

### III

#### A ROMANO-BRITISH SETTLEMENT AT TOWER KNOWE, WELLHAUGH, NORTHUMBERLAND (1972)

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#### SUMMARY

A rescue excavation was conducted on a small rectilinear shaped settlement of a form well established to the north of the Hadrianic frontier. Two main structural phases were present, the first represented by a palisaded enclosure containing two replacement phases of timber-built houses, the second by a stone walled enclosure on the same plan but containing three stone-built houses. Both phases can be assigned to a Roman context. A small, adjoining field-system was possibly associated with the settlement (NY:700871).

#### INTRODUCTION

The first modern inundation of the upper reaches of North Tynedale began with a State afforestation scheme which, over the years, has resulted in the largest stretch of afforestation in the country. Almost inevitably in such a process archaeological sites have been lost to view beneath the arboreal blanket. More recent proposals for a second inundation, this time in the form of a reservoir, ten kilometres in length, have prompted investigation of some of the remaining earthworks and early settlements in the area even before such a scheme gains final approval. The purpose here is to record excavations on an established Romano-British type of settlement which, being stone-built, needed to be hand-dug and did not lend itself to machine operations, such as might have to be employed on neighbouring earthworks should more hasty action be required.

As on many other occasions, one is greatly indebted to internal and extra mural students of the University of Newcastle upon Tyne for their invaluable co-operation, and to the University Excavation Committee for financial assistance. Mr. Dickinson, the tenant farmer at Shilburnhaugh, and the Ministry of Agriculture and Fisheries, as landowner, gave their willing consent to the excavations.

## THE SITE AND LOCATION (fig. 1)

The settlement lies on the south side of the River North Tyne some 2.5 kilometres above the village of Falstone and less than a kilometre above the proposed line for the main barrage of the reservoir (NY: 700871). The estimated top-water line of the reservoir at 607.5 feet crosses the site. Tower Knowe itself is formed from an outcrop of Fell Sandstone with, in places, a slight cover of drift. Consequently, the area is normally covered by a strong growth of heather or bracken according to the very localized changes in the depth of the underlying rock. There is no tower or pele on the knowe and it is difficult to account for a name which is attributed to it at least as early as the first edition of the O.S. map in 1863.

The enclosure lies well above the formerly damp haugh-lands bordering the river meanders. It is well drained and, despite its comparative elevation, is sheltered from the prevailing winds which are deflected upwards by the steep western bluff. When the bracken is laid a small field-system can be seen on the south side of the site, where the soil-cover is deeper. The small Shil Burn flows beyond the western scarp, fresh-water springs ooze from the northern slope, and the wooded bank of the North Tyne, a river once teeming with salmon and trout, is no more than two hundred and fifty metres distant.

Beyond Falstone the hills begin to close in upon the upper reaches of the river and, despite the uncertainties created by the obscuring forest, early settlement appears to have been more restricted than elsewhere in the valley. Those settlements and forts which are known in the immediate area have all been surveyed and recorded elsewhere.<sup>1</sup> Tower Knowe is the last of the established stone-built Romano-British settlements of rectilinear form in this particular valley since beyond this point, on the steeper riverine slopes, the curvilinear or egg-shaped form of the Cheviot type of settlement prevails.<sup>2</sup> The site has only recently been recorded for the first time in the previous volume of these Transactions, where the plan unfortunately lacks the detail which a liberal cover of heather and bracken inevitably obscured.<sup>3</sup>

Further activity on or in the immediate vicinity of the knowe merits some mention, however briefly, since all traces of this are likely to disappear beneath the proposed reservoir. A hollow way ascends the western scarp from the direction of Shilburnhaugh Farm and an old ford over the North Tyne, and passes hard by the northern side of the settlement. It is possible that at one time this could have been a branch from the main drove-road in North Tynedale which ran along the north side of the river not far from the now disused single track railway. Some two hundred metres to the north-east of the settlement are faint traces of an old steading and several large "fields"

<sup>1</sup> G. Jobey, *A.A.*<sup>4</sup>, XXXVIII (1960), 1-38 and XLIII (1965), 21-63. G. Jobey in *Rural Settlement in Roman Britain* (ed. C. Thomas, 1966), 1-14.

<sup>2</sup> G. Jobey, *A.A.*<sup>4</sup>, XLII (1964), 41-64.

<sup>3</sup> *A.A.*<sup>4</sup>, L (1972), 75.

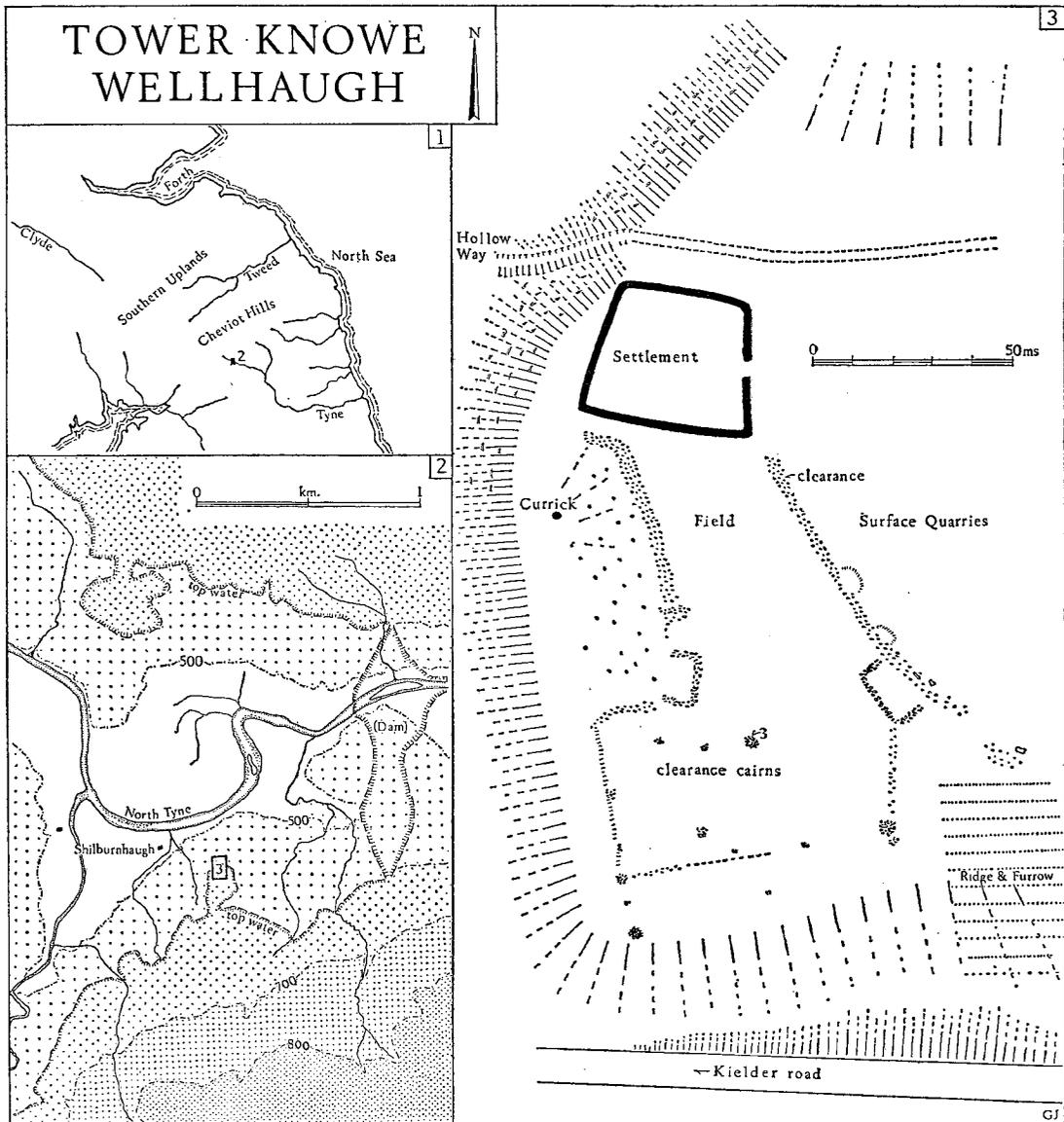


Fig. 1

enclosed by the remains of crudely built walls. Interspersed amongst the fields are the remains of very small stone-built rectangular buildings, possibly lambing pens or temporary shelters. It is just possible that the whole complex could be a "stance" associated with a drove-road. Immediately below the north-west corner of the early settlement, at the foot of the western scarp, there is one of a number of old drift mines in the area, serving as a reminder of the more extensive and, amidst such a sylvan landscape, the almost forgotten local industry of coal-winning.<sup>4</sup> To the east of the site there has also been extensive surface quarrying of the slab-like rock outcrops, which could well have started hereabouts with the stone-built settlement itself and continued intermittently until comparatively recent times.

