were removed. They

Fig 11. View west along the channel of the Annexe, from inside the arched drain. The capping slabs have been removed.

appeared to have filled a wet area near to the southerly buttress. The course of the ditch channel was indicated by a linear depression filled with large Quarr stone boulders. As these were removed, so the dimensions of the ditch could be seen. It was over 2 m wide in this locality.

A four-metre section of the ditch was excavated adjacent to the west wall. It was U-shaped in section, 0.50 m wide at the base by 1.25 m deep, with some evidence for a recut. The blue-grey primary silts (**44**) were overlain by orange-brown gravel (**43**), fine grey clay (**42**) and several boulders (**41**) tipped in mostly from the south side. Layer **36**, encountered further north, entered the ditch from this side to merge with **41**. A thick deposit of fine brown silt (**40**) lay above the slates, and over this was the limestone spread (**33**) (Fig 12).

Layer **37**, a mix of brown sandy silt, slate and limestone, represents the evidence for the earlier cut. Its removal revealed a band of brown clay (**47**) up to 0.25 m thick, over mottled yellow-brown clays (**48**) of similar depth, and a possible pit (**38**). The exact significance of these layers could not be ascertained in the small area excavated but they did contain large sherds of late medieval pottery.

The internal drain exited the west wall through an arched opening made from imported lava stone (Fig 15). Beyond this the course of the drain was flanked by lines of stones (**46**). These may have been contemporary with, or later replacements for, wooden stakes (**45**), five of which survived in a waterlogged condition.

A second section was cut at the north end of the trench, revealing a gully (**49**) running north-south (Fig 12). This had a deep U-shaped profile. The fill consisted of fine grey silts and brown yellow clay, but it was noticeable that fragments of slate were present all the way through to the base. Some fragments of medieval pottery also occurred here. The gully was a cutting probably designed to channel run-off from the aqueduct. Its sharp but irregular profile was probably due to a combination of rapid water movement and the nature of the soft clay subsoil.

The area east of the Annexe end B(E) & B(E)Ex

The area east of the annexe was excavated over two seasons by means of triangular cuttings which took into account the existing fence line. Other modern features included service trenches which were the same as those noted to the west (**27**).

In 1987 the first two layers removed were brown clay (**50**) and redeposited topsoil (**51**) which were known to have been dumped here during the construction of the Motor Museum. These had a combined maximum depth of 1.40 m, but thinned out to the south.

Beneath this was a layer of small stones, roof tile and slate above a roof slate and mortar mix (**52**). Finds included the base of an 'onion' bottle (1680–1720), oyster shell and some pottery. Further south the slate dipped to the south as did the surface of the fourth layer (**53**). This was a rich

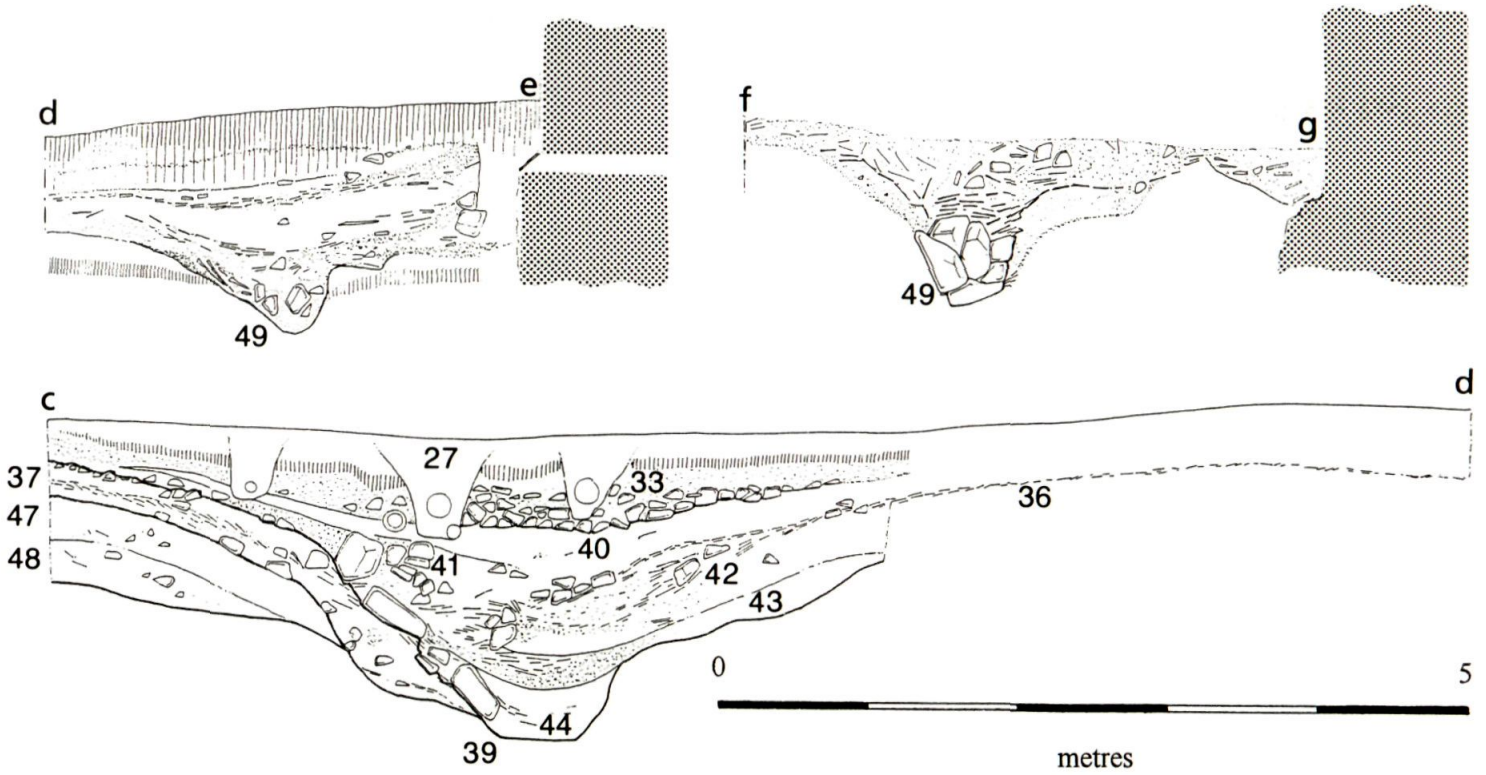

Fig 12. Sections across ditch (**39**) and gully (**49**) – see Fig 8 for location.

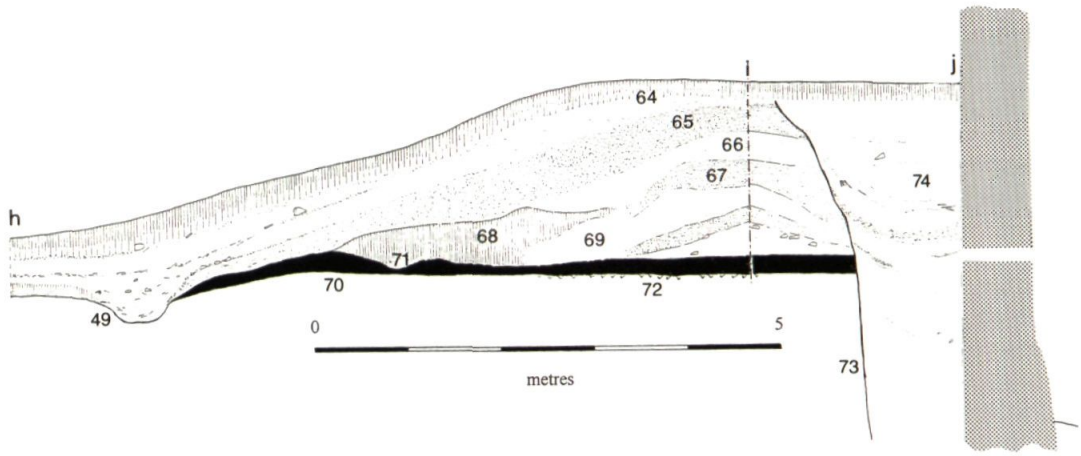

Fig 13. Half section of the bank and cross section of the north wall foundation trench (**73**) – see Fig 8 for location.

brown clay with stone and bone in it. The clay was sectioned, but no Annexe wall footings trench could be seen. Parallel to the wall at a distance of 0.30 m, was a small gully (**54**) which contained a mix of slates and mortar (**52**).

The north-east wall buttress stood on a large footing approximately 1.30 m square, with the buttress itself measuring 1 m × 0.90 m. The buttress had a chamfered base; **52** may be a construction rather than a destruction layer as it lies over the footings and up to the chamfer.

In 1988 this area was extended beyond an existing fence. Arduous digging removed over 0.30 m of compacted hoggin and a thick black greasy layer (**56**) over stone and tile tumble (**51**). Part of the cutting was made to reveal the watercourse (**62**) leading to the arched drain. It proved to be a rectangular channel, with side walls of re-used monastic limestone, probably stone-floored throughout, capped with large irregular flagstones. These flags (**60**) had been covered with a layer of clay some 0.40 m thick (**57**).

The side walls were also clay bonded, but collapse had soon taken place, and a similar fill of gravel, silt, slate and clay was found as elsewhere in this drain (see **61**). A series of side gullies had been cut to meet this feature. One to the south was square in section (**58**).

The south leg of the cutting revealed more of the east wall of the Annexe. Here the wall was heavily robbed and part of a buttress (**63**) had been removed. Also evident was the foundation of a small rectangular structure (**93**) covering an area approximately 1 m × 2 m and integrated into the main structure.

The Aqueduct Bank B(N)

The bank was stripped of turf for a width of 3.50 m and found to have had its east side substantially widened with dumped clay (**64**) from the foundations of the Motor Museum built in 1971. Also, behind the north wall of the Annexe there had been a number of trees, the roots of which had greatly disturbed the surface of the bank at this point. The origin of the trees could be approximately dated to the end of the 18th century. The pressure of the root growth had forced the north wall to bulge badly.

The excavation cut into the disturbed area, but found only yellow/orange clay with odd pockets of gravel (**65**). The gravel deposits appeared to be an accumulation of stone and mortar which had fallen from the wall of the building. There was no evidence for post holes in the bank, nor for a wooden trough or channel; the root damage, however, was deep and extensive.

A section, 2 m × 7.50 m, was cut to the rear of the wall on the western half of the building, where

Fig 14. View west of the Aqueduct Bank under excavation. The clay-filled foundation trench is clearly visible, running at a different angle to that of the north wall of the Annexe.

there was no recent dumping (Fig 13). This showed the bank to be of one period of build. It was composed mainly of yellow clay, but this had turves, gravel and mortar spalls within it. Six layers could be discerned in section, including a dump of old turf and soil (**68**) containing pottery, and the black old ground surface (**70**). This was between 100–200 mm thick and contained animal bones, shell, pottery, tile and charcoal. Beneath this soil clear spade marks (**72**) showed in the subsoil surface, mostly towards the middle of the mound. The bank finds were all medieval; the most significant were in the old ground surface sealed by the bank, dating to 1350–1375.

Also revealed was a shallow slot 0.20 m wide (**71**), running at right angles to the wall on the top of the old ground surface. The spoil from this feature had been piled up to the west. In the fill of the gully was a fragment of inscribed monastic stone.

