



Illus 5.1 Revetments 388 and 596 below the east end of the Cluniac church.

5 Structures

5.1 Introduction

This chapter describes the structures that were discovered during the excavations, divided into three main periods, subdivided where possible into phases. The artefactual and environmental evidence for these periods is also considered. The pottery assemblage was essential for the dating of the identified structures and the pottery types referred to are: SWGW (Scottish White Gritty Wares), SMR (Scottish Medieval Redwares) and SPMR (Scottish Post-Medieval Redwares) (*see* Chapter 8). Correlating the cemetery groups with the structural phases has proved to be problematic as the burials were dated by radiocarbon assay and the structures generally by pottery, thus producing wide date ranges that are difficult to tie in together (*see* Illus 3.7).

5.2 Period I: Early Christian

5.2.1 Phase 1: modifications to the raised beach, fifth–seventh centuries (Illus 5.1)

A large area of beach-rolled cobbles and boulders was revealed beneath the cemetery, early churches and the priory chapter house. This consisted of large rounded stones, c.0.05m–0.3m in length, and is interpreted as the remains of a raised beach, modified into a platform by the movement of substantial quantities of stone along with the construction of revetment walls on the E side. On the E edge of the platform the rounded cobbles were mixed in with more angular stones, and there was an area which consisted of particularly small stones (1135) in the SW corner of Trench V. Within the cemetery the stones were at least 0.7m deep, and overlay a layer of dark-brown silt which then sealed a surface of smaller rounded stones (context 909, Illus 4.2). The depth of stones beneath the foundations of the church was at least 0.6m. Over the site as a whole the extent of the platform was seen to be at least 60m N–S and 22m E–W, although it may well have continued further N. Very few burials were found within the periphery of this area.

Fragments of walling and at least two drystone revetments were constructed towards the E edge of the platform. These were most clearly seen at the E end of the cemetery (Illus 4.1 and 4.6). A wall, faced on both sides with large angular boulders (contexts 896 and 895) was c.1.4m wide and survived up to three courses in height, with a core of rounded stones. This is of very different construction to the revetments, which were only faced on the E, but as only its surface was revealed within the narrow trench, this is difficult to interpret. The two revetments (contexts 894 and 881) to the E of

this wall were roughly parallel to each other and were constructed of large elongated boulders, set at right angles to the line of the revetment, forming a fairly even face on the E side. The tallest revetment (context 881) was at least 0.8m high and survived to just beneath a post-medieval midden deposit (801). The construction sequence of these revetments was not clear as they did not cut one another and were surrounded by beach stones. However, it is thought likely that the wall 896/895 was the earliest, with the revetments added sequentially to the E of this as either the cemetery or the building platform expanded in size. Wall face 894 predated a burial (832, Group 3) which has been radiocarbon dated (at 2σ to the fifth to the ninth century (GU-4211).

It is possible that the same two revetments were revealed in the area beneath the E end of the priory church (388 and 596), (Illus 4.1 and 4.7), with the addition of a third revetment to the W (393). Revetment 393 consisted of a line of large stone blocks sealed by redeposited beach stones and was cut by burials 385 and 386 (Group 3). One of these burials (386) has been radiocarbon dated (at 2σ to the ninth to the 13th century (GU-4964). Revetment 388 survived to a height of 0.8m close to the SE corner of the priory church. To the E of 388 was a revetment consisting of several large angular blocks (596). The space between 393 and 388 was filled with beach cobbles (389), while large angular stones (390) were noted to the E of 596. The different nature of 389 and 390 supports the idea that the platform had been extended, or supported, to the E with stones which did not all originate from the raised beach, but included blocks derived from the quarried rock face close to the W of the site.

Beneath the chapter house (the N room of the E range), the cemetery platform was investigated with a narrow trench only 1.2m wide (Illus 4.9 and 4.10). Within this trench a line of flat subangular stones (466) was aligned N–S. This pre-dated a burial (444) which was radiocarbon dated (at 2σ to the seventh to ninth century (GU-4966). A second line of large stone blocks was tentatively identified as a revetment (460) to the E. This overlay and post-dated burial 444. A single sherd of Shelly Ware which could date from between the ninth and the fourteenth century, was found between these stones (*see* Chapter 8.5.4). This could be intrusive, however, as artefacts could trickle down through the gaps between the stones.

To the N of the cemetery in Trench V, a length of wall was seen on the W side (1141, Illus 4.15 and 5.1). This wall consisted of massive boulders, up to 1.1m long, laid in a single course. The line of these stones was cut through by two 12th–13th-century burials (1137 and 1138, Illus 4.15). A second line of walling

(1140) was found to the E of 1141; this may have been a remnant of a second revetment or perhaps the remains of some other structure. It consisted of eight flat stones surviving two courses high to a height of c0.4m and 2.3m in length, forming a rough face to the E, similar to the revetments discussed above. Continuing the line of 1140 to the N, was a double-faced wall formed of a single course of smaller flat slabs (1123). This stretch was c2.2m long and c0.8m wide. Towards the N end the walling consisted of roughly laid, large rounded boulders c1m wide, two stones thick and a single course high. The two roughly parallel sections of wall seemed to converge at the point where it was cut by the two burials.

A third revetment was found 3.7m to the E, represented by a line of large angular boulders (context 1139). These were revealed over a distance of only 2m within a narrow extension to the trench. The platform stones to the E of 1139 were large and angular rather than the rounded beach stones seen elsewhere. These revetments were sealed by a layer containing sherds of SWGW, possibly dated to the 12th to 14th century.

In the far N, within Trench L, the round platform stones (910) were encountered at a depth of c1m and the surface of these sloped away steeply to the E (Illus 5.26). The platform was examined to a depth of 0.3m–0.4m and no burials, or shell sand indicative of burial fill, were discovered here. The revetments are contemporary with the Group 1 burials within the cemetery which are also dated to the fifth and seventh centuries and pre-date the Group 3 burials.

5.2.2 Phase 2.1: pre-stone-church layers of burning, eighth–tenth century

Beneath the priory church, lying immediately over the cemetery platform and beneath the earliest church foundations, were several small, patchy, burnt layers. In the W, beneath the first drystone church (context 412, *see* Chapter 5.2.3) were patches of white, red and black ash (context 420) up to 0.1m thick. This material contained a late tenth-century coin fragment, (*see* Bateson, Chapter 8.3.1 (Table 8.4, No 2), a worked flint (101.5 SF 38), a copper alloy terminal (Illus 8.5, no 35, 101.5 SF 52; Cox, Chapter 8.2.3), a single shell-tempered pot sherd identified as either Late Saxon Shelly Ware or Flanders Shelly Ware (Chapter 8.5.4), and a single fragment of a Roman *tegula* roof tile (Illus 8.6, no 4, 101.5 SF 29). It is thought that this ashy material could have derived from an occupation surface, possibly from within a building, or that it simply represented hearth debris. Alternatively, it could represent the destruction of one or more insubstantial timber buildings, located within the vicinity of the later church.

Further E, also beneath the priory church, was a deposit of loam with burnt patches (459) which contained small amounts of oak charcoal, and one sherd of SWGW (which could be intrusive). There was also a patch of sand containing occasional fragments of charcoal, mammal bone, fish bone, shell, carbonised

vegetable matter and some cinder, seen within the stones of the platform (391), with no artefacts. The ash layers (420 and 459) contained only small amounts of charcoal (Miller and Ramsey, Chapter 7.6) and are most likely to be derived from insubstantial timbers such as driftwood.

Below the chapter house, the cemetery platform (418) and burials were sealed by a loose sandy silt (409) which contained one sherd of SWGW (which may be intrusive) and a worked bone fragment (no 84). This layer was sealed by a loose loam with burnt patches (410), similar to the burning that took place prior to the construction of the churches. In Trench L, the cemetery platform was sealed by a burnt orange/red layer with black and grey ash patches, which was up to 0.2m deep (879, *see* Illus 5.26). It contained a large, broken, round-headed bone pin (Illus 8.5, no 73), a piece of bloomery bottom, but no pottery. A similar bone pin was found within Pictish layers at the Brough of Birsay (Curle 1982, 20). There were no burnt layers observed within Trench V.

The intermittent and disparate locations of this burnt material would argue against there being a single centre of burning activity. There is the possibility that this does represent the destruction of early timber buildings, although the charcoal evidence suggests that the burnt timbers were too small.

5.2.3 Phase 2.2: first church, late tenth century (Illus 5.2 and 5.3)

The remains of the first stone-built church on the site were found beneath and within the footprint of the priory church. This primary structure consisted of three fragmentary walls (1242, 412 and 414) of drystone construction that, when complete, would have measured internally 3.2m N–S by at least 4m E–W. The W end of the structure was not seen; this appeared to lie beneath, and to be incorporated within, the W wall of the later church. This could not be confirmed, however as the area beyond this to the W was not excavated. It does seem likely, however, that the W end of the primary stone church was adapted and reused by the builders of each successive phase of church construction.

Wall 1242 ran E–W, the N face sealed by the N wall of the priory church (110). It consisted of large unworked basalt blocks which were laid irregularly, but formed a good face to the S. The E wall (412) ran N–S, measuring 1.1m wide, and consisted of a single course of large sub-rectangular blocks. A foundation cut for this wall (438) was filled with a dark brown sandy silt (439). The corner of 412 and 1242 had been destroyed by the insertion of a trough (142) in the post-medieval period. The S wall (414) ran E–W, forming a corner with 412. It was up to two courses high and survived to a length of c2.5m. Protruding stonework (tusking 416) in the foundations of the W wall of the later priory church (111) is likely to be a remnant of this wall. Stones also protruded to the W of wall 111, which suggests that the wall might have continued to the W, although this is by no means certain; it may instead be part of the foundation of 111. Walls 412 and 414 were

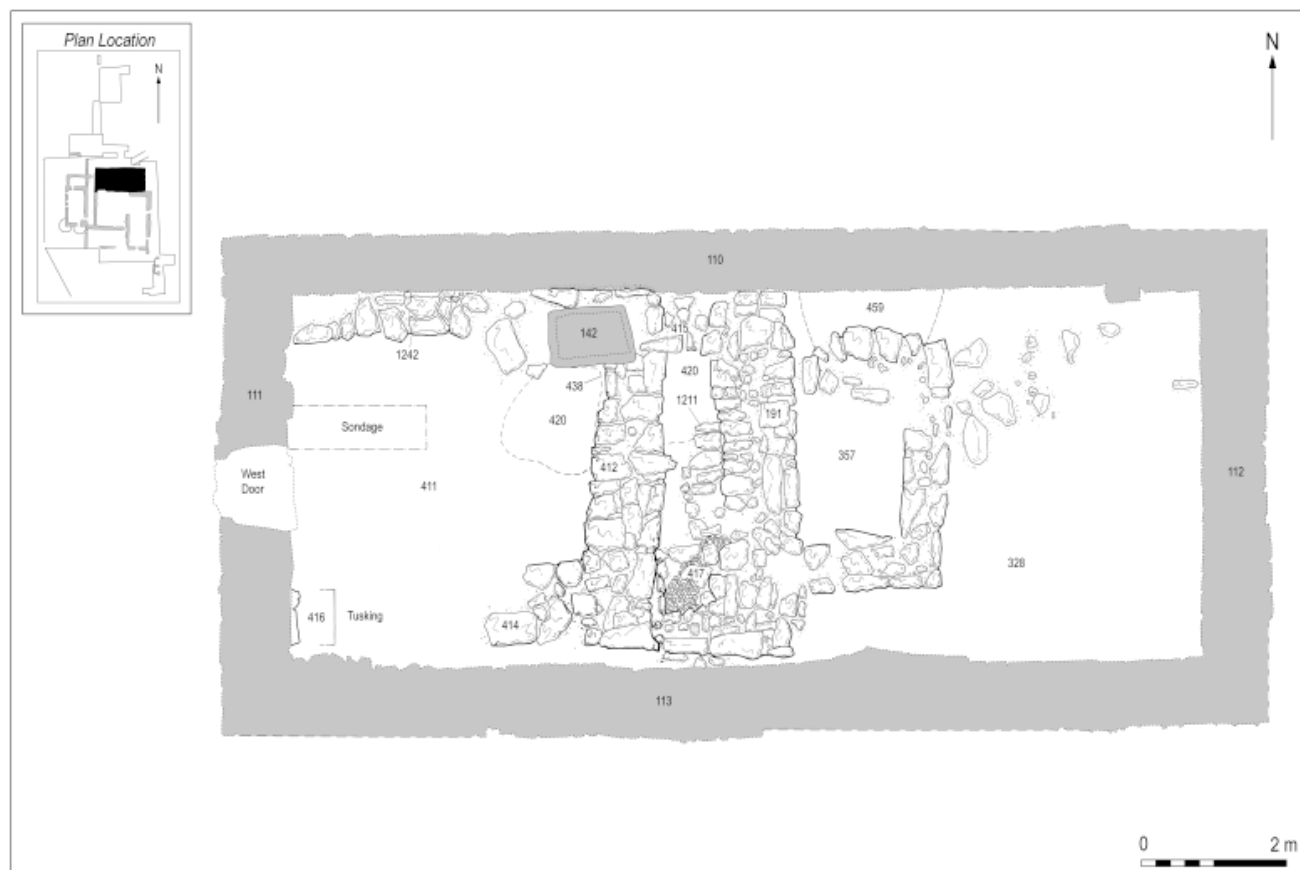


Illus 5.2 Modified raised beach burial platform, with three phases of early church building, overlain by the larger Cluniac church. (© Fife Council)

unmortared, but with traces of clay bonding, while wall 1242 did have mortar in its upper courses. This mortar, however, may have been a later addition associated with the absorption of this early wall into later structures.

No clear floor levels were associated with this structure, which was constructed over the ashy layer (420) and the cemetery platform cobbles (411). Layer 420 was cut by the foundation trench (438) for the wall (412), and its surface could have become the floor of the first church. Elsewhere, any organic flooring might have fallen down between the stones of 411 as it decayed. A sondage was dug to a depth of 0.5m, near the centre of this structure through the platform stones (411), but no burials were found. Dating evidence for the construction of this structure is provided by a silver denier (possibly Frankish) of the late tenth century found within the ashy layer (420) cut by the construction of wall 412 (Bateson, Chapter 8.3.1). The coin provides a *terminus post quem* of the late tenth century for the construction of the church. This assertion is supported by the radiocarbon date (GU-4965) of the seventh to early eleventh century for a burial (442) also cut by the E wall (Illus 4.7) and by the presence of Shelly Ware within layer 420 (dated from the ninth to the fourteenth century).

A small trench about 2m square was excavated beyond the SW corner of this church. Deeply buried at the base of this trench was a surface of flat slabs set at an angle of 45 degrees to the church (470) (Illus 5.4



Illus 5.3 Detailed plan of the three early churches.



Illus 5.4 Early paved surface 470 at the southwest corner of the first stone church.



Illus 5.5 The east ends of the three pre-Cluniac churches, oldest to the right, looking south. (© Fife Council)

and 5.6). These slabs formed a surface 1.15m wide, with slightly upstanding kerbstones on either side. This fragmentary surface was difficult to interpret and was only partially excavated within a restricted area. The slabs may have been the cover stones for an early grave. However, there is also the possibility that they related to this early church, perhaps a continuation of the road (833) found in the cemetery trench.

5.2.4 Phase 2.3: second church, 10th/11th century

The E end of the first church was extended 1.8m to the E with the addition of two walls (415 and 397/191, see Illus 5.3 and 5.5). Only the S face of the N wall (415) was visible as it was sealed by the N wall of the priory church (110). Wall 415 extended the line of 1242 to the E, with the inner face of 415 set forward about 0.12m. The E end wall (397 and 191) was 1.1m wide and consisted of two faces of angular stones with a rubble and mortar core. All of the walls of this structure were bonded with a cream-coloured, shelly mortar. The building would appear to have been widened by 0.5m to the S, which would have necessitated the dismantling of the S wall (414) of the primary church. Most of the surviving foundations of the S wall of the second church were sealed by the S wall of the priory church (113). The floor levels and the SE corner of this structure were disturbed by post-medieval activity, while an area of small cobbles (417) in the SE corner may have been remnants of a floor of uncertain date. A drystone setting (1211) abutted the inner face of wall 397, and it is likely that this was the foundation for an altar base, given its central location against the E wall. There is no specific dating evidence for this phase except for its relative position between the first and third churches.

5.2.5 Phase 2.4: third church, 11th–13th century (Illus 4.8 and 5.3)

The church was modified for a second time with the addition of a small square chancel (190), the construction of which would have required an opening for a chancel arch to be slapped through the E wall of the

earlier structure. The chancel measured internally 1.5m long E–W and 2m N–S. The wall foundations were c0.6m thick. A single ashlar block survived *in situ* at the SW corner. Within the chancel was a deposit of mortar and angular stones (357) which probably represented a foundation layer for a now-lost floor surface. Fortunately, this layer contained a silver penny of William the Conqueror dated to 1074–7 (Bateson, Chapter 8.3.1 (Table 8.3, no 3). It provides a *terminus post quem* of the late 11th century for this phase.

The earliest surviving floor, comprising sandy silt with shells (402), was laid throughout much of the church during this phase. This layer contained a large number of artefacts, which included a metal lace end (Illus 8.7, no 19 (101.5 SF 16), a bone pin end (Illus 8.8, no 70 (101.5 SF 17), two flint fragments (not illustrated, 101.5 SF 19 and 39), four bone and shale beads from a rosary necklace (Illus 8.9, nos 89 and 90, 101.5 SF 22 and 26), a whalebone block (Illus 8.9, no 78, 101.5 SF 23) and a decorated and riveted bone (Illus 8.8, no 64, 101.5 SF 45). This layer also contained two sherds of SWGW, two sherds of Yorkshire type ware and two sherds of SPMRW. These last sherds, which date from the 16th to the 18th century, are the only finds which would not fit within the 12th to 13th century. Despite the late pottery, layer 402 is clearly not a post-medieval surface, as it was cut by the ‘scallop’ burial (context 155, see Chapter 5.3.3) which was radiocarbon dated to the 13th to the 15th century.

Outside the chancel to the E was a silty sand layer which sealed the platform (328) and pre-dated the foundations of the Cluniac church. This layer was a silty sand (327), 0.1m deep, which contained no pottery but did contain a bronze handle (Illus 8.5 no 33, 101.4 SF 40), and two joining spindle whorl fragments with decorative grooves (Illus 8.5, no 95, 101.4 SF 45 and 46) along with a piece of bloomery bottom.

This church is likely to have been in use for about 50 years before the establishment of the Cluniac priory. It may well have continued to be used as a church by the Reading monks for some decades after their colonisation, until it was replaced by the larger church in the 13th century.

5.3 Period II: medieval

5.3.1 Phase 3.1: colonisation and construction of the Cluniac priory, 12th century

It seems likely from these excavation results that the monks from Reading Abbey colonised a site which already had an association with a martyred saint and a cemetery dating back at least 500, if not over 600, years, along with a standing church which was probably more than 150 years old. From the archaeological record it is not possible to know the condition of this existing church by the mid-12th century. It may have been kept in good repair, which the reuse of the W doorway would suggest. It is clear that this church served the community until a larger church was built in the 13th century. The Period II structures have been divided into three phases (see Illus 3.7); phase 3.1 includes the initial construction of the E, S and W ranges. Phase 3.2 includes some alterations to the E range and phase 3.3 includes the construction of the final church and alterations to the E range.

The construction of this small priory may have taken decades to complete, and so it is likely that temporary timber structures would have been constructed to provide accommodation and facilities for the monks and their workforce. It is likely that these would have been constructed in the vicinity of the church and replaced over time by stone-built ranges. A single post-hole beneath the S range (591, Illus 5.12) is tenuous evidence of a possible colonisation period structure here.

The excavations concentrated on the core of the priory, consisting of four ranges set around a cloister (Illus 5.6). The N range comprised the church, the E range comprised the chapter house with storage undercroft below and dormitory above, while the S range contained the refectory, and lastly the W range perhaps housed the prior's quarters and offices. The latrine block was located at the SE corner of the E range. Further ranges are known to have existed to the NW and SE, but these were not extensively excavated. The layout of the claustral plan is discussed by Fawcett in more detail in Chapter 10.

The wall cores were constructed of dolerite quarried locally from the bluff close to the W of the site. The facings of windows and doors, however, were of dressed sandstone brought over from the quarry at Fife Ness on the mainland. This stone was identified by a visiting retired mason from Crail who was familiar with Craighead Quarry, Fife Ness, which is now within the golf course. The mortar used was a hard white mix that included shell sand, probably from Kirk Haven beach, 100m NE of the priory. The core arrangement of conventual ranges was built over the S limit of burials within the platform (Chapter 4), with both the church and E range overlying the earlier platform revetments. The bedrock outcrop on the S side of the site was levelled in an attempt to provide stable platforms for the construction of the standard arrangement of four ranges around an open cloister garth. This difficult site

necessitated the creation of no less than four different levels, with the church, E range and cloister being the lowest, with a step up to the cloister walk and W range, with another up to the S range, and yet another to the latrine block.