### THE EXCAVATION

From the outset it was apparent that the site had been extensively robbed for its stone and, more recently, for the erection of temporary shooting butts. In addition, it is almost certain that earlier excavations had been carried out with intent, involving the clearance of existing house-floors and trenching in various directions. This was somewhat unexpected since there had been no previous record of the site by earlier antiquaries, including the most perceptive Henry MacLauchlan. The nearest active investigator of local settlements in the last century, the Rev. Rome Hall, Rector of Birtley in North Tynedale, can hardly have been responsible, if for no other reason than his meticulous recording of the excavations which he accomplished. Whoever was responsible, such intrusions have been omitted from the present plans for the sake of clarity. In some measure, however, they could explain the more than usual lack of occupation material and disturbances which extended below the sub-soil in some places where bed-rock did not prevail.

Two main structural phases were present on the settlement, the earlier of timber and the later of stone. They are described in this order.

#### TIMBER-BUILT PHASE

##### (a) *THE PERIMETER* (figs. 2 and 3; plate VI)

This consisted of a single palisade trench enclosing an area of 0.13 hectares (0.3 acres). It was investigated in cuttings *A*, *B*, *C*, *D* and at the entrance, *E*. Where the trench was best preserved, in cutting *A*, it was from 0.3 to 0.4 metres wide and 0.3 metres deep from the rock surface. Slab-like packing stones remained *in situ* in places on both sides of the trench and there were

<sup>4</sup> *History of Northumberland*, XV (1940), 13.

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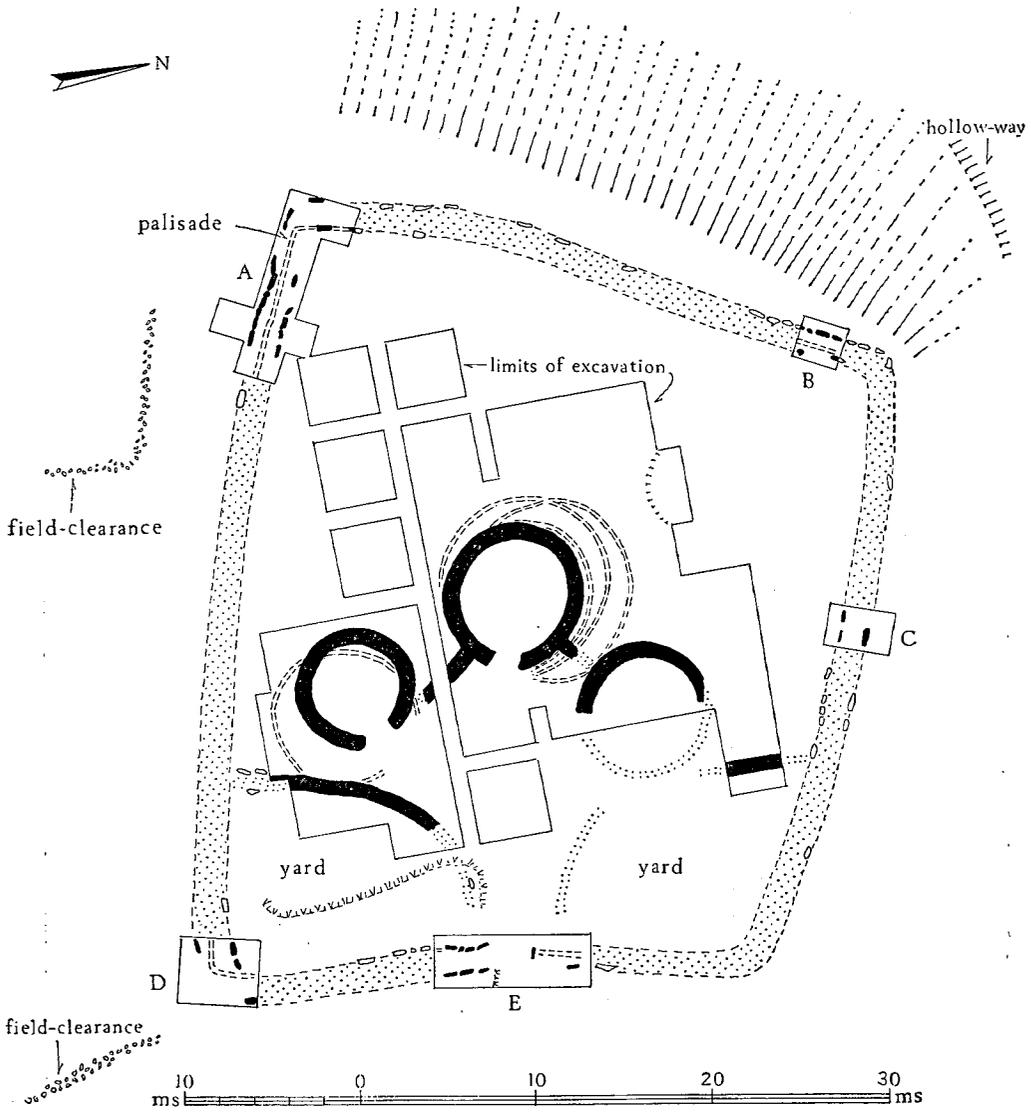


Fig. 2

also sufficient transverse stones to suggest the use of closely set timber uprights of, at most, 0.2 metres in diameter. No interior post-holes were present so that diagonal bracers of any form appeared to be unlikely.

So far as could be ascertained, the rectilinear course pursued by this fence was almost the same as that of the later stone-built wall. On the south side in cuttings *A* and *D* it lay centrally between the two later wall-faces and turned almost at right angles at the south-west and south-east corners. However, for a short distance on the west side, in cutting *A*, it lay beneath two of the large orthostats forming the interior face of the wall, thereby at least dispensing with any notion that the fence and the later wall had together formed part of a unitary structure (fig. 3). The trench could not be found in cutting *C* but here the later wall was itself represented by no more than a rickle of stones and there had been much later disturbance. Similar difficulties were encountered on the south side of the entrance in cutting *E*, where the whole

