

Westerton: a Roman watchtower on the Gask frontier

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ABSTRACT

The excavation of the Roman timber watchtower at Westerton was undertaken to obtain dating evidence and a complete plan. The four-post tower was more elongated in plan than anticipated and was provided at the front with steps giving access to the first-floor level, a feature not readily paralleled in excavated towers anywhere in the Roman Empire. The one fragment of probable mortarium recovered from the single enclosing ditch is commensurate with a Flavian date. Disturbance of the post-holes indicated that the tower had been deliberately demolished.

The tower is considered in relation to other adjacent examples which make up the Gask frontier. The function of this system is discussed and placed in its broader historical context.

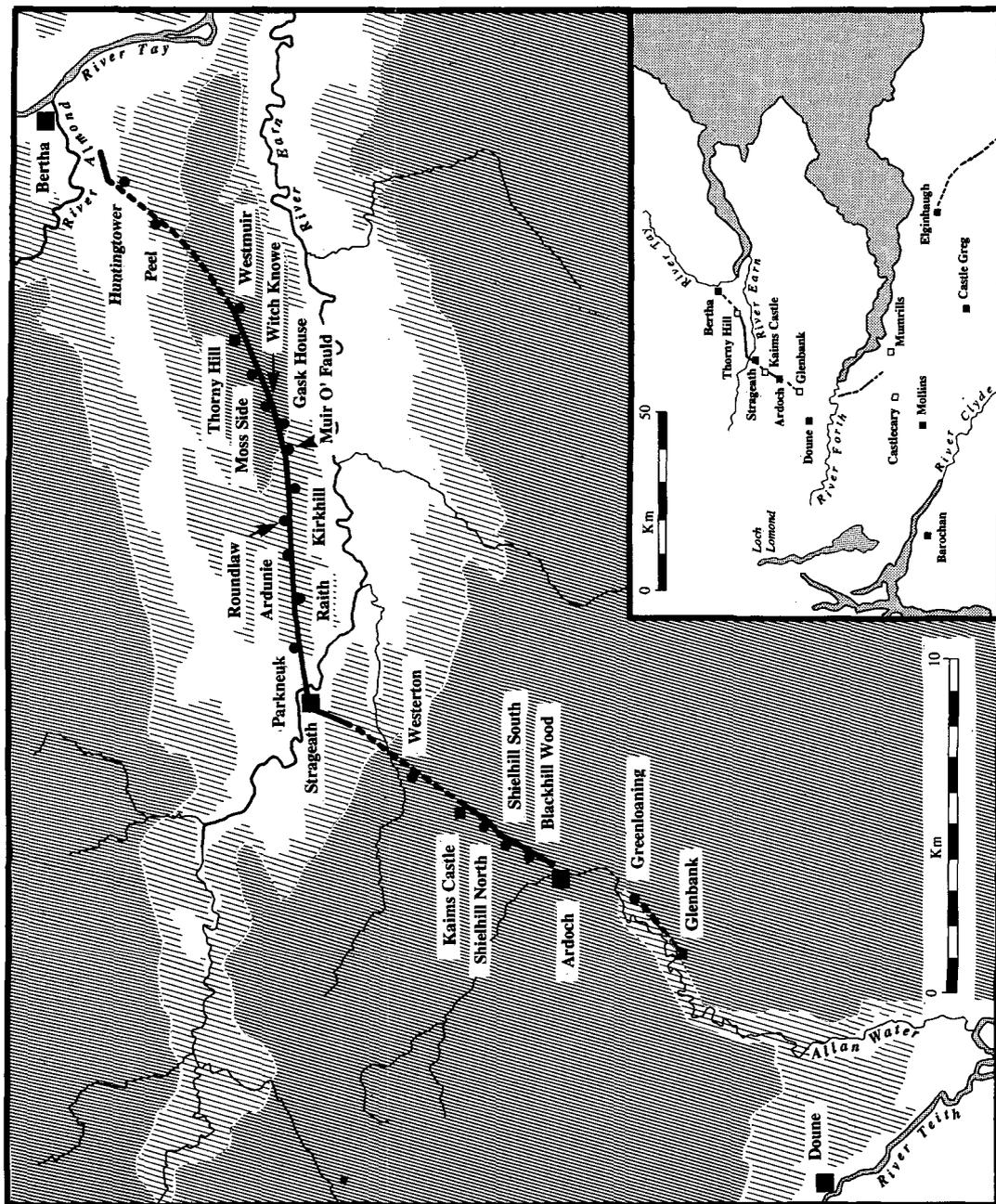
INTRODUCTION

The existence of a series of timber towers along the Gask Ridge has long been known. The best-preserved examples follow the line of the Roman road to the east of the fort at Strageath along this low ridge of hills, which runs approximately east/west immediately to the north of the river Earn. The number of sites known has grown over the past 50 years or so, largely through aerial reconnaissance. As a result, some 17 towers are now attested, the distribution of which extends beyond the Gask Ridge both to the north-east, towards the fort at Bertha on the Tay, and to the south, past the fort at Ardoch (illus 1). The term ‘Gask frontier’ has now come to be applied to this more extended system, even though only part of it follows the Gask Ridge itself (Breeze 1982, 72). This terminology is here preferred because it maintains a link with the best-known element of the system. The alternative descriptor, the Tay/Forth frontier (Maxwell 1990, 355), has implications which, though likely, have yet to be proven.

Several of the towers were investigated by Christison (1901) around the turn of the century, and others over the last 25 years by Robertson (1974) and St Joseph (1973, 218; 1977, 136–9). Despite the considerable attention that has been paid to the Gask frontier, there remain major difficulties in placing the system in its correct historical context because of the lack of direct dating evidence. The only dateable artefact recovered from any of the above excavations has been one piece of pottery, a fragment of Flavian mortarium from Gask House (Robertson 1974, 20–1). In addition, presumably because it was assumed that they were very simple structures, none of the more recent excavations made any attempt to obtain a complete plan. It

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ILLUS 1 Map of the Gask frontier and its broader context



ILLUS 2 Westerton and the line of the Roman road from the air (Crown copyright: Royal Commission on the Ancient and Historical Monuments of Scotland)

was in an attempt to address these deficiencies that the excavations reported here were undertaken.

The site at Westerton (NN 87291458) was discovered from the air as a cropmark (illus 2) by St Joseph (1951, 62), and is the most northerly of the towers known in the stretch of Roman road to the south of the fort at Strageath. It stands on a low ridge on the north side of that road with an unobstructed view over Strathearn to the north and to Kaims Castle fortlet on higher ground 2 km to the south. Since the site was ploughed flat, but had not previously been examined, it offered an ideal opportunity to obtain a complete plan with the minimum of damage to the surviving archaeological remains, and was thus expected to allow the optimum selection of deposits for removal in search of dating evidence.

