TYNEMOUTH PRIORY AND CASTLE—EXCAVATION IN THE OUTER COURT, 1980

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SUMMARY

Excavations took place in 1980 at the east end of the Priory headland, on the site of part of the monastic Barn Yard. This report describes the remains of a major aisled barn of earth-fast post construction, and identifies the barn with the documented monastic Wheat Barn. Earlier occupation of the site of the barn, demonstrated by the remains of two early medieval (one perhaps pre-Conquest in date) timber buildings, is also described, and a brief account is given of the post-Dissolution use of the area by Villiers' house of c. 1672 and coastal artillery control and coastguard buildings of the present century.

I. INTRODUCTION (fig. 1)

THE EXCAVATION described in this report was carried out by the Inspectorate of Ancient Monuments of the Department of the Environment over a period of seven weeks in May and September, 1980, in advance of the construction of a regional HQ for HM Coastguard. Tynemouth Priory occupies a high promontory above the mouth of the Tyne, strongly protected on three sides by steep cliffs, and on the fourth, western, side by fortifications of fourteenth and sixteenth century date. The church and its conventual buildings occupied the central and southern, and offices and agricultural buildings the western and northern, areas of the headland.

The area excavated in 1980 lies north-east of the presbytery of the church, within part of the Outer Court designated as Barn Yard on an Elizabethan plan (NCH VIII pl. XII). It was known before excavation that this area included part of the sites of a major domestic barn described in post-Dissolution surveys (Knowles 1910 p. 43) as the Great or Wheat Barn, and of a large house built in c. 1672 by Col. Edward Villiers, commanding officer of the Royal garrison of the Castle (NCH VIII p. 201). Almost half of the Wheat Barn (Building C), and the south facade and garden areas of the Villiers' house, were available for excavation in 1980.

The 1980 excavation was the second of recent years within the Outer Court of the Priory, the first being the more extensive work of Mr. George Jobey in 1963–4 (Jobey 1967) north of the church, where part of a building clearly to be identified as the monastic 'cow house' of the Elizabethan plan (the store-house of a 1577 survey) was excavated. The 1963–4 excavations also produced evidence for earlier occupation,

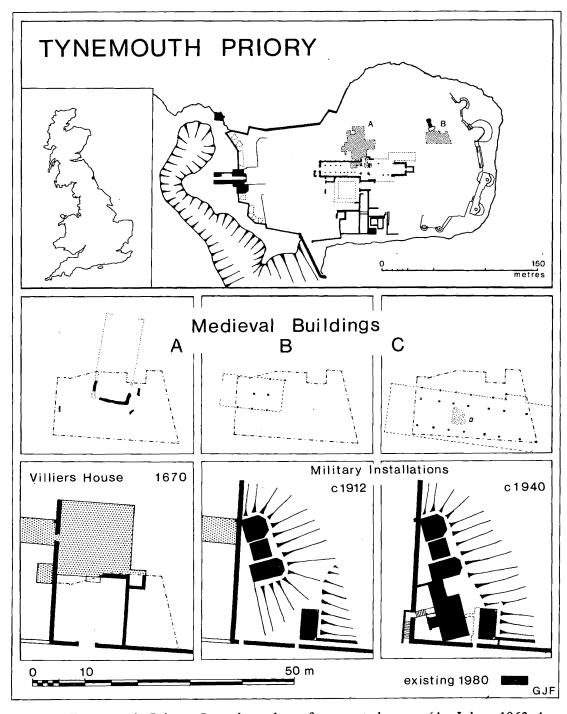


Fig.1. Tynemouth Priory: Location plan of excavated areas (A: Jobey 1963-4, B: 1980); and Outline Site Sequence of 1980 excavated area.

of Iron Age, Romano-British, and pre-Conquest date. The 1980 excavation produced no evidence of prehistoric occupation, but one (Building A, below) or perhaps two (Building B) timber buildings can perhaps be ascribed to the pre-Conquest period, and, with George Jobey's four pre-Conquest buildings, may be part of the early monastery at Tynemouth (Jobey 1967, pp. 47–8, Cramp 1973 p. 108).

The present report is principally concerned with the three timber buildings of medieval date, buildings A, B, and C. Post-medieval use of the site (Villiers' house of c. 1672, and later military and coastguard functions) is described in outline.

II. THE MEDIEVAL TIMBER BUILDINGS (fig. 2, pl. III)

The remains of the timber-built structures (figs 2–6) found in the excavated area were identified only at the level of bedrock, and could only be differentiated as three separate buildings through differences in their alignment, plans, and construction.

All three buildings were rectangular, but each was of a distinctive construction and plan-type: A was trench-built, B was of small earth-fast paired posts, and C was part of a very large aisled post-hole structure. The B and C post-pits were clearly differentiated from each other in form and in size (see figs 4-6). The circular post-

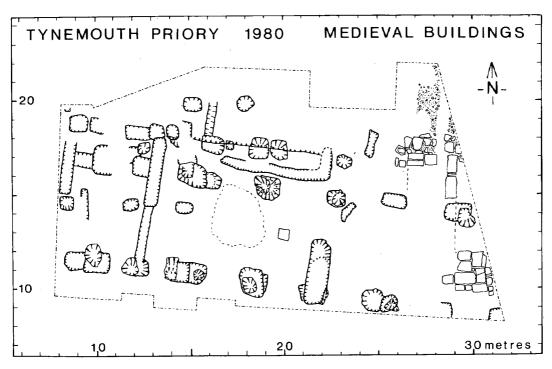
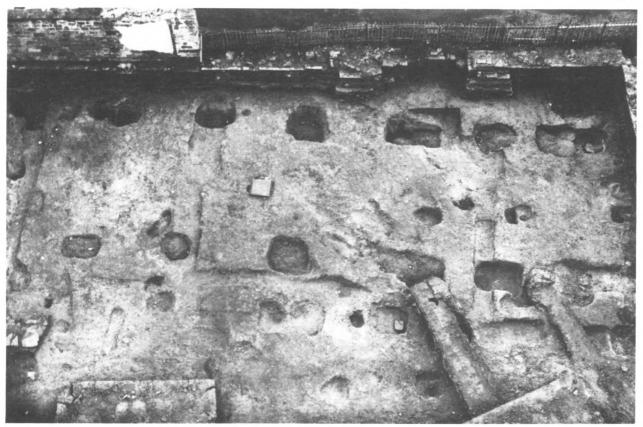


Fig. 2. Tynemouth Priory: plan of medieval features.

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Excavated area in final stage of excavation, showing remains of Buildings A, B, and C. See Fig. 2. Near-vertical view, north to bottom of plate. The post-pits of Building C are partly back-filled.

sockets of B were also distinct from the square sockets or the buried pad-stones of C. Finally, the earth filling the two groups of pits differed slightly: all the posts had been packed with the magnesian limestone spoil from their original excavation, but the pits of B generally showed a higher proportion of incorporated material, mainly loamy earth and pebbles, than those of C. The earth filling the wall trenches of Building A differed more distinctly, consisting of fine grey brown silt with a much slighter admixture of redeposited limestone, probably indicative of final filling during demolition rather than during construction (for other implications see below, pp. 107). The relative sequence of these buildings is not certain for although building C (the Wheat Barn recorded in 1577) is clearly later than both A and B (as post-pits of C intersected remains of both buildings A and B), the relationship between buildings A and B cannot be established stratigraphically. The sequence suggested by their nomenclature is perhaps supported by the typology of their construction techniques, however, and they are here described in that order.

BUILDING A (fig. 3)

1. Description of excavated remains

The structure consisted of shallow and fragmentary wall-trenches which defined the south end of a rectangular building of 7 m (23½ ft) width. The length of the building, much of it destroyed by the basement of the Villiers' house, is unknown.