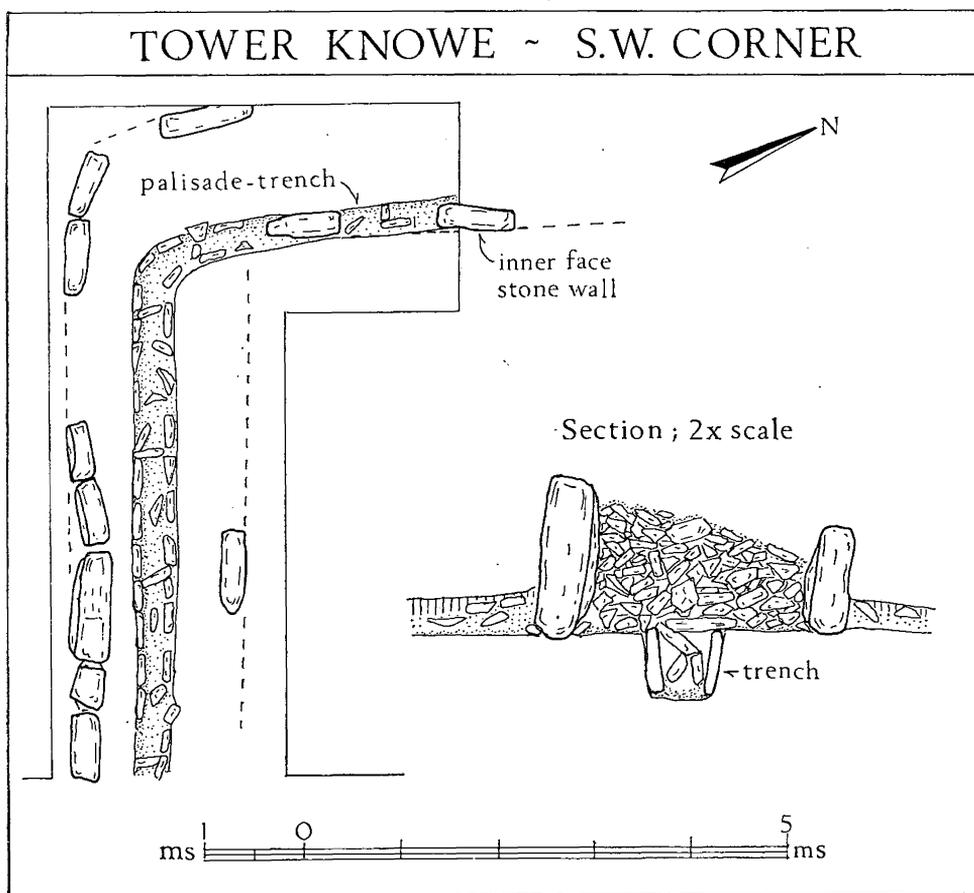


Fig. 3

area had been taken out down to solid bed-rock. However, a shallow groove did run beneath the odd remaining orthostat on the line of the inner face of the later wall and, on the north side of the entrance, a short length of rock-cut trench terminated in a deeper post-hole, presumably marking the gateway.

Where this palisade trench was well preserved it was remarkably free from silting, and no turf-line intervened between it and the rubble core of the wall. Moreover, in some places the packing stones were so disarranged as to suggest that there had been a deliberate withdrawal of the uprights, there being no carbonized wood present to indicate any general conflagration. Such observations, together with the almost identical plans of the enclosures in both phases, served to confirm that the replacement of timber by stone had taken place without any real interval in occupation. No datable material was found in the palisade trench or in undisturbed sections of the later wall. One fragment of iron-slag was recovered from the bottom of the trench beneath the wall-core.

(b) *INTERIOR TIMBER-BUILT HOUSES* (figs. 2, 4 and 5; plates VII and VIII)

Although replacement phases were present in the interior timber buildings, there was no means of relating these directly to the perimeters, so that it cannot be assumed that all are necessarily associated with the earlier palisaded enclosure. However, for convenience, they are best considered together at this stage. All were of ring-groove or trench construction, whereby a solid timber house-wall of closely set posts or split timbers was set into a trench cut into rock or sub-soil. In the case of houses 1, 2 and 3 the stub-ends of the trenches appeared mainly in brash or the light rather leached sub-soil which replaced the rock found over the more southerly parts of the interior. Except for occasional fragments of carbonized wood and less frequent flecks of bone, the fill of all trenches was remarkably clean and in places barely distinguishable from the sub-soil. The houses are described in chronological order commencing with the earliest.

HOUSE 1 (fig. 4)

The circular trench was at best 0.25 metres wide and 0.3 metres deep, although some packing stones protruded slightly above the edges as found. These stones, as in other cases, were much disturbed but occasional liners appeared *in situ* on either side of the trench. The doorway to the house lay in the east, facing towards the main gateway, its terminals probably marked by post-holes 2 and 6. The latter occurred in a natural rock-fissure which had been partly adapted for use as a construction-trench. An average diameter for the house was ten metres, giving an internal floor area of some seventy-eight square metres.

This house, together with the other timber buildings, was indisputably earlier than the stone-built houses. Where the wall-trench intersected that of house 2, on the north side of the doorway, it was evident from the fill and the position of the packing stones that house 1 was the earlier. Similarly, at its point of intersection with house 3 on the western arc, house 1 was again the earlier.

#### HOUSE 2

For much of its circumference the dimensions of this wall-trench differed little from those of house 1, except on the north side of the doorway where the depth of the trench increased to 0.4 metres in the softer sub-soil. The terminal post-holes appeared to be nos. 1 and 7, so providing an east facing doorway just under two metres wide. The average diameter of the circle was 9.5 metres, yielding a floor area slightly smaller than that of house 1 at some seventy-one square metres.

This house was demonstrably earlier than house 3 at their intersection on the western arcs. Two small fragments of Samian ware were recovered from the bottom of the wall-trench, in positions which indicated that this trench had been open when or after Samian ware was reaching the site.

#### HOUSE 3

The course of the wall-trench was again somewhat irregular but, with an average diameter of 7.75 metres, this house was considerably smaller than the preceding houses, having a floor area of just over forty-seven square metres. The doorway, again in the east, was marked by post-holes 4 and 8. There were no datable finds unequivocally associated with its occupation, but the Samian ware from wall-trench 2 provided a general *terminus post quem* and a wall-sherd of Antonine cooking-pot, from a small patch of occupation earth beneath the wall of stone-built house A, could also have been associated.

#### HOUSE 4

In this instance the wall-trench had been cut through rock and rock-brash, and was up to 0.3 metres deep. Even so, it disappeared completely on the eastern arc, where the doorway must also have lain. Its removal in this sector can probably be attributed to a deliberate levelling of the rock-surface by the builders of stone house B. The slab-like rock could have been levered off without much difficulty and may well have been incorporated into the later

