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Cramalt Tower: historical survey and excavations 1977–9

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INTRODUCTION

The new Megget reservoir, which will provide a major new source of water for Edinburgh and the Lothians, will occupy the whole of the central portion – the major part – of the Megget valley. Such an enterprise can rarely be undertaken without leaving some casualties in its wake, and Megget is no exception. Apart from the loss of some 260 hectares (1 square mile) of land, two farms, four cottages and the old Megget school will also disappear.

The greatest loss to antiquarians, however, will be Cramalt Tower. Situated 1·15 km upstream of the dam (fig 1), the remains of this old Border stronghold will disappear for ever beneath some 40 m of water. It was essential, therefore, if a detailed record of this monument was ever to be obtained, for a new survey to be made of the ruins and as many of the surviving features as time permitted. At the same time it is necessary to consider the history of the Megget valley and its owners to appreciate the importance of the site and see Cramalt in its true historical perspective.

HISTORY

Meggetland and Ettrick Forest

The Megget valley, or 'Meggetland' as it was commonly called, was an outlying district of the ancient forest of Ettrick, a hunting preserve created by David I during the 12th century, when he established a royal manor at Selkirk. It was one of two such royal forests in the Borders, the other being the later and much smaller Jed Forest (HAS, 'Hunting Reserves', 33–4, 135).

Meggetland proved to be especially popular, almost invariably providing sport until well into the 16th century. The local landscape must, therefore, have looked very different then compared with the open hills and valleys seen today. It is known, however, that the upper Yarrow and Ettrick valleys, which Alexander II had granted to the abbey of Melrose, were used for grazing sheep, and there can be little doubt that the same was true of the higher ground in Meggetland. It is the lower ground that has been transformed during the last 400 years, the ancient woods and scrub having almost disappeared with the advancement of agriculture. Pont's maps show some of the more heavily wooded areas, including a wood at Cramalt, but no trees of any great age have survived to the present day (Blaeu, maps of 'Tweeddale' and 'Ettrick Forest' as surveyed by Timothy Pont c 1595).

Robert the Bruce granted Ettrick Forest to Sir James Douglas in 1324, and it remained with his heirs, the Earls of Douglas, until their forfeiture in 1455, when it reverted to the Crown. By this time Newark Castle, built c 1420, had become the forest's new 'caput'. The forest was subsequently granted as a dower to the queen of James III and later to the queen of James IV.

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James V frequently hunted in Ettrick. Meggetland was especially popular, hunts there often appearing in the records between 1528 and 1535. The royal accounts for August 1529, for example, record the purchase of material to make a cloak for the king 'to ryde to the hunting in Megotland', while £3 was paid 'for carying of the pailzeonis (pavilions) fra Peblis to Meggotland' (ALHT, V, 357, 363). But James V was a devious character at the best of times, and his frequent visits to Meggetland were not prompted solely by love of the chase. In his ceaseless campaigns to suppress the Border rebels of Liddesdale and Eskdale, Megget proved an excellent base from which to launch sudden and devastating raids upon the rebels. Using the hunting as a very plausible excuse for his presence, James would ensure a large attendance of nobles and their men either by open proclamation or by sending messengers. For instance, in August 1531 a messenger was sent 'to Menteth and uthir place with lettrez to warne the gentilmen of the cuntre to the Kingis hunting in Megetland'; another was sent 'to pas in Lowthiane'; and a third to 'the lardis Innerwik and Spott, and the lord Hay' (ALHT, V, 445). Of one treacherous expedition in July 1530, which culminated in the hanging of Johnnie Armstrong of Gilnockie and his followers at Carlenrig, Pitscottie relates that during the same expedition 'eighteen score of harts' were said to have been slain in and around Meggetland (Pitscottie).

Queen Mary and Darnley visited Megget in August 1566, but got 'na pastyme of hunting' because outlaws had driven off the deer. Annoyed by their loss of sport, they held a court at nearby Rodono, and charged all the lieges that none shoot at deer; but to no effect (Buchan III, 526).

A further attempt to stop the poaching was made ten years later during the minority of James VI, when, on 27 March 1576, the Privy Council issued a decree 'Anent the deir of Megotland'. This noted the unlawful slaughter of deer that was taking place daily in Meggetland and other areas of the Borders where the kings of Scotland were wont to have their chief pastime of hunting, and ordered proclamations to be read at Dumfries, Jedburgh, Peebles, Selkirk 'and utheris places neidfull' commanding 'his Hienes lieges that nane of thame tak upoun hand to schute at the saidis deir with gunnis, or to bring in ony maner of Inglismen to hunt', without express licence (RPC II, 506).

By then, however, the days of Ettrick Forest as a hunting preserve were rapidly drawing to a close. During the latter half of the 15th century the forest was still divided into three wards, each of which contained a considerable number of steads leased on tacks of three or five years; but under an Act of 1504 all the tacks were converted into feus, making the tenures henceforth heritable (APS II, 253). There had been an earlier Act, in 1458, authorising the holding of crown lands in feu, though few such tenures seem to have been granted at that time (HAS 'Crown Lands', 72, 185). In 1587 the crown finally resigned its forest rights (RCAMS 1957, 5–9).

Meggetland always seems to have enjoyed a special status in the forest, for, although it was included in the Yarrow ward, it contained no steads as such, having been held in fee from the crown from a very early date. It was thus spared the uncertainty of tenure inherent in the tacks. And although it lay within the forest's boundary[1], and was subject to the forest laws, it did not come under the jurisdiction of the sheriff of Selkirk, but formed a part of Peeblesshire[2].

The Lands of Cramalt

Prior to the 17th century the various properties in the Megget valley were rarely referred to individually. One of the few exceptions was the grant by Sir David de Hay of Yester, in 1462, of his lands of Westirhopprew . . . and also his lands of Fulyart, Schelehope and Wyntirhope in the barony of Lyne, and an annual rent of 4½ merks from his lands of Crammalde in the same

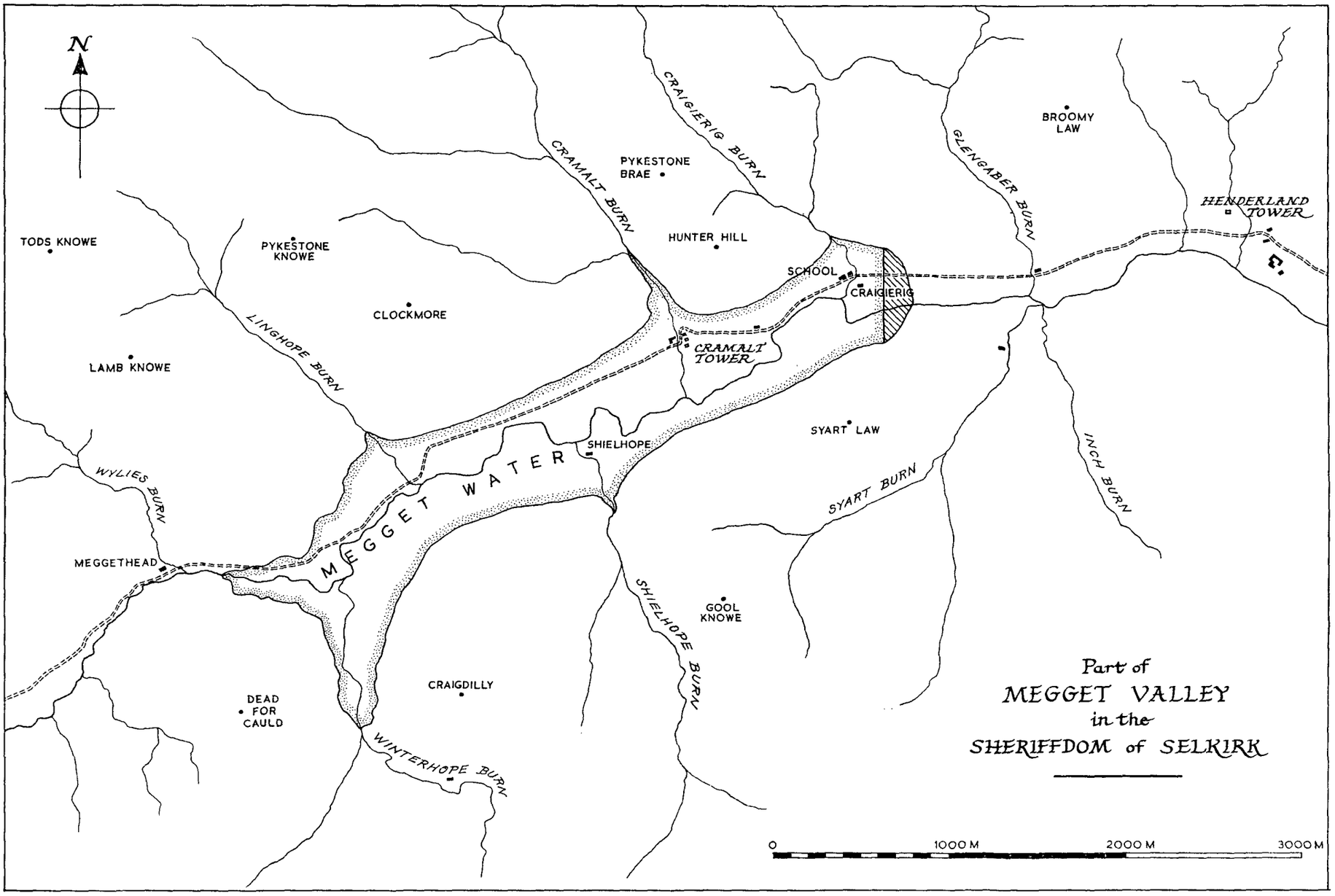

FIG 1 Part of Megget Valley in the Sheriffdom of Selkirk, showing the extent of the new reservoir

barony, to his son John le Haye, later 1st Lord Hay of Yester, on the occasion of his marriage (Yester Writs, no 124). Cramalt was mentioned again in a decree issued by parliament in February 1468/69, under which Alexander Cokburne and Matho Cokburne were ordained to 'devoid and red' the lands of Crammalde and Upper Megot to Sir David the Haye of Yester, and to find £300 caution for their future good behaviour (Yester Writs, no 143). This is the only known instance of a distinction being drawn between 'Upper Megget' and the other properties in the valley. It was more usual just to refer to the collective 'lands of Megget'[3], which at various times formed part of the baronies of Lyne, Megget, Hopprew and Yester.

Royal documents tended to be equally general, referring merely to 'Megotland'. It is significant, therefore, that two charters granted by James V whilst hunting in the district in 1531 and 1535 were dated 'near Crammalde' (RMS III, nos 1059, 1511). And in 1532, when Lord Dacre wrote to Henry VIII (following receipt of a letter from James V), he reported that 'The king of Scots came hunting, 30 May, into a waste ground called Crammell, in Meggot's lands' (L & P V, no 1101). Whatever Dacre meant to imply by 'waste ground', Cramalt was certainly an established 'house' (the normal description for a Border tower) by that time and the property of Lord Hay of Yester (p 404).

Strategic Importance of the Site

Local tradition has long credited Cramalt with having been the ancient seat of the Meggets of that Ilk (Pennecuik 1815, 47n), the earliest of whom on record is 'Randulfus de Meggate', who witnessed a perambulation of the marches of Stobo c 1200 (Black, xx–xxi). This could be true. Certainly, of the various sites that have been occupied in the valley during the last 500 years, only two – Cramalt and Henderland – show any sign of having supported 'houses of strength', and no earlier 'sites' have been identified elsewhere.

Cramalt was in fact an important strategic site. Although it lay almost on the bed of the valley, it was centrally placed, with a good view down the Megget to Henderland, close to St Mary's Loch, and up the Megget almost to the watershed with the Talla Water, in Tweeddale. But there was another, less obvious reason for its importance. Anyone wishing to travel between the Upper Yarrow valley and Upper Tweeddale had only two reasonable passages at his disposal, and both met close by Cramalt. One route lay straight up the Megget valley and over the Talla Pass to the west: the other ran over the hills immediately behind Cramalt to Manorhead, and thence down the Manor valley to Peebles, passing Neidpath on the way. The latter route was that used by James V when he came to hunt in Meggetland, and thus gained the name 'The King's Road'. It was also one of the routes used by Border rebels when raiding Peebles. This gave Cramalt added importance as an outpost of the Hays, who were not only concerned for the safety of Neidpath, but also, as hereditary sheriffs of Peebles, were responsible for enforcing law and order in Tweeddale. The road still exists, though the hill section is no longer in use for wheeled traffic (RCAMS 1957, no 112).

The Hays of Cramalt

It is not certain when or how the Hays came into possession of the lands of Megget, and thus Cramalt. The earliest of the name to settle in the Borders seems to have been Sir John de Haya, a kinsman of the Hays of Errol in Perthshire. By his marriage with the daughter and heiress of Robert de Lyne early in the 13th century, Sir John acquired the barony of Locherworth (later Borthwick), together with certain lands that the Lynes had held in Peeblesshire for at least

three generations during the 12th century. There is a reference in 1236 to one Thomas de Haya, who held lands either in Megget or its immediate vicinity (Buchan III, 526). He was in all probability a younger son of Sir John de Haya, occupying lands either inherited through the Lynes, or possibly acquired direct from the Meggets of that Ilk.

Around the turn of the 14th century Sir Gilbert de Haya of Locherworth married Mary, daughter and co-heiress of Sir Simon Fraser (d 1307) of Oliver Castle. The Frasers had been an important family in Peeblesshire throughout the 12th century, and held extensive lands in Upper Tweeddale and around Jedderfield (later Neidpath). Sir Gilbert was thus able to add the lands of Neidpath and the NE portion of the lands of Oliver to his existing Peeblesshire properties. The remaining lands of Oliver passed through Mary's sister to the Flemings of Biggar, who eventually, in 1470, granted them to Sir David Hay of Locherworth and Yester, thereby reuniting the Frasers' ancient property.

Although the lands of Megget march with those of Oliver, there is little doubt that the Hays obtained Megget before there was any direct connection with the Frasers. Certainly the Hays were firmly in possession of the major part of the Megget valley before they obtained the Flemings' portion of the lands of Oliver[4], for in 1462 Sir David Hay had granted certain of his Megget properties to his son John (p 403). Moreover, this charter refers to the lands of Megget as then forming part of the barony of Lyne.

Early in the second half of the 14th century the Hays built a massive new tower-castle at Neidpath (RCAMS 1967, no 519). This became their principal residence, although they still continued to live at Locherworth for some of the time, as well as being designated 'of Hoprew', Peebles (Complete Peerage VI, 421). A short while afterwards Sir Thomas de Haya of Locherworth married Joanna, eldest daughter and co-heiress of Hugh Gifford of Yester. When the family eventually succeeded to its share of the lands of Yester – which does not seem to have been until c 1400, or even later (Complete Peerage VI, 421) – Yester became in turn their new seat. Neidpath and the other Peeblesshire properties were still retained, but Locherworth was sold.

Although the lands of Cramalt are occasionally mentioned in charters during the second half of the 15th century, there was no mention of a tower as such until 1530, though this in itself is not remarkable. The occasion was James V's visit in May, when, following the execution of William Cockburn of Henderland, a notorious rebel, and in preparation for his expedition against Liddesdale and the West Marches, James ordered that certain chiefs in those regions be detained in ward. One of these was William Cockburn, younger of Henderland, whom the Privy Council directed should be placed in the custody of John Lord Hay of Yester (Armstrong, 272n). At a further meeting of the Council on 20 May, Lord Hay was directed to 'pas hame to his awin housis of Crammald and Neidpeth', and to remain there, and to be ready with the landed men of Tweeddale to resist the Border thieves and make raids upon them (ALCPA, 329). The stronghold at Cramalt is next mentioned in 1555, when John, 4th Lord Hay of Yester, 'was infeft as heir to his father in the lands of Ester Hoprew, Edstone, Jedworthfield and the office of Sheriff of Peebles at the castle of Neidpethe; in the lands of Megothe at the place and fortalice of Crammald; and in the lands and barony of Olivercastell, the superiority of the lands of Todrik (Selkirkshire), and half of the lands of Glenrusko, at the principal messuage of Olivercastell'; all of which had been in the Queen's hands since 26 September 1543 (Yester Writs, no 658). Lord Hay died shortly afterwards.

