
THE 1984 EXCAVATIONS

The principal objectives in 1984 were: to excavate below The Bow; to re-excavate elements of the claustral buildings uncovered, consolidated and laid out for display in 1936–37; and to investigate the available area beyond the East claustral range, thus allowing structures partially uncovered, but evidently not understood by the earlier excavators, to be fully exposed and interpreted. Illustration 10 shows the extent of the excavated areas and the structures exposed and colour illustrations I–IV show work in progress.

The excavation findings have enabled the site's development to be divided into five main periods:

PERIOD I Pre-Augustinian activity (before *c* 1138)

PERIOD II The building of the abbey (*c* 1138–*c* 1300)

PERIOD III Remodelling and rebuilding (*c* 1300–*c* 1480)

PERIOD IV Late repairs and alterations (*c* 1480–1559)

PERIOD V Post-Reformation activity (1560–1875)

Phasing an excavation can be a subjective exercise (Rahtz 1979, 45) and it is realised that the boundaries between the periods listed above may not always reflect precise moments in time. For example, both the evidence of excavation and a consideration of the abbey's architecture (8 below) suggest that the initial building campaign had largely been completed by the middle of the 13th century but, because the first major rebuilding work began after the English attack of 1305, the preceding half-century is included within Period II. In addition, the widespread redeposition of materials, associated with numerous repairs and alterations, calls for extreme caution when attempting to date many of the excavated features. This was vividly demonstrated by the discovery of a coin of Aethelred II (978–1016), found in the backfill of a robber trench associated with the final phase of the Chapter house, and by a 1st-/2nd-century AD Roman *dupondius* recovered from a monastic drain in the East cloister alley.

2.1 PERIOD I – PRE-AUGUSTINIAN ACTIVITY (BEFORE *c* 1138)

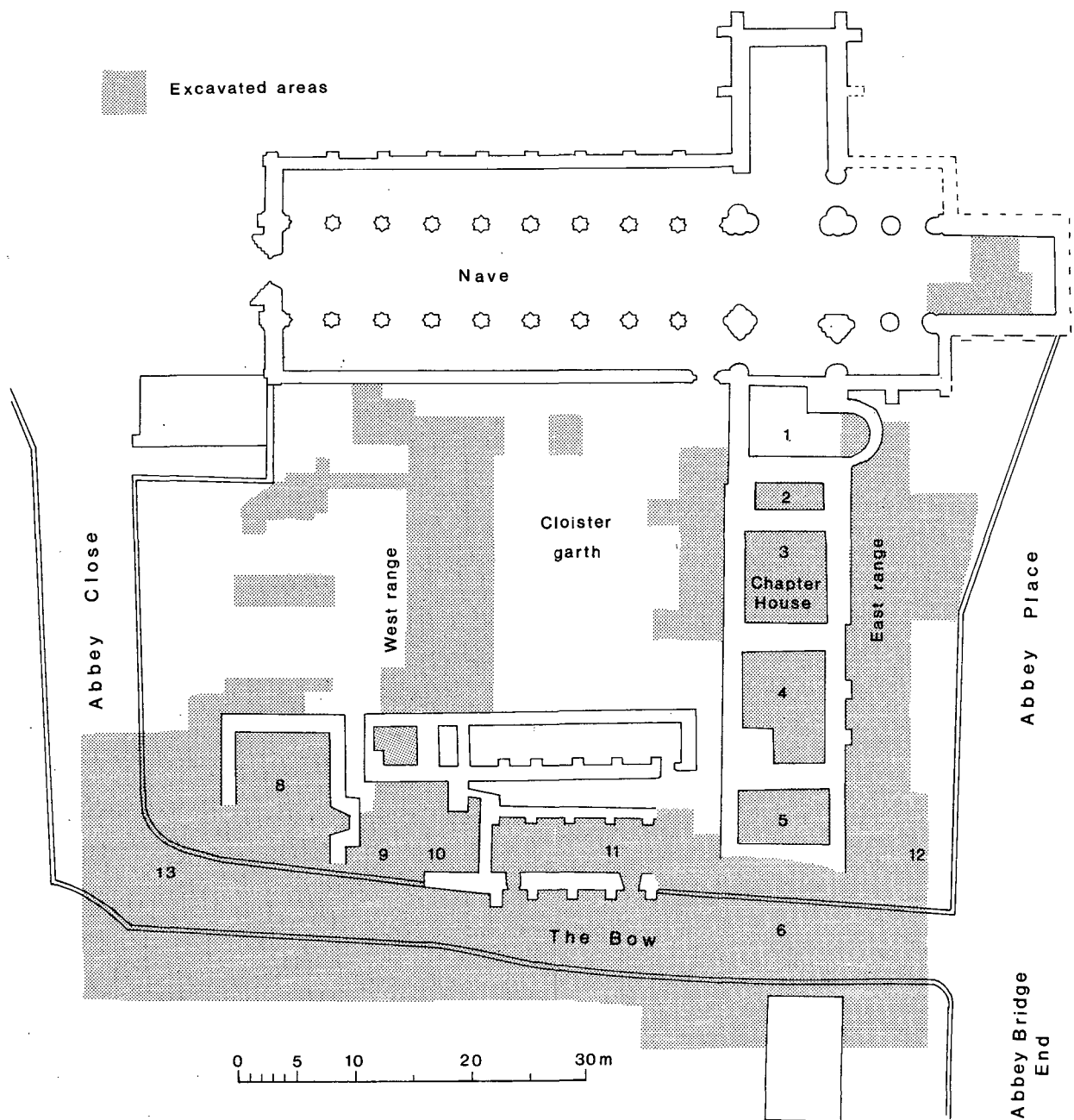
Pre-12th-century artefacts recovered from the abbey and its environs prior to 1984 have suggested that this was an important centre, with a monastic presence, in the late first millennium (Duncan 1975, 464) although the physical evidence of contemporary occupation has been lacking. Nevertheless, several features discovered in the area of the East cloister range (illus 11) most likely represent a pre-Augustinian presence although none of these features could be ascribed an absolute date.

OUTSIDE THE EAST RANGE

Outside Room 4 was a reasonably level surface of water-washed pebbles (916) which was cut by a ditch (928) of probable 12th-century date, implying that the metalling was a pre-Augustinian feature. Nearby were the remains of two parallel, rubble walls (914, 915) (illus 12a), apparently contemporary with the metalling although the width, 1.1m, of wall 915 and its location suggested that it might be the S wall of an 18th-century building (John Preston's House) (illus 67). Unfortunately it was not

possible to expose more than 5.5m of these walls and hence the problem remains unresolved.

Both walls were cut by an irregular trench (probably the work of stone-robbers), the backfill of which comprised rubble and mixed soils containing a 15th-century Nuremberg jetton (4.7, no 47 below). The S limit of the metalling (916) had been truncated although a drop in level of 0.42m along its surviving length of 6.5m suggests it had been an external surface – perhaps a path or courtyard – rather than an internal floor.



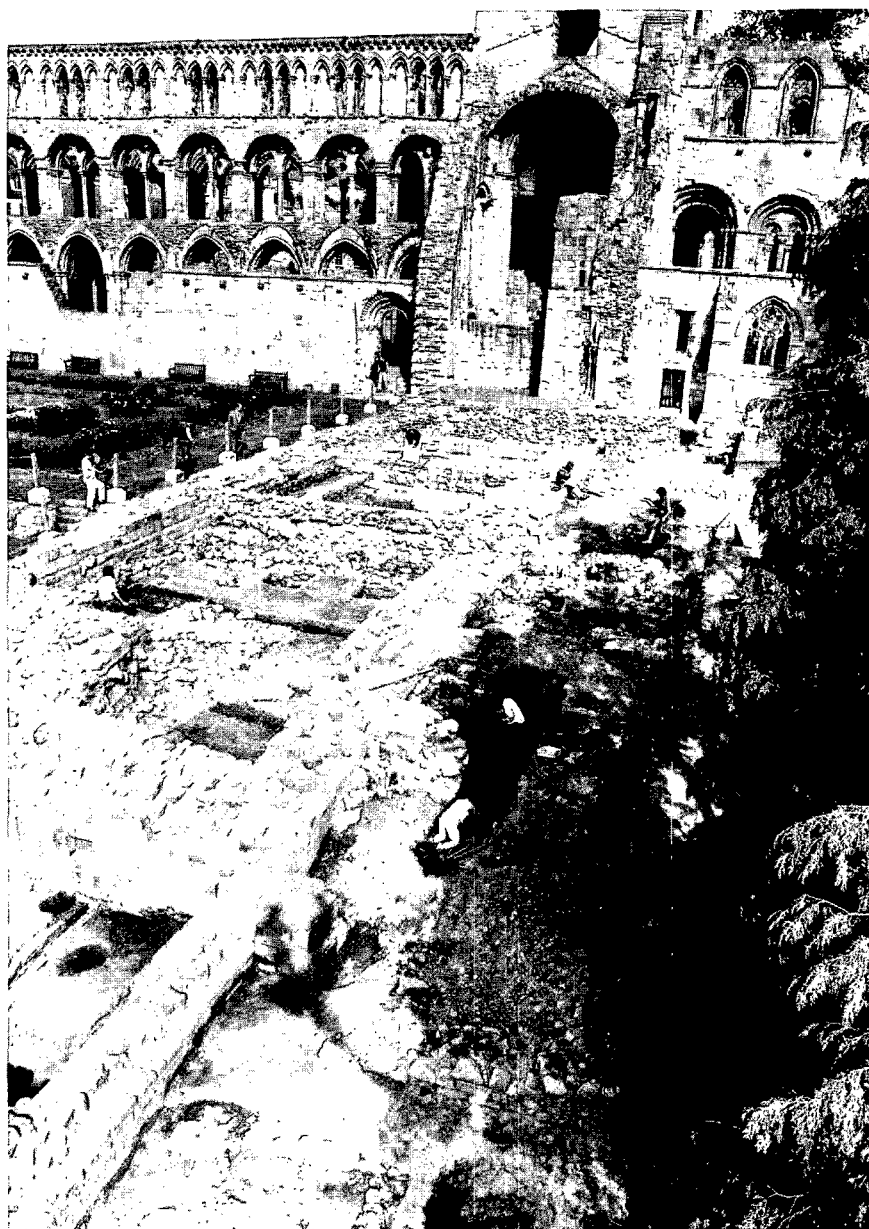
Illus 10
Plan of the area of excavation in 1984 and 1990.

ROOM 4

Pressed into the sandy subsoil within Room 4 were two areas of compacted gravels. The gravels predated levels known to be associated with the building's construction and were, perhaps, contemporary with the area of metalling (916) although here the stones were unsorted. In the NW corner of the room was a quernstone and, elsewhere among the gravel, many dolerite boulders with worn surfaces that suggested a footpath or yard pre-dating the Augustinian East range.

THE CHAPTER HOUSE AREA

Early occupation of this area was suggested by charcoal-rich soils, disturbed during the construction of the first Chapter house, and by numerous disarticulated human bones, many of them juvenile, within the room's floor-levelling deposits. This concentration of human remains clearly indicates an early graveyard; the juvenile bones within it implies that it served a secular community.



Illus 11

View from the S of the excavation of the East range and adjacent area. Ditch 928 is in the centre.

2.2 PERIOD II – THE BUILDING OF THE ABBEY (c 1138–c 1300)

PRIMARY OCCUPATION

From the onset of construction, temporary housing for the canons and builders, as well as the latter's workshops, must have covered a wide area for a considerable period of time. Little evidence of such transient accommodation might be expected to survive the construction of the main stone complex; although traces of a ditch adjacent to the East range and two timber structures in the West range can be ascribed to the primary occupation by the Augustinians.

FEATURES ADJACENT TO THE EAST RANGE

DITCH 928 (illus 12a, b, c)

The ditch, approximately 1.0m deep, cut through the metalling (916) and the fluvio-glacial soils below. It had been truncated at a point 7.46m from its rounded N terminal, probably during the construction of the East range. Over that distance the ditch narrowed from 1.8m to 1.1m at the top whereas the narrow channel at its base widened from 0.37m to 0.64m. Within the channel was a grey-green silt containing fragments of bran, ova of whipworm (an helminthic gut parasite) and high levels of *Potentilla*-type pollen (*Potentilla* spp were frequently used as astringents); these together with high levels of organic and organic-rich phosphates, indicate that the ditch was used as a sewer.

Minimal accumulation of the organic-rich deposit suggests either that the ditch was in use for only a short period or that it was emptied regularly – but not immediately prior to backfilling. The pollen was generally undeteriorated and hence typically water-borne, its assemblage representing a catchment area that included forest and scrub, woodland, tussock, turf and open ground. The hills to the W and NW of Jedburgh would provide such an assemblage and in all probability these hills were the source of the abbey's water supply. High values of metallic lead within the ditch suggest that the water was piped at an early stage, the pipes presumably running below or through the foundations of buildings.

DRAIN 1173

The only other evidence of plumbing to survive in this part of the site was a stone-sided drain (1173) (illus 15a) in the East cloister alley. The drain appears to have accommodated a (?lead) pipe and

may have served the lavatorium in the South cloister alley or perhaps an infirmary beyond the East range.

GRAVE 38

Near the truncated end of the ditch, against its W side, were the partial remains of a human torso (Grave 38) (5 below) whose position and lack of orientation were indicative of a non-Christian burial. Although the skull and limb bones were missing (perhaps removed during later landscaping), the articulation of the surviving rib-cage indicated that, had the corpse been moved, this must have taken place within several months of death (Dr RAA Macaulay pers comm). Near the skeleton were several very interesting artefacts: a small walrus ivory comb; a seal/pendant, also of walrus ivory; a horn buckle; and a whetstone (4.1; illus 78; colour V; VI below). All four objects were of high quality and, assuming single ownership, belonged to someone of wealth and importance. Whether that person was the same whose skeleton lay nearby is unproven but the circumstantial evidence is strong. The objects were evidently made between the late 11th and the late 12th century and perhaps disposed of in the third quarter of the 12th century.

Following these depositions the ditch was backfilled, apparently in a single phase with no obvious pattern or consistent direction of tipping. Within the infill were an almost intact ceramic cresset lamp (4.6; illus 83, no 51 below), sherds from a straight-sided cooking pot of local white gritty ware (*ibid*, no 29), three worked flints, pieces of tracery and fragments of two more whetstones. Near the top of the ditch infill was a barely worn Henry II 'Tealby' penny identified as Type C (1161–5), Type D (1165–68) or most likely Type E (1168–70) (4.5, no 4), indicating that the ditch was infilled no earlier than 1161 and probably at least a decade later.

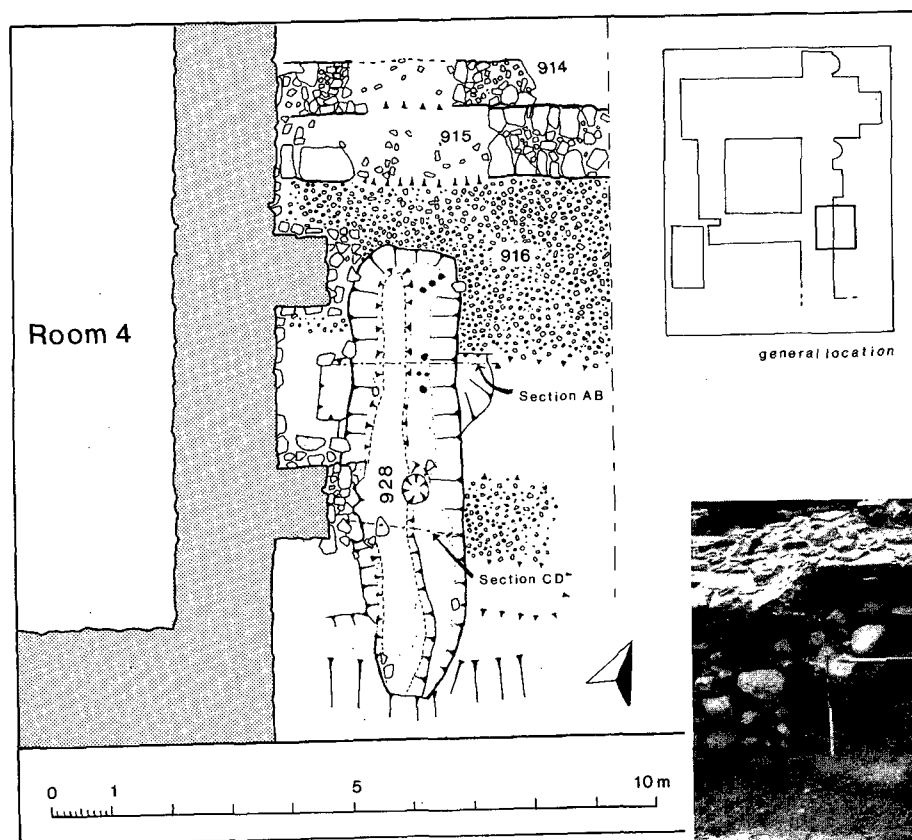
THE TIMBER STRUCTURES AT THE W OF THE SITE

The fragmentary remains of two timber structures were discovered towards the SW corner of the site (illus 13). They were built on terraces cut into the natural N bank of the Jed Water (illus 27) and appear to represent a fairly lengthy period of occupation within this area of the monastic complex: this is suggested by the successive phasing of the two structures and by the apparent sub-division of Timber Structure 2. They were precursors to the Period II structure, 8, with its undercroft and pend (below), but their precise functions are not clear. They were apparently domestic in character (despite the absence of hearths) and are most readily interpreted as part of the extensive temporary accommodation required on site during the

construction of the church and other major stone buildings. In addition to the slight structural evidence from the buildings themselves, further evidence of the occupation of the site during the later 12th and early 13th centuries was reflected by deep, tipped deposits of domestic midden associated with the timber buildings (see below).

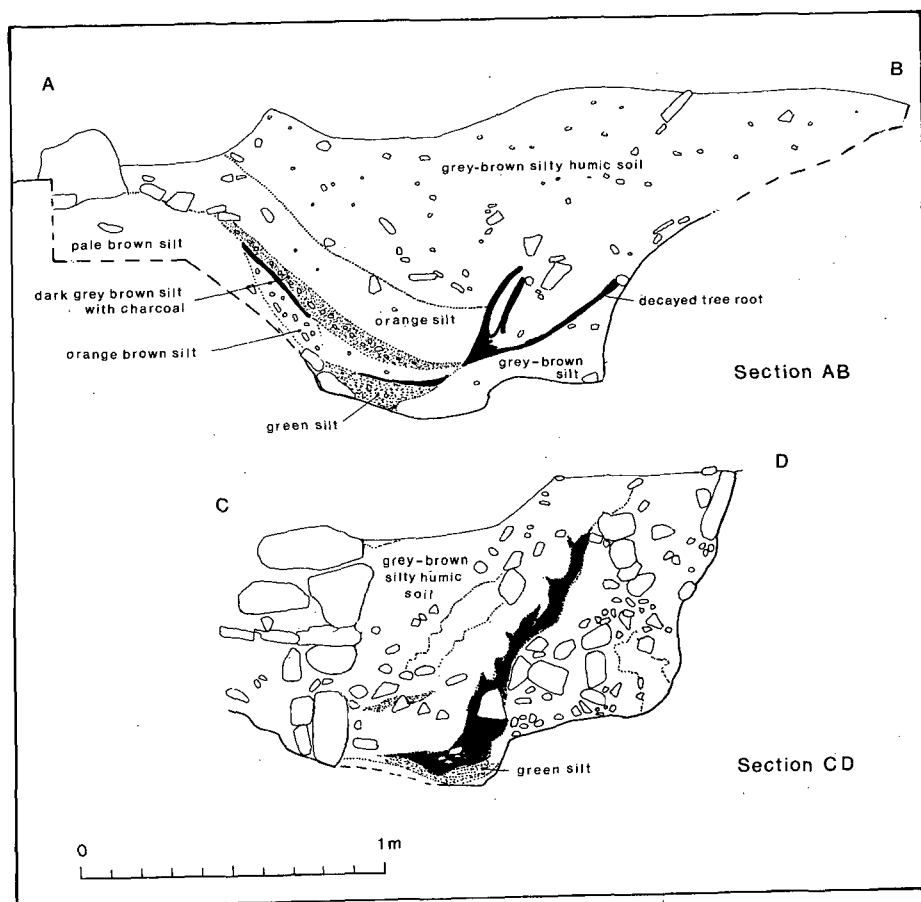
TIMBER STRUCTURE 1

Evidence of the earliest building phase identified on the W of the site was limited to a narrow rectangular area immediately N of the

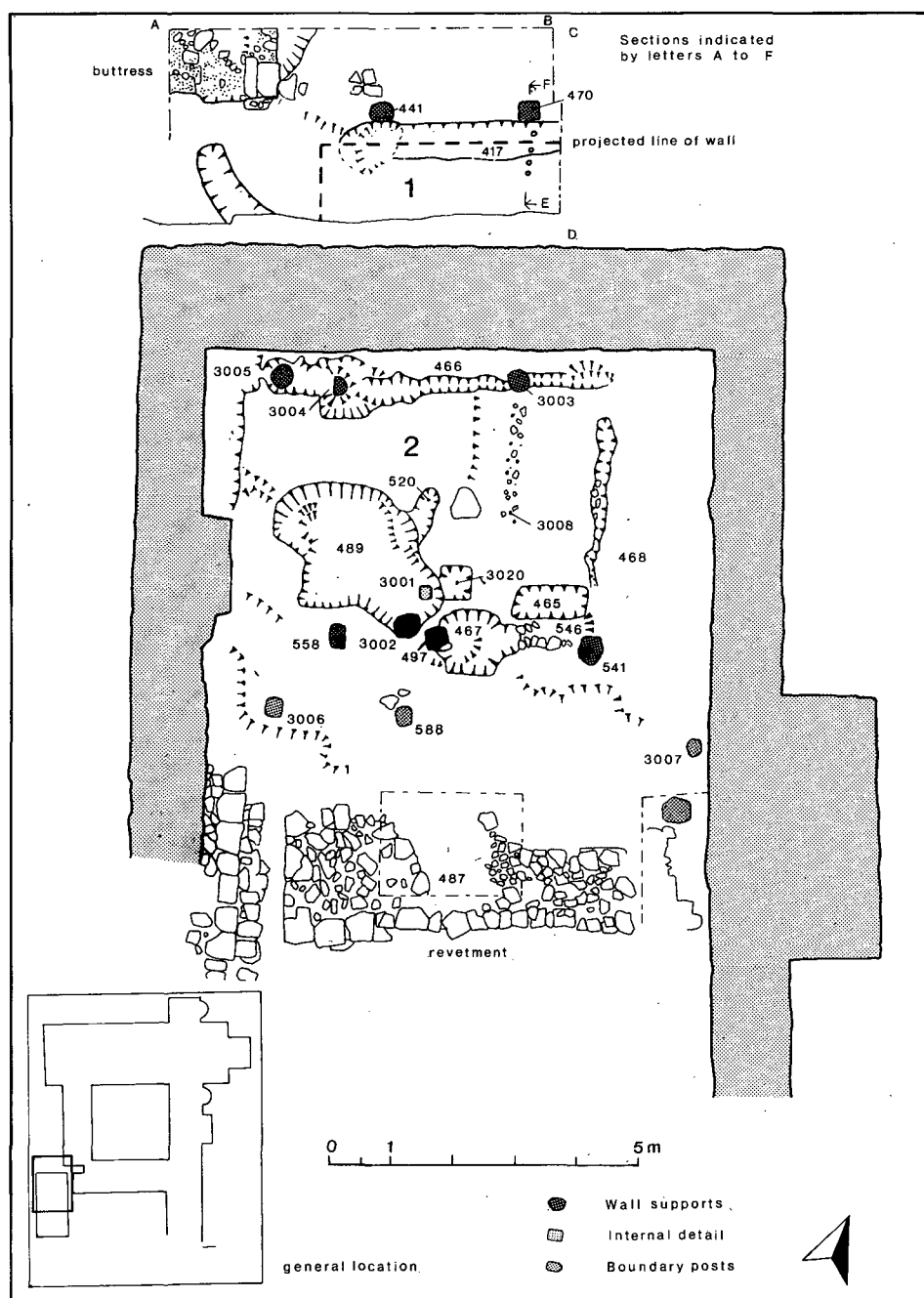


Illus 12
Ditch 928 and adjacent
features: a) plan;

b) the N terminal of ditch
928; from the E; note the
proximity of the East range
foundations to the ditch
edge;



c) sections across the ditch.



Illus 13
Plan of Timber
Structures 1 and 2. Part
of Structure 8 is shown in
outline.

N wall of the later Structure 8 (illus 13). After the removal of 1.8m of deposits associated with the construction of the 18th-century manse and garden, an artificially-levelled terrace surface was uncovered. This surface comprised three composite lenses of compacted mortar (411, 476, 432) (illus 14a), with an overall depth of 0.2m, which sealed a localised group of features and associated levels lying towards the extreme S of the area.

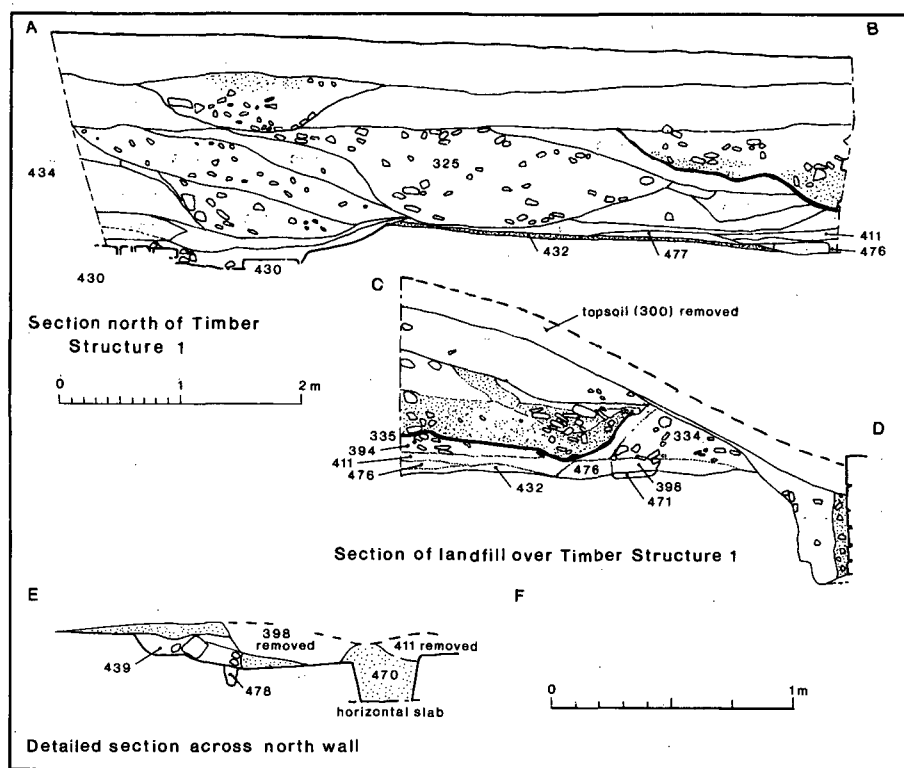
SLEEPER BEAM AND POST PITs

The structural elements comprised a sleeper beam slot (417) and two small squared post pits (441, 470) (illus 13; Table 2). A series of midden deposits (473) ran up to the S side of 417, suggesting that their deposition occurred when the wall over the beam was standing. Context 473 was, in fact, a composite midden deposit with lenses of ash, charcoal, animal bone and pottery, all suggesting domestic debris accumulating over an extended period.

Quantities of charcoal in the lower fills of all three timber features indicate that they were burnt *in situ* rather than dismantled and the holes backfilled. Although such fragmentary remains make the reconstruction of the building difficult, the characteristics of this group of features are sufficiently distinctive as to represent a single structure, reconstructed as Timber Structure 1 (illus 27).

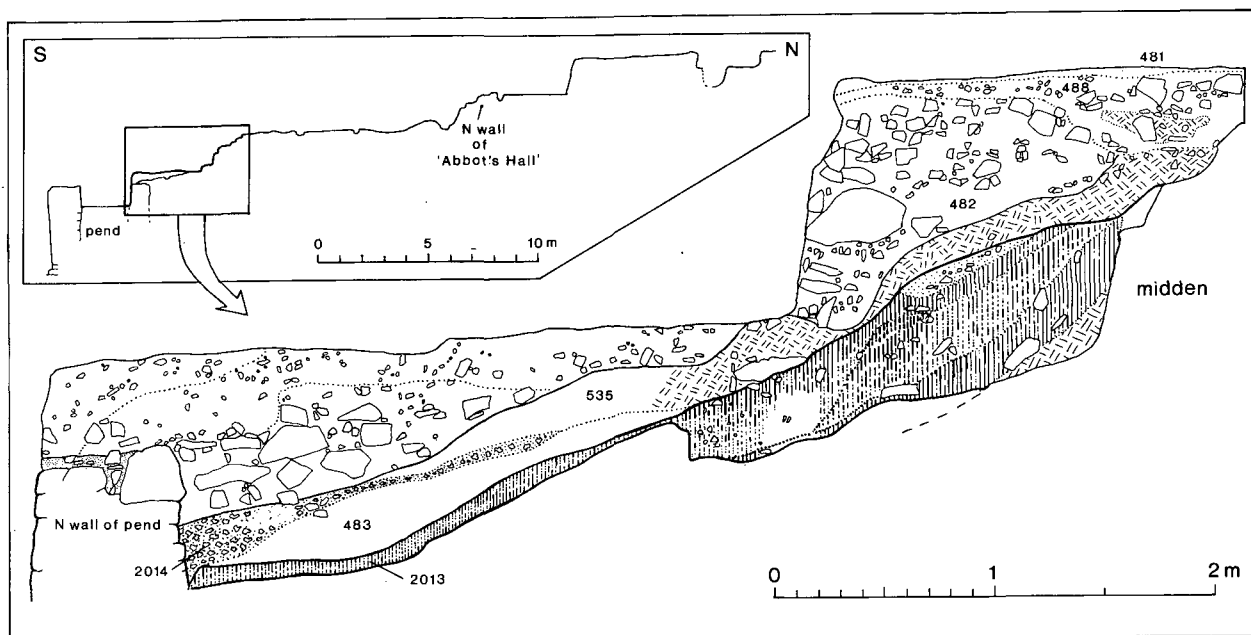
The two post pits (441, 470) were basically square in plan with no packers. Both, however, had flat stones at their bases to receive the weight of a timber upright, the dimensions of which were not traced. The fill of both – charcoal and redeposited midden (473) – suggests that Timber Structure 1 was first burnt and the debris cleared and flattened thereafter.

The overall regularity and fill of the associated beam slot (417) reflect the same sequence of destruction as in the two post pits. Its shallow depth implies the use of a sill-beam, a constructional device intended to avoid rotting (a common problem in earthfast



Illus 14
a) Sections through deposits overlying Timber Structure 1, mainly reflecting extensive post-monastic landscaping in the claustral area;

b) section across midden deposits to the S of revetted bank 487.



timbers). Such a beam would have been laid directly onto the cleared ground surface, thus providing a firm footing for the main infill of the wall – possibly wattle, planking or small stave uprights set into the sill-beam itself.

STAKEHOLES

A small cluster of stakeholes, again sealed by the flattened midden (473), was found to the S of post pit 470: these were contemporary with Timber Structure 1 but their function was impossible to determine.

TERRACE

The deposits against which Timber Structure 1 was cut comprised not only the upper levels of the natural hill but also the underlying clays and sands located at least 0.6m below the top of the natural soil profile (Ian Mate pers comm). This terrace, moreover, was truncated by the construction of Timber Structure 2 which lay immediately to the S. Its further progress N was not pursued because of limited time but, using the evidence of the uppermost terrace level upon which the cloister was built, it could not have extended more than 1m or so. This suggests that the terrace for Timber Structure 1 was a precursor of that prepared for Timber Structure 2 and had been abandoned when the latter was built.