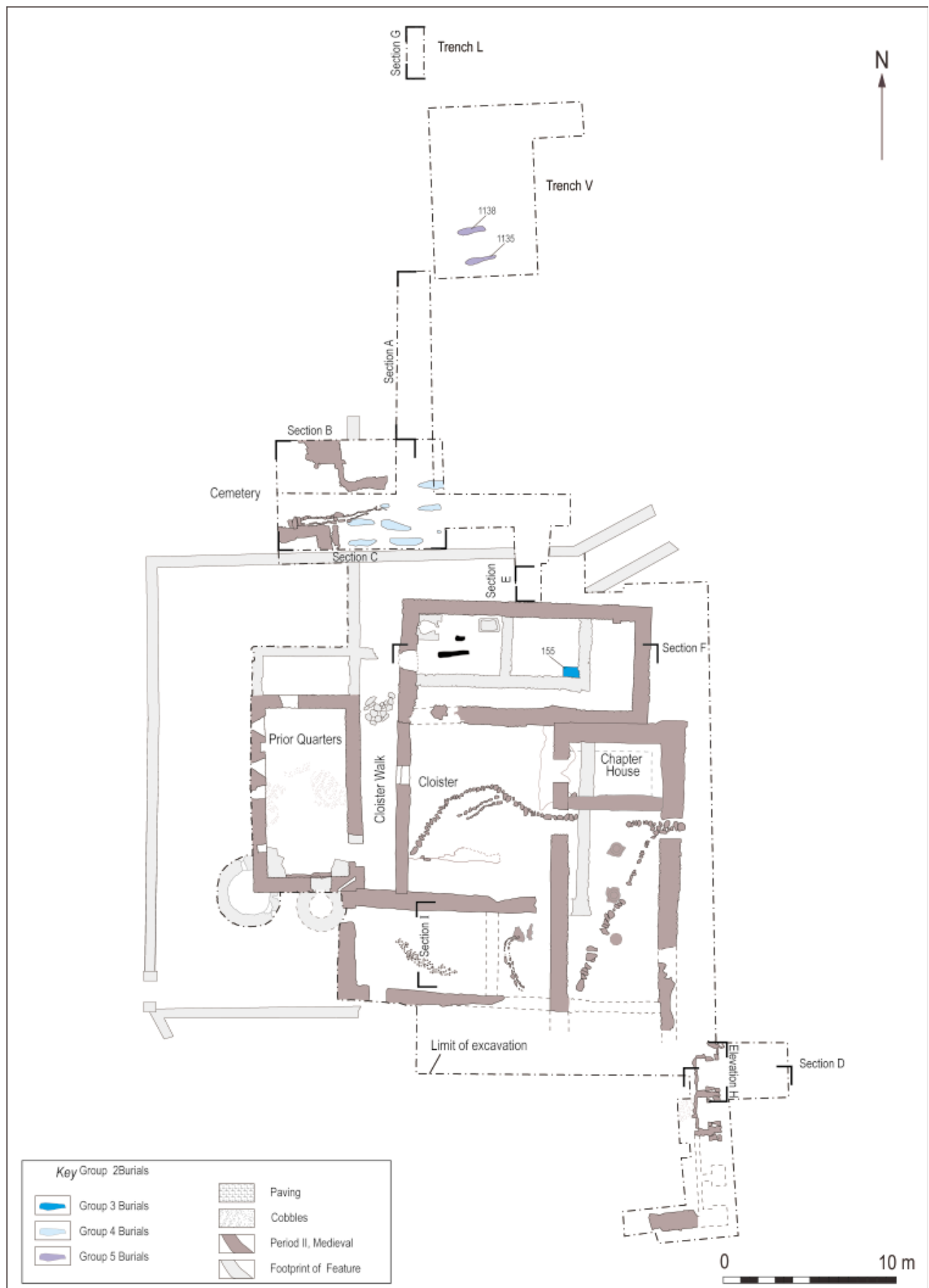
The east range and chapter house (Illus 5.7)

The E range structure measured 11m N–S by 5.2m E–W internally, and was originally planned as a simple rectangular structure on two floors. The ground floor was divided into two rooms, interpreted as the chapter house and undercroft. This structure pre-dated the priory church that abutted the N end wall. The E range was constructed partly over the cemetery and partly into outcropping bedrock.

The sloping nature of the site required considerable effort on the part of the builders, who had to excavate a usable platform from the bedrock to a depth of 1m at the S end. The N, E, and W walls (201, 202 and 214) were constructed onto sloping ground that resulted in the S end of walls 214 and 202 sitting on bedrock. The full extent of this range was not identified as the S end was disturbed by post-medieval alterations, however it is probable that the structure linked through to the latrine block (see below). The S wall may have been located in the vicinity of wall 220, which sealed demolition debris (224) and was therefore post-medieval in date. In the NW corner a raft of stones with an edge on the W side (392) lay beneath mortar (394, not illustrated). This mortar is likely to be a remnant of the foundations of the NW corner. The wall foundations were up to 1.35m wide and were constructed of angular stone with a rubble and clay core. The W wall was only partially uncovered; it was 0.9m wide at the top and survived up to 1m high in the SW corner.

There was an external doorway towards the N end of the E wall, 0.8m wide, with dressed sandstone jambs. A socket for a door pivot was visible in the base of the N jamb. A corresponding doorway led through the W wall, to form a passageway or slype, following a standard monastic arrangement in affording access to the cloister through the E range. It is possible that this range was originally partitioned with timber screens, although no evidence of these survived. There was very slight evidence for a dividing wall (499), at a point, about 11m S of wall 201. This consists of a straight edge to the bedrock and a line of angular blocks that may have formed a wall or partition base. If this division is real, then the primary internal planning of the E range would have consisted of a large central space with smaller rooms of similar size (3m by 4m) at either end.

The N end may have been partitioned off for use as a chapter house during this primary phase, with an entrance into the chapter house directly from the cloister through the W wall (Illus 5.7). Within the chapter house there was a layer of compact silty clay and mortar (329) that sealed a burnt layer (410) (Chapter 5.2.2). Layer 329 was rich in fish bone and also contained two nails, four iron ore nodules and six sherds of SWGW.



Illus 5.6 Overall plan of the priory buildings.

The iron ore was perhaps brought to the island by the monks' workforce and used for making nails or other fittings. This would suggest the presence of a smithy during the colonising decades.

To the S, the remaining area is thought to have served as an undercroft for storage or office space. There was no evidence for supporting columns at this stage, suggesting that the floor above, if one existed, would have been supported by timber posts and joists. Although there was no evidence for post-holes or post pads. The floor sloped up N–S with a marked difference in level of c0.7m. At the S end, layers 436 and 497 sealed the bedrock and a natural deposit of compact orange sand (498). Layer 436 was a fairly compact silty sand which contained a sherd of prehistoric pot (vessel 12), animal bone and a single nail. Above this was a compact silty sand with mortar (497), which contained fragments of fish bones and shells. Layer 497 sloped upward gently towards the S but did not reach the S wall (220), stopping 4.4m short of it over bedrock. A drain (480) was formed by cutting an irregular-shaped track into the surface of layer 497 and the bedrock (Illus 5.7). It was about 0.1m deep with no basal or side stones. It was capped with irregular slabs between 0.2m and 0.6m long and up to 0.1m thick. The drain ran for a distance of 11m from the SE corner diagonally across the room, exiting through the doorway in the E wall. The fill of the drain (482) contained one sherd of SMR.

The latrine block (reredorter) (Illus 5.8–5.10)

The remains of the monk's latrine block was found at the SE corner of the claustral core, just where the latrines might be expected to be found in terms of standard conventual planning. This comprised what was probably a four-arched latrine block, measuring approximately 10.5m in external length. The surviving springers for three arches (1203, 1202 and 1238) formed the base of the E wall of the latrine block which was aligned N–S. The W wall of this structure was not fully excavated. The arch bases were constructed of dressed sandstone blocks, surviving to a maximum of four courses high. The N and central arches were 1.6m wide with a reconstructed height of 1.2m. The S surviving arch base (1238) had a third arch springing from its S side, presumably towards a fourth arch base, which had been truncated by the construction of later post-medieval walling. The chutes formed within this double thickness E wall were 0.48m wide (1241). Only the E face of this rubble wall was exposed. A drain outflow (1240) would have flushed the N end of the chute and the sewage channel with clean water. In the extreme SW corner of this area a remnant of walling (1232) was revealed. This consisted of two faces of basalt blocks pointed with light-brown mortar. The wall was 0.9m wide and up to 0.25m high. Wall 1232 was similar in width to the monastic walls seen elsewhere and could be the remnants of the original S wall of the latrine block. The SE corner of the latrine

block had, however, been destroyed by the construction of a post-medieval wall (1234).

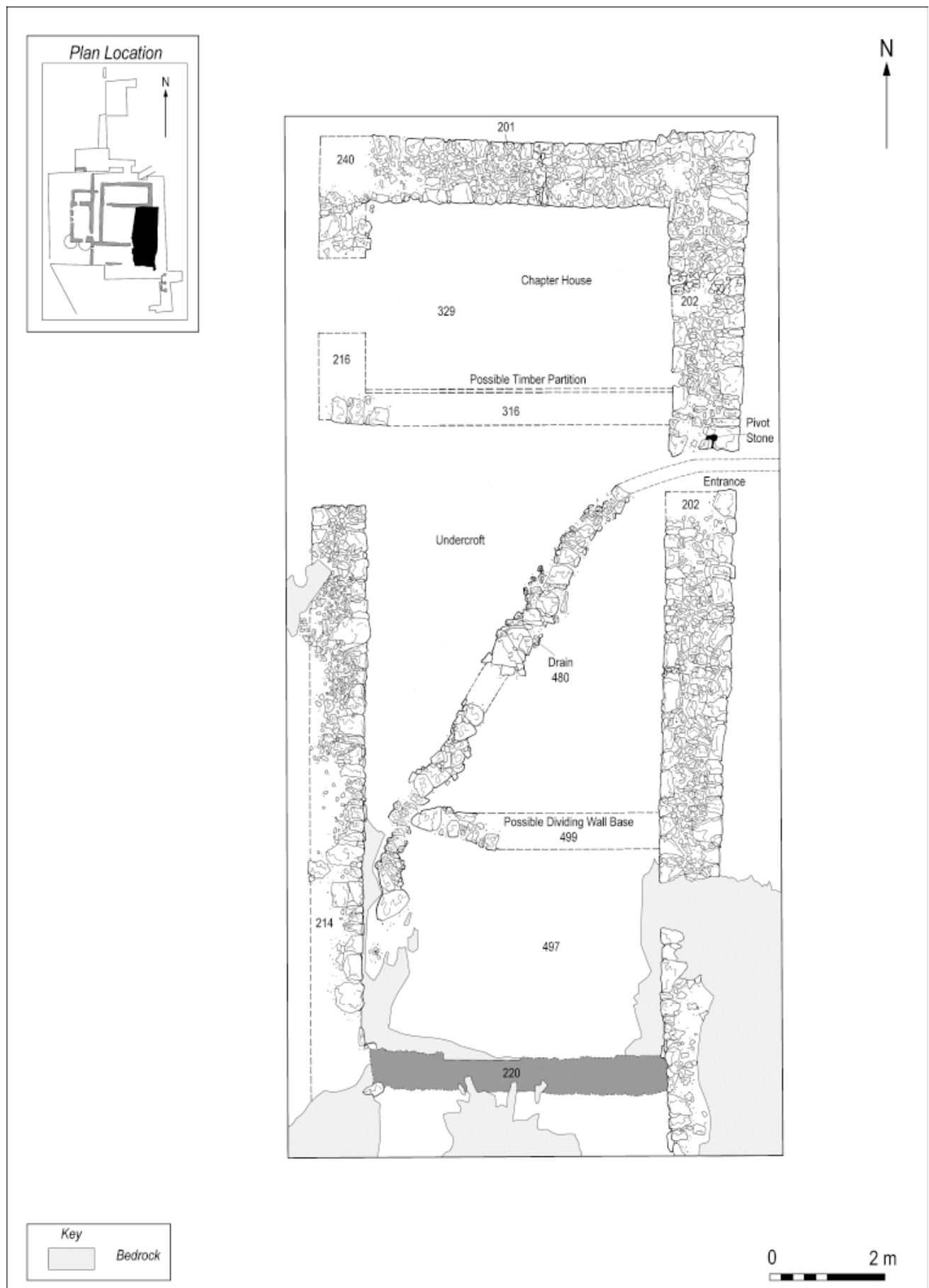
The latrine block was located at the corner of a reversed L-plan arrangement, articulated between, and with direct access from, the E range dormitory to the N, and an external S range to the W, of which very little is known. A long toilet seat, or maybe even four cubicles, would have been located at a higher level above the chute, corresponding with the four openings in the E outer wall. The E wall of the E range was entirely robbed out in this area and so its junction and relationship with the latrine block was unclear.

Evidence of an E–W rock-cut drainage channel was found in the bedrock immediately E of the latrine. Sewage fell down the chute and out through the arches into a shallow channel of indeterminate width running E–W. At the N end the main channel was found running E from the N latrine arch. This was flushed by the drain outflow 1240. The drop was 1.3m from the base of the back wall (427) to the bottom of the channel at the E edge of the excavation. Deposits containing probable human faeces remains were found within the channel (Hall, Chapter 7.8), along with midden material and lime. The primary deposits at the base of the chute consisted of a deposit of yellow-grey clay with mortar flecks (1223/437). Half of a pair of copper tweezers or clips was found within this clay (Illus 8.7, no 23, 101.5 SF 62), along with sherds of SWGW. This was sealed by a compacted mottled surface of mortar with sand and angular stones laid flat (1224) and sealed by a thin deposit of yellow-brown fibrous material (1220). This layer was sealed by a crust of brown material about 0.03m thick, which resembled hardened toffee (1214). This crust did not extend beyond the arches. Within the outer channel the primary layer was dark-brown silt over pebbles (1217, not illustrated) which did not contain finds. Above this was a dark-brown clay loam up to 0.2m thick (1216) which contained SWGW, a sherd of a French vessel (Will and Haggerty, Chapter 8.5), animal bone and shell. The French sherd matched another found in layer 1118 in Trench V. Above this was a layer of grey clay (1219) which contained a SWGW handle.

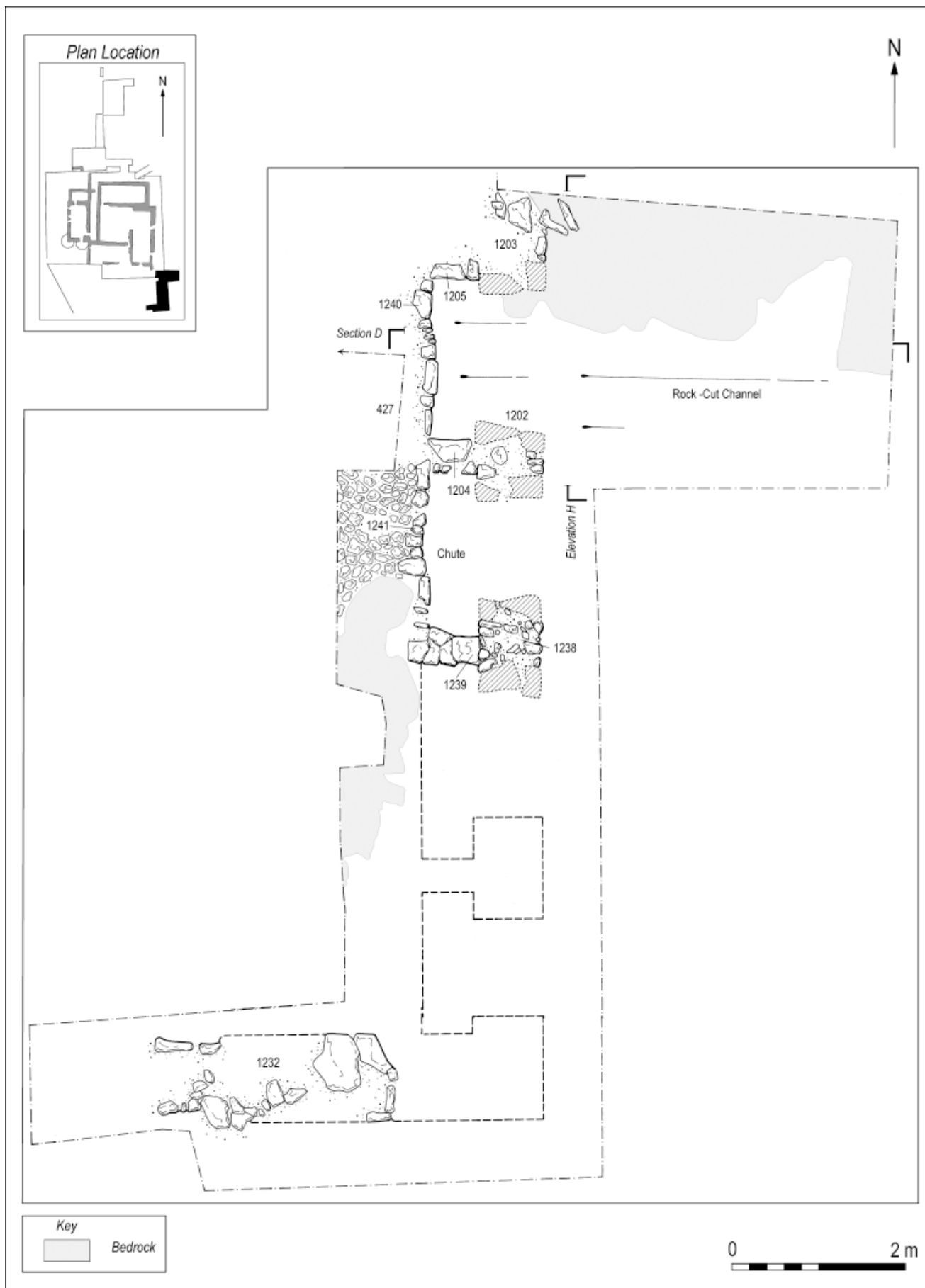
Three samples from the latrine were analysed for macroplant material; these contained some plant remains, which surprisingly seemed to be derived from midden deposit rather than from digested food remains (Miller and Ramsay, Chapter 7.6). There was no continual source of running water for the latrine, so the chute would have required occasional flushing out, perhaps with rainwater collected in butts for this purpose. The presence of lime may represent an attempt to purify the latrines.

The south range (Illus 5.12 and 5.34)

The S range was the most problematical area to excavate because of the great depth of deposits, up to 1.7m in depth, that sealed its floor, coupled with the impact of extensive post-medieval activity. The N wall of the



Illus 5.7 Plan of east range, phase 3.1.



Illus 5.8 Plan of latrine range.

range (502) was faced with angular stones and some very large boulders around a rubble and mortar core. It was c0.8m wide and survived up to seven courses, a maximum height of c1m. This wall was built directly onto uneven, outcropping bedrock. Its E end terminated with large dolerite blocks, c0.4m short of the E range wall (214) which was probably shared as the E wall of the S range. The junction of these walls had been disturbed by a post-medieval pathway (566). At the W end, the wall (502) abutted the SE corner of the W range, overlapping for 0.8m. It was impossible to determine which of these two walls was constructed first.

The W wall (1302) was of similar construction to the N wall. It survived to a height of 0.3m, with an entrance 0.8m wide in the NW corner (1316) with sandstone door jambs. The S wall (584/1312) was up to 0.9m thick and 0.3m high at the W end, with both surviving faces of angular stones and a mortar-and-rubble core. There was another entrance, 1m wide, with sandstone door jambs (1318) in the SW corner of the range facing the kitchen midden. Towards the E, where the bedrock outcropped, the wall became a single rough face of small angular flat stones with mortar bonded onto bedrock. This continued the line of wall 220 (the S dividing wall in the E range) and was of similar construction.

The floor layers had become stratigraphically separated from the walls because of the outcropping bedrock and later disturbances, though it was possible to identify, in small areas, a monastic-period floor and the layers beneath. A possible old ground surface of black silty loam (479, 341) lay over bedrock in pockets up to 0.4m in depth (*see* Miller and Ramsey, Chapter 7.6). Above this, in the W, were successive layers of gritty silt and rubble (478 = 454, 475, 474, not illustrated). Layer 474 contained sherds of SWGW and one sherd of SMR. This was sealed by a layer of angular stones (471) which also contained SWGW. In the E there were several poorly defined groups of stones (286, not illustrated, 581 and 587) which perhaps formed remnants of a N–S wall or kerb, but which could not be fully examined. These remnants of walling may indicate that there was an entrance in the SE corner of the S range, giving access to either or both the latrine block and the S external range.

A single post-hole (591) was seen cut into the surface of 454. This post-hole was 0.35m in diameter, 0.15m deep and filled with dark sandy silt with packing stones (449). No other post-holes were seen in the vicinity and so its interpretation is problematic. Two shallow scoops were seen in the surface of the levelling material. Scoop 465 was centrally located and filled with sandy silt with animal bone. A linear scoop (456) was found 2.2m to the S, filled with silty loam with burnt patches and tile. This feature perhaps represented the base for some internal timber furnishing built up against the S wall.