The north wall was constructed in a foundation trench (**73**), the line of which diverged from it at an angle of 6 degrees. The possible reasons for this and the likely sequence are discussed below (p. 139). The wall itself was well built, and its north face of even surface, presumably because the width of the trench allowed good access. The trench was filled with stiff green clay (**74**), possibly for waterproofing. It was not fully excavated due to wet weather and difficult conditions (Fig 14).

The remaining part/'Dry End' of the Annexe B(C)S

Much of the Annexe was initially inaccessible as it lay beneath a road. This was broken up and removed down to floor levels by machine, and then trowelled. There was little evidence for interference to the floor levels by post-demolition activity, but both side walls of the Annexe had been severely robbed. The foundations were well defined on the west side, where a hard cemented mass was visible (**75**). On the east side the line of the wall showed as a robber trench (**76**). Both walls were 0.70 m wide.

A modern wall was removed from the junction of the Annexe and the Range, revealing that there had been no east-west wall in this location. There were, however, two post-bases of inferior quality, central to the axis of the Annexe (**80** and **82**) and evidence for a screen wall (**81**) between the southerly post-base and the east wall. These foundations were also insubstantial in nature.

The surface of the floor had several distinct textures and colours: charcoal, grey sand, and yellow clay. There may have been a through passage just north of the central post-base, visible as a band of different coloured soil (**92**); but this may have been the result of road traffic causing soil compression (Figs 16 & 17).

The northern limit of the central floor area appeared as a scarp or gully (**25**) parallel with the north wall.

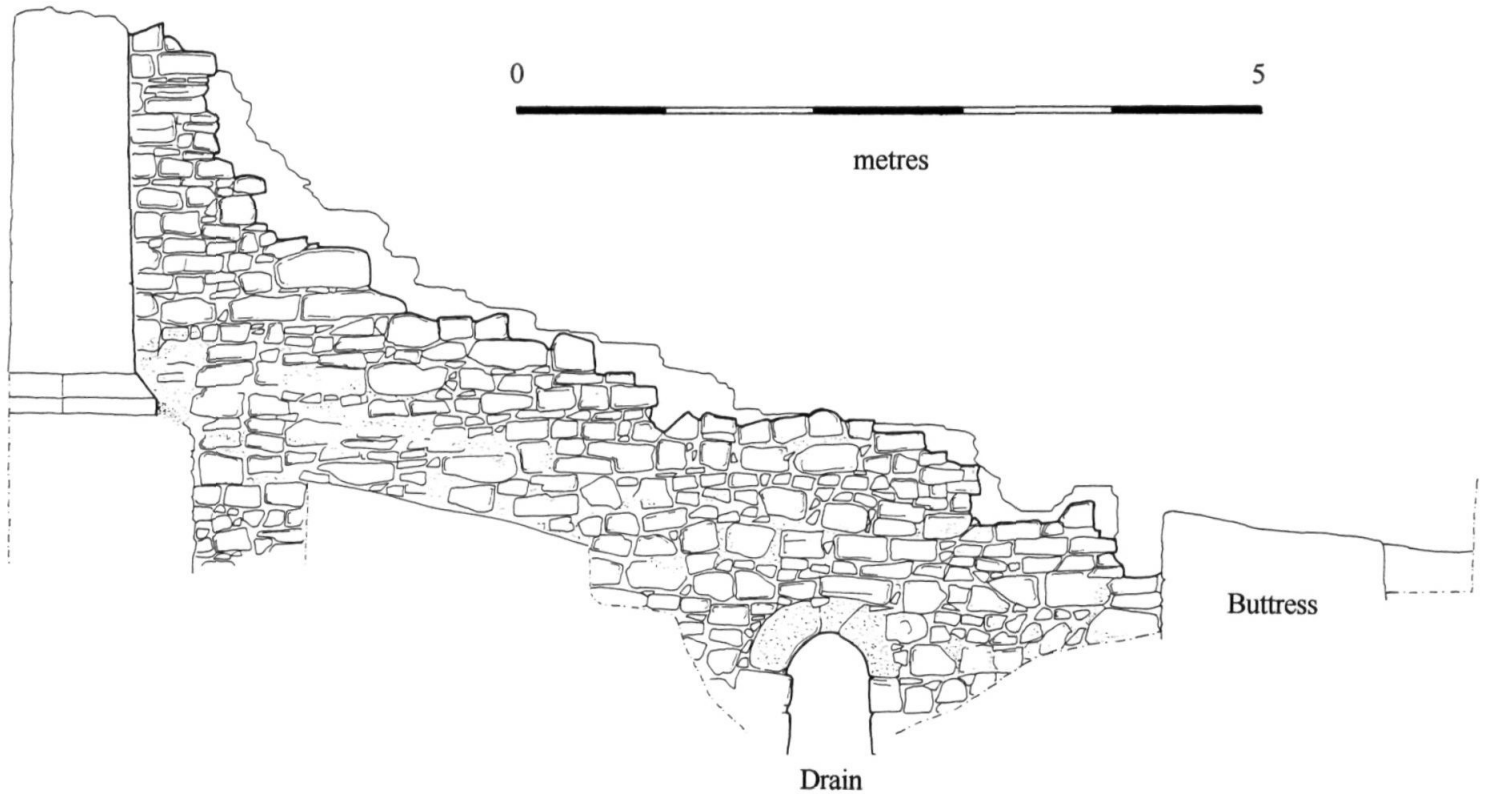

Fig 15. Exterior elevation of the west wall of the Annexe.

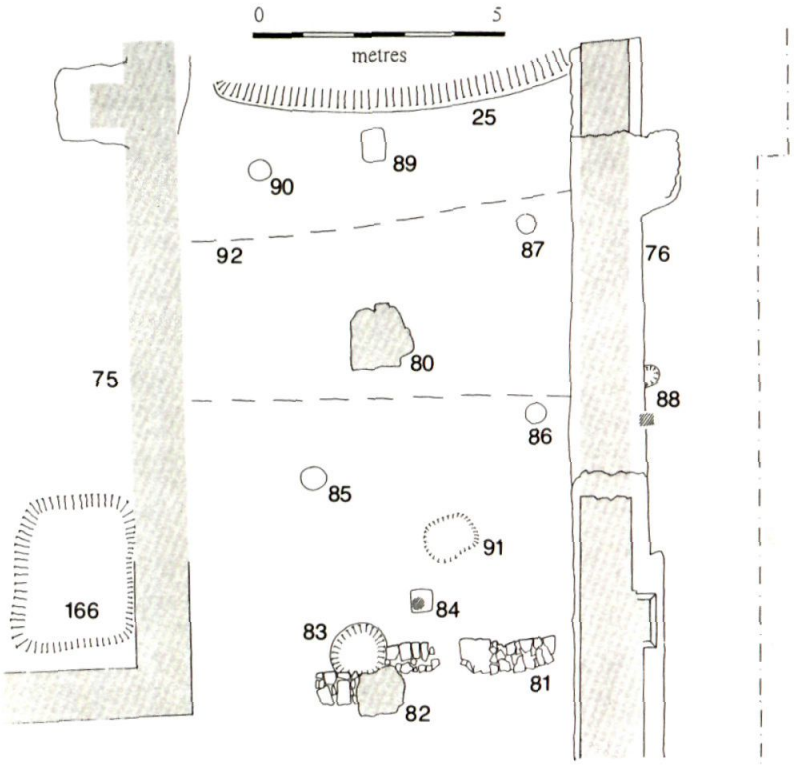

Fig 16. Detailed plan of the south end of the Annexe showing the small number of features present.

THE EAST-WEST RANGE

Northeast Corner A

This corner was stripped to reveal black loam (**94**) and gravel and slate fragments over yellow clay (**95**). Two post bases were uncovered; the larger base (**97**) belonged to the set of twelve in this building, the smaller (**98**) was aligned with two in the Annexe. The sleeper wall recorded by Poole was also exposed. This part of the excavation was taken no further.

South wall

The bases of five external buttresses along the south wall of the Range were uncovered. They were of uniform construction. There was no evidence of an entrance into the Range along this wall.

Western end A(W)

At the west end of the building, an area 13 m × 8 m was examined, the easterly two metres overlapping with the Poole trench (Fig 18). A layer of turf and broken roof tile (**99**) was removed to reveal two areas of hard-standing, one composed of stone, pebbles and slate (**100**) and the other of crushed brick and tile (**101**). Removal of these layers revealed an extensive mortared floor (**111**), overlying yellow clay mixed with flint rubble (**151**).

In order to prepare the ground, the original surface had been levelled, with build-up at the south to a maximum depth of 0.50 m. This process was apparently confined to the interior of the building. The surface of this floor was riddled with around 40 pits, post holes and other intrusions (**113–149**), all of relatively recent origin. There were also drainage trenches complete with ceramic

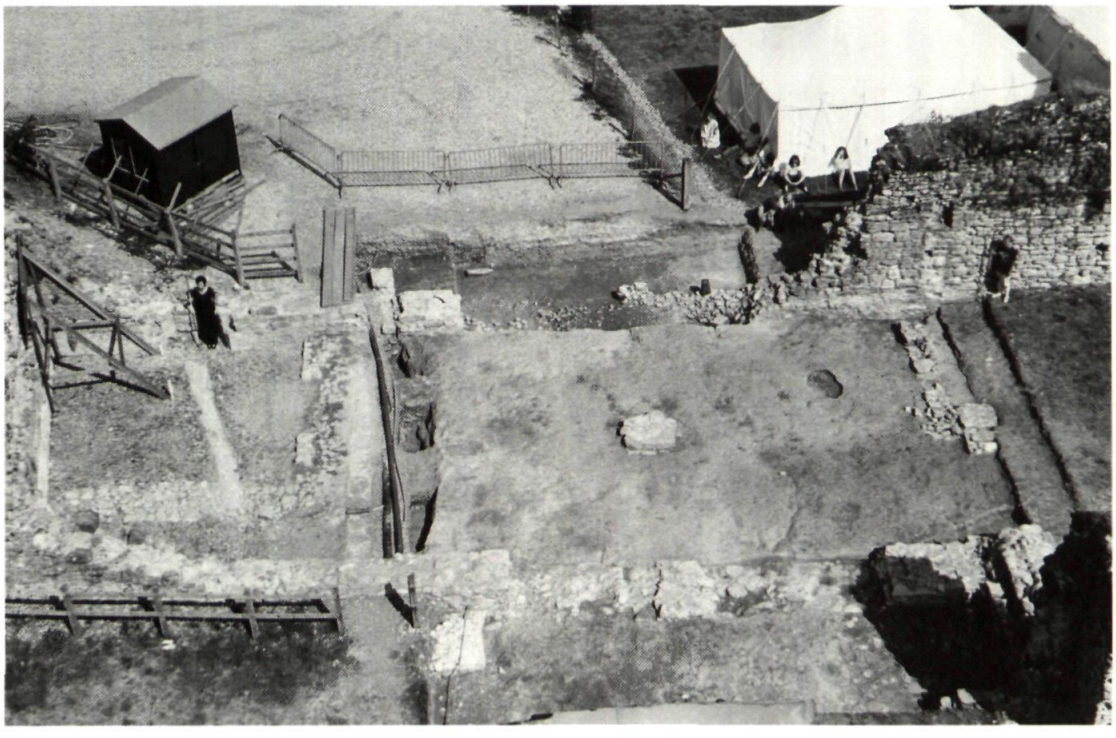

Fig 17. Oblique aerial view of the whole of the North-South Annexe. The 'Wet End' has been back-filled, and the robbed out 'Dry End' is exposed. Also visible is the lack of wall between the Annexe and the Range.

pipes (**112**) which led through the south wall and out into the Donkey Field. Some of these post-holes and the areas of hard-standing represented evidence for make-shift structures utilising the ruined walls (Fig 19).