On 15 February 1555/56, William Hay, son and heir of the late Lord Hay of Yester, was granted a crown tack of the barony of Yester; the late lord's lands of Easter Hoprew, Edstoun and Megot, and the lands of Apiltresyde, lying within the barony of Megot, wadsett under reversion, all lying in the sheriffdom of Peebles; and other lands in the sheriffdom of Dumfries;

for an annual sum of 700 merks Scots. At this time William was still a minor. Three months later William, 'now (5th) Lord Hay of Yester', was granted the ward and non-entries of these lands (RSS IV, no 3166, 3237). By 1561 a certain John Cesfurd was tenant in Cramalt (Buchan III, 534).

In 1576 William, 6th Lord Hay of Yester, was served heir to his father in the lands of 'Meggot' (Buchan III, 527); and on 27 February 1590/91 he received a crown charter confirming to him the lands and barony of Yester, etc., the lands of Easter Hoprew, the lands of Edstoun and Megott, and the lands and barony of Olivercastell, with the castles, etc., all of which were now incorporated into the barony of Yester (RMS V, no 1830). Three months later these lands were resigned by William and granted by the crown to his younger brother, James Hay (later 7th Lord Hay of Yester) (RMS V, no 1872).

During the 17th century the Scotts of Buccleugh acquired some title to Megget, though the connection remains something of a mystery. In 1661 Anna, Countess of Buccleugh, was served heir of provision to her sister Mary in the lands and barony of 'Meggitt', including the lands of Cramalt (Buchan III, 527). The Hays nevertheless remained in possession until 1686, when John Hay, 2nd Earl of Tweeddale, had to sell all his Peeblesshire properties, including Megget, to meet debts. The lands were bought by William Douglas, 1st Duke of Queensberry, who bestowed them on his second son, William, 1st Earl of March; and they continued to be held by the Earls of March until the death of the 3rd Earl in 1810, when they passed to the Earl of Wemyss, descendant and heir male of the 1st Duke's only daughter. They have remained with the Earls of Wemyss and March ever since.

Later History of Cramalt

As early as 1462 mention is made of individual parcels of land in Megget, most of whose names are still familiar. It was not until early in the 17th century, though, when Ettrick had ceased to be a hunting preserve and the Borders were settling down to a more orderly life, that these and other lands became established farms, able to support one or more tenants and their families. Dr Pennecuik, writing c 1702, gives a brief description of the valley, listing the houses at that time as Dead for Cauld, Wintropburn, Meggit-Knows, the Crammel, Shielhop, Craiggy-Rigg, Siert, Dirthop and Henderland (Pennecuik 1715, 24). He does not include Fulyard, which is recorded in 1462 and again in 1509, and Dirthope has since disappeared, unless it was another name for Glengaber[5]. 'Dead for Cauld' seems to have been an old name for the farm of Megget-head: the name is still retained for the southern portion of the farm and the adjacent hill (fig 1).

The earliest tenant on record is the John Cesfurd who was at Cramalt in 1561. Then there was an Anderson in Cramalt c 1610; Adam Linton in Syart by 1629; the same or another Adam Linton in Shielhope, and John Linton in Craigierig, in 1645; James Andison and Thomas Miller in Cramalt, and James Burrel in Henderland, in 1649; and so on (Buchan III, 534ff; Gunn 36ff).

The Andersons continued as tenants in or around Cramalt for some 300 years, finally giving up in 1910. During this time they saw many changes in the property: the old towers were soon abandoned and fell into ruin; a new farm complex grew up; the agricultural revolution arrived, though probably with less impact here than in more arable areas; and in the 19th century the 'new' farmhouse was built[6], followed later by the 'lodge'.

SITE INVESTIGATIONS

When the present investigations began, only one feature of the old stronghold of Cramalt was known to have survived. This was the ruin of a tower-house – now known as the 'North Tower'. It stood on the E side of the farmyard complex, across the Cramalt Burn from the main

buildings, and at the foot of the 'lodge' garden, whose southern boundary it partly defined. The S and W sides[7] of the tower bordered on a fank (or sheep pens), which in turn extended across to the burn and as far S as a small, enclosed wood. The E side formed part of an enclosing wall for a field (fig 2).

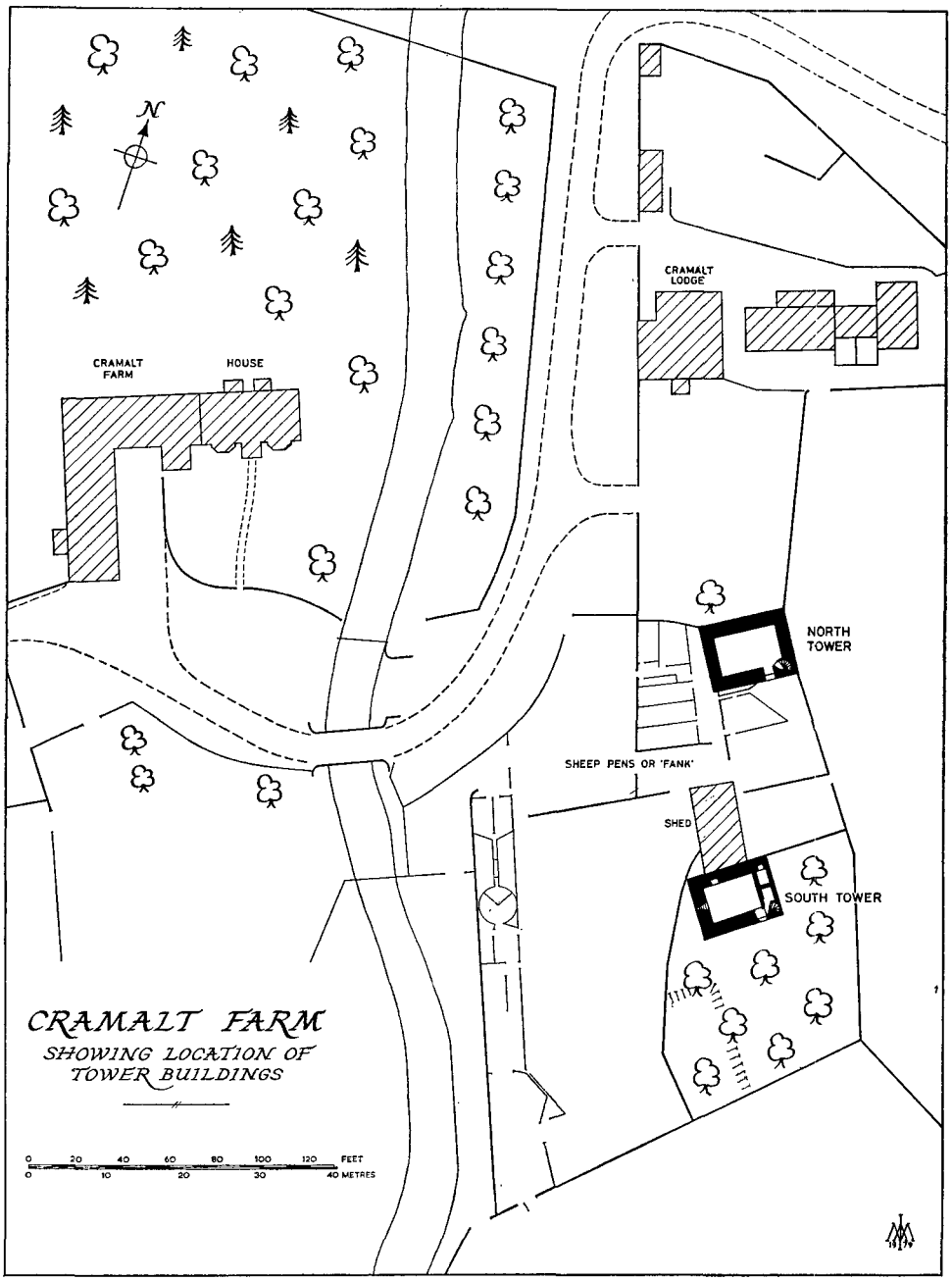

FIG 2 Cramalt Farm: showing location of Tower buildings

The surviving tower, which had long been in an advanced state of decay, probably owed its survival from total collapse to the fact that its lower walls still served a purpose. Because of the poor quality of the mortar and the very irregular rubble used, the outer faces of all the walls had largely fallen away. To some extent these were found to have been repaired with drystone work at two distinct periods. The area within the tower was choked with rubble and farm debris, while what remained of the walls above was largely obscured by a dense covering of ivy and other vegetation.

Most of the N wall survived to first floor level, as did the W half of the S wall, and the NW and SW corners. The W wall had a wide breach near the centre, while the E wall had collapsed at each corner and had little more left between (pl 34a). There was clear evidence from the two end walls that the basement had been vaulted, although the vaulting itself had completely gone, leaving ragged cavities in the side walls (fig 4). It was also evident that there had been a wheel-stair in the SE corner, but this was choked solid and overgrown. Nothing could be seen of the stairs themselves; nor was there any trace of the tower's entrance.

THE NORTH TOWER

It is not known for certain when the North Tower was abandoned as a residence. There is, however, strong evidence to suggest that it was still occupied during the closing years of the 17th century (p 423), and it cannot have been long afterwards before it was finally vacated and allowed to fall into ruin. Certainly a map of Peeblesshire dated 1775 shows only 'ruins' on the E bank of the Cramalt Burn, while on the W bank there are three, detached, rectangular buildings that represent the farm (pl 33a)[8].

At some later date what was left of the tower was again called into service. It is not clear exactly what was involved, nor to what purpose it was put, but only the basement was apparently used. The vaulting was either deliberately dismantled, or more likely had already collapsed. In either case, the excavations revealed that the vault had been completely removed and the ruins covered with a new, slate roof. When this roof later collapsed, it fell straight to the basement floor, where the slates were found buried under successive layers of rubble that had subsequently fallen from the crumbling walls above. The force with which one section of walling crashed to the ground showed that it must have fallen from about second floor level. This would indicate that, although the tower was already ruinous when re-roofed, the walls were still standing to a considerable height.

Either at the same time as the new roof was added, or later during this period of use, the entrance passage was narrowed by the addition of a roughly built, drystone wall on the W side. This reduced the original width of 4 ft 2 in (1·27 m) to a mere 2 ft (0·61 m) (fig 3). When this addition was removed, it was found that the original wall behind had been breaking away, both above and below a surviving portion, before the drystone was added. The crudeness of this latter work supports the belief that the building's revival was solely for use as a farm outbuilding. It is fairly certain that portions of the tower's outer wall-face were also restored with drystone at this level at the same time, though the work carried out later, when the fank was built, had largely obscured this.

The fank was apparently added during the second half of the 19th century[9]. It was at this time that the tower's entrance passage was finally closed altogether. It was nevertheless a little surprising – considering the inside of the tower was being sealed off and abandoned – to find that the passage was built up throughout its entire length, and carefully faced flush with the walls as well on the inside as the outside. Indeed, it was the quality of this work that had at first obscured

the location of the entrance. The fank incorporated the S and W walls of the tower in its enclosures, the outer wall-faces being restored in drystone except for two portions on the S side, which were sound. This work was carried to a height of some 5 ft 6 in (1·68 m), and was of a high standard. The various dykes surrounding and dividing the fank, and the one enclosing the small wood to the S (fig 2), mostly belonged to this period too, though some may have stood on the foundations of earlier walls associated with the old stronghold (see pp 420–1). The dyke on the W side, however, and the one running N from the tower's NE corner were of earlier date (Appendix 3).

The Walls

The tower measured 37 ft (11·28 m) by 28 ft 9 in (8·75 m) overall[10]. At ground level the walls were 5 ft (1·52 m) thick at each end, but 5 ft 9 in (1·75 m) at the sides, where they had to support the basement vault. Above this level the walls were all 5 ft (1·52 m) thick.

The masonry was local rubble (mostly greywacke) bonded with lime mortar. In the main the stones were used in their natural state; but when required for quoins, dressings or steps, they were usually split to provide one or more flat surfaces (at the top and bottom in the case of quoins), and then roughly hewn to shape. Only at the NE corner had any quoins survived above the ground. Subsequent excavation, however, when the whole of the E wall was exposed down to the foundations, revealed a further five at the NE corner and four at the SE corner. They varied in size considerably, with lengths ranging from 1 ft 9 in (0·53 m) to 4 ft (1·22 m), widths from 10½ in (0·27 m) to 2 ft 6 in (0·76 m), and heights from 8 in (0·20 m) to 1 ft 3½ in (0·39 m).

A considerable area of the outer wall-face was still visible on the N side of the tower, rising up to 6 ft (1·83 m) above the present ground level, and a further 4 ft 3 in (1·30 m) above the original level. On the S side two more areas of facing survived: one was below the first floor window (fig 4), while a smaller area lay in the SE corner. Only a fragment of the E face could be traced above the ground, but most of the facing below was found to be still *in situ* – averaging a height of some 3 ft (0·91 m). On the W side of the tower the outer facing had completely gone above ground level, except in the extreme NW corner, which was inaccessible.

Entrance Passage

The entrance to the tower was situated in the S wall, adjacent to the stair well, but not communicating with it directly. Immediately outside, the yard had been paved with small, irregular, flat slabs of the local greywacke.

Nothing survived of the entrance doorway itself except the threshold. This was a massive slab of greywacke, some 4 ft 5 in (1·35 m) wide and up to 2 ft 6 in (0·76 m) across, which projected 4 in (0·10 m) beyond the outer wall-face. It rose about 2½ in (0·06 m) above the original ground level on either side. Almost midway across the passage, and only 2¼ in (0·06 m) inside the line of the outer wall-face, there was a cup-shaped recess, 4 in (0·10 m) in diameter and 1¼ in (0·03 m), deep, neatly cut in the step (pl 34b). It was presumably associated with the fastening for an outer door; but as no such arrangement is known in connection with the original entrance to a Border tower, it was probably added to fasten a small door or gate when the width of the passage was later reduced (p 407). The jambs themselves had completely disappeared; they had either collapsed or were taken for use elsewhere before the modern drystone dyke was built across the entrance[11].

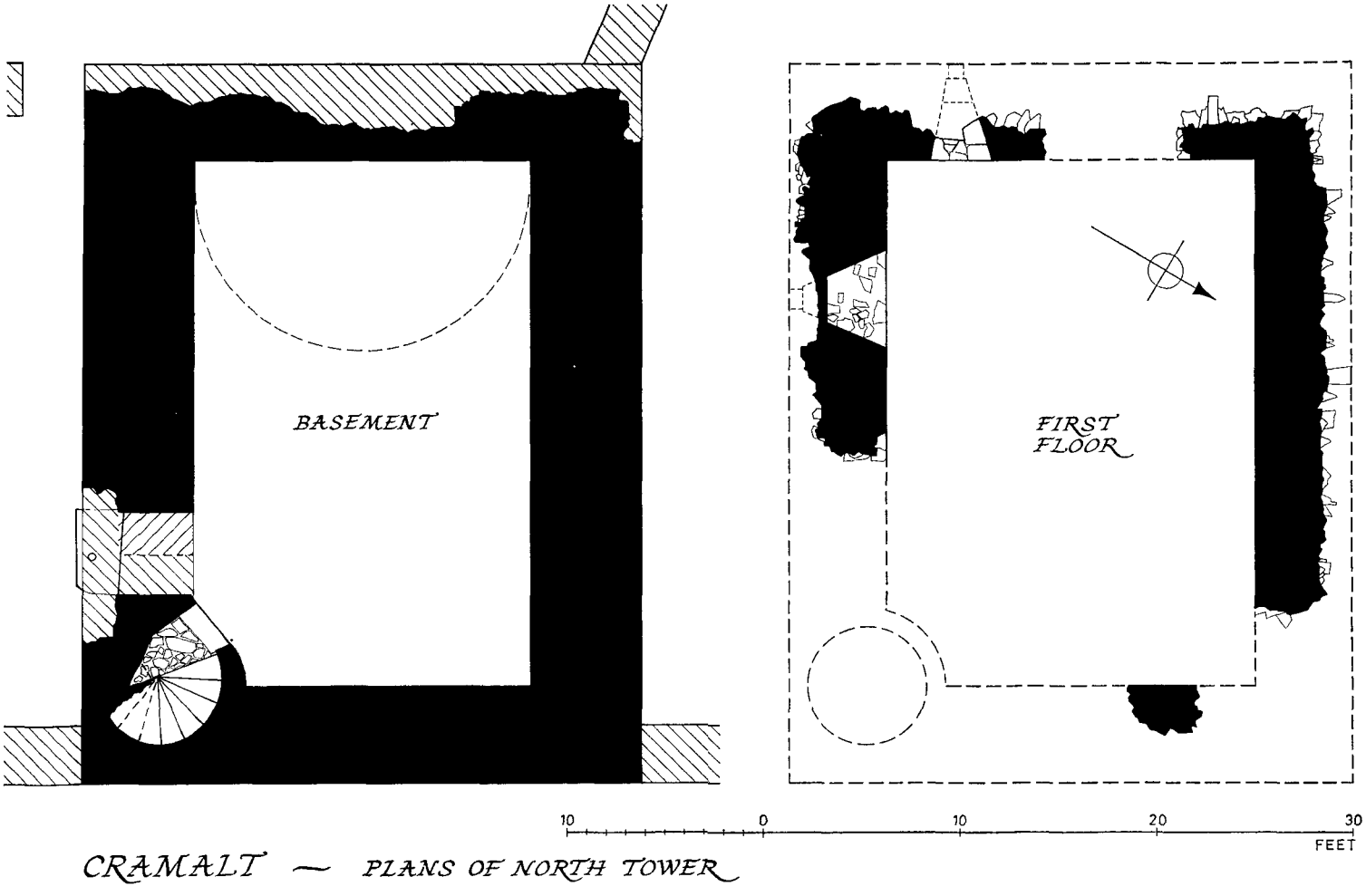

FIG 3 Cramalt: plans of North Tower

There were, however, still traces of mortar where the jambs had been bonded to the entrance step.