# TOWER KNOWE : 1

TIMBER PHASE

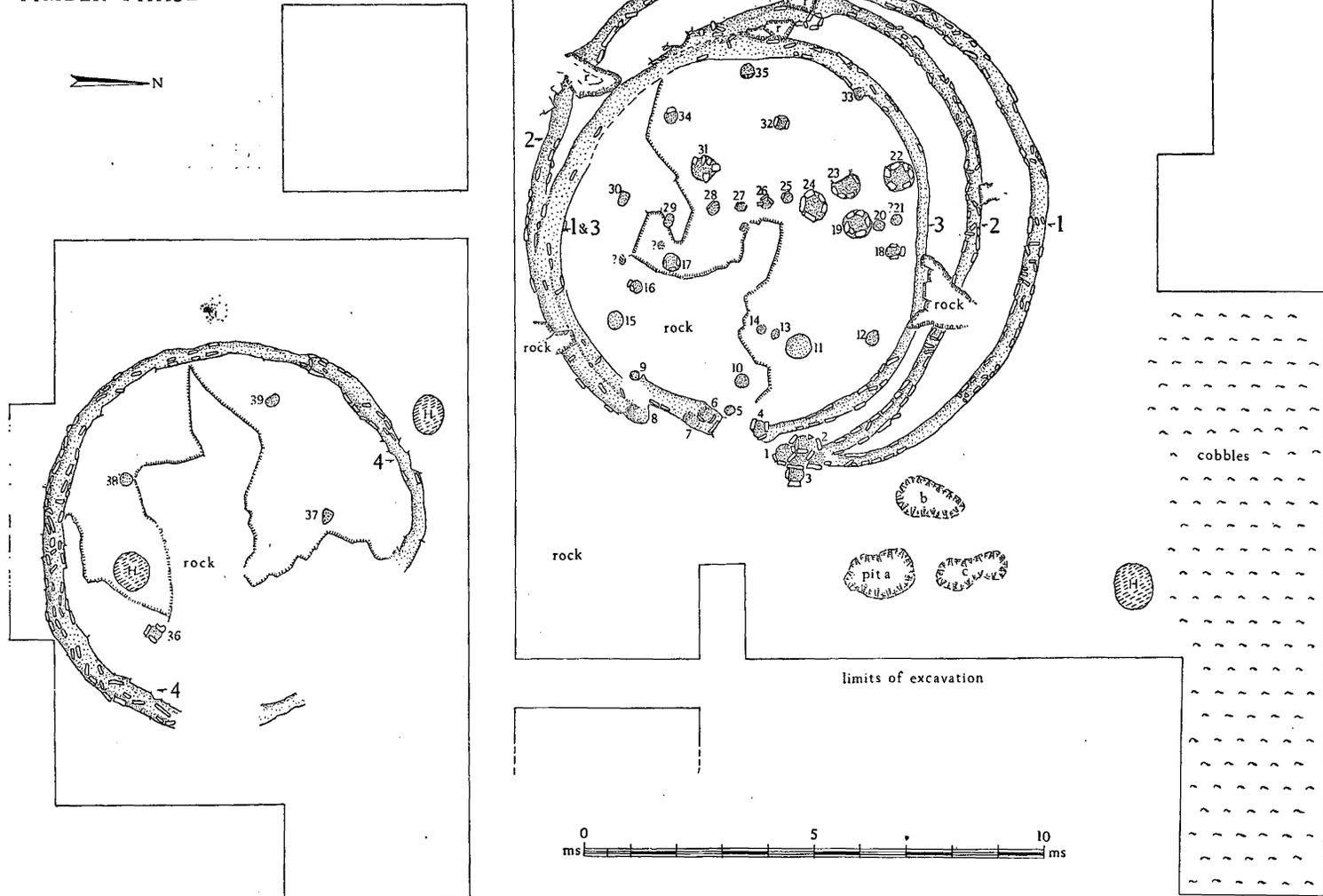


Fig. 4. Timber-built houses

stone houses or perimeter wall. One interior hearth (fig. 4, *H*), consisting of a large cracked and reddened sandstone slab, covered by some carbonized wood, lay partly beneath the wall of house *B* and was most probably associated with house 4. This was the smallest of the timber-built houses, having a diameter of 7.5 metres and a floor area of forty-four square metres.

The house was indisputably earlier than the stone-built house *B* and the stone wall of the southern yard, but it could not be placed in an unequivocal relationship with any one of the other three timber buildings. However, its wall-trench appeared to have been deliberately filled with additional stone when house *B* was constructed, so that one probably followed upon the other with little interval. In the circumstances it would then seem reasonable to associate house 4 with house 3. Taken together, these two smaller timber-built houses would have had a total floor area some thirteen and twenty square metres greater than that of house 1 or house 2 respectively.

Some sherds of native pottery, not closely datable, were recovered from the wall-trench of house 4. Broken rotary querns incorporated into the walls of house *B* and the yard could also have been related to the occupation of the earlier timber building.

#### OTHER FEATURES

For various reasons most of the post-holes shown in fig. 4 have been adjudged to belong to the timber-built phase on the site. Post-holes 36 to 39 presumably represented at least part of a system of internal roof-supports within house 4, and it might be possible to envisage a roughly concentric setting of holes within house 2. Beyond this it is difficult to associate specific post-holes with individual houses either by stratigraphy, which was virtually absent, or by the resolution of patterns on the basis of a good structural fit. For the record, the depths of the various post-holes are listed below, but these can have little bearing in circumstances where there was a variation at floor level between solid rock and comparatively soft sub-soil.

#### *Depths of post-holes in metres v. fig. 4*

1. 0.4	11. 0.2	21. 0.1	31. 0.3
2. 0.4	12. 0.2	22. 0.4	32. 0.2
3. 0.3	13. 0.1	23. 0.5	33. 0.2
4. 0.3	14. 0.1	24. 0.3	34. 0.2
5. 0.2	15. 0.1	25. 0.2	35. 0.2
6. 0.2	16. 0.1	26. 0.1	36. 0.3
7. 0.2	17. 0.2	27. 0.1	37. 0.2
8. 0.3	18. 0.2	28. 0.1	38. 0.1
9. 0.2	19. 0.4	29. 0.1	39. 0.2
10. 0.1	20. 0.2	30. 0.1	



1. Palisade trench, Cutting A



2. Wall face, Cutting A



1. Stone house A, timber houses 1 & 2



2. Timber houses 1, 2 & 3 (stonehouse A removed)

Pits *a* and *b* were earlier than the stone-built house *C* and could conceivably, though not certainly, have been associated with the timber phase. They contained no more than flecks of charcoal and bone amongst an otherwise fairly clean earth fill. Pit *c* contained a similar fill but, in this case, the association of the pit with a specific phase was even less certain since it was not overlaid by the wall of stone-built house *C* and the floor of this house had suffered from much recent disturbance.

Two additional hearths (fig. 4, *H*) were respectively earlier than the stone buildings *B* and *C* and have been presumed, therefore, to belong to the timber phase although they could only have been exterior features. Both were simple, shallow pits, filled with dirty earth containing small fragments of carbonized wood.

A long stretch of cobbles, consisting mainly of small broken stones rather than water-worn material, ran along the north side of the excavated area. It extended beneath the remains of the stone wall of the later north yard and also impinged upon the line of the stone-built house *C*. A general context in the timber phase would seem to be most likely for this feature, although its full extent was not traced and its precise function not determined. The only finds from the surface of the cobbles were a spindle-whorl and a fragment of iron-slag, both essentially unstratified. Sufficient of the surface of this cobbled area was removed to ensure that no timber-built house had ever existed on this part of the site. The maximum number of timber-built houses co-existing on the site could, therefore, only have been two on the evidence from the excavated area.

#### STONE-BUILT PHASE

##### (a) *THE PERIMETER* (figs. 2 and 3; plate VI)

As already indicated, the enclosing palisade was replaced on almost precisely the same lines and without appreciable interval by a solid stone wall. The wall, though much robbed and in places reduced to a thin spread of rubble, had originally been faced on both sides by large orthostats. These slabs of undressed natural rock, measuring up to 1.25 by 1.0 metre on the faces and 0.3 metres thick, had been trigged into position by small chocking stones. For stability reliance had been placed upon the weight of the stones themselves since they were not supported in grooves nor had the palisade trench been re-used for this purpose. Rubble composed of land-stones and scree material, the latter presumably from the western scarp, formed the core of the wall with little or no earth admixture. Where best preserved, in cutting *A*, the wall was from 1.5 to 2.0 metres in overall width and, with this form of construction, is most unlikely to have exceeded two metres in height.

Little of the wall remained at the entrance where there had been a great

deal of robbing. Either in the previous timber phase or at this stage slabs of rock had been cut or levered off on the south side in order to give a level approach. Inequalities in the remaining surface were made good with packed stone. As is normally the case with such non-defensive settlements, the gate structure itself must have been of the simplest order. In this instance there was no provision by way of post-holes for a timber framework and all that remained was a single pivot-hole cut into rock on the north side. On the other hand it is always possible that some form of timber framework had been incorporated into the stone wall itself.

The only datable finds of significance from the wall-cuttings were confined to a few sherds of second century cooking pot from beneath what appeared to be initial tumble from the wall in cutting *A*. A glass counter, probably Roman in general context, came from the rock surface in the gateway.

(b) *THE STONE-BUILT HOUSES* (figs. 2 and 5; plates VII and VIII)

These were three in number. Two were completely excavated but only part of the third, the least well preserved, was disengaged. Nowhere were there more than two courses of facing stones remaining and even this only occasionally. All the house interiors had been previously investigated in what can only be described as a merciless manner. In such circumstances, and mindful of the likely fate of the settlement, all walls were eventually removed in order to pursue the earlier timber-built structures.

HOUSE A

This house was located a little to the south of centre of the enclosure. Part of its western arc had been robbed out to construct a small shooting-butt, testified by spent cartridges, and there had also been extensive stone-robbing in the region of the east facing doorway. The latter was probably marked by post-holes 5 and 9 and by the remains of a slightly raised stone threshold such as is known on other stone-built Romano-British settlements in the area.<sup>5</sup> The threshold consisted of three carefully selected stone slabs, placed end to end in the natural fissure which had previously served as part of the wall-trench for two of the earlier timber buildings. At this stage the fissure had been equally carefully levelled up with stone. A pivot-stone from the disturbed interior of the house may well have come from the same doorway, since these too are not uncommon on other stone-built round houses in the locality.<sup>6</sup> Approximately half of the floor of the interior had been on bed-rock and the rest levelled up with paving which unfortunately had been subsequently displaced in earlier excavations. The interior diameter of the

<sup>5</sup> *A.A.*<sup>4</sup>, XXXVIII (1960), 10-13.