A rectangular area of the clay floor 3m × 6m in extent (**108**), had been burnt. In more than half of this area the burning had penetrated to a depth of 180 mm. The intense nature of the process suggested very high temperatures were involved. Set into this rectangle were several bricks, burnt to fragments but bonded to the clay floor (**109**). These were of 18th-century type. There were no other artefacts associated with these features.

Located in this area were three of the building's massive internal post-bases (**102–4**). The square holes cut for them were packed with yellow clay, surrounding the stone construction. The bases appeared not to have been built as foundations for stone columns, as they were irregular in their finish; it is assumed that the uprights were made of wood. The bases were built prior to the laying of the floor.

The trench cut in 1973 by Poole Museums (**110**) provided a view of the layer beneath the floor. This was a black humic deposit about 100 mm thick (**152**) and the overlying floor (**151**) was removed to reveal it in plan. It was not of constant thickness and was at its most substantial (200 mm) at the north-east end of the cutting, fading away to both west and south (Fig 20). There were no features in this layer, but a number of pottery sherds (early 15th century) and fragments of bone and shell were present.

The area of the excavation was extended beyond the north wall and the 'entrance' as shown in the Poole plan. The discovery of a badly robbed external buttress (**153**), on the line of the internal supports, showed that a doorway could not have existed here.

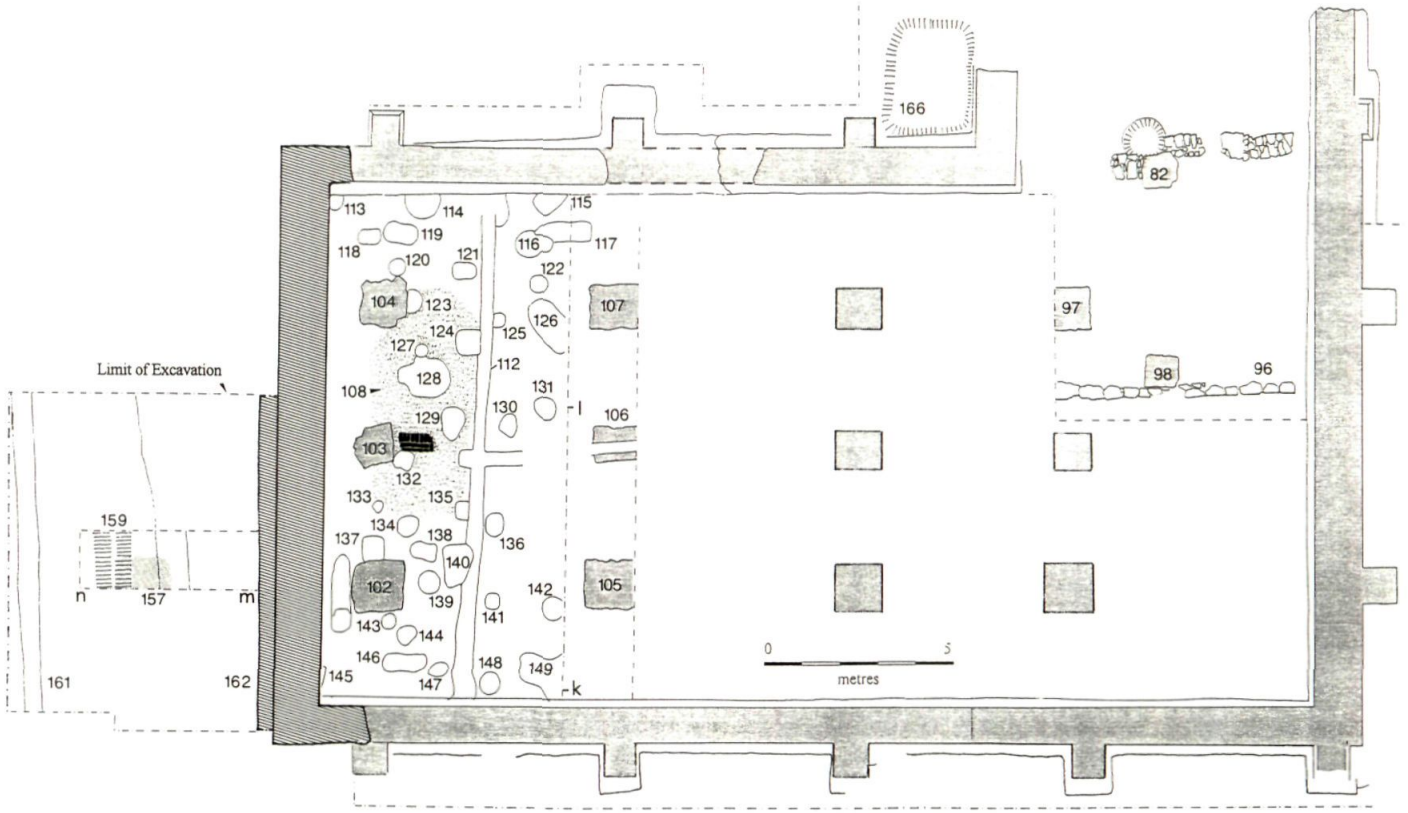

Fig 18. Detailed plan of the Range showing the areas excavated 1987–89.

Fig 19. View south of the western end of the Range, showing the rows of three post-bases, and extensive later intrusions cut into the floor.

The west wall of the building, constructed when the range was shortened, was located in a substantial trench (**150**). This was at least 0.40 m in width, almost reaching the internal post bases. A rectangular area of mortared stone present against one of them (**102**) must have been laid after the wall was built, but its function was not clear. The wall, described in detail elsewhere (p. 113) was of inferior build to the original structure. At both ends there are signs of settlement and severe cracking.

Area beyond the west wall C(H)

The area to the west of the Range was examined with a small trench in 1988, and an area excavation (9 m × 7 m) in 1989.

Removal of the turf and topsoil revealed a mixture of slate, stone and mortar (**155**) above a brown, mixed stone and soil layer (**156**). It was clear that the floor level encountered within the building had been removed from this area, to a depth of as much as 1 m, to be replaced by the mixed layers. Careful investigation found evidence for one of the demolished post bases (**157**), which had also been disturbed by a north-south gully (**159**) (Fig 20).

The footings of the west wall were irregular and rough on this side, and formed a batter onto which the upper wall was built (**162**). Some of the adjacent layers of material could be attributed to the construction phase of this wall.

THE DONKEY FIELD AND RALLY FIELD

A resistivity survey was carried out in August 1985, in areas to the south and east of the range and annexe. The main feature to emerge was an area of high resistivity at the south west corner of the range. This was interpreted as a building

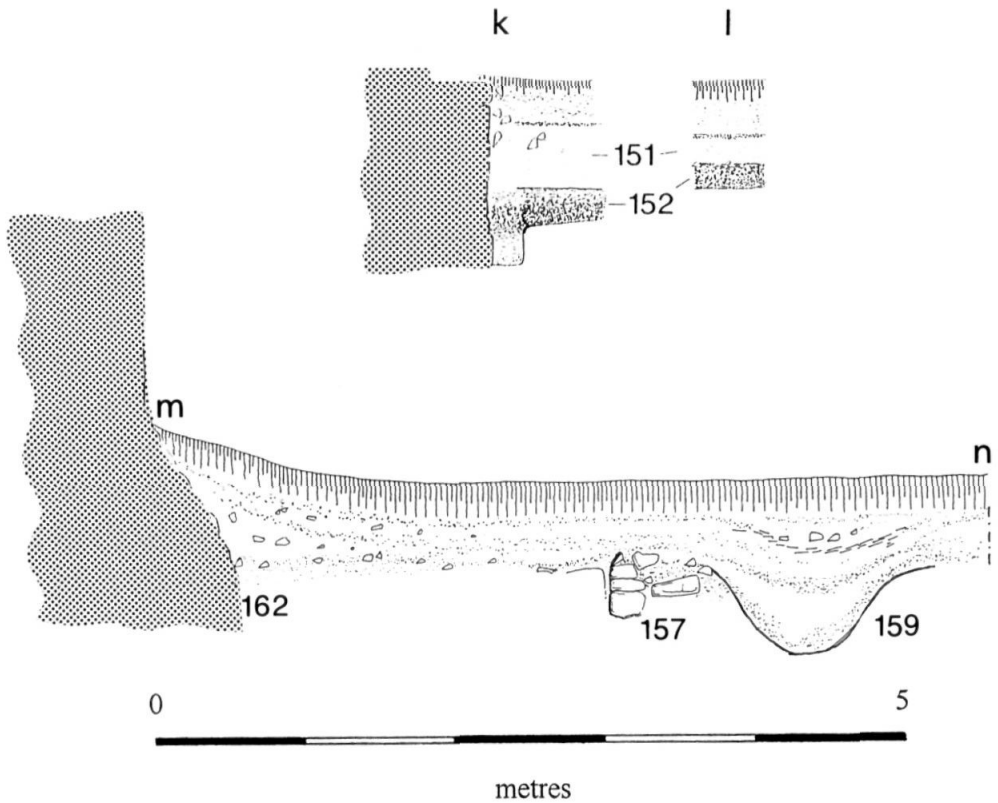

Fig 20. a) Section showing the buried soil and yellow clay beneath the Range floor; b) Section showing the remnants of a post base outside the west wall – see Fig 18 for location.

extension, or a narrower building and yard. A curving line could also be picked out running up the east side of the survey area, and this was tentatively identified as a water course.

In order to investigate these anomalies a trench 2 m wide was dug north-south along the full length of the Donkey Field (65 m). Two smaller trenches were opened to the west, one of which produced a Long-cross silver halfpenny and a bronze buckle.

An average depth of 150–200 mm of turf and topsoil was removed, revealing parts of stone floor and yard surfaces, wall footings and drains. Some of these were substantial features, but the comparatively limited nature of the excavations in this area did not allow the full plan to be appreciated.

A trench in the Rally Field 20 m to the east (C(K)) suffered from the same limitations, but was productive with regard to finds. It was cut to investigate a low mound. The first layer encountered was a dump of mortar and stone (**163**) above a stony soil layer (**164**) with patches of rubble particularly at the south end. This produced many pieces of a North French medieval jug and a number of metal objects, including two buckles. There were indications of an *in situ* floor, walls and rubbish pits. Beneath this building debris was a grey sticky homogenous layer (**165**) and the natural subsoil.

THE FINDS

The excavation produced a reasonable quantity of finds, but the nature of the site meant that there were relatively few undisturbed deposits, and the

sealed layers of medieval date were not rich in material. The unpublished finds from the Poole Museums excavation in 1973 are also included in this report. The finds come from three main periods: monastic (13th to early 16th century); 18th century; and modern (late 19th–20th century).

Pottery

A total of 1,470 sherds was recovered (Table 3), of which only 166 came from secure contexts. As would be expected at a monastic site, there was evidence for a wide range of imported wares in this period, including Polychrome ware from the Saintonge region, Northwest French ware and Spanish Merida. Only those pieces which have a direct bearing upon the dating of the 'Wine Press' complex in its industrial phase have been reported in detail. In the later 18th century the products of the Verwood kilns tend to dominate during the agricultural re-use, whilst the more recent material again comes from a variety of sources.