Beyond the entrance, the mural passage had survived through most of the wall's thickness, reaching a maximum height of 6 ft 3 in (1·91 m) on the E side and 6 ft 1 in (1·85 m) on the W side. At its inner end it admitted directly to the basement. There was no inner doorway, the W wall of the passage being simply squared off with the basement wall, while the E wall was angled along the line of the doorway to the stair-well to a height of 2 ft 10 in (0·86 m) and then also squared off to follow the curvature of the basement vault (pl 34b).

The walls of the passage were finished with fine harling. Traces of the same finish were also found in the stair well and S window recess of the floor above, and on the inside walls of both the basement and first floor. It must, therefore, have dated from the original period of occupation, though whether it was as old as the tower itself, or a 16th- or 17th-century addition, is not known. Traces of harling could also be detected on the tower's outside walls.

The Basement

The basement had been a single, vaulted cellar, 17 ft 3 in (5·26 m) wide by 27 ft (8·23 m) long. The vault had been one of the widest in a lesser tower anywhere in the Borders: only three are known to have been wider, and one other to have equalled it. It rose to a maximum height of about 10 ft 6 in (3·20 m). Although the vault itself had gone, its method of construction was still clearly visible. It had been raised before the end walls such that, when they were added, it would be keyed into them to a depth of some 6 in (0·15 m). This left the line of the arch clearly defined when the vault later came away.

The springing level for the vault, which was some 3 ft 6 in (1·07 m) above the floor, and a few surviving portions of the beginning of the haunches could still be traced in the side walls. The greatest height to which the haunches survived was 19 in (0·48 m); this was on the S side, close to the entrance passage. The partition wall between this passage and the stair-well also retained the first 16 in (0·41 m) of an arch that followed the curvature of the S haunch to join the main vaulting above (pl 34b). This arch would also have helped support the roof of the passage, which must have been vaulted too, probably with a segmental arch.

Above the springing level the haunches of the main vault had broken away from the side walls, whilst subsequent decay had further undermined the wall above (fig 4). But whilst the haunches formed an integral part of the side walls, this was only true to a height of some 6 ft (1·82 m) above the springing level. Thereafter the side walls were built straight up the remaining 3 ft (0·91 m) to the level of the first floor, while the space between was filled with random rubble. On the S side this upper section of walling was 5 ft (1·52 m) thick, the same as the walls above; but on the N side it projected a further 3 in (0·08 m), so that it ended at first floor level with a small offset course. The vault was 15 in thick at its apex.

The basement floor was not level, but slightly graded such that the W end was about 7 in (0·18 m) higher than the E end and entrance passage. Both this floor and its extension into the passage itself were paved with irregular, water-worn, rubble slabs. These varied considerably in size and thickness.

There must have been some form of opening in the walls, even if only for ventilation. There were, however, no openings in the side walls, whilst sufficient of the E wall remained, reaching a height of some 11 ft 9 in (3·58 m) at one point, virtually to preclude the possibility of any opening there either. It would thus appear that, as at the South Tower (p 415), the only opening had been in the W wall, and this had been destroyed by, or was a contributory cause of, the major breach there.

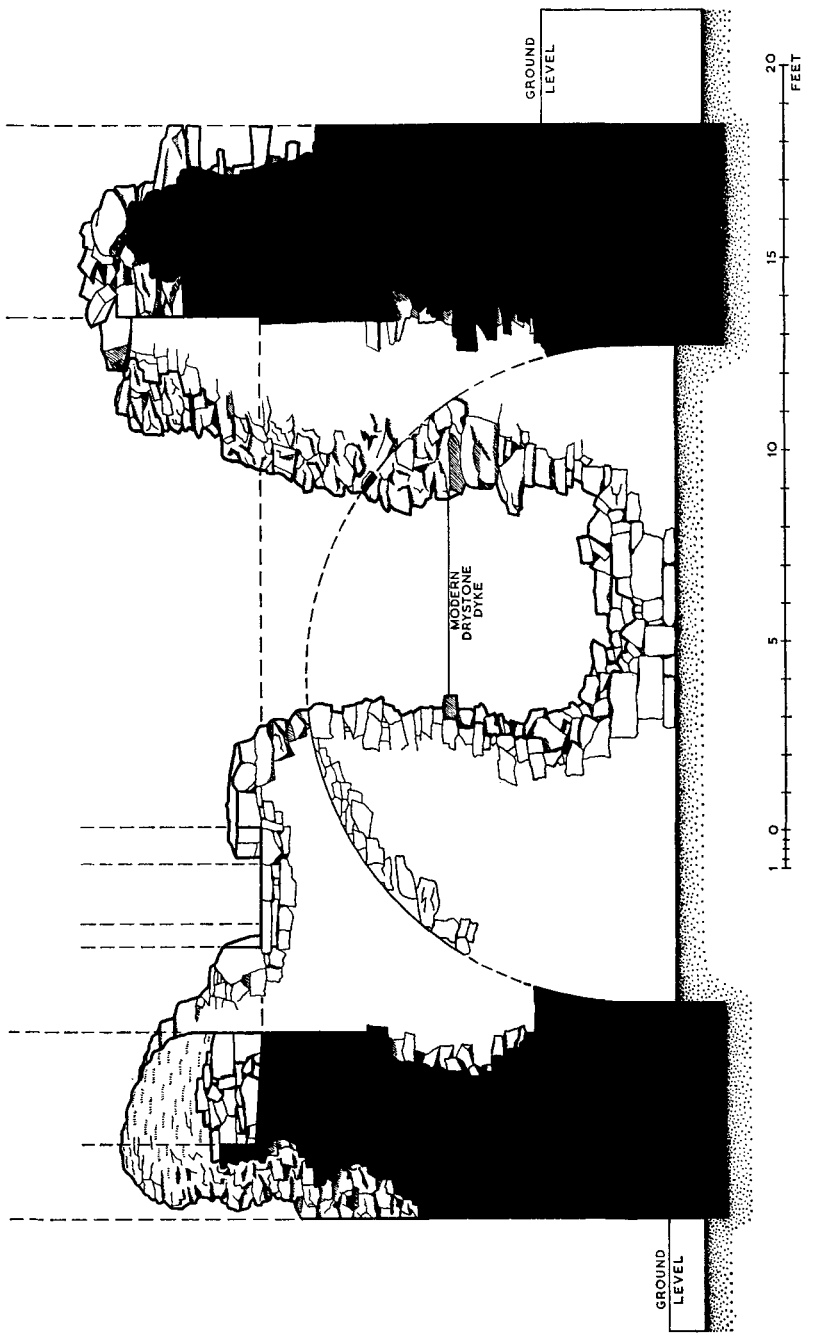

FIG 4 Cramalt: sectional elevation of North Tower looking West

The Stair

The wheel-stair in the SE corner connected the basement with the first floor, and would have continued to serve the upper floors. It was approximately 6 ft (1·83 m) in diameter and contained largely within the thickness of the walls. Its entrance cut across the SE corner of the basement (fig 3); it was 2 ft 9 in (0·84 m) wide. The landing at the foot of the stair-well was paved with irregular rubble slabs, similar to those in the basement. These were level with a large, well-dressed slab of greywacke, some 13½ in (0·34 m) deep and 8½ in (0·22 m) high, that formed a step across the entrance (pl 34c). Although there were no rebates nor signs of fixings at the entrance, the arrangement of the landing was clearly designed for an inner door opening away from the steps. One curious feature of this landing was a recess, 1 ft 9 in (0·53 m) deep and 14 in (0·36 m) high, behind the foot of the newel. Its significance is not known.

The first six steps of the stair survived. With one exception each was made from a single slab, with an average tread length (including the newel) of 3 ft 4 in (1·02 m), a rise of 8¾ in (0·22 m), and a turn of 20·5°. This would have given a total of 14 steps before reaching the first floor. These lower steps were supported by solid walling.

The First Floor

All that remained of the first floor were a few fragments of wall and two window recesses near the SW corner (fig 3). The N wall survived to an average height of some 3 ft 6 in (1·07 m) on the inside, except at the E end where the corner had broken away. It appeared to have been quite plain, incorporating neither window recess nor fireplace, though there could have been a small window or aumbry higher up.

The larger of the surviving window recesses was in the S wall. It was 3 ft (0·91 m) deep and boldly splayed, opening out from 2 ft 5½ in (0·75 m) at the window to 5 ft 1 in (1·55 m) on the inside. It had been paved with irregular slabs of rubble, with flat surfaces and generally smaller than those found in the basement. The ingoes still retained portions of the fine harling finish already referred to. Inside the recess the wall supporting the window had largely gone, only a portion of the lower inside face surviving (fig 4). The other window recess was in the W wall. It too was splayed, but here the splay was asymmetrical, with a noticeable bias towards the SW corner. It was also smaller, being only 3 ft 2 in (0·97 m) wide on the inside. Although only the inner portion of the base had survived, the paving, never having been disturbed by vegetation, was perfectly fitted to leave no gaps.

Although this floor would have had a fireplace, a significant and very necessary feature in these towers, no trace of it had survived. It had certainly not been in either of the side walls, and one would not have expected to find it in the E wall adjacent to the stair. This leaves the breach in the W wall as the only possible location, a supposition that is reinforced by the position and size of the W window. The consequent weakening imparted to this wall would help explain why it had collapsed so completely in the middle.

The NW corner was the highest surviving point of the tower, rising some 16 ft 8 in (5·08 m) above the original ground level.

THE SOUTH TOWER

It was assumed that there had originally been outbuildings at Cramalt, as at most other towers, but it was also believed that all trace of these, or at least all visible trace, had long since

disappeared with the progressive development of the farm. There was no mention of secondary buildings amongst the historical records examined, nor did local residents know of any other remains. The Royal Commission's Report (RCAMS 1957, no 39) likewise only mentions 'the tower' – the North Tower.

It was wholly unexpected, therefore, when another substantial fragment of early walling was found. It served as the gable wall for a 19th-century shed south of the known tower (fig 2); but despite its great thickness – 5 ft 6 in (1·68 m), compared with the 2 ft (0·16 m) walls of the shed – it had previously passed unnoticed because it backed against the adjacent wood, where the ground was appreciably higher, and was obscured by scrub. It was not until this cover was removed (the wood had long been used as the farm's rubbish tip) that the full significance of the wall could be appreciated (pl 35a); and it was not until excavation was well advanced that it was established that the building in question was no mere outbuilding, but a second tower-house. Moreover, although marginally smaller than the North Tower, its architecture proved to have been considerably more sophisticated.

The Walls

The tower measured 35 ft (10·67 m) by 26 ft 6 in (8·08 m) along the walls. It was not, however, a true rectangle, being some 1½° out of square externally, with further discrepancies within – reminiscent of, but by no means as exaggerated as, the eccentric layout of Neidpath Castle (RCAMS 1967, figs 246–7). As a result, the N, S and W walls, whose design thickness was 5 ft 6 in (1·68 m), vary between 5 ft 3 in (1·60 m) and 5 ft 8 in (1·73 m) (fig 5). The E wall was thicker, measuring 7 ft 8 in (2·34 m) overall; but this was to accommodate two mural chambers (pl 36b), which reduced the thickness of the outer wall to a mere 1 ft 8 in (0·51 m), and the inner wall at one point to as little as 1 ft 4½ in (0·42 m).

The masonry was basically similar to that found in the North Tower. It comprised local rubble (mainly greywacke) bonded with lime mortar; but where dressed stones were required for quoins, stairs, sills and lintels, large blocks of very hard greywacke had been laboriously chipped until an acceptable finish was achieved. Exceptions to these dressings were the jambs of both the entrance and basement doorways, which were of cream-coloured sandstone ashlar, with well cut rebates and arrises (See Appendix 1 – masonry).

Where the foundations of the walls were exposed during excavation, the foundation stones themselves were found to have been substantial boulders, laid to project on average about 4 in (0·10 m) beyond the outer wall-face. This was barely adequate, considering the alluvial nature of the ground beneath, and was in all probability the main cause of this tower's ultimate collapse[12] – although the North Tower was similarly founded, and did not suffer the same fate. It was also noted that the ground in the wood immediately S of this tower appeared to have been built up to provide a level platform (see fig 2); and it is possible that this extended beneath the S wall, making the ground there even less stable.