Patches of a level, compact, mortar layer (552, 560, 556, 577 and 579) sealed these primary layers and features. This was interpreted as the remnants of a medieval floor surface. Layer 560 contained some

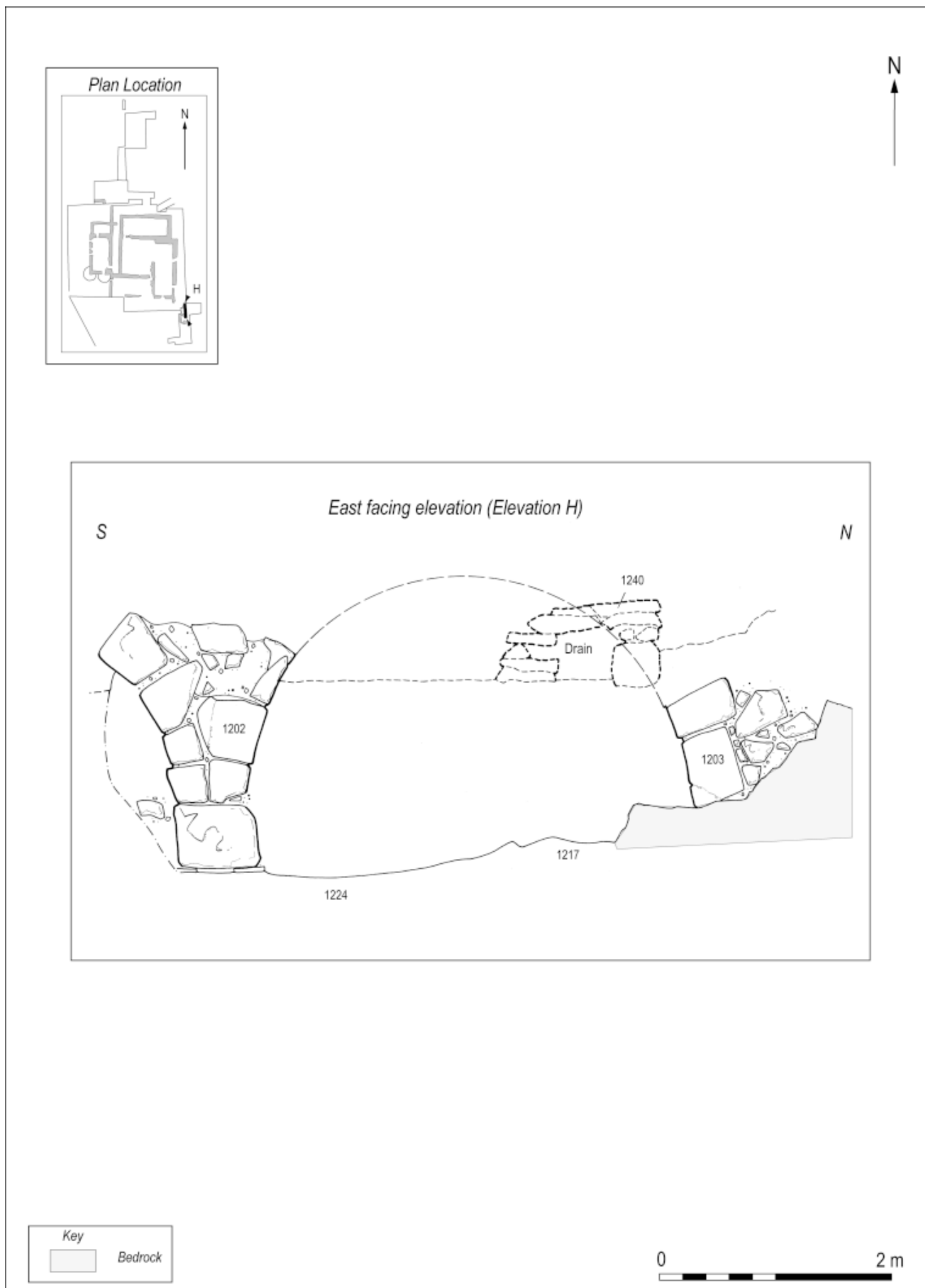


Illus 5.9 *Excavating the sewer trench: latrine arch piers 1202 and 1203 with drain 1240 behind.* (© Fife Council)

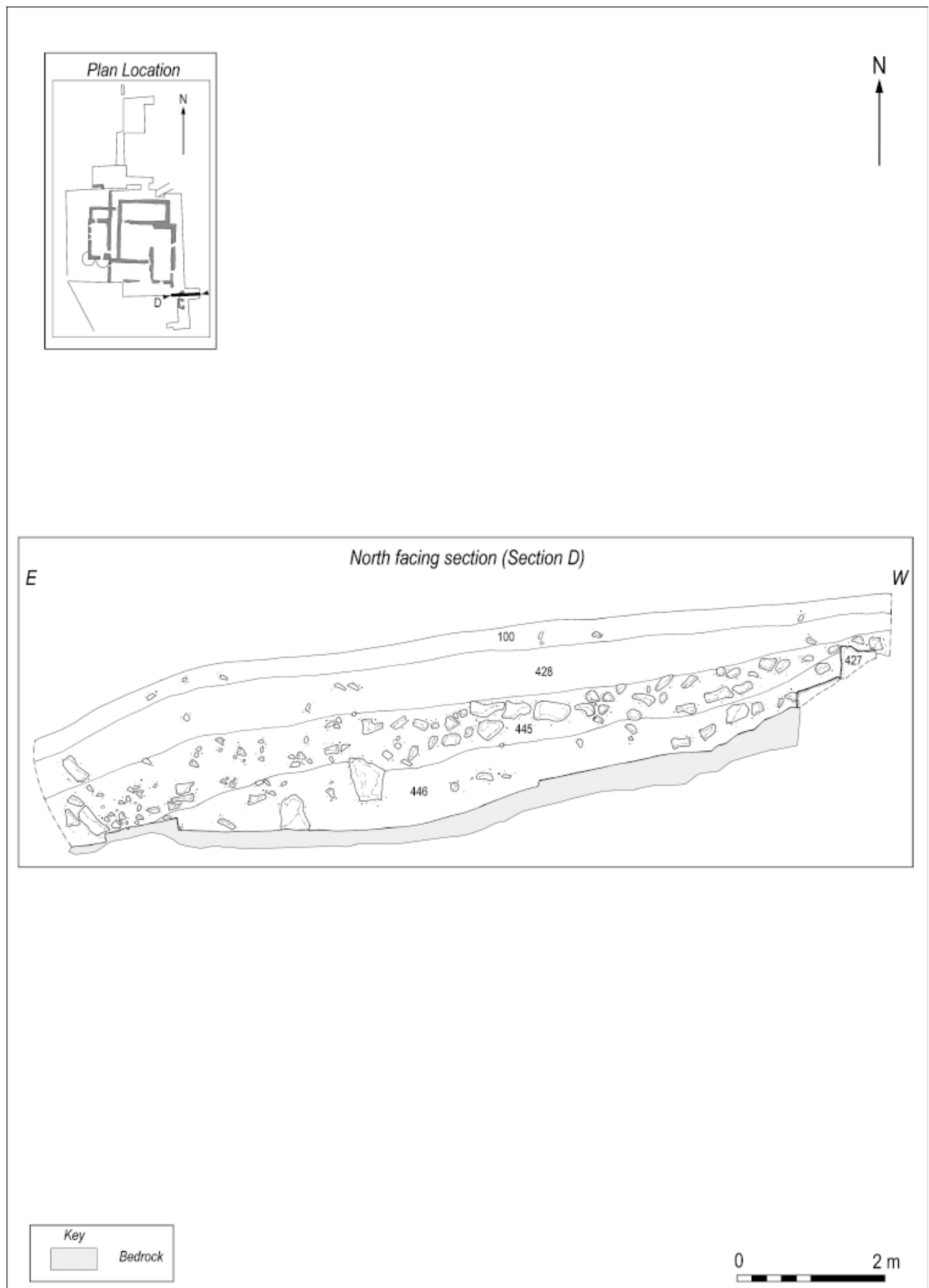
animal bone but no other finds. As sherds of SWGW and a single sherd of SMR (13th–15th century) was found beneath floor 560, this suggests that this floor was laid, or at least repaired, towards the end of the Cluniac occupation.

A U-shaped, pebble-filled drain (570) was cut through the mortar surface, and curved for a distance of c6.5m across the S range from the outcropping bedrock in the SE towards the NW corner, towards the monastic *lavatoria*. It was 0.5m wide, 0.15m deep and contained sherds of SWGW. On the E side of the range was a stone-lined drain with flat capping stones (545). The channel was formed of small angular stones set on edge c0.1m apart. In plan it consisted of two curving sections separated by a large stone (possibly outcropping bedrock) lying across the drain, which meant that this could not have functioned as a single drain. At the N end the drain diverged into two channels (583) with two cover slabs (515). The drain fill (572) contained no ceramics, and the results of the trace metal analysis did not indicate the presence of lead pipes (Cressey, Archive).

There is some evidence which suggests that there may have been a N–S dividing wall within the S range about 2m from the E wall, just W of the drain 545. There appears to be a difference in function between the W side (with the pebble drain) and the E side (with the stone-lined drain). This boundary corresponded with outcropping bedrock at floor level, which could have



Illus 5.10 Elevation of latrine arches.



Illus 5.11 Section D through sewer trench.



Illus 5.12 Plan of south range.

provided a suitable foundation for a wall or timber partition. The N-facing section did indicate a vertical break in the overlying deposits (not illustrated). Also, a distinct layer of boulders and mortar (543) extended across the S range at a higher stratigraphic level than the mortar floor, as if collapsed from a wall during the post-medieval period (*see below*). This wall would have divided the S range into two rooms of uneven size. The fragmentary remnants of paving or flags (571, and 588 (not illustrated)) were seen against the section in the putative E room.

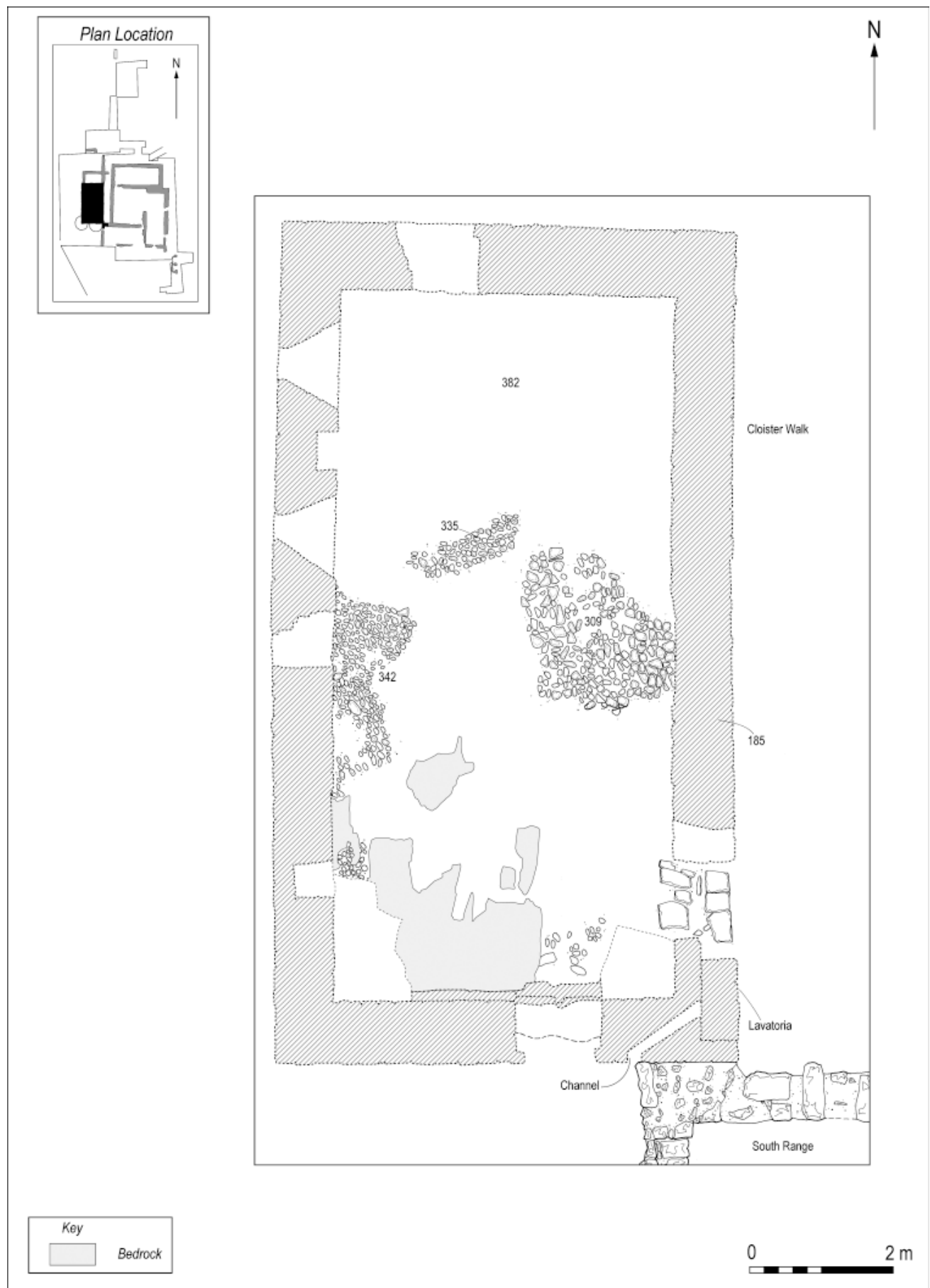
The west range (Illus 5.13 and 5.14)

The W range was the best preserved and only monastic structure visible prior to the excavations. The archaeology of the W range was very different from that of the other ranges, as a result of the post-medieval alterations and its continued use. It became known as St Adrian's Chapel, and was once the resting place for a stone coffin (Stuart 1868, lix) which disappeared during World War II. A local tradition states that a stone coffin, which now lies in the Anstruther Wester churchyard, came from the May. The architecture of the W range is described by Fawcett (Chapter 10). The main features consist of two splayed lancet windows in the W wall and a door in the S wall, which are thought to date from the turn of the

12th and 13th century. There would also have been a door in the E wall, giving access to the cloister, although the evidence for this was lost when the present doorway was inserted at the S end.

Two small test trenches were dug to examine the foundations of the E wall (185). The foundations were found to be shallow, consisting of only one course of angular slabs in the S and two courses towards the N. These foundations were offset 0.2m from the base of the wall. The interior of the W range measured c4.8m by 9.5m which was slightly narrower than both the E range and the church. The S end of the range was built onto bedrock, while the N end had been built over a deposit of silt with rounded cobbles (1226), interpreted as being part of the cemetery platform. Within the structure the foundations were then infilled with angular rubble (382) and silt (1227). Layer 382 contained no pottery or other dating material, but layer 1227 contained three sherds of post-medieval pottery. This was interpreted as evidence for disturbance, probably during rebuilding work, rather than providing a date for the initial wall construction.

In the SW corner there were two thin patches of mortar with coal, animal bones and sherds of SWGW overlying the bedrock (332), which may have been a remnant of an early floor with later midden compacted into it. An irregular hollow filled with small cobbles,



Illus 5.13 Plan of west range, phase 3.

interpreted as a drain, extended across from the W wall to the E side (342 and 335). The pebble-filled drain (342) was similar in nature to that in the S range, which is likely to have been medieval in date. A rough cobbled surface spread over the E side (309; RCAHMS [1933]) suggested that the E wall had been substantially rebuilt and that the present entrance at the S end of this wall may not have been original. However, the substantial threshold stone within this break in the wall does suggest that there was an original entrance here, although the sandstone jambs have been removed. A chute through the SE corner of the W range could have supplied water to the arched recess on the cloister side of the E wall, which probably contained a basin for hand washing.

The cloister (Illus 5.15 and 5.16)

The cloister was enclosed by the four ranges, except in the NW corner where there was a gap between the church and the W range, allowing access from the W cloister walk into the church. The area of the cloister was not quite square in plan, being c10m N–S and c11m E–W (measured between the outer walls of the main ranges). This all strengthens the idea that the priory was constructed during more than one episode of building.

Cloister alley walks

A 2m-wide walkway extended down the W side of the cloister, enclosed by a narrow wall (171). This wall abutted and ran between the SW corner of the church (111) and the NW corner of the S range (502). It survived up to 0.8m in height and was constructed of angular stone with a mortar-and-rubble core, similar to the other monastic walls, but also included occasional red roof tile fragments in its upper courses, indicating a rebuild in the medieval or post-medieval period. This wall is likely to have been the base for an open arcade, which supported a lean-to roof, covering the walkway, as seen at other monasteries. There was a sandstone step down into the cloister towards the N end of this wall (251). This step had a scored diamond pattern chiselled into the top, probably to create a non-slip surface.

The W cloister alley walk had been incorporated into the post-medieval replanning of the site; it was decided to retain this good surface within the monument conservation and presentation programme. A small area was excavated however, in the NW corner, between the wall (171) and the W range. The earlier paving slabs (470, *see above*) were sealed by a wall (472) of loose angular and rounded stones, 0.35m wide and c0.3m high, which ran between the Cluniac church and the W range. This wall would have blocked access into the cloister (it was rather high to be a step), and it is possible that it pre-dates the cloister walk, which would therefore have to have been at a higher level. The area to the S of this wall was infilled with a stony layer (469, not illustrated) that contained SWGW and tile. A mortar-

rich layer (463/177) sealed 469 and has been interpreted as the remains of the alley surface on this W side of the cloister, 0.1m below the level of the surviving post-medieval surface.

There was evidence at the S end that the cloister walk turned the corner and continued along the outside of the N wall of the S range. In this area of outcropping bedrock there were remnants of a terrace c2m wide, running parallel with the S range. This terrace was c0.4m higher than the rest of the cloister and was crudely revetted by angular stones on its N side (255 and 400).

The base of the upstanding wall (171) continued across the SW corner of the cloister walk. The southernmost basalt stone of this wall was worn, and it is possible that this was in fact a step. This step up would have been 0.35m high from the W walk into the S walk. The monastic mortared surface to the W of wall 171 was not investigated in this corner, in order to preserve a post-medieval pebbled surface (259). At the E end the walk merges into the outcropping bedrock, and there were no further traces of a formal walkway along either the E or N sides of the cloister. There was a fall of 0.35m between the level of the S walk, and the ground level at the N side of the cloister adjacent to the likely S entrance to the church.

Layers in the cloister garth

Bedrock outcropped over much of the cloister. The pre-priory burials on the E side of the cloister (1211 and 376) were sealed by layers of dark peaty silt (492, 490) up to c0.3m deep, which contained SWGW and 1 sherd of SMR. A charnel pit containing human bone (496, Illus 4.9) was cut into these layers, which probably marks the construction of the priory and the associated disturbance of a number of burials. A more extensive layer (293) sealed the charnel pit. It was dark sandy silt, up to 0.1m thick, which extended across the cloister from the outcropping bedrock in the S and abutted the cobbled platform (392) against the wall of the E range. No pottery or other finds were retrieved from this layer. This may have been a remnant of a garden soil created within the cloister garth.

Drains (Illus 5.16)

A drain (289) had been cut through the deposit 293. It was seen for only 2.8m in length, curving around peaks of outcropping bedrock. Flat stones set on edge formed the sides of the drain, with a channel 0.05–0.1m wide. No cover slabs survived. This drain had been replaced by a second stone-built drain (373), which presumably used the same route for much of its length, leaving only the short stretch of 289 'high and dry'. This second drain abutted the wall 171 in the SW corner of the cloister, where it appeared to exit from beneath a long lintel stone set within the wall. The drain curved across the cloister for about 11m, and continued beneath the passage through the E range. Within the cloister the

drain had flat cover slabs with sides formed of angular stones of varying size depending on the height of the bedrock. The channel was c0.2m wide and 0.25m deep. There were no finds in the small section that was investigated, and no evidence of any lead or ceramic pipes. The fact that the cover slabs were intact suggests that these drains may have continued in use into the post-medieval period. Remnants of a possible surface, composed of silty sand with small grit (256), was seen in patches across the cloister, sealing the drains. This contained sherds of SWGW, animal bone, tile, nails and an iron bolt.

It is therefore the case that the medieval cloister garth had a formal cloister walk around only two sides. It is probable that the walls 171 and 400 were the bases for a cloister arcade supporting a lean-to roof, but there was no evidence for the continuation of this walkway around the E and N sides. These cloister walks were at different levels because of the sloping nature of the site. No well, cistern or other features were detected within the garth. There was no formal garden here but rather outcropping bedrock that was gradually sealed by an organic soil. The outcropping bedrock within the cloister would have effectively precluded burial in the southern area. Several deposits within the cloister, associated with the construction of the priory, contained large numbers of disarticulated human bone, including the contexts 381, 477, 496 (a charnel pit) and 492.

Kitchen midden (Illus 3.4)

Immediately to the S of the claustral core was an area of rough grass full of rabbit burrows, locally known as the 'kitchen midden'. Prior to the excavations, numerous finds of ceramic tiles and pottery had come from here in the upcast from burrows (di Folco 1981). Trial excavations here (Trenches E and H) revealed that the midden had built up to a depth of 0.9 m. This contained animal bone, roof tile, medieval and post-medieval pottery and shells. Unfortunately, the stratigraphy had been destroyed to such an extent by burrowing as to render worthless any analysis of the rich macroplant material and faunal remains within this midden.