The wall-trenches were of irregular U-shaped profile, with flat, level bases. The best-preserved length (98) was 62 cm (over 2 ft) wide and c. 20 cm (6") deep, but it was probably originally deeper, and slightly narrower. There was evidence in the trench for only one post (196), whose deep (45 cm) and relatively large (35 cm square) socket extended below the trench base. Shallower post-bases may once have existed and a single possible example, associated with an entrance, was recognized in the east wall.

The whole of the south wall survived, with a clearly defined terminal on the west, and a short return northward on the east. In the east wall was an entrance, though only its south door post (in the shallow post-base, referred to above) survived, preceded at a distance of 180 cm by a short trench (213) suggestive of a wind-shield or a porch. A second entrance may have existed at the south west corner, where the south wall terminated with a post socket, short of the line of the west wall (192), although discontinuous trenches need not signify an entrance.

Two further features displayed characteristics similar to the remains of building A, and are tentatively associated with this phase of the site's history: a small pit (45) to the south-east of the building, perhaps an angle buttress; and a part of a trench (227) near the western edge of the excavated area, perhaps the wind-shield or porch of a second building further west.

2. Discussion

The only archaeological artefact recovered from Building A, a fragment of a decorated

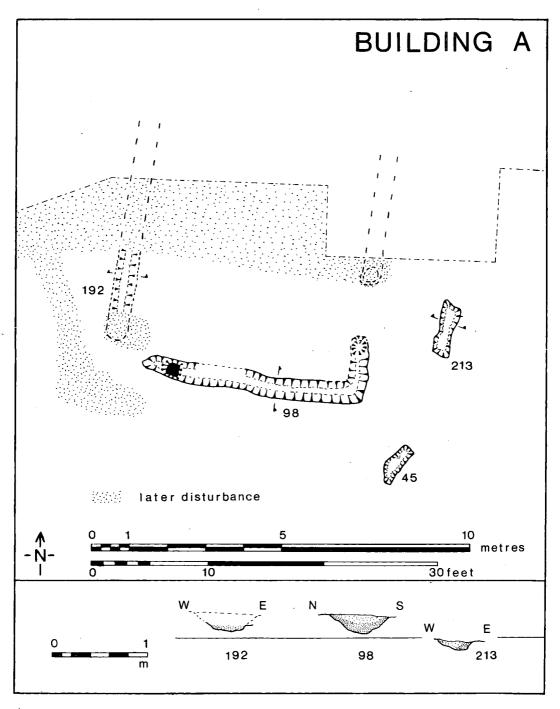


Fig. 3. Tynemouth Priory: Building A, plan and sections (datum at 29 m OD) of excavated remains.

stone grave-cover or – marker (fig. 10:4), is neither susceptible to close dating, nor free from suspicion of being residual in its excavated context. The structure's affinity to other known buildings is thus the only indicator (though imprecise) of date and function.

The building's remains suggest two possible construction methods: that the trenches supported upright timbers or held a horizontal sill.

The first of these methods is the more common in the archaeological record, ranging in date and geography from the seventh century at Chalton, Hants (Addyman et al. 1972, 1973), through the eighth and ninth centuries at North Elmham, Norfolk (Wade-Martins 1980), to as late as the eleventh century at Portchester Castle (Cunliffe 1976). A comparable technique in a more sophisticated form can be seen in the post-and-plank walls of Yeavering in the seventh century (Hope-Taylor 1977). Excavation of such buildings normally recovers evidence for the upright timbers, either in the filling of the trenches (e.g. Portchester, Building S11) or as depressions on the base of the trench (e.g. North Elmham Building S1), but the absence of such evidence (the single earth-fast post in building A is not evidence of post-in-trench construction) does not necessarily exclude this method.

There is an indication, however, that Building A was of sill construction. The fillings of the wall trenches were consistent with material introduced after the removal of a continuous horizontal beam — had the trenches contained upright timbers, it is probable that redeposited limestone (used as post-packing as in the later buildings on the site) would have survived among the final demolition filling.

Horizontal ground sills supporting uprights are less well-known in early medieval buildings than in later framed structures. In some cases, sill construction has been suggested for building remains lacking evidence of uprights – North Elmham building P of the tenth century, for instance (by Addyman 1973 pp. 71–73, rather than by the excavator, Wade–Martins 1980 p. 139) – but has been more certainly demonstrated for late Saxon buildings in the St. Neots area (Buckden, and St. Neots buildings A, B, and C: Hope–Taylor 1962, Addyman 1973), and from the tenth century at Old Windsor (unpublished save in summary form in *Med. Archaeol*. II p. 185) and York (Addyman 1979 p. 70).

On a more useful local level are the four timber buildings excavated in Tynemouth Priory itself by George Jobey in 1963. While drawing attention to the possibility that these buildings belonged to the monastery at Tynemouth in the seventh and eighth century (Jobey 1967 p. 47), a view more recently supported by Professor Cramp (1973 pp. 108–11), the excavator emphasized the possibility of later date, as only antecedence to the church of 1080–1130 could be proven for building 1, inferred for building 3, and reasonably assumed for buildings 2 and 4. The four buildings nevertheless fit into the context of pre-conquest trench-constructed buildings discussed above, and one, building 4, is comparable to the building excavated in 1980, with a similar trench, c. 2 ft wide, no evidence for upright posts, a width of c. 19 ft (6 m), and an off-centre door in its long side.

Tynemouth Building A cannot on the evidence available be interpreted confidently as of either post or sill construction, although the latter and therefore probably a

later rather than an earlier date, seems more probable. In its plan, building A is consistent with many similar excavated structures: its span of c. 7 m is common to almost all trench-built structures, even (as North Elmham Building Z) where central ridge posts ought to have allowed a wider span; its discontinuous and irregular wall trenches are paralleled, for instance, at Portchester (Buildings S11 and S13); and the asymmetric siting of the entrance(s) finds affinities at Yeavering and, again, at North Elmham (Building U). The postulated porch seems to be a unique feature. The evidence however cannot be extended further than provisionally placing building A in a probably tenth or eleventh century context, and noting its similarity to George Jobey's building 4.

BUILDING B (fig. 4)

1. Description of excavated remains

The second timber building marked a change in construction technique, having paired earth-fast posts. Its remains were again incomplete, disturbed by later buildings and possibly lying partly outside the area of the excavation. Three posts of the south, and two of the north, wall were excavated, and there were remains of two posts on the longitudinal axis. These elements are regarded as a single building as they are consistent in form, and on account of the reconstruction of the laying-out of the building (though it should be emphasized that only at a single point, i.e. posts 188, 205, 178, can all three longitudinal alignments be linked transversely by surviving remains). No floor levels survived, and it is probable that the tops of the excavated features had been truncated.

The five post-pits of the north and south walls were sub-rectangular and of similar dimensions (see fig. 4), except that the north pits (178, 180) had been distorted by later disturbance. Post-sockets were recognized in three of the pits (178, 219, 215), all circular (20 cm, c. 8", in diameter), though the timbers may have been squared above-ground. These three sockets, and the known interval of 310 cm (10 ft 4") between the adjacent posts (215 and 219) in the south wall, allow the location of the unrecognized sockets in pits 188 and 180 to be reconstructed within the limits of the pits, and their reconstruction suggests that the building was laid-out with equally-spaced paired posts. The possible central row of posts. (i.e. 164, 205) was eccentric to the building, however, forming two "aisles" of unequal size. One of the post pits (164) showed a possible post socket (15 to 35 cm in diameter), but both pits were very fragmented. No central post existed on the line of the east wall (marked by pit 180), and there was no indication of a post pit paired with pit 215 at the west end of the excavated building.

The overall dimensions of the building were 5.8 m (c. 18 ft 9") wide and 9.30 m (i.e. 30 ft 6") long, as excavated (i.e. three bays). This may be the full original length of the building, but it is possible that further bays lay to the west, suggesting a possible full length of 12.4 m (40 ft 8") if of four, and 15.5 m (50 ft 10") if of five, bays. Finally, a pit (242) in the north "aisle" might indicate a partition.