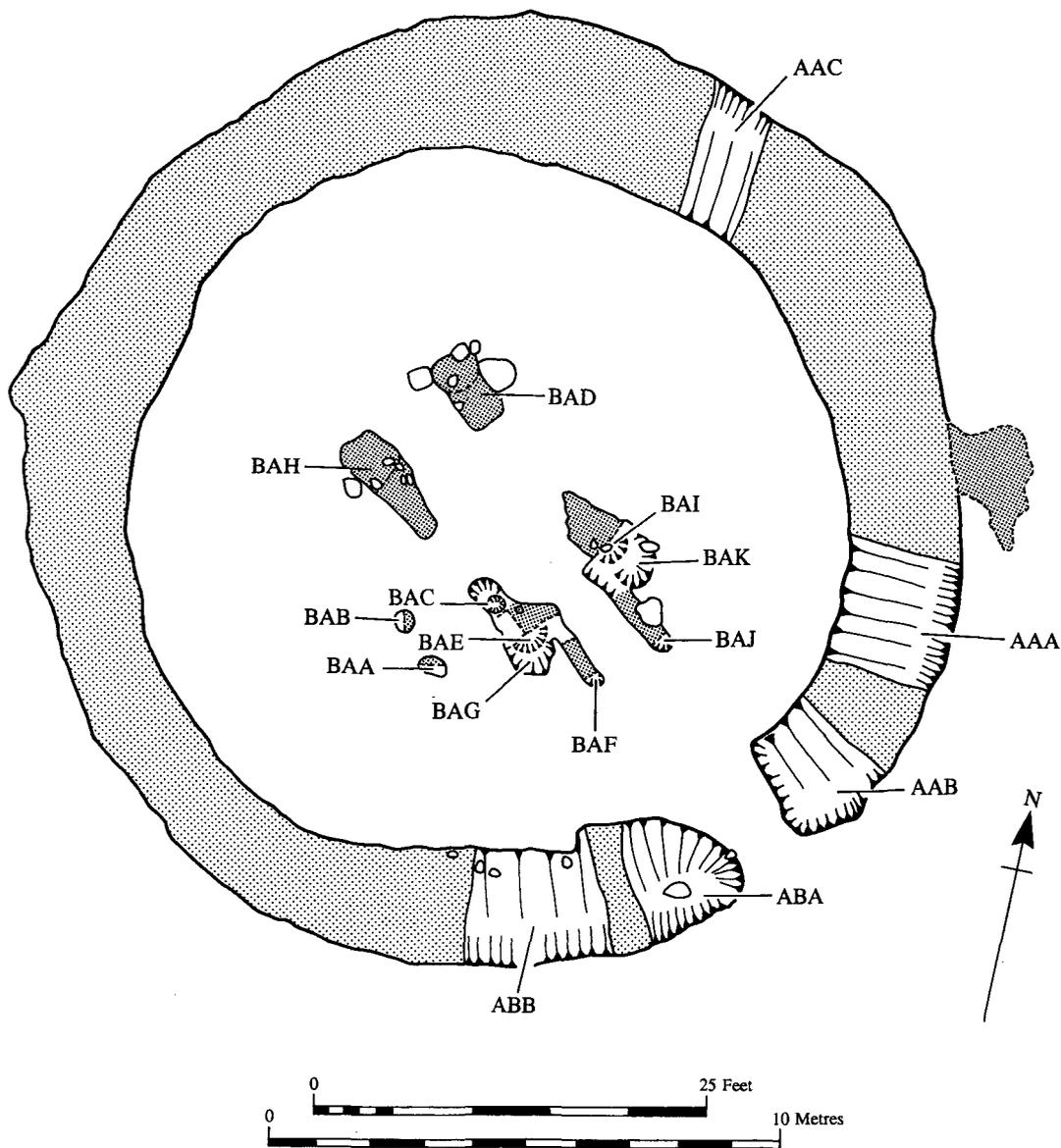
Permission to excavate was granted by the factor, Mr P G Farquhar, on behalf of Drummond Castle Estates; by the tenant of Westerton Farm, Mr Miller; and by Historic Buildings and Monuments, Scottish Development Department (now Historic Scotland). Funding was provided by the University of Glasgow and the excavation took place over three weekends in October/November 1979 with the aid of students from the Department of Archaeology. To all these bodies and individuals the authors are most grateful.

Since the site was located on top of a natural ridge and was regularly under the plough, it seemed unlikely that there would be anything of value to be gained by excavation undertaken entirely by hand. Accordingly an area of some 500 sq m was stripped of its topsoil by machine. The surface was then carefully cleaned by hand to define the archaeological remains. After the excavation of selected features the site was backfilled and returned to cultivation.

All primary records from the excavation have been deposited in the National Monuments Record of Scotland, and the single find in the Hunterian Museum, University of Glasgow.

THE ENCLOSURE (ILLUS 3 & 4)

As the aerial photographs indicated, the site consisted of a single-ditched penannular enclosure 14 m in internal diameter. An entrance causeway 1.2 m wide, faced the Roman road, the approximate line of which was defined by its quarry ditches immediately to the south-east. The butt-ends of the ditch seemed the most likely places for the deposition of rubbish and thus for the recovery of artefacts. Accordingly two sections were removed on each side of the entrance. A fifth section was excavated on the north side of the enclosure where the ditch appeared to be widest. A total length of 9 m of ditch was emptied.



ILLUS 3 Westerton: site plan

As defined on the surface, the ditch varied in width from 1.5 m to 2.8 m, the edges following a slightly irregular line presumably because of the way in which the cornbrash subsoil had fractured. The excavated sections were more consistent in width, between 1.9 m and 2.5 m, and were 0.6–1.0 m deep (illus 5, A–C). The ditch profile was of typical ‘punic’ type, a characteristic noted also at Roundlaw (Robertson 1974, 24), with a gently sloping inner side and a sharply cut outer face. In some sections, notably on the north side of the entrance (AAA, AAB, AAC), a slot some 0.3 m wide and 0.15 m deep, the so-called ankle-breaker or cleaning channel, was provided at the bottom of the ditch.

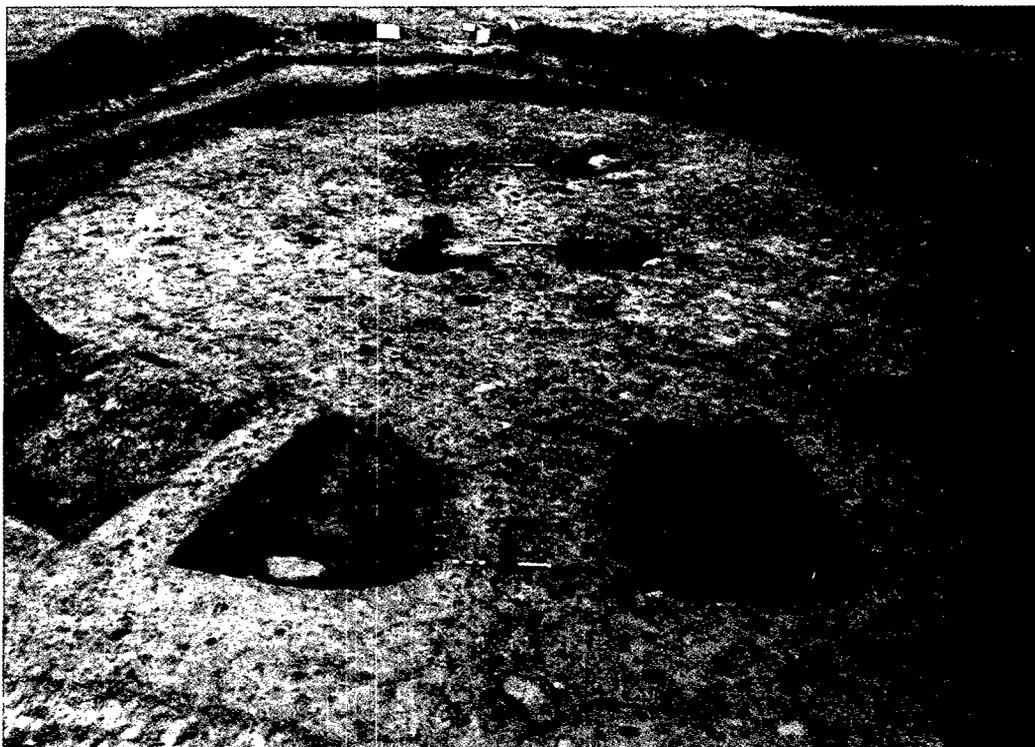
The ditch filling was broadly consistent in all the sections opened. Primary silt filled the bottom and sometimes continued in a thin layer a little way up the inner face. Above that tended to be a layer of dirty gravel with a few larger stones representing material which had collapsed in from the steeper outer side of the ditch. The upper fill consisted of homogeneous orange-brown clay-silt admixed with stones, some quite large, presumably the result of later infilling by the plough. The one fragment of pottery recovered came from low down in this upper fill in section AAA, to the north of the entrance. There were no signs of deliberate backfilling of the ditch, with the possible exception of some larger stones at the bottom of the channel in section AAC and a large stone in a similar position in the western butt-end section (ABA).