5.3.2 Phase 3.2: further development of the priory, 13th century

East range (Illus 5.17 and 5.18)

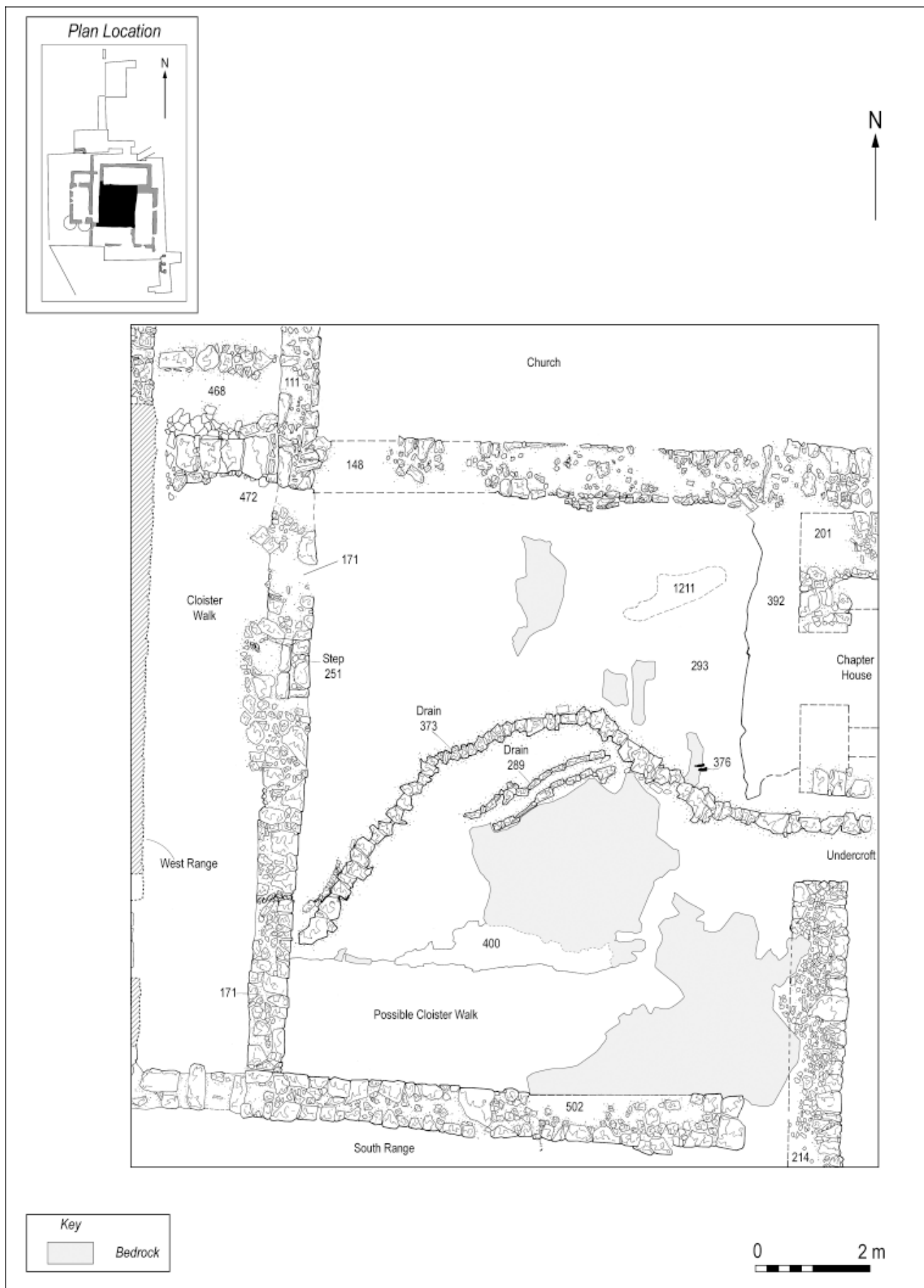
In this secondary phase the chapter house room was formalised by the replacement of the possible timber partition with a stone wall (316). It sealed layer 329, and was therefore not an original feature. Only the foundations of this wall survived, the upper courses having been removed by the construction of a wall in the post-medieval period. It created a room measuring 3m N–S and 5m E–W. This room would have continued to have been accessed from the cloister through an entrance in the W wall.



Illus 5.14 *West range interior.* (© Fife Council)

The floor layer was sealed by a bench base abutting the N and E walls (211 and 203). This benching was between 0.4m and 0.6m wide, formed of rectangular white sandstone blocks set on edge and with the space behind filled with angular rubble and mortar. The fill (also numbered 203 and 211) contained SWGW. These features were interpreted as the base for stone benches associated with the room's use as a chapter house, similar to those seen within the chapter houses at, for example, Dryburgh Abbey (Fawcett 1994, 100, Illus 77). The stone seating which capped the benching at Dryburgh did not survive on the May. Any trace of benching against the S wall had been removed by the activities of the post-medieval builders. There was, however, some evidence that suggested that the benching was post-medieval, or at least reused in this period. The excavator recorded that the foundation stones of 203 overlay the post-medieval wall in the SE corner. The benching could have been cut through for the insertion of the post-medieval wall and the sandstone replaced for reuse in the post-medieval period. There was also a single sherd of bottle glass from the rubble behind the sandstone blocks. This glass is dated to the first half of the 18th century (Murdoch, Chapter 8.6.6) and is therefore thought to be intrusive. This benching is however a defining feature of monastic chapter houses, although the finds evidence and structural relationships suggest that, in its final form, it is late.

Within the chapter house an irregular surface of crushed white sandstone (330) lay over layer 329 and filled the E side of the room, lapping up against the



Illus 5.15 Plan of cloister garth.

walls. This was probably levelling for the floor surface which consisted of dark-brown sandy silt with clay patches (317), which also lapped up against the walls and benching. It was up to 0.05m thick and contained three sherds of SWGW. There was no evidence that the floor had been tiled. The layer above was fine orange-brown silt up to 0.05m thick (315). It contained 14 sherds of SWGW, one of SMR and a strip of bronze (101.4 SF 35). Within the undercroft, the primary drain (480) was sealed by a fairly deep (up to 0.2m) deposit of rounded and subangular stones with sandy silt (228) that contained sherds of SWGW, animal bone, flint and shell. This was interpreted as being more imported material used for levelling the floor. The floor itself (352) consisted of a compact mixed silty clay (c0.03m deep), which sloped down slightly towards the E. A second drain (231) had been inserted into this surface. It started slightly S of the earlier drain, in the SW corner, and similarly crossed the room to exit through the E doorway, beneath the threshold, where it joined with drain 373. The drain cut (305) was shallow, c0.1m, and had an irregular profile, generally V-shaped with no side or base stones. The capstones (231) were more rectangular than those for drain 480 and measured between 0.3m and 0.7m in length. The drain was filled with angular rubble and dark-brown sandy silt (306). There was no evidence for a ceramic or lead pipe and no pottery was retrieved from within the drain.

Within the chapter house a mixed mortar surface with burnt patches was then deposited, containing red ceramic roof tile but no other finds (244). To the S of this, two substantial column bases were inserted into the undercroft, their construction cutting through the surface 352. A large pit (354), 1.15m in diameter, was dug and filled with angular stones (353) to provide a solid base for the N column (223). This base was 0.66m in diameter, and consisted of two half column sections. The southern base (232) was similarly constructed, but carved with a slightly different moulding (Fawcett, Chapter 10). The centre points of these columns were 2.7m apart and they were located along the midline of the undercroft. Seven sandstone column half drums were found in the vicinity of these column bases within the demolition rubble (*see below*). Each of these had mason's marks consisting of simple crosses. Fawcett has suggested that the column bases are early 13th-century in style and would have supported a timber floor for a first storey (Fawcett, Chapter 10). There is a problem however in reconstructing how an upper floor was supported on only two fairly closely spaced pillars. It is therefore possible that a third support existed to the S, all trace of which has been lost. There was certainly no substantial foundation pit for a column such as existed for the other two.

The demolition debris found in the subsequent phase (Chapter 5.3.3) also contained octagonal pilaster shafts, ceramic roof tile, some complete fragments of plain window glass and lead cames. The finds indicated the nature of the roofing material and the presence of painted glass windows within this range. The pilasters



Illus 5.16 *Drains in the medieval cloister. Post-medieval surface 259 at the threshold to the laird's house in the foreground. (© Fife Council)*

may have been from canopied seating in the chapter house, or perhaps from the cloister arcade.

Latrine

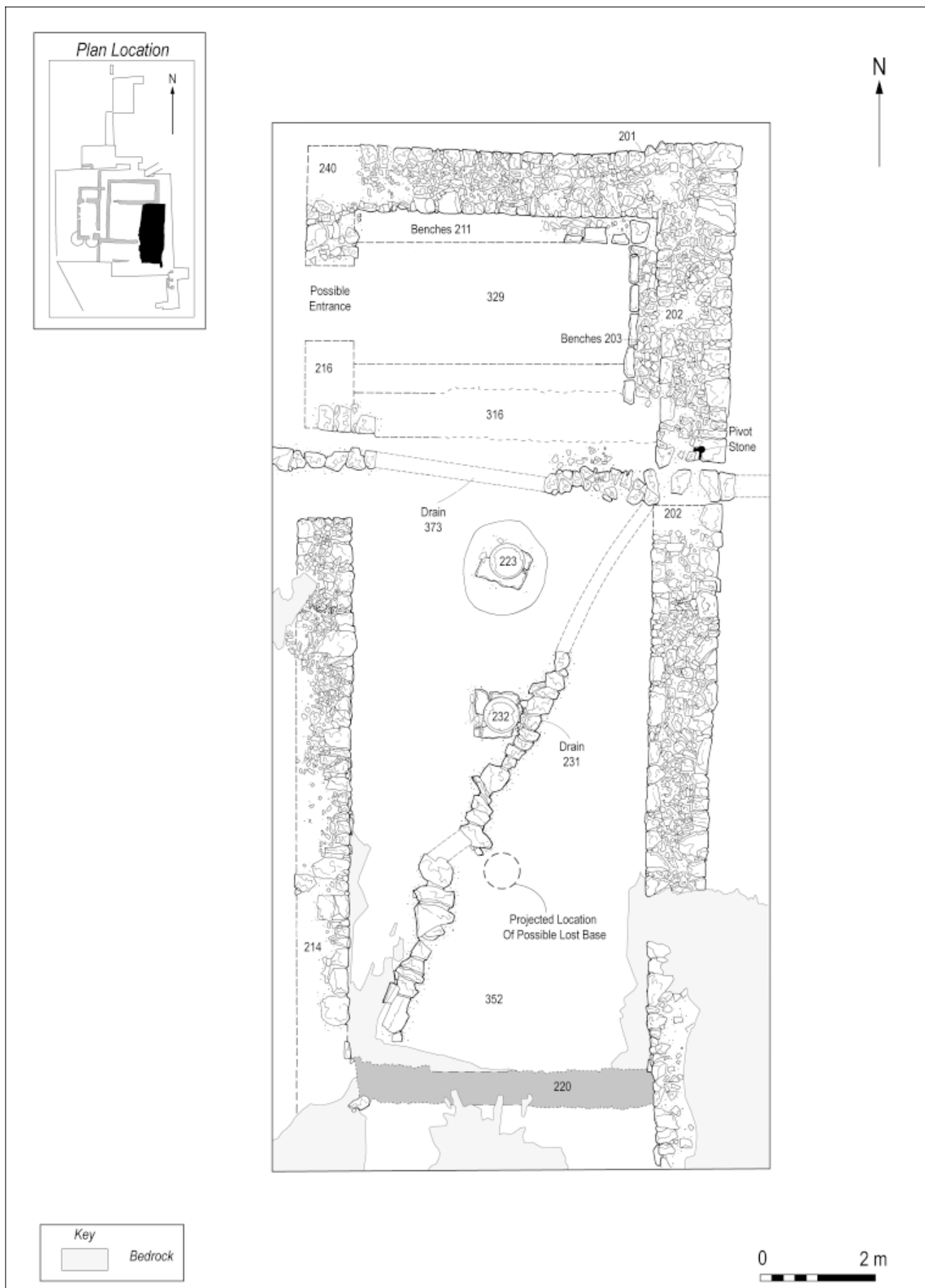
In this phase the latrine chute was subdivided by the insertion of narrow walls (1204 and 1239) to form four separate compartments (Illus 5.9 and 5.19). This possibly reflected a subdivision of the stalls at the higher level, created in response to a need for greater privacy.

5.3.3 Phase 3.3: late 13th–early 14th century

The Cluniac priory church (Illus 5.20–5.22)

The foundations of a substantial mortar-bonded stone church overlay the earlier churches. This structure has been interpreted as the church built for the Cluniac community, probably in the late 13th century, forming the N range of the conventual plan. There was no evidence in this church for any internal divisions or other architectural features, although various features in timber are all likely to have existed, such as dividing screens to separate the nave from the choir.

The foundations were built on a plinth of large flat stones and the walls were generally about 0.7m wide,



Illus 5.17 Plan of east range, phases 3.2 and 3.3.



Illus 5.18 East range with excavators in the chapter house, and drain caps exposed in the undercroft floor to south. (© Fife Council)

although in the SE corner where the wall abutted the N gable of the E range, the walls were up to 1m wide. The walls were faced with local basalt with a core of beach pebbles, rubble and mortar, similar to the walls of the E range. The walls survived up to three or four courses high, on average 0.8m in height. The N, E, S and W walls, (110, 112, 113 and 111) formed a rectangular structure measuring internally 13m by 5.2m. Remains of creamy-coloured lime plaster, up to 4mm thick, were seen in patches on the internal face of both the N and W walls. The S wall had been most severely robbed and for much of its length only the basal stones (148) survived. A mass of masonry external to the NE corner can be interpreted as the base for a buttress, necessary to provide extra support for the E gable, which was built on the edge of a steep slope down to the harbour.

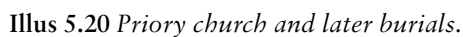
There was a doorway in the centre of the W wall with a sandstone door jamb on the S side with a door check inset, 0.1m wide. The N door jamb had been robbed. There was no evidence to suggest whether the door was single- or double-leafed. Assuming that the doorway was central to the building, it is possible to say that the door would have been 0.8m wide externally, widening out to 1.2m internally. The level of the threshold indicated that the contemporary ground level in this



Illus 5.19 Latrine: looking south along the wall of arches, showing later subdivisions within chute with wall 1204 in right foreground. (© Fife Council)

area during the Cluniac period would have been at least 0.6m below that of the post-medieval path. A decorated voussoir was found built into the post-medieval smithy, and this may have come from the original W doorway (Fawcett, Chapter 10). It would be usual for there to have been at least one door in this wall giving access from the cloister. The most likely position was marked in the S wall, at the NE corner of the cloister, by a long block of stone that ran across the full width of the wall. It is possible that this was the foundation for the E side of a door jamb.

The foundations of the N wall (110) and its relationship to the underlying building platform were examined with a narrow trench, 1.2m wide, cut through the post-medieval pebbled path (104) to the N of the monastic church. The platform was sealed by a layer of mid-brown clay loam with sandstone fragments, fish bone and shells (912), which in turn was sealed by a layer of dark brown loam (838). The foundation cut for the church wall (842) was 0.9m wide cut through 838. A large, flat foundation slab was laid within this cut. This slab extended 0.2m beyond the face of the wall. Within the foundations a mortar lens (842) was sealed by a mid-brown loam (843) which was similar to 838. Layer 912 contained one sherd of SWGW and one sherd of



Floor layers (Illus 5.20 and 5.22)

The E end of the third, pre-Cluniac church was sealed by a compacted silty surface with mortar (152, not illustrated), which abutted the rubble 163 and contained SWGW. A thin mortar lens (151) sealed layer 152 and above this was a brown silt with mortar, shell, bone and coal (150). This layer was probably a midden deposit rather than a floor, because it contained mortar, coal, tile and shells. It did, however, form a surface with the top of the rubble 163. The pottery within 150 was predominantly SWGW, and SMR with 11 sherds of SPMRW, suggesting an intrusion of post-medieval material, as the 'scallop shell' burial above (context 155), which cut 150, has been radiocarbon dated to the 14th to 15th century. At the E end of the church there were two layers of silty loam (130) which contained SMR and SWGW and may have related to the use of the church. There was no surviving evidence for an altar base at the E end. The inner wall foundations of the walls projected in places up to 0.08m, most noticeably in the SE corner of the church where they formed a



Illus 5.21 Section E to north of priory church.

ledge, possibly marking the level of the floor surface. Elsewhere, no *in situ* floor surfaces survived.

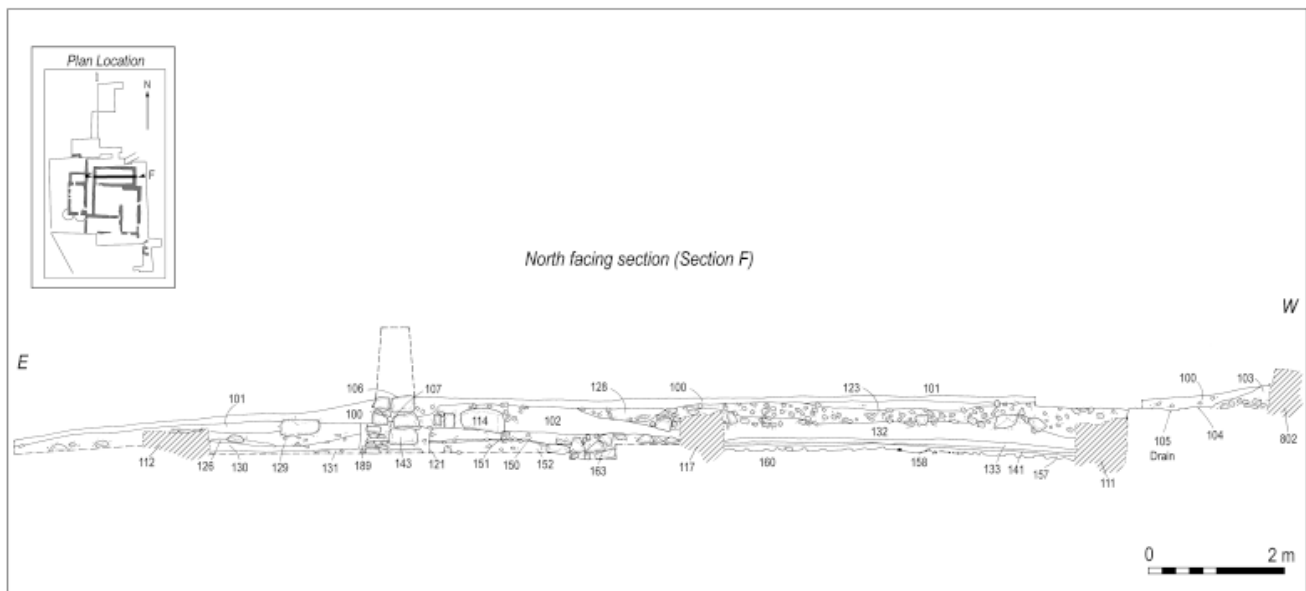
Burials 155, 158 and 170 within the church

Scallop shell burial 155 (Illus 5.23 and 5.24)

A grave that contained the noteworthy burial of a young/middle adult male, who probably died in his twenties, was found cut into layer 150 (Chapter 6). The burial was aligned E–W close to the likely location of the high altar, in what would have been a prestigious location. Pathological analysis has indicated that shortly after death the man's mouth had been wedged open with a sheep leg bone, and part of a scallop shell placed in the palate (M Bruce pers comm). This burial has been radiocarbon dated (at 2σ to the late 13th to mid-15th century (GU-4962). It was subsequently truncated by the construction of the post-medieval smithy.

Burials 158 and 170

A further two burials of adult males were found under what would have been the floor of the priory church (Illus 5.20). These two E–W burials were found c0.6m apart, in the NW corner, cut into the rubble 163 and the layer 160. All but the lower leg bones of the N skeleton (170) had been incinerated and destroyed during the use of a smithy furnace built here in the post-medieval period, to the extent that even the remaining bones furthest away were seriously affected by heat. The S skeleton (158) was missing its skull, probably because the surface from which the burials was dug was scoured out in preparation for the use of the structure as a smithy, the floor of which was formed by layer 141 (Chapter 5.4.1). Skeleton 158 was radiocarbon dated (at 2σ to the late 12th to 15th century GU-4963), which probably corresponds to the period towards the end of the use of the priory, or even after its abandonment by the monastic community.



Illus 5.22 Axial section F through priory church.