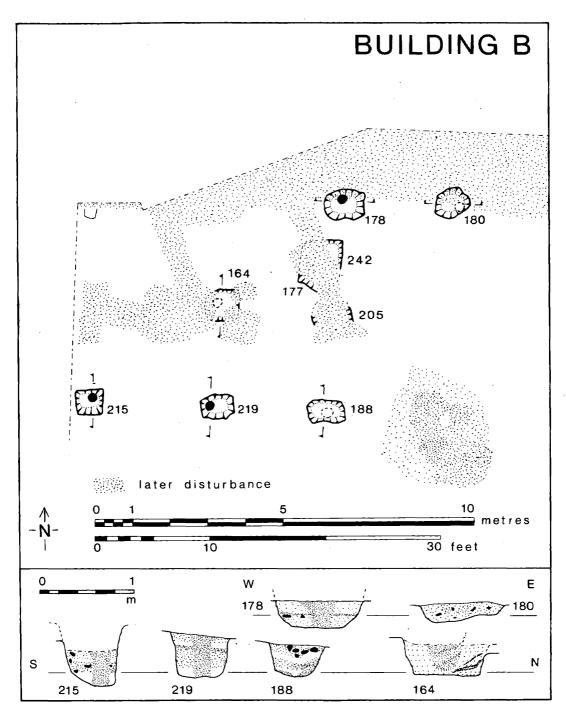


Fig. 4. Tynemouth Priory: Building B, plan and sections (datum at 29 m OD) of excavated remains.

2. Discussion

The principal features of this building are the precision of its post alignments, and the existence of the central posts. The former suggests a framed structure with "normal" assembly of tie beams and wall plates, though reversed assembly cannot conclusively be ruled out. The use of principal rafters is unlikely, because the probable function of the central posts, as at East Haddesley (Smith 1973 pp. 73–4) and Maxey B (Addyman 1964 p. 25), was to support a ridge piece. An alternative reconstruction of Maxey B (Addyman 1964 p. 45) with the central posts supporting an upper floor, is perhaps less likely. As there was no evidence for a central post on the line of the east wall (represented by post 180 and its inferred counterpart), it is probable that the roof of the building was hipped, the post within pit 205 supporting the east (and possibly, if the building as excavated is complete, pit 164 supporting the west) end of the roof ridge. No evidence was recovered for the form taken by the wall cladding, though vertical timbers, resting upon ground level sills either between or beyond (and so forming narrow aisles) the upright posts, are probable.

Parallels for this building, and particularly its central ridge-supports, are not common in Britain. In the mid Saxon period, North Elmham building Z and Maxey building B possessed central posts, though both were buildings of post-in-trench construction. At Yeavering the earliest buildings possessed terminal (gable) ridge posts in the late sixth century. In Yorkshire, similar buildings have been excavated at East Haddesley (Le Patourel 1973, Smith 1973) and at Huttons Ambo (Thompson 1957), both of much later, thirteenth century, date. At the former, the outer wall posts were widely, but irregularly, spaced, while the central posts stood in a trench. At Huttons Ambo, the stone hall possessed a central row of separate, irregularly-spaced posts. Finally, a late medieval building at Waltham Abbey, Essex, identified as a hay barn, possessed a row of central posts interpreted as a hay-loft (Huggins 1972 p. 79).

The second principal characteristic of the building is the wide and regular spacing, and the transverse pairing, of its posts, in contrast to earlier building types such as those at Chalton and Maxey already cited, which have almost continuous posts comparable to post-in-trench construction. These characteristics of building B seem to appear first in the eleventh or twelfth century. At North Elmham (Wade-Martins 1980 pp. 245-6) in period IV, building A of the early eleventh century, buildings T, AJ and AL of the later eleventh century, and building AK of the early twelfth century, are comparable, though the posts are not accurately paired. Buildings E and G at Thetford (Davison 1967) of the tenth or eleventh centuries exhibit transverse pairing of posts, the latter with two central rows of posts which divided the interior into three equally sized parts. At the royal palace at Cheddar, individual spaced-post construction begins with the "West Hall", the first phase of which is attributed by the excavator to his period II, i.e. c. 930 – late tenth/eleventh century, the third and final phase being of the later eleventh or twelfth century (Rahtz 1979 pp. 44, 146–48). These indications suggest that Building B should not be earlier than the eleventh century, and may well be much later, perhaps of the thirteenth century, though the dangers of dating from typological deductions are clear. It is tentatively argued below that Building C probably replaced B during the thirteenth century.

BUILDING C: THE WHEAT BARN (figs 5-7, pl. IVa)

1. Description of excavated remains

Building C, identified as the medieval Wheat Barn, was a substantial, and long-lived, aisled building. About half of the length of the building lay within the area excavated, although only the north outer wall could be examined as the south wall lay beneath the modern road. The remains of the barn consisted mainly of post sockets in rectangular pits, though some trenches and the robbing trench of the latest north wall also existed. There was evidence for two main building periods, for the latest of which there is documentary evidence.

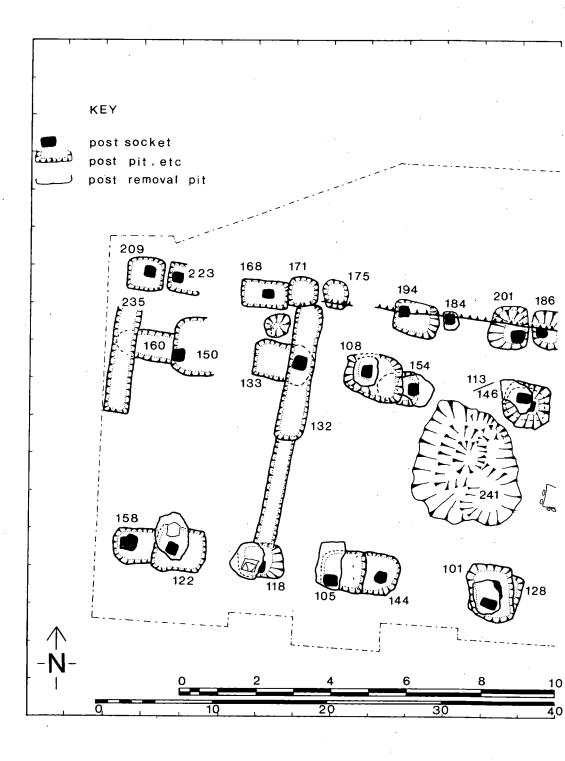
Period 1 - phase (a)

The arcade posts in the first phase were earth-fast, in large rectangular pits. The depth of the pits was relatively constant: of the fifteen examined only two were shallower than 90 cm (74: 82 cm: 71: 50 cm) and only two were deeper than 110 cm (118: 115 cm; 78: 118 cm). Their plan dimensions also were constant, between 80–100 cm \times 120–140 cm. Post sockets were identified in all of the excavated pits but two (160 where excavation was incomplete, and 128, where only a depression caused by the post's removal survived). The sockets demonstrate that the uprights themselves were of uniform size and shape, all squared timbers, occasionally square but generally rectangular, measuring on average 31–32 cm \times 33–34 cm. They suggest an attempted standardization with approximately foot-wide timbers.

The plan of the barn suggests that the arcades were laid out, and perhaps reared, as discrete units independent of each other, rather than as trussed pairs. The transverse framing of the posts, while approximately forming a bay system, is inaccurate but the longitudinal alignment of the arcade posts is considerably more exact. No evidence for any structural tie between the arcade posts and the outer walls was recovered. Two bay-widths were employed in the arcades, of 10 ft and of $12\frac{1}{2}$ ft. The wider bay occurred in three cases – once to accommodate an entrance; once apparently related to a stone base in the centre of the bay and to a hollow (241), perhaps the remains of a threshing area, in the adjacent bay; and once in the westernmost bay excavated, where the structural evidence in period 1b also suggests a specialized function.