TIMBER STRUCTURE 2 (illus 13)

TERRACE AND MIDDEN DEPOSITS

A wide, level terrace, uncovered within the N half of the later Structure 8 but probably extending further W than that structure, would have covered originally an area some 16m E–W by 10m N–S, its limits determined by the steep river bank to the S. The steepness of the original N bank of the river was determined by the pitch of a series of tipped midden deposits associated with Period II occupation and which lay against the face of the natural bank. This midden, along with two covered drains (573, 490) (illus 28), were part of the terrace for Timber Structure 2's occupation phase: the structural remains are, however, limited probably to the NE corner of a rectangular building on an E–W alignment.

STRUCTURAL REMAINS • PITS AND OTHER FEATURES

Timber Structure 2 can be described as the E end of a rectangular building. The main uprights of the walls rested in shallow and irregular slots which defined the N, S and W sides of the building. The walls appeared to have been constructed with wattle and daub, fragments of which were retrieved. These earthfast posts occurred in two groups: the N wall, pits 3005, 3004, 3003, and the S wall, pits 558, 497, 546, 541 and possibly 3002. The pits were fairly regularly spaced at an average of 1.3m apart. There is some evidence to suggest that the wall posts were paired and, as such, could have supported tie beams spanning the building to form three roof supports. Table 2 lists the dimensions of the main structural elements.

The wall slots were of such irregularity that sill-beams do not appear to have been used; instead, the wattle infill was sunk straight into shallow trenches which ran between the main earthfast posts.

A large and complex pit (489) was contemporary with pits 3002, 3001, 497 and 465. All had very similar fills characterised by the presence of daub and other burnt debris which included animal bone, pottery and the leg of a bronze cauldron (4.2 no 69, below). The function of pit 489 is, however, obscure. It consisted of a large, shallow, rounded depression backfilled with burnt material around a central core of random stonework (probably backfill). It

may have been the robbed-out setting for a simple hearth or oven or some demolished industrial feature associated with the main building programme of Period II. Moreover, the role of the pit is linked with a pair of regular, shallow, rectangular depressions lying to the E of it. These features (520, 3020) proved to be only 30–40mm deep and, because of this lack of depth and yet regular plan, they were probably settings for robbed stone pads or low plinths.

The other main internal feature was the rectangular pit 465 – a well-defined, large, earthfast post setting which may have been a repair or structural refinement to the building. The feature retained its packers (although displaced), suggesting a post of some 0.35m or more in diameter. Its position, offset from the wall lines, suggested an association with a possible entrance to the building – itself a secondary feature. The wattle infill between posts 541 and 497 in the S wall was removed to create a cobbled threshold (546) within a primary wall slot. This feature comprised two rows of neatly set pebbles in a roughly rectangular area overlying the narrower wall slot. The reason for the creation of a doorway at the SE corner of the building may be linked with the construction of a probable light, internal wall running S from post 3003 in the N wall. The shallow foundations of this wall (3008) were marked by a line of pebble packers within a gully, resulting in a narrow passage 1.4m wide at the extreme W of the building. Therefore, pit 465 may have acted as some form of door support or wall reinforcement necessitated by this secondary work.

TERRACE BOUNDARY POSTS (illus 13)

The remaining timber features contemporary with the occupation of Timber Structure 2 were not, however, part of the building. At this stage, as they appear to define the S limits of the contemporary terrace activity, they are described as boundary posts.

This small group of post pits was of very similar character to the wall posts (Table 2), being roughly 0.2m in diameter with packers still *in situ*. Significantly, 3007 was found below the masonry of the upper course of the main E–W revetting wall (487). It may also be associated with a series of similar post pits (452, 453, 454) (illus 27) cut against the riverside terrace immediately E of Timber Structure 2.

THE COVERED DRAINS 573 AND 490 (illus 28)

Running N–S for a distance of 3.8m between walls 487 and 384, was a stone-lined drain (573), sealed by tipping in advance of the construction of Structure 8. The drain was readily identified as a primary Period II feature as it lay below later Period II build-up and was truncated by the later Period II revetting wall 487 which, in turn, post-dated primary Period II timber settings.

Another similar drain (490) also dated from primary Period II. Both served the early terrace occupation and flowed down to the original N bank of the Jed Water: both were adapted as sub-basement drains, taking away any natural accumulation of water from the hill which might have undermined the standing masonry.

The fills of both drains were similar in that the presence of burnt material was particularly marked. In the case of 490, this proved to be mainly burnt heather, apparently used as fuel. All traces of the W extremity of Timber Structure 1 were obscured by later building but it is likely that the W riverside terrace, against which 490 is cut, was linked in some way to the terrace of Timber Structure 1.

DRAIN 573

The drain was built predominantly of flat slabs of sandstone, both to define the edges of the channel and to cap it. There was no

Timber Structure 1

Context	Depth (mm)	Upper Dimensions (mm)	Length (m)	Width (mm)	Description
441	310	400 x 393	-	-	squared post hole
470	396	390 x 383	-	-	squared post hole
417	120	-	3.3	500 - 630	beam slot

Timber Structure 2

Context	Depth (mm)	Original Diameter (mm)	Overall Diameter (mm)	Description
3005	190	195	210	rounded post hole
3004	206	75	180	rounded post hole
3003	208	100	123	rounded post hole
541	263	200	256	rounded post hole
497	198	298	310	rounded post hole
3002	288	216	288	rounded post hole
558	306	300	308	rounded post hole

Context	Length (m)	Upper Width (m)	Lower Width (mm)	Description
466	5.7	1.0	75	wall slot
468	3.1	0.3	65	wall slot
467	3.5	1.0	600	wall slot
546	1.0	0.4	275	wall slot

Context	Depth (mm)	Upper Dimensions (m)	Lower Dimensions (m)	Description
3001	30	0.1	0.03	internal support
489	307	2.5 x 2.4	1.5	internal support
465	498	0.58 x 1.08	0.56 x 1.0	internal support

Boundary Posts

Context	Depth (mm)	Upper Dimensions (mm)	Lower Dimensions (mm)
3006	275	180 x 220	90 x 75
588	304	300 x 246	100 x 64
3007	260	290 x 250	165 x 75
452	250	260 x 220	70 x 64
455	30	-	250 x 216
454	50	-	100 x 88

Table 2 (left and above):
the dimensions of the timber structures.

stone bottom to the drain: the sides were simply pressed into the accumulated midden deposits adhering to the river bank immediately S of the primary Period II terrace. The drain had partly collapsed under the weight of successive building although, for most of its length, it retained its capstones *in situ*. The channel was an average of 250mm wide and 157mm deep.

The drain disappeared under the N face of wall 384 (the N wall of the Period II pend) and was realigned to flow out through the E end of the pend. Its original outflow was probably straight down the slope to the river – a straightforward attempt to remove effluent from primary Period II terrace activity. Indeed, it probably helped to prevent the kind of noisome accumulation into which the drain was cut.

It was sealed by three major tipped deposits – 488, 482 and, most significantly, 2014. The first two were basically redeposited clays and rubble whereas 2014 proved to be a key indicator of

secondary Period II work, being a distinctive deposit of crushed yellow sandstone, stonemason's debris in all probability.

DRAIN 490

In the main, this drain was constructed from unbonded sandstone slabs defining a narrow channel, 150mm wide and 120mm deep. A flattened 'S' shape, it ran for a distance of 5.5m across an artificial terrace (115) cut into the natural bedrock immediately N of the river to form a riverside platform.

Like 573, it was retained for use under later buildings – in this case, the basement of Structure 13 where it was refined by the addition of a sump (see below, Period III). The drain was also truncated by the cutting-back of the river bank to accommodate the angled outflow of the original Period II garderobe and drain (see below).

OCCUPATION DEPOSITS FROM THE TIMBER STRUCTURES

The limited area between late Period II walls 487 and 384 contained an intact, stratified sequence of deposits (illus 14b) which clearly predated the construction of the main stone claustral buildings. The material was sectioned to a depth of 1.2m from its upper profile as defined by the drain 573.

The material was deposited in thin lenses. The uppermost of these (535) was characterised by large amounts of animal bone, shell and pottery sherds. This gave way to increasingly organic deposits with much charcoal, some of which was up to 0.2m deep,

culminating in deposit 2013. This soggy, black layer was not fully excavated but sherds of pottery, animal bone and other domestic debris were found alongside large pieces of bark and wood. The overall depth of the lower, organic rich sequence of deposits was a maximum of 0.4m at the N end of the section (a combination of layer 2013 and a deep tip of charcoal). The gradual nature of the depositional sequence and the depth of material on the upper reaches of the natural slope imply that the midden was the product of a lengthy period of occupation on the primary Period II terraces.

THE MAIN BUILDING PHASE

THE CLOISTER

The reconstruction of the cloister lay-out by the Office of Works after 1937 reflected two supposed phases in its development (RCAHMS 1956, 204). The second-phase cloister alleys were retained, the garth was planted with roses and, on dubious evidence, wall-lines were re-established. Partial excavation of the cloister in 1984 attempted to substantiate (or refute) this two-phase theory.

THE EAST CLOISTER ALLEY (illus 15a, b)

Placing contexts in specific periods of the abbey's development proved impossible here and consequently all of the excavated features in the East alley are described in Period II.

The trench consisted of a 16.0m-long section of the alley, itself 3.0m wide, with a short extension at each end. Below the topsoil and other recently deposited materials was a hard-packed layer of red sand and clay, cut by 1930s excavation trenches and other modern features as well as by a few medieval features which included five graves (5 below). Two of the graves (24 and 25) were stone-lined although their skeletons had been removed. One (Grave 28) had held a wooden coffin and two (Graves 26 and 27) were simple pit burials. The surviving skeletons were in a similar state of preservation to most of those within the Chapter house

and, although the evidence is inconclusive, it suggests that they too were monastic.

One or two courses of the W wall of the alley (1131) had been rebuilt after the 1936–37 excavation. Its removal exposed the wall's clay-bonded, rubble foundations, the width (1.0–1.3m) of which indicated that the wall was unlikely to have carried much weight.

Running below the S end of the wall was a badly damaged drain (1173), its base of pale yellow clay still bearing the impression of a (?lead) pipe. A 1st-/2nd-century Roman *dupondius* (4.5, No 1 below), recovered from the drain fill, is assumed to be residual for the cloister wall respected the drain's course and the two structures were probably contemporary.

THE W SIDE OF THE CLOISTER

Excavation at the W side of the cloister (illus 16) was intended to shed some light on the two-phased cloister and the character of the West range. The excavation was not comprehensive and the excavation of the West range was limited to three trenches. The evidence, therefore, is fragmentary.

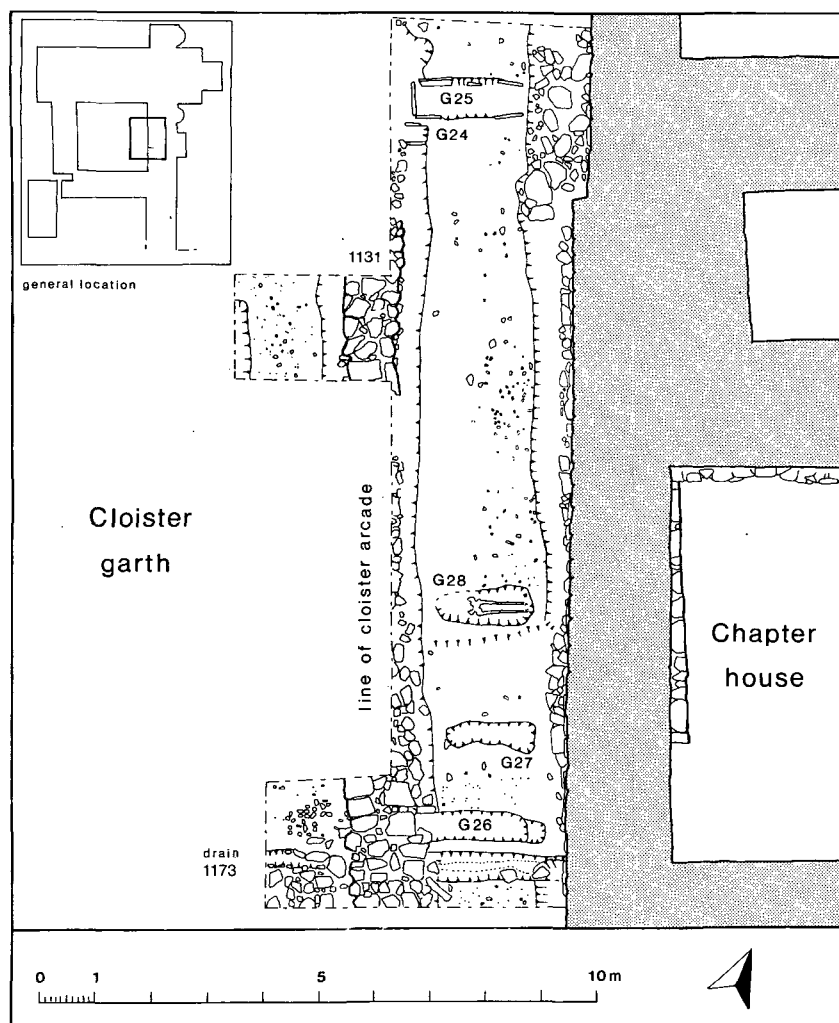
As much of the area in question had already been excavated earlier this century, the standing remains and their associated stratigraphic contexts were often found to be isolated from each other by the linear trenches of the previous excavations. However, sufficient evidence survived to confirm that the cloister had, indeed, been extended.

Of the cloister walls, both sides of the East alley survived whereas only the inner or E wall of the West alley remained, its W wall having been almost entirely robbed out.

THE EAST ALLEY

The East alley averaged 3m in width. Its upper surface (which showed no sign of cobbling or paving) was cut by intrusive features: five proved to be monastic burials (5 below) and another a clay-lined drain.

Both inner cloister walls (1212, 3011) were built on cobbled footings – mainly large river stones, apparently bonded in clay. Nothing of the upper masonry of 1212 survived; but 3011 showed that the main fabric of the walls was mortared sandstone.



Illus 15

The East cloister alley: a) plan;
b) (below) view of the alley showing
some of the graves partly exposed;
from the N.



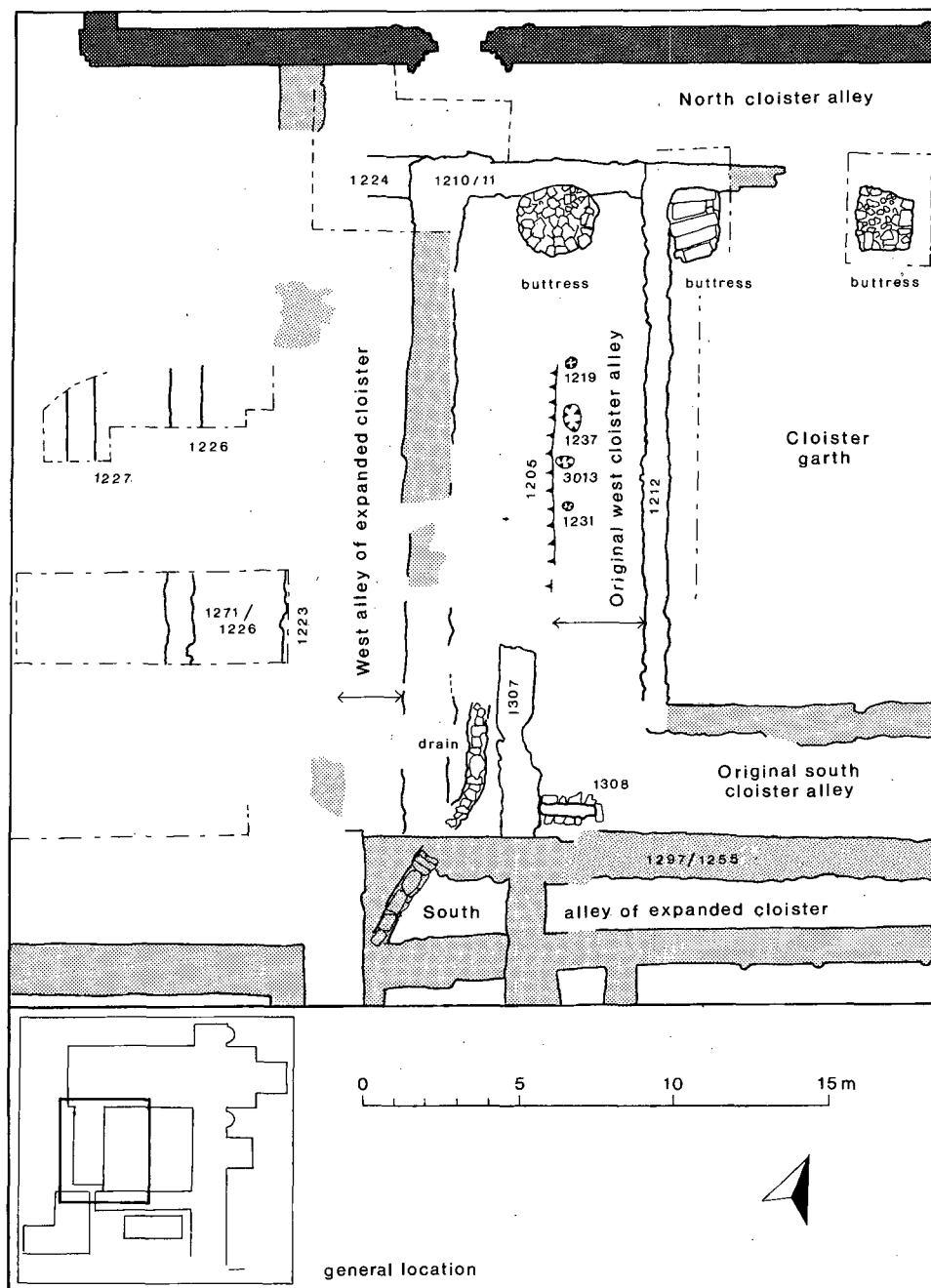
THE WEST ALLEY

The West alley was also approximately 3m wide, although its putative W wall was almost completely missing. Photographs of the 1936 excavation seem to show extensive masonry but all that remained in 1984 was the E side of its shallow foundation trench (1205). This feature echoed the line of 1212, ultimately being cut by a modern drainage trench. To the E of this shallow cut were four shallow rounded pits (1219, 1237, 3013, 1221), much eroded by later garden activities (indicating some sort of claustral feature). On average, they were only 0.1m deep but were spaced reasonably regularly at intervals of about 1.5m.

THE NORTH AND SOUTH ALLEYS

A short section of primary W wall did survive beneath the South alley. The wall (1307) was badly damaged by modern pipe trenches to such an extent that only the W face remained. The wall had the characteristic footings noted in 1212: a few stones from the core of the upper masonry survived, giving an overall width of 1.1m and a maximum height of 0.41m. The wall which had once run for over 20m was reduced to a 3m length.

The N wall associated with 1212 (the S wall of the North alley) was of identical build and dimensions. However, due to the almost complete masking of the contemporary S wall (N wall of South alley) by later restoration, there was no opportunity for a detailed examination of the relationship of this wall which was ultimately abandoned in Period III along with other elements of the first cloister.



Illus 16
The W side of the
cloister.

The wholesale remodelling of the two-phased refectory N wall (1297) and the secondary South alley S wall (1352) also obscured the complete sequence of re-alignment of the South alley of the cloister in Period III (as described in RCAHMS 1956, 205).

In a re-examination of the chronology of the claustral circuit development, the original refectory formed the S limit of the cloister although all that survived was the undercroft, terraced some 2m below the surviving alley surfaces. This would have necessitated a stepped entrance if there had been direct access between cloister and refectory undercroft, although the only surviving door, located at the end of the S wall of the refectory, suggests that access, at least during Period III, was only from the S.

The original South alley (illus 17) was 3.4m wide: only one damaged feature from this period, Grave 1308, survived within it. The contents of the grave had been removed before 1984, leaving

a boulder-lined trench located towards the W end of the South alley. Although fairly small (2.0 x 0.3m), its position under a cloister alley and its E-W alignment all tend to suggest a grave cut against the E face of 1307 and partially disturbed by modern pipe trenches. The grave, of well-laid boulder construction, was unlike any of the other five cloister inhumations.

Photographs taken in 1936 show that the S wall (1297) of the South alley was an extremely well-built section of masonry superior to and more massive than its successor, the Period III N wall of the enlarged cloister. It was apparent, however, that the earlier masonry was not demolished to a uniform height and that the succeeding cloister walls were not built directly onto the cleared earlier stonework but rather a substantial depth of soil. This evidence suggests that there was a delay between the first refectory being demolished and the new cloister being laid out.



Illus 17
Drain and the foundations of the
walkway in the South cloister
alley; from the W.

THE MAIN BUILDING PHASE

THE WEST CLAUSTRAL RANGE

The evidence for the original West range is inconclusive due mainly to the extensive disturbance to the surviving walls. It was detected in the 1936 excavation (illus 8b) as photographs and plans from that survey clearly show that the S end of wall 1307 was linked to a wall lying further to the W. This wall, apparently only surviving for 2–3m in length, was not revealed in 1984 but, on the evidence of similarity of build and dimensions as well as the overall symmetry of the site, it most likely joined with wall 1223 (illus 16), creating a major building 19m × 6m.

STRUCTURAL EVIDENCE

The N limits of the building were suggested by 1224 which appeared to be of Period II build (later re-used as cobbling in the Period III West alley) over which Period II blocking wall 1210 was built and which was redefined by the N end of the Period III West range.

Other than the broad outlines of the structure, there was little else found from this period of the West range, mainly due to the disturbance caused by the subsequent construction of the Period III range. It is likely that the mortared surface (1230),

against which all the Period III walls were cut, dates from Period II and, as this surface, which resembled a floor surface, lay to the W of 1223, there may have been another structure in this area.

The likelihood that wall 1223 was a Period II wall line was further suggested by the fact that it was exactly aligned with the Period II W wall of Structure 8 (see below). Wall 1307 was removed during Period III; 1213 formed the E wall of the West alley and 1223 became the W wall of the West alley.

THE MAIN BUILDING PHASE

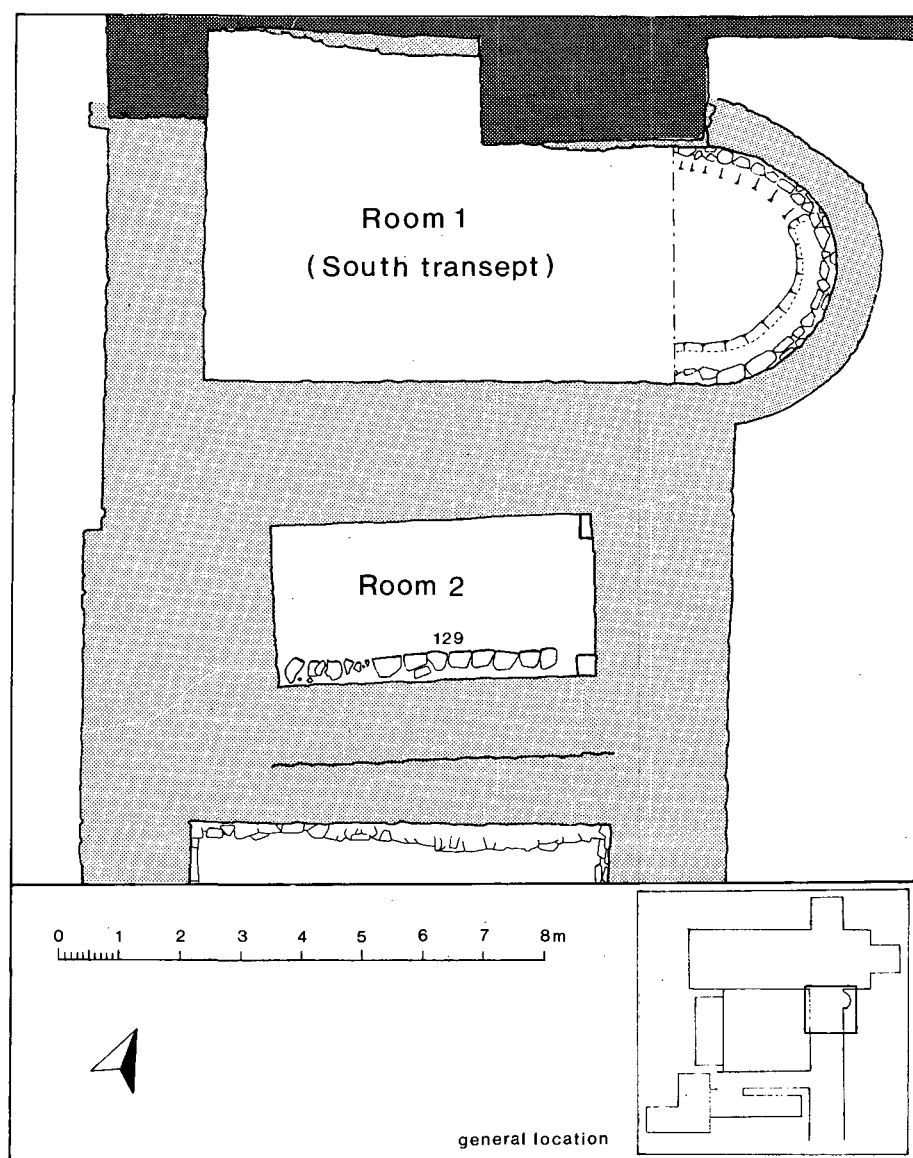
THE EAST CLAUSTRAL RANGE

During the excavation all rooms within and adjacent to the East range were given identifying numbers (illus 10; colour III). This system functioned satisfactorily except in the Chapter house, where the relatively small Room 3 proved to be the third and final manifestation of a chamber which had formerly extended well beyond the E wall of the range. In addition to the rooms partially uncovered in 1936–37, the S end of the

range (buried beneath The Bow) and an adjacent area to the E were also investigated.

The East range had been greatly disturbed during the 1936–37 excavation. Narrow, frequently deep, trenches had been dug alongside walls, resulting in the loss of evidence associated with the walls' construction and their relationships with adjacent levels. Thereafter, one or more courses of the exposed walls had been rebuilt and pointed with a very hard gritty mortar, thus further masking contextual relationships and making the interpretation of structures difficult, if not impossible.

The several phases of construction, together with stone-robbing and other detrimental activities, left little evidence of the environment that faced the builders in the 12th century and it can only be assumed that turf had been removed and the ground levelled before the East range was begun. The length of the building was such that localized problems, and the techniques employed to counter them, must have varied considerably. Near the church the ground was flat and the subsoil a stable, sandy clay, minimising difficulties whereas, further down the range, both the gravel slope and the river bank were always liable to erode.



Illus 18
Plan of Rooms 1 and 2.

STRUCTURES OF THE EAST RANGE

ROOM 1 (SOUTH TRANSEPT) (illus 18)

The foundations of the S and apsidal E walls of the South transept were uncovered in 1936. Thereafter the walls had been partially rebuilt and the interior of the room levelled up with 1.45m of rubble and soils, presumably to echo the floor level of the choir. In 1984 excavation was restricted to the E end of the transept, to avoid disturbing a 20th-century grave in its NW corner. Below the rebuilt masonry the foundations of the S and E walls, each 0.7m wide, survived as single courses of doleritic boulders. There were traces of an associated bedding trench, 0.45m wide and 0.3m deep, cutting the otherwise undisturbed glacial till.

ROOM 2 (SLYPE/PARLOUR) (illus 18; 19)

This room measured 5.4×2.7 m wide internally. The lower courses of the N, S and E walls, which had escaped the attentions of previous excavators, were built upon disturbed clayey subsoil within which were several disarticulated human bones, presumably redeposited. A thin spread of loosely compacted gravel had been used to level the ground below the W wall and within the adjacent part of the room. Blocks of sandstone, each about 0.4m square and mortared onto the side walls in the NE and SE corners of the room, appeared to be contemporary with

those walls and were perhaps the base courses of an arch in the E wall.

Adjacent to the S wall was a line of roughly-faced, mortar-bonded sandstone blocks (129), the single surviving (0.25m high) course degenerating into a few rounded boulders and pebbles towards the W of the room. There was insufficient evidence by which to interpret this stonework with any confidence although conceivably it could have been the foundation for bench seating, which would justify the room's designation as a parlour as well as a slype (RCAHMS 1956, 204). However, the N face of 129 shared the same alignment as the outside face of the N wall of the early Chapter house (see below), suggesting that it was unconnected with Room 2.

Overlying the gravel in the W end of the room was a layer of red sandy clay, probably the bedding for flagstones or floor tiles although nothing remained of the floor itself. Patches of smooth white mortar had been dropped onto the surface of this clay and onto the inside face of masonry 129, presumably when the walls were being plastered or lime-washed.

There appeared to be a wall face within the masonry dividing Rooms 2 and 3 although this may have been a feature exaggerated for display purposes following the 1936–37 excavation. Given the strange configuration of this feature, its interpretation as the day stair (RCAHMS 1956, 204) is difficult to accept.



Illus 19

Room 2; showing the possible foundations for bench seating against the S wall and what may be the bases for an arch in the far corners of the room; from the W.

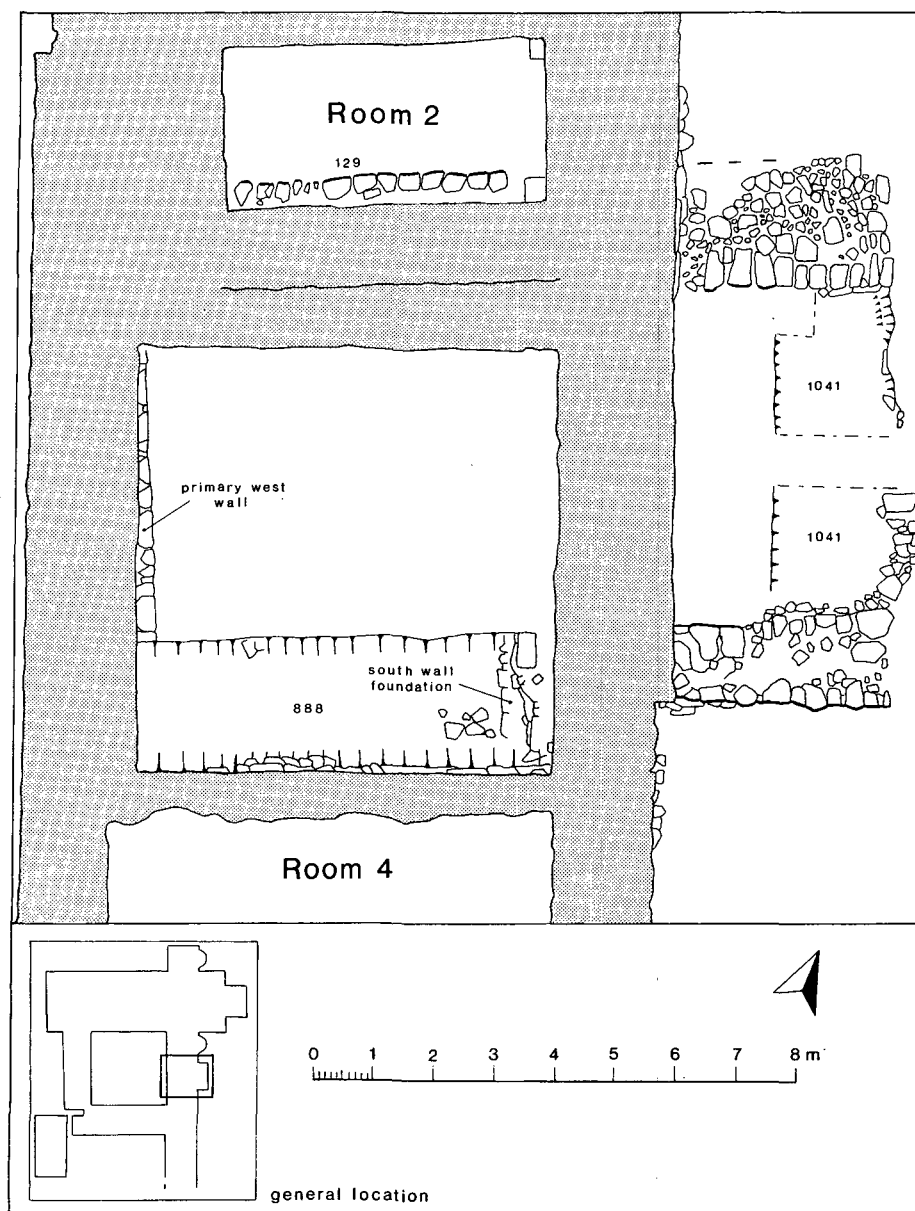
THE CHAPTER HOUSE (illus 20)

Three distinct phases of development were identified in the Chapter house. Originally the room extended some 3.0m beyond the East range and measured $10.5 \times 5.3\text{m}$ internally, giving a floor area of approximately 52.5m^2 (exact measurements were impossible because of wall robbing and rebuilding). At a later stage the Chapter house was extended further to the E, only to be reduced thereafter to the small square chamber whose outline was displayed after 1937.