There were no direct traces of an internal turf bank or rampart, such as those detected at Moss Side (Christison 1901, 29–30), Parkneuk, and Gask House (Robertson 1974, 18–23) (illus 6), though given the present and longstanding agricultural régime at the site this is unsurprising. Indeed, on cleaning the interior, plough-marks were clearly visible cutting into the subsoil. However, fragments of turf were detected on the inner side of the ditch in one section (illus 5, B), as they were at Roundlaw (Robertson 1974, 26). Although this might represent no more than material which had fallen in from the original ground surface, the presence of turf at this particular point (section AAA) would be entirely consistent with slippage from the corner of the internal bank of a square enclosure. At both of the sites where internal banks have been recorded by modern excavation (Parkneuk and Gask House), the enclosures they defined proved to be square rather than circular in plan, following the outline of the tower rather than mirroring the inner scarp of the ditch.

INTERNAL FEATURES (ILLUS 3 & 4)

All four post-pits visible on the aerial photograph (illus 2) were located, but with surprising difficulty. They were carefully defined by removing a few centimetres of their fill, but only the two facing the entrance were excavated. Only one of the pits was regular in shape, but all had their longer dimension on the same NW/SE axis.

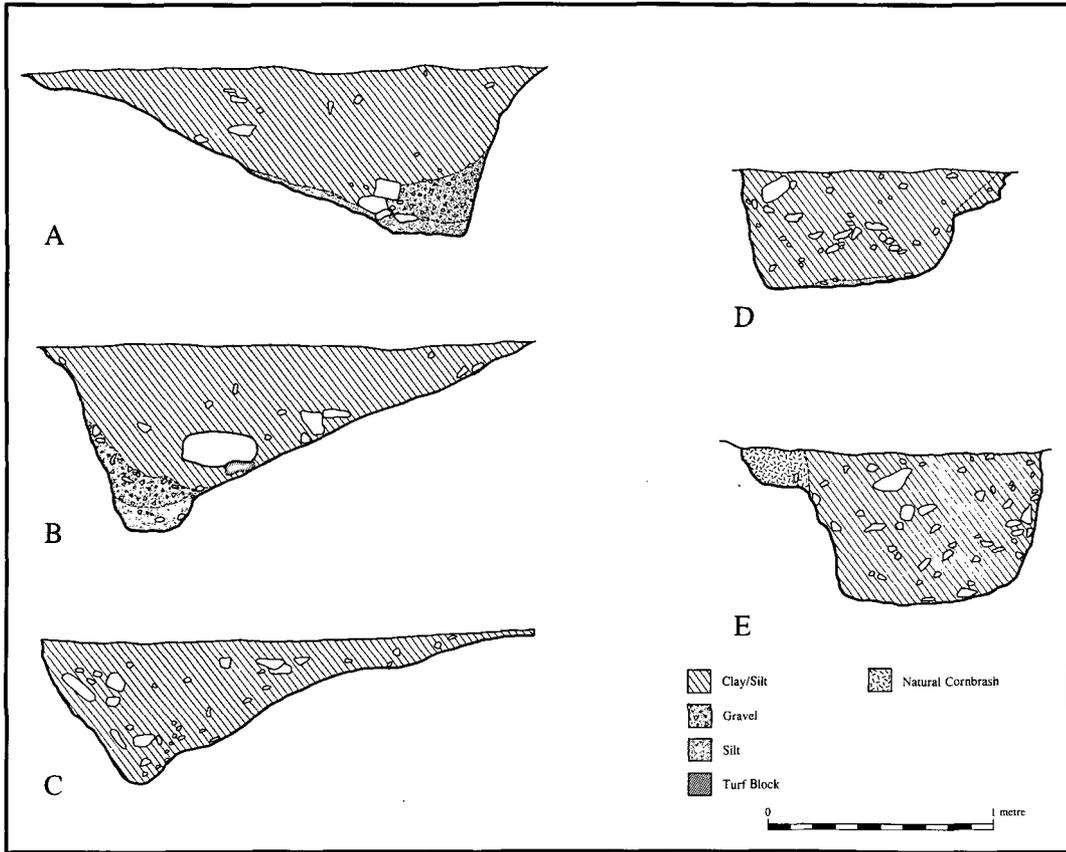
At the rear of the tower the more northerly post-pit (BAD) was approximately rectangular (1.6 m by 0.8 m), and was partly bounded on the north-east side by a large boulder. The pit was not completely excavated but the upper fill was removed to a depth of c 0.1 m to ensure adequate definition of the sides and character of the filling. The hard-packed dirty-pink stony-clay filling gave way at the northern end to a dark orange-brown soft silt with some large stones. This clearly represented disturbance caused by the removal of a post, rather than simply the position of one which had rotted *in situ*; this indicates deliberate demolition of the tower, as was attested also at both Shielhill North and South (St Joseph 1973, 218; 1977, 138). A similar pattern was observed in the other rear post-pit (BAH); it was 2.4 m long and was pear-shaped, varying in width from 0.35 m to 0.9 m, with softer disturbed fill at its wider northern end. The narrow elongation of the



ILLUS 4 Westerton: site after excavation

southern end probably marks the position of a ramp to facilitate the erection of the post. Such ramps are not infrequently recorded in the post-pits of fort gateways, as for example at Baginton (Hobley 1972, 19) and at Carlisle (Charlesworth 1980, 205), though sometimes mistakenly interpreted as demolition features.