There were two sherds of prehistoric pottery from the Poole trenches; the remainder falls into three groups:

1. *Monastic*

a) Beneath the Aqueduct Bank (**70**)

Thirty eight small sherds were found in the cultivated soil beneath the bank. These were mainly body sherds of sandy ware and coarse ware, dating to 1350–1375; a rim and handle are illustrated (Fig 21, 1 & 2).

b) North-west corner within the 'Wet End'(**17**) and fill of drain (**07, 15**)

Forty-nine sherds were recovered from these contexts; all have parallels in Southampton, (R G Thomson, Southampton Museums, pers. comm.) dating to 1475–1500. They comprise German salt-glazed stoneware (Fig 21, 6–8); Merida ware from Spain (Fig 21, 5); Normandy Stoneware (Fig 21, 3); Spanish amphora (not illustrated) and local unglazed late medieval ware, probably made at Totton (not illustrated).

c) Layers (**47, 48**) and pit (**38**) west of the North-South Annexe

These features produced twenty two sherds of 15th-century date; two vessels are illustrated (Fig 21, 9 & 10).

d) Beneath the clay floor in the East-West Range (**152**)

Fifty seven sherds were recovered representing six fabric types, including Dorset Whiteware and Blackware. The vessels range from coarse cooking pots to thumbed based jugs, all dating to the early 15th century (Fig 22, 11–17).

There is no 17th century pottery.

2. *18th century*

This is mostly Verwood, 1760–1790. Forms include dairy pans, jars and a costrel with a lug handle.

3. *Modern*

A total of 271 sherds was recovered.

Brick and Tile

Flat roof tile fragments comprised the bulk of these finds, with only one near complete example (**43**). This was in bright red clay, with a score mark made with a blade before trimming, and two peg holes. The red clay tiles made up the majority, and were frequently over-fired. The few yellow clay tiles had been much better made and bore 'shake' marks on one side. Some tiles had glaze on them. A number of ridge tile fragments were retained (**36, 51** and **77**), enough to distinguish seven different architectural styles.

Several types of floor tile could also be distinguished, some encaustic (**51**). Two tiles had animal footprints (**99, 51**) from a dog and sheep respectively. One find from 1973 was a glazed floor tile fragment pierced with two holes, the perforations being for air circulation or drainage.

The bricks were in the main badly made, and over-fired. Two complete bricks were retained, (**03** and **36**). Most brick and tile fragments were discarded, however, as the site is rich in these materials and good examples abound. Furthermore, none of the levels from which they came were sufficiently well sealed to guarantee that the material could be soundly dated.

Glass

This was mostly modern (19th–20th century) but one or two late 17th/early 18th-century fragments

Table 3 Pottery Finds by Sherd Count

	Prehist	*Monastic*	*18th cent*	*Modern*	*Total*
CONTEXT					
Poole Bldg I	–	82	420	156	658
Poole Bldg II	2	34	24	37	97
B(C) 01, 03, 07, 13, 14	–	11	123	13	147
B(C) 17	–	18	–	–	18
B(C) 15	–	21	–	–	21
B(C)S	–	8	–	–	8
B(N) 65, 66, 67, 68, 69	–	26	–	–	26
B(N) 70	–	38	–	–	38
B(W) 26, 36	–	101	4	131	26
B(W) 38	–	22	–	–	22
B(E) 50, 51, 52, 53	–	1	11	–	12
B(E)Ex	–	2	22	–	24
A	–	1	1	1	3
A(W) 99, 151	–	25	2	12	39
Buttress 153	–	2	1	17	20
A(W) 152	–	57	–	–	57
C(H) 155	–	48	23	31	102
C(H) 156	–	47	–	–	47
TOTAL	2	469	728	271	1470

of bottle glass were recovered (**04** and **60**). A complete medicine bottle was recovered from the area outside the west wall (**154**), and a glass marble from inside the Range.

Slate

Slate was found in quantity throughout the site, but principally in the deposits relating to the abandonment of the industrial process. Crushed slate filled the upper part of the tank in the 'Wet End' (**08**) and the ditches to both the east and west of the building (**36**, **52**). More than 200 barrow loads were removed from these deposits. A number of complete and near-complete examples of roofing slates (some with peg holes) were retained. Several sizes could be ascertained – 190 × 140 × 8 mm, 270 × 210 × 20 mm, and 350 × 115 × 15 mm. In the Poole excavation several slates were found which showed evidence of being re-used.

Flint

A prehistoric flint fabricator was found in the yellow clay floor of the East-West Range (**151**). Two gun flints were recovered from outside the North-South Annexe (**50** & **26**).

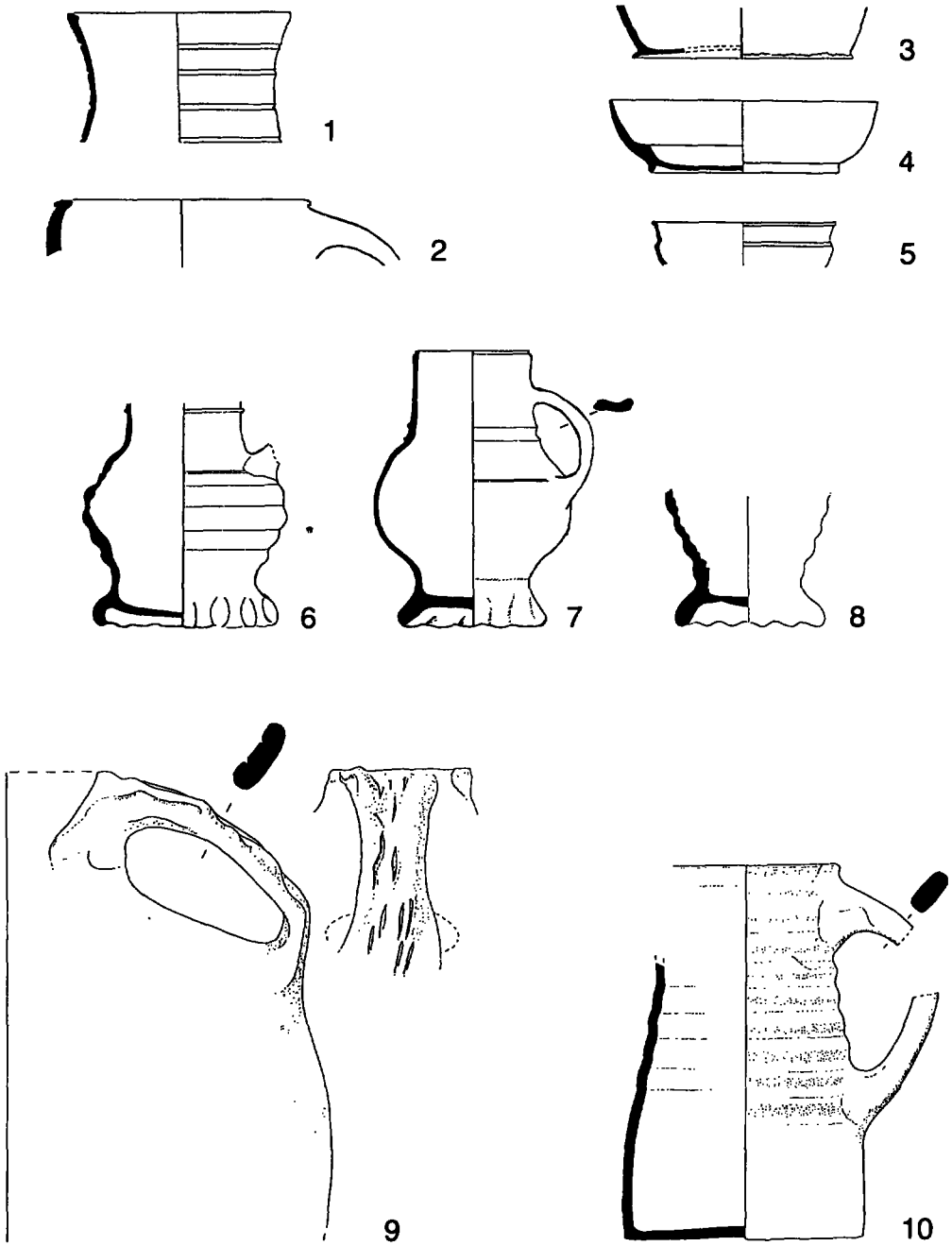

Fig 21. Pottery (scale 1:4). 1 Jug rim sherd, grey fabric, remnants of green glaze (70). 2 Jug rim sherd with handle stub, buff fabric fired red, traces of white accretions (70). 3 Normandy stoneware base sherd (17). 4 Bowl sherd, poor quality red earthenware, dirty green glaze (17). 5 Bowl rim sherd, dense grey earthenware, olive glaze both sides (17). 6 Flagon, grey fabric, fired yellowish pink, glazed outside (17). 7 Flagon, grey stoneware, brown glaze inside and outside (17). 8 Base sherds of flagon, grey fabric fired yellow, brown glaze outside (17). 9 Jug, coarse grey fabric, gritty inclusions, firing colour ranging from pink to black, traces of green glaze (48). 10 Jug?, grey fabric fired to buff, traces of olive glaze under handle (48).

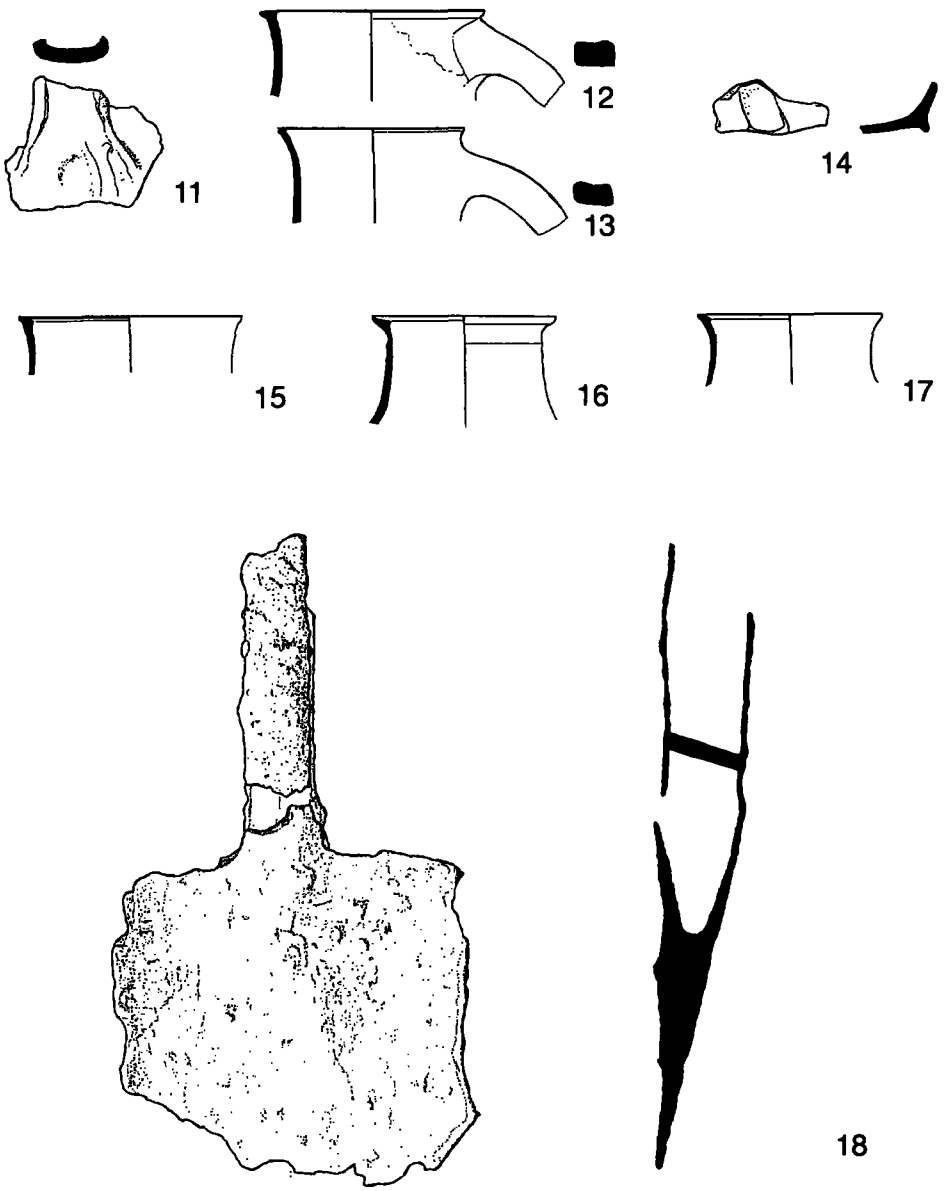

Fig 22. Pottery and iron (scale 1:4). 11 Pitcher handle, blackware with white accretions (152). 12 Pitcher rim sherd with handle stub, grey fabric, fired grey (152). 13 Pitcher rim sherd with handle stub, grey fabric, fired red, traces of green glaze (152). 14 High Medieval thumbed jug base sherd (152). 15 Rim sherd, black fabric, unglazed (152). 16 Rim sherd, grey fabric, fired red, some glaze (152). 17 Rim sherd, buff fabric, white accretions (152). 18 Broken iron spade and handle (30).