Phases (b) and (c)

The alterations to the barn in the later phases of its first period were piecemeal, and did not change the basic plan. They occurred mainly at the western end of the excavated portion, where two pairs of timbers were replaced in the same position. The southern posts (118, 158) of each pair were removed, and new posts erected in the same pit, still earth-fast, but raised on buried pad-stones. The corresponding northern posts were replaced by earth-fast horizontal timbers. One (132) lay directly above the earlier post, but the second (235) was displaced to the west. Where they crossed the filled-in earlier post pits, additional support for these timber sills was provided



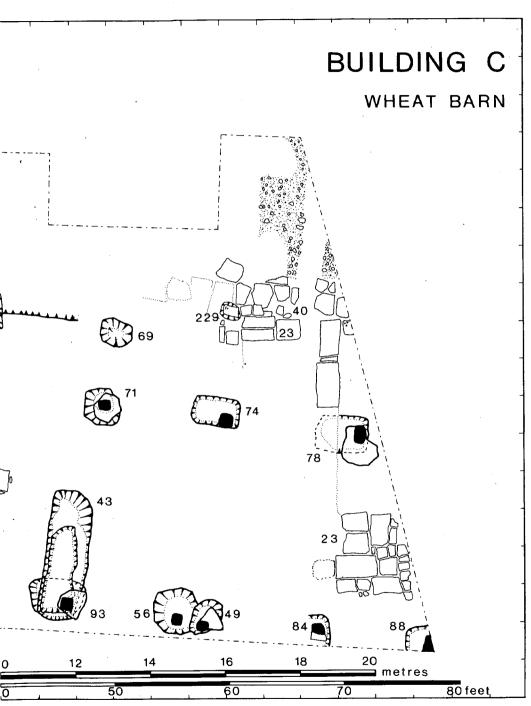


Fig. 5. Tynemouth Priory: Building C (the Wheat Barn), plan of excavated remains.



a. Building C (the Wheat Barn) during excavation, looking west. Arcade posts only excavated. Scales = 50cm intervals.



b. Grave-marker. See Fig. 10:1. Scale = 5cm intervals.

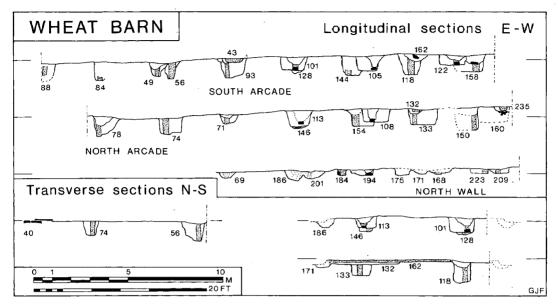


Fig. 6. Tynemouth Priory: Building C (the Wheat Barn), sections of excavated remains (datum at 29 m OD).

by rubble-packing. The two sills, extending parallel to each other south to the centre of the barn, and north as far as the outer wall, defined one of the three wider bays. Almost central between the sills, on the line of the arcade, stood a single upright (150), of period 1a type, although secondary to a period 1a post pit. It belongs to neither period 1a nor 2, and is assumed to be associated with the adjacent period 1b sills, perhaps an attempt to compensate for a real or feared weakness caused by lifting the adjacent posts from their hitherto earth-fast position. Subsequently (i.e. phase (c)) the eastern of the two sills (132) was extended to the south arcade, and possibly to the south wall. The arcade post was not however removed, so the sill must have butted against the upright timber, perhaps another indication that the builders were reluctant to lose the stability of earth-fast posts.

Finally, two changes were observed at the east end of the excavated area. One post (56) was either replaced or reinforced by a new post (49) c. 50 cm further east, but as no alterations occurred in the opposing post of the north arcade, the change was probably due merely to localized timber failure in period 1b or c. In the next bay to the west a more important alteration took place, similar to those discussed at the west end, and probably of the same date, period 1b. A single post (93) was replaced by an earth-fast sill (43) extending to the centre of the barn. This sill also defines a wide bay, here associated with a threshing area.

The outer wall in all its timber phases, of which two or three can be identified, will be discussed here. Nine posts were excavated, but a tenth (a second post in 194) may be postulated from the evidence of the primary bay system of the arcade, and

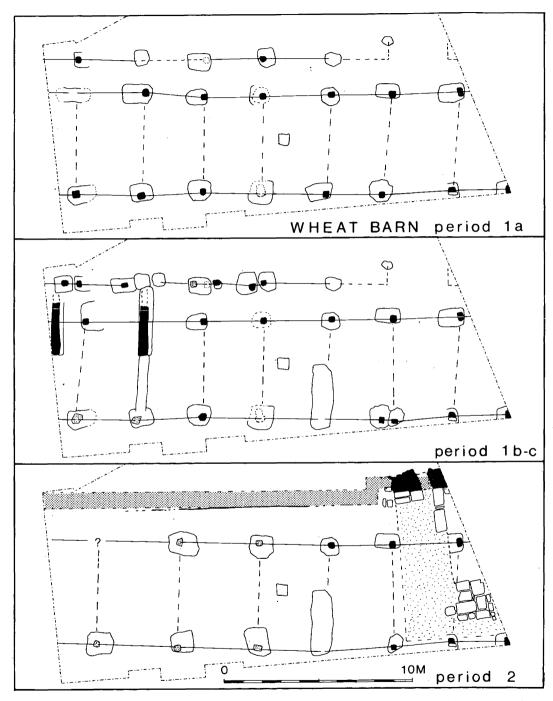


Fig. 7. Tynemouth Priory: Building C (the Wheat Barn). Phasing and interpretation.

an eleventh can be suggested (175). The posts are arranged as four pairs, and two separate posts. With the exception of one of the latter (184), which was stone-packed, all the posts stood in rectangular pits, smaller than those of the arcades. Squared post sockets of similar size to those of the arcades stood within the pits, though only five were recognized, partly owing to the period 2 reconstruction, which also destroyed the stratigraphic relationship between the paired posts.

That these posts represent more than a single phase is evident from the unique isolation of the easternmost post (69) and the coincidence of the duplicated posts with those of the arcade posts that were replaced in period 2. It is probable (if it is assumed that a primary post socket below the east end of post pit 194 was overlooked) that the easternmost post of each pair was the earliest, as these are clearly associated with the primary period 1 bay system. The secondary posts are presumably replacements (or more probably reinforcements) of the outer wall, in period 2, or probably in a late phase of period 1. There are indications (184, 175) of a possible third stage of reinforcement of the outer wall.

Period 2

In this period, the western part of the barn, which had already been reinforced at least once, was completely rebuilt: the four westernmost excavated pairs of arcade posts were replaced by three more widely-spaced pairs, and the outer wall was reconstructed in masonry. Finally, the barn of this period was surveyed, in a state of dereliction, in 1577.

The documentary evidence derives from two sources, the Elizabethan annotated plan of the Priory (NCH VIII pl. XII) and a survey in 1577 of the repairs necessary to those parts of the Priory, notably the Outer Court, still in use but in advanced stages of disrepair (Knowles 1910 pp. 42–50). Both refer to the excavated building, respectively as the "Great Barn" and the "barne called the wheat barne".

The survey is the more informative source. It describes a building 5 yds high, with masonry walls 4 ft wide, and roofed with "slayte" (in fact, on excavated evidence, stone tiles). The high cost of necessary repairs, £7.6s.8d to the masonry (compared, for instance, to £12·10s. for the store house, a much more substantial stone-vaulted building) and six tonnes of new timber (compared, for instance, to only two tonnes for the whole complex of "hall, buttrye and chambre"), suggest that the barn was in a poor state of repair, and probably of considerable age in 1577. The dimensions given, 53 yds long and 14 yds wide, correspond with what is known of the building. Where the survey can be checked it is generally accurate (but see p. 118).

The arcade posts of the eastern part of the existing barn were retained into period 2, as is evident from the absence of any period 2 arcade posts, the continuity of the entrance in the north wall (see below p. 118), and the improbability of the structure being aisle-less. That they survived to the end of the barn's life cannot, however, be proven, and this must be considered later.

