V.

EXCAVATIONS IN THE BROCH AND HILL-FORT OF TORWOODLEE, SELKIRKSHIRE, 1950.

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Introduction: The Circumstances of Excavation.—The existence of a circular stone structure of the broch class within the hill-fort known as the Rings of Torwoodlee, near Galashiels in Selkirkshire, was first recognised in 1891, and in that year the interior of the broch was cleared to approximately floor-level. These operations produced a remarkable quantity of Roman pottery and glass fragments, as well as a coin of Titus and other objects (p. 108 below), all referable to a date late in the first century A.D.[1]

This mass of dated Roman material from a native structure seemed to offer a unique opportunity for placing the fort and broch in a firm chronological setting if their relationship could be established by excavation, and it was also desirable to determine whether the 1891 finds were in fact contemporary with the structure within which they were found, by re-excavating the broch floor and part of its wall. Examination of the site on the ground showed that the ditch encircling the broch impinged on the inner ditch of the hill-fort, and that the stratigraphical relationship of one to the other could be obtained by excavation at the point of junction. Excavations under the writer's direction were accordingly carried out in the summer of 1950, under the auspices of the Society of Antiquaries of Scotland and the Scottish Field School of Archæology, with the results described below.[2]

The Site.—The hill-fort and broch under consideration lie just below the summit of a hill on the estate of Torwoodlee, within the 800-foot contour, and with an extensive view across the valley of the Gala Water to the north, and southwards to its junction with the River Tweed and beyond this to the Eildon Hills some six miles away (Nat. Grid Ref. 36/466385). As is well known, the broch is one of the very few southern outliers of this class

[1] *P.S.A.S.*, xxvi (1891–92), 71. The coin was originally published as a "first brass of Vespasian," but on cleaning it proved to be a silver denarius of Titus (Macdonald, in *P.S.A.S.*, lxviii (1933–34), 29).

[2] Permission to excavate was readily given by Mr James Pringle, the owner, under whose encouragement the 1891 digging had also been carried out, and to him and to his son we are most grateful for help and co-operation. Six students from the Universities of Edinburgh, St Andrews, Glasgow and London took part in the excavations, Mr P. R. Ritchie (Edinburgh) acting as second-in-command, and Mr D. C. Baird (St Andrews) being responsible for carrying out a supplementary excavation after the main season was completed.

of structure, but only two miles away across the Gala Water is the Bow or Bowland Broch, on a conspicuous hilltop over 1000 ft. high (fig. 1).

The whole site, fort and broch, has been much mutilated by stone-robbing to build dykes: the 1891 excavators record that some 2000 cart-loads of stones were obtained in this manner in the middle of the nineteenth

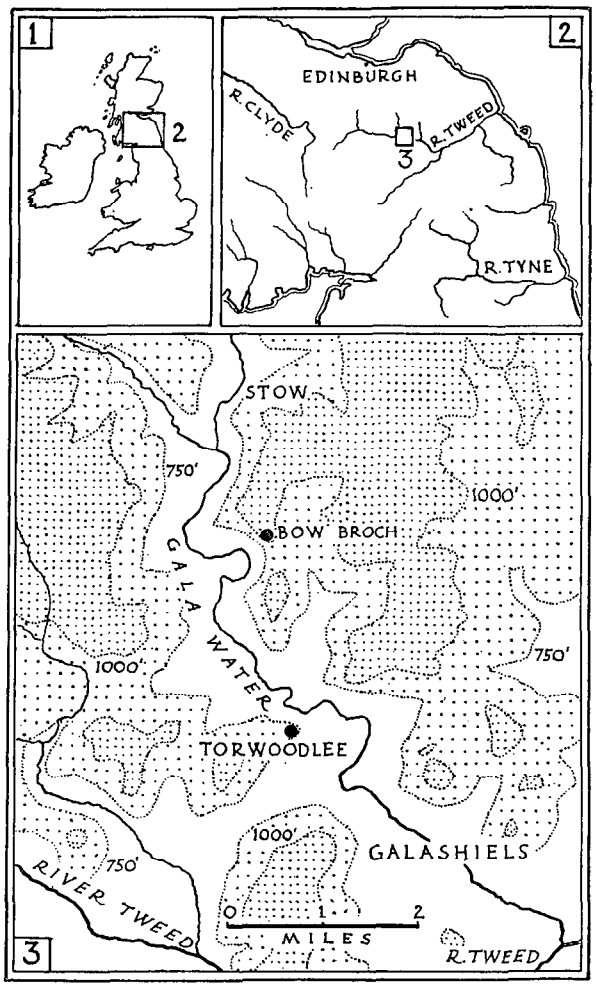


Fig. 1. Location of the Torwoodlee and Bow Brochs.