Illus 5.23 Scallop shell burial under floor at E end of Cluniac church, cut by smithy walls. (© Fife Council)



Illus 5.24 Scallop shell burial: detail of the skull. (© Fife Council)



Illus 5.25 *Medieval structures in cemetery.*

5.3.4 Medieval structures in the cemetery

Cemetery (Illus 5.25)

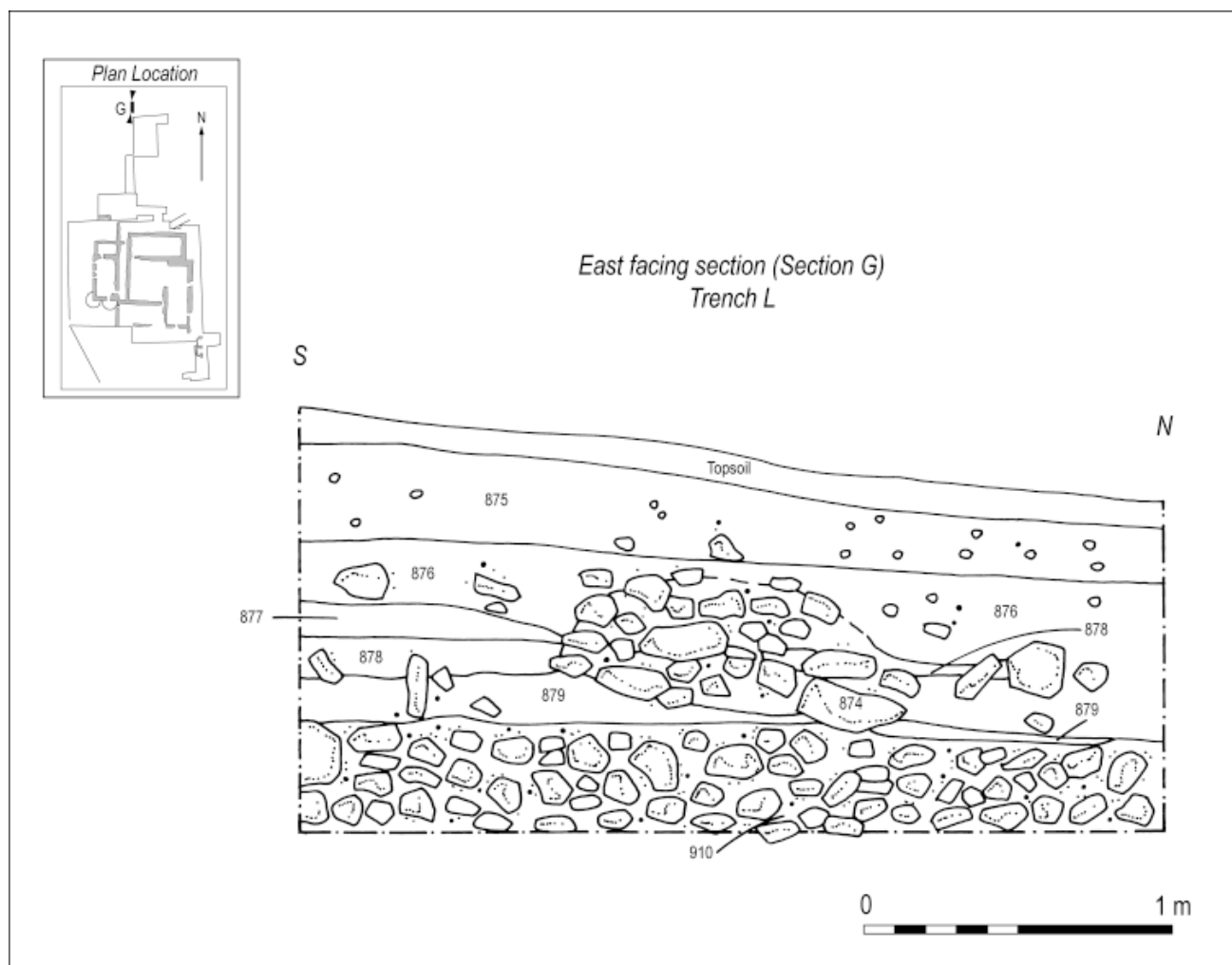
It was difficult to identify layers and events that can be definitively ascribed to the period of the construction and occupation of the Cluniac priory in the 12th to the 14th century within the cemetery, because the layers that immediately sealed the cemetery platform contained medieval and occasionally post-medieval pottery. These layers had also been disturbed by the insertion of the Group 4 burials (Chapter 4.3.4). The platform, located between the flat grave slabs (850) and the S edge of the cemetery, was sealed by an extensive layer of bright orange ash (819), c0.15m thick, which contained mortar, coal, and animal bone. The pottery within it was SWGW and SMR and so is thought to be at least 14th century in date. This was not industrial waste, but may represent evidence for the destruction of buildings. At the far W end of the cemetery (Illus 4.5) a layer of dark-brown soil (950) up to 0.2m in depth sealed the roadway (883). This layer contained SWGW and Low Countries Greyware, pottery dated to between the 12th and 15th century. A mid-brown silt (947) was found to the E with pottery sherds of predominantly SWGW, but also two sherds of SMR and one sherd of Low Countries Greyware.

The remains of two structures were found within the cemetery in this phase. Structure 933/812 and surface 937 were found in the NW corner of the cemetery, above

the medieval layers 947 and 950. This was thought to be the SW corner of a mortar-bonded building, surviving as a single course of walling measuring 3.8m long and 0.8m wide (933), along with a remnant of a foundation consisting of cobbles, mortar and flat stones (812). To the NW of this structure was a small patch of a rough stone surface (937), constructed of large flat and rounded stones surviving in an excavated area 2m by 1.5m.

The NE corner of another medieval building (936) was exposed in the SW corner of the cemetery (Illus 4.5). It overlay the much older roadway 883. This building was located c8m N of the N gable of the W range. Only a small part of the building was revealed, and so it is not possible to comment on the overall dimensions. Its orientation appeared to be slightly different to that of the church and W range. The walls survived to a height of 0.5m and were constructed of large stone blocks with a light-brown shelly mortar and rubble core. A line of stones (943) abutted the base of the wall on its E side, which was thought to be a foundation.

A drain, c6m long (810) (Illus 5.25), had been built on the N side of the structure 936. At the W end it was constructed of rectangular side stones between 0.2m and 0.6m long, with three surviving flat cover slabs c0.4m long. The channel was c0.3m wide at this end. The drain ran E for a distance of 4m, at which point the build changed to a less substantial double row of vertically placed rounded stones and red roof tiles.



Illus 5.26 Section G through Trench L.

The fill of the drain was dark-brown silt (845), which contained SWGW, flint and tile. Within the structure was brown silt with tile fragments, flecks of coal and mortar, and also sherds of SWGW (938). The alignment of the drain was planned to respect the large stone grave cover 892.

The most extensive layer found in this area to the E of the building 936, dating to the monastic period, was layer 807, which sealed the platform up to 0.4m deep (Illus 4.5). This layer was a light-brown sandy loam with angular stones, which contained human and animal bone, along with a large quantity of artefacts including flint, tile, and two sandstone pin sharpeners (Illus 8.26, 103 and 104, 101.3 Sfs 2 and 23). The pottery was predominantly SWGW, but also contained two SMR sherds and one intrusive modern brown earthenware sherd.

Activity within Trench V in the medieval period consisted of two burials, 1137 (13th century) and 1138 (Chapter 4.3.5 and Illus 4.15), and a pit containing disarticulated bone (1136). These burials were sealed by a deposit consisting of sandy loams (1118, 1127) which contained medieval pottery, predominantly SWGW, but also one SMR and one modern intrusive sherd. These layers probably date to the 12th to 14th century. Within Trench L an orange ash (879) was sealed by a layer of

brown silt (878, Illus 5.26) which contained three sherds of Yorkshshire Ware, animal bone, a human mandible (Battley and Roberts, Chapter 6), nails and tile. This layer was probably medieval in date. A low bank of rounded stones (874) measuring 1.2m wide and 0.45m high was set slightly into the brown silt of 879. This bank was aligned NW-SE and was interpreted as the remains of a drystone wall which may have formed the N boundary of the cemetery. A layer of white sand (877) and seashells infilled the lower stones and was built up on the S side. The pottery within the layer beneath the bank indicates that the bank was constructed some time in, or after, the 12th century. It was therefore not associated with the Early Christian cemetery. This bank was sealed by a layer of midden (876) that contained three sherds of SMR, and finally by the topsoil (875) which contained modern material and clay pipe.

5.3.5 Trench K, Kettle Hill (Illus 1.3)

A low oval mound was identified by the Bradford survey on Kettle Hill overlooking the harbour, 200m N of the priory (Archaeological Management and Consultancy Services 1992, Site 62). Associated scatters of medieval pottery, tile, and hard white mortar similar to that used

in the priory, were visible in numerous rabbit burrows and so a trench, 7.5m by 1.2m was opened to investigate whether there were any structural remains within the mound (not illustrated). The topsoil (923) contained 49 sherds of SWGW, as well as mortar and midden debris, but no structural features were identified. Two of the sherds were perforated, presumably for use as loom weights (101.3 SF 57 and 101.3 SF 58). Bedrock was found at a depth of 0.3m. It was concluded that a medieval stone-built mortared structure once stood here overlooking the harbour, but had been completely destroyed.

5.3.6 Phase 4: destruction and abandonment, 14th–16th century

Church (Illus 5.22)

No layers relating to this period survived at the W end of the church because of the scouring of the floor during the construction and use of the post-medieval smithy. At the E end there were several layers that lapped up against the foundations and walls. These layers were together c0.25m in depth, and contained sherds of SWGW and SMR. The silty loam layers (131 and 130) were sealed by a layer of angular stones, mortar and decayed sandstone (126), which was concentrated in the NE corner. This was then sealed by an extensive layer of silty loam (129/147) which contained numerous SWGW sherds and a few sherds of SPMRW. These layers are thought to relate to the period of post-monastic abandonment and destruction of the E end of the church and were cut by the foundation trench for a post-medieval structure (*see* wall 143). The lack of any coins from this period supports the evidence for a comparatively low level of activity at the site, from the time of the Wars of Independence until the mid 16th century.

East range (Illus 5.27 and 5.28)

Within the ruins of the medieval undercroft two open hearths were found on the E side of the floor. One of these (238) measured about 2m across and consisted of a primary layer (281) of black and grey ash with charcoal, along with a second layer (238) of burnt sand with charcoal, coal, shell, fish bones and sherds of SWGW. The other hearth (239), to the N, was slightly smaller and consisted of similar mixed burnt material (283, 282, 239) with sherds of SWGW, animal bone, window glass and tile.

Sealing these hearths was a deposit of demolition debris (229), c0.15m deep, which extended across much of the undercroft interior. As the ground surface here sloped up towards the S, the depth of this debris likewise increased towards the S. It contained sherds of SWGW and SMR, animal bone, window glass, lead window comes (101.3 SF 26) and a bone mount (Illus 8.8, no 75, 101.3 SF 32). Several broken but complete ceramic roof tiles were found lying flat on the ground

where they had fallen (Illus 8.15, nos 1 and 2). A late 13th-century coin (101.3 SF 31) provides a *terminus post quem* for this demolition. It was a Continental imitation sterling, perhaps from Flanders (Bateson, Chapter 8.3.4). The date of this coin corroborates the documentary evidence for attacks and destruction of the priory buildings in the early 14th century (Chapter 2).

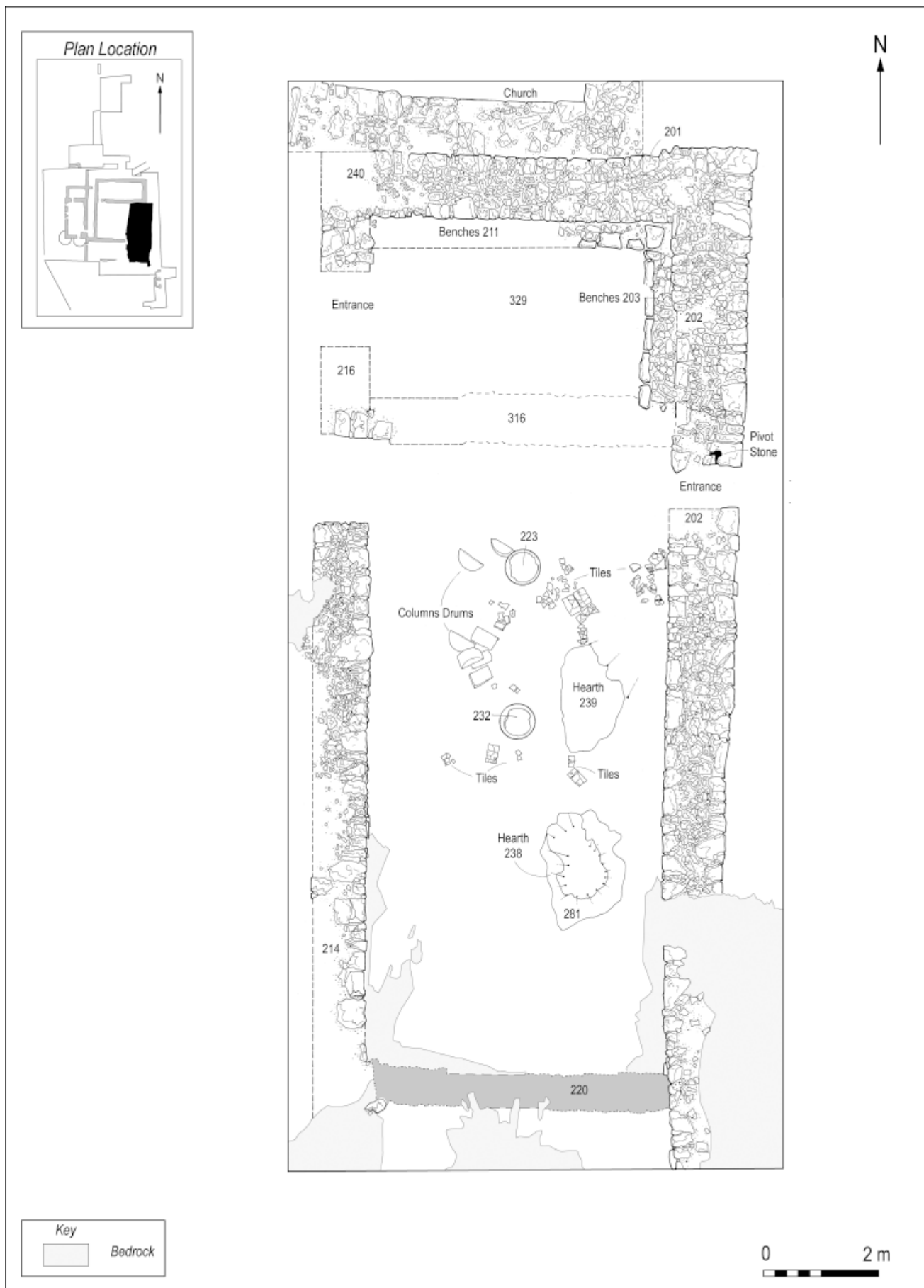
An upper layer of demolition debris (224), up to 0.9m thick, contained several architectural fragments, including seven half column drums (Illus 8.12, 101.3 SFs 9 and 10), five fragments of sandstone window splays (Illus 8.13, nos 11, 12, 13, 14, and 15 (101.3 SFs 14, 15, 16, 34, 42)) and nine stone mullion fragments (Illus 8.12 no 5, SF 40. SFs 37, 38, 39, 41, 48, 49, 50 and 51 not illustrated: Chapter 8.3.6). The demolition debris also contained a bronze needle (no 28, not illustrated) and a bronze strip (no 42, not illustrated), animal bone, flint, roof tile, and a chip from one of the column bases. The pottery within this layer was SWGW, SMR and SPMRW. This material was sealed by a layer of silty rubble (219), which also contained sherds of SWGW and SMR, animal bone, tile, and two pillar/mullions fragments (101.3 SFs 8 and 13). These layers together represent the collapse and robbing of the monastic E range, probably in the 14th or 15th century, incorporating some sherds of SMR and SPMRW into the debris. The presence of the SPMRW does suggest that some deposition of this demolition layer took place in the 15th and 16th centuries.

Latrine (Illus 5.11)

The human waste deposits within the chute and channel were sealed by a 0.4m deep deposit of dark-brown silty clay (446), which contained sherds of SWGW, animal bone, and roof tile, as well as a possible iron fish hook (Illus 8.7 11/9, no 57, 101.5 SF 64) and an iron rod (no 58, 101.5 SF 65 not illustrated). This accumulation indicates that the latrines were no longer maintained and may even have been deliberately infilled. This was followed by a layer of demolition debris, consisting of many angular stones within a matrix of silty sand and shells, but with no pottery or other anthropogenic material (445). This debris was up to 0.45m deep and probably represents the collapse or demolition of the latrine block. Above this was redeposited midden (428), 0.35m in depth, which contained sherds of SWGW and SMR. The pottery might date the deposition of this material to the 14th to 15th century.

South range (Illus 5.12)

Within the S range the phase 3.1 monastic floor (560) was immediately sealed by post-medieval layers (550/518) consisting of a black loam with coal, and an orange ash that contained SPMRW. There were no features clearly related to the destruction and abandonment phase. This might indicate that this range continued to function along with the W range in this post-monastic period.



Illus 5.27 East range, phase 4.

West range

There were no features related to this period within the remains of the W range, probably because either the reuse of the building in the post-medieval period has removed all trace, or this range survived the devastation relatively untouched. The survival of this range alone into the post-medieval period does indicate that it was maintained and adapted while the E and S ranges were not.

5.4 Period III: post-medieval

5.4.1 Phase 5: conversion to laird's residence, 16th–18th century (Illus 5.29)

It was clear from the outset of the excavations, that the W range at least had been remodelled for secular use during the post-Reformation period. The excavations revealed this remodelling to have been extensive, resulting in the creation of a lordly courtyard house, enclosed within a barmkin that contained at least two other buildings. One of these was within the remains of the church, while a gatehouse was formed out of the chapter house at some time in the mid or late 16th century. These structures incorporated some of the better preserved walls of the monastic ranges. The cloister garth was transformed into a slightly larger courtyard. Also forming part of this complex was the poorly understood building which incorporated part of the latrine block and adjoining external range, standing on the higher ground to the S.

The smithy (Illus 5.30 and 5.31)

A two-roomed structure, 11.2m in length and 5m in width (externally) was built within the remains of the church (walls 110, 111,), utilising the original monastic outer walls. The original S wall of the church was levelled and robbed at this time. The new internal walls were narrower than the monastic walls. The new S wall (115), E wall (143) and dividing wall (117) formed two rooms of slightly different sizes. A good-quality cobbled surface (104) with a central drain (105) was constructed around the N, W and S sides of the range. The smithy walls were constructed of angular stones with a rubble-and-mortar core. They were about 0.6m wide and survived to a maximum height of 0.6m. The W doorway of the church was blocked (167) and the external ground level built up at least 0.6m against the blocking. Access into these two rooms was from the S, off the courtyard (the old cloister). These doorways, 0.9m wide, mirrored each other on either side of the central dividing wall 117. They each had sandstone thresholds with a single step down to the sunken floor. The foundation cut of the E wall (143) was filled on the W side with a mixed deposit of brown soil, coal, shells and bone (122) that contained sherds of SPMRW, SMR and SWGW. This wall had truncated the lower half of the scallop burial

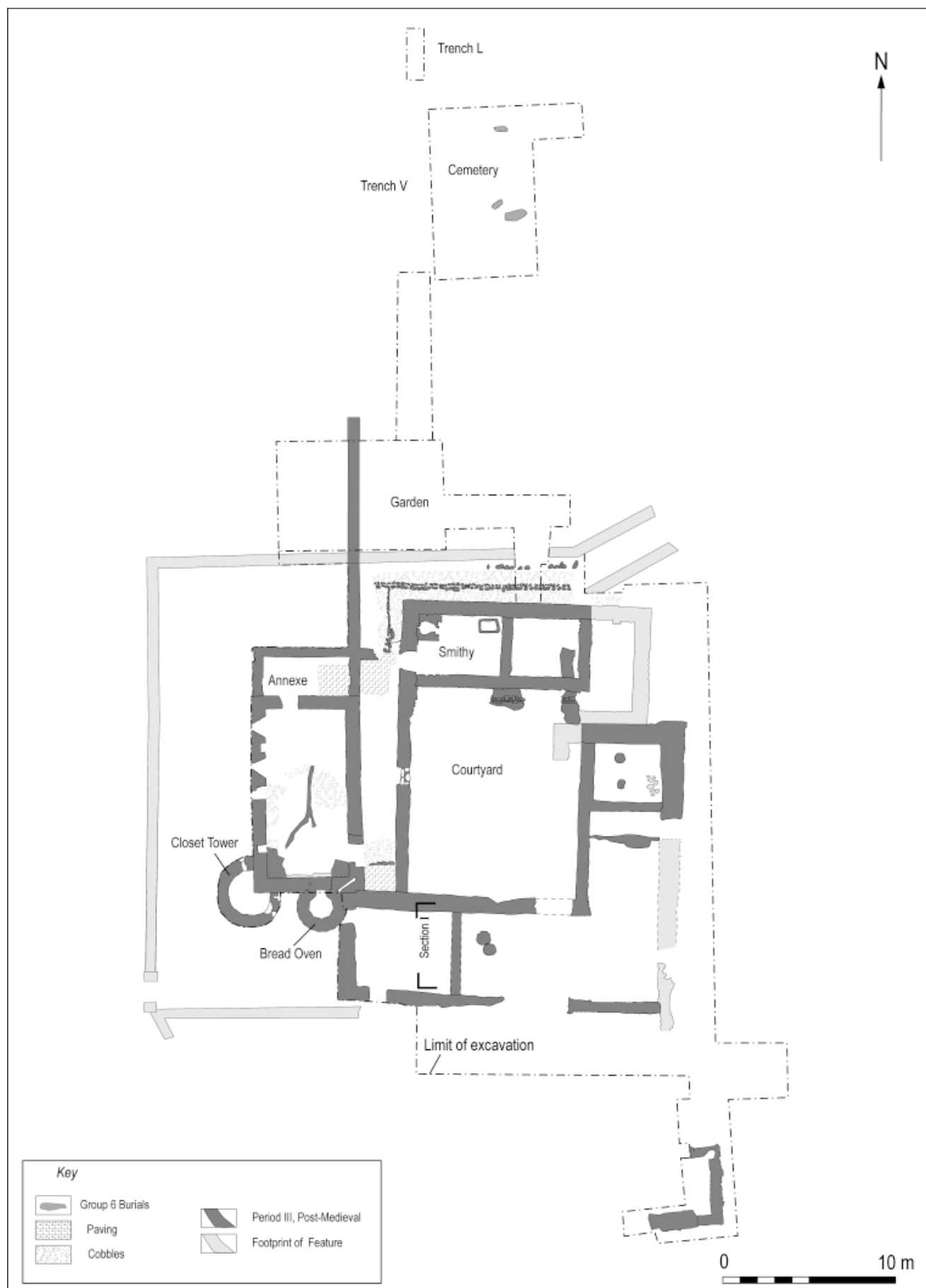


Illus 5.28 *East range: destruction debris in situ, column drums, pilaster shafts and roof tiles. (© Fife Council)*