Stone
Many fragments of dressed stone were found by Poole Museum, including a piece of Purbeck marble column, and dressed Quarr stone, which may have come from the ruined window in the east wall of the Range. There was also a fragment of a hone stone.

The 1987–89 excavations produced four pieces of worked stone:

i piece of polished marble with traces of lettering (**71**). Crystalline, possibly of Italian origin. (Fig 23, 21)
ii mortarium fragment (**51**). Middle Purbeck Limestone, probably from the Swanage area. (Fig 23, 22)
iii 'sconce', or bracketed candle-holder (**17**). Fine pale powdery limestone. (Fig 24, 23)
iv fragment of column base (**163**). Purbeck marble (limestone), probably from the Swanage area (not illustrated).

Clay pipes
Numerous clay pipe stems and several pipe bowls were discovered in disturbed layers in the East-West Range and in the trench in Donkey Field.

Animal bone
Poole Museums excavations retrieved many fragments of animal bone, mainly sheep and pig, but also horse and cow, in the Post-Dissolution levels of the East-West Range. Animal bones were also found in layer **03** (post 1900) in the North-South Annexe. Most of these finds were discarded.

In 1988 fragments of bone were found in the buried black soil beneath the aqueduct bank (**70**). Larger assemblages were recovered from two features; the shallow pit (**04**) and the black soil with stones in the north-west corner of the Annexe (**17**). As this was a dateable context, bone analysis was carried out by Mary Iles at the Centre for Human Ecology, University of Southampton.

Twenty bones were identified as cattle, horse, sheep/goat, pig, fallow deer and chicken. The presence of butchery marks on the cattle, pig and large long bones suggested that they were food waste and were disposed of as such. The sheep/goat bones were probably also part of domestic food waste.

The pair of fallow deer metacarpals would not have yielded any meat, and it is probable that they arrived at the site as part of a skin. Dog gnawing marks on these bones and two others indicated that they were not disposed of immediately, but left lying around for a short period of time.

Only two bone finds from the 'Wine Press' showed any evidence of working: an antler, possibly the handle of a walking stick (Poole 73/V/2) and the broken end of a small awl (**155**).

Waterlogged wood
Waterlogged twigs and wood fragments were recovered from the dished floor in the north west corner of the Annexe (**17**). Small pieces of wood and daub were also collected from the eastern-most vat (**19**). A number of stakes lined the outflow ditch to the west (**45**).

Iron
A large number of corroded iron objects was found during the excavations, mainly nails and unidentifiable fragments. They were distributed throughout the site, in particular over the floor of the East-West Range. Nails were also found in all layers of the 'Wet End' of the North-South Annexe. The number of iron nails would suggest that the roofing tiles and slates were held in position by these rather than wooden pegs.

The bulk of the iron finds was discarded. The more note-worthy objects from the 1973 excavations included a spur, stirrups, horseshoes, buckles and rings, a key and small pieces of door furniture (all from the East-West Range). The equestrian metalwork was of late 17th- to 18th-century type. Retained from the 1987–89 excavations were several door fittings, a hook and an iron hasp, all from disturbed upper layers; and a horseshoe. Among other finds in the trench in the Rally Field (**164**) was an iron buckle.

Two finds, perhaps connected with the robbing of building materials, were recovered from the west of the Annexe: a mason's wedge, 195 × 50 × 40 mm, but heavily encrusted, weighing 1350 g (**36**) and a broken spade (Fig 22, 18) (**30**). The spade was associated with 18th-century Verwood pottery.

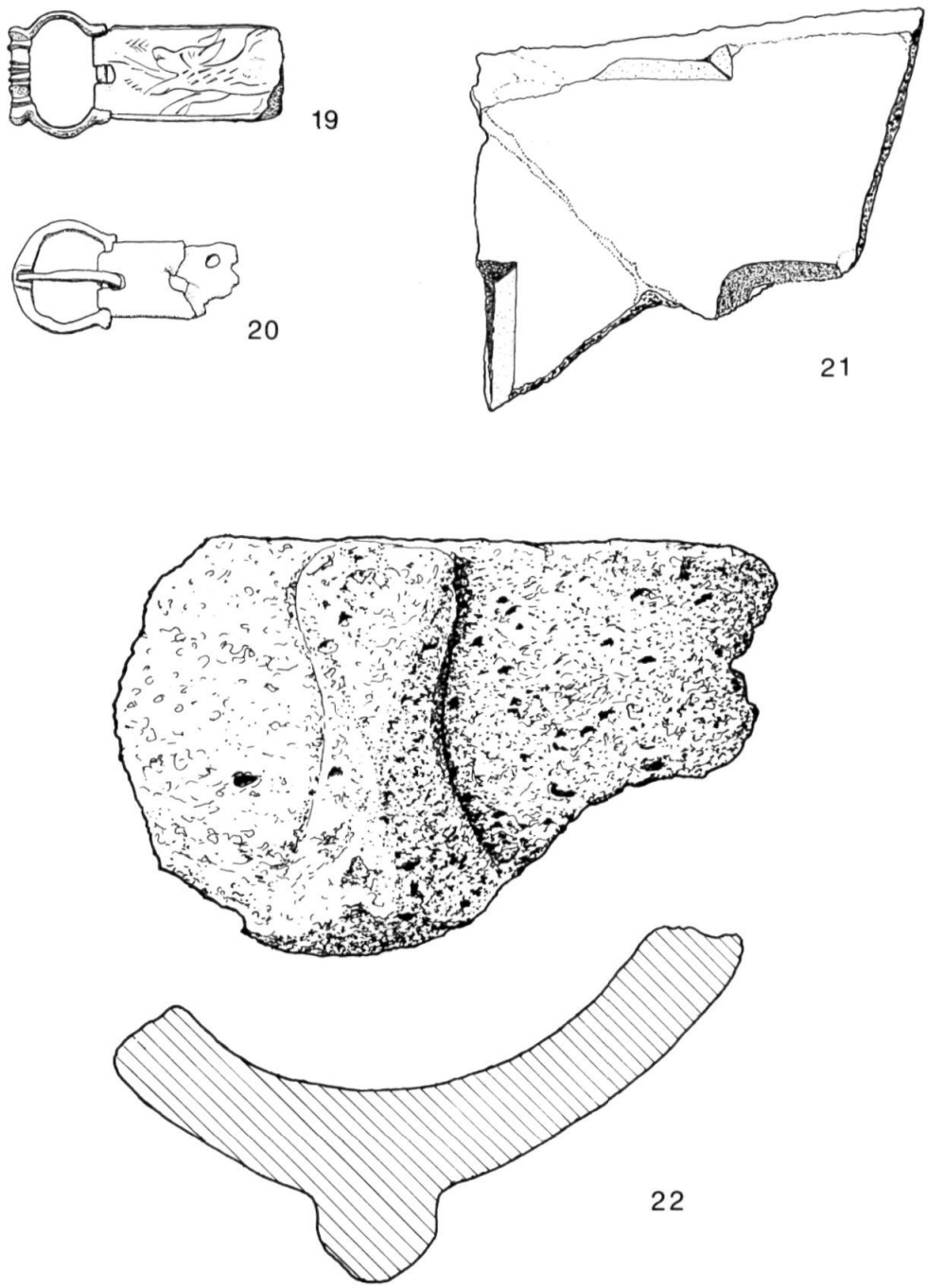

Fig 23. Small finds (scale 2:3). 19 Copper alloy buckle incised with fire-breathing dragon (**163**). 20 Copper alloy buckle. 21 Polished marble with traces of lettering (**71**). 22 Mortarium fragment (**51**).

Other Metal

A few small pieces of lead from window casings were found in the bank (**68**) and in the East-West Range, as well as one lead musket ball. A lead cauldron leg, with iron encrustations, 115 mm long, was retrieved from pit **04**. A silver tube fragment 22 mm long was found in the East-West Range (Poole 1973). Several cartridge cases found in the East-West Range could be dated to World War II and the use of the area by the Home Guard. Other copper alloy objects found in the Range included a piece of wire 90 mm long, and a tanged bronze strip. A piece of melted/cast bronze 50 mm long was found by Poole in 1973, as well as a copper strip with a rivet (45 mm long), possibly part of a horse harness.

The Rally Field trench produced a copper alloy buckle plate, 57 mm in length, with incised decoration.(**163**). The design features a fire-breathing dragon and dates to the 13th or 14th century (Fig 23, 19). Another tinned copper alloy buckle plate of medieval date (47 mm long) was found in the separate trench in the Donkey Field (Fig 23, 20).