The W wall was built on sloping ground and laid on a bed of mortar over a thin layer of disturbed, mottled clay. Differing markedly from any other masonry within the range, the bottom courses of cream sandstone resembled a crudely-faced, free-standing wall which, together with a slight eastward alignment, suggested that it had belonged to an earlier structure although there was no other evidence to support this. Alternatively, this may be an example of wall foundations being realigned because of constructional mistakes and alterations, as was the case apparently at Bordesley Abbey (Hirst 1983, 229).

Up to 0.5m of charcoal-rich soils and other deposits that overlay

the subsoil had been removed before the foundations of the E, S and N walls were laid. The only surviving evidence of the E wall was a robber trench (1041), 3.1m wide, and a few remnants of the wall's foundations. The S wall, however, was represented by foundations, 2.0m wide, of rubble alternating with layers of clay and pebbles that extended below and to the E of the Period IV E wall. This style of wall foundations was typical of the abbey's primary construction. At the bottom end of the East range mortar, rather than clay, had been used; otherwise the technique was identical. The N wall of the Chapter house, including its foundations, stood to a maximum height of 1.05m, above which was 1930s stonework. Its width could only be estimated as 2.5m because some of its masonry was masked by that of Room 2. However, it is possible that masonry 129 in Room 2 was a section of the N wall's outer face (see above). The difference in level between the two sides of the N wall could be explained by the slope of the ground. Where it extended beyond the East range, the outer face of the N wall had been badly robbed in antiquity. Many constructional details, including the relationship between the N and W walls, were unresolved although the foundations of the N wall were shown to be bonded with clay and a little mortar.



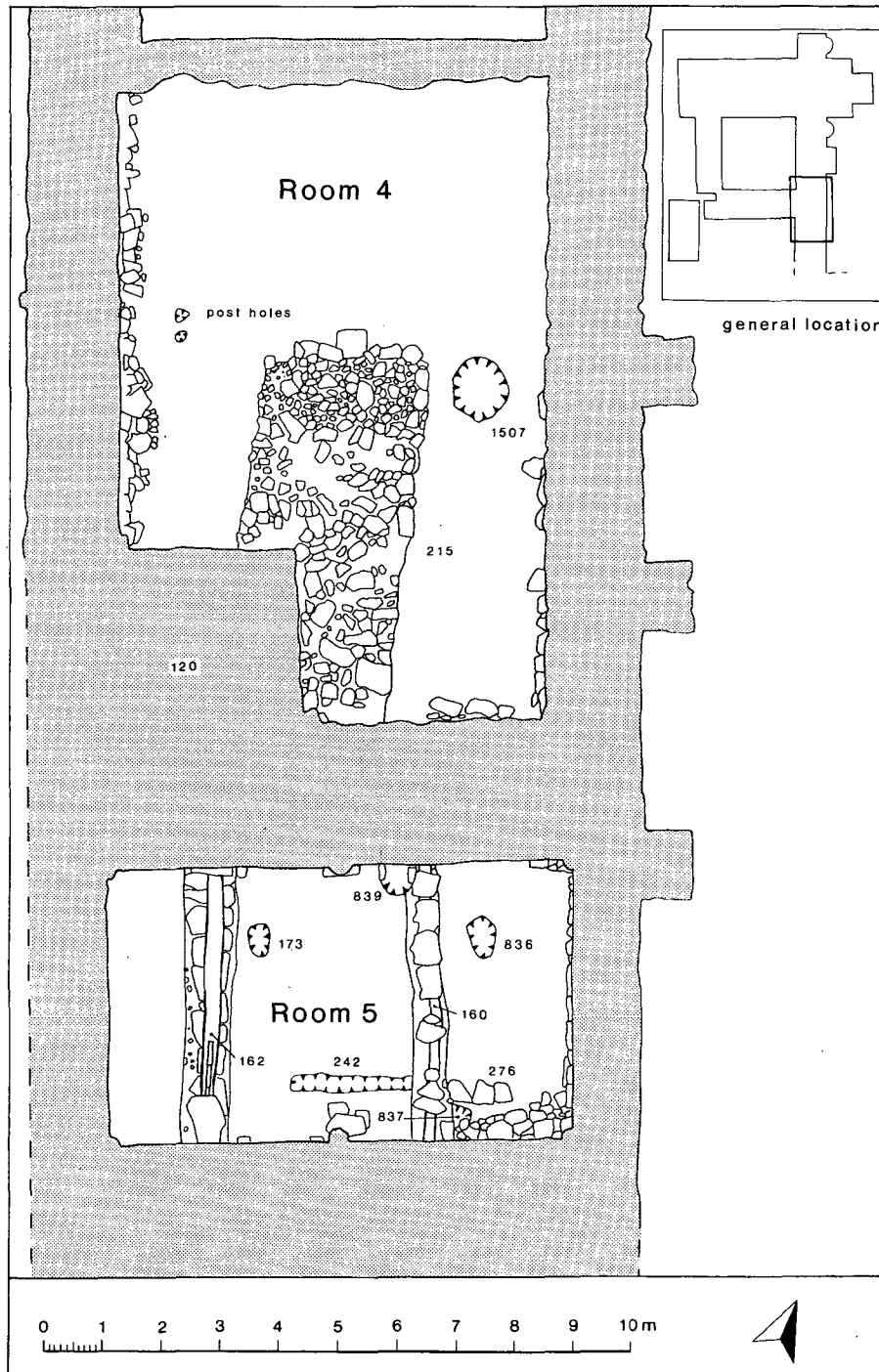
Illus 20
Plan of excavation of the Period
II Chapter house.

After its superstructure had been built, the room's interior was raised and levelled, mainly with stone-free soils whose depth increased towards the S to compensate for the slope. There were numerous human bones, many of them juvenile, within these soils, suggesting that there was a cemetery in this area before the Chapter house was built. Above these levelling deposits were thin spreads of fine-textured, mortar-like material, probably derived from the plastering and/or lime-washing of walls. The builders' scaffolding may have been set upon stone or timber base plates for there was no evidence of socket-holes to house the necessary uprights. Similarly, nothing remained of a floor surface, the stone flags or clay tiles presumably having been removed during subsequent alterations.

Entry to the Chapter house would have been through a door in the W wall. Although the floor itself was missing, the drop in level from the cloister alley to the interior of the Chapter house suggests that there had been a short flight of steps inside the door. The space, 1.8m wide, between sarcophagus graves 5, 6, 7 and 8 and the building's W wall was the likely position of those steps.

ROOM 4 (illus 21; 22)

Religious reformers, stone-robbers, 18th-century builders and 1930s excavators had all helped destroy evidence relating to the building sequence within this room: indeed, it is unclear just how much of the surviving fabric of the room was genuinely medieval.



Illus 21
Plan of Rooms 4 and 5.

For example, the surviving portion of the W wall was consistent in style with that expected of 12th-century architecture, yet its masonry appeared to be continuous with the stone platform (120) in the SW corner of the room, below which were found sherds of 16th-century pottery. It is quite possible that the presumed 12th-century masonry had been reused but, without dismantling the walls, it was impossible to reconcile these inconsistencies.

The foundation trenches for the walls were cut into deposits of sand, gravel and small stones, up to 0.3m deep, overlying the gravel and boulders that are thought to pre-date the Augustinian abbey (2.1 above). Of the primary N wall (and arguably the W wall) only the foundations of large angular sandstone boulders, survived. The thickness (at least 3.0m) of the N wall suggests that this could have been the site of the day stair that led from the canons' dormitory to the cloister. Perhaps more likely, the foundation for this stair was the large platform of clay- and mortar-bonded sandstone rubble (215) in the S side of the room.

Adjacent to the W wall were two stone-lined post-holes (209, 908), cutting the early gravels but covered by primary levelling

materials, which were probably settings for scaffolding posts used during the construction of the building. Also cutting the early metalling was a pit (1507), 0.92m in diameter and 0.43m deep, probably too large for scaffolding and too near to the masonry of 215 to have housed a stone pier. Its fill of stone-free sand appears to have been washed in, suggesting that the pit was open for some time, perhaps during the construction of the building.

A strip of yellow-green clay, 1.0m wide, that overlay the levelling deposits on the N side of the room was interpreted as the base of an underfloor drain (similar to 1173 in the East cloister alley), whose course had been truncated.

ROOM 5 (illus 21; 23)

Most of this area was simply stripped down to bedrock before building commenced. However, because Room 5, which measured 8.0 × 4.7m internally, was built astride the old river bank, the gap between the cliff face and the S wall of the chamber had had to be levelled up, using a mixture of stone, gravel, clay



Illus 22

The probable footings of the day stair in Room 4; viewed from the N.



Illus 23

Room 5. Running N-S across the room are the two rock-cut drains 160 and 162; viewed from the W.

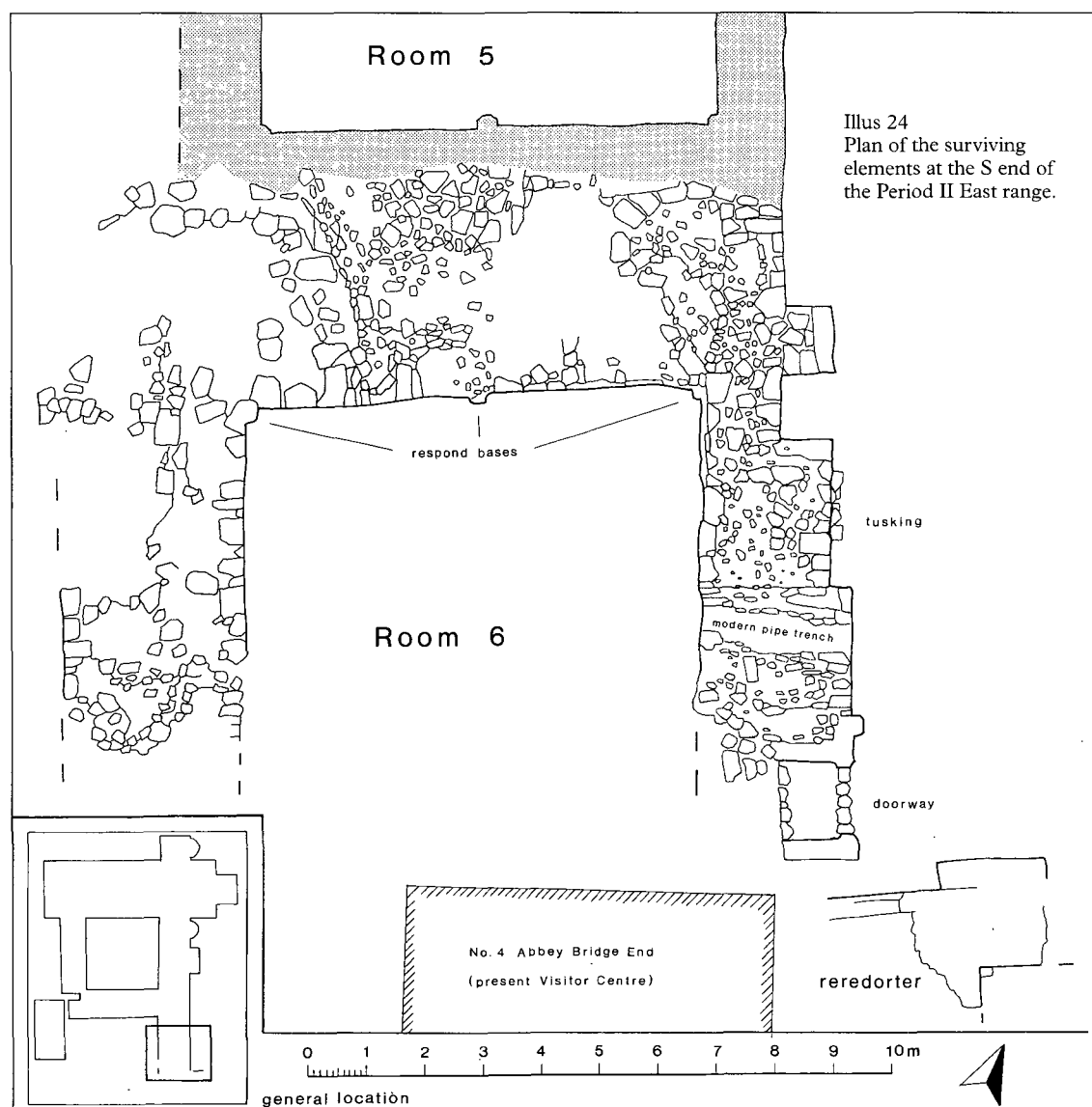
and mortar. As well as supporting the upper storeys of the East range, the massive (4.6m thick) wall dividing Rooms 5 and 6 also helped prevent the cliff face eroding any further.

Much of the archaeological record within this room was probably destroyed during the 1936-37 excavation and subsequent programmes of consolidation and rebuilding. The only upstanding medieval masonry to survive until 1984 comprised some of the S and E wall foundations and a few semi-octagonal pier bases, the upper courses of which were modern reconstructions. These piers, located in the corners of the room and midway along its walls, had supported the roof of a two-bayed, quadripartite-vaulted chamber. There had been a flagged floor although only fragments of it survived in the SE corner of the room.

Two rock-cut drains (160, 162) took ground water from the cloister, discharging it into the core of the wall separating Rooms 5 and 6, from where it percolated away. The drains, each 0.2-0.25m wide internally, were lined and capped with mortar-bonded sandstone flags although most of the capstones of drain 162 were missing and its duct reused to accommodate a modern

earthenware field drain. It is assumed that two pennies (dated 1913 and 1916) retrieved from drain 160 had been inserted through one of the gaps between the drain's capstones during the 1936-37 excavation. Photographs and drawings from that excavation show a square opening, apparently aligned with drain 162, in the SW corner of Room 4. Although the evidence has been obscured by subsequent masonry consolidation, it may be reasonable to assume that the aperture had a similar function to one found below one of the cloister walls at Butley Priory, Suffolk. There it was interpreted as an inspection point for a conduit that carried water from the cloister roof and possibly from the lavatory (Myres 1933, 254).

There was no obvious pattern to the rock-cut holes dispersed throughout the room and, although some may have been scaffolding sockets, they were certainly not all contemporary. Pits 173 and 836 were filled with materials similar to the levelling deposits on the S side of the room and may have been pre-Augustinian features. Pit 839, adjacent to the N wall, was cut into bedrock and backfilled with three pitched sandstone slabs and loose red clay. The dimensions of pit 837, which was infilled with



red-brown silt, remain unknown for it extended below the S wall. An irregular cut in the SW corner of the room is thought to be a modern feature associated with the rebuilding of the W wall.

Towards the S side of the room were the remnants of a structure that may have pre-dated the main building phase of the East range. These remnants comprised three mortar-bonded sandstone blocks (276), faced on their S side, and a 2.0m-long slot (242), perhaps a robbed section of the same feature. The relationships between these features and the construction trenches for the Room 5 walls are not altogether clear although 276/242 did appear to be cut by drain 160.

ROOM 6 (illus 24–26)

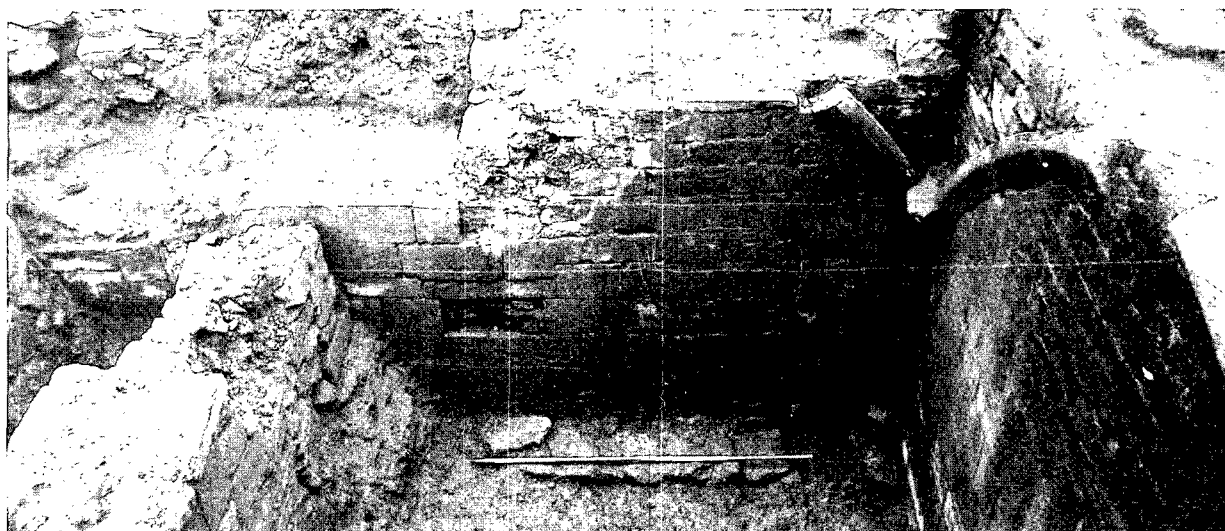
At the foot of the old river bank was Room 6, a large undercroft which had not been excavated prior to 1984 because it lay beneath The Bow. To its S and SE were the remains of the reredorter (illus 24).

The undercroft was two bays (approximately 8.0m) wide and, although at least two bays long, its original extent could not be ascertained because the building was badly damaged at its S end (illus 25). The thickness of the E wall increased from 1.3m to



Illus 25

The S end of the East range. Note the massive walls on the N, E and W sides of Room 6. No 4, Abbey Bridge End (now a visitor centre) stands over the remains of the reredorter; from the NW.



Illus 26

The NE corner of Room 6. Its ashlar-lined walls retain remnants of blind arcading; viewed from the S.

2.6m over the room's surviving length while the W wall was even broader (3.5m) and had been widened still further at a later date. Such massive walls were needed to support the towering height of the East range at this, the lowest point of the abbey.

The wall foundations comprised rafts of large dolerite boulders and sandstone rubble, similar to those used in the Chapter house, although here the bonding material was mortar rather than clay. Each course of the finely-tooled ashlar wall faces was 0.2–0.3m high and built of blocks up to 0.6m long, the very tight joints requiring little or no pointing. Wall cores, however, were of unworked or reused rubble, bonded with a cream-coloured mortar. Within the core of the W wall was a block of fine-grained red sandstone, roughly inscribed into a board used for the game of merelles, or nine-men's morris (4.7; illus 87 below).

The highest surviving masonry was the 3.0m-high E wall which was, nevertheless, well below the level of the quadripartite-vaulted ceiling. Evidence of the piers that supported the vaulting survived midway along the N wall of the undercroft and in its NE and NW corners. The latter survived to its full height of 1.23m and still supported some vaulting ribs as well as the blind arcading in the N and E walls (illus 26). Secondary developments had destroyed, or masked, some of the piers although midway along the E wall, behind a secondary E–W cross-wall, a springer was still in evidence. An aumbry, 0.76m long and 0.3m high, was recessed 0.58m into the W wall of the N bay, 1.0m above floor level. Two small areas of flagstones adjacent to the N and W walls were all that remained of the floor. The only visible access to the undercroft was

by an inward-opening doorway, 1.16m wide, in the E wall of the S bay. No windows pierced the surviving stretches of the walls.

An ashlar wall, 1.2m wide and surviving as tusing, projected from, and was integral with, the E wall of the range. Being so narrow, it is unlikely to have supported a superstructure and the wall is thought to have been a boundary, defining the limits of another range of buildings.

THE REREDORTER (illus 24)

Only a very brief investigation was possible to the E of No 4 Abbey Bridge End prior to its conversion into a visitor centre. Below post-18th-century deposits of rubble and clay and approximately level with the N wall of the house, was an E–W wall, 1.4m wide and extending 3.3m beyond the line of the East range. The wall's masonry was identical to the 13th-century ashlar of Room 6. There was a southward return on the internal angle but this wall had been damaged during the construction of the house and consequently its width could not be determined.

During operations to underpin the foundations of the house, the quoins of a chamfered plinth and one further course of ashlar were uncovered below the building's W wall, 1.4m from its SW corner. There was an eastward return from the S side of the chamfer and a 1.13m length of walling extending N from the quoins but, otherwise, little else survived.

THE MAIN BUILDING PHASE

THE SW OF THE SITE

The main building phase in this area was preceded by extensive preparation of the steep terrain. This was followed by the building of Structure 8 and Structures 9 and 10.

PREPARING THE GROUND • TERRACING AND FOUNDATIONS

The first stage in the preparation of this part of the site for the main phase of building saw the construction of three, squared blocks of masonry (illus 27) which were to serve a triple function:

- a) to support the great W wall of Structure 8 where it proceeded down the steep, stepped profile of the already terraced site, to the river;
- b) to give added protection to the W wall where it projected into the full force of the river current; and
- c) to receive the main drainage and garderobe outlets for the buildings at the W limits of the site.

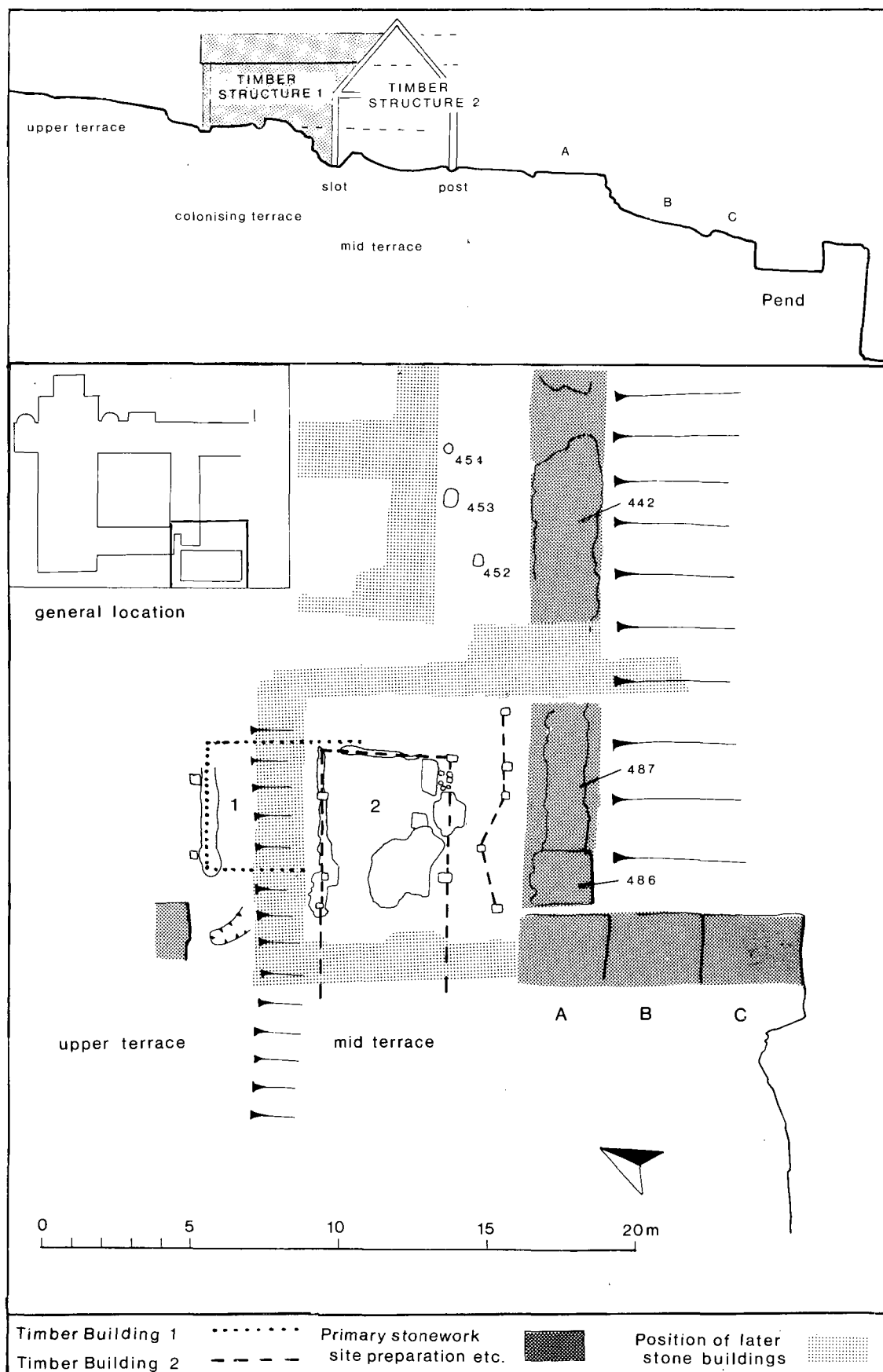
PLATFORMS A, B AND C

Three platforms, A, B and C, ran from the S edge of the middle terrace down to the river for a distance of some 11m, with platform C forming the SW corner of Structure 8. Platforms A and B were regular in size and plan: A was 2.3m E–W and 3.0m N–S; and B was 2.3m by 2.8m. However, C was altogether different in that its E face was on the same alignment as A and B but it was wider and its W face was angled obliquely to face upstream. This was originally to ensure the easy passage of the

river around the walls of Structure 8 which were to project well beyond the limits of the natural river bank and into the river itself.

The three blocks of masonry were of monumental construction. A and B were both built into the slope and thus required an extensive construction raft of large boulders sunk into the face of the existing upper terrace and the natural bank. Over this foundation course, mortar-bonded sandstone masonry was laid. These heavy foundations acted as revetment against any movement down the slope. They were only partially exposed and, of the two, only B was examined closely. Its foundations were over 1.0m deep and were bonded with clay (2015). They were dug against midden material (2013 type) and appeared to follow the NE–SW alignment of the original river bank.

The upper masonry of A and B stood only about 0.4m high: this was mainly due to the wholesale robbing of all stonework from the abbey buildings which were ultimately covered by The Bow. Platform C projected beyond the line of the river bank and, on its E side, was excavated to a depth of 2.3m. The topmost 0.75m of the face was constructed of narrow, flat sandstone slabs with many small pinnings, forming a crude but dressed finish. The lower courses of the buttress showed no attempt at even crude dressing, being constructed of largely unmortared, more massive and irregular sandstone slabs. The lower masonry also had a distinct



Illus 27

Plan and section of Period II terracing at the SW corner of the site showing the location of the timber structures and Structure 8.

batter to the E, eventually resting on huge boulder foundations. This style of construction is distinct from subsequent Period II building and is only comparable to other 'strengthening' walls such as the revetment walls 487 and 442 (illus 13), both of which were ultimately buried.

The original S end of platform C was obscured by the addition of the massive S wall (378) of Structure 8. However, the original angled W face of the platform was still discernible as a break in build between it and its successor, 2011 (see below).

REVETTING WALL (487) (illus 13; 28)

Once the original W limits of the site were established by the A, B, C platform buttress series, a major E–W revetting wall was constructed (487). This, as in the case of the platforms, served a combination of purposes:

- a) the masonry was dug onto the southernmost point of the river bank where a straight E–W line could still be established in order to create a secure naturally founded wall; and
- b) the wall supported buildings to the N of the line as well as providing footings for extending S.

The wall had, however, suffered extensive damage by late stone-robbing and further subdivision of the monastic complex (notably Room 11 which abruptly truncated the wall as it proceeded E).

Superficially, the masonry was crude with its visible outer (S) face constructed of large and irregular mixed stones, some water-washed and some crudely dressed. In particular, the N face of 487 was erratic in its course, making the wall appear to vary in width considerably (from 2.5m to a minimum of 1.5m over its entire length of 19.5m).

During the excavation of the Period II pillar base (2017) the true quality of the masonry was apparent. A section across the W end of 487 showed that the irregularities in the N face were due to levelling up from the middle terrace to cover a totally regular straight-sided wall below, set in a foundation trench. The upper irregular stonework was simply intended to

completely fill the construction trench and to bring the upper surface of the wall to the correct height. Once these top two courses were removed, the entire construction was found to be laid against a vertical cut in the natural sand and clay of the colonizing terrace which ran along a straight E–W line 2.0m N of the S face of wall 487. The component layers within the wall were not totally excavated and, of possibly numerous rafts, four were ultimately revealed:

- a) the uppermost course of finishing and levelling masonry comprised largely rounded, dolorite boulders with some sandstone for pinning and packing set in a pinkish clay, a maximum of 0.3m deep;
- b) a second layer of more random and larger water-washed stones with an overall depth of 0.24m;
- c) a flat layer of river pebbles, closely packed to give an almost cobbled appearance some 0.2m thick; and
- d) a second cobbling raft, apparently identical to c).

The second cobbling raft (d) was found to run below the E wall of Structure 8 and the uppermost layers ((a) and (b)) sealed a primary Period II post pit (boundary post 3007) – confirmation of the intermediate role of the E–W revetting wall between the primary and secondary phases of Period II.

LEVELLING DUMPS

The extension S of the middle terrace level was carried out to accommodate the massive N–S dimensions of Structure 8 at the S limits of the site – to form, in effect, the SW corner of the abbey complex. This period of extension is characterised by the series of tipped deposits over residual, early Period II midden (illus 14b) down the face of the slope – in particular 2014, a single distinctive dump of smashed sandstone chippings (presumably a by-product of the stone dressing from the building work elsewhere on the site). A similar sequence of events probably occurred with two other later Period II buildings on the site – Structures 9 and 10 – where the terrace revetted by 422 (the E end of 487) was extended S artificially.

STRUCTURAL EVIDENCE

STRUCTURE 8 (illus 28; 29)

Structure 8 was intended to link (at its first floor level) with the cloister while the building had a basement, or undercroft, below. This plan was based on the assimilation of the existing Period II terraces (illus 27) – that on which the abbey church and cloister were built and that under Timber Structure 2, halfway down the slope – within the new building. The two main floors of the block were further complemented by the addition of an alley or pend at a level below the undercroft, at the extreme S end of the building. The creation of the pend was again a reflection of the effort of the builders to utilise the steep slope on the river bank which Structure 8 spanned. An examination of the sequence of levels from the cloister down to the river shows clearly how the three elements of upper floor (S), undercroft and pend could be accommodated. The terrace of Timber Structure 2 lies 3m below the cloister (South alley) and is 4m above the level of the pend which, in turn, stands 4m above the river.