<sup>6</sup> *Ibid.*

# TOWER KNOWE : 2

STONE PHASE

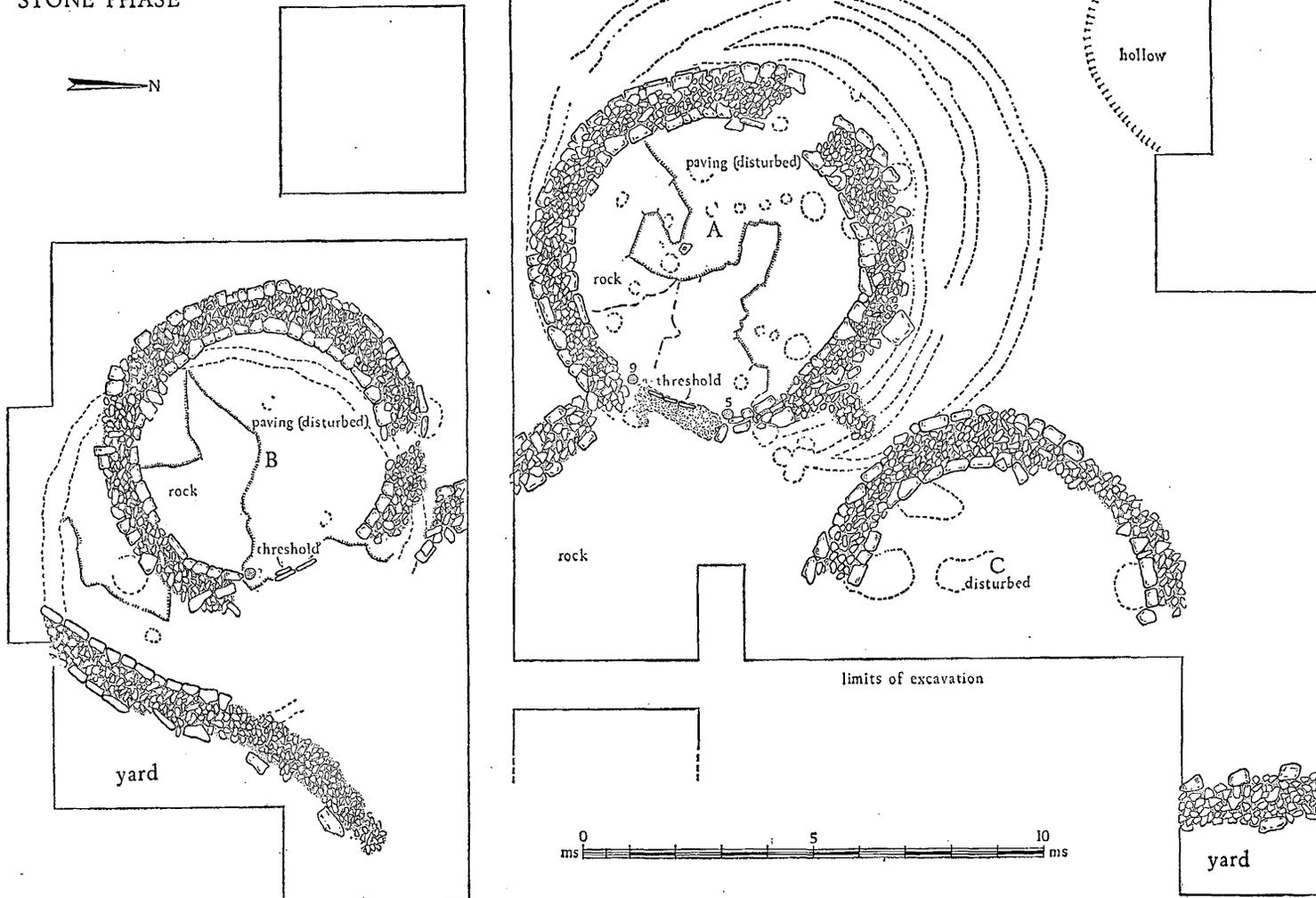


Fig. 5. Stone-built houses

house at just over 6 metres was within the normal range for local stone-built Romano-British houses and gives a floor area of some twenty-eight square metres.

There were no datable finds from the floor level of this house but a fragment of Antonine cooking pot from beneath the core of the wall gave a general *terminus post quem* for its construction.

#### HOUSE B

The construction of this house was similar to that of house *A*, including the remains of a raised stone threshold. As often appears to be the case, far greater attention had been paid to the internal than to the external wall-facing. The floor was again partly of bed-rock and partly of paving, the latter greatly disturbed. Its diameter was 5 metres, yielding an internal area approaching twenty square metres. As already noted, this stone-built house appeared to have replaced its timber precursor with little interval in time.

There were no strictly datable finds from the interior, but fragments of the same rotary quern were recovered from the rubble core of the house-wall and from the enclosure wall of the nearby northern yard. This at least enhances the possibility of the contemporary construction of both even though it may not prove it conclusively. The quern was of a type which would not be out of place in a Roman native context hereabouts.

#### HOUSE C

This was the least well preserved of the stone-built houses and the old floor level had been almost completely turned over by previous investigators. Therefore, the area excavated was restricted to that which seemed to be sufficient to demonstrate that there had been no timber-built predecessor. The floor area was estimated as having been in the region of thirty square metres. From surface observation only it appeared that the enclosure wall of the north yard had probably butted on to the house-wall at some stage. The remains were so robbed and tenuous at this point that excavation would only doubtfully have resolved the situation.

Although all three stone-built houses need not have been of simultaneous construction, the remains of two short connecting walls between houses *A* and *B* and houses *A* and *C* at least demanded contemporary occupation at some time. Whether or not a similar link wall had ever existed between house *B* and the enclosure wall of the north yard is problematical, since here an earlier trench had been driven through and only a mass of rubble remained. However, the obvious attempts made elsewhere to restrict entry to the rear part of the site suggest that some provision must have been made at this point, even if this was no more than movable hurdling.

*THE YARDS* (figs. 2 and 5)

The wall of the north yard was well preserved in its southern sector but at best consisted of no more than a thin spread of rubble after turning eastwards towards the gateway. It must have been in this section that an entrance to the yard had existed, since there appeared to be no provision for such through the east wall of the main enclosure, where subsidiary entrances leading into the yards have sometimes been found on similar settlements in the neighbourhood.<sup>7</sup> Some recent quarrying of the rock surface had taken place within the yard itself (fig. 2) and this could well have removed the evidence for such minor arrangements. No paving or cobbles, such as have been found elsewhere, would have been necessary in the interior of the yard which, in this instance, consisted of solid bed-rock. Both yards appeared to have been roughly of the same size, each enclosing some one hundred and twenty square metres. This area is somewhat less than on some sites of this order but is comparable with others.

At some stage reconstruction had been carried out on a short section of the wall of the north yard, when large facing blocks had been laid over a thin spread of rubble, but the occasion must remain unknown. The fragments of rotary quern, already mentioned, were retrieved from the original wall-core and not from the reconstructed section.

*THE REAR PORTION OF THE SITE* (fig. 2)

The point has already been made elsewhere that a number of these rectilinear settlements have a comparatively large area, apparently unoccupied, behind the range of stone-built houses. When on other occasions round houses are present in this part of the settlement they would appear to be secondary structures.<sup>8</sup> In the case of Tower Knowe this area was proportionately large and accounted for almost half of the total enclosed area. It would also seem at Tower Knowe and, indeed, elsewhere, that there had been a firm intention to control access to this part of the site. Hitherto little exploration has been made in such areas and unfortunately, in this instance, although approximately one hundred and fifty square metres were uncovered, there was little positive indication as to the use to which it had been put. Part of a slightly dished hollow, no more than 0.3 metres deep and containing some stone rubble, yielded no information as to its context or function. Nor were any post-holes for subsidiary timber-built structures uncovered. Perhaps the most significant feature of the whole area was the amount of fairly clean earth which overlay the rock-brash, in places up to 0.4 metres deep. This no doubt accounted for the fescue grass hereabouts in place of the mixed heather and turf elsewhere

<sup>7</sup> *A.A.*, XXXVIII (1960), 4-8.