The arcades of the western part of the excavated portion were, however, completely reconstructed. The new posts were still earth-fast, in slightly larger pits, but following the precedent of period 1b they stood upon buried pad-stones, and were now

accurately aligned transversely as well as longitudinally, with wider 14 ft bays. All this suggests that the new building displayed a more sophisticated construction. The outer wall, as has been seen, was of masonry by 1577, and probably from considerably earlier. Whether the rebuilding in stone took place at the start of period 2, which seems probable from the whole-scale rebuilding of the arcades and roof, or in a later phase of period 2, is not certain. The post holes of the earlier outer wall were directly overlain by the remains of the robbing trench of the period 2 stone wall, and little of the wall itself survived. The 1577 survey gives its width as 4 ft, though a reconstruction of the barn's width on this basis (assuming the south aisle to be identical to the north) produces a discrepancy of 2 ft too little. This might be the result of sixteenth century survey error, as in the case of the store house, where the 3 ft recorded by the survey does not correspond with the 4 ft width of the walls excavated in 1963 by George Jobey.

The entrance was also modified, and most of its excavated remains (a flat, 5 ft wide, boulder foundation for a threshold, flanked by two stones perforated with pivot—or bolt-holes) belong to period 2. Of the period 1 entrance, only a single post hole (229) survived, and the only evidence for the origin of the entrance in period 1 (apart from the presence of the wide bay, see above) is that the period 1 north wall did not continue beyond post 69. Finally, in period 2b, the entrance bay of the barn was paved and a path laid along the central area towards the east, and new stone-packed door posts were erected. The paving was very fragmented owing to eighteenth century gardening, and its full extent is unknown. A small area of metalling to the north of the entrance represented the surface of the Barn Yard.

POST-HOLES: morphology and demolition (plates Va-Vb)

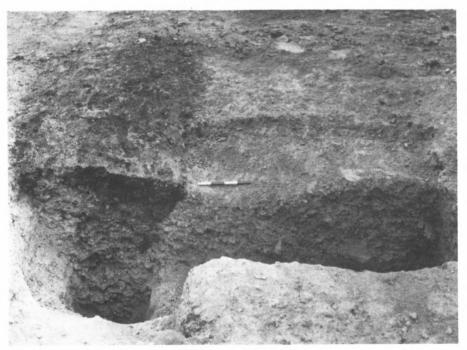
A few of the post sockets were identified in half-sections through the filling of their pits (e.g. 133), but the majority were identified and excavated in plan. The sockets of period 1 posts usually appeared first in the bottom of removal holes dug into the top of the pits. These removal holes rarely extended to the base of the post pit, leaving the post socket still mainly intact, perhaps because the foot of the post had already decayed. The possibility of the sawn-off feet of timbers being left in situ is unlikely given the nature of the fillings of the sockets. In one case, the socket was perfectly preserved, and filled with clean white sand (56). This post was replaced very quickly (above p. 115), and it is probable that the manner of its socket's preservation indicate complete decay. In two groups of pits, the post socket had been completely destroyed. First, where period 2 pits directly overlay period 1 pits, and secondly in the period 2 pits themselves, where surviving sockets above the pad-stones were very rare, and never more than vestigial. The explanation in the latter cases may lie in the better preservation of the timber at the time of demolition (the result of either relative youth, or because the posts stood upon pad-stones), which would have necessitated total removal by digging-out.

Dating Evidence (and see below)

The barn cannot be dated by its associated artefacts. Four sherds of pottery were



a. Post-pit 93 of south arcade of Building C (the Wheat Barn), showing period 1a post socket during excavation, and period 1b/c trench after excavation at top of plate. Looking north. Scale = 5cm intervals.



b. Post-pit 133 of north arcade of Building C (the Wheat Barn), showing period 1a post socket in section, overlain by period 1b trench 132. See section at Fig. 6. Looking south. Scale = 5cm intervals.

found in the post pits of the north wall – three (from 186, 201) were residual, of Roman date (a chip of fine slip-coated ware, two sherds of black burnished ware), the fourth is of an imprecise medieval date and derives from a secondary pit (194). A number of stone fragments were recovered, mainly used as stone post bases in periods 1b and 2. Two are fragments of early medieval grave covers, a third, a cross-decorated grave marker (from 122) (fig. 10: 1–3). They must all be residual, from an early (? eleventh-twelfth century) monastic cemetery. A fourth stone fragment, a piece of simply moulded window base, was found in a period 1b trench (235), again residual, and providing only a terminus post quem of perhaps the thirteenth or fourteenth century.

Finally, from demolition contexts came a medieval glazed handle sherd (from the north wall robbing trench, 41) and a rim sherd of a medieval cooking pot (from the undifferentiated filling of a period 1b trench, 43). Two fragments of painted glass and medieval and early post-medieval pottery overlay the remains of the barn. There is otherwise little evidence for the date at which the Barn passed out of use, except four Scottish Turners of Charles II and Charles I, from a clearance horizon and construction level associated with the 1672 Villers' house. Although in plan the house appears to avoid the barn, there is clear stratigraphic evidence that the barn no longer existed or was demolished to make way for the house, and as it was in decay in 1577, it cannot be assumed to have been in any useful state of repair much beyond the early seventeenth century.

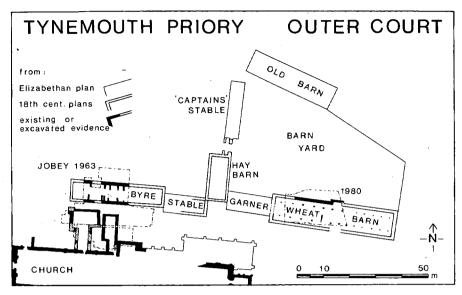
2. Discussion

Reconstruction

The excavated fragment of the building measured 73 ft in length along its south arcade, slightly less than half of the 53 yds recorded in 1577 for the barn called the Wheat Barn, the largest of several barns in the Priory's Outer Court. The identification of the excavated building with the documented barn is fairly certain: Building C has the characteristics of an aisled barn, and coincides in position and reconstructed dimensions with the Wheat Barn.

The excavated portion occupied the central and most of the western areas of the barn (fig. 8). Part or all of seven bays of the period 2 barn were excavated, while the known length of the barn in 1577 suggests a full length of thirteen or (with terminal half-bay aisles) twelve bays. This reconstruction assumes that, as in the excavated area, only the west end of the barn was rebuilt in period 2, and that the east end, except for the outer wall rebuilt in stone, retained its original period 1 form. The period 1 barn, if of the same length as in 1577, may have been up to fourteen full bays in length. In all phases the barn probably had a single central north entrance, perhaps with a smaller, non-vehicular, opposed exit.

In size and form, the Tynemouth barn is comparable to that excavated by Christine Mahany in 1970-1 at Whittonstall, Co. Durham (*Med. Archaeol.* XV p. 165, XVI p. 195) though larger (Whittonstall, of eight bays, being 37 m, 116 ft, long), and to the surviving great barns of southern England, particularly of Kent (Rigold 1966) and Essex (Hewett 1963, 1969, 1970). In Kent, for instance, while there exist barns



Tynemouth Priory: Reconstructed plan of agricultural buildings in the Outer Court. Based in part on: Knowles 1910, Hadcock 1936, and Jobey 1967.

of lengths of 210 ft (Frindsbury) and 172 ft (Littlebourne), smaller barns of c. 130-160 ft are the norm. In Yorkshire a group of post-Dissolution surveys demonstrate that small priories possessed "corn" (i.e. wheat or barley) barns of up to only 120 ft, the average being c. 95 ft (Brown 1886).