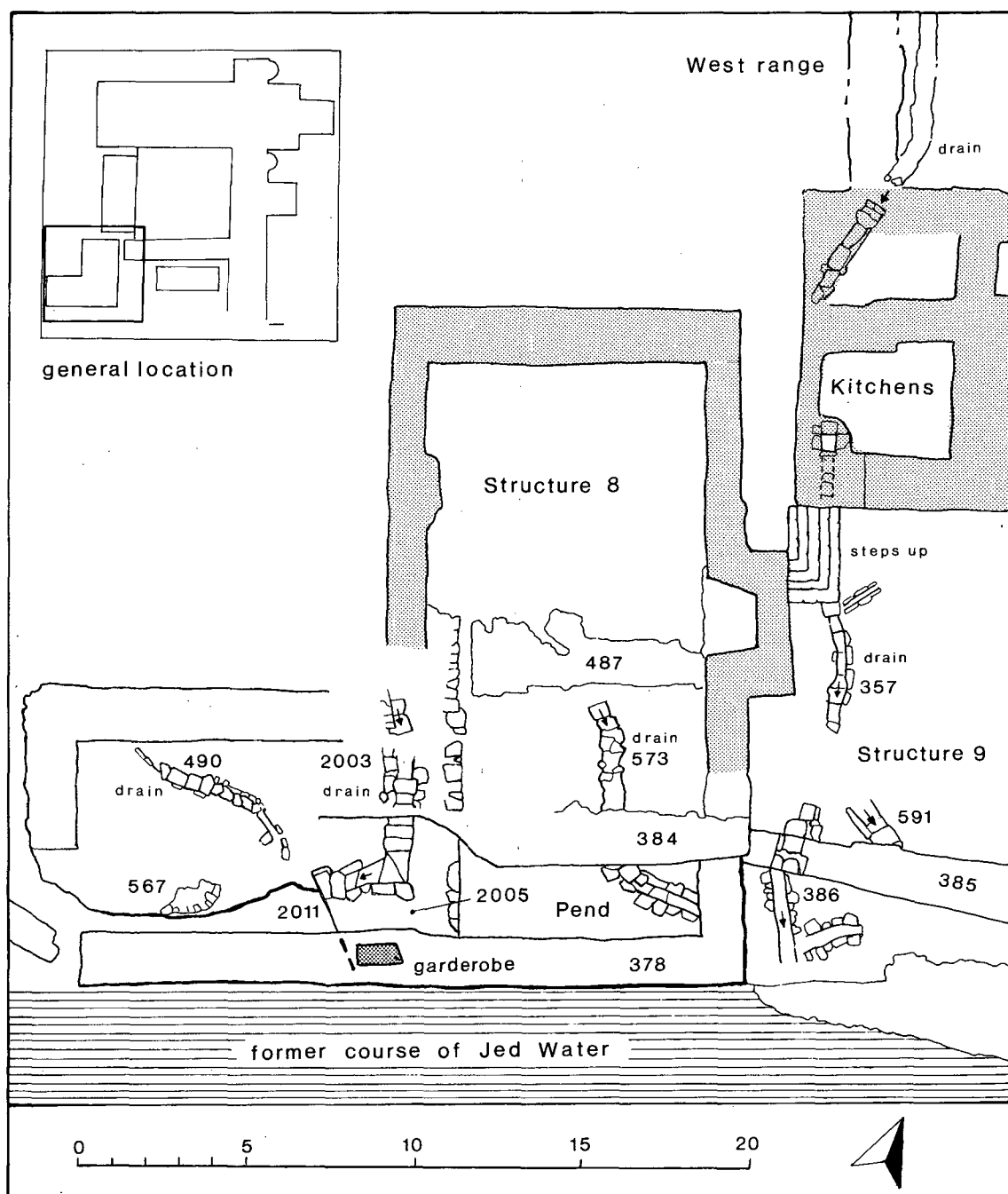
To allow the establishment of an artificial terrace by means of successive tips, two E–W walls were built – the main S wall of the overall structure and the N wall of the pend (378 and 384 respectively). The S wall (378) was to receive the entire combined

weight of the main construction dumps, notably layer 2014, while the N wall (384) was built over the primary tips and revetted the upper sequence (482, 488, 481).

THE GREAT S WALL (378) (illus 30–33)

This section of masonry, still impressive despite only standing to a fraction of its original height, proved to be one of the most interesting and illuminating structures on the entire site. As found, the wall stood to an average height of 4.0m on its S face but could have been in excess of 20m high originally if it shared the same roof line as the refectory.

The wall was constructed of large ashlar sandstone blocks (illus 31), mortar-bonded and of general uniformity, with an average width of 1.4m and an overall length of 10.5m. At its S face, the stonework was built over a substantial timber raft and, to the N, it had foundations of river boulders (as noted in the sondage at the E face of 2005). The use of timber was necessitated by the fact that the wall was built over clays rather than bedrock (compare with the W end of the added Period III S wall) and so the ability of such a construction to spread the weight of the masonry more



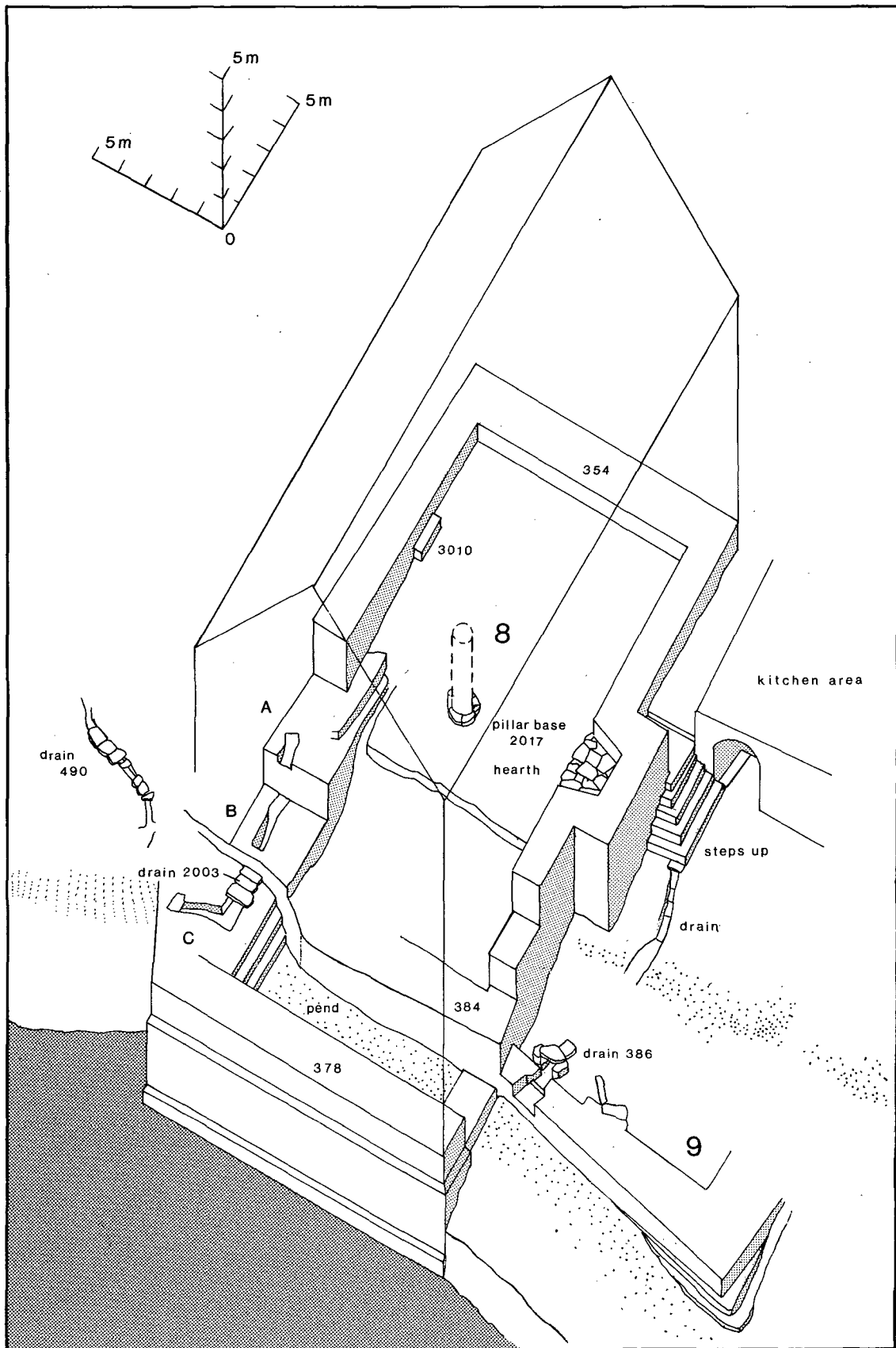
Illus 28
Structure 8 and associated drains.

evenly was vital. It is possible that foundations formed from several components might enable periodic repairs more easily in that a damaged section could be removed and replaced with little disturbance to the rest of the foundations. The timber raft consisted of a single oak beam 9.5m long overlying a series of four projecting cross members which were laid in stone-lined channels 2.75m apart.

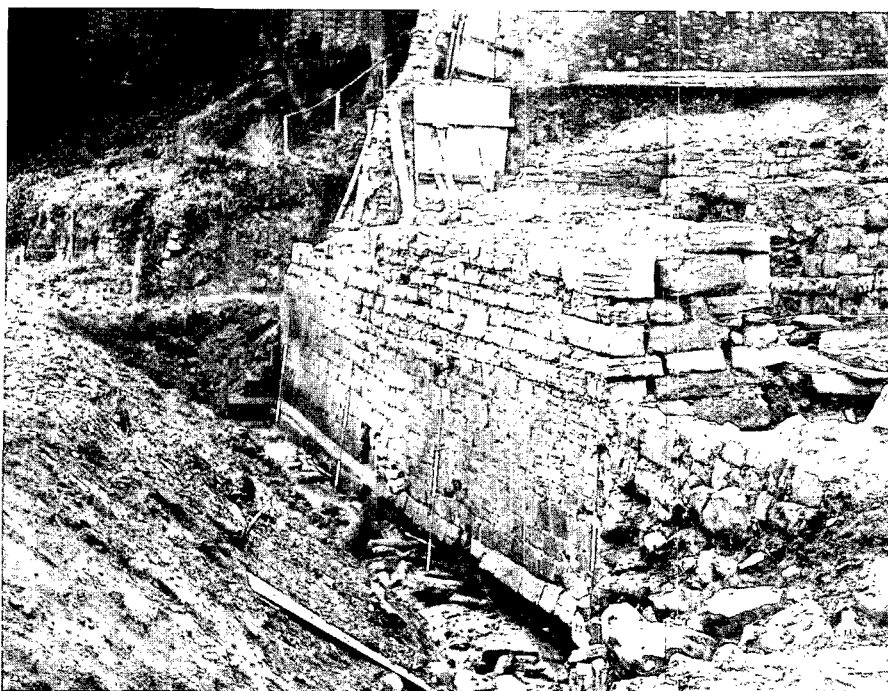
The cross members were laid first. The main beam was then laid across them (illus 32), resting in straight sided recesses 0.1–0.12m deep, to form a simple overlapping joint, with the cross members projecting an average of 0.7m beyond the S face of the main beam. The lowest course of masonry was then built directly on to

the main beam and took the form of a simple, angled scarcement (angle some 80 mm from vertical). The main fabric of the wall was then built up from that recessed face (illus 33) over some ten courses to a second scarcement level 2.4m above. This upper scarcement narrowed the wall still further to approximately 1.4m and from this point the wall stood only a maximum of 14 courses.

The relative quality of the surviving wood (oak throughout) at the W end of the wall enabled samples for dendrochronological dating to be taken (from beams 649 and 648) and a date of AD 1258±9 was obtained for beam 649. All the timber (both main beam and cross members) was rectangular in section and, while it was markedly better preserved towards the W of the wall line, decay



Illus 29
Isometric drawing of Structures 8 and 9.



Illus 30
The S wall of Structures 8 and 13;
from the SE.

had all but obscured the dimensions and jointing of the E section (beams 650 and 649). Only beam 648 was intact because beam 643, a similarly well-preserved section, was damaged when the textile mill's piped water supply was installed.

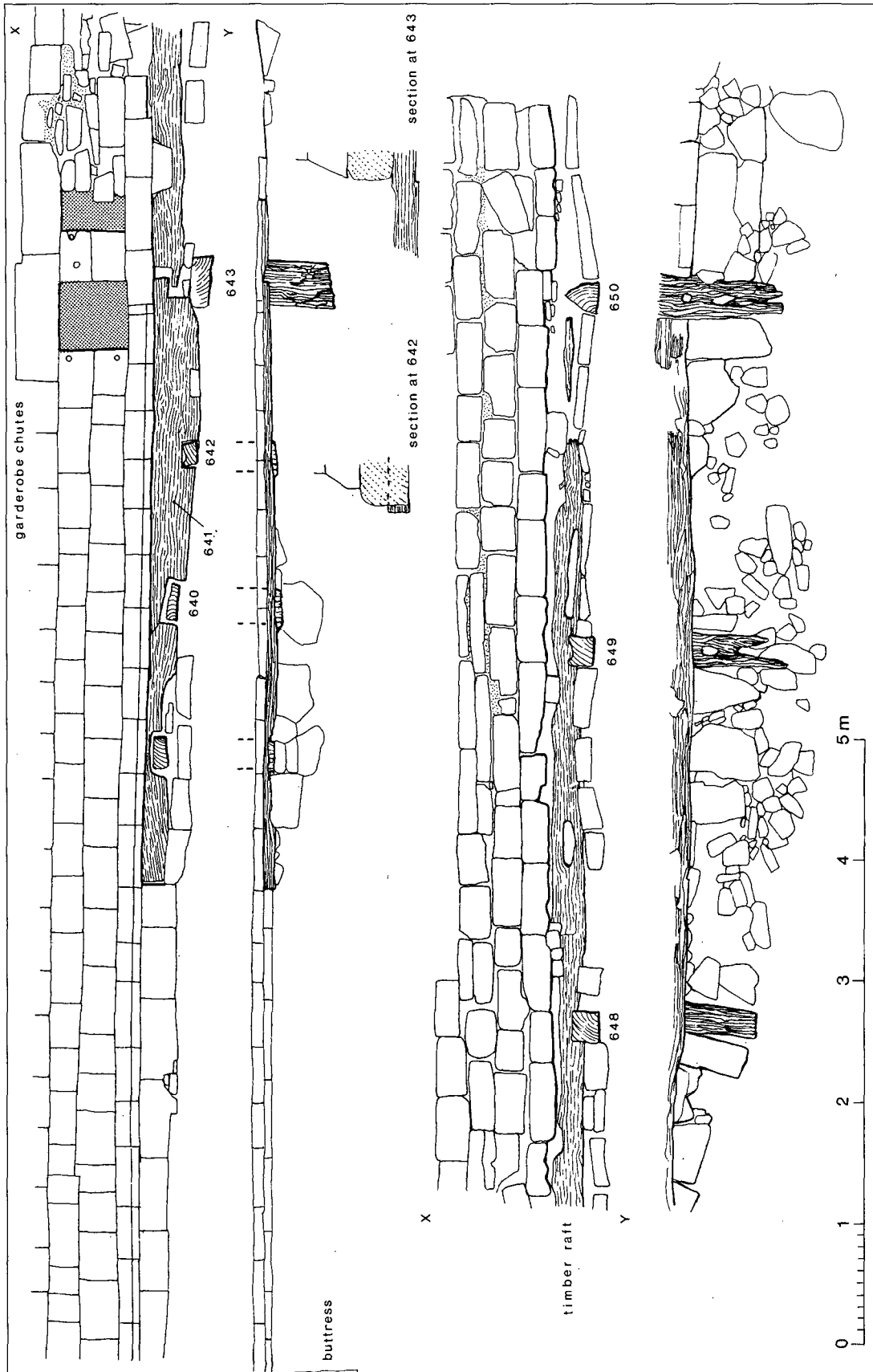
Wall 378 was extended W during Period III and was altered within Period II with the construction of a garderobe pit tacked on to its W end: both these developments have obscured the

original relationship between 378 and platform/buttress C to some extent. Limited excavation showed, however, that 378 was built across the S end of C, but with no attempt to key the two wall faces together. During excavation, the S wall was found to be slipping back from C, resulting from the partial decay and subsidence within the E half of the timber foundation raft and also due to the simple, butted interface between the walls.

The Timber Raft Beneath Structure 8

Context	Length (m)	Width/ Diameter (mm)	Description
644	9.20	700	main beam
643	1.00	400	cross member
648	1.30	209	cross member
649	1.00	300	cross member
650	1.46	300	cross member

Table 3 Dimensions of elements of the timber raft beneath Structure 8.



Illus 31
Elevation and plan of the lower courses of the S walls of Structures 8 and 13.



Illus 32
Detail of cross member (648), in a stone setting, supporting the timber raft.

THE N, E AND W WALLS (illus 28; 29; 34)

Virtually all these walls had been extensively repointed after earlier phases of excavation on the site; because of this, much of the detail of their form and construction has been lost.

The N wall closely resembled the S wall in length and breadth. It stood a maximum of four courses high at its N face (a height of 1.2m), diminishing to two courses at its S face (a height of 0.62m).

The W wall ran for some 10m to a point over Platform A. Its S section, ie that part beyond the limits of the middle terrace, was completely missing although it is possible that the sloping W drain (2003) was contained within the width of the W wall. Consolidation of the wall's masonry during the 1930s has made the stump of a possible cross-wall seem dubious. At a point 2.8m S of the internal NW corner of the building, a short section of masonry (3010) projected from the E face of the W wall for a distance of 0.8m. The S face of this possible cross-wall was less certain although it may have reflected a wall some 1.5m wide.

The consolidated section of the E wall ran for 13.5m and stood to a maximum height of 1.02m above the floor of the building and 0.9m at its outer face. Its abrupt termination at such a height was marked by the line of the most recent N wall of The Bow, the construction of which obliterated the S part of the E wall. However, its line was continued up to and beyond the N wall of the pend, culminating in the E threshold of the pend itself and its ultimate junction with the S wall.

The hearth/fireplace in the E wall (illus 29)

The E wall had a recessed hearth halfway along its length – a feature which also helped to stabilise the overall building. This was achieved by the siting of the hearth and flue over a squared platform similar to Platform A in the W wall: its S face was built along the line of Period I revetting wall 487, thus reinforcing the critical break between the terrace under Timber Structure 2 and the extended S half of the building.

The hearth had a flagged surface and splayed sides – 2.3m wide at its mouth, tapering to 1.5m at its back wall. The back wall stands to a height of 0.65m above the paved floor of the hearth although all the masonry involved had been repointed and may have been enlarged. This policy of comprehensive rebuilding (found all over the site) might explain the apparent anomaly of the difference of level between the hearth floor and the interior of the room itself

(the main floor surface was some 0.2m above the hearth floor). The narrow trench dug by the earlier excavators along the inside (W) face of the wall and the hearth effectively removed the possibility of ever establishing the reason for this curiosity.

Externally, the buttress formed by the hearth recess was generally simple and unadorned, although a short section of a scarcement survived along its S face.

PILLAR BASE

With the exception of a possible cross-wall (3010) to the N of the undercroft, the surviving evidence as to how the ceiling of the undercroft was supported amounted to a single pillar base (2017) (illus 29; 35).

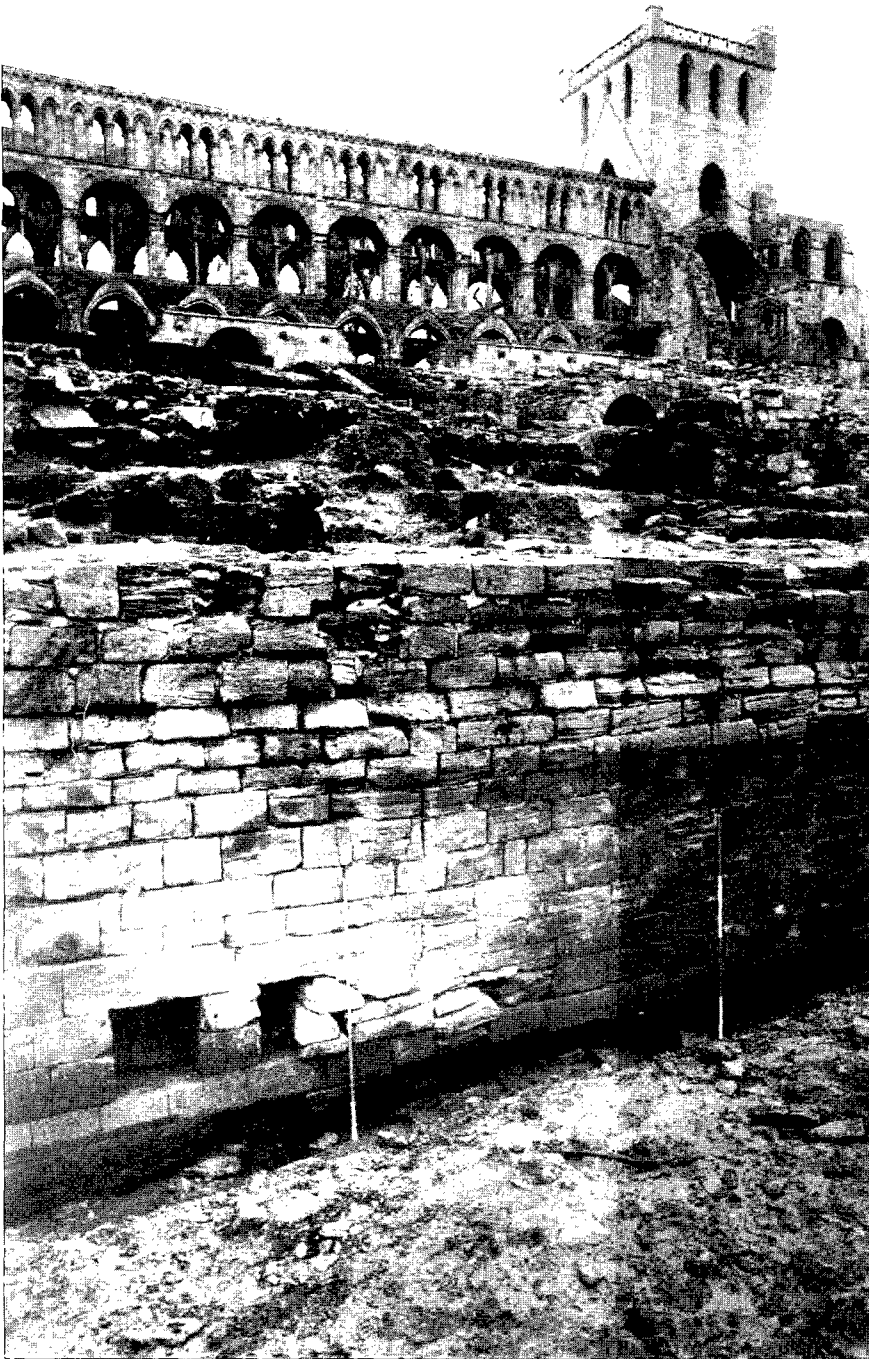
This rounded structure lay almost exactly in the centre of Structure 8. At its upper surface, it consisted of a rounded, mortar-bonded plinth composed of three or four slabs of pinkish-red sandstone laid flush with the floor, about 1m square. The feature was dug into the two upper levelling rafts within revetting wall 487, to a depth of 0.45m. Large, rounded dolomite boulders were then laid as foundations, set in redeposited natural sands and gravel, over which a raft of smaller, mixed masonry was set in clay. The upper, sandstone, flags were then laid on top of a level, yellow, sandy mortar surface which bonded the stonework.

THE PEND (illus 29; 36)

In order to make most efficient use of the natural profile of the river bank and the terraces, as well as providing a stabilising effect, a narrow passage or pend was constructed at the S limits of the building. To the W, the pend allowed access on to the Period II W riverside terrace and at its E end originally provided an outlet to the river.

The pend ran the entire width of Structure 8 with its E threshold formed by the reduced height of the main E wall of Structure 8; and its W threshold crossing Platform C and its drain via a series of steps. The N wall (384) of the pend ran parallel to the S wall (378) for most of its length (a distance of 7.4m) but turned N as it approached the W end of the passage. This was to ensure a uniform width for the W entrance by making the N wall conform with the angled outer face of Platform C and to permit secure access on to the riverside terrace.

These considerations resulted in a passage with a width of 2.2m



Illus 33
Detail of the S wall of Structures 8
and 13, showing garderobe outlets
and timber raft; from the S.

for most of its length which then widened to almost 3.0m at its junction with Platform C; and which narrowed again to 2.0m at its W entrance.

The N wall (384) was of generally crude sandstone construction for most of its length but was much better finished at its two entrances with the use of good, close-fitting ashlar. This shows how visible masonry was harmonised with the general quality of other external masonry.

The wall stood to a maximum height of 3.0m with its lower courses being simply clay-bonded rubble construction. At a height of 1.8m, the wall was mortared and what little survived was of apparently better construction.

By projecting the height difference between the excavated floor of the pend and the level of the floor at the N of the undercroft, the pend could have been over 3.0m in height. A simple, barrel-vaulted roof could have spanned the width of the pend easily as well as binding the N wall of the pend to the main S wall, an important stabilising measure given the vastly different widths of the respective foundations of the two walls.

The reused primary Period II drain (573) found its new outlet to the river via the E entrance to the pend, by means of a well-constructed stone-lined and covered drain. The channel within this feature was 0.35m wide and 0.08m deep – all of which was recessed into the trodden clay and cobble floor of the passage.

THE W DRAIN AND THE ORIGINAL PERIOD II GARDEROBE

Platforms A, B and C provided the foundations for a well-built stone drain (2003) which ran from the middle terrace down to the river (illus 28). The surviving section of the drain was found to be angled downwards, broadly parallel to the original profile of the river bank.

The drain and its outlet into the Jed Water saw two phases prior to its abandonment during Period III (illus 38). The need to alter the original drain seems to have been a result of the construction of a garderobe pit within the width of the angled SW corner masonry. This was achieved by the thickening of the angled face by some 1.5m by the construction of 2011, the Phase 2 outlet wall (see below).

THE W DRAIN (2003)

Phase 1 (illus 37; 38)

The drain was a well-built, mortar-covered, stone channel which rested on angled masonry built over Platforms A, B and C. The bottom of the channel, with the exception of a short section to the N end of Platform B, survived intact from the S edge of the Timber Structure 2 terrace down to the N face of the great S wall 378 – a distance of 5.7m. However, the sides and capstones for the N end of the drain were mostly missing although enough remained to show that the channel itself measured 0.4m deep and 0.45m wide at its N end, enlarging to 0.44m deep and 0.66m wide to the S.

The drain originally ran off due S. The remains of the S end of the Phase 1 channel could be traced for some 0.3m behind the deliberate Phase 2 blocking although the details of exactly how and where the effluent was discharged are unclear.

In Phase 2, the original S outlet was blocked off at a point approximately halfway across the upper surface of Platform C by means of a clay and rubble plug which ducted the flow out to the SW and through the Phase 2 outlet in wall 2011.

The drain, with its capstones, was absorbed in a series of low steps which ran up from the pend surface, onto Platform C then up to the drain via two steps of clay-bonded red sandstone.

Phase 2 (illus 38–40)

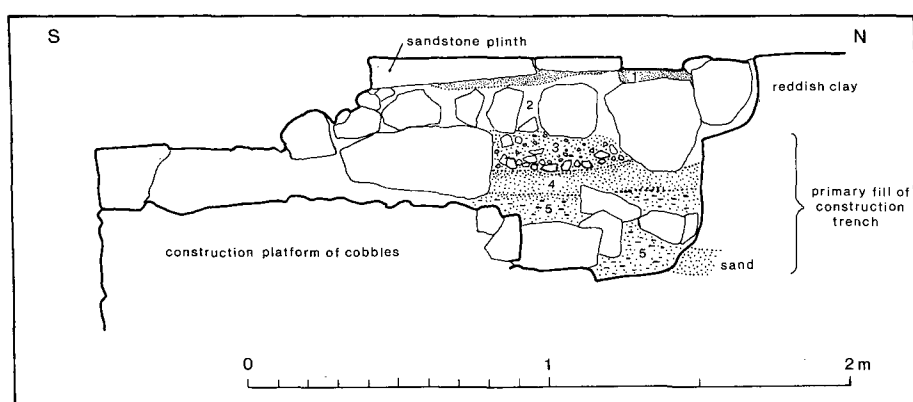
A section of fine, yellow, sandstone masonry was butted against the original angled W face of Platform C. The wall was constructed of distinctively dressed, ashlar blocks; some were very large including one which was 1.2m long; outer faces featured fine diagonal tooling.

The wall was excavated to a depth of 3.5m and was found to have been built directly against an artificially dressed edge in the naturally shaley bedrock, creating a neat joint between masonry and bedrock. The outlet for the redirected drain 2003 was marked by a rectangular aperture towards the top of the wall (2011) which was later blocked by Period III work. The outlet measured 0.6m deep and 0.3m wide, thus narrowing the channel from a maximum width of 0.5m (at the E end of the new extension to the drain). Such a device ensured a spouting effect to project effluent away from the masonry.