Coins

A Long-Cross silver halfpenny was found in the separate trench in the Donkey Field. This was identified by Marian Archibald of the British Museum as a halfpenny of Edward III, 2nd Coinage, 1335–43, London Mint (Ref: North II, 1102). Its rather poor appearance was due to bad striking, not wear. The coin was also unclipped. This

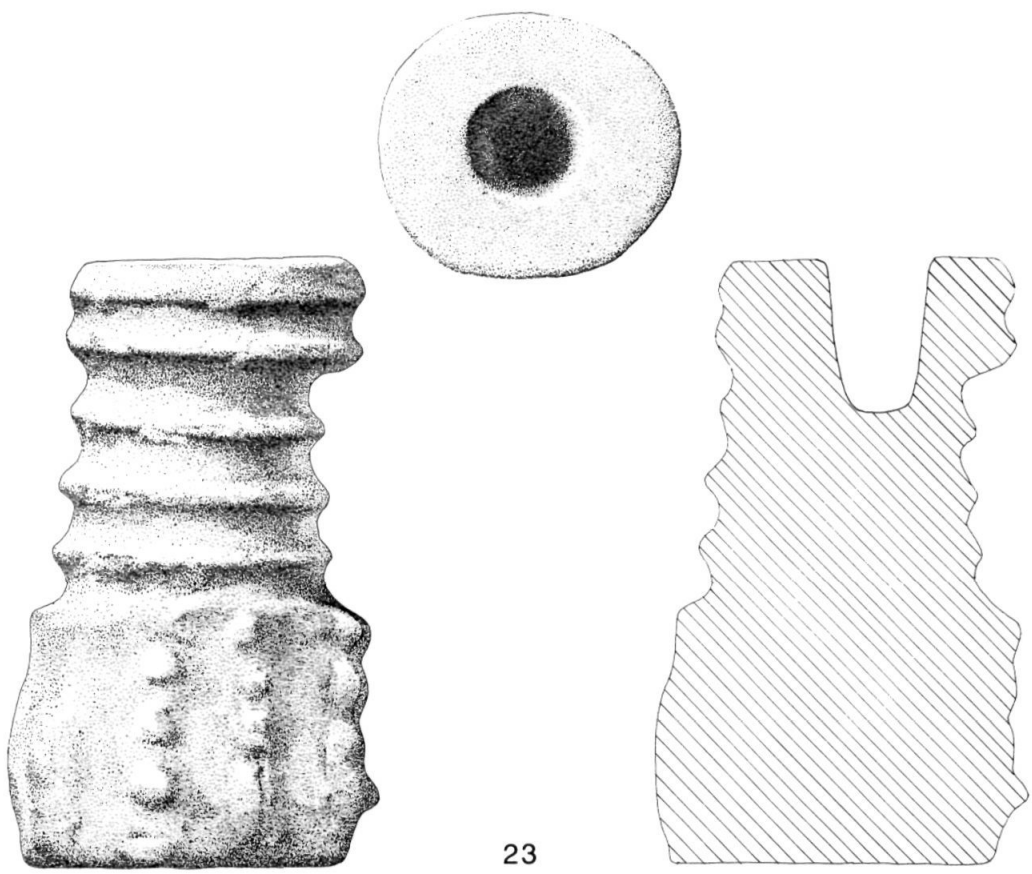

Fig 24. Small finds (scale 2:3). 23 Limestone sconce (**17**). (Drawn by Trevor Percy-Lancaster)

suggested that it was probably lost *c.* 1350 ± 10, although it is possible for coins of this type to have survived in good condition in circulation.

Stray coins included farthings, halfpennies and a florin, all of Victorian or later date.

INTERPRETATION

THE CHRONOLOGICAL SEQUENCE

The monastic period

The dating of the construction, use and abandonment of the 'Wine Press' relies on a small number of diagnostic sherds from a small number of contexts. The earliest pieces belong to the third quarter of the 14th century; the latest to the last quarter of the 15th. In terms of their original industrial use, therefore, the buildings may have had a life-span of 150–200 years.

Phase I

The sequence begins with the construction of the aqueduct bank on to a cultivated soil. The pottery recovered from this soil, and the bank core, suggests a date of 1350–1375 for this event. A small gully (**71**) may represent a marking out feature.

The water supplied by the bank may initially have served a compact building, square in plan, represented by foundation trenches **73**, **21**, **22**, **23** and **25**. The main additional arguments for the existence of this early timber phase are that the structure would have been at right-angles to the bank, and that the central drain and six small tanks (**19**) shared this alignment.

Phase II

The construction of the main stone elements of the East-West Range and North-South Annexe took place at the same time. The absence of any substantial wall-footing or robber trench where the two parts of the building join shows that neither could have existed independently. In addition, the precise relationship of the external buttresses to the internal corbels and post-bases of the Range indicate that this structure, as originally planned and executed, was a large cohesive unit. The clay floor at the west end of the building (**151**), sealed an old ground surface (**152**) with pottery dating to the early 15th century. If this is accepted as a construction date (and the presence of glazing in the east window is collaborative dating evidence), then the timber building at the end of the aqueduct bank was replaced by its stone counterpart after perhaps 25 to 50 years, at the same time as the massive Range was built on a previously unoccupied space to the south.

Phase III

During the life of the stone buildings various modifications were made. At the 'Wet End' of the Annexe the internal channel was covered by a mortared arch (**09**), which blocked the bottom of the east wall window. It cannot be determined precisely what form the channel took before this massive mortaring was added, and it is possible that the channel was already capped with stone; in any event, the mortaring was only carried out along two-thirds of the length of the channel – the remaining third (**10**) shows signs of an arched roof which had been broken, and then covered with slabs of dressed stone, re-used from elsewhere in the abbey.

There then followed the construction of a substantial L-shaped internal wall, assembled in two separate stretches (**05**, **06**) which met over the arched drain. To the west of this wall, and to the north of the capped channel, another enclosed working area (**20**) was created. The dates at which these modifications were made are unknown, but the infilling of feature **20** apparently began in the late 15th/early 16th century, with a rich rubbish deposit containing animal bone, twigs, pottery and other refuse.

One event which cannot be dated with any certainty is the rebuilding of the west wall of the East-West Range. There is no record of its presumably catastrophic collapse, although high winds are known to have caused structural damage at Beaulieu in the 14th century – too early for this building. It seems logical to ascribe repairs on this scale to the monastic period, but the workmanship is of an inferior quality to that of the rest

of the structure. If the Range was indeed later employed as the Parsonage Barn (see p. 111), such monumental work may still have been warranted post-Dissolution, although the architectural details of the window indicate a date no later than 1600.

Post-Dissolution

The dramatic events of 1538, and consequent changes in ownership and management at Beaulieu, would have led to many upheavals on the former abbey estate. If there are any layers in the archaeological record of the 'Wine Press' complex marking the immediate effects of the Dissolution, they are limited to the 'Wet End' of the Annexe. The accumulated clays and silts (**13, 42, 43**) presumably result from the abandonment of this area, and above them lie substantial quantities of broken slate (**8, 36**) which must represent the demolition or decay of the roof in this locality.

None of the admittedly few references to industrial activity on the estate during the later 16th and 17th centuries can be attributed to the 'Wine Press' buildings. Indeed, there are no finds from the excavation that can be dated to this period. As noted above, however, the Range may have served as the Parsonage Barn for some of this time.

In the 18th century there appears to have been large scale robbing of the 'Wine Press' walls, as evidenced by the broken spade and sherds of Verwood pottery at the north west corner of the Annexe (**30**). It was at this time that the two parts of the building became separated by the construction of an estate road. Nevertheless, what remained of the complex took on a new lease of life for primarily agricultural purposes. Numerous pits and postholes date to this period and suggest that both the Annexe and the Range were used for penning animals, whilst the areas outside were surfaced with layers of rubble to make a yard. The metalled surfaces and rough foundations in the Donkey Field seem likely to be contemporary. One particular activity at this period which took place inside the west end of the Range involved an area of intense burning around a hearth. In the absence of associated waste or finds, it is impossible to define the process involved.

Agricultural activity continued throughout the 19th century with particular efforts being made to drain the area successfully. Land drains were laid along the east side of the Annexe and inside the Range, which was enclosed by low walls on its north and south sides. In the 20th century identifiable episodes include the use of the area by the local Home Guard as a shooting range, and landscaping, as Beaulieu has developed its many visitor attractions.

FUNCTION

The aqueduct bank, channels and tanks in the Annexe identify the 'Wine Press' as one of the many workshops that must have existed at Beaulieu during the monastic period. The Account Book of 1269–70 gives some idea of the industrial activities involved; the difficulty is in deciding which particular process is represented here. What can be discounted, however, is the notion of vinification taking place in such subterranean water-logged conditions.

Phase I

The height of the bank implies that, in Phase I at least, water power was being harnessed at its southern end by means of an overshot wheel. Unfortunately, this is the only positive evidence for the existence of a wheel. There is no trace of any part of such a mechanism in the few surviving traces of the timber building (nor in the more substantial remains of its stone successor). This absence makes detailed conjecture about the position and size of the wheel extremely difficult, but the associated features allow for speculation as to the function of the building as a whole.

As well as being carried along the bank as a source of power, water was also directed through the building in the central channel. This was flanked by small tanks which could have been filled and emptied as required. It is these receptacles which are the most important surviving elements of the industrial process, and they suggest the need for soaking and steeping in shallow depths of water. Of the options available – dyeing, tanning and fulling – only the latter could have employed such an essentially simple process. Tanning required large pits for prolonged soaking of

skins, and dyeing the use of heat. Fulling, however, involved the beating of woven cloth in water to shrink and felt it, and by the period in question utilised water-powered hammers and pestles.

Phases II and III

Presumably the 'Wine Press' site continued to be used for fulling after being rebuilt in stone, although the operational details are again unclear. In addition, none of the modifications to the 'Wet End' – the mortared channel and L-shaped internal wall for example – provide clear clues for their *raison d'être*. The inner wall had a level upper surface and could have supported the framework for some machinery. It also had the effect of enclosing a new larger 'tank'. The height of the wall, however, meant that little depth of water could have been retained within.

What is apparent is that there was a need for a massive adjoining storehouse (the East-West Range). Possible uses for this building, with its substantial undercroft and first floor hall, include weaving, drying, finishing and storage (see page 00). The area in-between, the 'Dry End' of the Annexe, provided even fewer clues as to its function. It may have contained an entrance or entrances to the building and outside access to the upper storey, but the paucity of the evidence leaves this as a matter for conjecture.

THE FULLING PROCESS

The fulling process merits a more detailed discussion here for several reasons. Firstly, a breakthrough in fulling technology – the fulling mill – led to a transformation of the 13th-century woollen industry, with important social ramifications. After the corn mill, the fulling mill affords the earliest example of the application of inanimate power in the country (Kilburn-Scott 1933, 50). Furthermore, fulling was a widespread and fundamental industrial activity, fulling mills being almost as commonplace as corn mills. Thirdly, this innovation was linked with religious orders, and the Cistercians in particular. Finally (and despite the previous factors), fulling mills are remarkably under-represented in the archaeological record, with Beaulieu being possibly only the second excavated monastic fulling mill in this country. In order to assist the interpretation of the site, it is therefore worth putting fulling into its historical perspective.

The pre-eminence of the wool trade in medieval England is well known, and the great monastic houses have often been described as being 'built on wool'. The ransom for Richard I, captured by the Holy Roman Emperor Henry VI in 1194, was paid with the year's wool clip from the Cistercians and Praemonstratensians (Power 1941). Beaulieu shared in this prosperity. Indeed 'the main item in the revenue of the abbey, right from its foundation, was that derived from the wool of its flocks' (Hockey 1976, 63), and the abbey exported sufficient wool to warrant the construction of a large Wool-House in Southampton by the late 14th century (the present day Maritime Museum).

Under Edward III (1330–1377), the English cloth industry enjoyed another boom period, as the emphasis changed from the export of raw wool to that of finished cloth (Aspin 1982; Ryder 1983, 456); but as Carus-Wilson has argued (1941), the preceding century can be seen as a period of major importance for woollen manufacturing – in fact an early 'Industrial Revolution'. The reason for this striking progress was the invention of the fulling mill.

With the marked exception of fulling, the processes of converting a fleece into cloth varied little for several hundred years. First, the sheared fleece was graded and packed in woolsacks. The raw wool was sorted and washed (this would sometimes include sulphur bleaching or blue dyeing – dyeing 'in the wool'), and then dried and oiled. The subsequent processes of carding, spinning and weaving were all handcrafts which remained unmechanised until the 18th–19th centuries (the true Industrial Revolution). Fulling was part of the 'finishing' of the woven lengths, which included brushing or roughing, often with teasel heads to raise the nap (done when the cloth was damp), cropping, stretching and drying in tenting fields. At this stage, the cloth might be dyed 'in the piece'. Finally the lengths would be pressed between heated iron plates and packed.

Fulling was such a desirable process because it gave woven cloth greater density, stability, resistance to wear, warmth, smoothness and strength.