It is not known when this tower collapsed, only that it did. The whole of the SW corner and the adjacent portion of the S wall completely gave way on the outside, including, apparently, the foundations themselves. Excavations were greatly hampered by two large trees that had grown over the ruined wall in recent times; but whilst the roots had caused considerable disruption amongst the surviving masonry, there was no doubt but that the walling had completely wasted away long before their time. It is also quite likely that the thrust from the high basement vault, once weakened, hastened the catastrophe. There is no record or evidence of when this

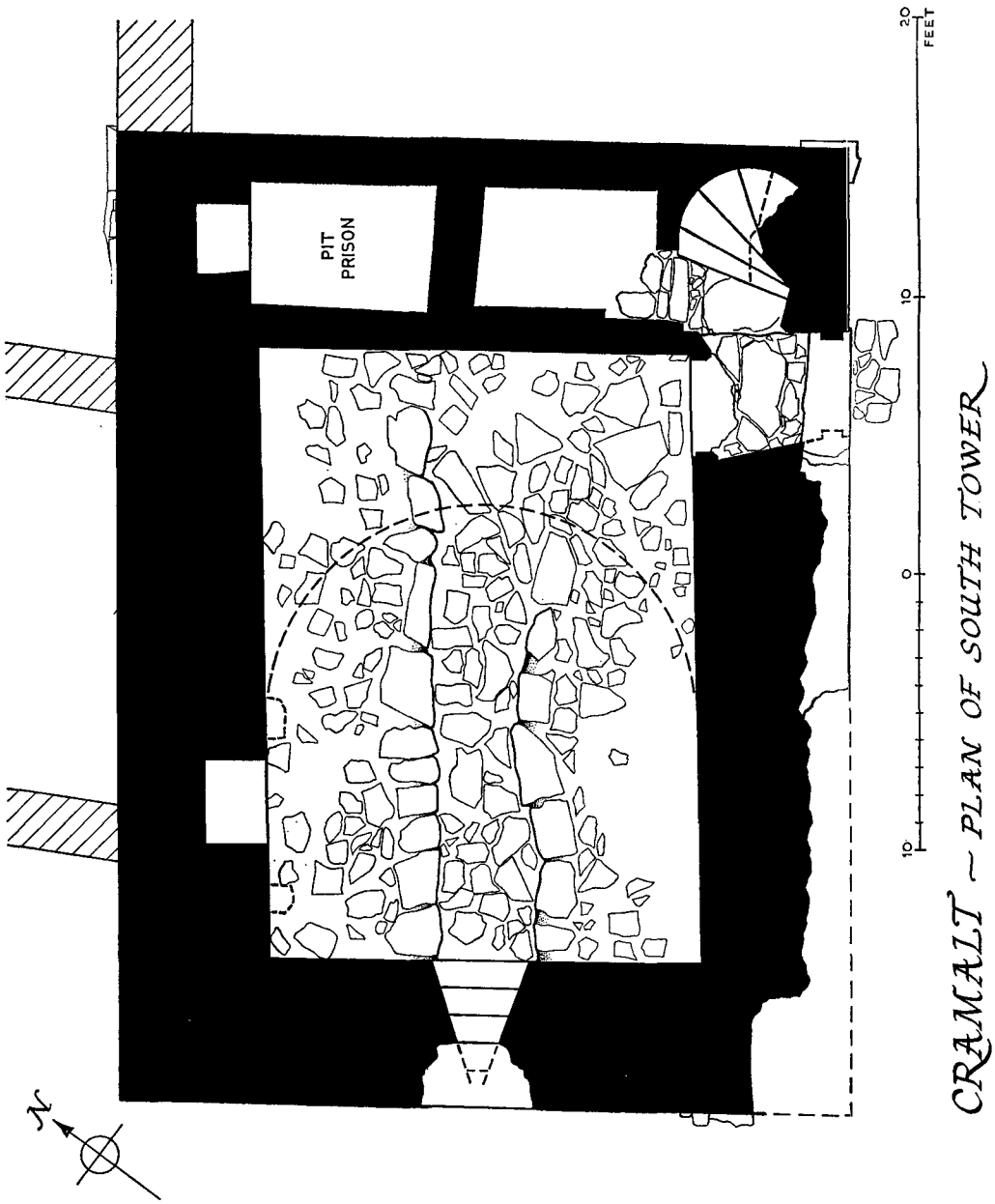

FIG 5 Cramalt: plan of South Tower

happened. The earliest known record of any detail is the farm plan of 1821, by which time the ruinous heap stood within a belt of trees and a dyke ran right over the top of what had been the basement (see Appendix 3 and pl 33a).

There was evidence that all the walls, both inside and outside, had at one time been harled, as was the case at the North Tower (p 410).

The Entrance

The entrance doorway was in the S wall, near the E end. Immediately outside the ground had been paved with irregular slabs, apparently forming a path about 4 ft 9 in (1·45 m) wide, while the rest of the ground (as far as exposed) was roughly surfaced with irregular cobbles.

The doorway itself had been about 3 ft 3 in (0·99 m) wide, although only the step and part of the E jamb survived. The step was a single slab of greywacke, 5 ft wide (1·52 m), 7 in (0·18 m) high and averaging 1 ft 7 in (0·48 m) broad; it rose 5 in (0·13 m) above the paving outside and 4½ in (0·11 m) above the floor of the vestibule within. All that remained of the jamb was the lowest stone. This was a well-dressed block of sandstone, rebated both outside and inside, with the outermost arris lightly rounded and the others cut with a slight chamfer.[13] The outer rebate (2¾ in (0·07 m) by 2¾ in (0·07 m)) would have been for a stout wooden door, while the inner one held a yett. This was an unusual arrangement (normally both doors were on the inside), but by no means unique: Comlongon Castle had the same arrangement, and so did a few later towers nearer at hand, such as Barns.[14] There was a hole in the inner face of the jamb, 13 in (0·33 m) above the step and 4 in (0·10 m) deep, where the yett's lower bolt had fastened. More significant, however, was a rust-stained groove worn in the step below, where the outermost upright bar of the yett had latterly rubbed (pl 38c).[15]

A mural vestibule inside the entrance led to the main basement chamber beyond, and also gave direct access to the wheel-stair in the SE corner and an adjacent mural chamber. Its floor was paved with three, large, irregular slabs of greywacke, around which smaller pieces had been tightly packed. One of the slabs served as the step leading to the basement, which was 4 in (0·10 m) lower at this corner, while a second served as a shallow step, only 2¼ in (0·06 m) high, between the main part of the lobby and the slightly higher E portion.

At some period the top of the entrance doorstep flaked off at the W end; perhaps it was broken deliberately to remove the yett, which may have had a lower pivot there. It then seems to have continued in use for some considerable time (for the broken edges were well worn), before it was decided to build the step up again. By this time the yett had certainly gone, for the new step was built 9 in (0·23 m) higher with pinnings and mortar capped with two large greywacke slabs. These had subsequently been well worn too. At the same time the floor of the main part of the vestibule was also raised by 4½ in (0·11 m), though without the use of mortar, and this level was continued right into the first mural chamber.

The Basement

The doorway admitting to the basement was 3 ft 4 in (1·02 m) wide. It had dressed sandstone margins, the lowest courses of which survived (pl 37a). The outer arrises were boldly chamfered, while those on the inside were checked to accommodate a door. The E jamb still bore the hole where the door's lower hinge had been anchored. This jamb had also been moulded to return along the passage facing the stair.

The basement itself had been divided into two floors beneath a high barrel-vault, rising about 16 ft 6 in (5·03 m) above the ground. The sole source of light, and ventilation, in the lower chamber was a slit window with boldly splayed ingoes in the middle of the W wall. The width of the outer opening could no longer be determined with certainty, as the outer face had entirely broken away, but the evidence suggests it was no more than 6 in (0.15 m), and probably less: on the inside it opened out to 3 ft 6 in (1·07 m). This window had a stepped sill; the inner three steps (and the pinnings for a fourth) survived, each 1 ft (0·30 m) deep and rising 18 (0·46 m), 9½ (0·24 m) and 9½ in (0·24 m) respectively (fig 6).

The only other feature was an aumbry towards the W end of the N wall (pl 38a). Its sill was about 2 ft 9½ in (0·85 m) above the floor, and its average dimensions 2 ft 11 in (0·89 m) wide, 2 ft 4 in (0·71 m) high and 2 ft 3 in (0·69 m) deep. Both the sill and lintel were single slabs of rough greywacke. The sides and back were also largely single slabs, roughly shaped at the corners, and with smaller pieces of rubble added as necessary to give the required overall size.

The basement floor was of particular interest, as the paving was most unusual, if not unique, and appeared to be entirely original (fig 5). It comprised irregular slabs of rubble, varying greatly in size, shape and thickness, many with their surfaces well rounded from a river bed. They were also unevenly laid. In some instances this could be attributed in part to the intrusion of tree roots, but elsewhere there was no such explanation. The most distinctive feature was a central passage or drainage channel, averaging some 3 ft 3 in (0·99 m) in width, which ran down the middle of the floor from the W window and then turned towards the doorway (pl 35a). Apart from an odd irregularity, this channel was almost level, the lowest point being at the middle of the E wall, where it was 1½ in (0·04 m) below the W end and ½ in (0·01 m) below the floor at the entrance. On either side extra large and deep slabs had been laid – also very irregularly – to form a rough kerb, some 6 in (0·15 m) high at the W end and eventually dropping to merge with the rest of the floor towards the E end (fig 5). Had this channel been intended for drainage, one would have expected the paving on either side to be graded down to it; but this was not the case. On the contrary, the floor outside the kerbing actually sloped the other way, such that the floor along the side walls was some 2½ in (0·06 m) lower.

Floors of all kinds are to be found in castles and towers throughout Scotland, but nothing quite like Cramalt can be recalled. One's immediate reaction is to think of a medieval byre or stable; but the low headroom – 6 ft 7 in (2·01 m) maximum to the top of the corbels supporting the entresol floor, or 7 ft 4 in (2·24 m) to the joists (assuming supporting runners say 9 in (0·23 m) high) – would alone suggest otherwise. And whilst at Bonshaw Tower, for example, the sandstone flags are close-fitting and quite deliberately graded to drain into a mural channel that connects with the main garderobe drain outside, at Cramalt the grading does not seem logical, nor could a drain be found.

South Mural Chamber

The small chamber at the foot of the stairs was probably no more than a store-room, for neither its position nor arrangement made it suitable for a guardroom. It measured 4 ft 5 in (1·35 m) by 6 ft 5 in (1·96 m) on average, within walls that survived to a maximum height of 4 ft 2 in (1·27 m). The floor had been damaged during the tower's earlier years of decay, but it appeared to have been paved originally with a mixture of small cobbles and larger, water-worn slabs (pl 37b). The doorway was 2 ft 6½ in (0·77 m) wide. From the size and position of the backset in the adjacent W wall, a door had been hinged on that side, opening inwards and closing flush with the outer face of the doorway. There was no evidence of any window or other opening in the surviving walling.

'Pit' Prison

There can be little doubt that the mural chamber at the NE corner of the basement was a 'pit' prison (pl 37c). Certainly there was no door at ground level, the only means of access having apparently been through a hatch in the vault above; and although the large aumbry, or stone seat, was unique for such a prison as far as is known, the general arrangement of a 'pit' within

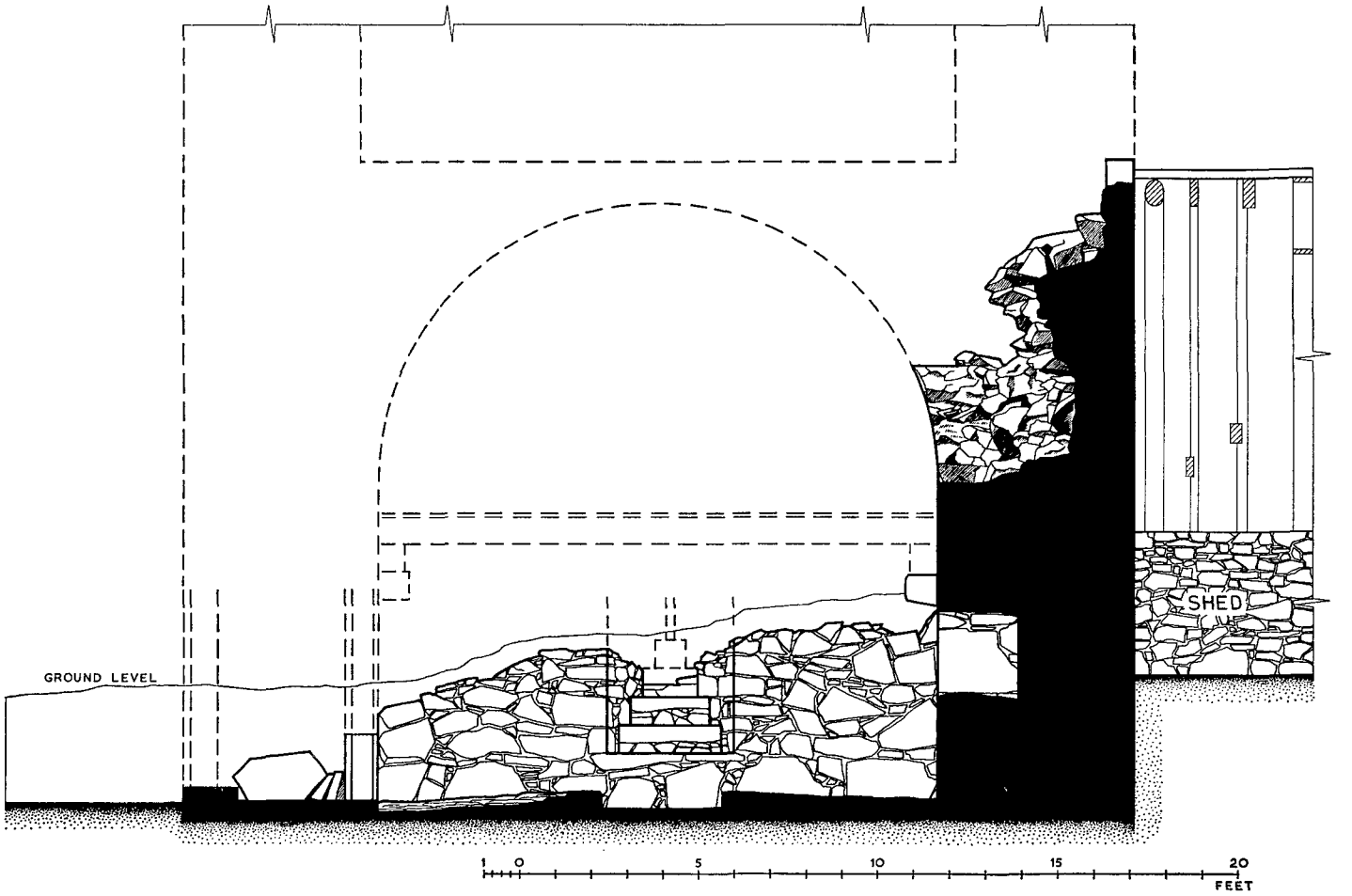

FIG 6 Cramalt: Sectional elevation of South Tower looking West

the thickness of the walls, with a guardroom above (in this case at entresol level – fig 7), was not uncommon in the more important castles and towers of the 15th century.

The chamber measured 6 ft 6 in (1·98 m) by 4 ft 5 in (1·35 m) on average, within walls that survived to a maximum height of 5 ft 3 in (1·60 m). It had originally been paved with large, water-worn boulders, but these had been badly disturbed at some later period. The large aumbry or mural seat was situated in the N wall. It was 2 ft 10½ in (0·88 m) high, 2 ft 2 in (0·66 m) deep and 2 ft 5 in (0·74 m) wide at the wall-face, with the sill only about 1 ft 2 in (0·36 m) above the floor (pl 38b); its construction was similar to that of the aumbry in the main basement chamber. Only a vestige remained of the only other feature in the chamber. This had apparently been a ventilation flue, some 9 in (0·23 m) wide at the lower end, which rose within the thickness of the E wall. It started some 4 ft (1·22 m) above the floor, rising at an initial angle of 60°. The chamber had originally been vaulted, and what appeared to be the beginning of the line of the vault could just be discerned in the NW corner. This would correspond with a guardroom at entresol level, giving the prison a total height of about 6 ft 6 in (1·48 m).

The Stair

The wheel-stair rising in the SE corner was smaller than the one in the North Tower, having been only 5 ft (1·52 m) in diameter. Only the first three steps and the pinnings for the fourth survived. They rose 13 (0·33 m), 9 (0·23 m) and 8 in (0·20 m) respectively, with an average turn after the first step of about 24°. Each comprised a single large slab, although the first two steps were continued with smaller slabs at the inner end, giving total widths of 4 ft 9 in (1·45 m) and 4 ft 6 in (1·37 m), and thus easier access at the foot.

Entresol Floor

Nothing remained of the entresol floor apart from a fragment at the W end of the N wall. This comprised two of the corbels that had supported the floor, a further 2 ft 6 in (0·76 m) of the side wall up to the springing level of the vault, and a 3 ft 3 in (0·99 m) high fragment of the vault itself (pl 36a). The outer wall-face, having been preserved by the shed, had fared better; it rose a further 5 ft 3 in (1·60 m) (fig 6).

The corbels were of greywacke rubble, only roughly chipped to shape. The top surfaces, however, were flat and level with one another; they projected 10½ in (0·27 m) and 8¾ in (0·22 m). At their centres they were 2 ft 2 in (0·66 m) and 8 ft 7 in (2·62 m) from the W wall, which suggests that there were originally four such corbels along each side wall. With such wide spacing they could not have supported the joists without the use of runners (see fig 7).[16]

This floor would have been lit by a single window in the W wall, similar to and above the one below. Access would have been directly from the wheel-stair. The mural guardroom at this level was probably also entered directly off the stair, though it could have been reached via the entresol chamber: it would have had its own small window in the E wall.