Similar features were noted in the two post-pits at the front of the tower, although in both cases these ramps were located at the northern end. The more southerly pit (BAG) was similar in shape to pit BAH, measuring 2.25 m in length and varying in width from 0.5 m to 0.85 m. It was the most thoroughly investigated and appeared to have contained two posts. The post-setting for the main tower-support was positioned not at the wider southern end of the post-pit, but close to the northern end. For half of its depth this sloped at an angle of 45° to form a ramp, before continuing vertically downwards. The post-setting (BAC) was 0.3 m in diameter, 0.75 m deep and was filled with grey-brown silty loam. The irregularity of its profile hinted at the removal of the post. Towards the southern end of the pit, but separated from the post-setting by a baulk of undisturbed dirty-pink stony-clay pit fill, was an area of softer darker clay-silt 0.9 m in diameter and 0.5 m deep (BAE) (illus 5, d). Since this clearly cuts the pit fill and the adjacent construction slot (see below), but does not impinge upon the post-setting already described, it would appear to represent the removal of a second post from the same post-pit. The thin layer of silt at the bottom of the trench may indicate the original position of the post. The adjacent front post-pit (BAK), though only half-sectioned, demonstrated similar characteristics. A central area of disturbance



ILLUS 5 Sections: (A) north-east face of ditch segment AAB; (B) south face of ditch segment AAA; (C) west face of ditch segment ABB; (D) south-east face of post-pit BAE and slot BAF; (E) south-east face of post-pit BAI and slot BAJ

(BAI), 0.65 m deep, (illus 5, E) marked the position of one post, although the existence of a second, more northerly, post was not tested, and the relationship with the adjacent construction slot (BAJ) was less clear.

Both of the front post-pits also exhibited an associated feature unique amongst the Gask frontier towers so far examined and, indeed, amongst Roman military timber towers in general. On the inner side of each post-pit, beginning about half-way along its length, was a straight-sided, flat-bottomed slot (BAF & BAJ) some 0.3–0.35 m wide and 0.1–0.18 m deep. The slots, running parallel some 1.4 m apart from centre to centre, extended between 0.8 m and 1.3 m beyond the ends of the post-pits in the direction of the entrance to the enclosure; they presumably represent the remains of some kind of entrance to the tower. Both were filled with grey-brown clay-silt and showed no signs of post-impressions either on the surface or in the sections excavated; this suggests that they may have contained sill-beams. In one case (BAF) the filling of the slot had clearly been cut by the disturbance which marks the removal of one of the front posts from its post-pit (see above).

Only two other features were identified within the enclosure. Approximately 1.5 m to the

west of the more southerly front post-pit (BAG) were two shallow depressions 1.0 m apart. The larger (BAA) was 0.6 m in diameter and 0.1 m deep. In the centre was a patch of charcoal-rich soil some 0.4 m in diameter, extending to the full depth of the feature and surrounded by light orange-brown clay-silt. The second depression was similar but only 0.4 m in diameter and 60 mm deep, and the charcoal extended for only half its depth. Though both in diameter and in location these features would make sense as part of some contemporary structure, they are rather too shallow, compared to the post-pits of the tower, to have taken much weight. The concentration of charcoal in their fill is perhaps more likely to have been derived from a hearth, but there was no indication that the subsoil had been affected by heat.

THE ROMAN ROAD

The general line of the road is clearly demarcated on the aerial photographs of Westerton and of an adjacent field by lines of amorphous pits (illus 2 & 7), the result of quarrying for road-surfacing material. These pits indicated a SW/NE alignment, though the exact position of the road line between them is uncertain. The watchtower and its enclosure faced south-east towards the road, which probably ran only a few metres away. If the most visible line of quarry pits to the north of the tower had continued southwards they would have intersected the line of the enclosure ditch. Indeed, an amorphous pit-like feature, which appeared to merge into the outer edge of the ditch, was detected just to the north of the entrance (illus 3). This may have been a small quarry pit, but was not investigated further. No chronological relationship was evident on the surface.

FINDS

The excavation produced only one significant find, a fragment of heavily degraded pottery from the upper fill of the ditch on the north side of the entrance (AAA). Since it had the general characteristics of a body sherd of mortarium it was sent to Mrs K Hartley for comment. She concluded that, if it was a piece of mortarium, the fabric was of Flavian date.

CONSTRUCTION AND RECONSTRUCTION

As predicted prior to the excavation, the remains at Westerton represent a four-post timber tower, although there was some greater structural elaboration than was anticipated. Exact dimensions for the tower cannot be provided since the position of only one post was determined with any precision. However, on the basis of the approximate positions of the other three, it seems to have been rectangular, measuring approximately 2.5 m by 3.8 m. The surface dimensions of the post-pits (at least 0.8 m by 1.6 m) and their depth, where ascertained (0.65–0.75 m from the top of the subsoil), are broadly commensurate with those of fort gateway and perimeter tower structures. Accordingly, the size of the post-pits may reasonably be taken to confirm presumptions that the tower would have risen to three storeys in height.

The presence of a second post attested in at least one of the post-holes nearest the entrance to the enclosure, and assumed to have been replicated in the other, is best explained by the need to provide additional support for an external upper balcony. Such balconies, apparently running around all four sides of the structure, are represented on several of the towers which are depicted at the beginning of Trajan's Column (Lepper & Frere 1988, 48, plates 4 & 5). These seem to represent pre-existing dispositions along the Danube bank and are likely, therefore, to be broadly contemporary in date with the Gask towers. At Westerton, however, a balcony may have been

provided only at the front to facilitate entry at first-floor level, for the two shallow slots some 1.5 m apart (which project 1.5 m from the front posts towards the entrance into the enclosure) seem to be best interpreted as the supports for wooden steps. Entry at first-floor level is generally assumed for the watchtowers along the German frontier as a security measure, and confirmed as a necessity in the case of examples along the Odenwald *limes* which have solid bases of dry-stone and timber construction (Baatz 1976, 13–14, 41–2).

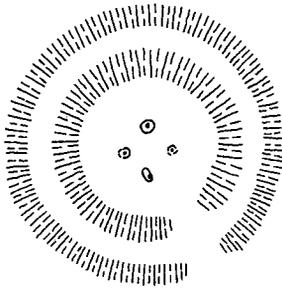
No evidence was recovered for the nature of the superstructure. There were no signs of construction trenches linking the posts, which might have supported any wattle infilling or sleeper beams, such as were attested at Moss Side (Christison 1901, 29–30). Nailed planking would seem the simplest method of forming connecting walls, but daub has been attested at Shielhill North (St Joseph 1973, 218) and timber appropriate for wattle construction was recovered from Raith (Christison 1901, 28–9).

As suggested above, there may have been a turf bank surrounding the tower, but there were no indications of post-holes in the vicinity of the entrance, either to serve as revetment or to support any entrance structure. Accordingly, any such bank is likely to have been only very slight (*contra* Breeze 1982, fig. 9), and is unlikely to have served any major defensive function. Similarly, the ditch may have been more a drainage than a defensive feature. Certainly, given the problems with surface water encountered by the excavator (Robertson 1974, 21–3), such a provision would have been required at Parkneuk. The upcast from the ditch is likely to have been thrown to the outside, for counterscarp banks are attested at several of the sites (see Appendix).

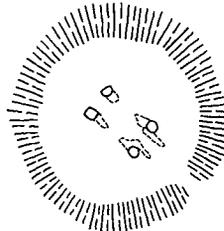
ANALOGIES AND PARALLELS

The closest analogies for the tower at Westerton and its surrounding enclosure come, not surprisingly, from the other posts in the Gask system (illus 6 and Appendix). The single-ditched enclosure is paralleled, in terms of its form, general dimensions and location in relation to the road, in virtually all examples to the north of Westerton where sufficient evidence survives. The only difference occurs in the sites between Glenbank and Kaims Castle which have a second, outer ditch (see below), though they have both the same internal dimensions and stand in the same relationship to the road. Indeed, single-ditched enclosures of similar dimensions are well attested elsewhere in Britain and parts of Germany, though in the latter area they tend to be circular rather than penannular (Fabricius *et al* 1936 *passim*).