century. Further, the southern part of the fort area has been disturbed by surface quarries, and a segment of the defences removed by this means or by cultivation. Beyond the fort to the west are earthworks which have been connected with the presumed line of the Catrail, but it is impossible

to establish any relationship between this work and the fort, since at their nearest they are separated by an interval of at least 100 ft. To the south of the fort, on the cultivated slope of the hill, are irregular terraces which have been claimed as lynchets formed as the result of ploughing in early times,[1] but the uppermost of these is in fact the denuded and ploughed-over ramparts of the fort, and the remainder are not at all convincing as cultivation terraces and may be of natural origin.

The fort appears to have enclosed an irregularly oval area some 450 by 350 ft., with its longer axis approximately N–S. (fig. 2). The ground slopes W–E., and maximum defence is needed along the western side, where the ground continues to rise beyond the fort area. Here at least the defences seem to have been of double rampart-and-ditch construction, and continue in this manner round the northern side of the hill, but the southern and eastern portions are destroyed or mutilated beyond certain recognition. There may have been an original entrance on the east.

Within this fort the footings of a stone-built broch of normal type are now exposed against the inner side of the western defences. It has an internal diameter of 40 ft., with walls 18 ft. thick and an entrance to SE. It is surrounded by a ditch, visible on the surface, with a causeway opposite the broch entrance and on its western side coalescing with the inner ditch of the hill-fort and cutting through the inner rampart (figs. 2 and 3). The whole area of the fort is planted with trees, and at the time of the 1950 excavations the interior of the broch contained some 50 saplings which had grown since the clearance of 1891 and which had to be removed before work could begin.

The Excavations of 1891.—When first identified, the site of the broch was a more or less level platform within its encircling ditch, and the excavations, superintended by Mr James Wilson of Galashiels, took the form of tracing the outer wall face by means of a narrow trench following its line, and the clearance of the interior area as well as the entrance passage, a guard-chamber opening from it, and a wall-chamber on the SW., discovered in the course of clearance. This work, and the finds made, were reported upon by Mr James Curle in the paper in the *Proceedings* referred to above.

The inner area was found to be filled level with the wall footings, which stood to a height of from 2 to 3 ft., and consisted in most places of not more than two or three courses of facing stones on outside and inside, with a rubble core. When the internal filling of debris was removed, the central area of the broch "was found to be covered with a layer of ashes, marking the old floor-level. This layer was from 1 to 2 in. in depth. Under the superintendence of Mr Wilson these ashes were sifted and all relics of the inhabitants were collected." [2] The material is now in the National Museum

[1] *P.S.A.S.*, LXVII (1932–33), 70.
[2] *Ibid., loc. cit.*, 75.

of Antiquities of Scotland, and is discussed below (p. 105) in conjunction with the finds from the 1950 excavations. The dump of stones from the broch interior made by the earlier excavators is still visible outside the building to the NE.