The Upper Floors

Nothing is known of the upper floors, with one possible exception. It was normal to have one or more garderobes at these levels, from which a drain would pass down within the thickness of the walls to discharge the waste at or, more rarely, below ground level. It would also have been

sensible at this tower for such a drain to be situated in the SW corner, where there was the best natural drainage. It is possible, therefore, that the distinctive, large, flat-sided 'foundation' stone, which terminated the southern end of the tower's W wall, was in fact the discharge point of such a drain (fig 5).[17]

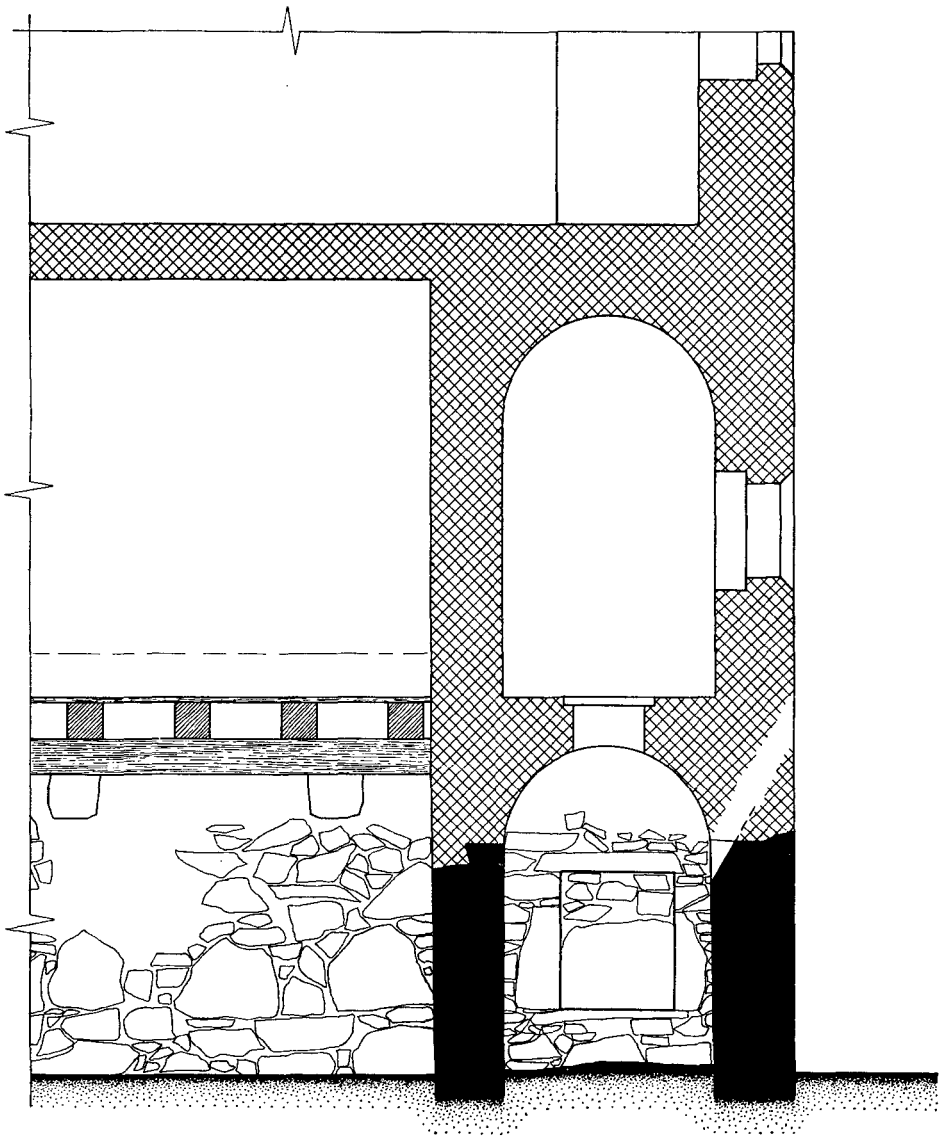

FIG 7 Cramalt: South Tower conjectural elevation

ANALYSIS AND DISCUSSION

Arrangement of the Towers

Of the two buildings at Cramalt described above, one thing is certain: each was a tower-house in its own right. Neither was a mere outbuilding. That is not to preclude the possibility though, that one may have been secondary to the other.

The two towers stood 73 ft (22·25 m) apart and were similarly disposed. Each was rectangular on plan and of approximately the same overall size; each had a vaulted basement, lit by a solitary window at the W end; and each had a wheel-stair in the SE corner, with the entrance adjacent in the S wall. But there the similarity ended. Whilst the basement of the North Tower was a single chamber beneath a low barrel vault, in the South Tower the vaulting rose more than 16 ft (4·88 m) above the ground, sufficient to contain an entresol floor, while the E wall was increased in thickness to accommodate mural chambers. The stair in the South Tower was also reached in the more usual way direct from the entrance lobby.

There was evidence to show that the North Tower had been at least three storeys high. It is most likely, though, that there had originally been a fourth floor, probably a garret. There may also have been an upper vault – as at the nearby towers of Castlehill of Manor and Dryhope – but no evidence of this was found.

The South Tower, although smaller and a mere vestige of its former self, proved to have been much more important architecturally and, therefore, historically. In the basement alone, the few surviving features amply rewarded the time and effort spent on their excavation. Of greatest interest, however, were the mural chambers in the E wall. Such features were not commonplace in the end walls of tower-houses of any period, and were very much rarer in buildings where they did not extend into the corners, or where there were no corresponding chambers in the side walls.

The overall arrangement of the E wall can now only be surmised. There can be no doubt, though, that the mural chambers were vaulted; and as the pit prison could only be entered from above, it is evident that there was a further mural chamber there, serving as a guardroom and reached from the stair at entresol level. This upper chamber would also have been vaulted, and would have risen to the level of the first floor hall (fig 7).

This general arrangement – a mural pit prison with a guardroom above – was fairly common in the more sophisticated 15th-century strongholds, especially those built c 1420–c 1460. It was nevertheless surprising in a tower so small. The existence of such refinement at Cramalt may be attributed to the importance of its builders, as hereditary sheriffs of Tweeddale and the influence of their castle at Neidpath.

In a tower of such relative sophistication, one would expect the hall to have been well appointed, with a large fireplace, buffet, garderobe, window seats, etc.; but apart from the possible garderobe drain (p 418), no evidence of any such features survived. The hall may also have supported an upper vault with an entresol floor, reflecting the arrangement of the basement below. On the other hand, there is evidence that the builder was as familiar with Newark, which had no upper vault, as his master's castle at Neidpath, which had two. Above the second floor there would have been a further floor or garret. One would also have expected both towers to have had the usual parapet walks.

Enclosures

The NE and SE corners of the North Tower and the NE, SE and SW corners of the South Tower were excavated to foundation level: the other corners were either less accessible or, in the

case of the North Tower's SW corner, totally destroyed. It had been hoped that some trace would be found of the old barmkin or enclosure walls; but nothing definite came to light. Indeed, apart from some mortar at foundation level on the N side of the South Tower's NE corner, which was apparently unrelated to any masonry, the adjacent ground was remarkably barren.

The question of where one would expect to find the old enclosing walls is no easier. For one thing, it would very much depend upon the relative chronology of the two towers: which was built first?; was the second built while the first continued in use; or were they contemporary? Was there a single enclosure, or, in view of Cramalt's obvious importance, were there multiple enclosures? The chronology of the towers will be dealt with presently. As far as enclosures are concerned, however, a few points are worthy of note, even though there is insufficient evidence to permit any meaningful deductions as to their overall arrangement.

One may assume that the entrances to the towers were enclosed; and as the platform immediately S of the South Tower (fig 2) did not appear to be entirely natural, a wall may well have run S from this tower's SW corner to enclose all or part of this area. It was also noted that the dyke running E from the same tower's NE corner was founded for much of its length on split boulders that were laid with their faces truly vertical and precisely in line with the outer face of the tower's N wall. This seemed too good to be mere coincidence. Of rather a different character was the old dyke running N from the North Tower's NE corner. Although not square to the tower, this wall was founded on unusually large boulder slabs, and, in addition, the foundations of another dyke were found branching out to the E only 15 ft from the corner of the tower – something that appears on no map (see Appendix 3). Were these relics of a very early, outer enclosure? The absence of walling abutting a tower at any particular corner proves nothing: at very few sites has evidence of the former barmkins survived.

Chronology

The date of the North Tower, the one long known as 'Cramalt Tower', posed a difficult enough question when it was the only structure known to have survived. In the absence of such architectural refinements as mouldings, and with so few features left, it used to be dismissed as just another of 'those lesser Border towers', and a very dull and insignificant one at that. The information gleaned from the excavations, however, when compared with other towers in the shires of Selkirk and Peebles and considered alongside the historical evidence, tells another story.

The thickness of the tower's walls was substantial. Although walls of 5 ft (1·52 m) and more are still found late in the 16th century – those at Barns (late 16th c) are 5 ft (1·52 m); Kirkhope (c 1600), 4 ft 11 in (1·50 m) to 6 ft (1·83 m); and Dryhope (16th c, rebuilt 1613), 4 ft (1·22 m) to 5 ft (1·52 m) – 4 ft 6 in (1·37 m) was rare and 4 ft (1·22 m) or less more usual. The walls at Manorhead, immediately to the N, are only 3 ft 1 in (0·94 m) to 3 ft 7 in (1·09 m). At Cramalt's North Tower, on the other hand, the gable and upper walls were 5 ft (1·52 m), while the walls supporting the basement vault were 5 ft 9 in (1·75 m). This compares with 6 ft 3 in (1·91 m) and 7 ft 3 in (2·21 m) respectively at nearby Castlehill of Manor and 6 ft 6 in (1·98 m) at Henderland. The comparison is not without significance. Henderland is believed to date from the latter half of the 15th century, and there is good reason to believe that Castlehill belongs to this early period too – perhaps even as early as the second quarter of the century when the Lowis family acquired half the barony of Manor. Patrick of the Lowis is recorded at 'Menner' in 1427. The family would not have delayed long in building some form of stronghold; and although it has not been established whether the present building was their original home, the ruins retain features that are more reminiscent of the 15th than the 16th century.

There is another interesting comparison between Castlehill and Cramalt: Castlehill measures 37 ft 5 in (11·40 m) by 29 ft 8 in (8·76 m) overall, while the North Tower at Cramalt measures 37 ft (11·28 m) by 28 ft 9 in (8·76 m). Looking at the sorry ruins, one could not readily appreciate their size. These were no humble towers: they were large and important strongholds. Indeed, there was no other tower so large in the whole region except the great tower-castles of Neidpath and Newark, which belonged to a different class altogether. The RCAM dated Castlehill late in the 15th century (RCAMS 1967, no 494) – perhaps a little too late. Cramalt's North Tower would seem to belong to the same general period.

But if the assigning of even an approximate date to the North Tower is largely circumstantial and rather tenuous, the same cannot be said of the South Tower. The latter building incorporates a number of distinctive features that strongly suggest it was built during the third quarter of the 15th century, or, at most, no more than a decade either side of it. It may have been erected soon after 1470, when Sir David Hay of Yester was granted the adjoining portion of the lands of Oliver (p 404), though it could equally well have been built earlier – Sir David was able to grant his son a rent from the property in 1462 (p 402). The fact that no house is mentioned at Cramalt until 1530 (p 404) is of no significance; buildings as such were rarely mentioned in titles and other documents this early.

The two towers would thus appear to belong to the same general period. However, although their overall size and wall thicknesses are generally similar, they are not the same; and if they had been built at the same time, one would have expected the walls at least to have been of similar proportions, and, if the towers were not to be the same size, the South one to have been the larger. Moreover, if it had been intended from the outset that they should serve as twin defensive towers within a common barmkin – as, for example, at Goldielands, Cowdenknowes, Corbet, or even Old Place of Mochrum in Galloway – one would have expected the entrance to the South Tower to have been on its N or E side, instead of facing away to the S. Fortunately it has been possible to resolve this question by mortar analysis. One cannot obtain specific dates by this means, but the results did establish beyond doubt that the two towers were not in fact coeval (Appendix 2).

Other questions then arise: which tower was built first; what was the time lapse between the two; and was the second tower built to supplement or replace the first? It is possible that the North Tower was built first to re-establish the Hays on what was, after all, an ancient site, while the South Tower was subsequently added at leisure. But the evidence makes it much more likely that the North Tower was the later structure, possibly added c 1490, though it may not have been built until early in the following century. Perhaps it was intended to provide additional accommodation during James V's hunting expeditions, or greater strength against rebels or invasion from the S. One fact seems to emerge beyond doubt: the North Tower was not built to replace the South Tower, but to supplement it, as it is virtually certain that the traces of harling found on the outside walls of both buildings were the same. Moreover, the Privy Council's directive to Lord Hay in 1530 (p 404) implies appreciably greater strength and accommodation at Cramalt than could be afforded by a single tower.

It has often been said that both Cramalt and Henderland were used partly for defence and partly for hunting. Certainly they were built as defensive homes – tower-houses – but to what extent they also served as hunting lodges is an open question. Although James V frequently came to hunt in Meggetland, records show that these expeditions ranged over a fairly wide area of the forest. Mention has also been made of 'pavilions' being carried to Meggetland for the hunting (p 402). So while the nobles and their retinues were thus accommodated, did the king himself also stay in a tent, or did he avail himself of the greater comfort and security provided by a stronghold

such as Cramalt – notwithstanding the rather scathing description of the area given by Dacre in 1532 (p 403)? His queen used to stay at Newark, 15 miles away, when she visited the area.

Nearly a century later, in 1649, two families are recorded living at Cramalt. If both towers were still standing that late, it is likely that each was occupied by one of the families. But whatever the case, the South Tower cannot have survived much longer before its final collapse. Alexander Pennecuik wrote of Cramalt c 1702[18] (Pennecuik 1715, 24): '. . . the *Crammel*, which seems to have been an old Hunting-House of our Kings, for I saw in the Hall thereof, a very large *Hartshorn*, upon the Wall for a Clock Pinn, The like I observed in several other Contry Mens Houses in that Desart and Solitary place, where both *Hart* and *Hynd*, *Dae* and *Rae* have been so frequent and numerous of Old, as witness the Name of the Hill *Hartfield*'.[19] It would thus appear that the old stronghold was still partly occupied at the end of the 17th century, for such a comment would not have been made about a building of later date than one of the towers. He was presumably referring to the North Tower, the one long known as 'Cramalt Tower', which did not collapse, but decayed from old age and neglect. It must, however, have been abandoned soon afterwards, and fell rapidly into ruin. By 1775 nothing was left but 'ruins' (p 407).

APPENDIX 1

FINDS

A STONE

1. *Stone Ball*

A small stone ball (pl 38d) was found lodged in the outer face of the North Tower; it was in the NW corner and some 11 ft (3·35 m) above the original ground level. It was clearly old, and had been shaped by hand. Its diameter is surprisingly consistent, averaging 1·70 in (43·3 mm), and with a maximum of 1·72 in (43·6 mm). It now weighs 3·13 oz (88·68 gm), but when complete (it has one chip) would have weighed 3·32 oz (94·07 gm).

It was submitted to the Institute of Geological Sciences in Edinburgh, who reported:

> 'The stone "ball" from Cramalt Tower is made from a greenish micaceous sandstone which has oxidised on its surface to a buff colour. At some time it has been subjected to iron-rich water, causing a thin deposit of hematite to coat the specimen.
>
> 'The shape certainly suggests that it was man-made, but whether it is a ball or ornamental carving from a larger piece of masonry, I am not qualified to say. If the latter, it was broken before iron-rich water coated it.
>
> 'I do not think that the rock has come far — these greenish sandstones are quite common in the Borders, associated with the greywackes which constitute the bulk of the area.'

It was subsequently passed to David Caldwell at the National Museum of Antiquities. He wrote:

> 'The stone ball from Cramalt Tower is most likely to be a gunstone. It is too small and light for it to have been used successfully in any mill or for playing at henching (a form of bowls). Small stone-shot like this were fired from breech-loading guns, mostly of iron, from the later 15th century through the 16th and into the 17th century. Its diameter of about 1·7 in (43 mm) might mean it would have fitted the guns known in England as bases, and hence in this Scottish context may have been for a bers. The only other Scottish iron breech loader of the 16th century which it might have been for is a cutthroat, but we lack detailed knowledge of their dimensions.'