A standard piece of cloth would have shrunk from 54 to 40 yards in length (Friar 1991) (or about 2/3 of its length and about 1/2 of its width). Various detergents such as fuller's earth (a fine-grained naturally occurring clay or silt mixture that is very absorbent), stale urine or fuller's herb, an extract of soapwort, also scoured and cleansed the cloth, removing the oil added to the wool before spinning (Ryder 1983). Once the cloth had been fulled, it was rinsed in clean water and hung on racks to dry and recover.

Until the 13th century most fulling was carried out by one of three methods: beating with the hands, with the feet or with clubs wielded by hand. All these methods could be carried out in the home on a small scale. Fulling by foot or 'walking' (in a trough) was applied to the long heavy broadcloth that became the staple of the English export industry.

A mechanical method of fulling involving two wooden hammers attached to a revolving drum was introduced at some point in the 12th century, but this date cannot be precisely defined because of the ambivalent nature of the terminology used in the written record (Robertson 1976, 92). The mallets were alternately raised and dropped onto cloth as it lay in a trough, and although the drum could be turned by hand, mechanisation was soon taken a stage further in many instances by the use of water power. The Winton Domesday has an entry apparently relating to a fuller's mill in 1117–19 (Kilburn-Scott 1933, 50) and there are records of water powered mills in Cumbria as early as 1135 (Aspin 1982) and in Gloucestershire by 1175 (Whewell 1972). By the end of the 13th century, the 'water fulling mill' is widely mentioned in surveys and rentals.

Two different types of apparatus were used for the two separate aspects of fulling; the scouring or cleansing of cloth was carried out in 'driving' or hanging stocks (or gravity stocks – Whewell 1972), and the milling or felting in 'falling' stocks. Driving stocks were hinged, with a rounded inner surface of the 'box' containing the cloth, so that material circulated freely as it was struck. The feet of the stocks were notched at widely space intervals to turn the cloth over. Falling stocks consisted of vertical stampers having smaller notches, and working in a more confined space, thereby preventing the cloth from moving until it had been well pounded.

The earliest recorded details of the actual machinery in a fulling-mill relates to the rebuilding of Elcot Mill near Marlborough, Berkshire in the 13th century, where accounts mention a *flagellum* (possibly a scouring mallet) and a *baterellum* (the milling hammers). It was feasible, however, for both scouring and felting to be carried out in driving stocks, although the process took longer. The earliest known illustration of the workings of a fulling mill (showing the driving type of stocks) dates from some 400 years later (Zonca 1607), and hence possibly shows an advancement on the earlier blueprints. Pelham states that there were also regional variations in design (1956).

Thus fulling was carried out in 'mills', although strictly speaking no actual grinding took place; but from the outside a fulling mill would be virtually indistinguishable from a water corn mill (Carus-Wilson 1941,43). It was this use of the water wheel which Carus-Wilson has claimed led to a 13th-century revolution, since the requirement of a fast flowing water supply meant that fulling mills were sited in hilly rural areas, rather than in the towns where the wool industry had been concentrated hitherto. Kerridge (1972) disputes this simplistic divide between town and country, and uplands and lowlands; he points out that the favoured overshot wheel could be used on any type of stream, provided sufficient land was available to build up a head of water. Nevertheless it seems true that wool processing moved away from the influence of the urban guilds, predominately in the eastern lowlands of England, to the country uplands of north and west England.

The guilds' loss of control did not, however, mean that fulling became a free market industry. In many cases the investment to build a fulling mill came from the lord of the manor, in order to derive considerable profits from his tenants, often under a monopoly. In fact, not only were tenants prevented from using any other fulling mill, they were also fined for fulling by hand at home. In the most extreme example of this type of regulation, the Abbot of St Albans entered the houses of offenders and exacted levies, provoking an unsuccessful insurrection in 1274.

Indeed, monastic and ecclesiastical estates were

as much involved in the fulling industry as lay ones; religious orders were among the first to develop mills, and there is some suggestion that the Templars may have introduced the idea into England from the continent (Carus-Wilson 1941, Pelham 1956). Cistercians were in the forefront of medieval industrial development (Coppack 1993), and a fulling mill existed on a Cistercian estate at Stanley as early as 1189 (Donkin 1978). Many early 13th-century references to fulling mills exist in monastic cartularies, and as previously stated there is evidence of such a mill at Beaulieu from the Account Book of 1269–70.

A contemporary portrayal of Clairvaux (one of the four original Cistercian foundations) at the beginning of the 13th century, gives a romantic account of fulling when describing the river's progress through the abbey grounds. '. . . *Just as it is busy (for those) who are in the mill by which the brethren are fed, it now appears at the place by which they are clothed. It does not say nay . . . but instead, alternately raising and lowering the heavy pestles, or as you might prefer to say, hammers – though wooden feet might seem a more appropriate name for this leaping work of the fullers – it relieves the fullers of heavy labour . . . As it turns so many chattering wheels round in swift rotation, it makes a foamy exit, and seems as if it was itself ground and made softer . . .*' (Braunfels 1972, 245)

It is hard to say whether at any time the monks at Beaulieu were deriving an income from fulling – this would have been in direct contravention to their founding principles of living without manorial revenue, but as has been already noted, the Cistercians were not above bending the rules when circumstances required. They certainly fulled cloth for their own needs. In 1297, 30 sacks of wool had been purchased from Beaulieu, but the king ordered that ten should be returned to them for making cloth for themselves (Close Roll. 25 Edward I Mem. 5 – Fowler 1911, 140). It is possible that the abbey fulling mill was used to finish pieces of cloth brought in from outside; however, monasteries were unlikely to have been important centres of cloth manufacture (Donkin 1978). There is little evidence to indicate that Beaulieu Abbey was exporting finished cloth, in stark contrast to its record of wool trading.

What can be stated with certainty because of the dating evidence, is that the excavated complex is *not* the fulling mill of 1269, which must have been located elsewhere in the precinct – or even outside it. In 1269 everything concerning wool was centred at the grange of Bergerie (*bercaria* or sheep ranch) three miles to the south of the Abbey, where all wool was brought together, cleaned, graded and packed for sale.

In the later 14th century, the aqueduct bank and associated building may well have been constructed to provide a new source of water power and centre of production, because there was no spare capacity at the previous site, or because new processes necessitated a new design of building. Alternatively, the desire to keep monastic activities within the abbey boundaries may have meant that a less efficient scheme was implemented.

Post-Dissolution, Henry Wells was building a fulling mill in 1578, presumably in yet another setting. Early 18th century maps show 'Fulmans Ponds' to the east of the 'Wine Press'. It also seems more likely that the 'Wine Press' mill contained the early type of falling stocks which were vertical and set in a confined space, rather than the later development of the more extensive driving stocks.

THE ARCHAEOLOGICAL EVIDENCE

Despite the assertion that 'the fulling mill was once as common as the corn mill' (Aspin 1982), there is remarkably little current industrial or archaeological evidence for the former. As water powered fulling was replaced by other techniques in the 19th century, the mills became derelict, or were converted for other uses. No mill actively engaged in fulling appears to survive in England (Pelham 1956), although the Esgair Moel mill was taken from its original site near Llanwrtyd and rebuilt at the St Fagan's open-air museum in Wales. To quote Keene: 'From time to time the quest had been raised for the fulling mill, but I suspect that the archaeological traces of most medieval fulling mills, slight structures sited on fast-flowing streams with undershot vertical wheels, or incorporated within corn mills, would be exceptionally difficult to recognise.' (1981, 153)

One other excavated medieval site where mechanised fulling has been hypothesised is Fountains

Abbey, also a Cistercian monastery (and also excavated by Hope, with more recent work by Coppack). The 'woolhouse' (Hope's bakehouse) was a complex building frequently altered between its construction in 1150 and demolition in the late 15th century; the 13th-century fulling mill within it had two circular tubs lined with ashlar, adjoining a previously constructed channelled leat which was wide enough have taken a narrow undershot wheel. In the 14th century a large rectangular stone tank was inserted in the remains of the east tub, and a rectangular clay-lined pit installed on the site of the west tub. Both these features were provided with hot water via lead pipes from coppers heated over two furnaces, and Coppack suggests that this part of the woolshed may have been used for dyeing (1986, 61). The fulling structures described bear little resemblance to those seen at Beaulieu.

CONCLUSIONS

Despite the unsatisfactory and incomplete nature of some of the evidence, the Beaulieu 'Wine Press' ruin appears to represent the remains of a 14th/15th-century monastic fulling mill, with associated weaving or drying shed. There is no doubt about the industrial nature of the building, nor that water was employed to play a central role in the process; the major drawback is that the way in which water *power* was harnessed remains unclear.

In a recent general survey of British medieval archaeology, Cherry commented that 'The use of water power in cloth-fulling, however, so far lacks any archaeological illustration, despite the notable work by Prof E Carus-Wilson on the importance of the fulling mill in the development of the English textile industry' (1986, 167). If the Beaulieu excavation is any guide, and indeed the relevant work at Fountains Abbey which is itself open to a number of interpretations, it will continue to be a difficult task to balance the substantial body of documentary evidence concerning water powered fulling, with even the occasional example revealed by archaeology.

The East-West Range also presents difficulties of interpretation, but it is worth considering in more detail its structural relationship to other surviving Cistercian buildings. The Range was constructed as part of the fulling mill complex, around the mid 15th century. Although barn-like in appearance, the structure could not have served this role. The three rows of post-bases, and associated cills show that a substantial floor separated what must have been a gloomy undercroft from an airy upper room open to the rafters. Furthermore, this first floor room was lit by means of large glazed windows in its gable walls. The most likely function for this space was as a weaving or drying shed and store. Nevertheless, details of construction bear comparison with two other surviving Cistercian buildings, the grange barns of Beaulieu-St. Leonards, five miles to the south, and Great Coxwell (near Faringdon, Oxfordshire) which were also part of the Beaulieu Abbey holdings (Fig 25).

The medieval barn at Beaulieu St. Leonards, now a huge and dilapidated ruin, was once the largest in England. Great Coxwell is smaller, but survives almost complete. A detailed study of these buildings was made by Walter Horn and Ernest Born in their pursuit of the development of the 'aisled all-purpose house' a tradition which 'began in the seventh century BC . . . and . . . twenty-six centuries later, has not reached its point of termination'(1965, ix). They found at St Leonard's the most remarkable imprint on the east gable wall of one of the long-demolished trusses, which allowed them to recreate on paper the complete timber framework for the barn. This, they argue, represents a successful method of innovative and economical framing utilised, and possibly even invented, by Cistercian carpenters. Horn and Born also suggest a construction date in the first half of the 13th century for both buildings.