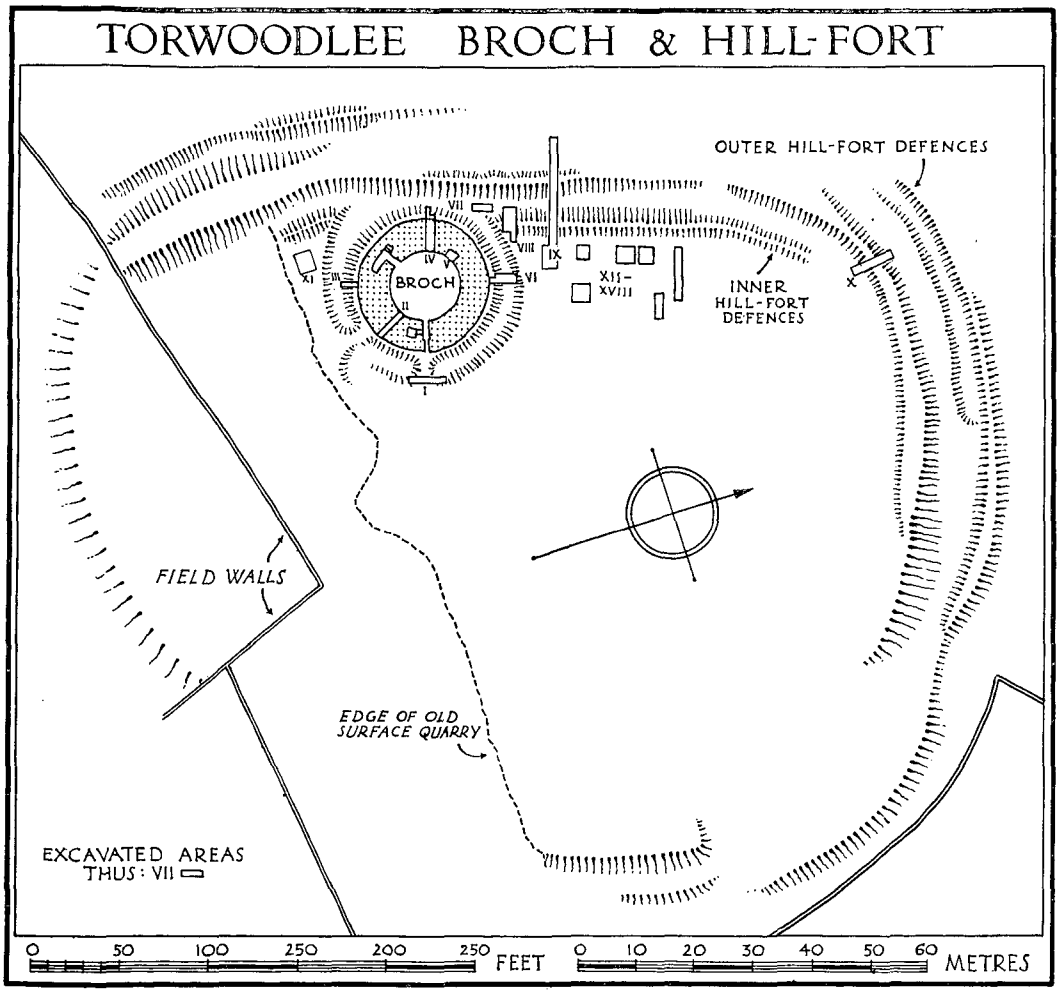


Fig. 2.

The Excavations of 1950–51.—The recent excavations were deliberately limited in scope, and were carried out primarily to ascertain the relation of the broch to the hill-fort, to reinvestigate the former in the hope of establishing more precisely the relation between structure and finds, and to explore its floor in case features survived such as post-holes unrecognised by the

earlier diggers. No attempt was made to examine the hill-fort defences in detail, except in so far as they were involved in relation to the broch.

A new survey of the site was made by the Royal Commission on Ancient Monuments for Scotland, on which fig. 2 is based, with their kind permission. A line passing diametrically across the broch through its entrance formed a convenient axis to which the lay-out of cuttings could be referred and the interior area divided into quadrants for stripping. In addition to this area, six cuttings (I–VI) were made to examine the structure of the broch and its ditch, one (VII) to determine the relation of the broch ditch to that of the fort, three (VIII–X) to examine the inner rampart and ditch of the fort with which the broch came in contact, and eight (XI–XVIII) to search for evidence of occupation outside the broch area but within the fort defences. These last cuttings were undertaken as a supplementary excavation by Mr D. C. Baird with students of the University of St Andrews in 1951, after the main work had been completed.

The excavations established the following sequence. Of the two structures on the site, the hill-fort was the earlier, of the Early Iron Age without trace of Roman contacts, and with it should be taken a timber-framed circular hut represented by post-holes within the central area of the broch. The wall of the latter was shown to overlie the site of the fort rampart on the west, and the broch ditch had cut through the partly silted ditch of the fort in the same region. The broch was associated with a dense scatter of Roman pottery and glass of the Flavian period, some of which was found to be incorporated in the structure of the wall and in a large central post-hole as well as over the internal area, though not in the post-holes of the hut referred to above. Before more than a minimal quantity of silt had accumulated in the deep V-section ditch of the broch, it had become filled with a tumbled mass of building-stones in a manner only explicable by deliberate destruction or slighting, and on the west a burial cist containing the remains of the skeleton of a young woman had been built in this ditch-filling during the process of the demolition of the broch.

The Inner Defences of the Hill-fort.—The inner rampart and ditch of the fort, with which the broch structures could be seen to come in contact on the ground, were examined in two cuttings north of the broch (VIII and IX, with its inner extension, XII), and in order to obtain details of the wall on the outer side of the ditch, robbed to its foundations in the region of Cutting IX, a further cutting, X, was made on the northern side of the fort where this feature was better preserved.

The innermost element of the defences consisted of a rampart of stones and yellow clay, now in a very denuded state (figs. 3 and 4). Its overall width was some 10 ft., and at the present time it stands no more than 2 ft. high. In Cutting VIII it could be seen that height had been added to the

rampart by scarping the ground on its inner side, and this was still more marked in Cutting IV, where remains of the rampart, and of a considerable scarped area, were found beneath the broch wall.