2. *Mouldings at the South Tower*

The door jambs at the South Tower were the only mouldings found on the site. They were of well cut and dressed sandstone. In the hope of finding whence they came, a sample was submitted to the Institute of Geological Sciences. Dr James Floyd reported:

'The sample of sandstone submitted is an off-white medium-grained micaceous sandstone with patches of iron staining. This is a fairly common rock type in the Upper Palaeozoic (ie Devonian, Carboniferous and Permian) of the south of Scotland and it is not possible to name a specific source. However, since there are no solid rocks of this age within 15 miles (24 km) of Cramalt, the stone has probably been transported a considerable distance.'

The same sandstone has so far only been identified at one other stronghold in the region. This is, perhaps not surprisingly, Neidpath, where it is found in some of the mouldings of the 14th-century tower and also for some of the (?re-used) quoins at the SE corner of the courtyard, which is said to date from the 16th century (RCAMS 1967, II, fig 246). The mouldings at Neidpath are believed to have been quarried near West Linton (RCAMS 1967, nos 519, 666). But if these quarries really did supply 'the whole of Tweeddale', one wonders why the particular sandstone in question has so far only been found at Neidpath and Cramalt.

3. *Slate*

Apart from the unremarkable roof slates found at the North Tower (p 407), an unusual piece of slate was found amongst the general rubble covering the floor of the South Tower's main basement chamber. It was 0·32 in (8 mm) thick, and had been roughly cut to form a circular disc about 4 in (100 mm) in diameter. Neither its purpose nor period are known.

B METAL

The following items were all found very corroded and encrusted with foreign matter. After treatment by Mr T. Bryce and his staff of the Conservation Department, National Museum of Antiquities of Scotland, they were examined by David Caldwell.

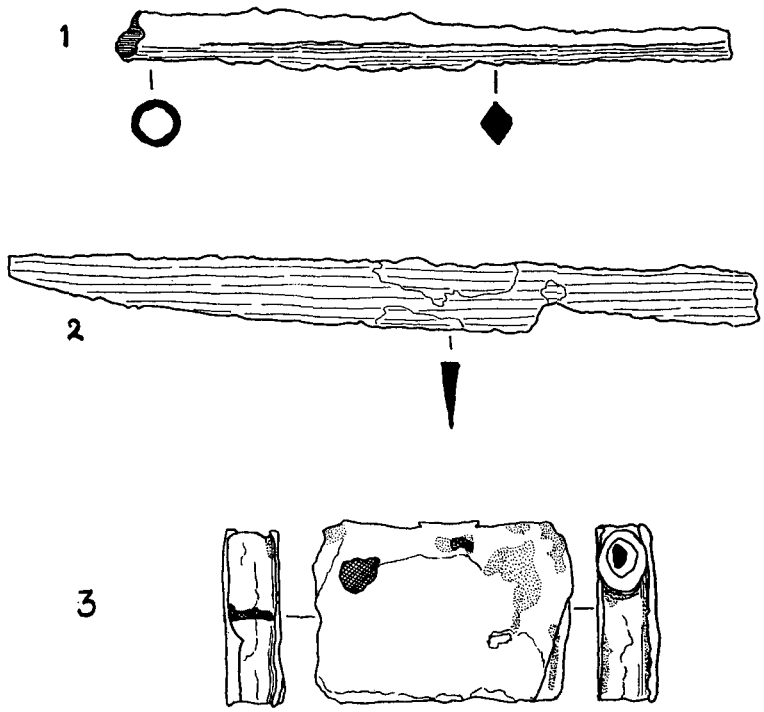

FIG 8 1 Spearhead; 2 knife; 3 'box'; scale 1:2

1. *Spearhead*

Found immediately beneath the disturbed stone floor of the pit prison in the South Tower:
'Iron socketed spearhead with narrow, pointed diamond-section blade, point missing. Length 163 mm. This is a medieval type for warfare.' (fig 8)

2. *Knife*

Found amongst the same general rubble as the slate disc, A (3):
'Knife with backed blade and strip tang with impressions of a textile binding surviving in the corrosion. Length 199 mm. Post-medieval.' (fig 8).

3. '*Box*'

Found in the same area as the knife:
' 'Box' made of sheet iron, lined with copper. It has a circular hole in one side. $66 \times 50 \times 17$ mm.' Purpose unknown. (fig 8).

C POTTERY

The following fragment was found amongst the same general rubble as the knife, B (2). It has been identified by David Caldwell as:

'Sherd of reduced grey earthenware, knife-trimmed, green glazed inside. 16th-17th century.'

D GLASS

A few fragments of glass bottles were found at floor level in the basement of the North Tower. These were of similar type and period to those found by the writer during the excavation of Lochwood Castle (Dumfriesshire) in 1969, and attributed to the end of the 17th century.[20]

APPENDIX 2

CRAMALT MORTARS

The precise age of a particular sample of mortar cannot yet be established by scientific tests alone. It is, however, sometimes possible to deduce some idea of a mortar's period of origin from its composition or the presence of certain secondary materials. Comparative analysis, on the other hand, can produce much more positive results, clearly identifying breaks in continuity in the erection or modification of a building, or establishing which structures or portions of structures are contemporary in a particular building complex.

Before the advent of factory-produced cement and standard mixing formulae, the composition of mortars varied considerably even when the material sources were nominally the same. The quality of lime varied from generation to generation, and from one source to another; the quality of the silicates and other secondary materials was often unpredictable; and the proportions of the various constituents in the final mixture was very much a matter of individual preference and experience. As a result, each mortar had a character of its own, and it is this individuality that is exploited in comparative analysis. It assumes that, for any one, continuous phase of building on a given site, there will be no significant change in either materials or craftsmen, and, therefore, no detectable difference in the general quality of the mortar. If, on the other hand, there was a distinct interlude between any two phases of construction, then this will be reflected in the analysis.

In interpreting the results thus obtained, due account must be taken of any other archaeological evidence available. Comparison with other sites in the neighbourhood, especially ones of known date, or where there is a direct historical link, may also help in establishing actual dates for the building work in question.

It was in an endeavour to establish a relationship between the two towers at Cramalt that a number of mortar samples from each were subjected to detailed analysis.

Chemical tests were carried out at the Research Laboratories of the National Museum of Antiquities under the direction of Dr J O Tate. Taking three random samples of mortar from each tower, the following results were obtained:

	North Tower			South Tower		
Sample	1	2	3	1	2	3
	%	%	%	%	%	%
Calcium	7·0	12·0	30·0	3·0	4·0	7·0
Carbonate	16·0	22·0	42·0	10·0	10·0	14·0
Total Silicate	58·0	50·3	5·8	69·4	70·8	61·8
Pure Silica	32·0	17·0	*	39·0	42·0	46·0
Hygroscopic Moisture	2·5	1·2	1·0	0·8	0·9	1·0

* This gave irreproducible results due to the hygroscopic nature of the carbonate, of which there was a high proportion.

Dr Tate writes:

' The very high results for calcium and carbonate in the third piece from the North Tower is due to the inhomogeneity of the original mortar itself. The other samples do not give a significant enough difference in results to distinguish the North from the South Tower, but at the same time we cannot say that they are of the same manufacture.'

However, despite the wide variation in the above figures, graphical analysis does show a clear demarcation between the results obtained for the two towers; and this was further confirmed by subsequent tests.

For each tower, larger quantities of mortar from the various samples available were then ground up more finely and mixed to give a single sample, which would be more representative of the tower as a whole. These were then passed to Dr A. Livingstone of the Department of Geology, Royal Scottish Museum, for further tests.

Using X-ray powder diffraction to establish the mineralogical content, and X-ray fluorescence for the chemistry, Dr Livingstone writes:

'As you will see from the results the two cements do seem to have quite a different composition. I have worked out the approximate mix in terms of sand and limestone, but must stress that these figures are only approximate in terms of bulk materials.

Mineralogy

North Tower – Calcite plus quartz (contains trace of unidentified phase)
South Tower – Calcite plus quartz (contains trace of unidentified phase)

Chemistry

	North	South
	weight %	weight %
SiO_2	67·6	56·3
CaO	27·3	10·8
*FeO	4·3	5·2
	99·2	72·3

* Total iron reported as FeO.

Bulk Materials

North – 58% sand, 42% limestone
South – 75% sand, 25% limestone.'

Samples of mortar were also obtained from four other strongholds in the neighbourhood, representing five distinct building periods between 1350 and 1550. It was hoped that a similar analysis of these would provide sufficient information for a meaningful comparison with the results obtained at Cramalt; but unfortunately, due to circumstances outside the control of the laboratories, it may be some considerable time before this additional work can be carried out.

APPENDIX 3

MAP OF CRAMALT 1821

Wemyss & March Estates have a map of Cramalt Farm as surveyed by William Blackadder in 1821.[21] Although not strictly to scale, it is nevertheless of considerable interest. Plate 33b reproduces a portion showing the farm buildings and their immediate environs.

The map shows the old road up the valley, before it was realigned to keep it above the flood level of the Megget Water, and also the former road over the hills from Cramalt to Peebles (p 403), which was apparently still in use at that time. The late farm steading is included, together with the adjacent farmhouse before it was modernised and extended in the front later in the century. The southernmost building shown on the 1775 map, however, had apparently gone by then (perhaps it had been a timber structure).

The lodge was not built until much later, though a rectangular enclosure is shown immediately to the N, beside the road, while the lodge's garden was occupied by another rectangular enclosure divided into quarters. Immediately S of this, and extending around the E and S sides of the future fank as far as Cramalt Burn, is a belt of trees, the centre portion of which survived as the small wood shown in fig 2.[22] These are the only trees shown anywhere on the farm. At this time they were not separated from the adjacent fields to the E and S, but actually stood within the field enclosures. It was only later that dykes were built along the sides of the fields themselves, while the southern portion of the former enclosing dyke was dismantled and the rest incorporated into the new fank.

The sites of both the North and South Towers lay within the wooded belt; and the fact that neither tower is actually shown does suggest, not only that both were completely ruinous, but also that by this time the North Tower had even ceased to serve any secondary purpose (p 407).

ACKNOWLEDGMENTS

Many people assisted in various ways during the course of my investigations: I am indebted to them all, and thank them. In particular I would like to thank Mr John G Dunbar, Secretary of the Royal Commission on the Ancient & Historical Monuments of Scotland (RCAMS), for his active encouragement and most helpful comments from the outset of this project.

I am also most grateful to Mr Geoffrey Stell of the RCAMS, who gave most generously of his time and the benefit of his experience, especially during the excavation of the South Tower. The Earl of Wemyss & March, laird of Cramalt (and Chairman of the RCAMS), provided generous assistance on site, as well as kindly checking the historical content of this paper; while Mr J B Segrott, Factor of Wemyss & March Estates, and Mr J Mitchell of Henderland Farm provided additional historical data.

Specialist investigations were carried out by Mr David Caldwell at the National Museum of Antiquities of Scotland; Dr J O Tate, Mrs Helen Dalrymple, Mr T Bryce and other staff at the National Museum's Research and Conservation Laboratories; Dr A Livingstone at the Department of Geology, Royal Scottish Museum; and Dr J D Floyd and other staff at the Institute of Geological Sciences in Edinburgh. Miss Helen Aitken made the drawings shown in fig 8.

I would also like to thank Mr A R Young and Mr D Gallacher of R H Cuthbertson & Partners, Consulting Engineers for the Megget Reservoir Scheme, who, in conjunction with the main contractors, Whatlings Ltd, gave every assistance asked of them in avoiding disturbance to the site during the investigations. Mr Mark Turnbull of W J Cairns & Partners, Landscape Architects for the Megget Scheme, also provided valuable assistance.

W J Cairns & Partners are planning to erect a monument to commemorate the towers at Cramalt.

NOTES

1 Pont's survey c 1595 still includes Meggetland within the forest's compass.
2 The Megget valley was not transferred to Selkirkshire until 1891. See RCAMS 1957. Introduction, p 1.
3 Variously spelt Meggat, Meggate, Megot, Meggott, etc.
4 The Flemings' portion almost certainly included the land marching with Megget.
5 Glengaber was listed in a Crown Roll of 1455 as a hamlet in Ettrick Forest. In 1508 it belonged to David Hoppringle of Tinnies, and in 1628 to Scott of Buccleugh. – Buchan, III, 533.
6 It seems that the late farmhouse was originally an 18th-century building, which was enlarged and completely modernised soon after 1860 (See p 407 and Appendix III).
7 The cardinal points of the compass have been used for convenience of description. The true orientation is shown on the plans (figs 2, 3 and 5).
8 Map by Mostyn J Armstrong in the Wemyss & March Estates Office.
9 It was still in use until the new farm buildings were completed on the hillside above in 1979.
10 Imperial measurements are used for structural details throughout this paper, as these were the basic units used by the builders. In this context metric dimensions would be both inaccurate and meaningless.
11 No trace of old mouldings was found amongst the later buildings at Cramalt.
12 The foundation stone at the SE corner was found to have canted significantly for this very reason.
13 This and the other sandstone dressings were all badly damaged after exposure to the severe frosts of the 1978–9 winter, and this appears in the photographs.
14 See also Proc Soc Antiq Scot, 17 (1883), 98ff: 'On the Grated Iron Doors of Scottish Castles and Towers', by D Christison.
15 The return of this jamb to the foot of the stairs was never completely square, but the angle shown on the plan (fig 5) seemed to have been exaggerated by the intrusion of tree roots.
16 The basement of the nearby castle of Newark has the same arrangement, except that the corbels there tend to be rather larger to carry the greater floor span (21 ft 9 in).
17 Newark Castle has an identical arrangement at its SW corner, where a garderobe chute discharges at ground level.
18 Although not published until 1715, the MS for this work is known to have been available in 1702 — Dictionary of National Biography, Compact Edition, 1632.
19 'Ane hart horn hingand in the hall' was also recorded at nearby Castlehill of Manor in 1555 — RCAMS 1967, no 494.
20 'Lochwood Castle II — Exploratory Excavations & Further Observations on Lochwood & its Lairds', by A M T Maxwell-Irving, 45. (MS in the National Monuments Records of Scotland).
21 A Mr J Anderson was tenant at the time, having taken a lease of Cramalt, Winterhopeburn, Shielhope and Meggetknowes for 31 years from 1807 at £273:14s:2d per annum.
22 The stumps of some of the trees formerly at the W end of this belt still stood in 1979, albeit in an advanced stage of decay, in the small field subsequently formed there.