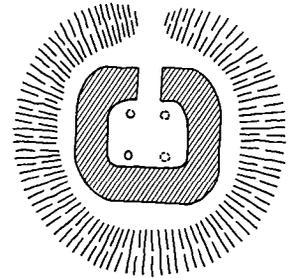
In general terms the simple four-post timber tower is also well paralleled. All the other posts in the Gask system, where the internal arrangements are attested, show this arrangement (see Appendix), as do a number of other sites elsewhere in Britain and in Germany (eg Maxwell 1976; Goodburn 1979, 282–3; Baatz 1976, 16–20), although this also includes examples likely to be early to mid second-century date. When examined in detail, however, the towers show a surprising variety of size and shape. Within the group which forms the Gask system, Westerton stands out in a number of ways. It is the narrowest of the towers and one of the most markedly rectangular. Although other sites show a similar tendency, notably Witch Knowe, Gask House and Roundlaw, the majority are square, even if they are not consistently the same size. But such variation in detail is typical of Roman military timber buildings and simply reflects the *ad hoc* mode of their construction (Hanson 1978, 298–305). However, in one respect Westerton is unique: it has an expansion at the front of the tower, interpreted above as providing support for steps to allow direct access to an upper storey. The absence of similar evidence from other sites may simply reflect the limited number of examples which have been subject to area excavation. The slight extension of the inner cobble-and-clay surface of the tower at Beattock Summit, though in a similar position,



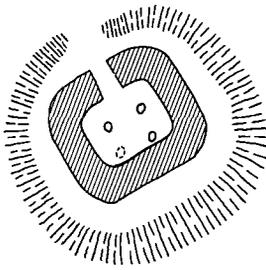
BLACKHILL WOOD



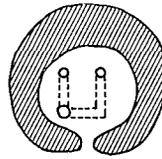
WESTERTON



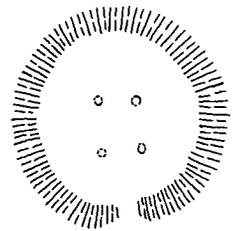
PARKNEUK



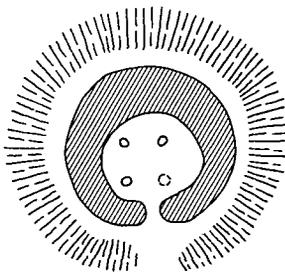
GASK HOUSE



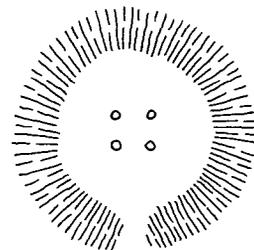
MUIR O' FAULD



ROUNDLAW



MOSS-SIDE



WITCH KNOWE



ILLUS 6 Watchtowers on the Gask frontier: comparative plans

need indicate no more than the demarcation of an entrance on the ground floor (Maxwell 1976, 35–6). Given the general assumption of a first-floor-level entrance for towers on the German frontier, it is surprising that parallels for the arrangement attested at Westerton are not common there, but access to these towers seems to have been by retractable ladder rather than permanent steps. However, one example with front projections is known at Welzheim on the Outer *limes* (9/134), although it was of later date and was built in stone rather than timber (Planck 1975, 8 and Abb. 2).

FUNCTION

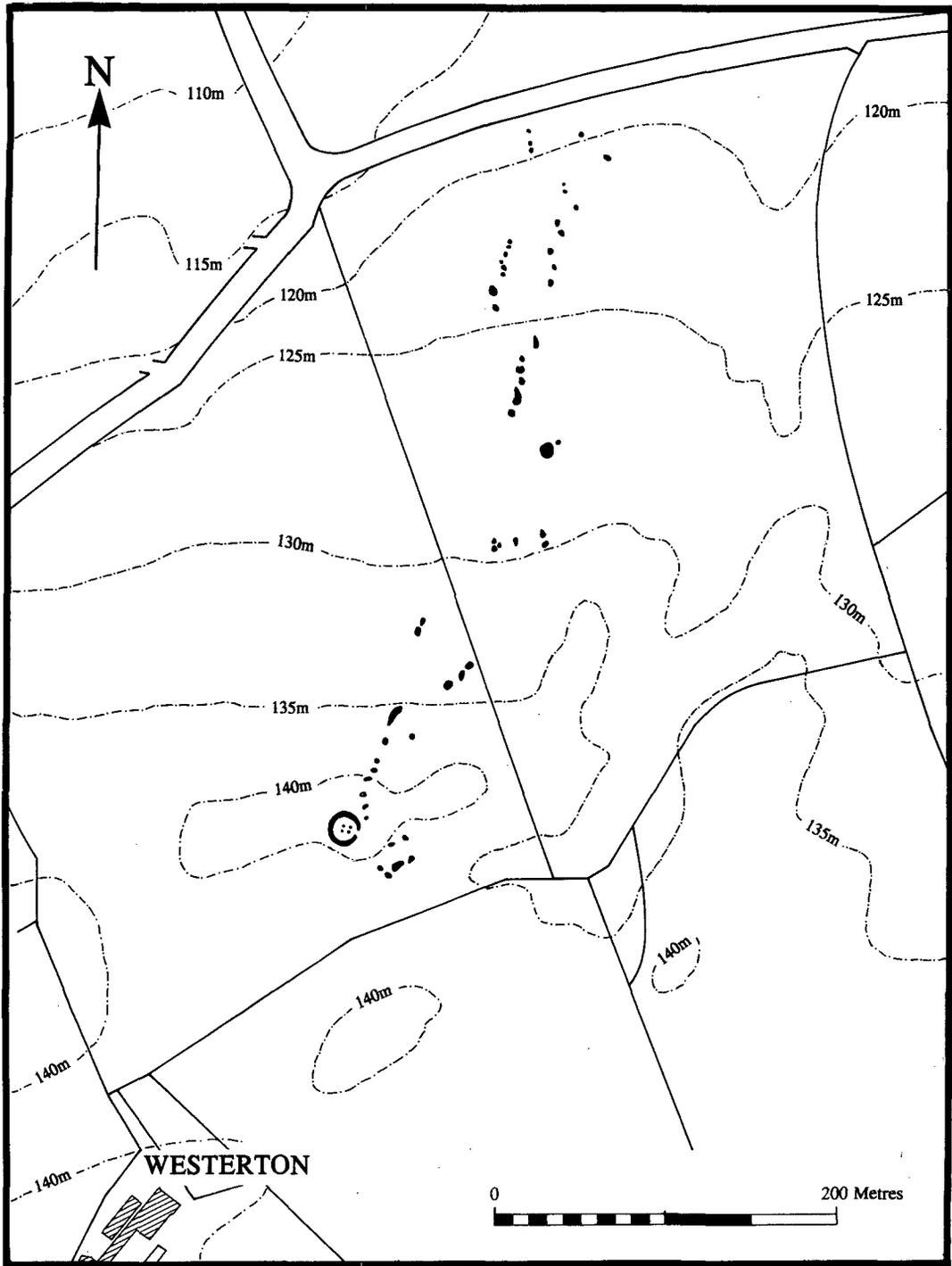
The tower at Westerton is clearly part of a more extensive system, as the general similarities of form (noted above) and the regularity of spacing (considered below) serve to emphasize. It is one of a sequence of military posts, involving towers, forts and fortlets, which, as far as we currently understand it, runs from the fortlet at Glenbank in the south to the fort at Bertha in the north. That the system once extended even farther south, at least as far as the crossing of the Forth to the west of Stirling, grows increasingly likely.