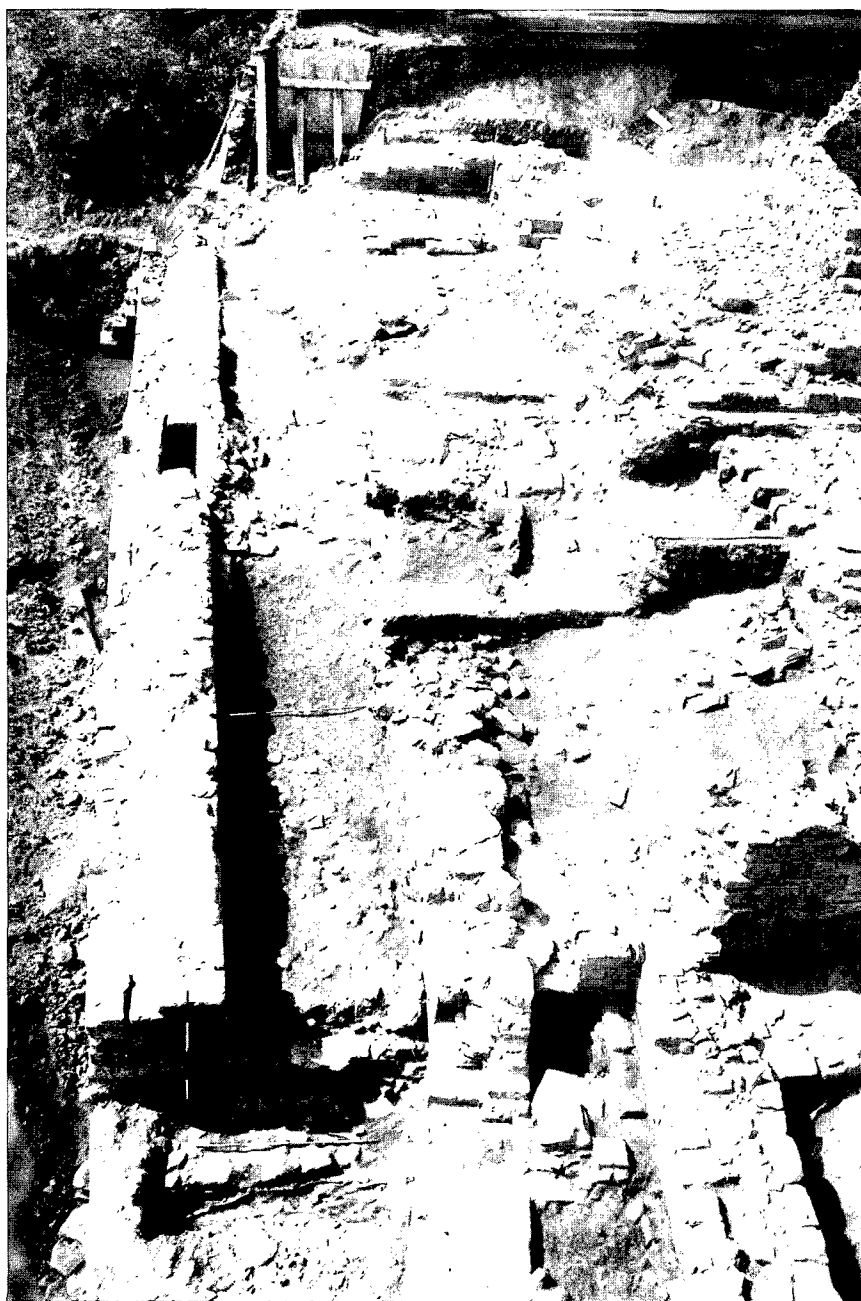


Illus 34

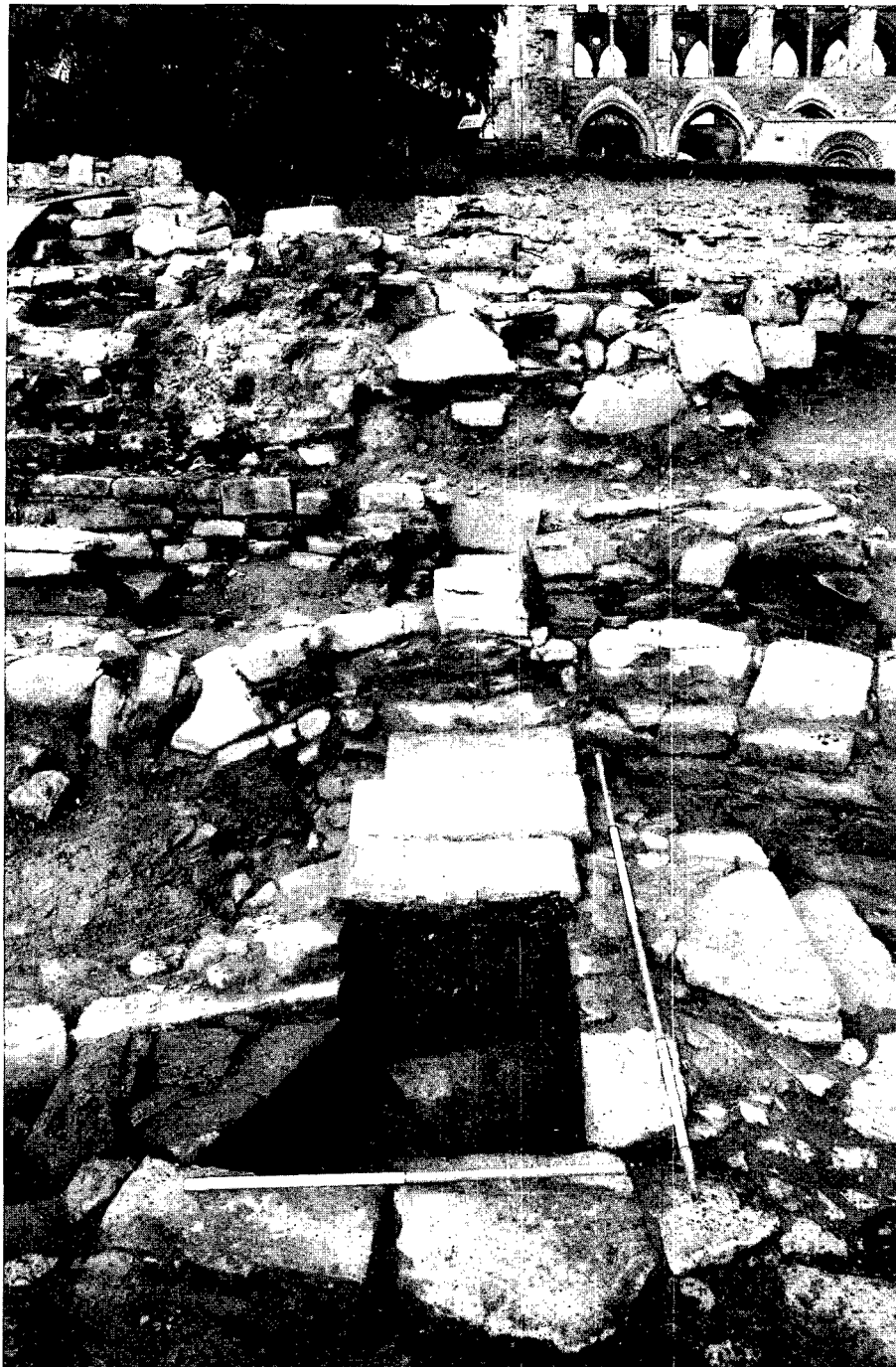
Structure 8 (Structure 13 is in the left background); from the E. The pend lies towards the bottom left. The steps on the bottom right were associated with Structure 9. To the top left are the remains of an outbuilding contemporary with the manse.



Illus 35
Section across pier base 2017.



Illus 36
The pend leading into Structure 13;
from the E. The W end of Structure
9 is visible at the bottom of the
picture with drain 386 issuing
through its S wall.



Illus 37

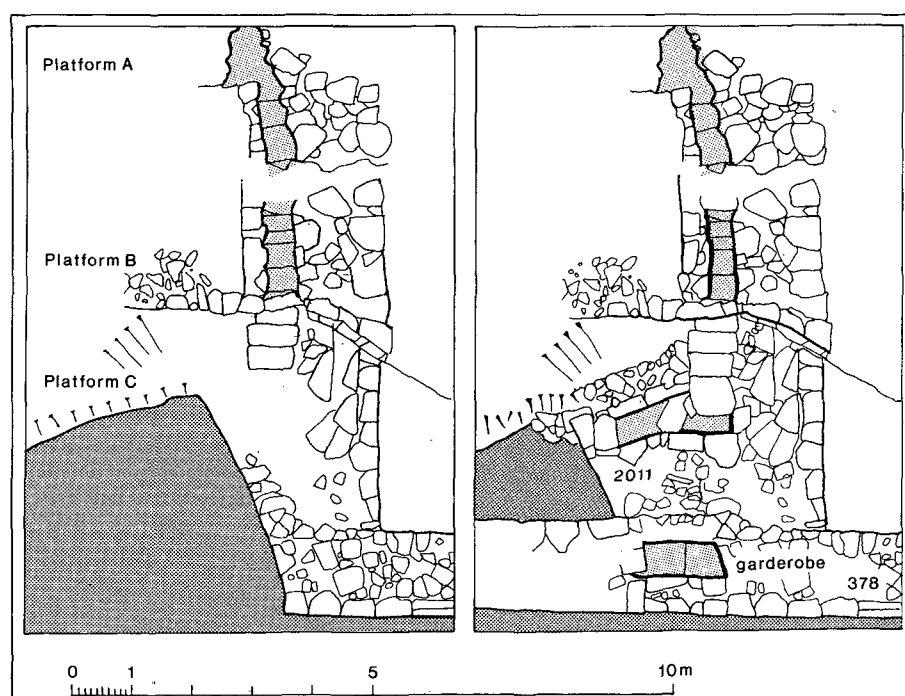
The W drain; from the S. The base of the drain can be seen towards the top of the picture. The drain flows out towards the left in the foreground.

The purpose behind building wall 2011 was to create outlets for drain 2003 and a possible garderobe serving the upper floors (S) of Structure 8; and also to create an area of turbulence within the river by deliberately angling the face of the wall into the full force of the current. Such an act would prevent a stagnant pool forming and would help to push the effluent out into the mainstream and away.

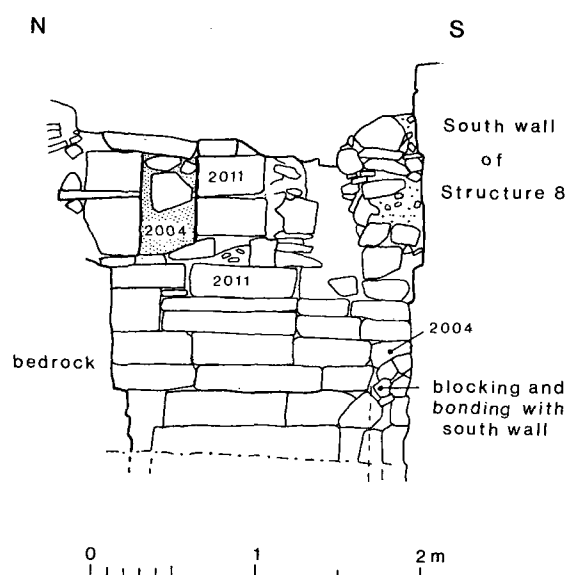
This was achieved by creating a 90° angle between the face of the natural bedrock which formed the river bank at this point and the outer face of wall 2011. The bedrock was duly cut back to the N and was also cut vertically over a distance of some 3m, thus providing an appropriate channel for the river to hit the wall with sufficient force.

GARDEROBE (illus 39)

The evidence for a garderobe pit associated exclusively with Structure 8 and located within the width of 2011 was first surmised by the realisation that part of the original W face of Platform C had been retained: it was visible as the E side of the Period III garderobe pit. This face, coupled with the elaborate hydraulics within wall 2011, tends to confirm the presence of a garderobe pit towards the S end of the new outer SW corner of Structure 8. This was superseded by the garderobe within the extended S wall within Structure 13.



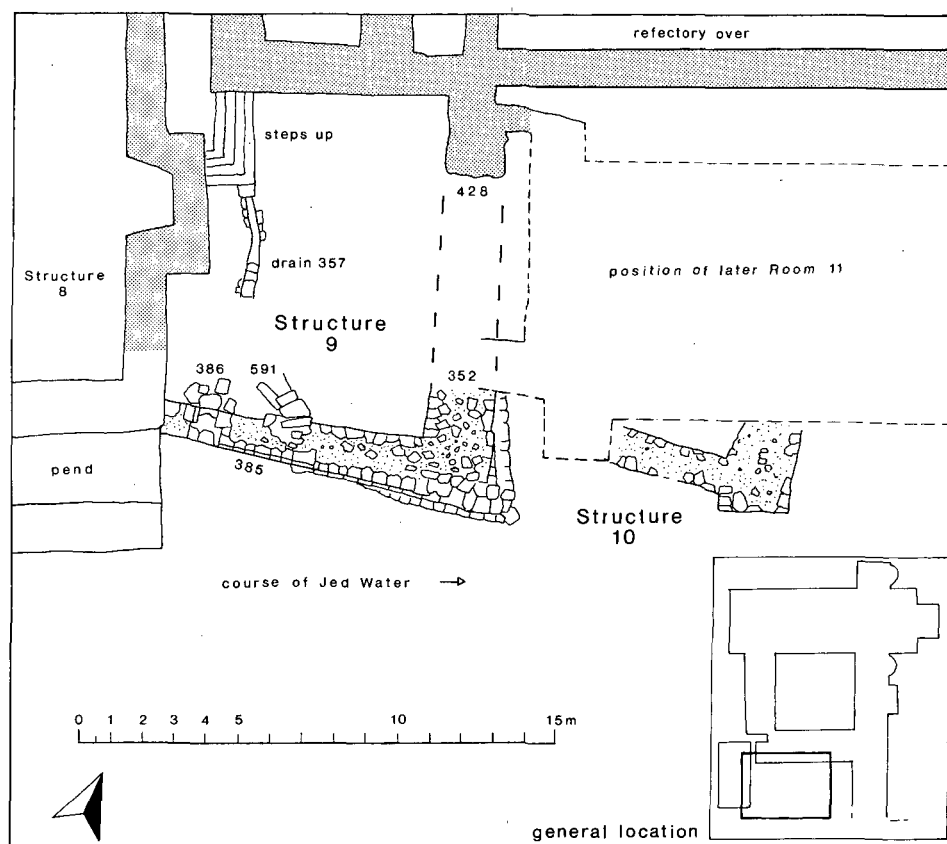
Illus 38
Plans of the W drain, phases 1
and 2.



Illus 39
Elevation of the outlet for the phase 2 W drain.



Illus 40
Phase 2 W drain; from the N. The junction between Period II platform C and masonry associated with the W drain (2011) is plainly visible towards the centre of the picture.



Illus 41
Plan of Structures 9 and 10.

THE CONTINUED USE OF THE PRIMARY W RIVERSIDE TERRACE

The outlet of the primary Period II drain 490 was truncated by the need to cut back the natural N river bank; and the resulting weak point at the corner between the main E-W alignment of the bank and the point where it turns towards the face of 2011 was revetted and stabilised by a short section of rubble masonry (507). The primary route W along the river bank was still a feature of later Period II although its ultimate destination was never ascertained. In due course, this surface was incorporated into the floor of Structure 13; and the need to create more accommodation took precedence over the route along the river to the W.

STRUCTURES 9 AND 10 (illus 41; 42)

Unlike Structure 8, the remaining structures so far identified as being part of the main building phase at the abbey only survive as very fragmentary remains, having been superseded and largely demolished by later building programmes. The creation of a viable route around the S of the site during Period III saw the redrafting of the original riverside elements of the site – the central S area of the site was extended S, thereby pushing the

river further S. This allowed a road to be built over much of what had once been a riverside frontage of distinctive, angled buildings.

STRUCTURE 9

This building or platform appears to have consisted of only two walls, to the S and E, which defined an open area immediately E of Structure 8. The area provided access to the river ultimately from the cloister via a passage between Structure 8 and the kitchen/refectory complex. All that survived of Structure 9 were the upper courses of the S wall and a short section of the E wall. Fuller excavation of these walls was impeded by the presence of later, monastic structures which obscured their full extent. However, enough survived to show its acutely angled external SE corner; and a characteristic stepped outer profile, a feature which suggested that the walls widened considerably as they neared the river.

The S wall (385) (illus 42) was butted against the E end of the N wall of the pend (384) and the visible remains of the S face of 385 ran in a generally SE direction over 11.5m. The wall widened at

its upper level from W to E. It stood to a maximum height of 1.15m above the Period III road surface but this may have been due only to the fact that the defining level for the Period III road, which appears to cover much of the S wall, was the threshold of the pend in Structure 8. Towards the SE corner of the structure, the masonry showed the stepped profile. The great stability of this construction technique and the overall obliqueness of the angle of the outer face suggest an original role as a waterfront building. This is largely confirmed by the outlet of a main drain (386) being set in its outer face, and its association with two other distinctively angled structures, one of which did project into the river. This building would be at once strong enough to withstand the erosive effect of the river and would also direct its flow down towards the reredorter.

The masonry in both walls was of bonded sandstone with a simple scarcement at the uppermost surviving level. The build of the walls at the SE corner was of larger, square stones but of rather uneven form – perhaps due to the complete robbing out of an outer angled face in ashlar.

The E wall (352) ran for only 1.6m at its internal face and 4.0m at its external face: its progress N was truncated by both the construction of a Period IV wall (375 – the S wall of Structure 14) and by probable over-digging in previous excavations.

Both walls served as revetment for a series of tips which only survived in the limited area between walls 375 and 385. This material was partially excavated and comprised four main layers of mixed, stoney silt which gave way to a flatter horizon of clean clay sealing a rubble core. The overall depth of the deposit above the rubble core was 0.75m. The lack of finds in these construction levels contrasts starkly with the abundance of material found in destruction horizons (526, 527) which partly

sealed them and which predated the building of Structure 14 (2.4 below).

DRAINS 357 AND 591 (illus 41)

It is possible that drain 591 was the original S outlet for the drain 357 which ran from the cloister. Drain 591 lay at a lower level than the more elaborate drain 386 and had been opened and backfilled. It comprised a short channel running SE and defined by two rows of pitched flat stones with two capstones *in situ* (the southernmost of which was built into the N face of wall 385). The W side of the drain was formed almost entirely from a single massive slab (1.503m long) whereas the E side was defined by a series of four smaller stones laid in a slight curve. This curved side, when viewed together with the alignments of the two surviving capstones, indicated that the drain was turning S when it disappeared at the N face of wall 385. Its abrupt end at this point confirmed that it was an earlier feature, simply built over by 385. Its crude appearance was reminiscent of the primary Period II drains (573 and 490) and, as such, it may have been a temporary outflow for 357 (or an earlier version of the same) which, in due course, was re-aligned in keeping with the carefully considered S face of Structure 9. The channel was a maximum of 0.5m wide and 0.23m deep and was backfilled with the same material as that revetted by walls 385 and 352.

Although it may have had an earlier form (as suggested by the presence of drain 591 and the complex history of most of the drains on the site), drain 357 dated from Period II. It was aligned to serve the W side of the cloister. From the cloister, it passed the probable site of the kitchen and dropped down through an open chute to the terrace defined by Structure 8. From there, it found its outlet via the elaborate construction (386) (illus 43) in the S wall of Structure 9. The entire feature was set in a wide embrasure



Illus 42

The stepped S wall of Structure 9; from the SE. The S limits of the Period II masonry are partially obscured by the Period IV roadway along the edge of the river



Illus 43

Outlet of drain 386; from the S. The drain emanates from the base of the arched opening, shown at the top of the picture

within wall 385. This comprised a straight-sided recess 0.8m wide and 0.7m deep at which point the overall width of the feature narrowed to 0.6m. The only surviving section of the channel itself rested within this inner section. The channel was roughly square in section (0.35m high by 0.4m wide) and had a scooped bottom which was some 0.6m above the bottom of the outer section of the embrasure. This, coupled with the fact that the bottom of the channel had been apparently set at a crucial height (there is a gap below it of 0.2m), suggested that the waste water may have been projected out beyond the face of the wall via some form of angled channel or conduit. The details of this were lost owing, in part, to the fact that the outlet was modified with lead piping during Period III. There was also some evidence to suggest that the outlet was a secondary feature within wall 385 in that the nearest stone from the scarcement level to the outlet had apparently been cut: it measured only 0.45m, as compared to the rest of blocks which were up to 0.8m long; similarly, the stone which formed the lower corner of the outer embrasure had been recut. This possibility could shed further light on the abandonment of 591 in that a more sophisticated and efficient method for the final disposal was required albeit an afterthought once the wall was in place.

STRUCTURE 10 (illus 41)

The presence of another large building to the E of, and on a very similar alignment to, Structure 9 was marked by a distinctive fragment of walling (3016). It was not fully excavated, being almost completely covered by the S access route of Period III and threshold levels associated with Room 11. Moreover, the W end of 3016 disappeared under masonry from Room 11, thus confirming it as a Period II feature.

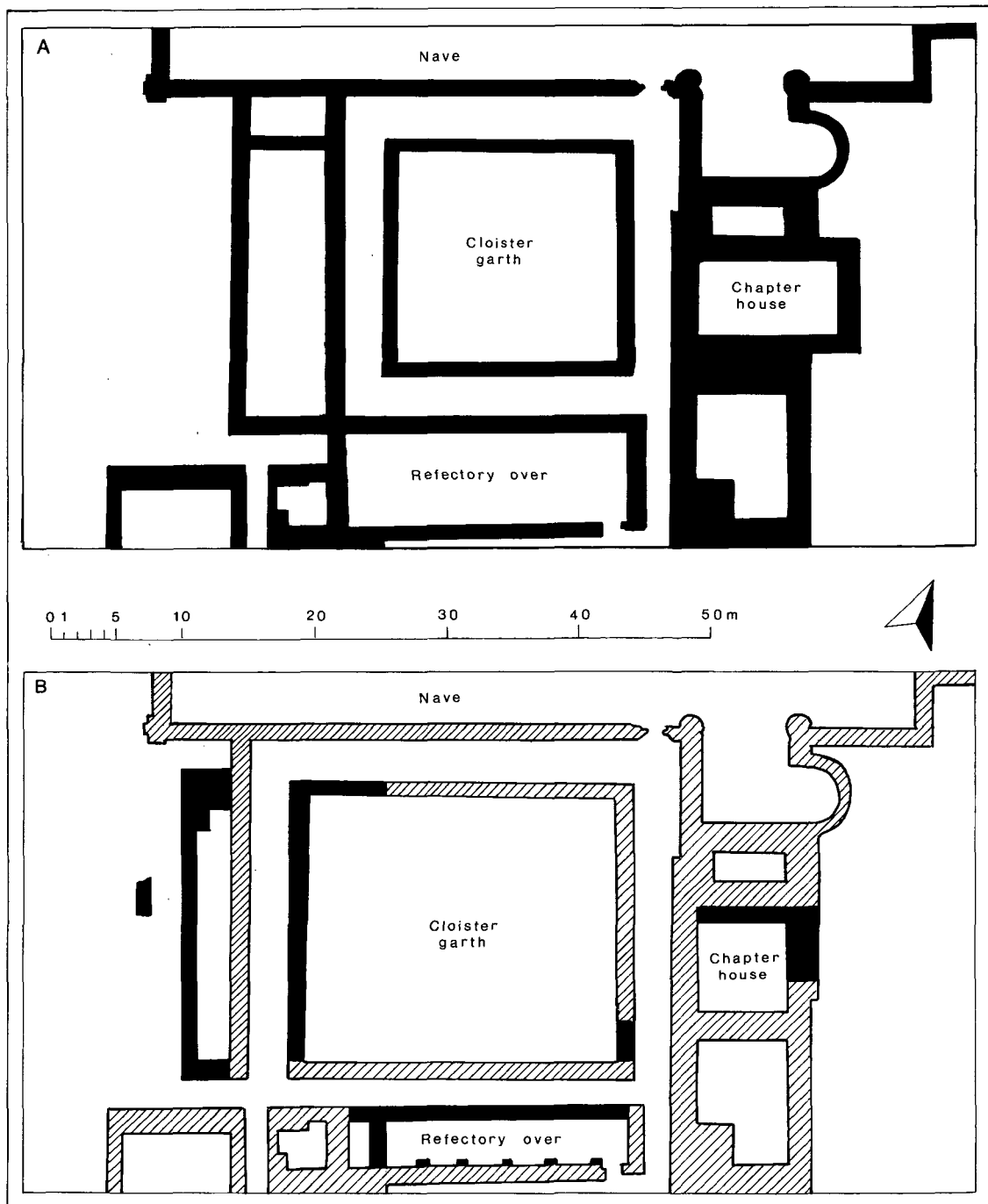
By the end of the excavation, 3016 was sufficiently exposed to interpret it as the truncated remains of a waterfront revetting wall, very similar to Structure 9 in terms of alignment and structural elements. It, too, seemed to comprise essentially a S and E wall with the suggestion of a reinforced outer face at the corner of the two walls. The S face of Structure 10 was traced for 6.0m while the E wall ran 2.95m to the N. Both walls were truncated by the construction of Structure 11. The S wall of Structure 10 was 1.3m wide for most of its length but thickened towards the E to 1.7m; the E wall was apparently 2.0m wide throughout.

2.3 PERIOD III – REMODELLING AND REBUILDING (c 1300 – c 1480)

The fabric of the abbey was altered many times over four centuries. The church was remodelled before its original design was fully implemented and it is quite possible that some of the monastic buildings were modified before the claustral ranges had been completed. However, this could not be confirmed by excavation because it was difficult to date most of the changes or to explain why they were carried out.

THE EXTENDED CLOISTER

Due to extensive excavation in 1936–37 in the area of the West range, the archaeological evidence for the extended cloister was inevitably fragmentary. The less extensive excavations of 1984 in this area did, however, confirm that the Period II West range was abandoned when the cloister was extended to the W. This development, along with the changes to the refectory, was part of an extensive programme of conversion and rebuilding over the Period II plan. The new layout saw the retention of the Period II W wall (1223) and the demolition of the Period II walls 1212 and 1307 (illus 44). There was then a period of industrial activity in advance of the construction of new walls 1226, 1213 and 1297 which resulted in the Period III plan. Much of



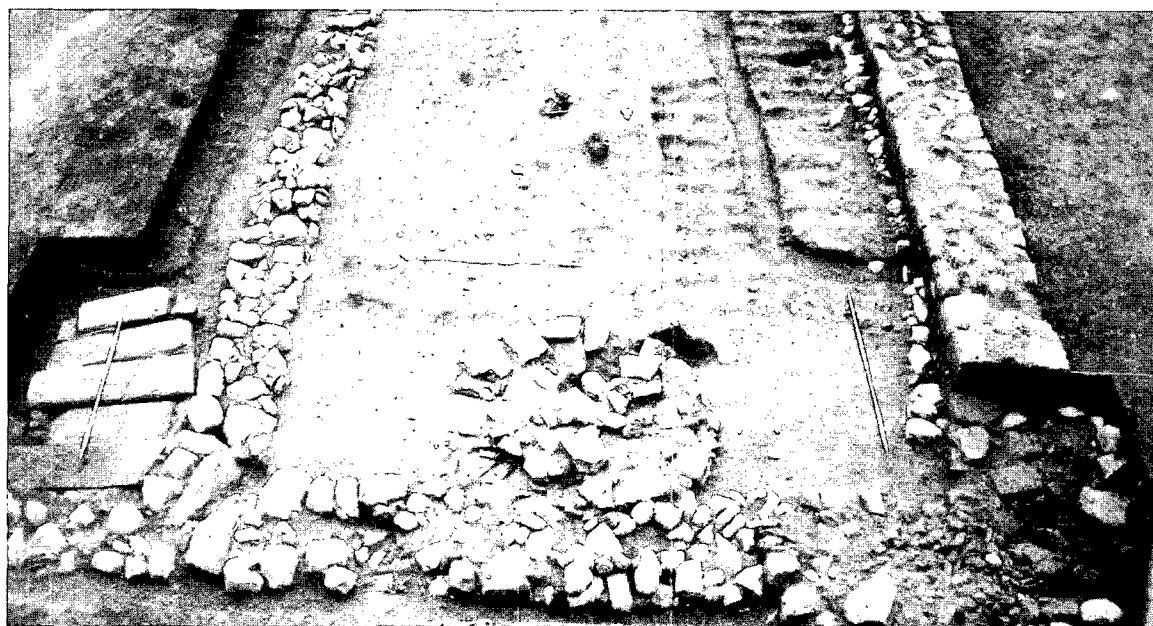
Illus 44
Schematic plans of the primary and secondary cloisters.



Illus 45

a) The W side of the cloister during the 1936–37 excavation; from the N, showing vestigial remains of Period II walls overlain by garden deposits; pier base 1215 is visible at bottom left;

b) the West cloister alley in 1984, with pier base 1215 in the centre; from the N; evidence of plant beds and late drainage channels can be seen to the top of the frame.



the detailed evidence for the sequence of demolition, robbing and rebuilding at the W side of the site did not survive earlier clearance work, as is shown on the photographs of the 1936–37 excavation (illus 45a). Many of the key walls from Periods II and III in this area were almost entirely robbed out with only the N and S extremities surviving to any degree. The construction of the manse and garden appeared to have removed all but the most vestigial evidence of the remodelled West range.

THE EVIDENCE FOR THE CLOISTER

Evidence for the dimensions of the Period II West range relies in part on close examination of the 1936 drawings and photographs (illus 45a, b) which show how walls 1223 and 1226 formed the long walls of a structure or range of structures 20m long and 3m wide.

Little detail from the second West range has survived apart from a blocked entrance (1293) in wall 1226 at a point some 4.5m from the N wall of the building: only the S side of the entrance was excavated but showed it to have been at least 1.0m wide. The blocking and a cross-wall which had removed the N

side of the entrance were all associated with the 18th-century manse.

The precise significance of wall 1227 is not known although it is of similar build and character to Period III walls 1226 and 1223 and is, as far as can be recognised, within the same stratigraphic group as the second West range. Only a very short section of 1227 (5.5m) was exposed, most of which was robbed out, but enough survived to show the presence of a wall running parallel to 1226 and lying 2.5m from it.

THE INDUSTRIAL COMPLEX (1279)

The mortared surface 1230, as well as predating the construction of the second West range, was also cut by a complex of post pits which were associated with a large industrial feature (1279) (illus 46a, b). Wall 1226 cut across the area defined by these distinctive features and thus showed that the activity reflected by these pits and other features occurred before the cloister was moved to the W.

Because of the limitations of the trench, it was impossible to reconstruct the plan of the building(s) reflected by these post settings. The entire industrial platform (which included the post pits) was sealed by a dense layer of ash, charcoal and fragments of burnt stone (maximum depth of 0.13m) – material more likely derived from the industrial function of the complex rather than from its demise (context 1278). The main focus of all the burnt deposits was a lead-lined stone trough (illus 46c) – a large,

rectangular setting of pitched slabs (1.0 × 1.7m), angled in from the sides, which were covered with a thick layer of white lead (up to 0.08m thick). The whole complex could represent a temporary building in use in advance of the extensive remodelling of the cloister. Whereas the precise function of the trough is not certain, its location near the church and adjacent to the Period II cloister could be interpreted as being used in the preparation of some specialised building material, metalwork or paint.

All the pits associated with 1279 had a similar fill, a dark brown, clay loam, stone-free with flecks of charcoal. Most of the pits had packers *in situ* but there was no sign of a post pipe in any. However, the similarity of the dimensions of the series suggests that the maximum timber diameter within the pits was about 0.15m.

THE EAST RANGE

STRUCTURES AND DEPOSITS

ROOM 2 (THE SLYPE/PARLOUR) (illus 47)

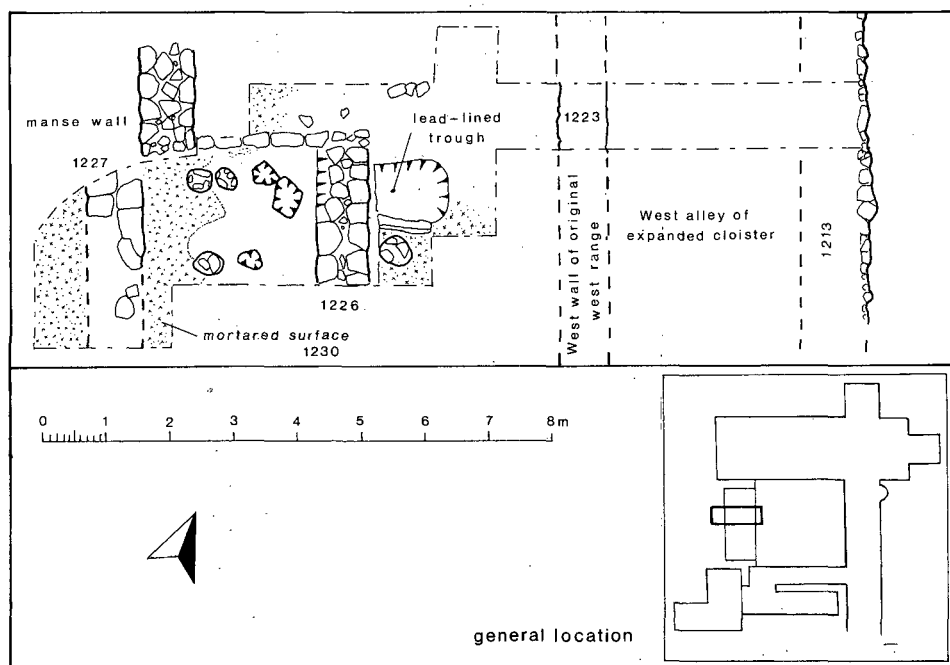
If the redesign of the adjacent Chapter house necessitated modifications to Room 2, these changes were not apparent during excavation. However, the unusual configuration of masonry evident within the wall that divided these chambers may be associated in some way with the remodelling of the Chapter house which may, in turn, have affected Room 2.

ROOM 3 (THE CHAPTER HOUSE) (illus 47; 48)

The Chapter house was completely remodelled during Period III. It was difficult to date this renovation with accuracy because of the

lack of surviving architectural detail and because many of the associated artefacts, including a coin of Aethelred II (978–1016), were obviously residual. However, it is argued below (6) that this event was probably contemporary with the large-scale remodelling of the claustral area during the early 14th century.