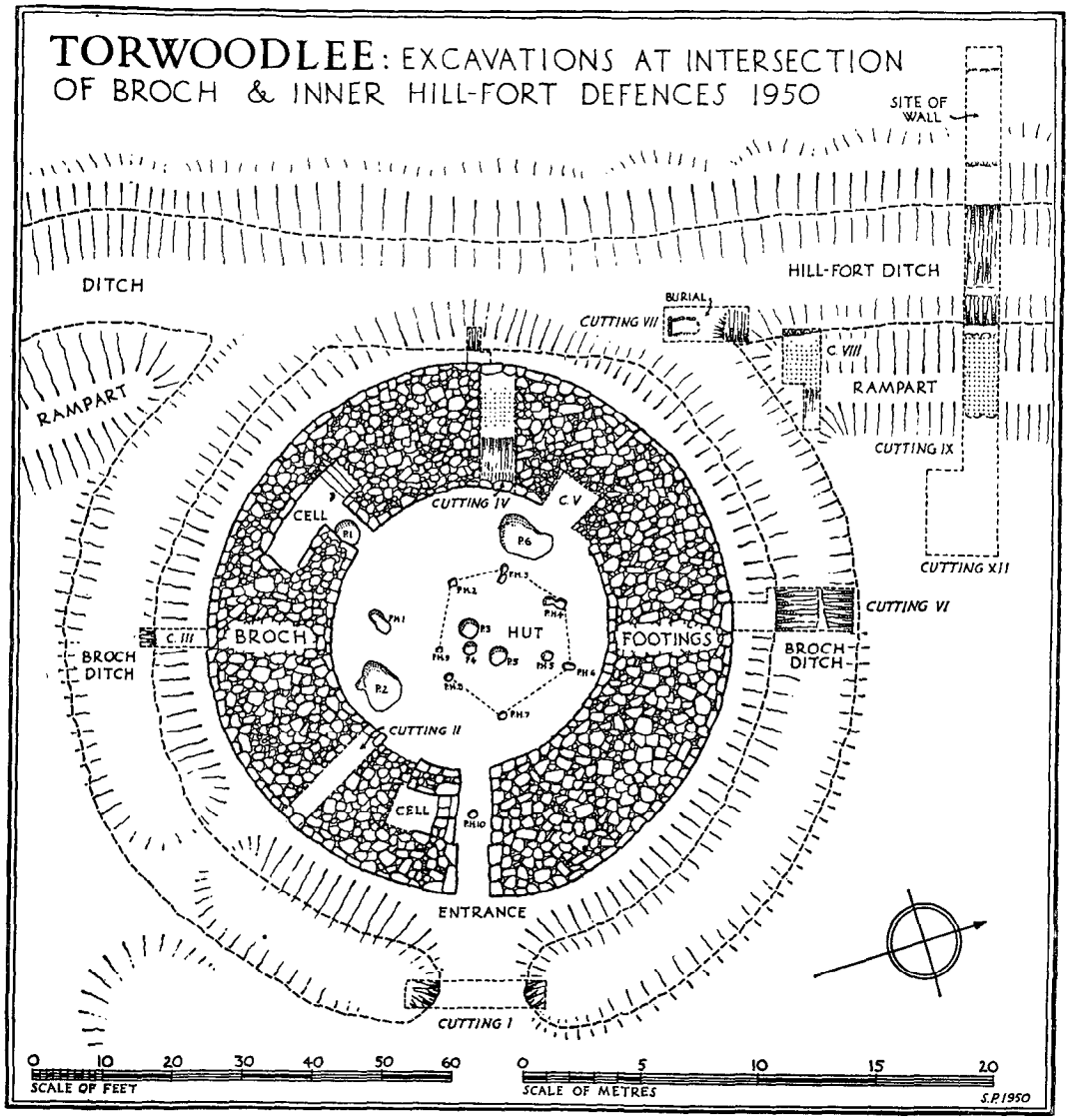


Fig. 3.

Outside this was a V-section ditch from which the rampart material had been derived, 4 ft. 6 in. deep below the natural ground-surface and 10 ft. wide. It contained on its outer side stones which had fallen in from

some outer wall or similar defence, included among which were fragments of the upper stone of a rotary quern (p. 109 and fig. 10 below). Above this stony fill was silt from both sides of the ditch.