The Roman road north of the Forth, though not known in its entirety, does not extend north of the Tay. Along its length are four auxiliary forts at Doune, Ardoch, Strageath and Bertha, spaced at intervals of 6.1 – 13.6 miles (illus 1). Between the more southerly of these forts, further reducing the spacing to 2.3 – 5.9 miles, are fortlets at Glenbank and Kaims Castle (Table 1). Indeed, it now seems likely that the rectangular enclosure at Thorny Hill, Midgate, identified and excavated by Christison (1901, 31–4), represents a third such fortlet, for it lies approximately midway between Strageath and Bertha. Recent resurvey and limited excavation has demonstrated its similarity to the other two fortlets in the system (Woolliscroft 1993, 302–7).

Additionally, Maxwell (1990, 356) has postulated a further fortlet at Cuilburn, to the north of Westerton, where a small single-ditched rectangular enclosure has been detected from the air. However, it lacks the detailed morphological characteristics of the better-known fortlets in the system, and it lies only 500 m to the south of the fort at Strageath, so that its identification as of Roman date must remain in doubt. The recent suggestion of a further fortlet surrounding the tower at Raith is open to similar doubts in relation to its morphology (*contra* Woolliscroft 1993, 298–9).

Interspersed between these various garrison posts are the towers. These currently total 17 or 19, depending upon the confirmation of a possible cropmark discovery at the southern end of the system in the vicinity of Quoigs (Maxwell 1990, 354), and the longstanding, but dubious, identification of a tower at Thorny Hill (see below). Although their spacing varies between 800 m and 4200 m (Table 1), distances of 800–960 m and 1400–1520 m recur, suggesting an underlying element of regularity.

It is the spacing of the towers which provides the main indication of their function. They have been commonly interpreted in the past as signal towers (eg Richmond 1935, 34–6; Crawford 1949, 51–2). However, the primary factor in the location of elements of an arterial signal system, as has long been recognized, is intervisibility. Regularity of spacing would be surprising, and very close spacing potentially counter-productive in terms of the speed and the accuracy with which any message might be conveyed. Thus the primary function of the posts as watchtowers is now generally accepted, while recognizing that one concomitant of this role was to keep the nearest garrison post informed of events, which might involve some form of signalling (eg Rivet 1964, 197; Donaldson 1988, 352–3). Yet the Gask towers are, generally, not sited on natural high points from which they might take best advantage of the topography in order to ensure maximum all-round visibility. This is particularly noticeable at Westmuir, where an adjustment in position of



ILLUS 7 Westerton and the line of the Roman road as defined by quarry pits. (Based on the Ordnance Survey map © Crown Copyright)

TABLE 1
The Gask Frontier: the spacing between sites

<i>Fort/Fortlet</i>	<i>Spacing in miles</i>	<i>Watchtower</i>	<i>Spacing in metres*</i>
Bertha	6.2	Huntingtower	3200
		Peel	1820
		Westmuir	3970
			840
Thorny Hill, Midgate	7.7		1400
		Moss Side	1120
		Witch Knowe	800
		Gask House	860
		Muir o'Fauld	1460
		Kirkhill	960
		Roundlaw	1110
		Ardunie	1520
		Raith	1520
		Parkneuk	1850
Strageath	3.8		4200
		Westerton	2040
Kaims Castle	2.2	Shielhill North	875
		Shielhill South	950
		Blackhill Wood	880
			900
Ardoch	3.1		2800
		Greenloaning	2330
Glenbank	5.9		
Doune			

* Because of inconsistencies in published data, measurements have been taken afresh from 1:10000 maps and are given to the nearest 10 m. The spacing from forts is to the estimated position of the nearest gate.

only some 300m would have brought the tower to the highest point on the Gask Ridge (Woolliscroft 1993, 301–2). Such positioning is in contrast to that of single towers elsewhere which presumably served as look-out posts for adjacent forts, such as that on Eildon Hill North (Steer & Feachem 1952), or posts intended to act as an early warning system and signal link, such as those which connect the outpost fort at Bewcastle to Hadrian's Wall (eg Topping 1987). Thus, it is the emphasis on close lateral visibility which provides the key to our understanding of the Gask towers and their associated garrison posts, not their potential for long-range surveillance and signalling (*contra* Woolliscroft 1993). There can now be little doubt that this arrangement constitutes a demarcated line within a frontier system, the towers serving to oversee, monitor and, with the aid of the nearby garrisons, control movement across the cleared strip of land through which the road ran (Breeze 1982, 61–2; Hanson 1987, 153–7). This in turn suggests that other towers yet remain to be discovered to infill the larger gaps, particularly at each end of the system, but also between Westerton and Strageath.

The best parallel for such a system is provided by the Domitianic frontier in Germany beyond the Rhine in the Taunus and Wetterau region. This consisted of a road with a series of timber watchtowers, at intervals of 500–1000 m, interspersed between closely spaced forts and fortlets, although there remains some debate about the precise contemporaneity of all the garrison posts involved (Schönberger 1969, 159; 1985, 375–8). A similar multi-period system, of slightly later origin, is gradually being elucidated in north-west Dacia (Gudea 1979, 73–7; 1986, 487–9). In Britain, the pre-Hadrianic, and potentially late Flavian (Jones 1991), frontier across the Tyne/Solway isthmus, the Stanegate, involves a series of closely spaced forts and fortlets, even if it is still the case that insufficient examples are known to allow confident predictions of a similarly extensive system of intervening watchtowers (Birley 1961, 132–50). Indeed, if the arguments adduced below for the date of the Gask system are correct, it is the earliest such artificially defined line yet known in the Empire, preceding that established in the Taunus and Wetterau by at least six years. Accordingly, it represents the beginning of a development which culminated in the construction of Hadrian's Wall and the other linear barriers, with their elaborate provision for the close control of movement across demarcated frontier lines.

HISTORICAL CONTEXT

Whenever a date has been ascribed to the system, the Gask frontier has been regarded as Flavian. The parallels for the timber towers are predominantly of first-century date, and occupation of the system would make little strategic sense if it was contemporary with the campaigns of Severus. Though occupation in the Antonine period is a possibility, it is generally unconvincing to postulate a frontier line in Strathearn, given the existence of a linear barrier running from Forth to Clyde only a few miles to the south. Moreover, the meagre direct dating evidence which is available, from Westerton and Gask House (Robertson 1974, 20–1), lends cumulative weight to the generally accepted Flavian date.