<sup>8</sup> *Ibid.*, e.g. fig. 3.

on the site. It is always possible that some minor horticultural activity had been pursued in this area of the settlement; but on this point the soil samples were not revealing.

#### *FIELD-SYSTEM* (fig. 1)

In a very slight hollow to the south of the settlement a small field-system was defined by two linear banks of land-stones, presumably cleared from the intervening area, and a number of small field-clearance cairns. In addition, two small rectangular shaped enclosures of uncertain context had been built against or from the material of the linear clearance. As this proposed field-system is not likely to be inundated by flood-water, only one field-clearance cairn, no. 3, was excavated in order to confirm the non-sepulchral nature of the remains. This mound consisted of clearance-stones piled up against a partly earthfast boulder. No plough-marks were visible on the sub-soil in the immediate area of the cairn but, as suspected from surface observation, the soil-cover was deeper on the area of the field than elsewhere in the immediate neighbourhood. From this small investigation it was not possible to establish the true relationship between the field and the settlement, a problem which will require further attention, together with that of cairnfields generally.<sup>9</sup>

On the south side of the Kielder road there are other small areas of cultivation on the first shelf in the north sloping hill-side. These are again marked by small clearance-cairns and areas of grass rather than the generally prevailing heather. The faint traces of rig-and-furrow immediately to the south-east of the settlement would, on the other hand, appear to be much later in date although smaller "rigs" have recently been found in a pre-Roman context in the Tyne valley.<sup>10</sup>

### SMALL FINDS

#### POTTERY

##### (a) Native Pottery (fig. 6)

Only thirty-five sherds were found, most of them being very small wall-fragments. There is little or no difference in the fabric of individual sherds. All have buff to red exterior and interior surfaces and a dark grey core. The grits are comparatively small and do not break the surfaces frequently. Whilst

<sup>9</sup> A detailed survey of cairnfields in the county is in progress.

<sup>10</sup> I am indebted to Mr. J. P. Gillam for allowing me to inspect plough-marks and what

appear to be narrow linear undulations or "rigs" of plough-soil beneath the internal buildings of the fort at Rudchester.

the few rim-forms could be matched in both Roman and pre-Roman contexts in the Tyne-Forth Province, the fabric is better than that of the pottery generally found on early palisaded settlements or hill-forts and has its closest parallels on local Romano-British settlements. Because of the smallness of the sherds no diameters can be estimated, but large storage jars would not appear to be present.

*Fig. 6, no. 1.* Rim-sherd from beneath the packing stones in the construction-trench of house 2.

*Fig. 6, no. 2.* Rim-sherd from the upper stone rubble between house *A* and *B*, probably thrown out by previous excavators from one or other of these houses.

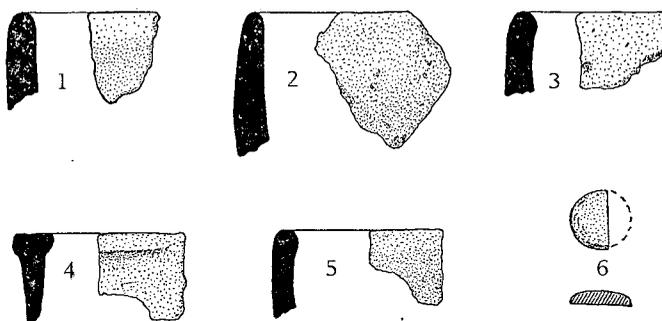


Fig. 6. Native pottery (1:2)

*Fig. 6, no. 3.* Rim-sherd from beneath the stone wall of house *B*.

*Fig. 6, no. 4.* Rim-sherd, poorly formed and with varying section, from high in the construction-trench of house 1.

*Fig. 6, no. 5.* Rim-sherd from beneath stone wall of house *B*.

In addition to these five rim-sherds, wall-sherds were found as follows: 3 from the bottom of the wall-trench of house 3; 14 from beneath the wall of house *A*; 4 from beneath the wall of house *B*; 4 from within the core and beneath the wall of the north yard; 5 from stone tumble between houses *A*, *B*, and *C*.

The lack of any pottery from the floors of the stone-built houses must on this occasion be attributed to the activities of the previous investigators.

#### (b) Roman Pottery

(1) Two sherds of undecorated Samian ware, smaller than thumb-nail size and with only part of the glaze remaining, were recovered from the bottom of the wall trench of house 2 at its deepest point, where it approached the doorway on the north side. It is probably Central Gaulish and second century in date. Even allowing for the possibility of movement by natural agencies it would appear that this trench was open when this pottery reached the site.

(2) One wall-sherd of cooking-pot in dense black, slightly gritty fabric, probably Hadrianic-Antonine in date, was sealed beneath the wall of house *A*, at a point where there had been no subsequent robbing and no apparent reconstruction.

(3) Four small wall-sherds of a jar in grey fabric, much abraded but one sherd showing two grooves, were found beneath the stone tumble lying within the enclosure in cutting *A*. Possibly *Gillam type 105*, A.D. 80-120.

## STONE (fig. 7)

### (a) Rotary Quernstones

None of the fragmentary top-stones are standing very high; although some have been well worn, as can be seen from the position of the handle-sockets. Even though the rotary quernstone reached the area before the Roman period there is nothing in this group which would deny a general Roman context. The stone from which the querns have been made is of four varieties; local Fell sandstone, cementstone, a coarse gritted sandstone and a Cheviot lava agglomerate. All could have been obtained locally. The maximum possible number of different top and bottom stones represented by the fragments is eighteen, six of these being top-stones. All of the top-stones are broken but at least four of the bottom stones are still usable. It is always possible that working top stones were removed from the site by departing inhabitants, as is the case with some migratory peoples today, since it is these which require the most attention in manufacture.

*Fig. 7, no. 1.* Broken stone of coarse grained sandstone with just the very tip of the socket-hole remaining. From stone-tumble within house *A* and possibly originally incorporated in the wall-structure.

*Fig. 7, no. 2.* One quarter of a stone of local sandstone, incorporated into the core of the enclosure wall of the north yard.

*Fig. 7, no. 3.* Half of a flat but well worn stone of coarse grained sandstone which had been used until the existing handle-socket could no longer function. From the stone tumble outside of house *B* and possibly originally built into the wall itself.

*Fig. 7, no. 4.* A partly broken base-stone of Cheviot agglomerate with part of an iron spindle still in position. Found amongst the tumble outside the wall of house *A*.

*Fig. 7, no. 5.* A complete base-stone of Fell sandstone, found on top of the rubble between houses *A* and *B* and possibly thrown out from one of the houses by previous investigators.

*Fig. 7, no. 6.* One of two fragments from what appears to be a base-stone, rather than a top stone, of local sandstone. It is interesting that the top stone must have been of smaller diameter, as with a pot-quern. Presumably the egress of the ground material would have been hindered by the rim formed entirely by wear.

*Not illustrated.* (i) Part of a base-stone from the tumble within the line of the main enclosure-wall, cutting *A*, and possibly originally from the wall itself.