The natural rise in the ground caused the outer side of the ditch to form a long glacis slope, on the level ground above which was the shallow robbing-trench of a stone wall or stone-faced rampart, some 12 ft. broad. In order to examine this feature in a better state of preservation, Cutting X was made on the northern side of the fort (fig. 4). Here three courses of an outer wall facing were found still preserved, backed by what could have been either a rubble rampart or the rubble core of a wall from which the inner face had been robbed. At all events the structure would have provided the tumbled stones found in the ditch in Cutting IX.

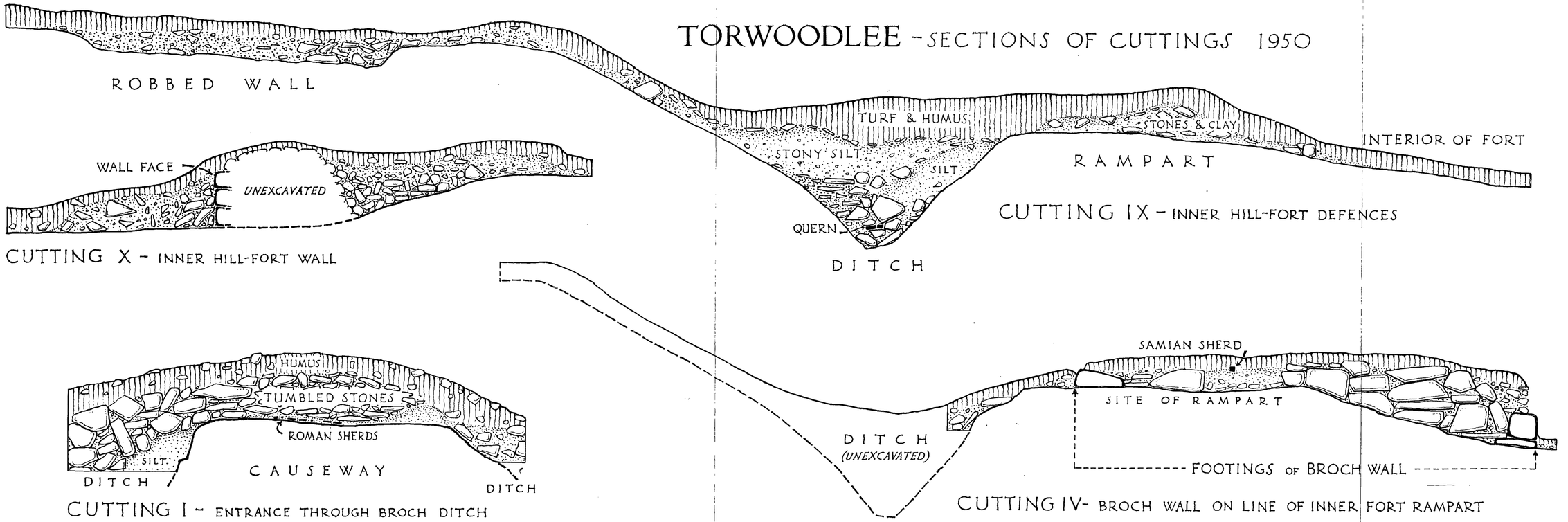
Early Structures within the Broch.—Although the area within the broch had been cleared out in 1891, it was felt that there was a reasonable chance that the actual undisturbed subsoil would not have been systematically searched for features such as pits and post-holes. Accordingly, after the removal of the saplings, this area was re-examined in 1950. It was soon found that the earlier excavators, having removed the dark ashy layer referred to above (p. 94), had stopped short, and that the real undisturbed floor of natural soil was intact beneath a layer of some 6–9 in. of stones and earth, containing a scatter of Roman pottery and glass fragments, evidently derived from the denser accumulation found in the layer above. In the old surface various features were found, consisting of pits and post-holes (fig. 5). Charcoal of oak, birch, alder and willow was found on the old surface and in the pits and post-holes (see Mr Orr's report, p. 115).

Of these features, Pits 1, 2 and 3 contained Roman sherds and are described at a later stage (p. 102). Pit 4 was a hearth with alder and willow charcoal on superimposed burnt clay floors (fig. 6), Pit 5 yielded no finds, and Pit 6 was a modern excavation, doubtless dating from 1891, and containing as archæological evidence of this date a much rusted tin billy-can and the metal ferrule of a walking-stick.

In addition, nine post-holes were found which, with the exception of Post-hole 1, were concentrated on the NE. side of the broch floor, and of these nos. 2, 3, 4, 6, 7, 8 and 9 can be interpreted as those of the main posts of a timber-framed circular or polygonal hut approximately 20 ft. in diameter, with its entrance, 4 ft. wide, between Post-holes 8 and 9 on S. It is possible that another post stood on the east side of the hut in a position now occupied by a tree which could not be removed during excavation (Pl. VII, 1 and 2).