The most obvious aspect of this modification was the expansion of the room to the E, to form a Chapter house measuring 16.0 × 5.3m. Apart from a few foundation stones, the whole of the primary E wall was removed, the resulting robber trench (1041) being 2.1m wide and 0.8m deep. This trench was infilled with debris typical of wall robbing (small rubble, mortar, soils and



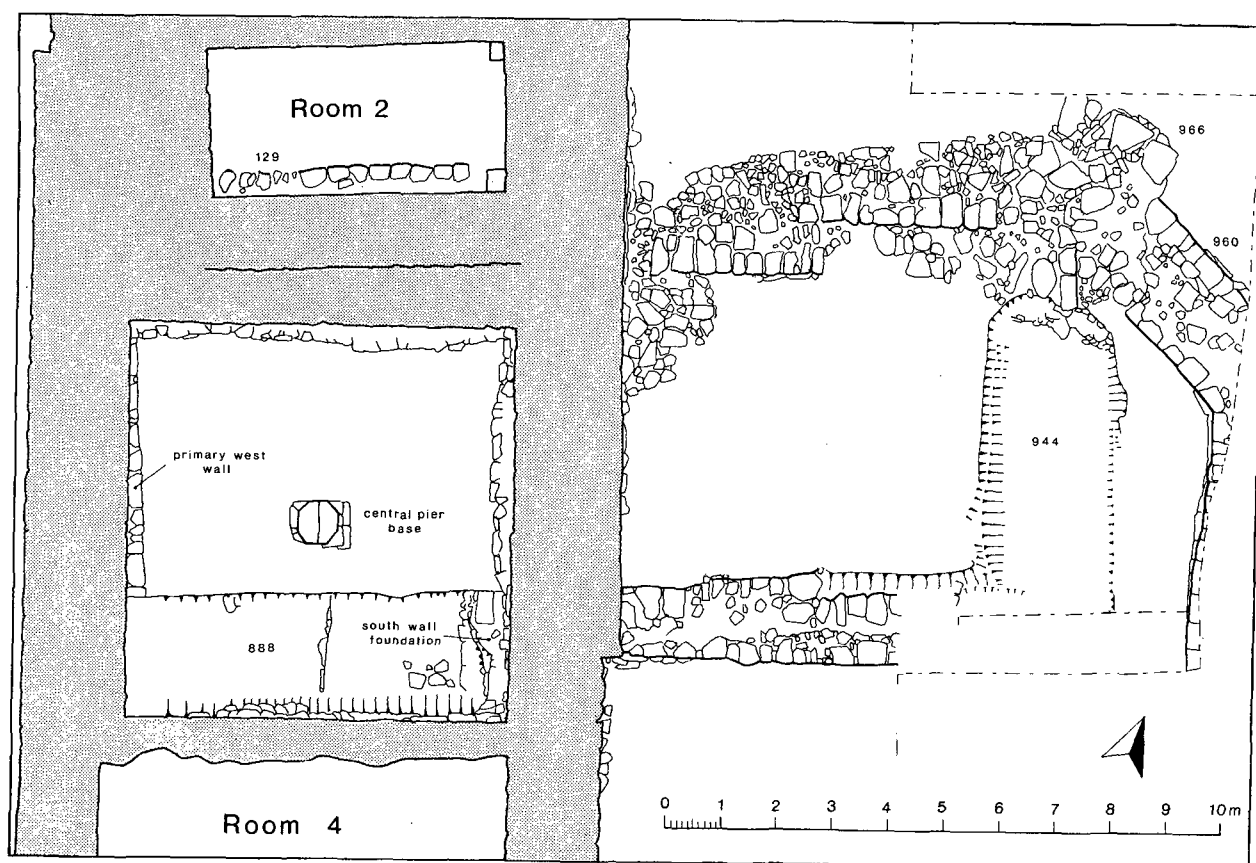
Illus 46
The industrial complex:
a) plan;
b) (below left) view from
the S; the lead-lined
trough lies towards the
centre of the picture
while fragments of
mortared surface 1230
can be seen towards the
left;
c) (below right) close-up
of the lead-lined trough;
from the N.



gravel), within which were two human skulls, probably from graves disturbed during the Period III building programme. The N and S walls were extended to meet the new E wall and most, if not all, of the original S wall appears to have been rebuilt, perhaps because of damage sustained when the primary E wall was dismantled. Instead of being widened, the extended N wall was stepped outwards although it is not clear if the wall's W section was similarly altered because its masonry was masked by 1930s work. Nothing remained of the new E wall other than at its junction with the N wall. Even its construction trench was obliterated by a Period IV robbing trench (944) which, at 2.3m wide, was perhaps of similar width to the wall itself. However, the surviving foundations, nearly 2.0m below the presumed floor level, comprised sandstone blocks and flags in a clay matrix although the wall itself was mortar-bonded. The primary W wall was demolished and its top surviving course overlain by a spread of mortar, upon which the Period III W wall was built.

The interior of the new building had been levelled with sand and clay containing numerous human bones, presumably from earlier, disturbed deposits within the Chapter house. This levelling material was quite thin over most of the room but 0.45m deep adjacent to the W wall, where subsidence may have been a problem. Three circular post-holes, cut 0.4m into the levelling deposits, may have held scaffolding uprights or, as has been suggested for Bordesley Abbey, a hoist (Rahtz & Hirst 1976, 106). The post-holes were sealed by a thin layer of compact mortar similar to another deposit at a comparable level beyond the later (Period IV) E wall – a rare example of continuity within the stratigraphic sequence on either side of that wall.

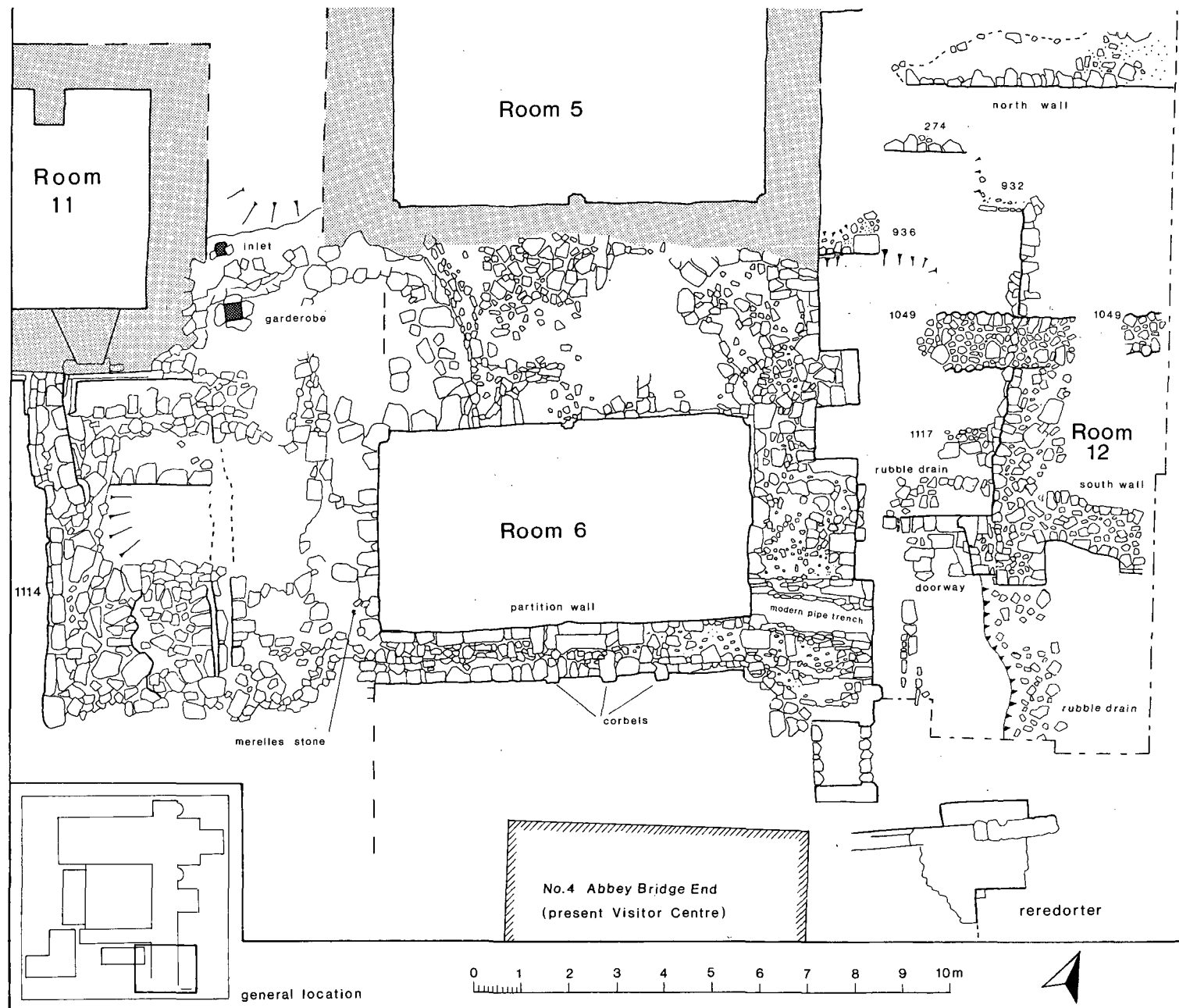
The ground level had been raised further with more sand and clay, over which was a layer of mortar, gravel and small stones which survived only at the E end of the room. Similar material found within the refectory or kitchen at Horsham St Faith Priory, Suffolk was interpreted as the bedding for a stone or tiled floor



Illus 47
Plan of the Chapter house in Periods III and IV.



Illus 48
The E end of the Period III Chapter house. The robber trench for the E wall of the building is to the left; viewed from the N.



Illus 49
Plan of the S end of the East range and adjacent structures of Period III.

(Sherlock 1976, 210) – a function it may have served in the Chapter house at Jedburgh.

ROOM 6 (illus 49; 50)

Only major structural damage could account for the radical reorganisation evident at the S end of the East range. There was no sign of failure in the primary masonry of Room 6 and deliberate demolition, rather than a natural disaster, is seen as the likely reason for such a drastic change. Whether the building's destruction was the result of a single assault by an invader or whether its fabric was simply allowed to crumble after suffering relatively minor damage is not clear. Whatever the reason, the upper storeys were dismantled and a partition wall built between the N and S bays of the cellar.

In contrast to the adjacent walls of ashlar, the partition wall was built of clay-bonded rubble, occasionally brought to course. Nevertheless the partition was reasonably well-constructed and nearly 3.0m of its height survived below The Bow. Three squared corbels projected from the S face of the wall, 2.3m above floor level, indicating that the height of the basement had been reduced considerably from that of the original, 13th-century room.

Midway along the same wall face was a small aumbry, 0.4m high, 0.53m long and 0.52m deep. On the opposite side of the wall was a blocked doorway, suggesting that the S side of the wall had been rebuilt at some stage. Unfortunately, shortage of time and the proximity of No 4 Abbey Bridge End prevented a detailed investigation of this area.

MIDDEN

Following the demolition of the upper levels of the building, only the S half of Room 6 was re-occupied: the N bays became new sources of building stone but were otherwise simply abandoned to the elements. Other than a few flagstones in the NE corner, the

floor had been removed and replaced by destruction debris which was overlain by 1.0m of amorphous grey-brown to black humic soil. Within this layer there were large amounts of butchered animal bones, significant quantities of pottery (4.6 below) and two French jettons (4.5, nos 45 & 46 below), collectively indicating that this area functioned as a midden between the mid-14th and late 15th centuries.

Because of limited time, most of this midden was removed by machine and only a small fraction of its contents could be retrieved thereafter. Of the bones that were recovered, 90% were from domestic animals (sheep, cattle, pig, fowl/geese) and 8.7% were of fish (all marine), the most common being haddock. The presence of numerous head bones within the assemblage implies that the fish were brought in whole. There were approximately 800 oyster shells but no other edible marine or freshwater shellfish was represented.

Most of the mammal bones were from high-meat joints (upper legs, back etc). The ratio of sheep to cattle bone fragments was 2:1 although, given the size of the bones, beef must have been four times as common on the table as lamb/mutton. The absence of cattle heads and sheep's feet indicates that slaughtering and butchery were carried out elsewhere; the presence of cattle feet may signify that there was a kitchen stock-pot. Most of the sheep bones were from animals in their prime (3 years or less at death), while some were from lambs less than 10 months old; no bovine, however, was younger than 18 months. Pork was not common and wild species were hardly represented although a few bones of duck, woodcock, plover, roe deer, rabbit and hare were recovered. As elsewhere on the site, many of the bones had been gnawed by carnivores and rodents.

None of the other developments post-dating the insertion of the partition wall could be confirmed as being monastic: hence they are included in the account of Period V.

WALL 1114 (illus 49)

Projecting 2.0m from the easternmost buttress of Room 11 were



Illus 50

Room 6, showing the Period III cross wall abutting the primary masonry of the building; from the NW.

the few surviving courses of a wall (1114), 0.9m wide and built of reused ashlar on rubble foundations. This wall was lengthened at some stage, its extension being only 0.36m wide and built of dry-stone sandstone rubble. The area between wall 1114 and its extension and the W wall of Room 6 had been infilled with loose sandstone rubble. Neither the date nor the purpose of this rubble has been established although it may have served to strengthen the W wall of Room 6 or, more likely, supported a passage and steps up to the cloister. Within the rubble was a large sculptured slab, thought to have been a grave-marker of 10th-century date (4.7, illus 86 below). A covering of mortar on its front face indicates that this stone had served at least three functions since it had been carved.

ROOM 12 (illus 49; 51)

Outside Rooms 5 and 6 were the remains of a poorly-built structure (Room 12) which, although within an area of considerable post-Reformation activity, is nevertheless believed to be monastic. Time was limited, as was the area available for excavation. Consequently, only a small part of this building was uncovered and its relationships with some of the adjacent structures remain unclear.

After the river had been diverted S (probably in the early 13th century) its bed was levelled with deposits of rubble and gravel which were then cut by the foundation trench for the East range. Thereafter, various materials were washed downhill, outside the East range. Contained within those materials were numerous artefacts including: a cut halfpenny dated 1180–1247 (4.5, no 6 below); pottery sherds that conjoined with fragments of the 12th-century straight-sided cooking pot from sewage ditch 928 (4.6, no 29 below); and large quantities of ceramics tentatively dated to the 13th century. One of these deposits, a dark, water-laid, organic silt, had lain exposed for 30–50 years (Dr B Moffatt pers comm), before being cut by most of the walls of Room 12 as well as by an earlier, narrow wall (1117) (illus 49) of unknown date, extent or function. Ground water was removed from this area by rubble drains, one of them at least 1.3m deep, although these did not prevent Room 12 subsiding at a later date.

Room 12 measured approximately 8.5m N–S internally but only 2.0m of its width was uncovered, its E wall being beyond the limits of excavation. The few surviving courses of the N, W and S walls,

all of which were built into a terrace of compact red clay, were constructed of sand- and clay-bonded rubble, similar to that of the secondary partition wall in Room 6. The S wall was unique in being faced with reused ashlar. A compact layer of red clay provided a base for the floor, upon which lay deposits of ash and fragments of charcoal.

A buttress built of reused ashlar projected S from the external angle of the S and W walls (illus 52). Integral with it was a doorway of which the threshold and three courses of the E jamb, again of reused ashlar, were intact. The W jamb was missing but, assuming it had abutted the East range the doorway would have been about 1.6m wide. A check on the S face of the E jamb indicated that the door had opened outwards within a recessed arch. There was no evidence of a floor or a metalled surface on either side of the door although such materials would have been easy targets for post-Reformation looters. Running N–S below the threshold was a drain, 0.2m wide, lined and floored with small sandstone slabs but with its capstones missing. Although relationships were difficult to verify, it is thought that the drain was associated with Room 12. The doorway had been damaged, probably in 1937 or 1957, when a dry-stone wall was built against the crumbling cliff face. It may be reasonable to assume, however, that the door led into a (?covered) passage and to steps (perhaps incorporating masonry structures 274, 932 and 936), which gave access to Room 12 and to the monastic graveyard.

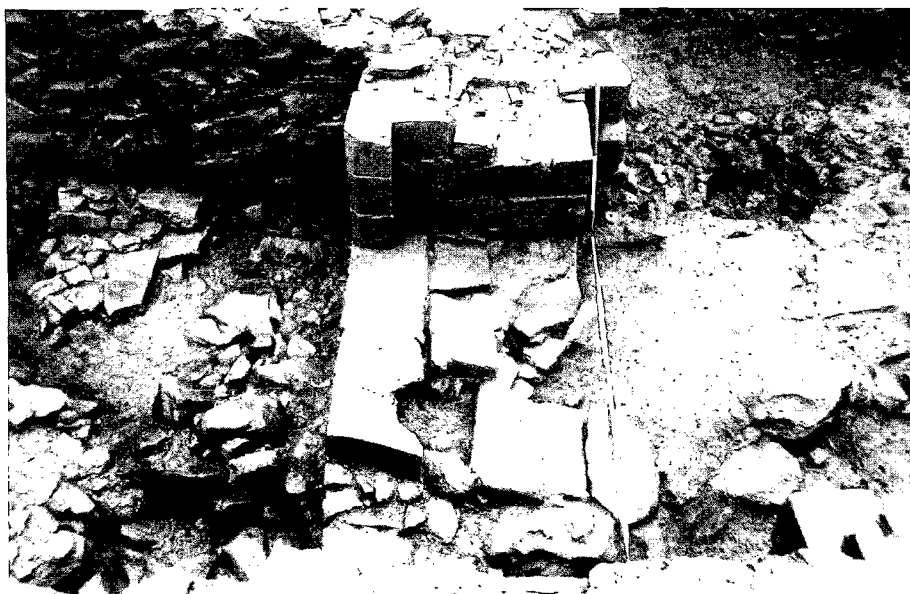
At some stage, the building's S and W walls subsided, probably because of the unstable nature of the ground and the poorly-built foundations. Thereafter the building was abandoned, most of its stonework robbed and a dry-stone rubble wall (1049), of unknown date and function, built over its W wall.

WALLING OVERLYING ROOM 7 (THE REREDORTER)

Partially overlying the 13th-century stonework of the reredorter was a stretch of clay-bonded, rubble-built wall, 1.78 × 0.4m (illus 49). Because of a developer's impending activities, only a cursory examination was possible but the resemblance between this wall and those of Room 12 suggests that they belonged to the same building programme.



Illus 51
Room 12; from the W.



Illus 52
The doorway, built of reused
13th-century ashlar, between
Rooms 6 and 12; from the W.

THE S AND W OF THE SITE

This period of building away from the East range is marked by the rationalisation of a proper route around the S side of the abbey, possibly in association with a bridge or ford located near the East range, and the need to replace accommodation destroyed at the S end of the East range. The structures identified from this period are Room 11 and Structure 13 which is traditionally referred to as the Abbot's Hall. It is likely that the subdivision of the refectory and the extension of the cloister occurred at this time as part of a concerted programme to make better use of available space within the original layout – perhaps as a result of the need to reorganize due to a change in the monastic regime, including private lodgings for key members of the community such as the cellarer.

Sufficient architectural detail survived from Room 11 to date it to the late 13th/early 14th century but as yet the dating of Structure 13 is not certain. The problem is further complicated by the fact that Room 11 saw limited re-use after 1559, a period (Period IV) which saw further building within Structure 13, all of which obscured original occupation horizons.

STRUCTURES

ROOM 11 (illus 53–55)

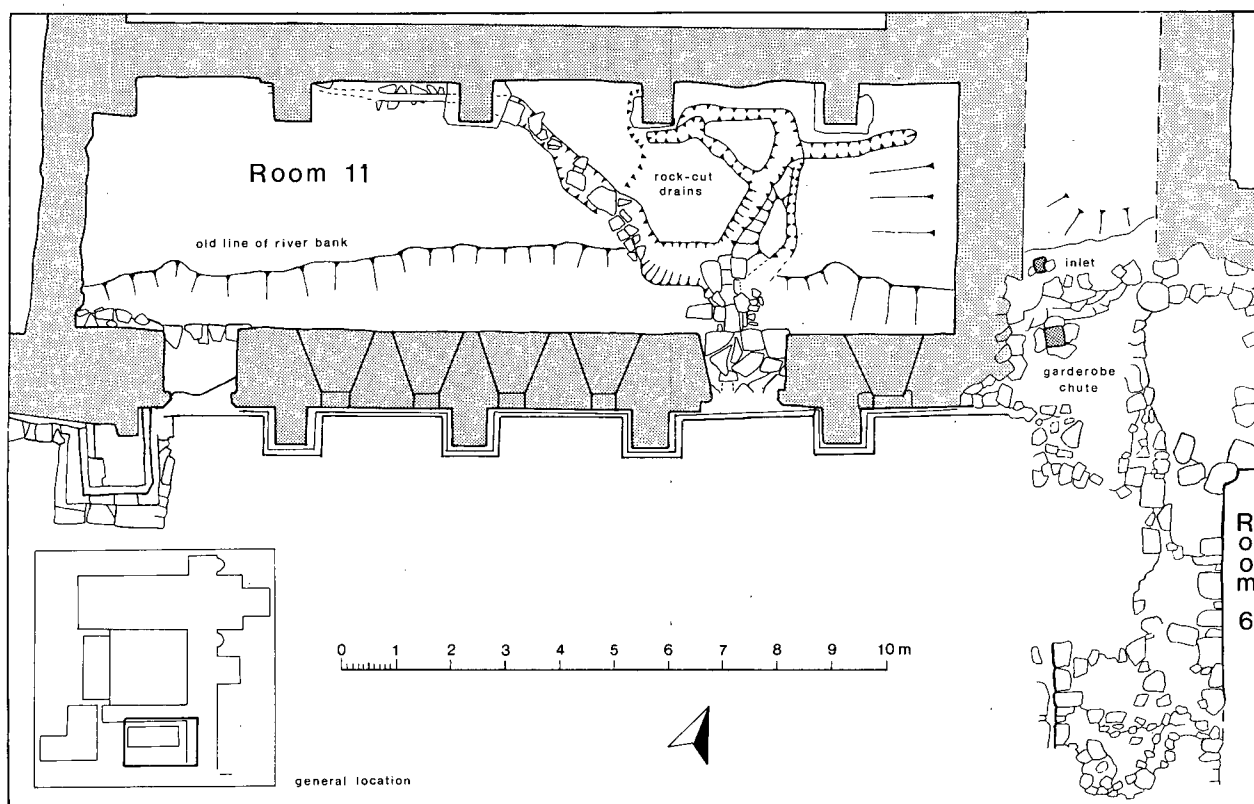
PRIMARY CONSTRUCTION

The evidence of excavation did not support the Royal Commission's conclusion that this building was the infirmary (RCAHMS 1956, 205). Indeed, the infirmary was usually situated to the E of the East range, as is evident at Inchcolm and Kelso Abbeys and at many other monastic houses. Meaningful stratigraphy had been reduced to a minimum by the 1936–37 and 1957 investigations, making it difficult to interpret the building's role or to date its construction, other than by its architectural style which implies that it was built during this period of remodelling.

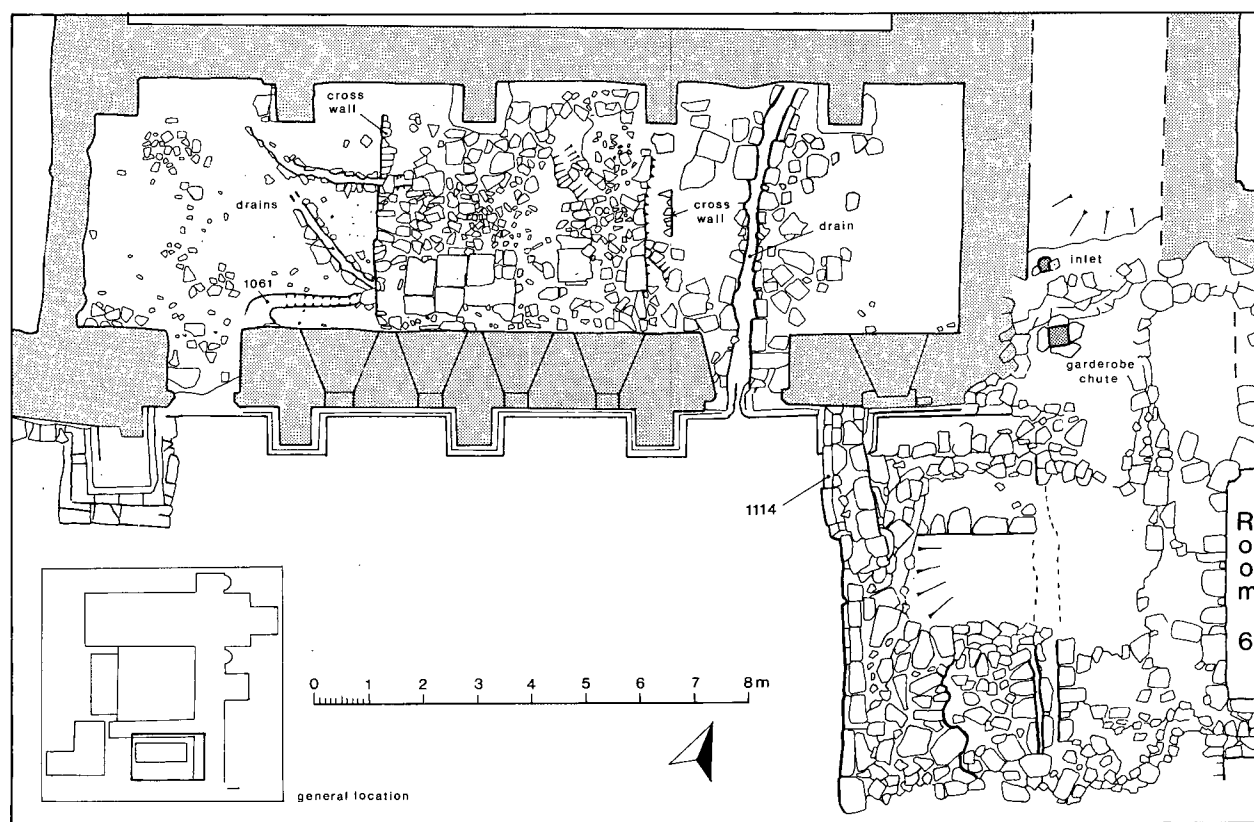
This undercroft measured 16.0 × 4.7m wide internally and was built against a man-made vertical slope on the lowest terrace of the abbey. The old river bank cut across the S side of the building, the gap between it and the building's S wall being infilled with

sandstone fragments and clay. Contrary to the general topography, the bedrock in this area rose slightly to the E and, consequently, the E wall and most of the N wall stood directly on rock whereas the W wall was built on clayey subsoil. The builders' concern about the stability of the ground manifested itself in five buttresses against the external face of the S wall, the scarcements on them showing many signs of repair. There were two doors in the S wall whilst access to the storey above was presumably from the N.

The assumption that the narrow (0.9–0.95m wide) W gable and perhaps the wider (1.2–1.3m) E gable were secondary insertions within a foreshortened range (RCAHMS 1956, 206) was not supported by the evidence of excavation: there was simply no evidence that this building had ever extended further in any direction. Both gable walls and the N wall (only 0.9m wide but set against the man-made, vertical cliff face) were rubble-built whereas the S wall, 1.4m wide, was of ashlar. The local dark red sandstone was used throughout the building, particularly in the S wall but, although this stone is easy to work, its tendency to laminate has



Illus 53
Plan of Room 11, showing the primary rock-cut drains.



Illus 54
Room 11, showing the flagged floor in the central chamber and modifications outside the SE corner of the building.

caused much of the building's masonry to erode badly.

Being on the lowest terrace of the abbey, the undercroft was prone to water seeping downhill from the cloister. Under-floor drains had been inserted to counter this problem although the only drains to survive from Period III were a few rock-cut channels, capped with roofing slates (illus 53), in the E half of the room. Elsewhere within Room 11 the surviving drains and floor surfaces belonged to a later phase of development and no trace of the primary scheme remained.

LATRINE

Projecting from the SE corner of the building were the

foundations of a structure, interpreted as a small latrine (garderobe) tower. Its chute, $0.4 \times 0.35\text{m}$, lined with ashlar, extended 0.5m below the ground surface from where a channel sloped gently towards the S. The latrine was probably flushed through the small inlet located to the N of the chute, the effluent draining away through the rubble infill between Rooms 11 and 6.

There was nothing to substantiate the theory that the five square piers against the inside face of the N wall had provided for a reduced roof span. Although all of the piers had been repaired after the 1936–37 excavation, contemporary photographs show that two of them had stood level with the primary springers in the N wall prior to consolidation. The remaining three had suffered more damage but all were built of finely-jointed ashlar, using the same dark red sandstone as in the S wall.



Illus 55

Room 11, from the W. The remnants of the flagged floor are in the foreground. In the background, the bottom end of the East range has yet to be exposed.

ALTERATIONS TO ROOM 11 (illus 54)

Modifications to this room were numerous. Some of these changes were evidently inter-related although many could not be tied in to any particular phase of development. None could be dated with confidence.

At some stage the floor level was raised with ashy soils, containing large amounts of animal bone and some pottery, which were sealed by a thin layer of orange clay. Cut into this material, at the W end of the room, was a drain which bifurcated into two narrow channels. A few capstones of one of the drains were still intact in 1957 but these had been removed before 1984. Both of these channels and another drain (1061) ran below a flagged floor which measured only $2.5 \times 1.3\text{m}$ although an area of small and medium-sized stones further N and E may represent a crude attempt at repair.

Two cross-walls divided the basement into three roughly equal chambers, only the central one retaining a flagged floor (illus 55). Photographs from 1937 indicate that the W partition was rubble-built, was brought to level every three or four courses and stood to the height of the springers in the N wall. By 1957 this wall had been demolished, perhaps because it was not considered medieval, and by 1984 only traces of its foundations remained. The wall was only 0.58m wide and, although it overlapped onto the flagged floor, the two features were probably contemporary. The line of the E partition was traced but it was so fragmentary that its width could not be measured with accuracy. Unless there was a trap-door leading from the upper storey, entry to the central chamber could only have been through this wall because, according to the 1937 photographs, there was no opening in the W partition.

At some point a single stone-lined drain (illus 54; 55) replaced the rock-cut channels at the E end of the room. The threshold of the E entrance was raised to accommodate the drain's course beneath it and, to ensure that the drain's capstones (removed in antiquity) remained covered, the floor surface was also heightened – to a level at least 0.3m above that in the centre of the building.

External alterations included many repairs, especially to the scarcements within the S wall and to its buttresses as well as to the infilling of dry-stone masonry between the E buttress of Room 11 and the W wall of Room 6.

STRUCTURE 13

The structure itself was essentially a large rectangular building added to the W wall of Structure 8 (illus 56; 57). This necessitated the following developments:

a) the abandonment and blocking of drainage complex 2003/2011; b) the re-alignment of the garderobe, now to serve

both Structure 13 and Structure 8; c) the construction of a doorway over the abandoned drain 2003; d) the backfill of the gap between the new S wall of the building (3006) and the recut, angled face in the bedrock; and e) the conversion of Period II drain 490, to act as an outlet for naturally accumulating water from the hill to the N.

THE S WALL (3006)

The wall was of similar build and dimensions to its precursor (378), being of monumental ashlar construction, surviving to a general height of 4.0m and measuring 1.5m wide, and resting on timber foundations.

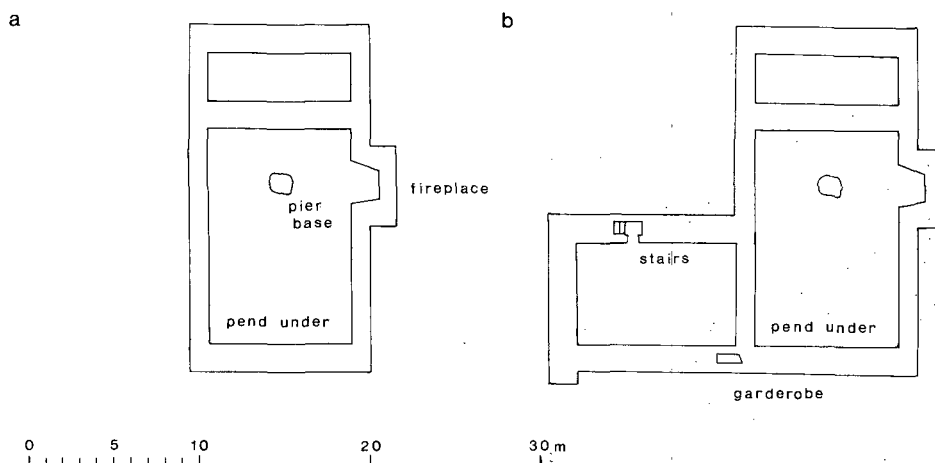
Closer scrutiny betrayed the separate phasing of the walls (illus 58). 3006 was much better built generally, with more uniform stonework, and was better preserved overall. The relatively weathered appearance of the S face of the earlier wall (378) as compared with 3006 implies that a long period of time might have elapsed before Structure 13 was built, although how much of this differential weathering was also due to inherent qualities within the stone itself was not clear.