1. Stone houses B and A



2. Inner face stone house B and timber house 4



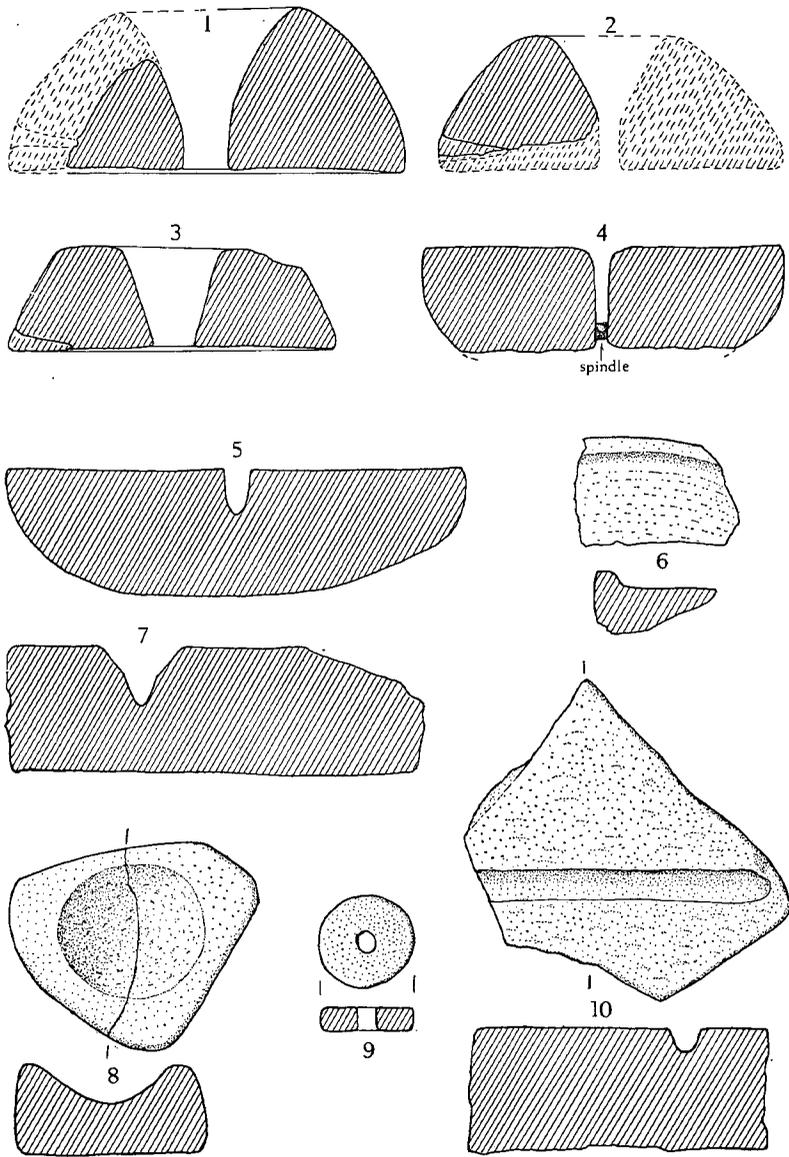


Fig. 7. Querns 1-7 (1:6); other objects (1:3)

(ii) Many fragments from a top stone in Cheviot agglomerate found in the core of the wall of house *B* and the enclosure-wall of the north yard. There are conjoining pieces from different provenances in both walls.

(iii) A further eight fragments, three from different top-stones and five from an uncertain number of different bottom stones, came from stone tumble on various parts of the site. Some of these probably came from the walls of the houses *A*, *B* and *C* and consequently could have been associated with the earlier timber-built phase.

#### (b) Pivot and "Cup-marked" Stones

*Fig. 7, no. 7.* A pivot-stone in local sandstone, bearing rotary striations within the pivot-hole. Found on the floor of house *A* and possibly displaced from the doorway.

*Not illustrated.* Two small slabs of local stone, approximately of the same size as no. 7 above, each bearing a peck-marked cup, some 70 mm in diameter and 30 mm deep, on one face. One was recovered from tumble on the west side of house *B* and the other from a disturbed area within house *A*. The cup-marks are not worn or weathered so that it is unlikely that these stones had been prised off larger inscribed slabs or that they have any ritual significance whatsoever. They could equally as well have served as bases for timber uprights for partitions or the like within the respective houses.

*Fig. 7, no. 8.* A small water-worn stone such as could be conveniently held in the hand. The cup has been pecked out but is now smooth with abrasion, as if it had been used as a small mortar or palette.

#### Spindle-whorl

*Fig. 7, no. 9.* This stone spindle-whorl was the only one recovered from the settlement. It was embedded in the surface of the cobbles to the north of house *I*.

#### Bar-Mould

*Fig. 7, no. 10.* A broken slab of Fell sandstone bearing part of a bar-mould, presumably for moulding a copper based alloy. Such moulds range widely in dated association but some are clearly not out of place in a Roman context.<sup>11</sup>

#### Pounders and Whetstones

*Not illustrated.* (i) Six egg-shaped hand-pounders of local water-worn river-stones bearing heavy percussion marks at both ends. Two came from the wall of house *B*, two from the disturbed floor-level of house *A* and two from the tumble of house *C*.

(ii) Five rectangular shaped stones used as whetstones. One had been incorporated into the core of the wall of house *B*, the rest were virtually unstratified.

<sup>11</sup> v. Hartburn, this volume.

### Cooking Stones

Various fragments of reddened and cracked cooking stones or pot-boilers came from the core of the wall of house *B* and from the area of the three hearths shown in fig. 3.

### Sling-stones

Six small rounded pebbles of local stone and quartz, possibly used as sling-stones, were found on the disturbed floor of house *A* and beneath the wall of house *B*.

### GLASS

*Fig. 6, no. 6.* A broken glass counter of the same opaque white glass used for pendants or bangles which are one of the most consistent finds on native settlements of the Roman period in the area. Found on the rock surface in the entrance to the main enclosure. Similar ? gaming-pieces in a variety of materials, including glass, have been found, for example, at Traprain Law,<sup>12</sup> as well as elsewhere.

### IRON-SLAG

Four small fragments of iron-slag, all of which appear to be from smithing rather than smelting, were found as follows; two from the surface of the cobbles to the north of house *I*, one from the bottom of the enclosure palisade-trench in cutting *A*, and one from the core of the wall of house *A*.

One large fragment, again from smithing and weighing approximately 0.5 kg, had been incorporated into the core of the wall of the north yard. The curvature on the base of the fragment suggests that it is from the base of a hearth.

Although there was no evidence of smelting on the site, it is not difficult to guess the source of the ore. A short distance to the north, on the far side of the river, smelting slag can be picked up on Sandboard Knowe and so by the Belling towards Falstone. At a greater but not excessive distance are the better known sources at the Pitland Hills, the Cinder Kiln Hills, and further afield in Redesdale.<sup>13</sup>

### COAL

Twelve pieces of partly burnt and unburnt coal were recovered from various parts of the site. Stratified fragments came from beneath the wall of house *B*, from the construction trench of house *3* running beneath the stone wall of house *A*, and from the rubble core of the wall of the north yard. In addition there were two fragments from the southernmost of the three hearths. Even without a spore analysis, it seems reasonable to assume an immediately local source. The presence of coal, other than drift material, is now well enough attested on similar sites in the area.<sup>14</sup>

<sup>12</sup> e.g. A. O. Curle, *P.S.A.S.*, LIV (1919-20), 83.

<sup>13</sup> I am grateful to Dr. R. Tylecote for examining the slag. v. also I. A. Richmond,

Romans in Redesdale, *History of Northumberland*, XV (1940), 80.

<sup>14</sup> *Rural Settlement in Roman Britain*, 9.

## DISCUSSION AND CONCLUSIONS

The initial phase on this non-defensive site was entirely timber-built and consisted of one large round house lying within a rectangular shaped enclosure formed by a single palisade. This house was eventually replaced by another of almost similar size which, in turn, was superseded by two smaller timber-built houses. From the available evidence the latter were unlikely to have been constructed before the second century A.D. Although corresponding replacements of the timber palisade were not evident, its support-trench had been cut into rock for most of the perimeter and refurbishing could have taken place from time to time without leaving overt traces. At some stage which could not be precisely defined in relationship to the internal timber buildings, the palisade was replaced on almost exactly the same lines by a stone enclosure wall, with little or no interval between the dismantling of one and the erection of the other. The occasion for this change is probably best seen when stone also replaced timber as the material for the internal structures, not before the mid-second century A.D. These consisted of three stone-built houses, on the same location as the earlier timber-built houses, together with two enclosed yards, one on either side of the east facing entrance. Such a plan in stone is typical of many other rectilinear settlements of established Romano-British context in the area.<sup>15</sup>

As to the date of the foundation of the first timber-built homestead, the artefacts are of little help except, perhaps, in a negative sense. Any estimate depends upon the vexed question of whether the structural picture as a whole represents continuous or intermittent occupation of the site. This is a problem already posed in more critical form on the settlement at Hartburn, Northumberland, as recorded in this volume of the Transactions. It will be evident that any resolution of such structural patterns in terms of intermittent occupation could also involve more far reaching economic and demographic implications, yet to be solved on northern native settlements. However, on the balance of evidence at Tower Knowe, continuous occupation would seem to have been the case. As we have seen, stone followed immediately upon timber in both the perimeter and the final internal arrangements. And there is no reason to suspect that the same does not apply to the two replacement phases of timber-built houses, although in the earlier of these the replacement of the first house would have involved a temporary loss of permanent accommodation whilst reconstruction was in progress. On this basis, with a time-allowance being made for timbers to decay to such an extent that complete replacement was required, there would seem to be no reason to place the initial foundation back beyond the first century A.D.