Post-holes 3 and 4 were double, implying replacement, and in the upper part of the filling of the shallower part of no. 3 were fragments of Roman glass. Near no. 4 was a scatter of burnt clay daub bearing the impressions of wattling, and charcoal of alder and willow was in the post-hole; similar fragments of daub were again found between Post-holes 6 and 7, and outside

TORWOODLEE - SECTIONS OF CUTTINGS 1950



Stuart Piggott.

Fig. 4.

[*To face p. 98.*

the broch area in Cuttings XII, XIII and XVII. Within the area of the hut were the hearth (Pit 4) and Pit 5, already mentioned, Post-hole 5

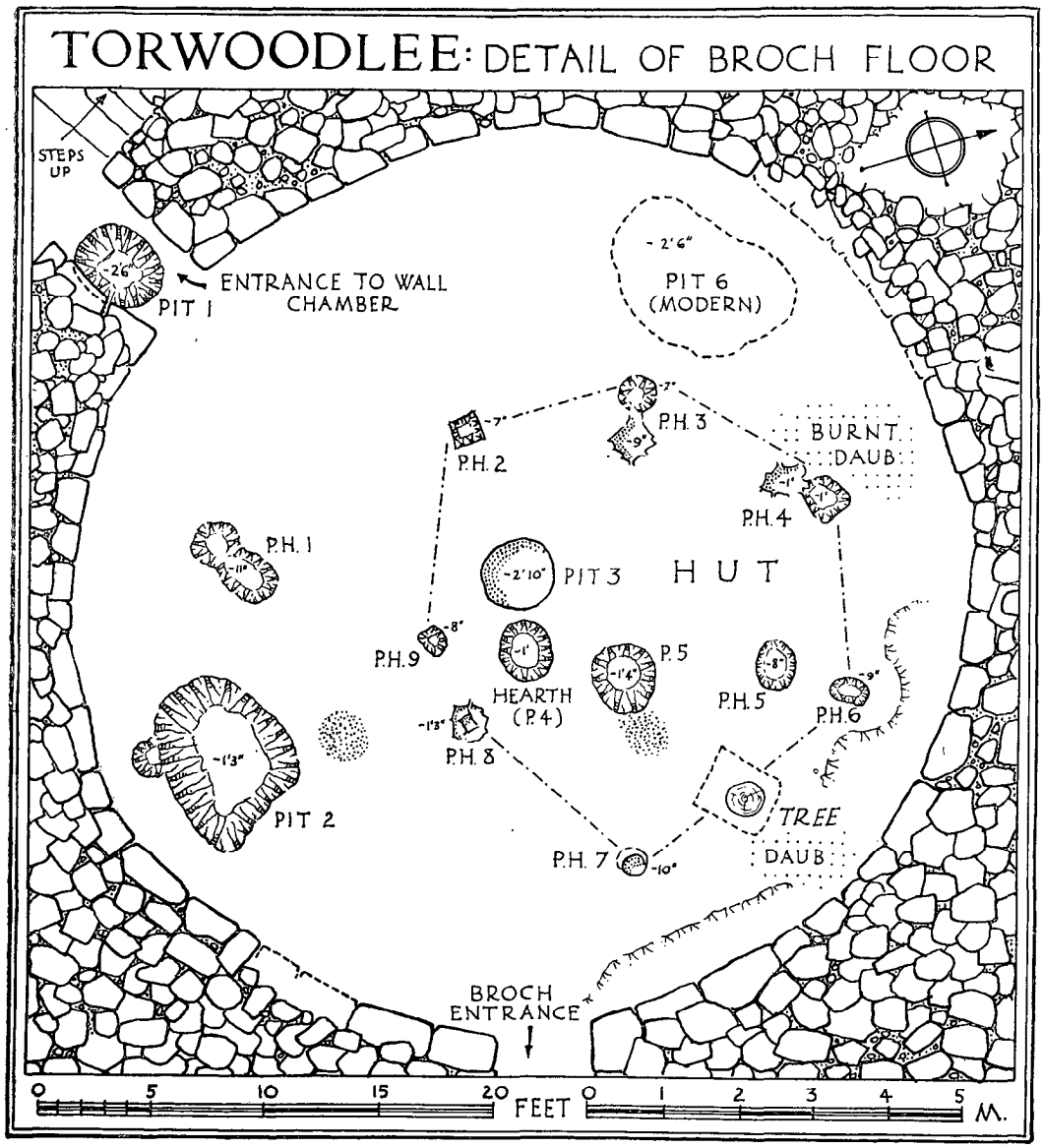


Fig. 5.