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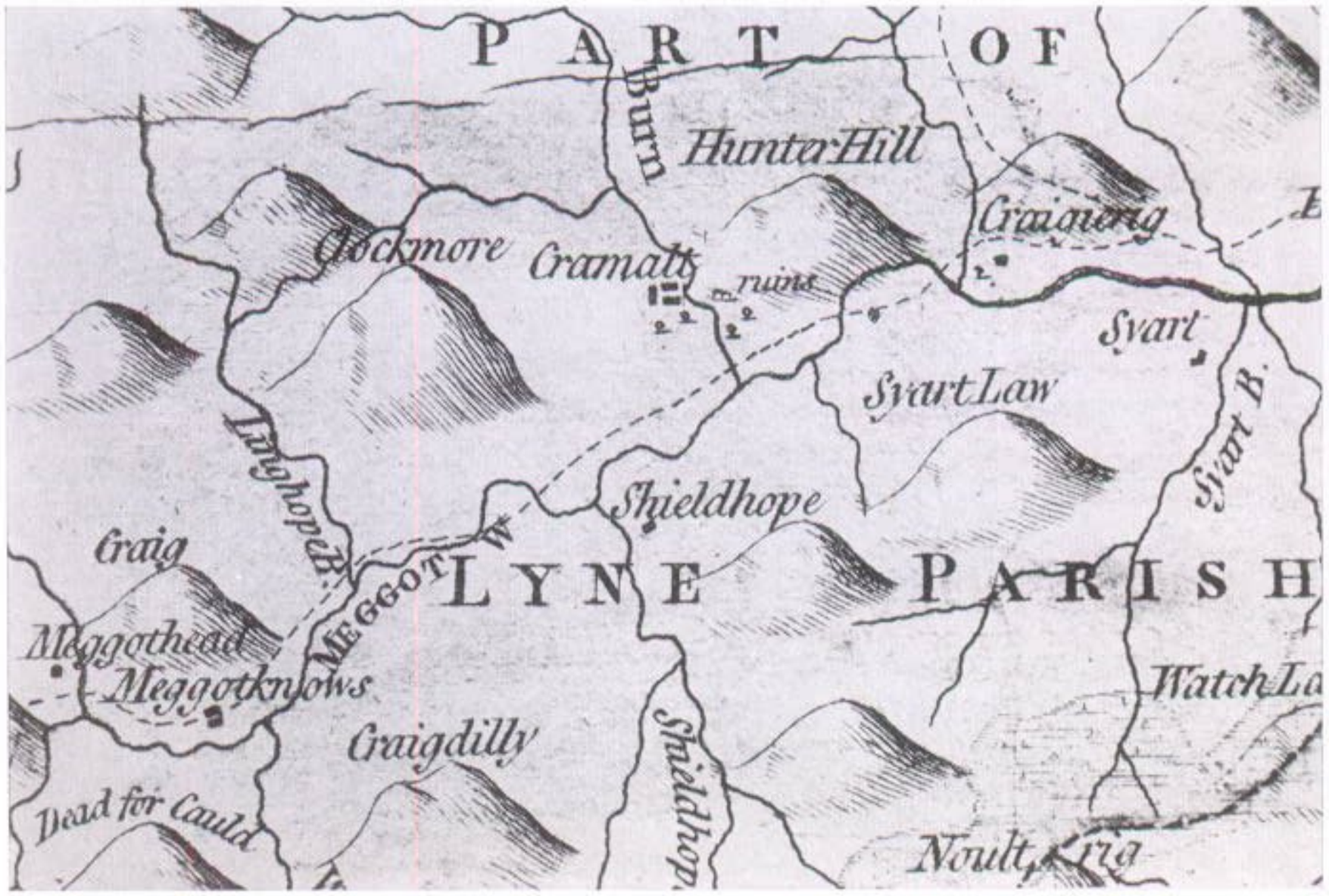
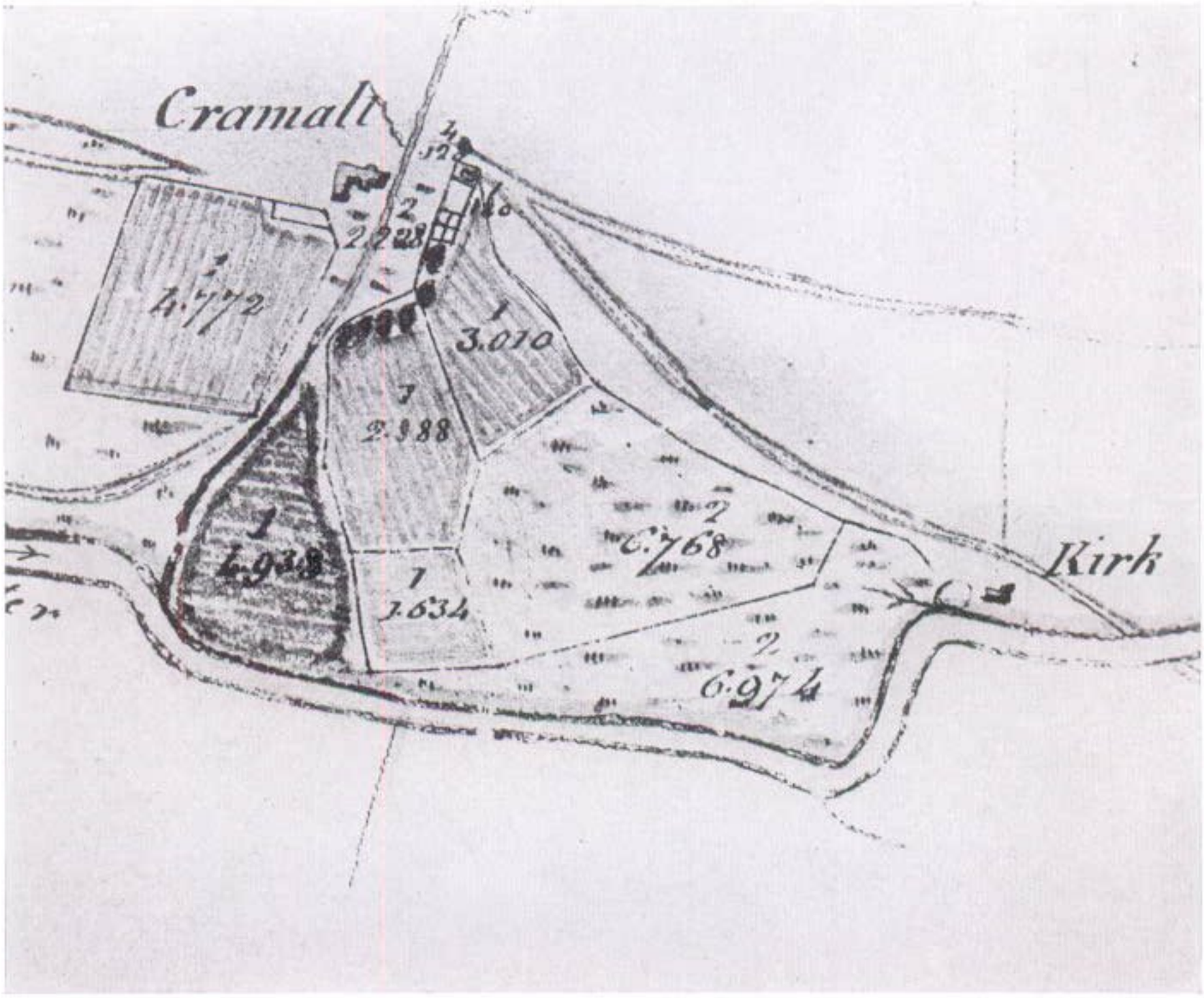
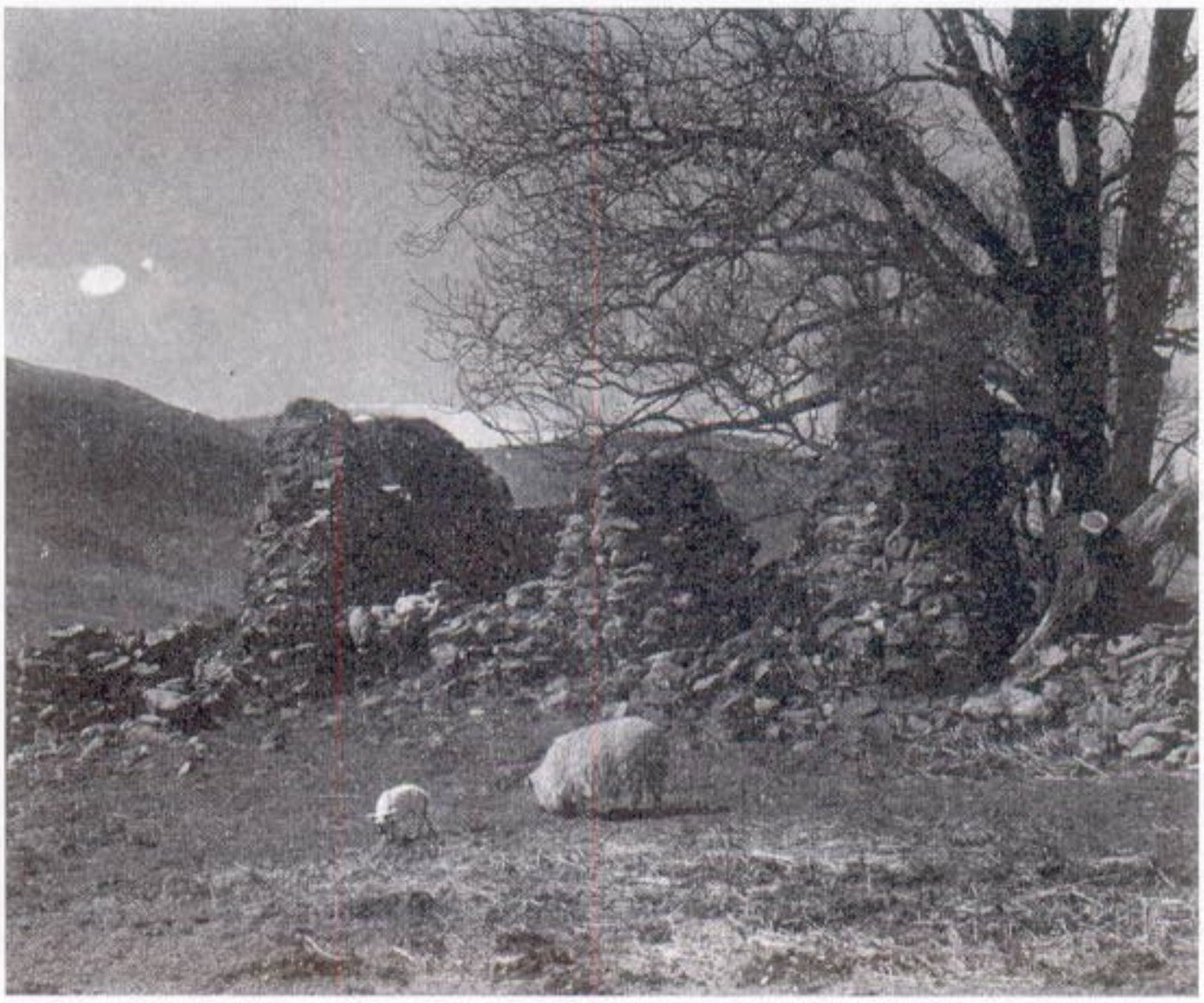


a Meggetland, 1775



b Cramalt, 1821



a North Tower from E, showing window recesses on First Floor

b North Tower entrance and wheel-stair

c North Tower, stair well

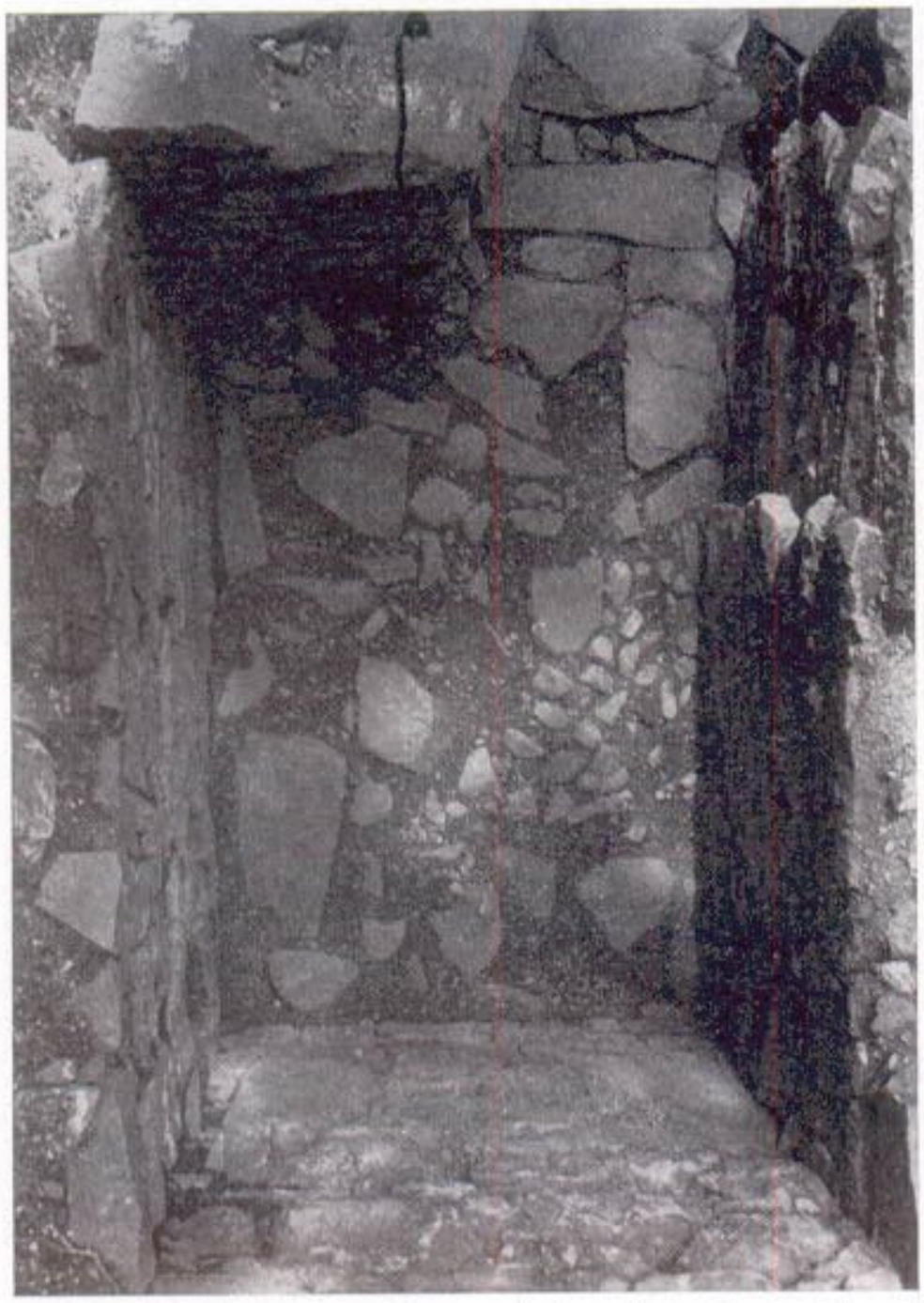
a South Tower from East

b South Tower entrance and mural chambers with N Tower beyond

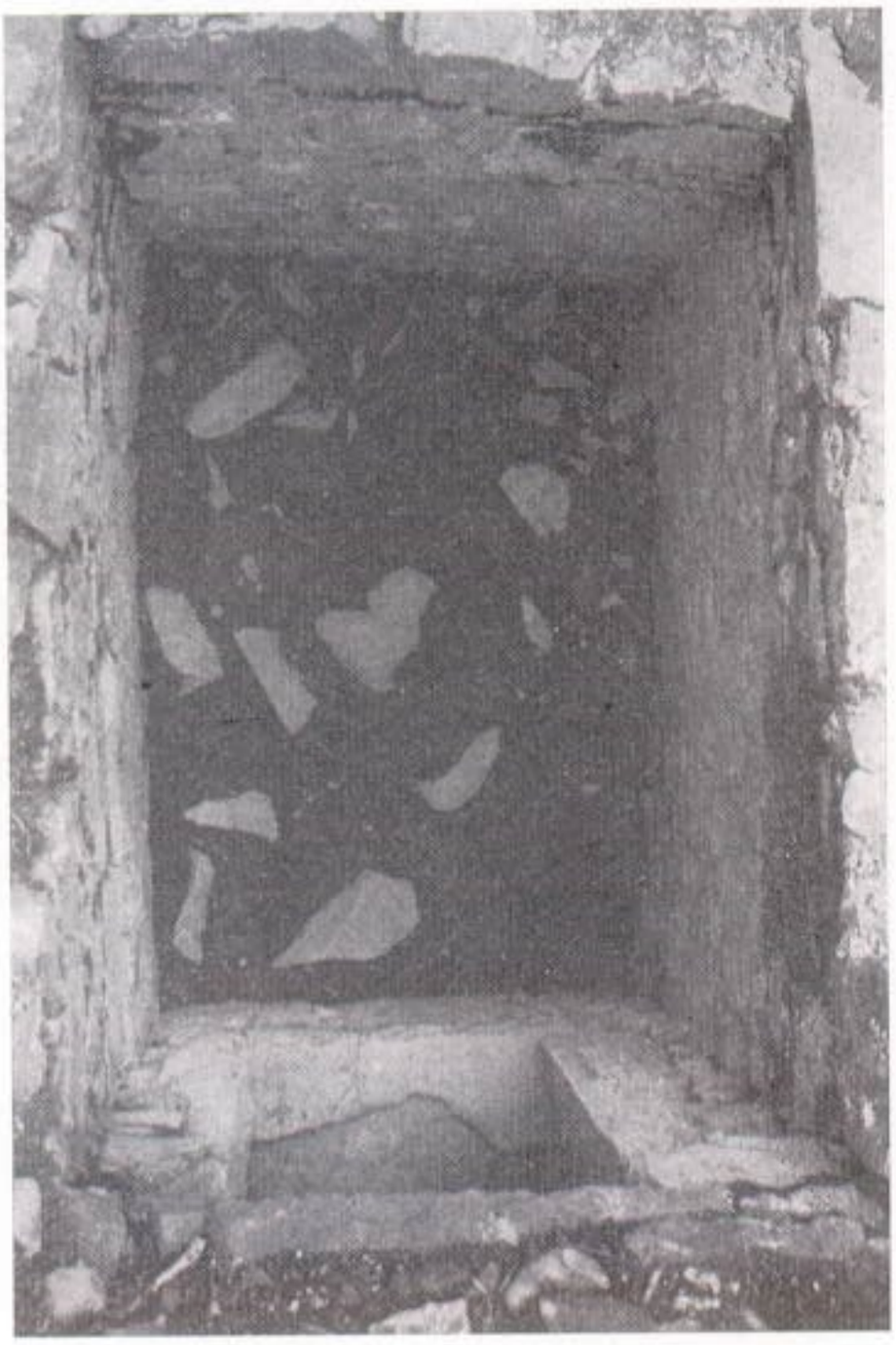
a South Tower, NW corner of basement showing corbels for entresol floor and start of vault