The precise historical context of the frontier within the Flavian period is, however, more contentious. Its construction could be associated with any one of four circumstances: the halt on the Forth/Clyde isthmus in Agricola's fourth campaign (Tacitus, *Agricola* 23); consolidation by Agricola of territory overrun by the end of his sixth campaign; the construction of the legionary fortress at Inchtuthil and its associated screen of auxiliary forts in Perthshire and Angus, either by Agricola at the end of his campaigns or by his unnamed successor; or, lastly, as a stage in the withdrawal from Scotland in the late 80s.

The least likely of these is the third option, since there would seem to be little strategic sense

in constructing a closely controlled frontier line in Strathearn at the same time as consolidation was taking place up to 45 miles farther north and west (*contra* Pitts & St Joseph 1985, 277–8, and Woolliscroft 1993, 300). While the so-called glen-blocking forts could be construed as outpost forts beyond the road line, such an interpretation does not fit happily with the inclusion of a legionary fortress amongst them. Similarly, the second option, with its implication of a series of successive linear defence systems, does not readily fit the context of continuing advance (*pace* Maxwell 1989, 126). Indeed, the phraseology used by Tacitus in reference to the halt on the Forth/Clyde isthmus implies most strongly that such a defensive approach was not favoured and was, therefore, unlikely to have been normal practice (*Agricola* 23).

The latest of the possible contexts, first fully argued by Breeze & Dobson (1976, 130–1), has been the one most widely supported (eg Salway 1981, 570; Hanson 1987, 153). The Gask frontier is seen as a preliminary stage in the withdrawal from northern Scotland following the abandonment of Inchtuthil and the so-called glen-blocking forts. But recent analysis of the numismatic evidence makes this interpretation virtually untenable. The abandonment of the forts north of the isthmus is dated by reference to the latest coins recovered. Consistently these have been issues of AD 86, their mint or near mint condition taken to be indicative of a Roman withdrawal not long after (Robertson 1968, 61–3; 1977, 72–3; Frere & Wilkes 1989, 13). But extensive excavations at Camelon (information from Dr V A Maxfield) and Elginhaugh in recent years has produced the same pattern of coin finds, suggesting that the abandonment of all the Roman forts to the north of Newstead was synchronous (Hanson & Yeoman 1988, 11; Hobley 1989). Moreover, Hobley's analysis (1989, 69–71) of the circulation in Britain of the coin issues of Domitian shows two peaks in successive years: AD 86 and 87. Thus it is the absence from these northern Scottish sites of coins of AD 87 which becomes crucial, for it indicates their abandonment before such coins were in circulation. If, as is widely assumed (Robertson 1968), these coins were shipped straight from the mints to pay the troops, the withdrawal from the whole of northern Scotland must have occurred by the middle of AD 88 at the very latest, and probably before. This leaves no time for it to have taken place in phases.

The only remaining context for the Gask frontier is the earliest, which would see it as part of the halt on the isthmus in Agricola's fourth campaign (Frere 1980, 89–91; Hobley 1989, 73–4; Hanson 1991, 1765–7). Tacitus' unusual geographical precision in describing that location need not carry with it the implication that the associated structures did not extend farther north. Indeed, he makes clear that Agricola's army had penetrated as far as the Tay in the preceding year (*Agricola* 22). Furthermore, when the isthmus was utilized as a frontier again in the second century, with the construction of the Antonine Wall, it is clear that direct Roman occupation and control, manifested in the form of auxiliary forts on the same sites as those occupied in the Flavian period, extended as far as the Tay.

It has been suggested that the Gask system shows two phases of use, primarily on the basis of the morphological difference between the enclosures to the north and south of Kaims Castle (Frere & St Joseph 1983, 136). This is too strong an inference to draw from the presence of a second enclosing ditch around some of the towers, particularly given the minor variations in structural detail apparent between almost all of the sites (see the Note on p 518, and the Appendix). Moreover, the paucity of finds from the several excavated examples suggests only a very short period of use. Thus it seems much more likely that these structural variations reflect simply the activities of different building parties, a principle which is familiar in relation to the construction of the curtain wall and minor structures on both Hadrian's Wall and the Antonine Wall (Breeze & Dobson 1987, 64–9; Hanson & Maxwell 1986, 129–31). Indeed, the historical context proposed would require only a very short life-span for the towers between the halt on the Forth/Clyde isthmus in Agricola's fourth campaign and the resumption of the advance north in his sixth.

The close proximity of the postulated tower and fortlet at Thorny Hill, Midgate, lying only some 13 m apart, has prompted the suggestion that the towers and fortlets may not be contemporary (Woolliscroft 1993, 307–11). However, though long accepted as an element in the system, there are major problems with the identification of the postulated tower there. It is the only enclosure in the Gask system which is markedly oval rather than circular; more importantly, Christison (1901, 31–4) failed to find any post-pits in his complete excavation of the site, but he did discover in the centre the remains of a small stone base bounded by upright kerbs, a feature unparalleled in any other tower and somewhat reminiscent of a prehistoric burial monument. On this evidence the continued identification of the site as a Roman watchtower seems untenable and removes any need to challenge the chronological integrity of the Gask frontier.

Evidence from Shielhill North (St Joseph 1973, 218) and now from Westerton indicates that on their abandonment the towers were deliberately demolished. This seems to have been a common practice in relation to timber-built forts (Hanson 1978, 302–5), and has been attested at other watchtower sites in Scotland (eg Maxwell 1976, 36). The reasons for this action may be debated. It might reflect simply the systematic thoroughness of the Roman army; a desire to prevent any subsequent use of the site by the enemy; the recognition of the re-use value of the massive timbers involved; or a combination of all three. What is clear, however, is that the process of abandonment was both measured and deliberate.

In conclusion, the identification of a demarcated frontier line stretching from the Forth to the Tay has important implications. Though a natural routeway, the line followed is not an obvious topographical frontier and was presumably determined, therefore, by the political geography of the area. This in turn suggests that it may have corresponded to a pre-existing tribal division. The line chosen is ideally situated to control communications across Strathearn between the tribes of Fife and those to the north and west. More specifically it seems to imply a desire to protect the more southerly area from the Caledonians (Frere & St Joseph 1983, 58). This would lend support to the suggestions that the Venicones, assuming that they are correctly identified as the occupants of the Fife peninsula, were in some form of treaty relationship with Rome (Hanson 1987, 120 & 157).

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APPENDIX

Watchtowers on the Gask Frontier

Name Ardunie *NGR* NN 94691876 *Height OD* 65 m
Number of ditches 1 *Ditch dimensions* –
Enclosure diameter 11.9 m *Bank/s* –
Orientation of entrance N *Distance from road* 5–10 m
Tower form – *Tower dimensions* –
Other features –
History – *Present state* Earthwork
References Crawford 1949, 52–3

Name Blackhill Wood *NGR* NN 84521076 *Height OD* 137 m
Number of ditches 2 *Ditch dimensions* –
Enclosure diameter 14 m *Bank/s* –
Orientation of entrance SE *Distance from road* 15 m
Tower form 4-post, square *Tower dimensions* 3.66 m by 3.66 m
Other features Overlain by Severan temporary camp
History – *Present state* Cropmark
References St Joseph 1977, 135–7

Name Gask House *NGR* NN 99041919 *Height OD* 115 m
Number of ditches 1 *Ditch dimensions* 1.8–3.35 m by 0.9 m
Enclosure diameter c 17 m *Bank/s* Internal, square, 2.74 m wide
Orientation of entrance NW *Distance from road* c 10 m
Tower form 4-post, rectangular *Tower dimensions* c 3.05 m by 2.44 m
Other features Charred wood in post-holes; Flavian mortarium rim from interior surface
History – *Present state* Earthwork
References Christison 1901, 26–7; Robertson 1974, 18–21