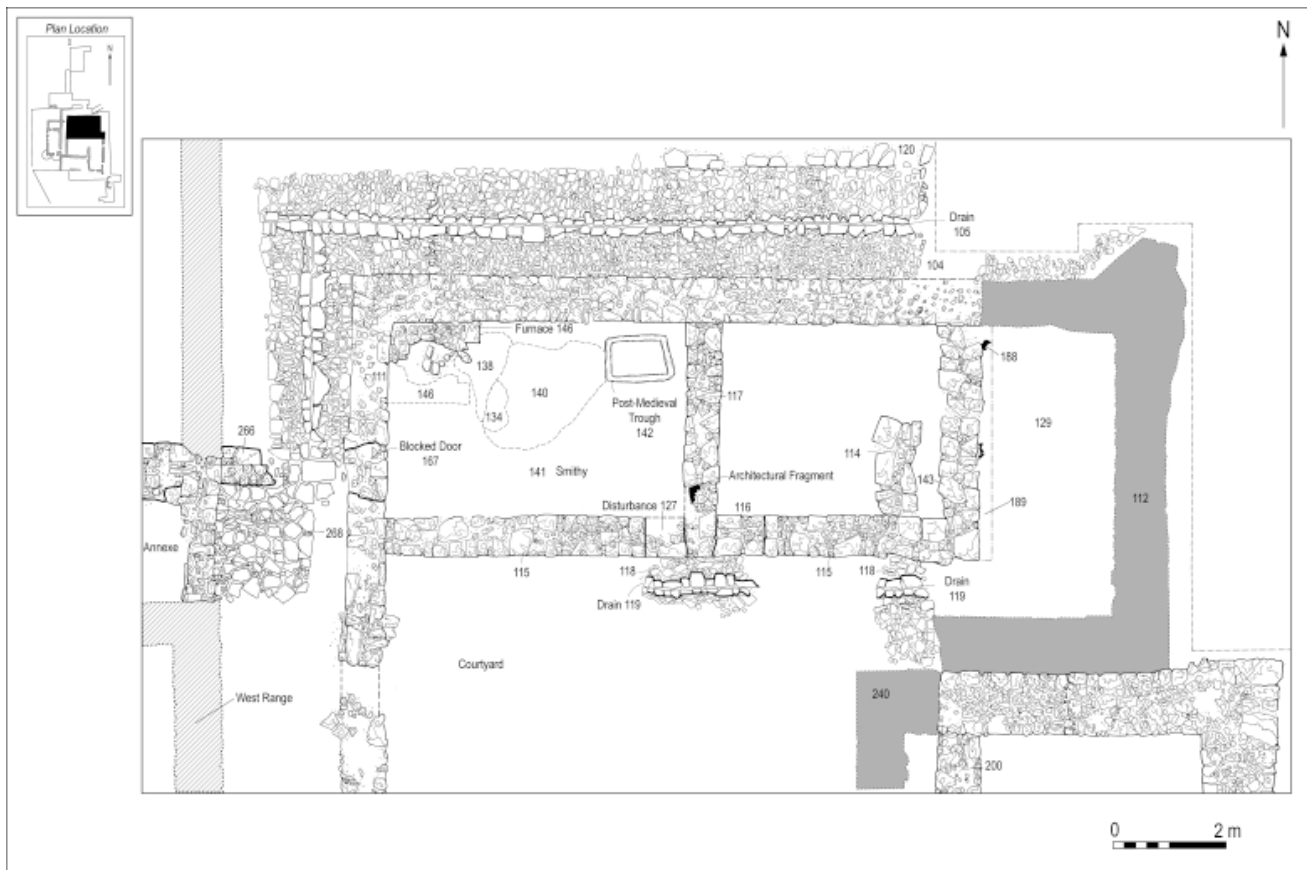
155 (Chap: 5.3.3) and the disturbed bones from this were found reburied with others on the E side of the wall, within the foundation trench (188).

The west room of the smithy

The W room measured 5.3m E–W (internally) and 3.45m N–S. Its floor was a compact yellow-grey mortar with subangular stones (141) which contained bone, bloomery debris, flint, roof tile, and unfired clay, along with residual SWGW pottery. An oval furnace had been built into the NW corner (146). The base of the furnace comprised broken flat slabs and sand (145), with a flue opening out to the SE. Outside this flue were several layers of ash and coal that represented rake-out from this furnace. These layers (140, 134, 139 and 138) contained evidence for bloomworking debris and hammerscale (Cullen, Chapter 8.6.7), along with animal bone, glass, stone, lumps of clay and tile. A single sherd of SWGW was found in layer 139. A stone trough, carved out of a single block of sandstone (142), had been set into the floor of the smithy, 2.3m E of the furnace. It was roughly rectangular with sides 0.11m thick, and overall it measured 1.2m long, 0.78m wide and 0.24m deep. There was a shallow circular depression, only 0.04m deep and 0.24m in diameter, in its base at the W end. This was probably used as a quenching trough, although it is likely to have been



Illus 5.29 Overall phase plan of laird's residence.



Illus 5.30 Plan of the smithy.



Illus 5.31 Post-medieval smithy, formed within the church walls. A monastic trough is reused as a quenching trough. The burials under the floor of the monastic church in the foreground. (© Fife Council)

moved here from the W range *lavatoria* or perhaps from the monastic kitchen.

The east room of the smithy

The E room measured 4m E–W by 3.45m N–S. A rectangular setting of dry stones, possibly a wall base (114), was constructed in the SE corner. This wall base consisted of a single course of stones, which abutted wall 115 to the S and was parallel to the E wall 143, with a gap of 0.4m. It may have been a base for workshop benching or machinery, but there is no other evidence for how this may have functioned. It is perhaps coincidental that a patch of surviving pebbled drain surface mirrors this walling to the S side of wall 115. It seems likely that the far E end of the Cluniac church was left unroofed but enclosed, and reused as part of the freestanding barmkin enclosing wall.

External features

A cobbled surface (104) with an integral central drain (105) ran around the outside of the smithy. The drain was constructed of flat angular stones which formed a slight V-shaped channel. To either side was a surface of carefully selected, evenly sized, rounded cobbles. On the N side the cobbled surface was 2m wide and was bounded on its N side by a fragment of a boundary wall base (120). To the W the cobbled surface was 1.4m wide. Between the blocked W door of the church and the annexe to the W range (*see below*), the drain (105) abutted more irregularly laid paving (268) which was probably contemporary with the paving within the annexe (320). A wall base (266, Illus 5.29) constructed of a few angular stones set in mortar, overlay this irregular paving and was in line with the N wall of the annex. This reduced the space between the N range and the annex, leaving a gap which could have been closed by a single door. As the upper part of these walls did not survive, it is not possible to be sure how this gap was closed. Two small patches of a pebble surface (118) and drain (119) survived in the area to the S of the smithy. These features probably once extended along the whole of the S side of the smithy. It survived up to 1.9m from the S wall of the smithy, but there was no clear edge to the cobbles and so it may originally have been of a similar width to the cobbled surface on the N side. It did not continue into the space at the E end.

East range (Illus 5.32)

A structure similar to the smithy was built within the remains of the N end of the E range. This structure consisted of one room (reusing the chapter house), a passageway (the slype) and an enclosing wall. A new N–S wall (200/213) was constructed 0.30m to the E of the original monastic W wall (214). The wall (200/213) was 0.75m wide and 10m long, and in the S it survived up to a height of 0.7m. At its N end it abutted the

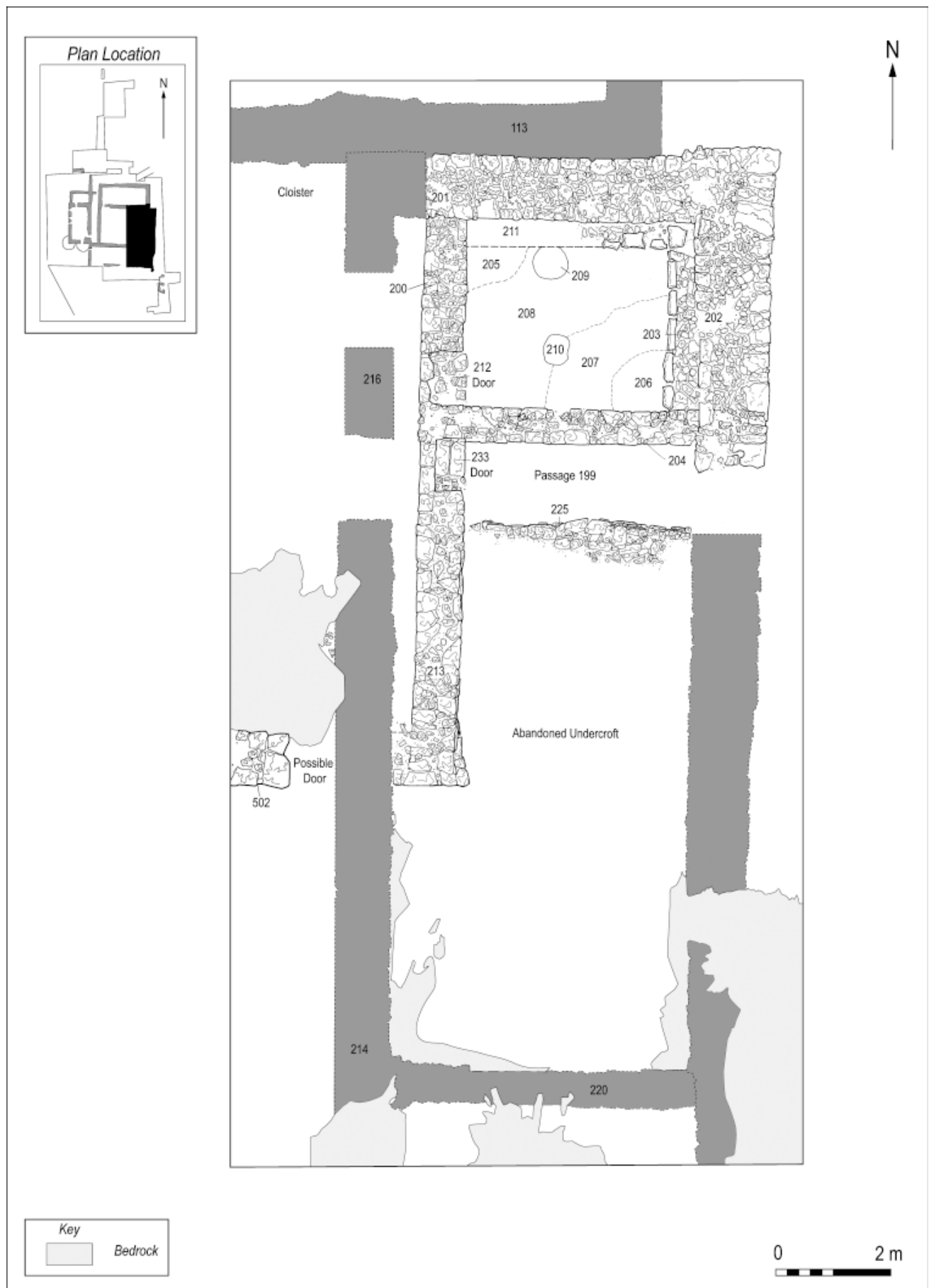
monastic wall 201, which was reused. At the S end, wall 213 turned towards the W and abutted the foundations of the monastic wall 214. While there is no surviving evidence that this wall continued up over wall 214, continuing the line of wall 502 (the N wall of the S range), it is likely that it did so, possibly retaining an original doorway as the S exit from the courtyard. The wall (200/213) was constructed of angular facing stones with a mortar-and-rubble core. There were two entrances, 0.9m wide with a single step down (212 and 233), located to either side of a cross-wall (204) which incorporated the lowest two courses of the monastic dividing wall (316) as its base. This arrangement precisely mirrored that seen in the smithy (*see above*).

North room (originally the chapter house)

It has been mentioned above that the features interpreted as monastic benches within the chapter house were rebuilt and reused during the post-medieval period. A deposit, 0.5m deep, of predominantly sandy layers was found within the N room, sloping steeply to the S, having been dumped in from the N (205, 208, 207 and 206, Illus 5.32). Layer 207 was the exception, being a layer of burnt slates, roof tile and clean sand. Layers 205, 207 and 206 contained sherds of SWGW, while 207 contained one sherd of SMR. Together these formed a surface, raised up to 0.5m above that of the monastic period. Cut into the surface was a possible bowl furnace (209) and a shallow pit (210). The possible bowl furnace was 0.6m in diameter and 0.25m deep with burnt sides, indicating that burning had taken place *in situ*. One of the fill layers (234) was sampled, and found to contain fish bone, shell, coal, cinder, mortar and a very small amount of iron. The analysis of the iron debris has concluded that this bowl furnace was used for smelting iron, despite the lack of furnace lining and the small amounts of bloomery slag surviving. Pit 210 was c.0.4m in diameter with gently sloping sides and a flat base. It was 0.15m deep and filled with a light silty sand (237) which contained no obvious industrial debris, and so this was unlikely to have functioned as a furnace.

Abandoned undercroft

A passageway c.1.4m wide was formed between the dividing wall (204) and a newly constructed revetment wall (225). This passageway perpetuated the earlier use of this area as the monastic slype. This revetment wall was built of angular stones forming a rough face inside the passageway, and survived to a maximum height of 0.55m. This insubstantial feature probably supported a screen wall. The passage led to the stepped doorway (233), which then allowed access into the courtyard. Only the basal course of the E wall (202) survived. While the northern part clearly formed the E wall of the N room, the southern part may have been reduced in height to the level of the demolition debris, or perhaps was retained as an architectural feature, although



Illus 5.32 Plan of east range, phase 5.



Illus 5.33 *Plan of south range, phase 5 bowl furnace and pit.*

unroofed and abandoned. When viewed at the time from the laird's house, the walls 200/213 and 502 enclosed the courtyard, masking the debris beyond.

Remodelling of latrine structure (Illus 5.37)

The S part of the latrine block was incorporated into a post-medieval structure, possibly a rebuilt monastic range or outhouse, which lay to the S in an area outside the focus of the excavation project (Illus 5.37). The walling (1234) extended c4m N–S in line with the earlier latrine arches. At the S end the wall turned a corner in the W (1233) and joined with remnants of a thicker wall (1232), which was thought to be of monastic date. Walls 1234 and 1233 were faced on the inside but roughly built on the outside. Within this structure was a sandy loam (488) which contained animal bone, glass, metal, tile, recent salt-glazed pottery and residual medieval, as well as SPMRW, pottery. In the NE corner of this room was a rounded alcove (493), which was also filled with post-medieval material (494, 495 and 1207). The walls of this alcove showed no sign of burning and so it was unlikely to have been a hearth. However, it may have served to house a stove or a cupboard. This post-medieval structure may have been contemporary with the industrial ranges within the priory.

The south range (Illus 5.33)

This range appears to have been repaired and continued to function, at least for a brief spell. Two slightly oval-shaped hollows (569 and 574) were found cutting the Phase 3 floor layers and the post-medieval layers (550). Feature 574 was up to 0.9m across and 0.12m deep and was filled with pink ash, coal, loam, lumps of clay, cinder and iron concretions. There were four stones lining the N edge of this feature, which may have been used to support a tuyere or bellows. A lack of bloomery debris within the fill and the presence of coal, a fuel thought unsuitable for the smelting of iron has placed some doubt on whether this feature could be interpreted as a bowl furnace (Cullen, Chapter 8.4.8). However, the surrounding surface was burnt red and concreted which would indicate that some high-temperature firing was taking place.

The other hollow (569) located just SE of 574, was up to 0.8m across and 0.25m deep and was filled with black cinder, small stones, hammerscale, a lead pig fragment and bloomworking debris. There was no evidence for burning around the edges of this feature. Cullen has interpreted this feature as a pit, dug to dispose of smithing debris. The lead pig fragment found in the fill suggests that lead was being worked in the vicinity. Cullen has concluded that this area of



Illus 5.34 Section I, east-facing through south range.

the site was used for smithing. The presence of the lead here does suggest that recycling of the structural lead from the monastic buildings was also taking place during this phase of demolition and rebuilding. Further smithing and bloomery slags were present in the overlying layers, which included 565 (a sandy loam with coal and window lead) and 536 (a black ash with coal and cinders and a fragment of waste run lead). These layers had a combined thickness of up to 0.1m in the SW corner of the area. A narrow wall (557/535) aligned N–S was constructed on the surface of layer 536. This abutted the monastic S wall, and extended N for 3.8m. It survived as two short sections but may have served to subdivide the range into two equal-sized spaces.

Demolition of the south range (Illus 5.34)

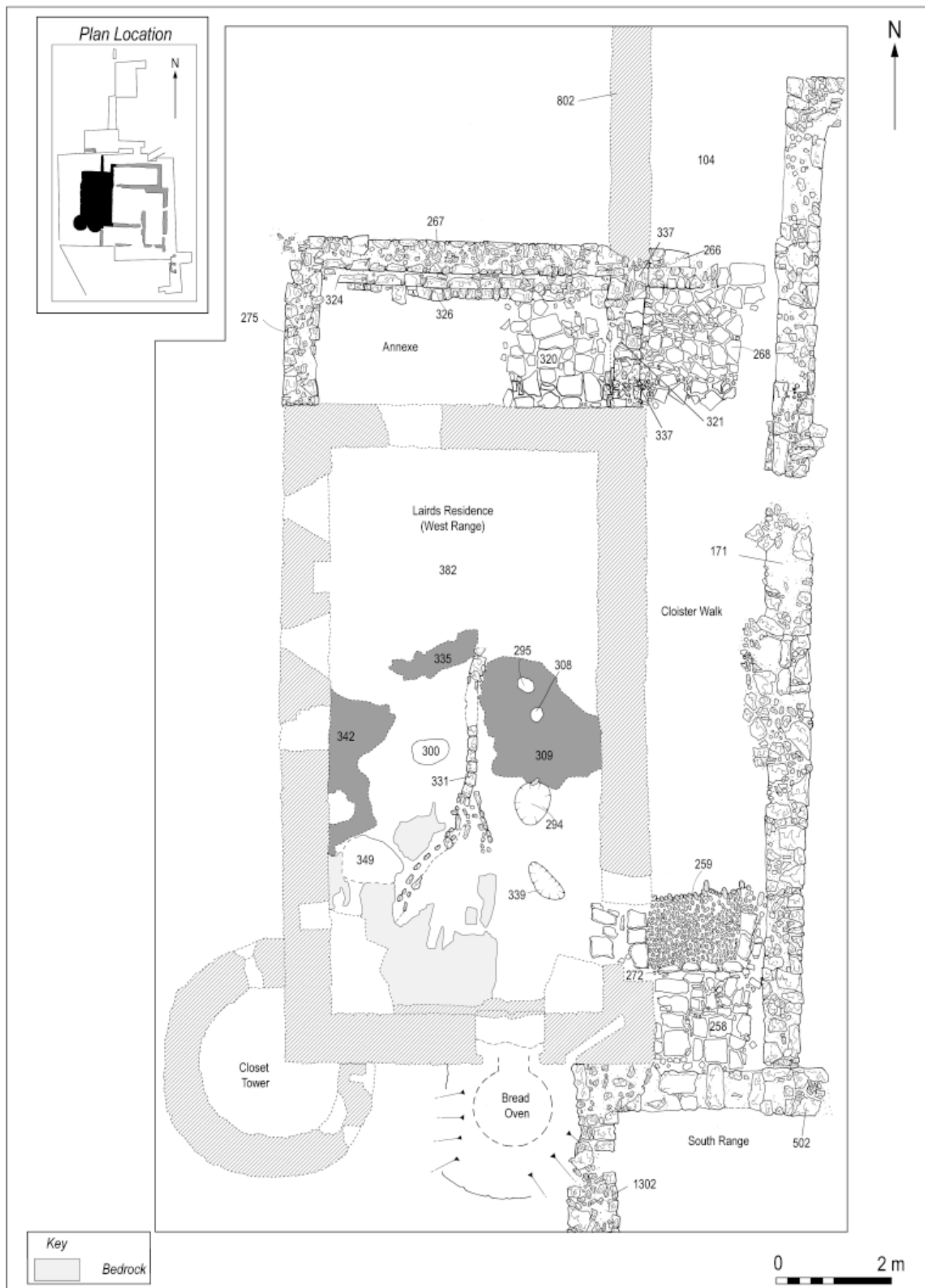
The surface of 536 and the wall 557 were sealed by a layer of angular rubble, interpreted as the collapsed monastic walls (543 (not illustrated) and 551). Unlike the rest of the S range, which was abandoned, it is thought that the N wall (502) was maintained and acted as the S wall of the courtyard, with the rest of the S range being ruinous. A circular oven built outside the S end of the W range (*see below*) was constructed over the remains of the W wall of the S range (Illus 5.35). The S range must have been largely demolished at this time and its footprint, which was terraced into the slope and considerably lower than the ground level to the S, began

to be filled in with rubble and midden. It is interesting to note that a fragment of smithy bottom was found in the upper layers of demolition debris (in context 505). This reinforces the industrial interpretation of the post-medieval use of this area.

West range (laird's residence) (Illus 5.35)

This range had architectural similarities to a small tower house, with the principal room on the first floor and storage or domestic uses on the ground floor. There was, however, no evidence that the building exceeded two storeys and an attic in height. RCAHMS noted the post-medieval additions to the W range, which included the circular bread oven built outside the S wall, incorporating a medieval doorway. This feature is not shown in the survey of 1818 (Illus 5.36; Stevenson 1818), but is shown on the plan of 1868 (Figure 3.1; Stuart 1868). The dangerous state of the domed top of the oven prevented examination of the deposits within. A circular closet tower, with wide-mouthed gun loops, had also been constructed clasping the SW corner. This measured c2.5m in diameter internally, with walls c0.7m thick. The fill layers within this tower were excavated in 1996, but only modern material over bedrock was found, suggesting that it had probably been cleared out in the 19th century.

Within the W range there were fragmentary remains of drains and pebble surfaces. A slate-and-pebble drain



Illus 5.35 Plan of west range (laird's house) and annexe.