In its construction methods, however, the Tynemouth barn differs from those mentioned above. The surviving Kentish barns, for example, are framed structures supported aboveground on sole-plates or stone walls, and with sophisticated carpentry and roof structures. Even the Whittonstall barn, of stone from the first, had uprights supported on groundbased pad-stones. The use of earth-fast posts began to be obsolete by c. 1300 (e.g. Frindsbury, Kent) and perhaps earlier (e.g. Coggeshall, Cressing barley barn, Essex), but the primitive nature of the construction of the Tynemouth wheat barn need not imply so early a date (see below). It does however suggest a construction different from that of the major surviving barns, perhaps even a different tradition (see now Charles 1981), for the use of earth-fast posts does not of necessity imply that the wheat barn was an unsophisticated structure, an assumption sometimes made of excavated post-hole buildings in acknowledgement of the supposed difficulties of positioning earth-fast uprights with the degree of precision necessary to timber framing. While at Tynemouth the arcade posts were inexactly aligned in the transverse axis (so that tie beams framed into arcade plates would perhaps have been impossible), the same posts are precisely aligned in the building's longitudinal axis. The evidence could be interpreted to suggest not a primitive non-framed structure, but merely a building in which transverse ties were subordinate to arcade plates adequately supported only by the deep-seating of the arcade posts. Whereas in the Kentish barns stability derives from the rigidity of a box-like, braced, frame, perhaps at Tynemouth the buried feet of the posts provided an alternative rigidity. Even in period 2, the builders at Tynemouth were reluctant to raise their posts completely above ground level, though they had by then introduced some methods of framing. The outer wall posts were also subordinate to the arcade posts, as they supported only the wall cladding, and little or nothing of the roof structure. The several reconstructions of the outer wall, and eventually of many of the arcade posts, perhaps point to structural failure in the weak areas of the interaction of these two elements. In period 2, when the west end of the barn was rebuilt, the new arcade posts were less deeply buried and were accurately paired, suggesting that transverse framing was then important, but still, as in period 1, the arcade plate would have been of predominant importance, supporting some form of "rafter roof", perhaps scissor-braced but certainly without tie beams.

Finally, some consideration is necessary of the possibility that a final, third, period of the barn used ground-sill construction techniques which, particularly after seventeenth century levelling, would not leave archaeological traces. Such a technique would be a logical end to the known structural development in the barn's evolution. There is no evidence to support this, but such a hypothesis, if the period 1 posts which were retained throughout period 2 were replaced at ground level in a third period, would provide another explanation for the differences already noted (above p. 118) between the demolition methods of period 2 and period 1 posts. Secondly, no traces of post sockets or their removal holes (post pits would not of course be visible) were observed through the remains of the surviving areas of clay floor in the barn. By its nature, this negative observation is subjective and ambiguous, but if valid it could be explained by either a late aisle-less structure (which is improbable) or by archaeologically-undetectable construction methods.

Date

The poverty of the artefactual dating evidence has already been described and the excavated remains of the building must provide their own dating evidence. In the general outline of its plan, a few features point to an early date for the primary building. The central position of the only known entrance has already been noted. It recalls the earliest of the Kentish barns, Frindsbury and Littlebourne (Rigold 1966 pp. 9-12), the former of "not long after, possibly even before, 1300" (but now with a C 14 date of 1400 \pm 60, Hewett 1980 p. 185), the first phase of the barn (Building X) at Waltham Abbey, of c. 1200 (Huggins 1972 pp. 53-61), and the barn at Whittonstall, provisionally attributed by the excavator to the thirteenth century. The narrowness of the aisles is similarly comparable to the earlier Kentish barns and might perhaps suggest a traditional stage between the known early "quasi-aisled" buildings (e.g. the late twelfth century hall at Wintringham, Lincs; Beresford 1977 pp. 10-11, 302) and later fully aisled medieval barns. The early, probably early twelfth century, hall excavated by David Austin at Barnard Castle, Co. Durham, appears comparable to the Tynemouth barn: narrow aisles, earth-fast posts, and a structurally weaker outer wall. At the same period, though much further removed geographically, the eleventh

and twelfth century "East" hall at the Cheddar palace exhibits closely similar characteristics (Rahtz 1979).

An early date, perhaps thirteenth century, is also suggested by the specific details of the barn's construction, particularly the use of earth-fast posts. By at least c. 1300. this form of construction was widely superseded elsewhere by various forms of groundlevel construction. The Kentish barns of c. 1300 and the Barley Barn at Cressing, Essex have already been mentioned. The Hay Barn at Waltham Abbey displays stylobate construction at an even earlier date, by c. 1200 according to the excavator (Huggins 1972 p. 60), as does the Coggeshall barn (Hewett 1980 p. 47). In domestic building, the change to ground-based posts occurred mainly before or during the thirteenth century (Smith 1974 p. 246), although a very useful provisional sequence for Yorkshire (Le Patourel 1973 pp. 69-70) suggests that there the transition (via buried pad-stones as in Tynemouth's periods 1b and 2) may have occurred later, perhaps during the fourteenth century, and there must be some doubt that earth-fast posts, particularly for protected internal posts, did not continue in use much longer. Finally an early date is implied for the barn by its long lifetime, and the technical progression that can be observed in its development. The latest period 2 barn, with stone walls and posts on buried pad-stones (or possibly in part at ground level, see above), was in advanced decay by 1577, so its construction ought to have occurred at least well into the preceding, the fifteenth, century. The earlier period of building comprised at least three distinct phases encompassing the improvement of earth-fast posts into more advanced construction methods such as buried pad-stones and trenchlaid sills, a lengthy development which might suggest that primary construction began in the fourteenth or (given the comments made above) the thirteenth centuries.

The Outer Court (fig. 8)

With the aid of the Elizabethan plan and survey, an attempt can be made to reconsider the topography of the Outer Court of the Priory in the light of the 1980 excavations and those of George Jobey in 1963, and of a number of eighteenth century plans (see below) depicting the area of the Villiers' house.

The early Elizabethan plan shows a large Barn Yard with barns to the north ("A barne", or "old barne" in 1577), west ("haye barne"), and south (the Wheat Barn just described, and an adjacent garner). The yard was entered from the west through a gateway flanked by a small stable known as the Captain's stable. To the west stood two further agricultural buildings which screened the church from its outer court. These were a second stable (the "Guest" stable) and a byre, later a store room (the "cow house", in 1577 the "store house wher th'artillerye lyeth"), the building partly excavated in 1963.

No part of any of these buildings survives above ground. The stables, the byre, and the western barn are apparently visible on a drawing of c. 1666-76 (Knowles 1910 pl. XIV). The Wheat Barn disappeared before c. 1672 to make room for Villiers' house. The captain's stable and the northern barn were probably demolished soon after, and had certainly vanished by the time of an eighteenth century map of, possibly, after c. 1753. This map, however, shows that the western barn and the guest stables still existed, incorporated into the service buildings of the house, and at least part of the gateway was probably still standing. But by 1785, the date of a survey by Capt. Durnford, all three had been replaced, and only the artillery store, by that date barracks, survived into the present century, to c. 1950.

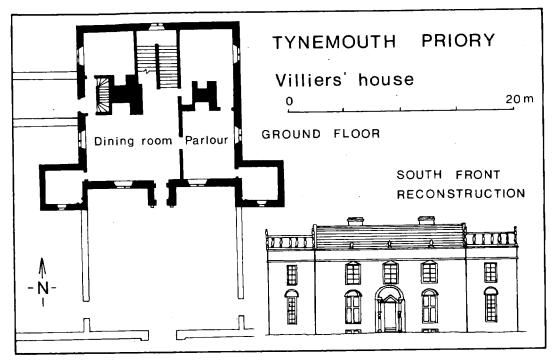
The excavations of 1963 and 1980 together provide fixed points which allow the evidence of these early plans to be transferred to a modern plan with some confidence. The result is presented in fig. 8 (and its applications to a detailed reconstruction of the barn has been shown above). The plan differs little from that reconstructed, on less evidence, by W. H. Knowles seventy years ago and by R. N. Hadcock in 1936. The main revisions are the re-siting of at least the Wheat Barn, partly beneath the modern road; the recognition of the medieval buildings, though modified, on the c. 1753 plan; and the re-identification by George Jobey of the cow-house.