The wall had nine courses above the lower scarcement level and a maximum of four above the upper scarcement (the upper line being some 3m above the river level). It was in the different moulding of the masonry within the lower scarcement, despite being on the same line as that in 378, that gave an indication of the two phases of the S wall. One stone had, in fact, both profiles – perhaps evidence of a rapidly abandoned attempt to recut the secondary masonry to conform with the 378 scarcement. The overall build of 3006 was of dressed sandstone blocks (which varied in size), close fitting and mortar bonded.

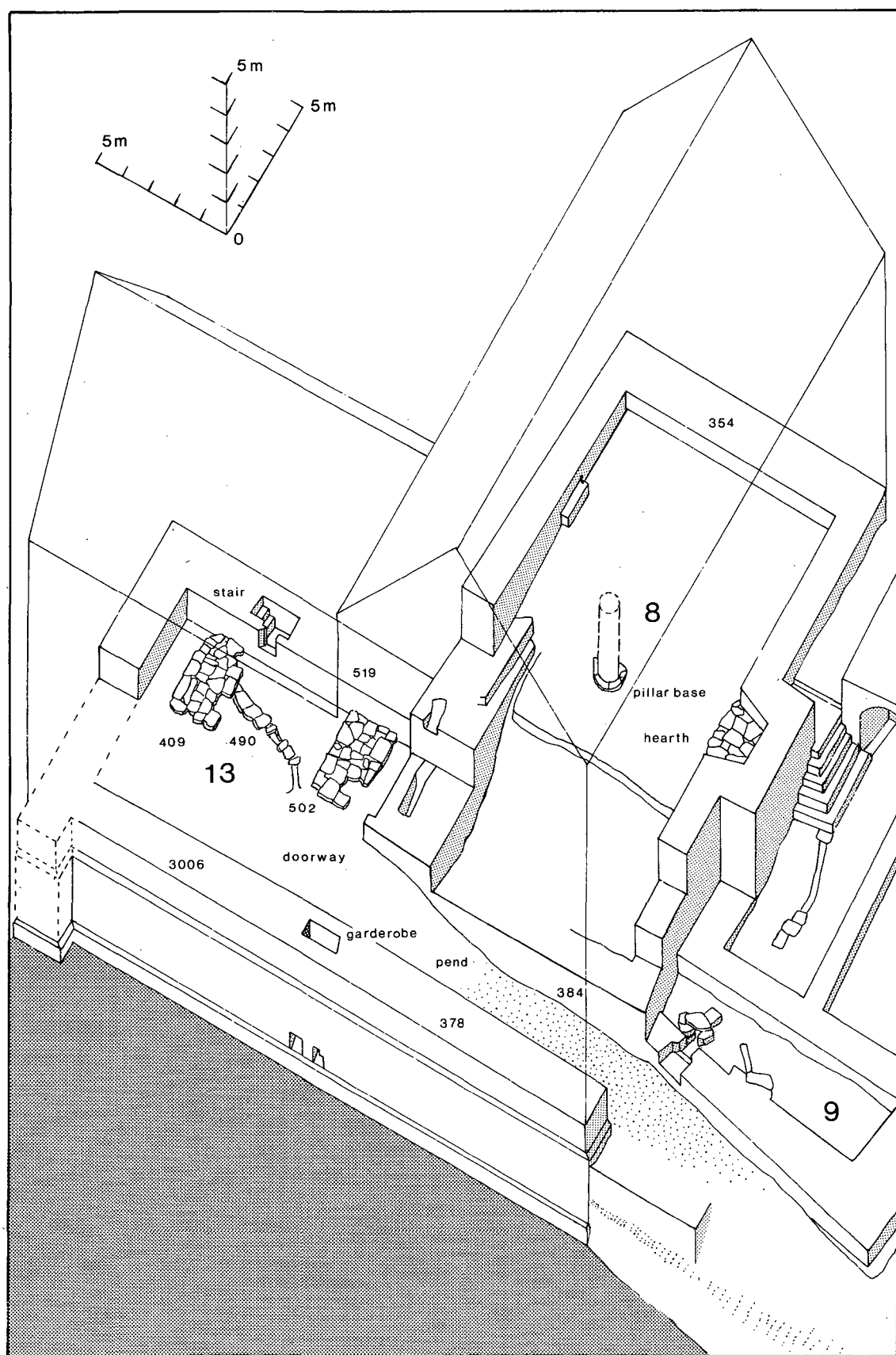
The foundations of the wall differed considerably from those in 378, being a combination of timberwork, laid masonry and a buttress at the SW corner.

The timberwork consisted of two, long sleeper beams (636, 641) with three cross members (639, 640, 645) over which the lower scarcement masonry was laid (illus 31). The W end of 641 (the Period II sleeper beam) was cut to receive 641 by means of a simple overlapping joint, 0.7m deep. Beam 641 (3.16m long \times 0.4m thick) similarly overlapped timber 636 which ran for 2.2m.

Two of the cross members were located more or less halfway along each sleeper beam (639 in 636 and 642 in 641) with the third (640) lying at the junction of the two beams. The cross members were of uniform size, 0.3m wide and 0.13m thick (illus 59). They were all neatly dressed flush with the outer face of the



Illus 56
Diagrammatic plan of
Structures 8 and 13.



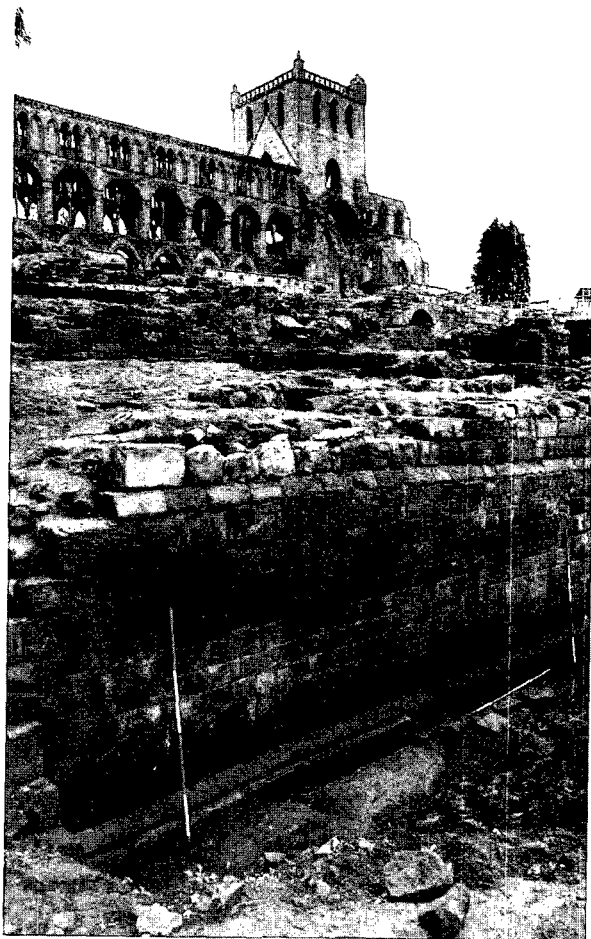
Illus 57
Isometric drawing of Structures 8, 9 and 13.

main beams and were laid in rectangular channels cut in the bottom of 641. Cross member 639 was laid in a wide and irregular cut in 636 – possible evidence of the reuse of the latter. The overall effect of the Period III timberwork was one of precision and accuracy, an impression which is reinforced by the remarkable state of preservation of the wood.

The westernmost 4m of the wall, however, rested on a single course of very large, roughly dressed, rectangular blocks of sandstone. The limits of these stone foundations coincided with a break in the natural strata forming the river bed at this point

between bedrock and clays. Stone foundations were only laid over bedrock and the more unstable clays received the timber framework.

The buttress, projecting some 0.8m from the wall face, was only partially excavated and stood to a height of 1.06m. The feature reinforced the leading edge of the whole building as regards the flow of the river. Wall 3006 was found not to be built against the surviving face in the bedrock to the N, with the result that the remains of the wall were free-standing. The importance of the buttress was doubtless to provide additional



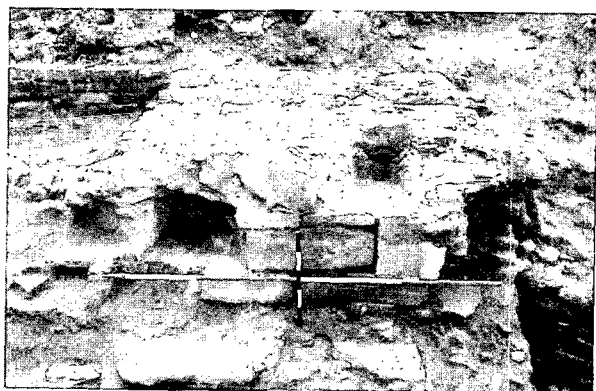
Illus 58

The S wall of Structure 13, from the SW. This section is an extension of the S wall of Structure 8 but is of superior quality to it.



Illus 59

Detail of a cross member of Period III timber raft; from the SW. The cross member is set into a slot and is laid over a stone pad.



Illus 60

The N jamb of the entrance to Structure 13; from the S. The infilled line of the Period II W drain can be seen within the threshold of the Period III entrance.

support for such a wall, given that its S face had to continue the line of the earlier wall (378) and therefore meant building right out into the river.

THE N AND W WALLS

The W wall was very badly preserved with the southernmost 2.4m of its length completely missing; the remaining 4.7m (at its outer face) stood to a maximum height of only 0.85–1.1m above the floor of the chamber (maximum of four courses) with a width of 1.52m.

The N wall (519) replicated the dimensions of 3006, except in height, standing only to a maximum height of 1.23m above the floor (four to six courses). However, at a point some 3.2m E of the inside NW corner of the room, there was an entrance to an intramural stair with three steps surviving *in situ* (illus 57). The stair consisted of a small recess (0.75 × 0.75m) set in the thickness of the N wall of Structure 13. Its entrance from the basement was defined by a low step (0.2m in height) and two moulded door jambs, creating a doorway (illus 60) 0.55m wide. An iron hinge still survived, attached to the inside face of the E door jamb, showing that the door was hung from the E and opened into the recess rather than the main room. The line of the stair from the entrance threshold was to the W. The room enclosed an area measuring 9.0 × 5.7m and represented an appreciable extension of the accommodation within Structure 8.

THE E ENTRANCE

The threshold of the entrance into the basement of Structure 13 from the E was via the Period II pend under Structure 8 (illus 57). This initially entailed the backfilling of drain 2003 as well as the gap between the Period II river bank and the N face of 3006 – the former with clay and stones, the latter with rubble. Once this was accomplished, the upper masonry from 2003 was extended together with wall 384 (the N wall of the pend) to create a squared section of masonry (516) which formed the N side of a doorway and which still retained part of the N door jamb. This masonry was characterised by the use of a very white, hard mortar faced originally with ashlar which had almost entirely been robbed away. To the S, the surviving masonry had been too badly damaged to retain any detail of the doorway, but the crude dressing-back of 2011 (Period II outer angled face) showed how the door was re-aligned on an E–W axis and appeared to have been about 2m wide. Masonry 516 stood to a maximum height of 0.75m and was 2.4m wide.

THE GARDEROBE AND DRAIN 490 (illus 61)

The Period III garderobe outlet saw a similar re-alignment away from the original angled profile of 2011 (illus 28) to an E–W line. This must have involved the partial demolition of 2011 and its original outflow over which 3006 was built, creating a new pit with three new sides (N, W and S), all on a straight E–W by N–S axis. However, the inside face of the original garderobe pit survived as the E wall of the new one; and showed clearly as an obliquely angled face within what was otherwise a regular rectangular pit. The sides of the pit were vertical and the internal dimensions were a maximum of 1.5m (S face) and 0.6m wide. The bottom of the pit consisted of angled stonework which directed the flow out into the river via two apertures. The latter features were rectangular and separated by a light column of masonry.

Further conversion work was found at the N end of primary Period II drain 490 (illus 57; 61), the primary role of which ended when Structure 13 was built but which was retained, with certain modifications, as a weeper beneath the new building, taking away excess water from the slope immediately to the N. To facilitate this function, a roughly squared sump and associated channel were dug at the N end of the drain immediately adjacent to the inside face of the N wall of

Structure 13. The sump, which could be periodically checked and cleaned out whenever necessary, acted as a trap for silt which might otherwise have blocked the drain. Indeed, the drain would only have been needed if the sump overflowed. Confirmation of this emergency only role for the drain is shown by the fact that no formal outlet into the river for such storm or flood water was built.

THE CONSTRUCTION OF THE S ACCESS ROAD

This development probably coincided with the construction of Room 11 over the partially demolished Structure 10. The orientation of Room 11 over earlier, obliquely-angled masonry and the incorporation of two doorways facing S towards the river suggested that this was part of an overall realignment of the South frontage of the abbey. This also established an access route on the S side of the abbey between its East and West ranges.

The original edges of this new artificial platform were obscured by a late revetment associated with the 19th-century textile mill which lay to the E of the site. However, the monastic river frontage and revetment were probably on a very similar line to the present profile: the later lade with the 18th-century bridge built into its W entrance were likely to have been simply refinements of abbey features.



Illus 61

Drain 490 and associated sump; from the NW. The masonry from the Period II W drain lies towards the top right; and the NE corner of paved area 409 is visible towards the bottom right.

The roadway to the E of the pend comprised a roughly cobbled surface (506, 653) which saw continued use well after the abandonment of the monastic ranges. This was the forerunner of The Bow. A more differentiated sequence of road surfaces was found within the pend where the passage gradually filled up (Period V), due to the narrowness of the route.

Limited excavation to the E of the pend entrance confirmed (on the evidence of the backfill in and around a simple drain or gutter (632, 659) running along the road parallel to the surviving S face of Structure 9) that the road originated in monastic times. This drain, obviously associated with the road, was partly demolished and sealed by midden material from the last phase of activity in the area of Structure 14 (2.4 below).

A sondage was dug over a narrow, linear feature cut against the upper cobbles and rubble core of the new road (513). This feature (514) proved to contain a lengthy section of lead pipe (illus 62) (3.2m long, comprising two main interlocking sections with a bore of 0.2m). The pipe was damaged and truncated by modern revetment (372), so no indication of its original outflow survived. However, its location and line suggest it was the re-routed outflow for drain 387 which was piped from the Period II outflow (386) down to the new channel 514. Exactly how the buried pipe was linked to 386 is unknown because any visible lead piping would have been robbed out. The bedding trench for the buried pipe was narrow and straight-sided, running virtually the entire width of the surviving road surface. It was 0.48m wide and crudely lined in stone.

Surface 513 proved not to be as regular as was first hoped but it extended as a wide, level surface from the pend up to the East range (illus 64), covering Structures 9 (partially) and 10 (almost entirely) and eventually linking with the thresholds of the doorways into Room 11. This surface also marked the limit of the excavation on the S of the site although a sondage showed the road to be built on a rubble platform (mainly dolerite boulders from the river) which was excavated to a depth of 0.6m below the upper cobbles.



Illus 62

Lead pipe within linear cut 514; from the N. The pipe was sealed by make up for the Period IV riverside road.

2.4 PERIOD IV – LATER REPAIRS AND ALTERATIONS (c 1480–1559)

THE EAST CLAUSTRAL RANGE

ROOM 1 (SOUTH TRANSEPT)

During the 16th century the South transept was divided off from the choir by the insertion of a screen-wall (8 below). Limited excavation revealed no evidence of other alterations to this part of the church during Period IV.

ROOM 3 (CHAPTER HOUSE) (illus 47)

This period saw the contraction of the Chapter house into a small square building, contained within the width of the East range and resembling the late 15th- and early 16th-century Chapter houses at Cambuskenneth and Glenluce abbeys (RCAHMS 1963, 128; RCAHMS 1912, 106).

The Period III walls were dismantled in stages. Initially, dressed stone was robbed from the N, E and S walls (illus 48); thereafter most of the foundations of the E and S walls were also removed. The footings of the S wall were retained below the Period IV E wall, forming part of the latter's foundations; for different reasons (discussed below) the N wall was only partially demolished. The robber trench (888) for the remaining section of the S wall was 1.5m deep and was backfilled with sand, clay, gravel and other relatively stone-free soils whereas the infill of the E wall robber trench comprised mainly rubble and roofing slates, some of which were complete.

Although shortened on its E–W axis, the Chapter house was widened by some 1.5m to the S to form an approximately square chamber. A new W wall appeared to have been built over the foundations of the primary structure. Other than a few courses rebuilt in 1936–37, the new S wall was represented only by its

footings. Because of further 1930s interference, it was impossible to tell whether the Period IV E wall was a new structure or had once formed a partition between the Chapter house and a vestibule. The latter seems unlikely, however, for the wall's insertion had disturbed several stone-lined graves.

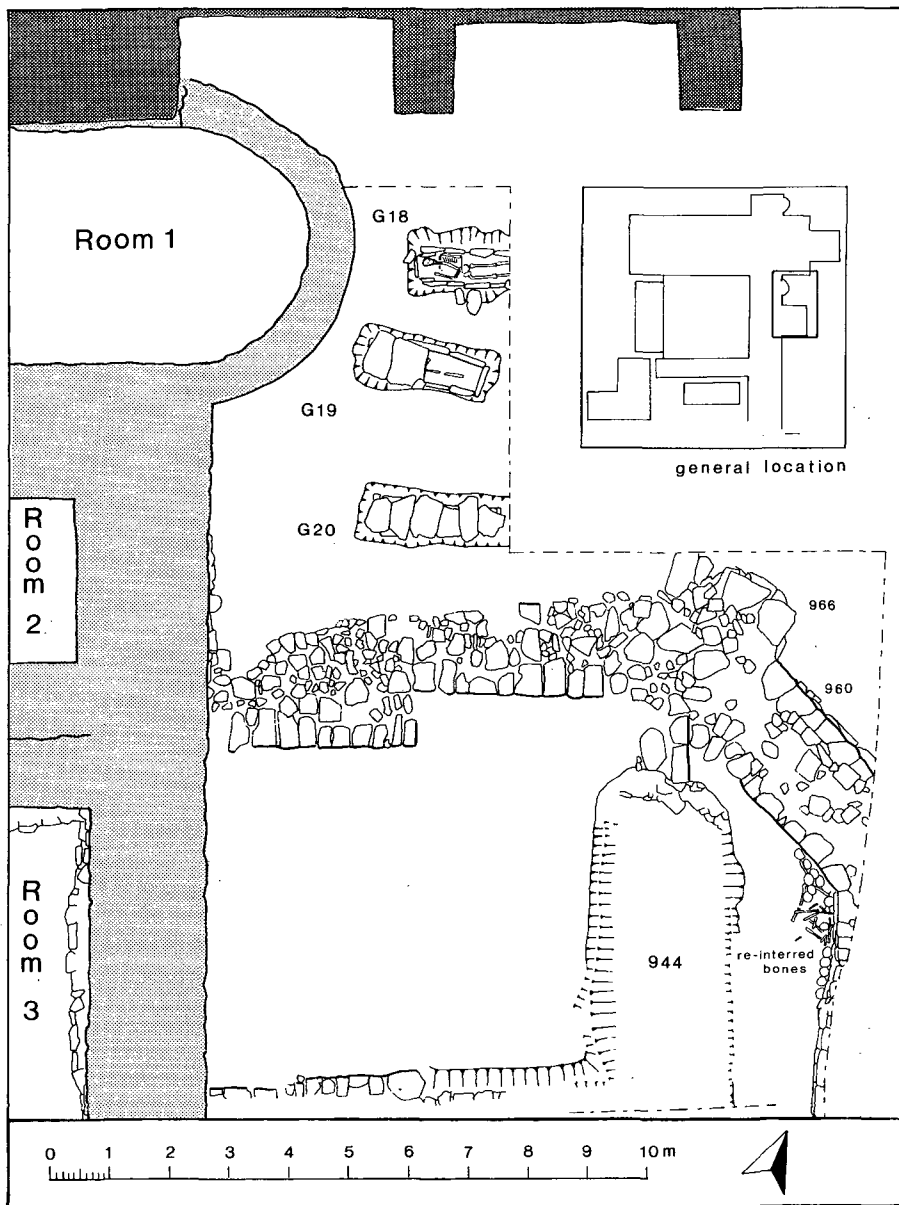
There was no indication as to how the Chapter house roof had been supported in Periods II and III whereas during Period IV its weight was borne by a central octagonal pier. The foundations of the pier were set into a pit, 2.0m deep, and comprised ten layers of rafted rubble and clay overlain by two courses of flat sandstone blocks, including a reused sarcophagus capstone. These foundations were sealed with purple-red clay upon which was set the single surviving course of the pier, 0.66m wide and comprising two semi-octagonal components, one of them a modern rebuild.

A purple clay-rich soil covered most of the room, including the capstones of Graves 9, 10 and 11 which had all been disturbed by the insertion of the Period IV E wall. The uniform, plastic texture of the soil suggested that it was a sub-floor layer although no flagstones or tiles were found. Only four graves post-dated the clay's deposition (illus 94): a coffin burial (Grave 14) against the

N wall and three similar interments (Graves 15, 16 and 17) cutting the backfilled robber trench 888.

Two stone-lined graves (4 and 5; illus 89, 91) had been disturbed when the pier was inserted (illus 89b; colour VII). The resulting voids were infilled with loose rubble which proved inadequate to the task: the floor subsided on at least one occasion, forcing the pier base to be strengthened and the surrounding area to be levelled with small stones and mortar. Thereafter, all of the graves were sealed with deposits of small rubble, mortar and clay, overlain by red sandy soil and unsorted, mottled clay, up to 0.4m deep. Although post-dating the burials, these were not necessarily post-Reformation deposits; they may simply indicate that by this time interment had ceased within the Chapter house.

Against the exterior of the E wall were the sandstone rubble foundations of two features interpreted as buttress bases. Essentially an extension of the new S wall, buttress 917 measured $2.18 \times 1.74\text{m}$, while the smaller, heavily robbed N buttress (197) measured only $1.3 \times 1.49\text{m}$.



Illus 63
Plan of wall 960, outside the
Chapter house.

ROOM 4

There was little evidence by which to date the changes undertaken to the fabric of Room 4, other than those associated with the Period IV remodelling of the Chapter house. Hence these alterations are described within this, the final, period of abbey building.

The N and W walls were completely rebuilt. The primary, sandstone foundations were overlaid with dolerite boulders, gravel and clay upon which were built the Period IV walls, consisting mainly of reused ashlar. Although there was no evidence that the E and S walls had been altered or rebuilt in monastic times, such evidence may well have been masked by the construction of a house that was built on the site of Room 4 in the 18th century (2.5 below) or by the disruptions caused during the 1930s. Drawings of the 1936–37 excavation show a narrow wall connecting the NE corner of masonry 120 with the E wall of Room 4 but by 1984 only traces of the wall's robber trench survived. It is quite likely that the earlier excavators removed the wall thinking it was a post-monastic structure. However, although this area had been severely disrupted, this wall did appear to pre-date the 18th-century occupation and was probably medieval in date.

The SE corner of the room had been disturbed at some stage, perhaps by stone-robbers, the ground surface being levelled thereafter with dolerite boulders, gravel and sand.

OUTSIDE THE CHAPTER HOUSE (illus 63; 97)

Abutting the NE corner of the Period III Chapter house were two

masonry features (960; 966), both robbed to their foundations of clay-bonded, sandstone rubble. Time did not permit either structure to be investigated fully, a restriction compounded by the proximity of masonry 960 to the modern wall that now forms the E boundary of the abbey precinct.

Wall 960 was 1.8m wide at foundation level and ran SE for a distance of 3.0m from the NE corner of the Period III Chapter house. From there its course continued S beyond the Chapter house. Wall 960's foundations differed markedly from those of the Period III Chapter house and, although this area had been heavily disturbed by stone-robbing and landscaping, wall 960 appeared to be the later of the two structures. Against the inside face of the wall were 19 human skulls (illus 97), 124 other cranial fragments and 355 disarticulated, post-cranial bones. Six of the skulls were identified as those of adult males, another nine were adult with male features, one was of an 8–9 year old juvenile but neither sex nor age could be determined for the remaining three (5 below). The bones were in a similar state of preservation to those within the Chapter house graves, suggesting that these disturbed skeletons had once lain within stone coffins.

There was time only for a very limited investigation of masonry feature 966 and its full extent and function remain uncertain. Possible interpretations include: a buttress for the NE corner of the Period III Chapter house, a wall extending N to the South choir chapel, and an extension of wall 960.

REPAIR AND REFINEMENTS AT THE RIVERSIDE AND CLOISTER

The last phase of building during the active life of the community is generally of crude quality and exemplified by the badly finished masonry of Structure 14 (illus 64). Post-dating an extensive deposit containing general destruction debris and quantities of decorated window glass (4.10 below), the original open area of Structure 9 was subdivided, firstly by the construction of a S wall (375) on the same alignment as the S wall of Room 11 and then subdivided by two N–S internal walls (409, 440).

WALL 375

Wall 375 was built between the external face of 354 (the E wall of Structure 8) in the W and the inside face of 352 (the E wall of Structure 9) in the E. The construction of the wall and its associated foundation trench (526) truncated the course of drain 357; and a general spread of levelling soils and light rubble (400) was laid in to cover much of the upper surface of walls 385 and 352 where they lay to the S of Structure 14.

The construction trench for wall 375 was fairly regular, measuring 0.55m wide by 0.35m deep and running along the S face of the wall. The fill of the feature (526) also contained demolition debris – quantities of 13/14th-century broken window glass, charcoal and daub, together with 15th-century, green-glaze pottery (4.6 below).

Wall 375 was constructed mainly of random sandstone blocks. The inclusion of parts of re-used columns, one of which formed the inside face of a possible doorway, suggested that most, if not all, of this masonry has been taken from a demolished building nearby. The lower courses of the wall were of superior construction and ensured stable foundations for an otherwise rather crude structure.

The wall was 8.0m long × 1.2m wide. A short return N at the SW corner, the inner face of which lined up with the outer face of Structure 8's projecting fireplace, effectively squared the corner. This could have meant that either the W chamber within Structure 14 was roofed or that Structure 14 was partially demolished. Otherwise, there seemed little point in building the two walls face to face. Perhaps the

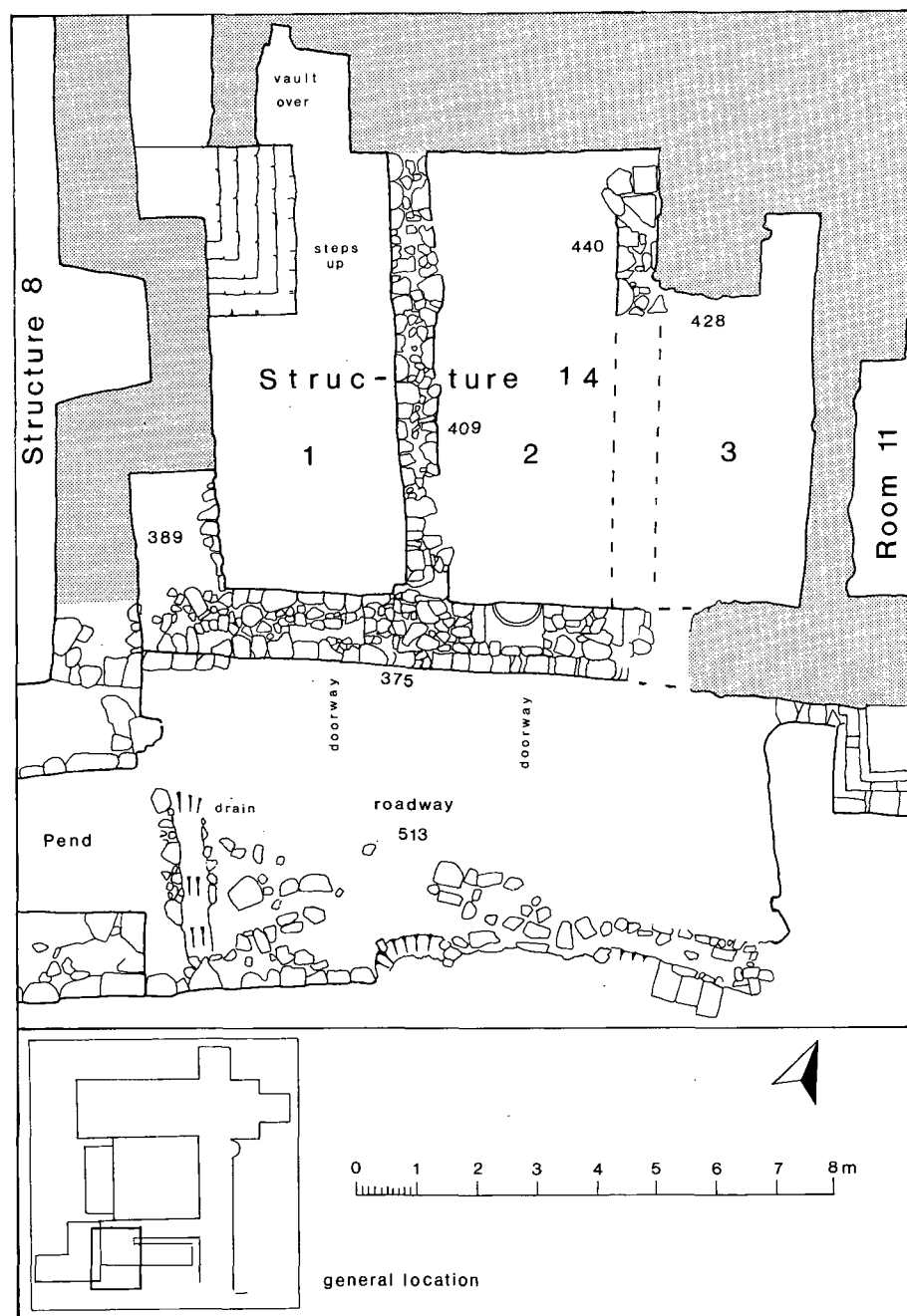
degree of reconstruction within 354 (the E wall of Structure 8) belied the true character and scale of the original masonry.

PARTITION WALLS 409 AND 440

The two partition walls – 409 to the W and 440 to the E – were of similar build and dimensions although the latter was extensively robbed. Wall 409, 0.7m wide, ran the entire width of the Structure 14 N–S, a distance of 7.04m. The standing remains of 440 ran for only 2.3m although its line could be traced for a further 1.3m. It was built against the W face of 428, a short section of an earlier, more substantial wall, possibly associated with 352 (the E wall of Structure 9). This wall had been extensively repointed by the Office of Works so that its true character and alignment were impossible to determine. The two partition walls were of crude mortar-bonded construction and, like wall 375, had many re-used moulded stones in their fabric, notably parts of columns.

STRUCTURE 14 (illus 64)

The walls subdivided Structure 14 into 3 chambers – numbered 1, 2, 3 (W–E). Chambers 1 and 2 were roughly 3.0m wide while Chamber 3 was 2.5m wide. Overdigging in previous years had removed all evidence of where the floor of Structure 14 lay. The obvious difference in level between the N end of the overall enclosure and the S (a drop of some 1.1m) suggested that either the



Illus 64
Plan of Structure 14.

floor was projected across at the higher level or that the rooms had split-level floors. In the likely event that the former was the case, the embrasure noted in the S wall of Chamber 2 must have been a doorway. The opening was only 1.0m wide and a similar narrow doorway could have been located in the S wall of the other two chambers. The function of Structure 14 with its three rooms is obscure, the only certainty being that they post-dated some significant period of destruction at the abbey – on the evidence of the pottery, no earlier than the 15th century. The rooms were probably roofed but their small size, crude construction and late date suggested that they were part of an effort to relocate some key structure in the abbey – be it for storage, kitchen or accommodation – which was too badly damaged to repair or re-occupy.

STRUCTURE 13 (illus 65)

The W part of Structure 13 saw re-use after the whole building

had been damaged to some extent. This was reflected by three associated features: two discrete areas of paving or flagging which fronted onto the robbed remains of a cross-wall, all within walls built during Period III. The two areas of heavy paving were of very similar build and dimensions and were located symmetrically within the W section of Structure 13.