(331) cut through the earlier pebble-filled drain (335) and into the layer of angular rubble (382). The drain was constructed of two lines of pebbles supporting cover slates, with a depth of c0.07m. In plan this was Y-shaped, with arms extending from both the SW and the SE corners, merging in the centre of the room then heading for the NE corner. The rough cobbles of the earlier drains (342, 335 and 309) may have formed the contemporary surface. This slate drain was sealed by two layers of loam and mortar (336 and 280) which contained a lead pipe fragment (101.4 SF 41), a lead weight (101.4 SF 23), clay pipe fragments, two musket balls (101.4 SF 25), a cartridge case (101.4 SF 24) and other modern material. The pottery was a mixture of all periods from SWGW to modern sherds, therefore this layer was clearly post-medieval.

Cloister

Layers of demolition debris and redeposited midden were found sealing what was thought to be the monastic cloister surface of 293 and abutting the W wall (502). The earliest of these may represent activity in the post-Reformation period. In the NW corner was a deposit of black ash (292) sealed by cream mortar (291). Layer 291 contained SWGW and one sherd of SPMRW. Further S, a pile of angular boulders (273) was surrounded by a grey ash (290). These were sealed by an extensive layer of redeposited midden (257), the deposition of which appears to be inconsistent with the use of the area as a courtyard in the post-Reformation period.

In the NW corner the post-medieval pebbled surface 104/105 ran up to and stopped at the possible doorway into the courtyard (Illus 5.30). This surface continued to the S as flat stone paving (268), which extended just to the N wall of the W range. No paving survived S of this where the earlier monastic cloister walk (463/177) was sealed by a layer of angular stones (468), a layer of broken roof tile (172) and a layer of sandy silt (461). The old W cloister walk wall (502) also continued in use. This final layer (461) contained a 16th-century Scottish billon coin (Bateson, Chapter 8.4.2, 101.5 SF 43) and 23 sherds of medieval window glass (Bain, Chapter 8.6.1, 101.5 SF 67). In the S, by the present entrance to the W range, a roughly square patch of late cobbling (259) survived (Illus 5.16 and 5.35). This was kerbed on the S side with upright stones 272. To the S of this was an area of flat slabs (258) which had been neatly laid in the corner between the W range and the S range.

Annexe (Illus 5.35 and 5.36)

A ground-floor rectangular structure, with its vaulted roof intact and attached to the N side of the W range, is shown in Stevenson's plan of 1818. By 1868 the vaulting appears to have collapsed (Stuart 1868, Figure 3.1). RCAHMS believed it to have been a two-storey vaulted structure, connecting with the W range on its

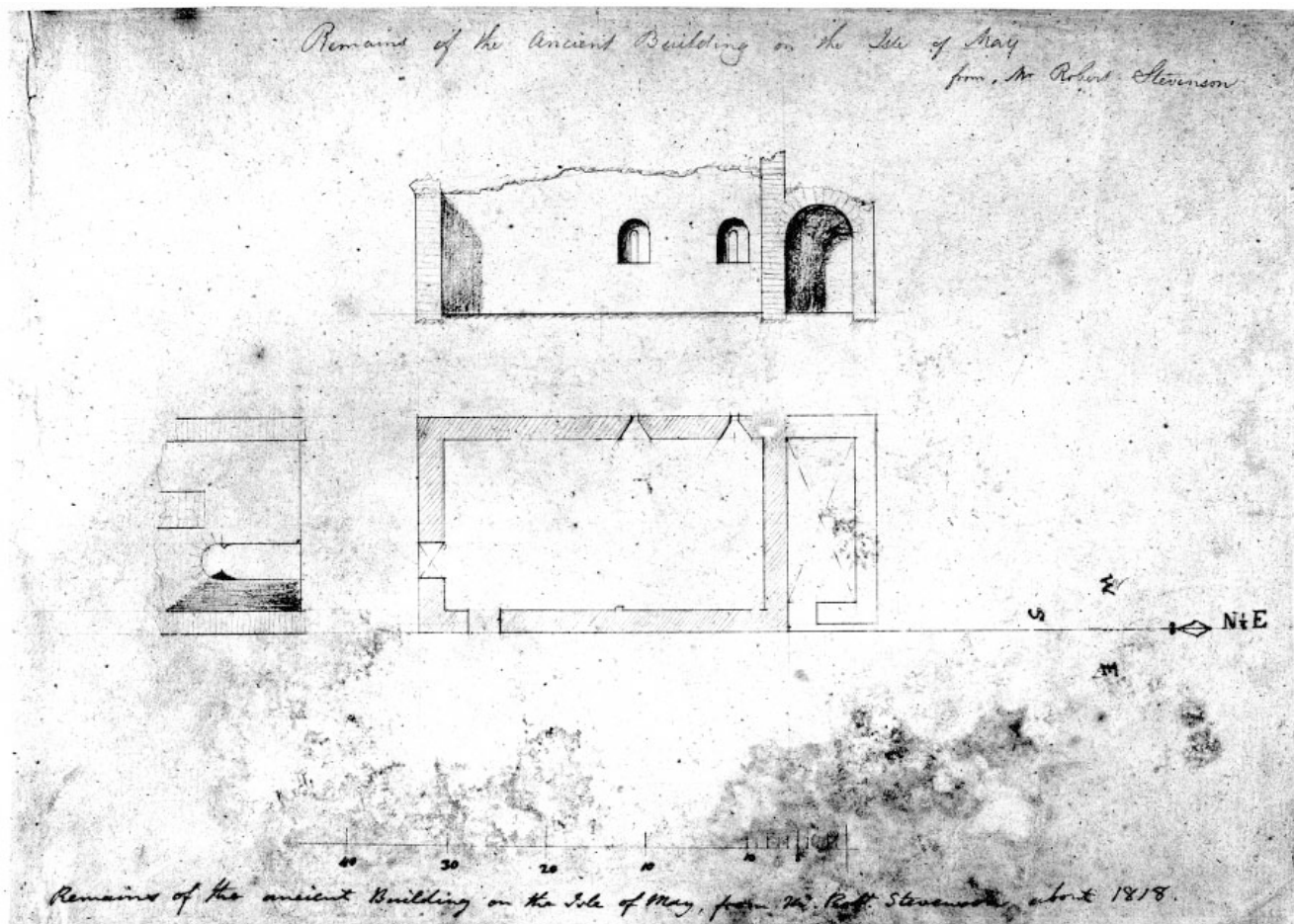
upper floor. Both levels of the white sandstone springer courses can still be seen on the exterior of the N wall of the W range (RCAHMS 1933, 26). Both the W wall (275) and the E wall (337) of this annexe abutted the W range so it was clearly a later addition (Illus 5.35). The N wall (267) had substantial stepped foundations on the inside (324 and 326). The foundation on the outer side of this wall was not examined, but, if symmetrical, the whole foundation would have been up to 1.7m wide. This width is perhaps explained by the need for substantial foundations to support the vaulted structure. The walls themselves were only 0.5m–0.6m wide and constructed of angular stones infilled with mortar and rubble, 0.3m narrower than the monastic walls.

Part of the annexe was paved with flat slabs (320) which were not lifted during the excavation. To the W of these, the ground had been disturbed so any surface here had been robbed. A sandstone jamb formed what was probably the N side of an entrance in the E wall, which faced the cloister. The width of this entrance was not determined as the wall had been disturbed, rebuilt and the entrance blocked. There was also an irregularly flagged surface (268) outside this structure, between the annexe and the N range, which may have been contemporary with the inner flagged floor.

No dating evidence for the construction of the annexe was forthcoming as the pottery within the disturbed layer (347, not illustrated) to the E of the floor contained several sherds of recent earthenware. The blocking (321) was of white shell mortar and angular stones, which also contained white earthenware of recent manufacture. Layer 307 sealed the floor 320 and also contained white earthenware. The relationship between the annexe and the wall that extended to the N (802) was not fully resolved. The basal courses of these walls, where the true relationship would be retained, were not examined, and it is known that the upper courses have been rebuilt. It is depicted as an integral part of the annexe in the 1868 plan, and there was no clear evidence in the upper courses that it was a separate wall. It can only be suggested, therefore, that wall 802 and the annexe were contemporary and constructed in the post-medieval period. The vaulting could well be of 16th-century construction (Fawcett, Chapter 10). There was no access from the annexe into the W range from the ground floor. It would have been reached on the first floor through an altered lancet window.

The cemetery

A surface consisting of smaller angular stones with clay (926) was sealed by a thin lens of coal and ash (931) and may have been contemporary with a wall aligned N–S (802). This wall may have been constructed at the same time as the annexe and was built of large angular blocks with a core of rubble and white mortar. It extended across the cemetery and continued beyond the edge of the trench. To the E of the wall 802, the area was filled with a deep deposit of midden and organic soil (layers 801 and 809), which contained medieval, post-medieval



Illus 5.36 Stevenson's survey of the west range, 1818, with vaulting intact in annexe.
(National Library of Scotland Adv MS 30.5.23.21)

and modern pottery. The presence of this soil suggests that this area may have been put over to cultivation although burial was still taking place further N (Trench V).

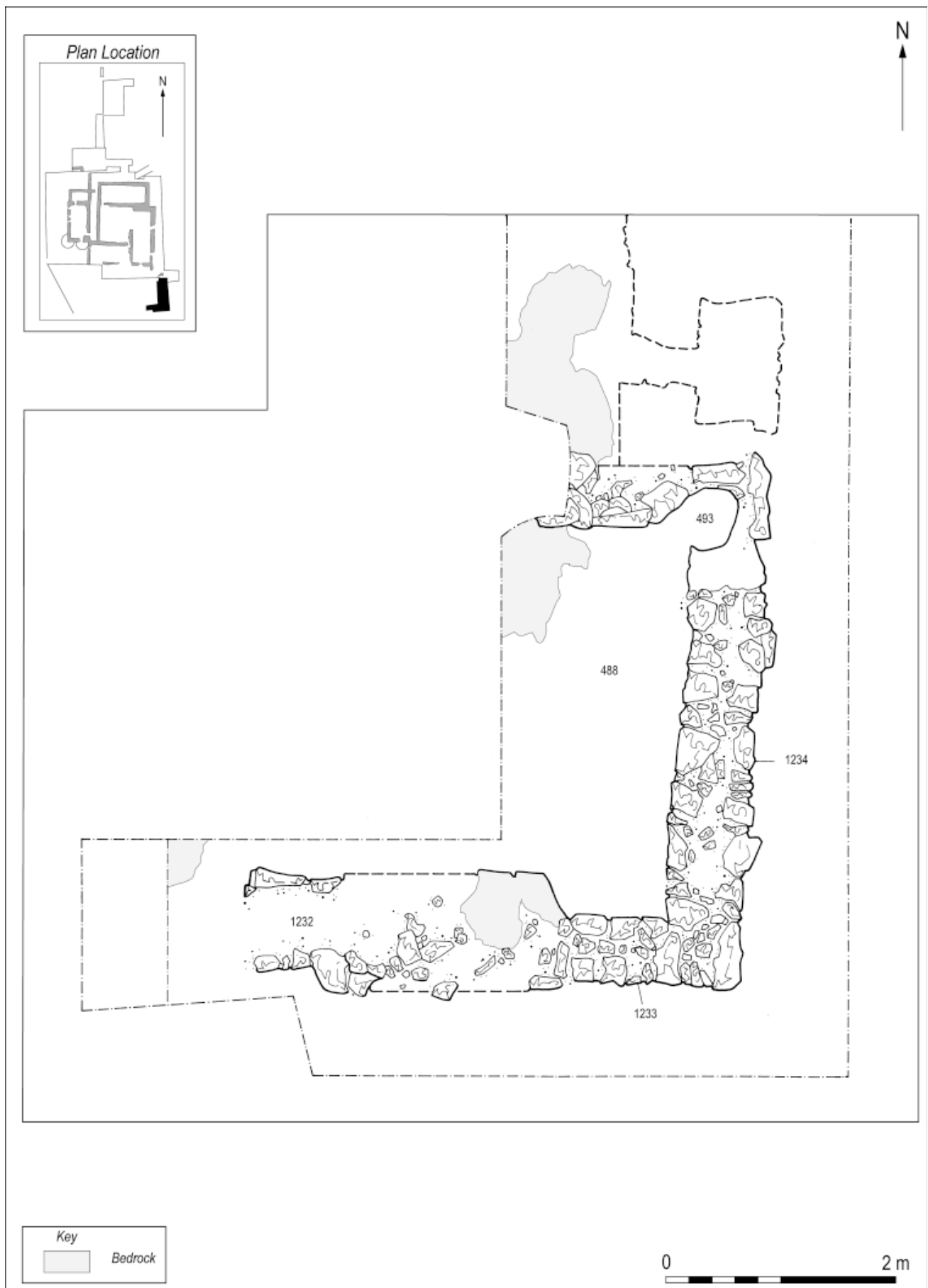
Within Trench V there were two burials (1120 and 1116, Group 6, *see* Chapter 4.3.6), two pits containing redeposited bones (1124 and 1125) and a group of bones not within a pit (1117) (Illus 4.16). Stratigraphically equal to these burials was a small raised platform near the centre of the trench which consisted of a single course of large flat slabs (1110) extending over an area 1.1m square. To the S of 1110 there was a platform of stones, which extended about 0.7m from the southern baulk (1130), set within an oblong cut. The function of these platforms is unknown. While it is thought that these had some structural purpose, it is a possibility that they were marking late graves, but this was not investigated. The dated burial within this trench indicates that this area was still being used for burials, possibly as late as the 17th century, and only after this was the area used for cultivation.

Village and kitchen midden (Illus 1.3 and 3.2)

The Statistical Account of 1792 states that the minister of Anstruther Wester visited the island regularly to

administer to the 14 or 15 families who lived there. The site of a village, where they probably lived, is marked on the 1st edition O.S. map of 1853 in the flat area c55m S of the W range. Eggeling states that 'the ruins of a village were still visible almost level with the surface of the ground towards the end of the last century' (Eggeling 1985, 27). Nowadays, however, no remains are visible on the surface. The high area immediately S of the monastery (known as the 'kitchen midden') was severely damaged by rabbit burrowing and a deposit which contained medieval roof tile, medieval and post-medieval pottery, shells and animal bone, had been revealed. This covered an area of c1000 square metres.

A village might have been created here sometime after the sale of the monastic property into secular ownership in the 1540s. The Bradford University geophysical survey (1992) suggested that the village could be detected as an anomaly located in the area between 70m and 130m to the SE of the monastery. In 1992, two trenches, Trenches I and J, were excavated to test for any trace of the village (Illus 3.4). The deposits within these trenches was shallow, sat directly onto bedrock, and contained midden material consisting of sherds of SWGW, medieval and modern pottery, clay tobacco pipes and metal nails, but no structural evidence. Trench I also produced a reworked flake of



Illus 5.37 Remodelling of the southeast range, phase 5.

a polished greenstone implement, possibly an axe (*see* Donnelly Chapter 8.2.2, no 20) and a prehistoric sherd (*see* Squair Chapter 8.2.3, vessel no 5).

GUARD undertook a second geophysical survey in the area of the village in 1993 in the hope that more features would be revealed (Banks 1993). The soil conditions were found not to be conducive to geophysical survey, the soil cover consisting of a loose, organic soil with little pedological structure. Consequently the data-set consisted of very low readings. Potential features were, however, tentatively identified in the report. During 1996, eight test trenches (M, N, O, P, Q, R, S and U) were excavated to bedrock across the area known as the tennis court. Half of the trenches were located over these potential features and half were located at random. The results were disappointing in that no structures belonging to a post-medieval village were identified. However, the topsoil from these trenches (1001) contained a remarkably high quantity of recent pottery, as well as post-medieval, and some earlier sherds, along with the usual midden material consisting of animal bone, glass, metal, and clay tobacco pipe. This is thought to be indicative of the high level of manuring which took place within the 10-acre field in the 19th century, as this was one of the few level areas of cultivatable land on the island. Trenches N and U each produced a sherd of prehistoric pottery (vessels 7 and 10).

5.4.2 Phase 6: demolition and landscaping, 19th and 20th centuries

In 1814 the island was acquired by The Northern Lighthouse Board (NLB) and construction of a new lighthouse began immediately, probably utilising the remains of the priory as a source of stone.

Demolition (Illus 5.38)

Apart from the W range which was retained, the walls of the priory were robbed and the remaining foundations and floor layers were generally sealed by up to 0.5m of debris and topsoil, although in the S range this was up to 1.2m deep (*see* deposits above 551, Illus 5.34). The debris contained residual architectural fragments (101.3 SFs 11 and 12), large pebbles, clay tobacco pipe, bone, iron/slag, glass, some sandstone, roof tile and the pottery dated from the 17th century and later. The N wall and part of the W wall of the S range were still retained as surface features, as seen in Stuart's survey (Stuart 1868, lix; Walker 1887). Within the cloister a deposit of midden material (contexts 257 and 262), 0.35m deep, filled the courtyard, interpreted as redeposited midden used to level up the courtyard. This probably took place in the early 19th century, just prior to the construction of the field walls. The W range was apparently retained, traditionally known as St Adrian's Chapel. The vaulted roof of the annexe was still in place in 1818 (Stevenson), but this had collapsed by 1868. The entrance to this room seen in the 1818 drawing (Illus

5.36) was later blocked, and the rest of the E wall (337) was rebuilt along with the upper courses of the wall 802.

Realignment of the monastic enclosure

St Adrian's Chapel was enclosed within newly constructed field walls forming a roughly square-shaped enclosure. Access for visitors to the chapel was provided from the harbour at Kirkhaven by a pathway lined by field walls to the NW of the enclosure and there was a second opening in the SW. Within the N and E ranges the field walls utilised the foundations of the post-medieval walls.

Previous excavations

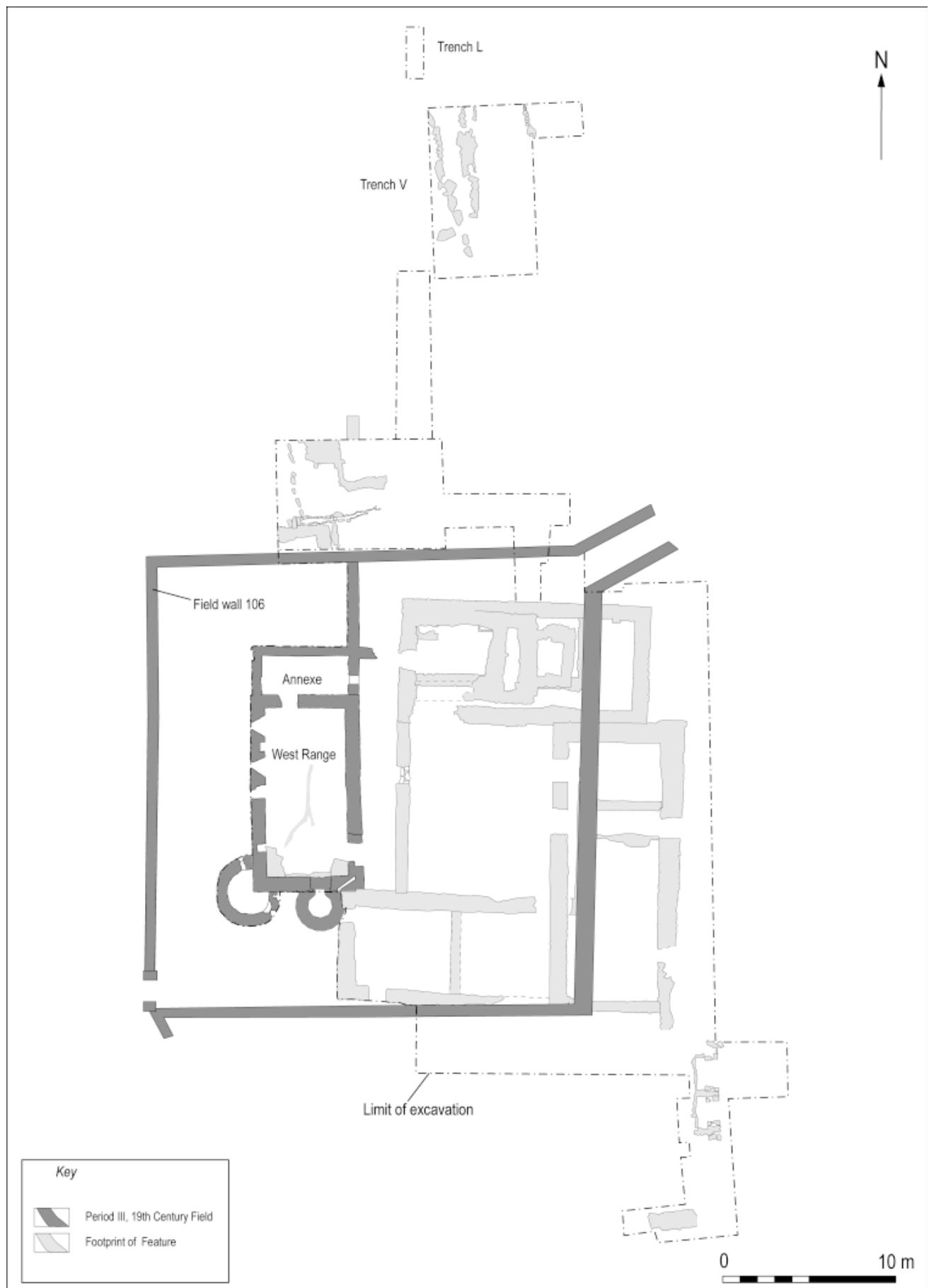
Stuart's report indicates that just prior to 1868, under the direction of Mr Robert Matheson, HM Office of Works cleared out the foundations of the priory and pointed the walls of the chapel (Stuart 1868, ilv). The excavations in the W range confirm this, where very few features earlier than the post-medieval period were identified. A trench running parallel to the N wall of the S trench (512), containing sherds of post-medieval pottery, was also thought to be the work of HM Office of Works. During the GUARD excavations a roughly carved, large sandstone bowl was discovered within this trench, wrapped in black plastic. The SNH wardens believed it to have originated in the W range, and that it had been buried here recently for safekeeping. This crude mortar is similar to, but not the same as, the one from this site described by Walker (Walker 1887). The whereabouts of Walker's mortar, which had a bottom drain, is now unknown.