III. POST-DISSOLUTION OCCUPATION

At the dissolution of the Priory in 1539 the headland passed into Crown control. Extensive remains still survive of the fortification carried out at this period, particularly to the west front in Elizabeth's reign, and military garrisons remained in the Castle until the 1960's. During this long period the site of the Wheat Barn was reoccupied twice. In c. 1672 a large house was built by the Governor of the Royal Garrison, Col. Edward Villiers. This house, after a period as a military hospital, was demolished in 1902, and replaced by the Fire Command Post for the coastal artillery batteries installed on the cliff edge, and along the adjacent coastlines, during the years of preparation for the Great War. From this control point grew the coastguard stations whose demolition and replacement provided the stimulus for the excavations of 1980.

VILLIERS' HOUSE (fig. 9)

The house built by Col. Villiers (who also, at his own expense, built the lighthouse prominent in nineteenth century views of the headland) stood on land later (1674) leased from the Crown (NCH VIII p. 201, AA_2 XXIV pp. 213–14). It was probably built to replace "the House formerly belonging to the Governor gone to ruin", shown on a map of 1741 around the important domestic buildings south-west of the monastic cloister, the "Hall and Yellow Chambre" of the Elizabethan Plan. Its architect is at present unknown, but the house itself is well-documented through the survival of two detailed surveys produced for the War Office in the 18th Century. One was by Elias Durnford, Capt. of Engineers, in 1785, the other, incorporated into Durnford's survey but on internal evidence earlier, may date from c. 1753 (being perhaps a survey taken upon the expiry of the Villiers lease in that year) or 1758 (when building work, and so possibly survey, was carried out). Further evidence comes from prints of c. 1780 by H. S. Grimm, and of 1784 by Byrne (AA_2 XX p. 17), and a photograph taken on the occasion of a visit to the house by the Society of Antiquaries of Newcastle-upon-Tyne shortly before its demolition in 1902 (PSAN₂ X p. 274). Part of the south



Tynemouth Priory: Villiers' House, plan of ground floor from eighteenth century surveys, and reconstruction of south elevation from Grimm, Byrne (AA2 XX p. 17), and PSAN₂ 1898 p. 274.

facade of the house was excavated in 1980: this confirmed the reliability of the two surveys, and added some detail to the available information.

In its original form the house was a square block of three bays, of two storeys over a semi-basement service floor. Servants' apartments were provided in a rectangular building, possibly of secondary origin, on the west, with a service courtyard to its south, while in the house a separate service stair was provided. Architectural detail was simple (in contrast, for instance, to houses of the Capheaton group of a similar date, which are attributed to Robert Trollope, who worked c. 1663-68 at Tynemouth Christchurch), though where it exists - semi-circular pediments over the ground floor, and triangular pediments over the first floor, windows; a deep semicircular porch on corinthian capitals over the principal entrance; and moulded cornices - the detail complements the advanced design of the building's plan. The principal floor, the ground (entrance) floor, was raised over the services and contained a centrally-placed large formal stairway occupying the principal entrance room, a building plan current in the second half of the 17th century. On both floors was a large main room - a ground floor hall (with an adjacent parlour, oak-panelled in 1902) and a first floor great chamber (with smaller adjacent bed chambers, and closets in the two square angle turrets).

A few architectural fragments from the house were recovered from excavation. These, with the documents referred to above, allow some of the later alterations to the house to be recognized. These principally consisted of re-fenestration. Most of the original mullioned (and, in at least one case, transomed) windows of the ground floor were replaced by double-sashes windows by c. 1784. The first floor windows, and all the turret windows, were apparently from the beginning of this more modern type—though conversely the basement windows kept their mullioned form throughout the life of the house. By 1902, the triangular and round pediments had been removed from the windows and the entrance porch removed from the door, and the exterior had been rendered. Finally, excavation has shown the SE angle turret (enlarged again in the 19th century) to be an addition (though by at least 1741) to the original square of the house, and it is probable that this applies equally to the SW turret.

Twentieth century Military Installations (fig. 1)

When Villiers' house was demolished in 1902 (NCH VIII p. 201) its site was occupied within a few years (by 1916) by the control centre for the coastal batteries: three small concrete blockhouses, sheltered behind a high earthen mound. The command block was of a single storey, but flanked by two higher blocks carrying raised observations posts. Armoured signals cables found in the excavation area diverged from the central block of the group, towards the eastern and southern batteries. These buildings constituted the Fire Command Post for not only the Tynemouth batteries, but all the batteries of the Tyne Harbour defences extending along the coast northwards as far as Blyth and south to Roker. The guns at Tynemouth were retained into the second war (although most of the outlying batteries were dismantled during the 1920's), while the Command Post buildings survived intact until 1980, amalgamated within the coastguard station which was built on the site by a process of agglomeration between c. 1933 and c. 1945. The new Coastguard Headquarters will still incorporate part of the first command post.

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deposited in the Northumberland and Durham sites and monument record. Finally, I am most grateful to Mr. Bob Alvey and Dr. Barry Knight for their contributions to the report, and to Bob Alvey for fig. 11.

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APPENDIX: SMALL FINDS

Most of the finds from excavation are not described. The few pottery and glass sherds are excluded, as they were almost entirely from twentieth century disturbed contexts (with the exception of the pieces mentioned above, pp. 118, 120), and do not form useful groups. The clay pipes are included as small, consistent groups of mainly stamped pieces, and the four coins because of their relevance to a question raised elsewhere about Scottish influence in midseventeenth century Newcastle. The bulk of the finds report is given over to masonry fragments, particularly early medieval grave markers.

1. STONE FRAGMENTS (fig. 10)

Grave Marker

1. An upright grave marker, with triangular pedimented top and slightly chamfered edges, bearing a triangular-armed cross in low relief within a square field. The base is incomplete. There are close-set diagonal chisel marks on the sides, c. 10 mm apart, but the face is smoothly finished. The reverse is unworked. The depth of relief of the cross, which is mainly defined by c. 20 mm wide steep V-shaped chiselled grooves, does not exceed 10 mm. Sandstone. Plate IV, b

height (surviving) 390 mm width 330 mm thickness 130 mm

TY 80-120: The stone was recovered from the removal pit (120) of a period 2 post pit (122) of Building C (the Wheat Barn). It can be assumed to have been re-used as a padstone, though at an uncertain phase of period 2.

Grave Covers

2. Fragment of a small trapezoidal grave cover. Plain but for quarter-roll mouldings on its upper angle. The fragment by its size appears to come from close to the foot of the cover. Diagonal tooling marks. Magnesian limestone.

length (surviving) 250 mm width 420 to 450 mm thickness 150 mm

TY 80-126: re-used as a period 2 buried padstone, found in situ in post-pit 101/128 of Building C (the Wheat Barn).

3. Fragment of a slightly trapezoidal grave cover, decorated with incised lines. Appears to

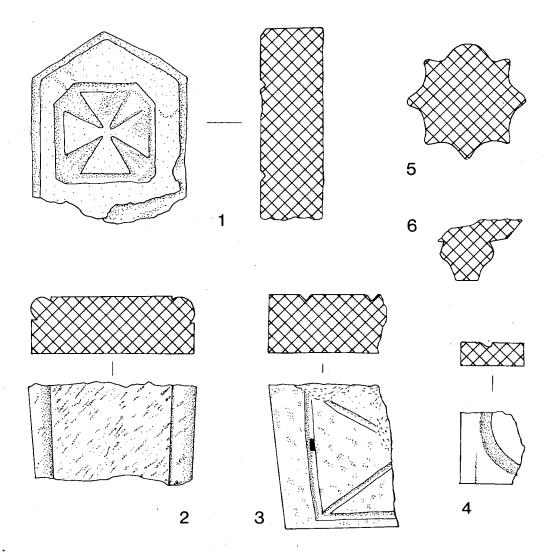


Fig. 10. Tynemouth Priory: stone fragments. 1: grave marker (scale 1:8), 2-4: grave covers (scale 1:10), 5-6: architectural fragments (scale 1:4).

be part of the foot of the cover. A small (30 mm) deep rectangular hole perhaps indicates a metal attachment. The incised decoration is incomplete, but appears to represent a triangular-armed cross within a square or rectangular frame. Slight diagonal tooling marks. Magnesian limestone.

length (surviving) 380 mm width (surviving) 300 mm thickness 160 mm

TY 80-131: Found in the upper layers of a period 1 post pit (118) of Building C (the Wheat Barn) re-used as a post-base in period 1b.