b South Tower, mural chambers and entrance

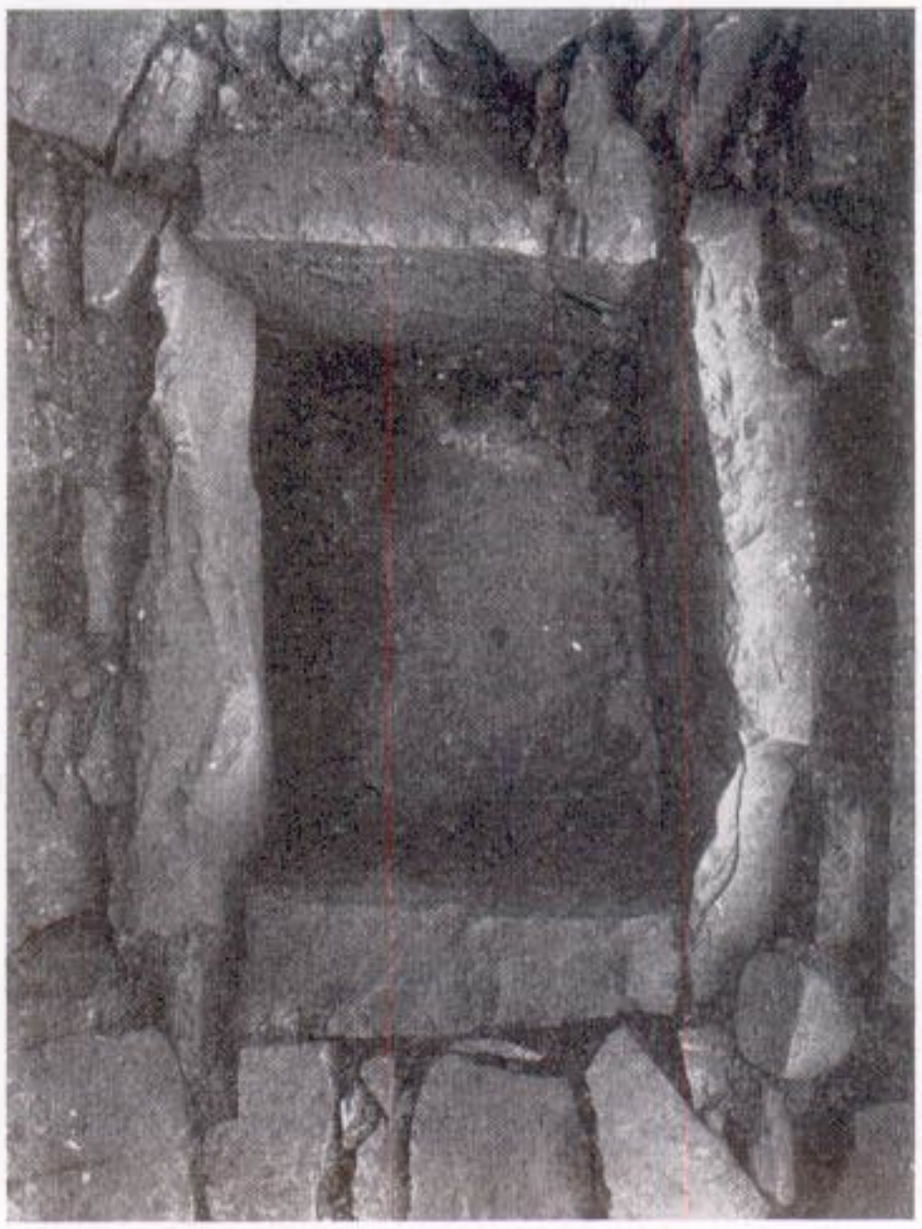
a South Tower, entrance vestibule & wheel stair



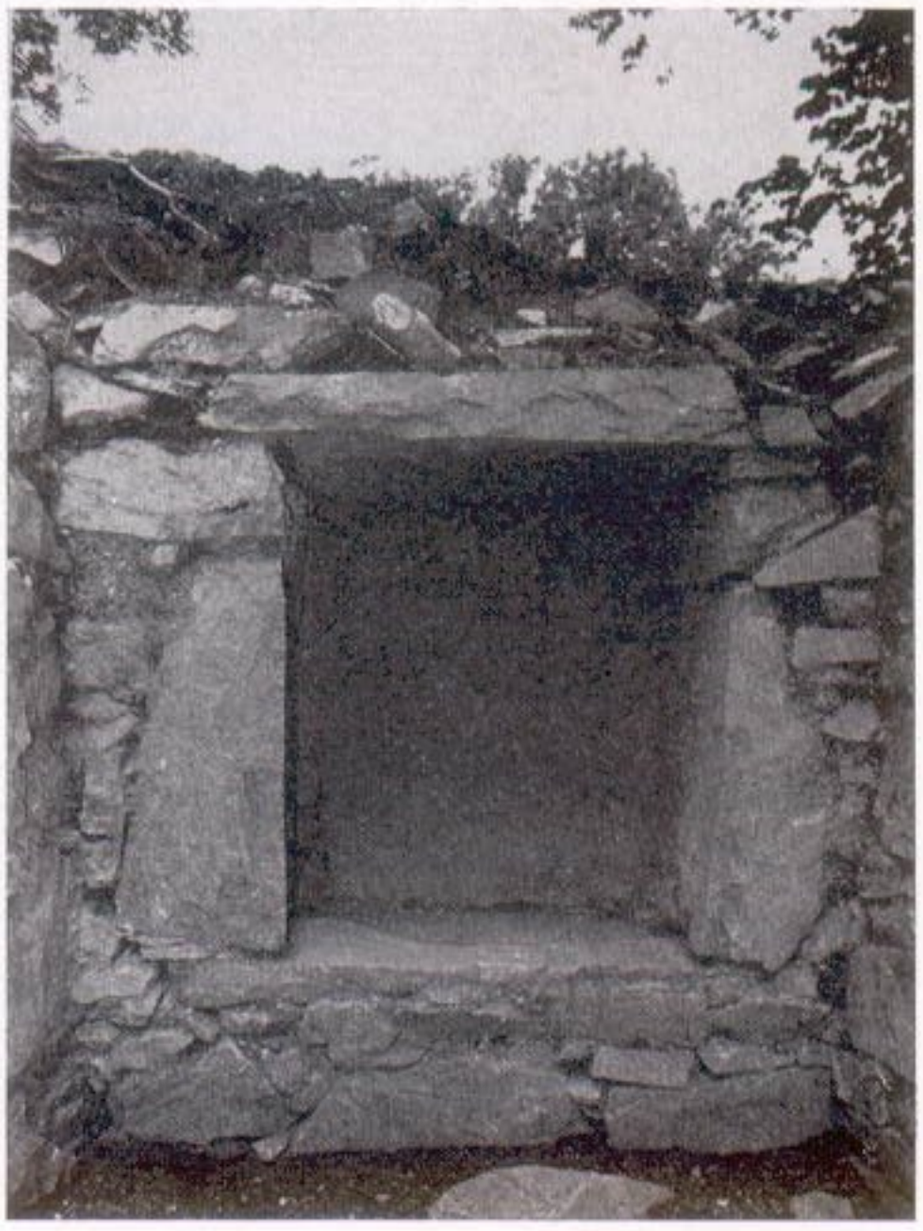
b South Tower, south mural chamber (from above)



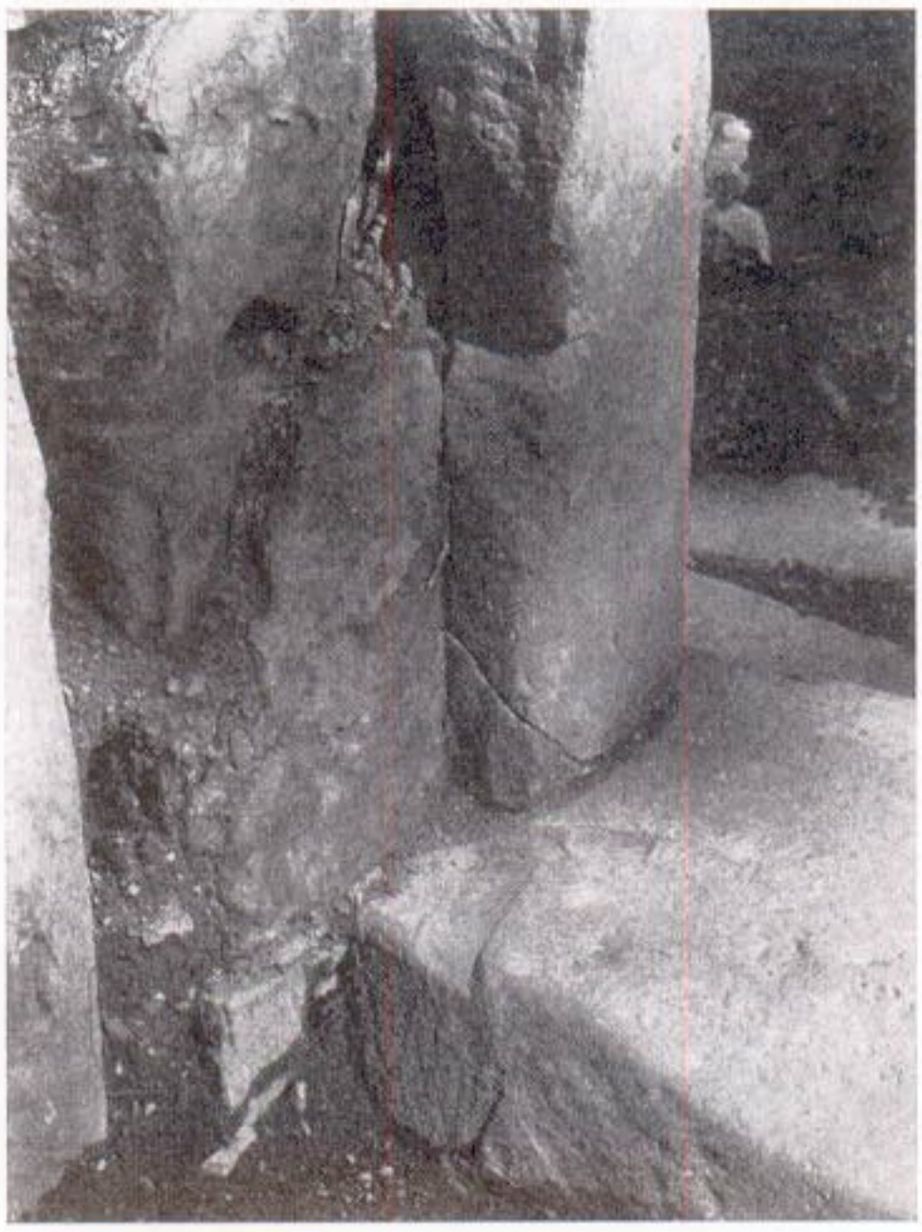
c South Tower, 'Pit' prison (from above)



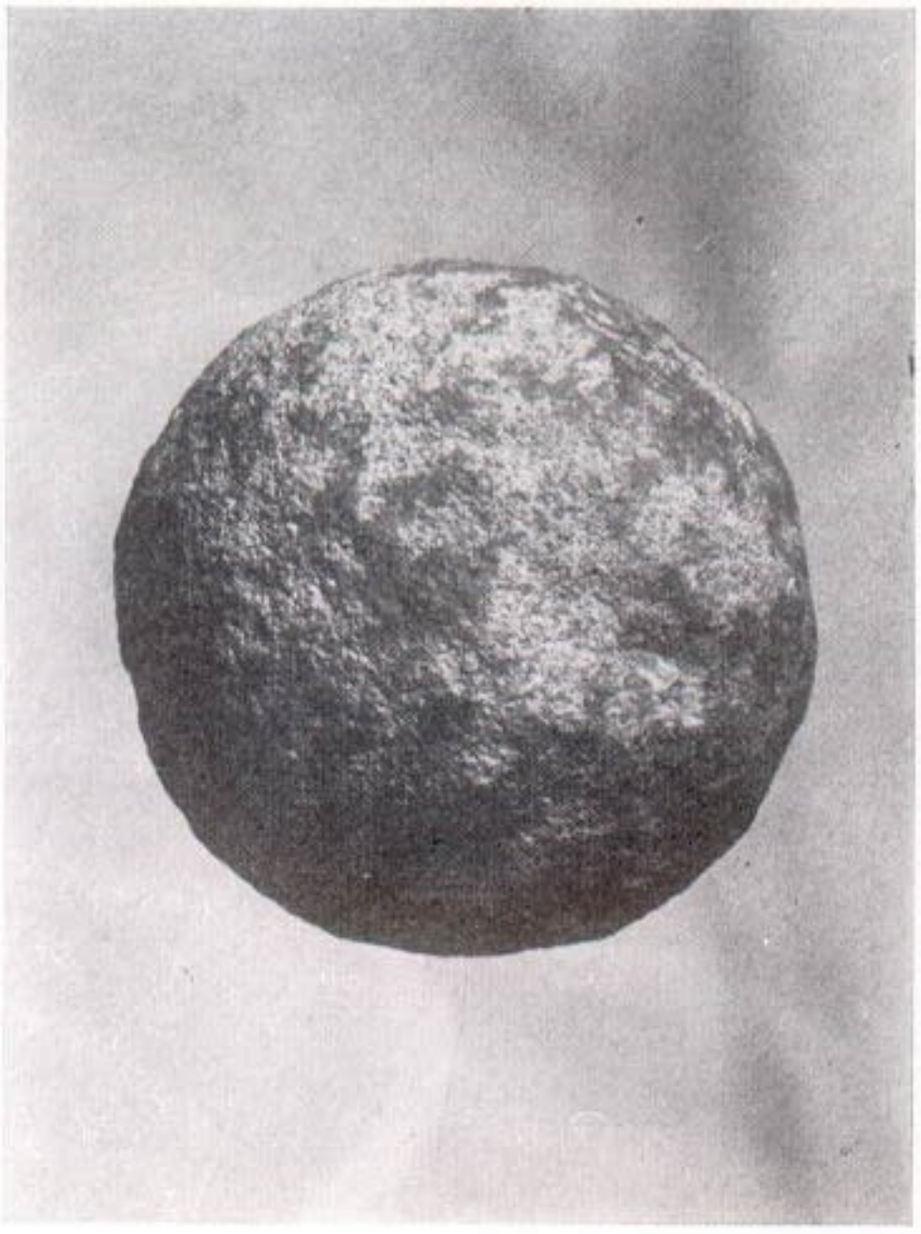
a South Tower, basement aumbrey



b South Tower, prison aumbrey



c South Tower, E jamb of entrance doorway showing step worn by Yett



d gunstone