(near no. 6) and the Roman Period Pit 3, central to the broch structure. If the hearth is to be considered as contemporary with the hut, it occupies a

curious position immediately within the assumed doorway. It contained, in its lowest layers, fragments of pottery of native Early Iron Age type (see below, p. 105).

The eccentric position of the post-hole setting to the broch, and the virtual absence of Roman material from any of the features, implies that we are dealing with a building which antedated the construction of the broch, which as we shall see is to be associated with the use of plentiful Roman pottery and glass on the site. Furthermore, the features in question were beneath a layer of stones and earth which must have separated them from the ashy layer of 1891, which appears to have been an occupation layer of the broch period: this is well shown in the hearth, Pit 4 (fig. 6).

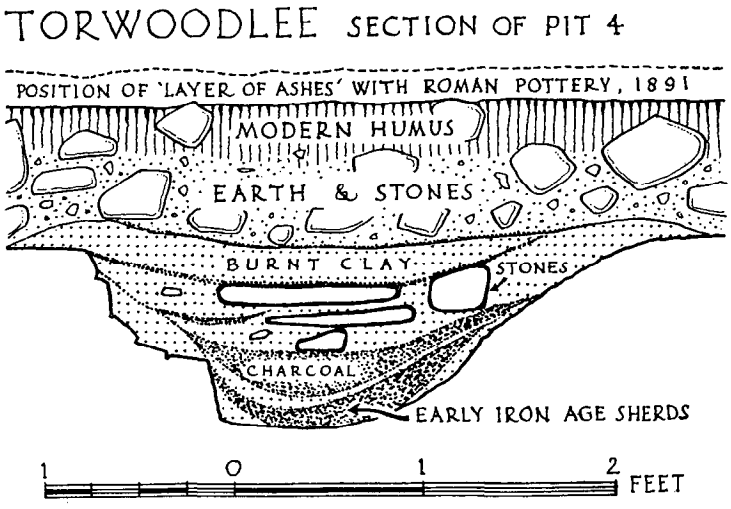


Fig. 6.

It is therefore reasonable to assume that the hut is contemporary with the hill-fort at Torwoodlee, lying immediately within its inner rampart. In the hope of finding further evidence of such buildings, or of occupation debris indicative of settlement at the period of the hill-fort, the supplementary Cuttings XI–XVIII were made within the inner rampart close to but outside the broch area. No evidence was in fact found, in the form of post-holes or of occupation material, except burnt daub in Cuttings XII, XIII and XVII, and one native sherd in Cutting XII, and the total absence of Roman finds is significant in contrast to their abundance within the broch itself.

The Broch.—All the main structural features of the broch had been determined and exposed during the 1891 excavations. The wall, 18 ft. thick, was built with massive facings of large blocks outside and inside, and the core of the wall consisted of varying admixtures of rubble, earth

and large blocks comparable to those used for facing. It nowhere remained more than about 3 ft. high, and from one to three courses of facing blocks survived (Pl. VII, 2). The single entrance, opening to SE., was 6 ft. wide, with the normal door-checks 8 ft. from the outside and a lateral cell or guard-chamber opening from the southern side over a sill (Pl. VII, 3). The walls of this cell were badly robbed and it was difficult to trace its original outlines. A second cell or wall-chamber opened from the central area on SW., with a short passage leading to a rectangular cell set laterally in the wall, measuring 13 by 5 ft. and with stairs at its NW. end evidently originally leading to a wall-passage. The internal area of the broch is a nearly true circle of 39 to 40 ft. diam., with Post-hole 3 already referred to at its centre. The overall diameter of the broch is 76 ft. Apart from its large internal diameter, the Torwoodlee broch is in general a representative example of the class, and for its relationships in dimensions and structural features one may refer to Mr Angus Graham's study.[1]

The 1950 excavations included the examination of the actual wall of the broch in two main and one subsidiary cutting. Cutting II, radial to the wall on S. side of the entrance, showed that the guard-chamber, the termination of which is uncertain, did not extend thus far: the wall make-up was of large stones and earth, and in this material was a rim sherd of a Roman jar of bluish-grey ware, further fragments of which had been found in 1891 in the central area of the broch (p. 111, fig. 11). Cutting V was a small excavation made on NW., where a favourable opportunity presented itself owing to the robbing of the inner wall face. Here the make-up was more earthy and with smaller stones than in Cutting II, and a fragment of Roman glass was found in the wall material near its base.