4. Fragment of square (original dimension perhaps 340 mm) stone, with circular (originally between 220 and 250 mm in diameter) raised boss defined by incised line. Perhaps part of a grave cover. Magnesian limestone.

TY 80-197: found in filling of post socket (196) in wall trench 98, used as post-packing of Building A.

Architectural fragments

5. Fragment of a small fluted column, with eight shallow (15 mm) grooves forming one wide semi-circular roll and seven narrow semi-circular ridges. Section only illustrated. Sandstone.

height: 188 mm diameter: 125 mm

TY 80-14: In levelling layers for Villiers' house, c. 1672. It is known that Villiers quarried the monastic remains to build his house and lighthouse (see NCH VIII p. 202, 207). Perhaps from arcading or a monument.

6. Fragment of moulded stone, possibly from a window. Section only illustrated. Magnesian limestone.

length (surviving) 160 mm width (surviving) 160 mm

TY 80-32: from construction layers of Villiers' house, c. 1672.

7. Fragment of a window base, with a series of superimposed and overlapping concave chamfers. Magnesian limestone.

height (surviving) 240 mm width (at base) 390 mm depth (surviving) 210 mm (restored)? 290 mm

TY 80-238: found re-used as reinforced foundation in trench (235) of period 1b of Building C (the Wheat Barn).

- 8. Window mullion, plain-chamfered with glazing groove but no shutter rebate, in basement window of Villiers' house. Not illustrated.
- 9. Fragment of semi-circular arched opening with three round orders, from Villiers' house. Not illustrated.

2. THE COINS by Dr. B. Knight

1.2: Two Scottish turners (2^d) of Charles II (1663 issue).

Obv: Crown over CRII

Legend: CAR.D.G.SCOT.ANG.FRA.ET HIB.R.

Rev: Thistle

Legend: NEMO.ME.IMPVNE. ACESSET

Mint marks: cross of pellets.

3.4: As above, of Charles I (issue of 1642, '44, '48, or '50)

Obv: Crown over C(lozenge)R Mint mark: lozenge.

1-3, from c. 1672 Villers' house construction (1-2: TY 80-10) and garden (3: TY 80-18) levels, are moderately worn. 4, unstratified, is well-worn.

The high incidence of these coins, owing to the absence of low denomination English royal issues and the proximity to Scotland, has already been noted in Newcastle (Robson in Ellison M et al. 1979 p. 177). They form also the majority of the coins found in later seventeenth century contexts at Edlingham Castle.

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3. CLAY PIPES by R. C. Alvey (fig. 11)

Group a): from pre-construction levelling and construction levels for Villiers' house, c. 1672. TY 80–10, 13, 14.

- 1. Bowl, rouletted rim. (Stem bore 3.5×3.6 mm) c. 1680–1710
- 2. Bowl, line below rim. Stem bore 3.4 mm c. 1660-80
- 3. and 4: Bowl. Stem bore 3.2 mm. c. 1630-60
- 5. Stem, decorated. Stem bore 2.5×2.9 mm. Possibly Dutch. c. 1670–90
- 6. Stem, decorated with stamp of parallelogram quartered with fleur-de-lys. Stem bore 34 mm. BAR 78: fig. 2: p. 25: No. 25

Group b): from garden area of Villiers' house, c. 1672-1906. TY 80-2, 18.

- 7. Bowl, line and roulette decoration. Stem bore 3.2×3.6 mm. c. 1670–90
- 8. Bowl and stem, Stem bore 2.3×2.6 mm. c. 1670–90
- 9. Stem, with stamp Leo(nard Holmes). Stem bore 2.4×2.6 mm. BAR 78: fig. 2: p. 21: No. 9. c. 1659-91
- 10. Stem, rose decoration. Stem bore 2.0 mm. 19th century

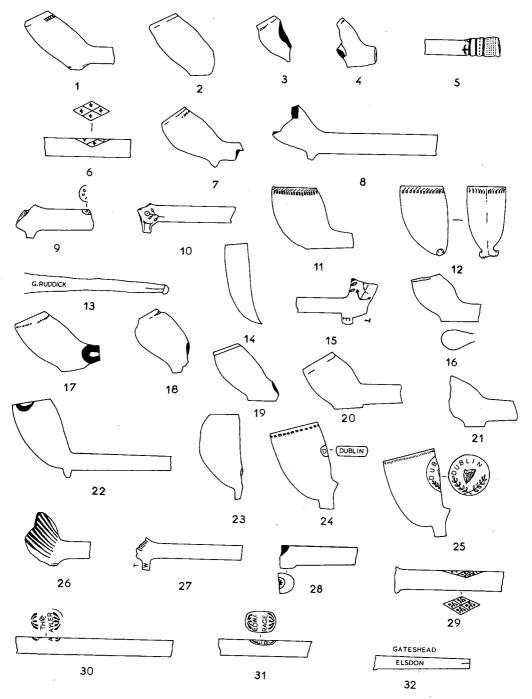


Fig. 11. Tynemouth Priory: clay pipes (scale 1:2).

- 11. Bowl. Stem bore 2.2×2.4 mm. 19th century
- 12. Bowl, no spur but lateral projections. Stem bore 2.1×2.2 mm. Late 19th 20th Cent.
- 13. Stem, stamped G. Ruddick. BAR 14: p. 170. George Ruddick, 1871-1906
- 14. Bowl, 19th century
- 15. Bowl and stem. Spur stamped F/T, bowl decorated with anchor and (?) Prince of Wales feathers, and oak leaves on seams. Stem bore 1.9×2.0 mm. c. 1850 -.

Group c): Villiers' house demolition levels, 1906. TY 80-1

- 16. Bowl. Stem bore 2.9 mm. c. 1604-60
- 17. Bowl, roulette decoration. Stem bore 3·1 mm. c. 1660-80
- 18. Bowl. c. 1640-60
- 19. Bowl. Stem bore 3·1 mm. c. 1650-70
- 20. Bowl. Stem bore 3.2×3.5 mm. c. 1650-75
- 21. Bowl. Stem bore 3.4×3.6 mm. c. 1650-70
- 22. Bowl. Stem bore 2.0×2.2 mm. 19th century
- 23. Bowl. Stem bore 2.0×2.1 mm. Late 18th century
- 24. Two bowls, stamped Dublin. Stem bore 1.9×2.0 mm. 19th 20th century
- 25. Two bowls, stamped Dublin in cartouche with floral decoration and harp. Stem bore 1.9×2.0 mm. 19th 20th century. Identical bowl also from group b).
- 26. Bowl, with fluted decoration. Stem bore 2.2 × 2.4 mm. Late 19th 20th century
- 27. Bowl and stem, with fluted decoration and T/W or H/W on spur. Stem bore 2.0×2.2 mm. Late 19th 20th century
- 28. Stem, with heel stamp of six-pointed star. Stem bore 2.8 × 3.0 mm. 17th century
- 29. Stem, decorated as No. 6. Stem bore 3.3 mm
- 30. Stem, stamped Tho. Tayler. Stem bore 3.0×3.2 mm. BAR: 78: fig. 2: p. 21: No. 16 c. 1697-1708
- 31. Stem, stamped Edward Crage. Stem bore 2.9 × 3.0 mm. BAR 14: p. 169 c. 1707-17
- 32. Two stems, stamped Elsdon Gateshead. Stem bore 2.9×3.0 mm. BAR 14: p. 169 c. 1811-90

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