Recent activity

The W range has, on occasion, been used for religious services during this century. In 1945 Lieutenant Commander Griffiths (RN), the ex-commander of the naval detachment on the island, had his daughter christened in the W range (Morris undated mss). In 1960, a party from St Augustine's Abbey in Ramsgate celebrated mass here (*Isle of May Observatory Trust Log Book 1959–1962* and the *Catholic Herald* 2 September 1960). At this time an altar stone was erected within the oven, 'raising the sill to an appropriate level with stones and pebbles'.

5.5 Economic and environmental evidence

This section summarises the artefactual and environmental evidence for each of the periods described above. More detail is found in Chapters 7 and 8, while the original specialists' reports are available in the Archive. Soil samples were taken for the retrieval of environmental material and fish bones. The number of samples actually wet sieved was relatively small, partly because of the nature of the site (in that it produced few layers



Illus 5.38 Overall plan pre-excitation, showing the arrangement of the 19th-century field walls, overlain on the monastery plan.

with visible carbonised plant material) and the modest post-excavation budget. Nineteen soil samples from 17 contexts were targeted specifically for wet sieving (*see archive*). Because of the paucity of environmental material in some of the structural phases, the results were grouped by period in order to attempt some comparison through time. This broad structure was also followed by the other specialists, although the numbers of contexts examined were enhanced by the hand-collected material. Only representative samples of the mammal and fish remains were examined, but because of the importance of the island as a nature reserve all of the bird remains were analysed.

5.5.1 Period I: early medieval

The few artefacts found in this period are discussed in Chapter 8.2 and 8.3.1. There was a distinct lack of pottery from Period I with only two sherds of Shelly Ware being found, one from the ash beneath the first stone church (layer 420) and another among a revetment beneath the chapter house (context 460). There is some uncertainty about the date of the appearance of this pottery type, which is possibly as early as the ninth century. Only two worked bone artefacts were recovered (bone pin, Illus 8.5, no 73, and No 84) and a possible worked flint, Illus 8.2, no 110). There were also some flint pebbles, flint ballast and other undiagnostic flakes from several contexts in this period. There was, however, evidence for ironworking on the site in the form of bloomworking debris, along with fragments of bloomery bottom from beneath the church and within Trench L, providing evidence for the production of nails and repair of tools, necessary for building work.

Only one possible sculptured stone was discovered in the cemetery for an insecure context (Illus 8.11). This has been reworked into a medieval chamfered architectural stone (Ross Trench-Jellicoe pers comm), but could have come from an earlier sculpture. Fragments of two spindle whorls were found: one an undecorated chalk spindle whorl or weight, not locally made, (Illus 8.5, no 97) was found among the shell sand sealing the cist burials (context 826), and a broken one made of stone with decorative grooves (Illus 8.5, no 95) from context 327 (although is described by Cox, Chapter 8.2.3 as possibly medieval). These indicate that domestic activities such as wool spinning were taking place on the island.

The archaeobotanical analysis was concentrated on five samples from this period (Miller and Ramsay, Chapter 7.6). The charcoal remains contained small amounts of oak, willow, birch and bladderwrack seaweed which could be remains of driftwood bonfires, the seaweed perhaps being used as tinder. Although patches of burning were found, these did not contain enough charcoal to suggest that there had ever been a timber church, which had burnt down. Evidence for agriculture was absent, with only a single barley seed found from layer 420 and even this was thought to be a contaminant. Carbonised seeds were generally low in

number and represented a range of habitats, particularly damp grassland and heath.

Pollen cores were taken from the South Plateau 0.2km WNW of the monastery site (*see Illus 1.3*), as well as from Three Tarn Nick 0.6km to the NW (Tipping and Milburn, Chapter 7.7). Radiocarbon dating of the two pollen cores showed that the onset of peat formation occurred at Three Tarn Nick between the late ninth and the early eleventh century (1σ, GU-3887), continuing to the present day (GU-3888), and at the South Plateau the onset occurred between the early 11th and the mid-12th century (GU-3886). Analysis of the pollen preserved in the cores suggested that during Period I the landscape was open, dominated by marshy grassland with some sparse hazel and alder becoming established on the island. Small percentages of oak, pine, birch, elm, lime and poplar pollen were present, although this could have been blown over from the mainland and does not mean that these trees actually grew on the island.

There was a single peak in microscopic charcoal in the South Plateau core just below where the first date of the early 11th to mid-12th century was obtained. This may be evidence of an extensive fire over the island. However, at Three Tarn Nick there were three peaks in the microscopic charcoal prior to the late ninth to early 11th century which suggests rather that the fires were sporadic and localised. The levels of microscopic charcoal decreased from this time onwards, suggesting that during the medieval period there were fewer localised fires on the island, perhaps reflecting a new focus at the priory.

It can be suggested that the onset of peat formation results from changing human impacts, such as woodland clearance or arable farming. On the May there was evidence for a reduction in the alder and hazel at much the same time as the peat development, but there was apparently no evidence that people were responsible for this, nor was there an increase in any indication of arable farming. It is more likely therefore that the onset of peat formation on the May was the result of a small climatic change in the 10th–11th century (Milburn, Chapter 7.7). However, the date of the onset of peat formation also corresponds approximately with the construction of the first stone church and this might be expected to be associated with an increase in human activity on the island. Later on, the pollen begins to show an increase in scrub and footpath species that may again be natural vegetation change or could be attributable to increased human activity. A date of the 12th century has been interpolated for this change, but given that the rate of pollen accumulation is not certain and that there are so few dates from the cores, this date is not reliable.

The most substantial evidence for human occupation in this period was seen in the accumulation of mammal, bird and fish bones. Only a sample of mammal bones, based on the context's archaeological significance, was analysed because of a lack of resources. The bones recovered from 22 Period I contexts were of domesticated animals including cattle, sheep/goat, pig and horse. The

only wild animal represented was seal, with knife cuts and chop marks indicating that they were used for their skins and for oil, as well as for food. The island's natural resources included the seabirds which nested on the cliffs and rocky shores. Unlike the mammal bones, it was possible to analyse all the seabird bones and it was found that a variety of seabirds were present, particularly the herring or lesser black-backed gull and the guillemot (Smith, Chapter 7.2). There was a noticeable absence of puffin and fulmar compared with the modern species present. There was also a single fragment of a possible bone of a great auk, which became extinct in the 19th century. Evidence of butchery was seen on the bones of the cormorant, guillemot, herring or lesser black-backed gull, and the domestic/greylag goose. In most other prehistoric and early historic sites it is the gannet that is most frequently found, but on the May only a few of these bones were found. This suggests that even in the medieval period the island was not a favoured place for gannets to breed.

Samples of fish bones were also analysed from 18 contexts (Chapter 7.4). There were no Period I primary midden deposits, the fish bones being redeposited within these contexts, thus reducing their value for detailed statistical analysis. However, taken as a group, they provide some indication of the fishing practices of the pre-12th-century period. The remains of nine species of fish were identified, dominated by cod, haddock and herring (*see* Chapter 7.4) and it is interesting to note that cod remained dominant throughout the history of the site. The variety of fish sizes indicates that the method of catching fish included lines from rocky shores as well as from boats in deeper water. The presence of a full range of fish parts was evidence that the fish were landed for consumption on the island rather than for drying and export. Research on the origins of industrial fishing in northern Scotland indicates that large-scale fish processing at the coastal edge was not introduced until the 12th century (Barrett 1997).

Shellfish probably also contributed to the diet of the island's inhabitants. Unfortunately, crushed seashells were present in every analysed soil sample, and it is probable that most were derived from the beach deposits introduced to the site as grave fill or as aggregate for lime mortar. Larger specimens of edible species such as the edible periwinkle, limpet and mussels were present and these were occasionally burned, which suggests that they were cooked and eaten on site or perhaps used as bait. Edible crab and sea urchin were also present and it is quite probable that these, as well as the wildfowl, would have been a significant part of the food resources. Oysters, which are present in later periods, are absent from the samples in this period.

5.5.2 Period II: medieval

Nine contexts were examined for macroplant evidence. The macroplant remains and pollen evidence suggests that grassland and heath was still predominant (Chapter 7.6). There was a decreasing presence of scrub woodland

(oak, hazel, willow and birch), contrasting with a corresponding increase in footpath and 'ruderal' plant communities from about the 11th century. In the late medieval period the pollen profile suggested a possible decrease in human activity. Walnut pollen has been identified in the profile from the South Plateau (Illus 1.3) during the medieval period, which, if correct, would mean that walnut trees were growing and flowering on the island. Walnut is a very rare species at this time in Scotland and it is not certain that the trees could have survived to flower in the Scottish climate, let alone on this windswept isle.

One of the characteristics of the medieval pottery assemblage was its wide range of wares. It included local Scottish wares (SWGW and SMR), English wares from Stamford, Yorkshire, Humberside and London, and foreign imports from N France, Rouen, Bordeaux and the Low Countries (Chapter 8.5). The pottery assemblage may contain evidence of changing patterns of trade and contact, but this is difficult to see. For example, this range of material might reflect the shifting spheres of influence which Reading and St Andrews brought to the island. But there is nothing that links the pottery to Reading, and, indeed, if this pottery was examined blind, there is nothing that shouts 'monastic' about it either (G Haggarty pers comm). While pottery remains essential for the site's chronology, in general it does not provide precise dates, due to its unrefined chronologies, and to the perennial problems of residu-ality and intrusion, especially on a site exposed to burrowing birds and animals.

The medieval finds included those associated with the *scriptorium*: a parchment pricker (Illus 8.8, no 69), a book clasp (Illus 8.7, no 29) and a possible parchment clip or tweezers found in the latrine (Illus 8.7, no 23). Remnants of the priory fabric were found in the form of sandstone architectural fragments, window glass, ceramic tile, a single lead pipe fragment and a lump of decorated white plaster depicting a leaf pattern (Illus 8.7, no 60). Although difficult to differentiate, plain floor tiles and roof tiles were both present. It seems apparent from analysis of the lithic assemblage that flint was still a useful resource in the medieval period (Donnelly, Chapter 8.4.3). It was utilised for strike-a-lights and for cutting and boring tools for working with leather or canvas.

Evidence for metalworking was found in various parts of the site. A small piece of vitrified rock with green glassy glaze, possibly a piece of furnace structure, was found in the W part of the cemetery (context 950). Bloomworking debris was found within a disturbed burial in Trench V (1127), from a layer beneath the Cluniac church (838) and from the cemetery (865). In the E range a floor deposit (329) contained iron ore nodules. Iron nails were found in far greater number in this period than before. The majority of these were characterised as general nails, with some clench nails (thick, diamond-shaped heads) and a small number of coffin nails (large round or square heads) were identified. Interestingly, none of these coffin nails were

from the cemetery, where general nails predominated. It is possible that during the medieval period the more general type of nails were used for the fixing of coffin lids.

The presence of outlying structures, retreats, fishing stations and boat shelters would be expected around a working priory in an island context, and there is some evidence for this on the May. Outlying middens on the island (e.g. on Rona) have produced medieval pottery and in this remote, rocky location, can only represent settlement debris. The structure on Kettle Hill survived only as a spread of mortar and pottery. Amongst the debris were two perforated pot sherds of nearly identical weights, perhaps utilised as loom weights, suggesting that this may have been a weaver's shed rather than a fishing station.

The lack of evidence for arable agriculture is fairly clear. For example, a sample from the midden (Trench X) contained only a single wheat seed, while the latrine yielded only a few unidentified cereal grains. The low-level cereal-type pollens from the peat cores have been interpreted as being derived from the natural wetland grasses. By contrast, the only good evidence of crop processing came from the open hearths within the E range, related to the immediate post-monastic period in the 14th century. Grains of barley, wheat and oats were found here, together with small amounts of chaff and weed seeds. So it seems likely that corn was being imported fully processed in this later period.

Despite the monastic rule that meat should not be eaten on fasting days, there was ample evidence for the consumption of sheep/goat, cattle, and pig as well as seal. Unfortunately, none of the bone-producing deposits were from primary middens, thus reducing their value to statistical analysis. There were a few bones of horse, red deer, fox, and rabbit. Although rabbit warrens are thought to have been constructed by the monks (Chapter 2), rabbit only accounts for a small proportion of the assemblage.

The historical sources tell us that the monastery received a tithe of the catch from the rich fishing waters around the May, and not surprisingly substantial quantities of fish bones were found throughout the site, and even from within the church floor. The analysis of the fish bones has suggested that cod was the main catch, with haddock, ling and pollack in lesser proportions. The excavated fish remains, however, should be considered only as evidence for monastic preference, and only indirectly can they shed any light on the commercial fisheries of the May. It is quite likely that some of the fish remains had been gifted fresh from the boats direct to the monks, while others were landed on the mainland and processed, by drying or salting, there and brought to the island as required for consumption by the monks.

Shellfish were also consumed; the shells of crab and sea urchin were found within a variety of deposits. Excluding the fragments that would have derived from shell-sand mortar, the most common shells were of the limpet (which could be used either as food or as bait)

and periwinkle, with lesser numbers of whelk, mussel, oyster and cockles. Unlike the other molluscs that were available close to the shore, scallops had to be fished from beds in the Firth of Forth, and therefore had to be imported. A queen scallop shell was found in the cloister (492) and the St James scallop in two contexts: firstly the 'scallop shell' burial in the church (158), and secondly in the orange ash layer in the cemetery.

The exploitation of wild fowl in the medieval period was demonstrated by butchery marks, consistent with consumption, on the bones of gannet, cormorant, shag, domestic or greylag goose, eider duck, mallard duck, gull and guillemot. This was supplemented by domesticated fowl (chicken).

5.5.3 Period III: post-medieval secularisation

The hiatus in the coin sequence of nearly 300 years ends at the beginning of this period with the two 1½d (penny ha'penny) coins of 1558 and 1559. Following the post-Reformation dismantling of some of the priory buildings, occupation by the owner of the island, despite the investment in upgrading the residence, may have been seasonal and short-term. The remains of the priory were converted into outbuildings set around a central courtyard, with twin doorways providing access to the N and E ranges. The church was converted into a smithy, containing an oval-shaped furnace and quenching trough, with plain glass windows. The N room in the E range was equipped with a bowl furnace. The other rooms may have been utilised for storage. Initially, the S range had performed an industrial function with evidence for high-temperature firing within a hollow in the monastic floor. At a later stage, the range was subdivided into two rooms of unknown function. An outbuilding was built to the S of the E range, reusing part of the monastic latrine walls, but here too a function was not ascertained. The amount of rubble within the S range, and the fact that it had tipped in from the S, indicates that further structures had probably existed in the region of the site to the S.

It is apparent that in post-medieval times much of the building stone from the priory and laird's residence was removed from the site, as there was clearly not enough rubble left *in situ*. There are several phases of building works on the island, including the 17th-century beacon, the village and the 19th-century lighthouses which may have been constructed of this reused masonry. The villagers would have relied mainly on fishing, and some crop cultivation, possibly supplemented by an involvement with smuggling. The later lighthouse keepers and their families were supplied with food and water from the mainland, and would have supplemented this with what they could grow themselves or trade.

The range of post-medieval pottery reflects the wide range of social status of the inhabitants, from the landowner to lowly villagers. Amongst the foreign imports and locally made wares there was high-quality pottery, such as the sherd of Dutch maiolica dated to about 1600, as well as a sherd of 16th-century Beauvais

tableware from Trench V. About 20 per cent of the total pottery assemblage consisted of modern industrial wares of the 19th and 20th centuries, which can be directly attributed to the occupation by the lighthouse keepers' families, and wartime occupation.

Similarly, it is possible to identify vessel glass of about 1680 to 1740, which reflects a high standard of living. This may be due to the smuggling that took place in this area (Wood 1887, 319–26) as square bottles which would have held gin or brandy, are particularly in evidence. Clay pipe fragments from Scotland, Holland and England were found. The later 19th-century pipes show a variety of local makers from both sides of the Forth, at Leith and Kirkcaldy.

The East Neuk fishing industry was booming in the 16th and 17th centuries, but lapsed in the 18th and 19th centuries. The sherd of pottery found within Trench O depicted part of a transfer design featuring a female herring seller. The title 'caller herrin', meaning 'fresh herring' (Speitel 1975), is a reminder of the importance of the herring fisheries in the 18th century. The May was ideally suited for watching for the fish coming into the Firth of Forth, and the islanders apparently followed the shoals of fish as they arrived (Sibbald 1803, 101–2). In the 18th century there were four places where boats could land: 'Tarpithol' (Tarbet Hole), Alterstanes, Pilgrims Haven and Kirk Haven (Sibbald 1803, 99). In the mid-19th century Gordon refers to the 'fine sight to see some 400 fishing boats on their way to the Island' (Gordon 1868). The fish remains from this period included haddock, cod, ling, pollack, saithe, herring and several other species.

Three contexts were examined from Period III. The samples from the pollen cores, dating possibly to the mid-15th century onwards, continued to reflect an open landscape with only windborne tree pollen. Walnut is present in the upper part of the pollen core, but the existence of a flowering example of this species is questionable. There is, however, a single fig tree still living in a crevice on the Burrian near the Low Light (Eggeling 1985, 157; Jim Dickson pers comm).

It was thought that the macroplant remains from the Period III deposits would have contained residual material from Period II, as these deposits also contained residual medieval pottery. However, while some residual material was discovered, this was not in the abundant quantities found in the Period II samples. This limited evidence cannot be taken to mean that processing of crops was not taking place on the island. There was, however, evidence for the burning of turf. Consideration should be made of the small number of samples analysed from each period. The build-up within the cloister in particular (context 257) contained numerous bird bones and mammal bones, suggesting the deposition of midden material, but very little macroplant material. Charcoal from other samples in this period contained *Pomoidiae* (*Sorbus* (rowan) type and alder, which could have grown on the island and also ash, elm and *Picea/Pinus/Larix*, which may have been burnt driftwood (Boardman and Thomas 1993).

The macroplant analysis produced no substantial evidence for cereal cultivation during the post-medieval period. Cultivation of small garden plots with vegetables could have taken place, and the most likely places on the island for cultivation would be on the raised beach to the N of the priory, and to the S in the vicinity of the village where the only area of extensive flat ground is to be found. Anthropogenic soils (plaggan soils) were evident across the area to the S of the priory within a series of test trenches. Beneath the modern turf layer this homogenous cultivated soil was up to 0.3m deep in places, and lay directly on weathered bedrock. The abundance of modern pottery and glass within the test trenches testifies to the extensive middening of the fields by the lighthouse keepers and their families in the 20th century. While it is known that these fields were enclosed in the early 19th century, it is possible that the terrace has been in cultivation periodically, at some level, since the medieval period, although there is no evidence for this.

The analysis of the faunal remains from this period revealed a predominance of cattle, including a high number of juveniles, suggesting that cattle were kept primarily for milk. This agrees with Eggeling's observation that cattle were not grazed in large numbers because of the lack of a good water supply, but the grazing would have been suitable for a few milking cows (Eggeling 1985, 56). Sibbald states that 'in the isle there is no 'corn' but good grass for pasture for a hundred sheep and some twenty cows' (Sibbald 1803). Some sheep/goat and pig (including a few young animals kept for fattening up) were also present in the mammal assemblage, along with a few bones of horse, cat, roe deer, hare, rabbit, rat and a polecat or ferret. The roe deer would clearly have been imported for consumption, as the vegetation was unsuitable for them to survive on the island.

Rabbit bones become plentiful in this period and their unrestricted burrowing has been noted in the midden deposits in the cemetery and the kitchen midden. The butchery marks on the bones clearly shows that some at least were consumed by the inhabitants, while natural deaths within burrows could also explain the presence of some of the excavated bones. The documentary evidence indicates that rabbits were kept in warrens in the medieval period, and were considered to have contributed to the wealth of the island. Casual trapping of rabbits probably continued into the later periods, especially during wartime, but this did not constitute an 'export trade'.

The mammal bones retrieved during the excavation included a significant number of seal bones with evidence of butchery. In the 18th century seals were killed on the E side of the island and the rendered oil was used for lamps and other purposes (Sibbald 1803, 115). Although eating seal flesh went out of common practice in Scotland in the post-medieval period, it may well have been utilised in times of need by the villagers, as was still practised in Orkney at this time (*ibid*, 114).

The utilisation of wild birds was also evident in the post-medieval period. In addition to those with evidence of butchery in the medieval period were added a pink-footed (or bean) goose, buzzard and greater black-backed gull. It seems unlikely that the buzzard was consumed, but it may have been killed because it threatened sheep and its body broken up. One goose was shot with a modern shotgun pellet. It is interesting to see that although puffin are numerous on the island now, there

are very few bones within the archaeological record, which is confirmation that they are fairly recent arrivals.

Limpet and mussel shells are more apparent in the analysed samples than before, as they were used as bait and as a food in times of need. Both the queen scallop and the St James scallop were found in small numbers in several contexts. The other edible species present include oyster, crab and sea urchin.