THE PAVED AREAS

The W paved area (409) (illus 57) was built from large sandstone slabs of generally irregular shape but well laid in a roughly rectangular pad. The stonework most probably came from ruined abbey structures and one slab in particular was identified as part of the Period III mural stair (450). This suggested that the walls of Structure 13 were partially collapsed when paving 409 was laid.

The paved area, $3.0 \times 1.7\text{m}$, lay approximately 1m E of 538 (the W wall of Structure 13). This is almost exactly mirrored by the



Illus 65

Structure 13, from the W, with paved areas 409 and 502 in the foreground and centre. The remains of the intramural stair are visible to the left within the N wall.

area of paving to the E (502) (illus 57) which featured reused stones, covered the same area and lay 1m W of 516 (the E wall of Structure 13). These two platforms stood 3.7m apart and were abutted by the residual traces of some form of cross-wall running E-W across the room and roughly aligned with the face of 516. The evidence for this robbed-out feature amounted merely to two long, narrow bands of yellow mortar sealed by a clean, red clay. Both these deposits were truncated ultimately by the sequence of 'Bows'. When first revealed, the former defined the S edge of a large platform effectively half the area of Structure 13. The platform's upper surface sloped away to the surviving top of the S wall of Structure 13. This represented a drop of some 1.1m.

DESTRUCTION OF STRUCTURE 13

It was the destruction of Structure 13 which allowed The Bow to develop and it was found that this sequence overlaid the partial remains of the building which had been dismantled in a rather measured way. It is likely that the retention of an upper level area and the slope in front of it are associated with the two platforms which were built using stone probably derived from the partially demolished Structure 13.

This evidence reflected the probable use in the 16th century of this part of the precinct as a gun platform; and part of a fairly extensive conversion of elements of the S and E limits of the claustral ranges to form a temporary artillery fortification.

With the creation of The Bow or Horse Wynd in the latter half of the 17th century, the first major building phase of the West range during the post-Reformation period began. There was little doubt that the undercroft of Structure 13 (which later became known as the 'Abbot's Hall') was ruined and reduced to the levels discovered in 1984. This

probably meant that the outline of the lower reaches of Structure 13 were visible for some considerable time while the upper sections were absorbed into the manse outbuildings from an early date.

At some point prior to the creation of The Bow, there was a period when fires were burnt in the area of the two platforms 449 and 502. Several fires were lit in the bottom of the stairwell 450 with the rake out and charcoal debris spread out over an extensive area around 449. This horizon was subsequently sealed by the sequence of roads described in Period V, suggesting that the roof was missing by then.



Illus 66

Buttress base 1215; from the W. The buttress is built into the S wall (1211) of the Period II North cloister alley.

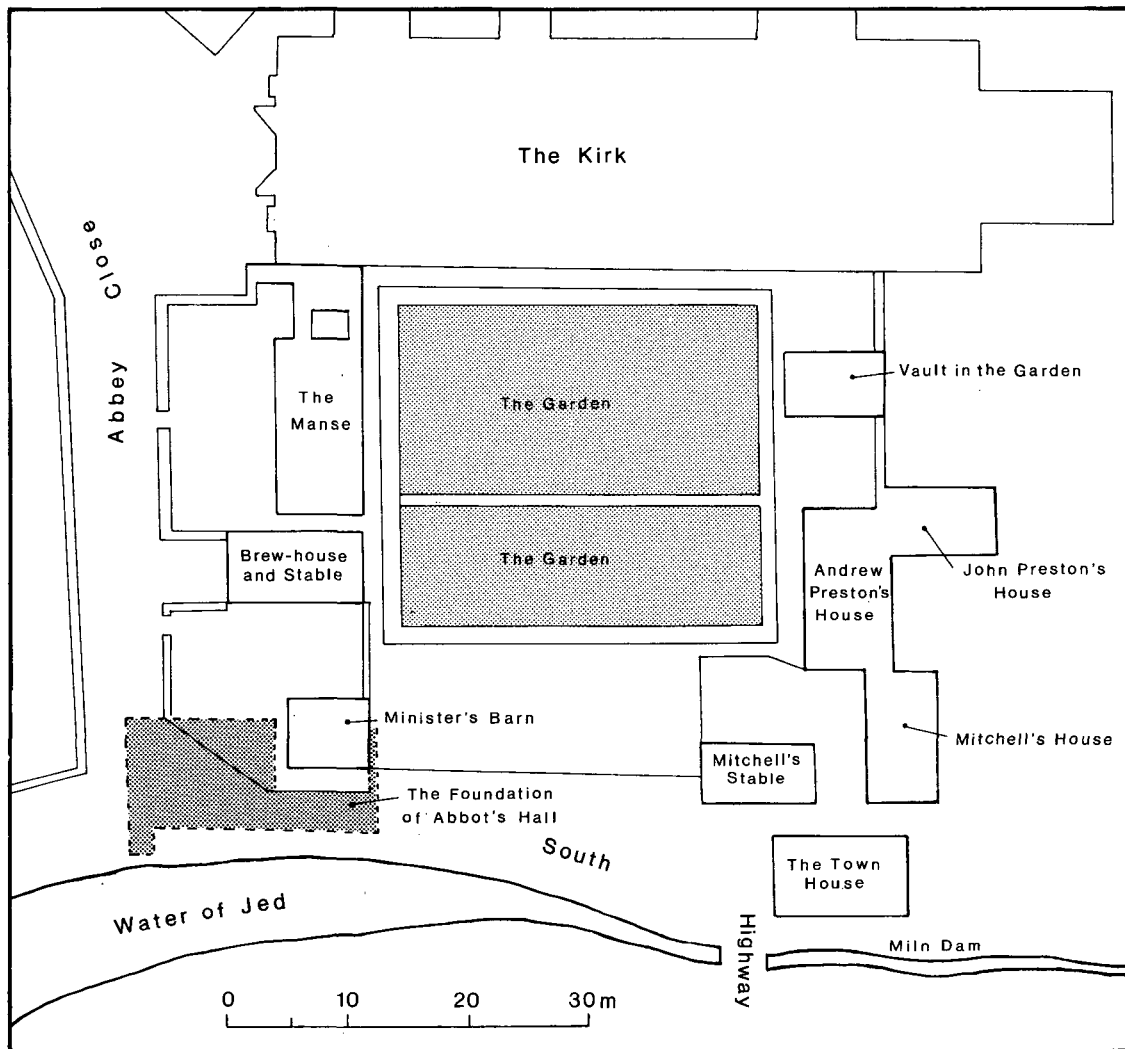
Towards the end of this period, there was evidently an attempt to reinforce the S wall of the church with four buttresses, irregularly spaced and crudely constructed. All four were completely excavated in 1936 and only those W bases, 1215, 1216 and 1225,

were excavated in 1984 (illus 66); apart from confirming that they post-dated elements of both claustral phases, no additional dating information was forthcoming. They all featured reused masonry in their build.

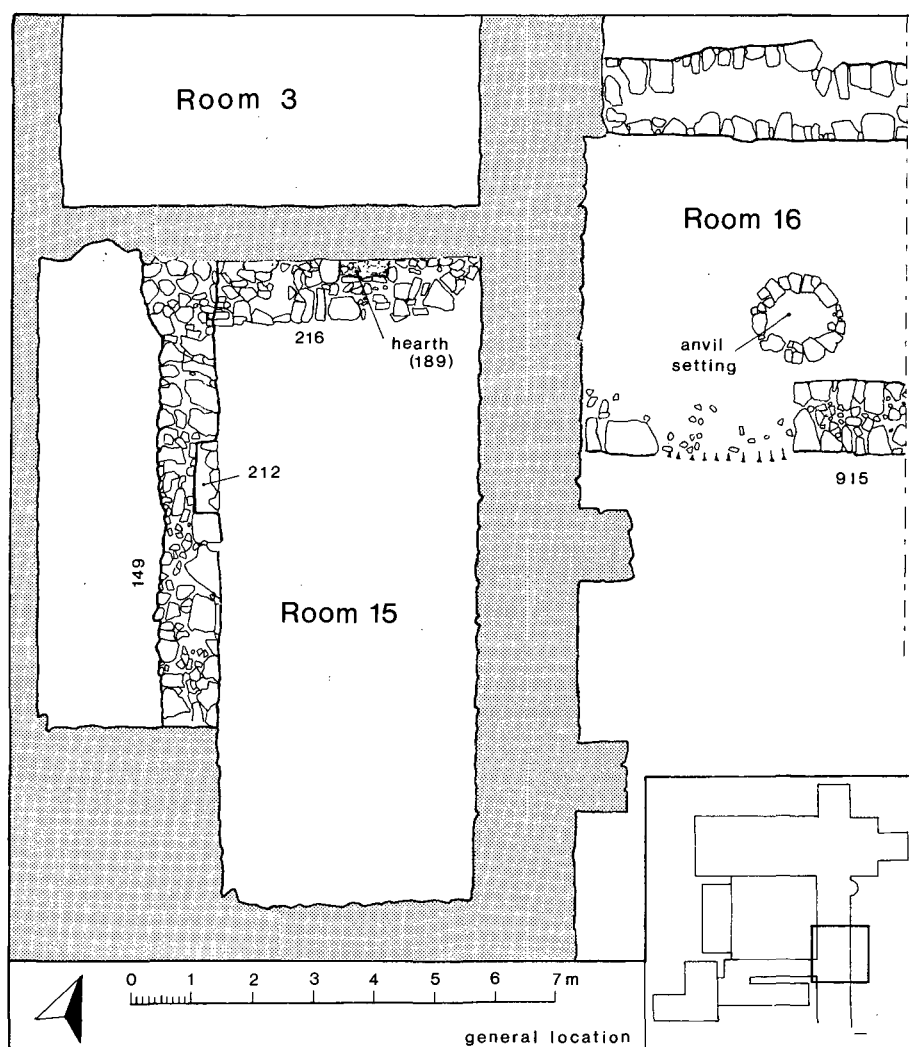
2.5 PERIOD V – POST-REFORMATION ACTIVITY (1559–1875)

After the suppression of 1559 the Lords of the Congregation insisted that no harm should befall the abbey church (Watson 1894, 81) and, in common with many Augustinian houses, it survived, albeit modified, as the reformed kirk of the parish (Robinson 1980, 156). Initially, the kirk was housed within the choir (and possibly the transepts) and re-roofed in 1575 with timber from the dismantled refectory (McGibbon & Ross 1896, 99 416). In 1671 it was transferred to the W end of the nave – a common practice in reused Augustinian churches (Dickinson 1968, 66) – where it remained until 1875.

The damage inflicted by the English armies in 1544–5 was probably aggravated by the actions of religious reformers who did all in their power to prevent the re-occupation of abandoned monasteries. Those buildings that could be converted to secular use were often spared, an example being ‘the old hall’ (?the Abbot’s Hall)



Illus 67
Copy of Winter's plan of the abbey, 1760.



Illus 68
Plan of Rooms 15 and 16, the latter used as a smithy in the 19th century.

at Jedburgh, which is cited in a document of 1671 (Watson 1909, 22). Other buildings were usually stripped of their fittings and dismantled for their reusable building materials, particularly in urban environments where stone was a valuable commodity (Knowles 1956, 383–8). Indeed, oral testimony confirms that building stone was being removed from Jedburgh Abbey as late as World War II.

During the 18th and 19th centuries several houses stood within the claustral area, many of them represented in James Winter's survey of 1760 (illus 67). These included: six buildings overlying or adjacent to the East range; the 'Foundations of Abbot's Hall' towards the SW of the site; and, to the NW of the cloister, the manse in its original, rectangular form. Subsequently, this rather modest building was extended into the impressive edifice illustrated in numerous 19th-century engravings and described in contemporary journals (Kelso 1805). Although the accuracy of such drawings cannot always be trusted, they often present a reasonable portrayal of contemporary buildings. An engraving by W Floyd, published in 1834, depicts three houses in positions identical to those belonging to John Preston, Andrew Preston and Mitchell, according to Winter's survey. The Prestons' houses may have been among the three purchased in 1857 by the Marquis of Lothian whose sole aim was their demolition (Kelso 1857) although, on the evidence of the first edition Ordnance Survey map, Lothian's scheme had not been implemented by 1859. By then John Preston's house had become a smithy, the 'Abbot's Hall' was buried beneath The Bow and the large, L-shaped manse was the only major building standing in the West claustral area.

Most of the buildings illustrated by Winter were at least partially excavated in 1936–37 and/or 1984. Several of those structures, together with other post-monastic features, are described below.



Illus 69

Room 15 (Andrew Preston's house), built over the demolished Room 4; from the N.

THE E END OF THE SITE

OUTSIDE ROOMS 1 AND 2

This part of the site had been subject to stone-robbing and landscaping for several centuries after the Reformation. As a result it was reduced to an area of irregularly-shaped cuts, infilled with miscellaneous materials whose removal demanded a great deal of the excavators' time. To the NE of the Period III Chapter house was a spread of compact red clay – possibly the remnants of a floor surface – within which were 12 coins (4.5, nos 9, 10, 12, 13, 15, 16, 17, 18, 19, 22, 30, 31 below), ranging in date from the early 16th to the late 17th century, that may have formed part of a hoard.

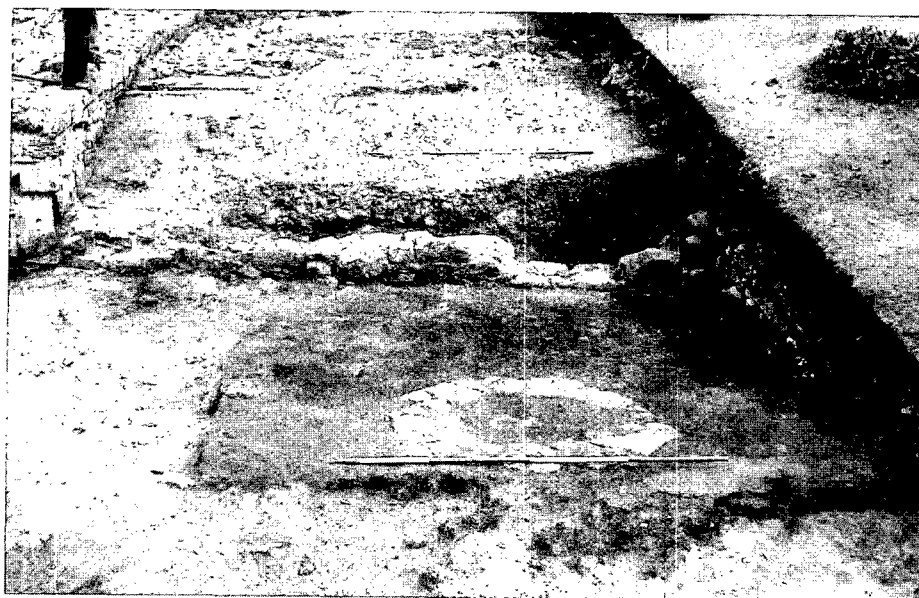
ROOM 3 (illus 98)

Adjacent to the N wall were four sub-rectangular pits that cut post-monastic deposits but which were truncated by a 1936–37 excavation trench. Their maximum original dimensions were estimated as 1.5–2.35m × 0.41–0.63m; their purpose was more difficult to assess. The pits resembled graves in shape and in size although their N–S alignment and the complete absence of bones within them would seem to contradict this. Nevertheless, it has been suggested that their orientation may be an indication of the work of religious reformers reacting against earlier burial practices.

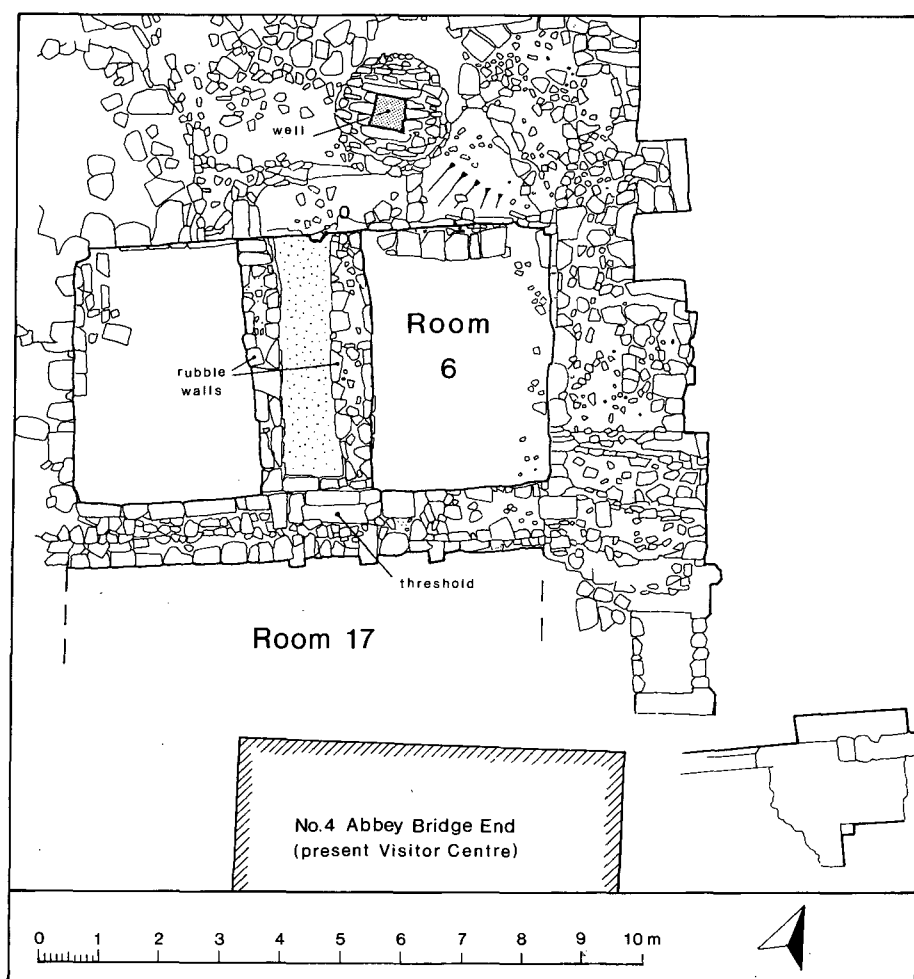
ROOM 15 (illus 68; 69)

Overlying the ruins of Room 4 were the remains of a narrower building (Room 15), interpreted as the 18th-century house of Andrew Preston (illus 67). Its N wall lay directly over the foundations of Room 4's N wall; similarly, its S and E walls had probably overlain those of Room 4 although no trace of the later structures survived. The remnants of the N wall, which was plastered on its internal face, had been consolidated in 1936–37, probably because it was thought to be abbey masonry. Within it were the remains of a well-constructed hearth (189), over which were the vestiges of a much cruder fireplace. Whether this signifies periods of abandonment and re-occupation or simply the lowering of standards is unclear.

The W wall (149) was an entirely new structure. Its two surviving courses were built of clay-bonded rubble, faced on the inside with reused ashlar and plastered with a pale cream mortar. The outer face, however, was very irregular and its lower courses had probably been hidden from view, suggesting that the floor of the building was below the external ground level. A recess (212), 1.2m wide × 0.4m deep, situated midway along the inside face of the wall, was too low to be a window and showed no sign of the heat damage expected within a hearth. It is interpreted tentatively as the threshold for a door. At some stage the recess had been blocked with rubble and clay, containing numerous sherds of 18th-century brown and yellow slipware (4.6 below) and other fragments of contemporary pottery and glass.



Illus 70
Room 16 (John Preston's house), built in the 18th century and converted to a smithy the following century. In the foreground is the circular stone setting for an anvil; from the S.



Illus 71
Plan of post-monastic additions at the S end of the East range.

The disturbed clay floor included patches of mortar and, adjacent to the hearth in the N wall, large quantities of coal, ash and other burnt materials. Overlying the floor were destruction debris and the backfill from the 1936–37 excavation, its trenches clearly visible against the walls of Room 15.

ROOM 16 (illus 68; 70)

Room 16, interpreted as John Preston's House (illus 67), was defined on its N by a narrow rubble wall, its foundations comprising the partially-demolished S wall of the Period III Chapter house. The S wall, however, was an enigma. A linear spread of rubble extending the width of the trench, approximately 5m from the N of the building, may have been the infill of the wall's robber trench. Nevertheless, this rubble directly overlay wall 915 (illus 12a) which was 1.1m wide (as was the N wall of the building) and built of tightly packed rubble and compacted small stone chips. Although a prime candidate for the S wall of Room 16, wall 915 could also be interpreted as a pre-Augustinian structure (2.1 above). The building's W wall is thought to have overlain the E wall of the East range although all material evidence of it had been lost by 1984.

The only indication of a floor consisted of a few patches of cobbles. These were cut by a circular, stone-lined feature, 0.8–0.9m in diameter, which, on the evidence of nearby deposits of coal and hammer-slag and the building's definition as a smithy by the first edition OS map, has been interpreted as the setting for an anvil. This putative anvil setting partially overlay another stone wall (914) that abutted wall 915 and which may have been a primary feature of John Preston's House although its role was far from obvious. Alternatively, this masonry may have been a pre-Augustinian structure (2.1 above).

ROOMS 6 AND 17 (illus 71; 72)

Operational difficulties and the proximity of No 4 Abbey Bridge End combined to restrict the area of excavation beyond the Period III partition wall in Room 6 to a sondage only 1.0m wide. Overlying the scant remnants of a monastic flagged floor was a deposit of black humic soil, 0.25m deep, containing some cereal grains and large quantities of chaff, perhaps derived from milling. Clay-pipe stems retrieved from this material demonstrated that it was of post-monastic age although more precise dating was not possible.

Although this putative mill appeared to be free-standing with its N wall being the reused Phase III partition wall, the overall dimensions of the building remain unknown. Entry to the first storey was over a very worn, sandstone threshold midway along the top surviving course of the N wall. Two clay-bonded, rubble walls, each 1.4m high and 0.6m wide, which sat directly upon the Phase III midden deposit, were perhaps associated in some way with the adjacent entrance.

At a later, unknown, date the N half of Room 6 was infilled with rubble and clay. Upon this material stood the fragmentary remains of a clay-bonded, rubble-built structure of which only a cursory examination was possible. Nevertheless, the building did appear to occupy a position similar to that of the 18th-century 'Mitchell's Stable' (illus 67). It may also have housed the well that had been sunk through the masonry between Rooms 5 and 6 (illus 71), presumably after the demise of the East range.

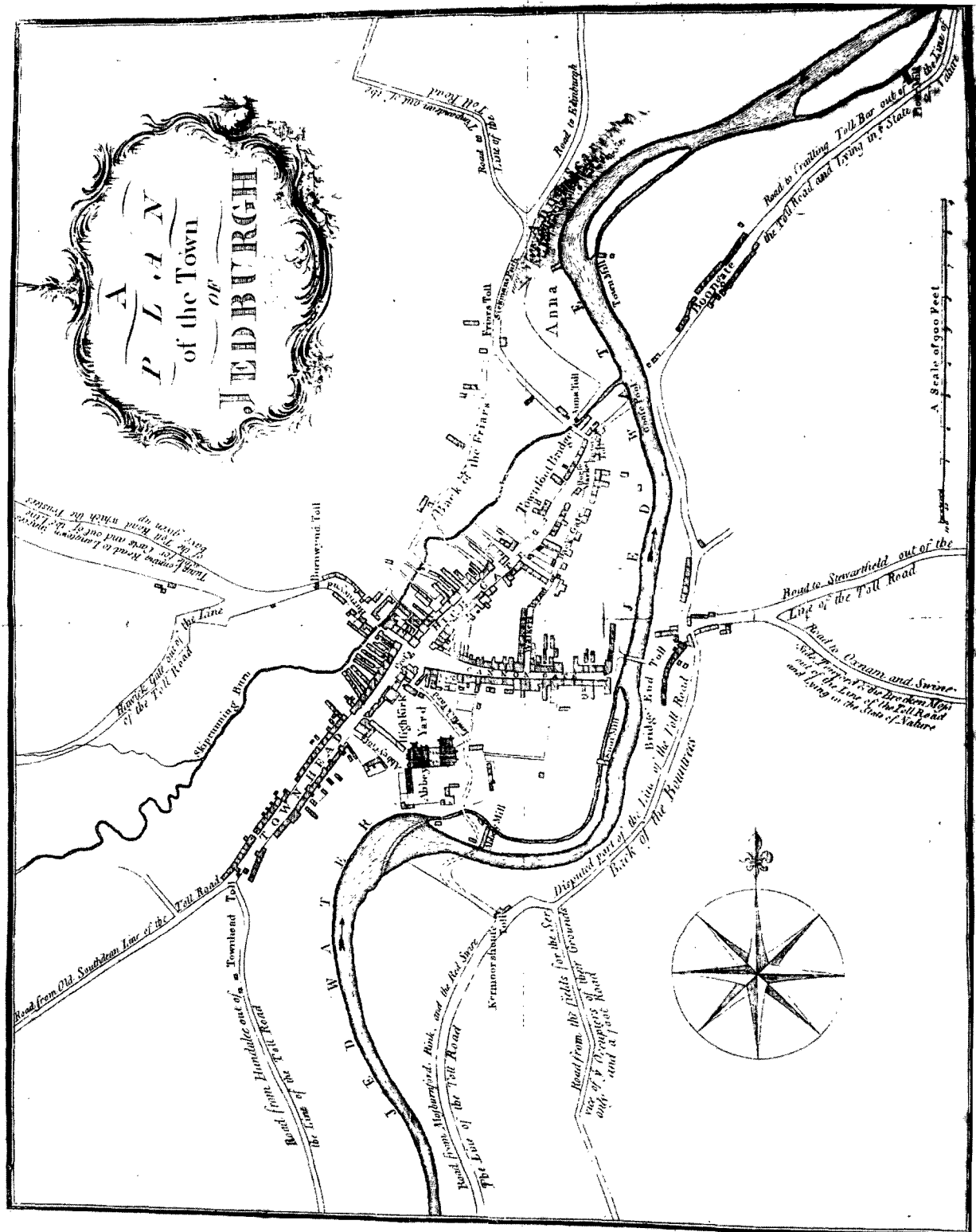


Illus 72

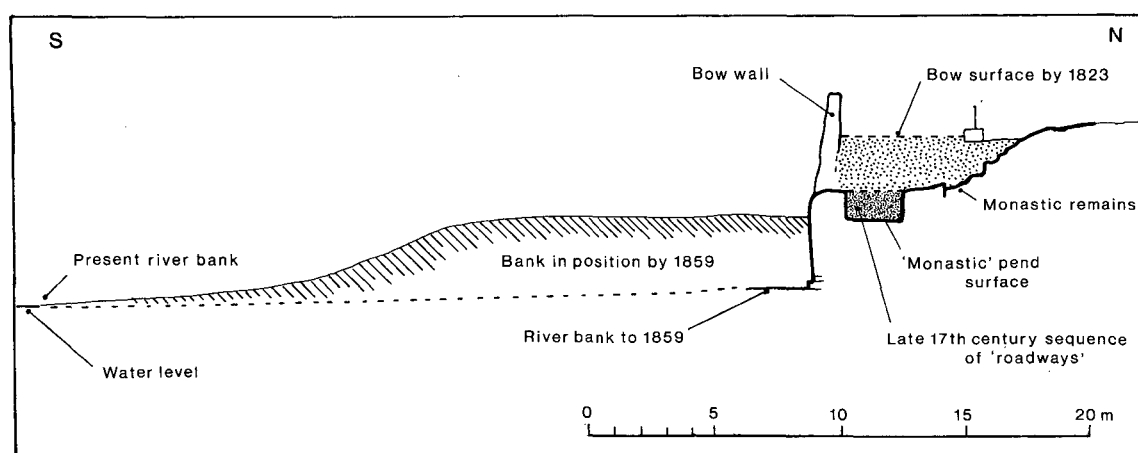
The surviving elements of Room 17. The entrance to Room 6 is in the foreground; from the E.

Of the 'Town House', depicted in Winter's drawing, there was no trace. It seems unlikely that there were gross errors in his survey, yet none of the excavated structures could be equated with this building.

Photographs and drawings from the 1936–37 excavation depict a set of five stone steps, built of reused ashlar and rubble, ascending to the E, 1.2m E of Room 5. To the S of the steps were three or four courses of a rubble wall and to its N was the base course of a door jamb. None of these features survived until 1984. The assumption that the steps were contemporary with the 13th-century East range (RCAHMS 1956, 205) is inconsistent with the use of both ashlar and unworked stone within the treads. Furthermore, by overlying the ruins of Room 12, the stair is almost certainly a post-monastic feature, its location suggesting an association with the 18th-century 'Mitchell's House' (illus 67).



Illus 73
Town plan of c 1775 by John Ainslie.



Illus 74

Profile of the post-monastic build-up in the SW of the site.

THE W AREA OF THE SITE

STRUCTURE 13 (ABBOT'S HALL)

It is likely that parts of Structure 13 (known latterly as the Abbot's Hall) were almost entirely removed in the 16th century, well in advance of the development of The Bow which was finally in place by the end of the 17th century.

The nature and extent of what survived from Structure 13 is best shown on two 18th-century maps: one, Winter's plan of 1760 (illus 67) and the other John Ainslie's town plan of c 1775 (illus 73). Both show the 'Abbot's Hall' foundations and it is apparent that these only amount to the bottom courses of Structure 13 masonry with nothing surviving of the great E and W walls (307, 354) from Period II.

There is a strong probability that the monastic surfaces up to the line of wall 383 (the N wall of the pend) survived and, indeed, supported the minister's barn yard. Since the upper masonry of Structure 13 was removed, the manse outbuildings were simply built on the Period II platforms and terraces. Most notable of these was the minister's barn and barnyard, access to which was from the W over the footings of the demolished Abbot's Hall.

ROADWAYS WITHIN THE MONASTIC PEND

The archaeological evidence for the period between 1560 and 1700 is mainly concentrated within the build-up of roadways within the monastic pend, first laid out in Period II.

The last 'monastic' surface within the pend survived more or less intact from the 15th to the late 17th century, running along the S of the site. This surface was ultimately raised by 0.2m within the length of the pend to form a good, cobbled road; which, in turn, was sealed by an almost identical sequence of deposits. This comprised soft bedding material, a deep dump of rubble and culminated in yet another cobbled surface. Coins below and immediately above this latest sequence of deposits suggested a single phase of road-building towards the end of the 17th century (4.5 nos 24, 25 and 32 below).

Within Structure 13, the build-up of a deep, organically-rich deposit over the last surviving monastic surface contained bottle glass dating from the period 1670–1730. This was sealed by a dumped deposit 0.3m deep and was covered by a metallised surface, presumably the 'highway' mentioned on Winter's plan of 1760. Finds from the dumped material included bottle glass dating to between 1720 and 1750. This sequence filled up the pend about halfway and coincided reasonably with the creation of a Horsemarket in Abbey Close in the 17th century and the subsequent traffic to and from it. Despite being progressively infilled, the distinctive bottleneck of the 13th-century monastic pend is plainly visible on the 1775 town plan.

The manse, which had several phases, was originally established towards the end of the 17th century. At this stage, it consisted of a long, narrow, single-storey structure apparently built directly over or within parts of the West range. The building of a new manse for the new church on the S of the Jed Water in 1876 saw the complete removal of the last manse on the site – a large, L-shaped, detached house of several storeys – and the subsequent landscaping of the area.

As with the manse, very little survived of the outbuildings towards the bottom of the site – all having been removed during the successive programmes of site clearance. All that remained *in situ* by 1984 were an area of cobbling and a cross-wall associated with the mid-18th-century barn and barnyard.

To the S of the abbey buildings, the Jed Water was systematically redirected to serve later mills built to the E of the Abbey cloister. In 1770, there was a weir ('the Cauld Back') and a lade adjoining the N side of Abbey mill and leading ultimately to the Snuff Mill before rejoining the river near Canongate Bridge. This general plan persisted until sometime after 1823: by 1859, the river bank to the N, immediately below the abbey, was massively extended and the weir relocated upstream. By then a sluice-controlled, piped water supply served the new woollen mills – the Abbey Mill and Hilson's Mill – and this system prevailed until the mills closed for good in the 1960s.