Name Greenloaning (a.k.a. Woodlea) *NGR* NN 83040716 *Height OD* 122 m
Number of ditches 2 *Ditch dimensions* –
Enclosure diameter – *Bank/s* –
Orientation of entrance NW *Distance from road* –
Tower form – *Tower dimensions* –
Other features –
History – *Present state* Cropmark
References NMR A28895–28902; Frere 1987, 309; see Note on p 518, this paper

Name Huntingtower (a.k.a. North Blackruthven) *NGR* NO 07172465 *Height OD* c 46 m
Number of ditches 1 *Ditch dimensions* –
Enclosure diameter – *Bank/s* –
Orientation of entrance N *Distance from road* c 25 m
Tower form – *Tower dimensions* –
Other features –
History – *Present state* Cropmark
References NMR A41252–21257; Frere 1986, 371

Name Kirkhill *NGR* NN 96761883 *Height OD* 90 m
Number of ditches 1 *Ditch dimensions* 3.65 m by 1.2 m
Enclosure diameter 14 m *Bank/s* External
Orientation of entrance – *Distance from road* c 46 m
Tower form 4-post, square *Tower dimensions* 2.9 m by 2.9 m
Other features –
History – *Present state* Earthwork
References Christison 1901, 28

Name Moss Side *NGR* NN 00781992 *Height OD* 135 m
Number of ditches 1 *Ditch dimensions* –
Enclosure diameter c 15 m *Bank/s* Internal, circular, 4.3 m wide
Orientation of entrance S *Distance from road* 64 m
Tower form 4-post, square *Tower dimensions* 3.35 m by 3.35 m

Other features Construction trenches joined three of the four post-holes
History – *Present state* Cropmark
References Christison 1901, 29–30; NMR PT/5752–4, B05101–5

Name Muir o' Fauld NGR NN 98211897 *Height OD* 110 m
Number of ditches 1 *Ditch dimensions* 3.35 m wide
Enclosure diameter c 16 m *Bank/s* –
Orientation of entrance N *Distance from road* c 15 m
Tower form 4-post, square *Tower dimensions* –
Other features –
History – *Present state* Earthwork
References Christison 1901, 27; Crawford 1949, 53

Name Parkneuk NGR NN 91671846 *Height OD* 56 m
Number of ditches 1 *Ditch dimensions* 3.66 m wide
Enclosure diameter 16 m *Bank/s* Internal, square, 2.74 m wide and external
Orientation of entrance N *Distance from road* 30 m
Tower form 4-post, rectangular *Tower dimensions* 3.35 m by 3.05 m
Other features –
History – *Present state* Earthwork
References Robertson 1974, 21–4

Name Peel NGR NO 06042322 *Height OD* 64 m
Number of ditches 1 *Ditch dimensions* –
Enclosure diameter – *Bank/s* –
Orientation of entrance NNW *Distance from road* –
Tower form – *Tower dimensions* –
Other features –
History – *Present state* Cropmark
References NMR PT/15158–60

Name Raith NGR NN 93191852 *Height OD* 91 m
Number of ditches – *Ditch dimensions* –
Enclosure diameter – *Bank/s* –
Orientation of entrance – *Distance from road* 165m
Tower form 4-post, square *Tower dimensions* 2.74 m by 2.74 m
Other features Unidentified red pottery; oak from large timbers; hazel and willow from smaller branches; large flagstone
History – *Present state* Largely destroyed
References Christison 1901, 28–9

Name Roundlaw NGR NN 95801889 *Height OD* 82 m
Number of ditches 1 *Ditch dimensions* 2.13 m by 1.22 m
Enclosure diameter 14.5 m *Bank/s* –
Orientation of entrance S *Distance from road* 44 m
Tower form 4-post, rectangular *Tower dimensions* c 4.27 m by 3.05 m
Other features Traces of turf on the inner side of the ditch
History – *Present state* Cropmark
References St Joseph 1955, 87; Robertson 1974, 24–7

Name Shielhill North NGR NN 85621220 *Height OD* 193 m
Number of ditches 2 *Ditch dimensions* Inner: 1.68 m by 0.61 m Outer: 1.37 m by 0.46 m

Enclosure diameter – *Bank/s* –
Orientation of entrance SE *Distance from road* c 10 m
Tower form 4-post *Tower dimensions* –
Other features Daub recovered from one post-hole; turf, ash and burnt clay from the inner ditch
History Deliberately demolished *Present state* Cropmark
References St Joseph 1973, 218

Name Shielhill South *NGR* NN 84991149 *Height OD* 155 m
Number of ditches 2 *Ditch dimensions* –
Enclosure diameter 15 m *Bank/s* –
Orientation of entrance SE *Distance from road* c 10m
Tower form 4-post, square *Tower dimensions* 3.5 m by 3.5 m
Other features –
History Deliberately demolished *Present state* Cropmark
References St Joseph 1977, 138; see Note on p. 518, this paper

Name Thorny Hill (a.k.a. Midgate) *NGR* NO 02082044 *Height OD* 147 m
Number of ditches 1 *Ditch dimensions* 3.05 m by 1.5 m
Enclosure diameter c 11–15 m (oval) *Bank/s* –
Orientation of entrance S *Distance from road* 40 m
Tower form – *Tower dimensions* –
Other features Sub-rectangular, kerbed stone setting (2.1 m by 1.2 m) in centre
History – *Present state* Earthwork
References Christison 1901, 31–4

Name Westerton *NGR* NN 87291458 *Height OD* 140 m
Number of ditches 1 *Ditch dimensions* 1.5–2.8 m by 0.6–1.0 m
Enclosure diameter 14 m *Bank/s* –
Orientation of entrance SE *Distance from road* c 10 m
Tower form 4-post, rectangular *Tower dimensions* 3.8 m by 2.5 m
Other features Double posts in front post-holes; shallow slots at front to support stairway/ladder; possible fragment of Flavian mortarium
History Deliberately dismantled *Present state* Cropmark
References St Joseph 1951, 62; Hanson & Friell, this volume

Name Westmuir *NGR* NO 02872078 *Height OD* 145 m
Number of ditches 1 *Ditch dimensions* –
Enclosure diameter – *Bank/s* –
Orientation of entrance SSE *Distance from road* c 40 m
Tower form – *Tower dimensions* –
Other features Slight trace of interior post-holes on one photograph
History – *Present state* Cropmark
References NMR PT/5749–51, A29079–81, A41269–71, B5098–100

Name Witch Knowe *NGR* NN 99761954 *Height OD* 127 m
Number of ditches 1 *Ditch dimensions* 4.27 m by 1.83 m
Enclosure diameter c 13 m *Bank/s* External
Orientation of entrance S *Distance from road* c 80 m
Tower form 4-post, rectangular *Tower dimensions* 3.35 m by 2.74 m
Other features –
History – *Present state* Earthwork
References Christison 1901, 26–7

NOTE

Since this paper was submitted, excavations have taken place at Greenloaning and at Shielhill South. In both cases two phases of construction are suggested by the excavator, but detailed results are not yet available in print.

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