As to the question of how long the latest stone-built phase could have lasted there can be no immediate solution. The few sherds of Roman pottery do not

<sup>15</sup> *Rural Settlement in Roman Britain*, 6-9 and refs.

extend in date beyond the second century A.D. But the sample is too small for firm conclusions and, in this instance, other material could well have been removed from the house-interiors by the earlier excavators. Moreover, stone-built houses by their very nature are seldom as sensitive indicators of the passage of time as timber ones.

The economy of this small Romano-British settlement, so far as could be gleaned, was similar to that of others in the Border country. Agriculture is attested by the rotary querns and perhaps the small field-system, although the latter at the moment is only doubtfully associated. Despite the almost complete absence of skeletal remains in the acid conditions, stock-rearing can probably be implied by the usual presence of the two enclosed farmyards. Some smithing and presumably smelting of the local iron-ores was already practised in the timber-built phases and some local outcrop coal was being used. In addition, there is evidence for the casting of copper-alloy bars.

The wider demographic problems of the period of the so-called *pax Romana* in the intra-mural zone are at present still under consideration. So far as this particular settlement is concerned, on the assumption that all houses were used as dwellings the number occupied over time will have increased from one to three within a total site-area which did not change. On the other hand, in terms of covered floor-space there would seem to have been little significant change in the total area available at any stage. In the sequence as determined this would have been 78 square metres (house 1), 71 square metres (house 2), 91 square metres (houses 3 and 4) and 78 square metres (houses A, B and C). The only minor increase occurred at the time of the substitution of the two smaller timber-built houses for the preceding single larger house, presumably sometime in the second century A.D., and this increase in floor-area was not maintained in the stone phase. Various methods of estimating the size of primitive social units have been suggested, some based upon ethnographic samples. Naroll's estimate envisages the population as being of the order of one tenth of the covered floor-space.<sup>16</sup> For the four internal building phases proposed at Tower Knowe, commencing with the earliest, this would give figures of 8, 7, 9 and 8; sizes which would seem to be too low and would allow no more than 2 to 3 people for each house in the stone-built phase. Other estimates which allow 4 to 4.5 square metres per person,<sup>17</sup> would yield 17 to 19, 16 to 18, 20 to 23, and 17 to 19. Such calculations are based upon a common space allocation to each individual. On the other hand, if the houses at Tower Knowe are taken to house family units and the Cook and Heizer formula<sup>18</sup> employed, whereby a family of 6 is allotted an area of twelve square metres with each extra individual involving an additional ten square metres, then the approximate figure would be 13, 12, 19 and 23. At least this has the value of giving some cognizance to the increasing number of structures

<sup>16</sup> R. Naroll, *American Antiquity*, 27 (4), 587-9.

<sup>17</sup> e.g. R. J. C. Atkinson in *Field-Survey in Archaeology* (ed. E. Fowler, 1972), 64.

S. Piggott, *Ancient Europe* (1965), 57-8.

<sup>18</sup> e.g. S. F. Cook in *Settlement Archaeology* (ed. K. C. Chang, 1968), 79-116.

in the two later internal phases whilst still recognizing the large areas covered by the first two houses.<sup>19</sup>

For some time it has been assumed, mainly from field-survey, that at a stage in the Roman period the internal buildings in some upland settlements of the Tyne-Forth Province changed from timber to stone constructions.<sup>20</sup> Such a phenomenon, however, has not been previously established for those more southerly sites of rectilinear form lying in advance of the Hadrianic frontier, although the possibility was anticipated. Earlier excavations of these stone-built settlements like Tower Knowe were confined in extent, and primarily directed towards the stone-buildings and the recovery of material which would give a general context for a large number of sites of similar form. Examination of the excavated areas will show that timber precursors of the stone houses could well have been missed. Indeed one might now reconsider the possible import of some recorded features such as the rock crevices acting as drains at Gunnar Peake<sup>21</sup> or even the internal arcs of double lines of stones on edge within houses at Carry House.<sup>22</sup> At Bridge House settlement, circular grooves within the inner face of two stone-built houses were associated by the present writer with the stone buildings,<sup>23</sup> by structural analogy with a house at the Milking Gap settlement.<sup>24</sup> It is just conceivable that these could have been earlier timber-buildings, but here they would have been *exactly* on the same location as the stone buildings. The validity and frequency with which this might occur is clearly a matter for further investigation.

In many respects, the most important aspect of Tower Knowe settlement must be the primary palisaded enclosure itself, here in a Roman or near Roman context. This is a further timely reminder that a palisade-trench represents no more than a form of construction, which may have to be anticipated in many different contexts both early and late. Whilst there may have been a *floruit* of such structures in various forms in an immediate pre-hillfort phase,<sup>25</sup> there are at least isolated examples in the Border area from as early as the beginning of the first millennium to the post-Roman period.<sup>26</sup> How consistent a feature the entirely timber-built site may be as an immediate precursor to the stone-built Romano-British settlements of rectilinear form will need to be tested on other sites. A good starting point would be the Romano-British settlement at Bridge House in the same valley as Tower Knowe. Here a short

<sup>19</sup> It is recognized that in this instance, with the paucity of information and different conditions, these can be no more than exercises.

<sup>20</sup> G. Jobey in *Rural Settlement in Roman Britain*, 4 and refs.

C. Burgess, *Trans. A. & A. Soc. Durham and Northumberland*, II (1970), 19-20.

<sup>21</sup> G. Rome-Hall, *Arch. Ael.*<sup>2</sup>, X (1885), 27.

<sup>22</sup> G. Rome-Hall, *Archaeologia*, XLV, 355-374. Some such trenches here and elsewhere may serve for internal house-partitions but unless they have been pursued beyond the inner faces of the stone walls of houses the context and function may remain uncertain.

<sup>23</sup> *Arch. Ael.*<sup>4</sup>, XXXVIII (1960), 10-11.

<sup>24</sup> H. E. Kilbride-Jones, *Arch. Ael.*<sup>4</sup>, XV (1938), 319-320.

<sup>25</sup> A. Ritchie in *Scottish Archaeological Forum* (Glasgow, 1970), 53-54.

<sup>26</sup> e.g. I am indebted to Mr. L. Masters for advance information of a single C<sup>14</sup> reading of the late second/early first millennium for Gledenholm settlement, Dumfriesshire.

G. Jobey, *Arch. Ael.*<sup>4</sup>, XLIX (1971), 91.

R.C.A.M., *Peeblesshire*, I (1967), 36.

stretch of palisade trench was found beneath the south wall of the enclosure, but not in other sections, in limited excavations carried out in 1958.<sup>27</sup> This was not recorded in the original summary of rectilinear stone-built Romano-British settlements in these Transactions, simply because of uncertainty as to its precise function and context; and, in odd cases, Romano-British settlements are known to overlie much earlier palisaded enclosures where there can be no continuity of site-occupation.<sup>28</sup> The time seems to be appropriate to make good this particular sin of omission.

<sup>27</sup> *op. cit.* (23), fig. 8, area 3.

<sup>28</sup> G. Jobey, *Arch. Ael.*<sup>4</sup>, XLIV (1966), 20-21.