It seems likely that the East-West range, built by the same owners as Great Coxwell and St Leonard's, although perhaps two hundred years later, may have had roof and internal timbers constructed in a very similar fashion. Certainly the overall layout of buttresses and post-bases compares well (Fig 25). It is unfortunate that during

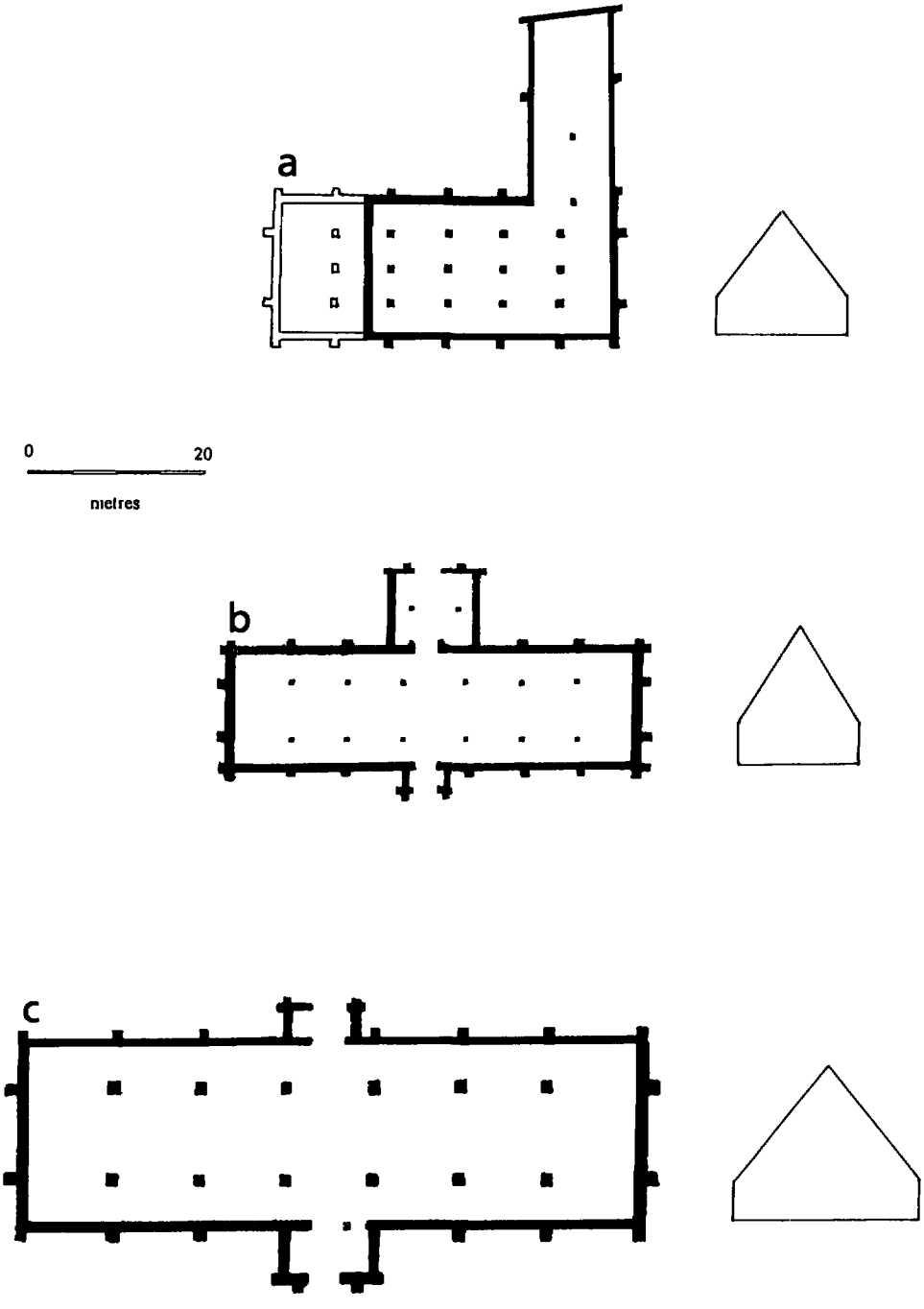

Fig 25. Comparative ground plans of a) Beaulieu Abbey 'Wine Press' b) Great Coxwell Abbey barn c) Beaulieu St. Leonards Abbey barn

their research Horn and Born looked closely at other Beaulieu Abbey remnants (*ibid.*, 39) but not, it would seem, at the 'Wine Press' ruin, which may well have been overgrown with vegetation at that time.

Another building in the locality which has Cistercian origins is the Wool House in Southampton. It was apparently built by the Abbey in the late 14th century, and is the only surviving medieval warehouse in the city. After a long and chequered career, and many external modifications, it now serves as the Maritime Museum. Comparisons with the 'Wine Press' are few, but the discovery of a small cupboard or aumbry at first-floor level, shows that in its medieval state the building was two-storeyed.

One remarkable conclusion drawn by Horn and Born (*ibid.*, 61) is that, of an estimated two to three thousand Cistercian barns constructed in England during the medieval period, only Great Coxwell survives in anything like complete form, and Beaulieu St Leonard's is the most substantial ruin. Indeed, such was the dramatic and drastic effect of the Dissolution that vast numbers of Cistercian utilitarian buildings were demolished, not to mention the holdings of other Orders. This gives even fragmentary survivals such as the Beaulieu 'Wine Press' genuine significance, and the excavators can only hope that their efforts to reveal its secrets have done it justice.

ACKNOWLEDGEMENTS

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Site supervision was undertaken by K J Barton and R B Burns, with the capable assistance of Rob Adams and Philip de Jersey. Site recording was in the hands of David Allen. The excavation work was undertaken by an enthusiastic team of students and volunteers who laboured hard to recover the information, often under difficult digging conditions.

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Enquiries about the archive should be addressed in the first instance to the Hampshire County Museums Service, Chilcomb House, Winchester SO23 8RD.

APPENDIX

Beaulieu Abbey 'Wine Press' 1987–89; context concordance

Excavation Feature Identity	*Report Number*	*Excavation Feature Identity*	*Report Number*
North-South Annexe		W1: Inner wall at right angles to North Wall	05
B(C)		Wall East-West to match wall North-South	06
Layer 1: 0.50m Modern gravel	01	Layer 3: Light brown and stony, uniform colour and texture	07
Poole excavation trench	02		
Layer 2: Brown and loamy	03	Layer 3a: Slates	08
BC2 Pit 1: shallow and extensive	04	Drain within building – arched	09

Excavation Feature Identity	*Report Number*
Drain within building – capped with reutilised stones	10
BC2 Pit 2/F2: Pit in North-West corner	11
F3: Pit close to Wall 1	12
Layer 4: Fine yellow clay	13
Layer 5: Soft brown floor with dark edges by wall	14
BCPF: Pipe/drain fill	15
Fine yellow clay in trough	16
Layer 6: Black soil with stones	17
Burnt area south of tank	18
6 vats/tanks predating inner walls	19
Dished floor North-West corner	20
Masonry footings 'Early axis' – west	21
Masonry footings 'Early axis' – north	22
Masonry footings 'Early axis' – east	23
Trough	24
Gully/Scarp south of tank	25
B(W)	
Layers 1: Tough and fibrous soil and modern infill	26
Service trenches: three slots with plastic pipes	27
F1: Foundation trench for west wall	28
Remains of second buttress on west wall	29
Robber Trench around Northwest buttress	30
Orange/yellow clay around foundations	31
Blue-grey clay bed with dump of limestone and bone on it	32
Pitched stone	33
Pit 1: 0.50m deep, circular	34
Pit 2: rectangular	35
Layer 2: crushed slate	36
Brown sandy clay mixed with slate	37
Brown Pit revealed by slate removal	38
East-West 'ditch' 1.50m wide	39
Ditch fill: fine brown silts	40
Ditch fill: Quarr stone boulders	41
Ditch fill: fine grey clays	42
Ditch fill: orange/brown gravel	43
Ditch fill: waterlogged blue grey primary clay/silts	44
Wooden stakes in ditch	45
Stones along ditch	46
Brown clays south of ditch	47
Layer 3: Yellow brown clays south of ditch	48
L2 Drain: North-South 'gully'	49
B(E)	
Layer 1: 0.90m clay	50
Layer 2: Brown turf soil and some rubble – 'yard' area?	51
Layer 3: Roofing slate and mortar, possibly in two parts	52
Layer 4: Rich brown clay, stone and bone	53
Gully with berm against stone wall – eaves drip?	54
Window aperture – blocking	55
B(E)Ex	
Thick black greasy layer	56
Layer of clay over slabs	57
North-South drain, square in section	58
North-South ditch with ceramic pipes, late 19th century	59
Capstones	60
Silts beneath capping	61
East-West Channel	62
External buttress (remains of?)	63
B(N)	
Clay layer: modern deposit	64
Layer 1: Yellow clay with gravel layer	65
Second clay layer	66
Layer 3: Yellow fairly soft clay	67
Layer 4: Turf within bank	68
Layer 5: Yellow brown clays	69
Layer 6: Buried soil, black – OGS	70
Small gully	71
Spade marks	72
Foundation trench	73
Fill of trench: green very stiff clay against footings	74
B(C)S	
Wall 5: West wall, North-South Annexe	75
Robber trench: East wall, North-South Annexe	76
Layer 1: Slate layer	77
Dump of pale yellow clay	78
Dump of orange yellow clay	79
Mortared pillar base (central post plate)	80
Drystone wall footings	81
Mortared pillar base (southern)	82
Stone filled pit next to pillar	83
Posthole: orange clay/slate	84
Posthole: black soil	85
Posthole	86
Posthole	87
Modern post stump	88
Posthole	89

Excavation Feature Identity	*Report Number*
Posthole: brown clay	90
Pit	91
Passageway by central pillar	92
External rectangular mortared footings	93
East-West Range	
A(W) Northwest corner	
Layer 1: Black loam	94
Floor: Gravel and slate fragments over yellow clay	95
Sleeper wall	96
Post base 1m sq (aligned with others in Range)	97
Post base 0.80m sq (aligned with others in Annexe?)	98
Sub-rectangular pit, full of slate – see 166	
A(W)	
Broken roof tile and topsoil	99
Stone, pebbles and slate layer in NW corner	100
Crushed brick, tile and mortar layer in SE corner	101
Post base – reduced	102
Post base – reduced	103
Post base	104
Post base (Poole trench)	105
Post base (Poole trench) – damaged by pipe trench	106
Post base (Poole trench)	107
Burned clay rectangle	108
'Hearth' of bricks bonded in clay floor	109
Poole Trench	110
Plaster floor surface	111
19th century land drain	112
Square posthole	113
Square posthole in circular pit	114
Rectangular pit	115
Oval posthole	116
Rectangular slot	117
Square posthole	118
Sub-rectangular pit	119
Circular posthole	120
Square posthole	121
Small circular posthole	122
Circular pit against post base	123
Square pit	124
Square posthole	125
Shallow pit	126
Circular posthole	127
Large circular pit with deeper square posthole	128
Oval pit	129
Oval pit	130
Circular shallow pit	131
Oval pit	132
Circular posthole	133
Circular posthole – modern?	134
Square posthole	135
Circular posthole – modern? Pair to 134	136
Shallow gully?	137
Shallow pit	138
Circular shallow pit	139
Shallow irregular pit	140
Square posthole	141
Square posthole	142
Circular posthole	143
Small circular pit	144
Square posthole	145
Rectangular slot	146
Shallow irregular pit	147
Circular posthole	148
Shallow irregular pit	149
West wall foundation trench	150
Clay layer – at least 0.30 m	151
Buried black soil, base of Poole trench	152
External buttress on north wall (foundations)	153
A(W)Ex or C(H) i.e. outside West wall	
Topsoil	154
Layer 1: Slate, stone and mortar layer	155
Layer 2: Brown mixed soil	156
Remnants of post base	157
Gravel and mortar spread	158
North-South gully – French drain?	159
Yellow clay seal	160
Modern pipe trench	161
External foundations of west wall	162
C(K) Trench in Rally Field	
Layer 1: Dump of mortar and stone	163
Layer 2: Stony soil layer with patches of rubble	164
Layer 3: Grey sticky homogenous layer above natural	165
Area outside corner of Annexe and Range	
Sub-rectangular pit, full of slate	166

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