Cutting IV, diametrically opposite the entrance to the broch, was made primarily to determine the relationship of the broch to the hill-fort rampart, since at this point the wall of the former appeared to overlie the line of the latter. The cutting (figs. 3 and 4) showed that the wall, here of massive construction throughout, was built up on its inner side over the internal scarping which, as we had seen in Cutting VIII, had been made to increase the apparent height of the inner rampart of the hill-fort, and that, above this scarping, a fragment of the rampart material, of characteristic yellow clay with stones, survived in the substance of the broch wall. On top of this fragment of the denuded rampart was a sherd of a Roman Samian platter (Form 18 or 15/17), which joins with another sherd of the same vessel found in 1891 within the central area.

Within the broch are certain features which appear to be related to its construction. The status of Post-hole 10, central to the entrance passage 4 ft. 6 in. within the line of the door-checks, is uncertain, but it may have been connected with the door of the broch (Pl. VII, 3). Within the central

[1] *P.S.A.S.*, LXXXI (1947–48), 48.

area we have already seen that certain pits and post-holes contained Roman pottery. Pit 1 was situated in the entrance to the wall cell, and can hardly have been contemporary with the use of the broch: indeed, the left-hand wall of the entrance to the cell partly overlay the pit, which must have been filled in at the time of building. It contained sherds representing at least three Roman jars of buff or grey ware, and charcoal of alder and willow. Pit 2, a large shapeless hollow, contained sherds of a Roman carrot-shaped amphora and a chip of plain Samian, the amphora fragments corresponding to other sherds found on the broch floor in 1891 and 1950. Pit 3, central to the broch area, was a well-cut cylindrical hole, of 3 ft. diam. and 2 ft. 10 in. deep, of quite different character from any of the other pits and post-holes within the broch. It appeared to have been deliberately filled with stones and earth, and flat slabs set horizontally, and contained, in addition to two rubbers or whetstones, a sherd of a Samian platter (Form 18 or 15/17) near the bottom of the hole, two fragments of amber glass, and charcoal of alder and willow.

The interpretation of this evidence is not altogether straightforward. There is no doubt that the broch was built over the remains of the hill-fort inner rampart and, as we shall see, its ditch cut into that of the fort. The problems arise with the Roman pottery and glass, present in quantities most unusual on a native site in southern Scotland, and to the exclusion of Early Iron Age wares or other objects, for the bronze terret and enamelled stud found in 1891 need not necessarily be associated with the Roman material, but could have come from the earlier occupation implied by the hill-fort and the timber-framed hut found in 1950. It seems reasonable to assume that the dark layer containing Roman material found by the 1891 excavators represented some sort of occupation deposit belonging to the broch builders, and that the further fragments of Roman pottery and glass found in 1950 in the stones and earth covering the undisturbed natural soil were derived from this and partly incorporated in what must have constituted the actual floor of the broch. Pit 2 may well be an exploratory hole of 1891, similar to Pit 6, containing Roman material from the disturbed soil through which it was dug, but without the tell-tale modern objects in its filling. But Pit 1 and its contained Roman sherds must antedate the construction of the broch, if only by a very short time, while Pit 3, which could be regarded as a well-cut post-hole of large size, must from its position in the true centre of the broch be regarded as integral with it, and again containing Roman material. It can hardly, however, have held a central roofing-post to support rafters 20 ft. and more in length converging upon it from the circumference of the 40 ft. diam. circle, and indeed it is noteworthy that no evidence for the roofing of the broch exists.

The presence of Roman pottery or glass in each of the three cuttings into the broch wall makes it certain that such material was present on the site

at the time of the building of the structure, and the fact that two sherds from two separate locations belong to vessels represented by further fragments found on the broch floor demonstrate this even more strikingly. Roman pottery was further scattered on the floor of the guard-chamber, in the entrance passage, and on the causeway across the broch ditch opposite this, but not a single sherd was encountered in any of the many cuttings made outside the area of the broch and ditch. The association of the Roman pottery and glass with the constructors of the broch seems therefore certain.

The Broch Ditch.—It could be seen before excavation that the broch stood within a penannular ditch with a causeway opposite the broch entrance. On the west, this ditch cut through the inner rampart of the hill-fort at two points, merging with the hill-fort ditch for a length of some 60 to 70 ft. The overall diameter of the broch ditch to its outer edge is about 115 ft., and the broch is set centrally within it, its outer wall face being separated from the inner edge of the ditch by a narrow berm of some 8 ft.

A cutting was made across the ditch on N. side (Cutting VI), and it was found to be V-sectioned, 5 ft. 6 in. deep and 12 ft. across, its lower part being quarried out of rock (fig. 7 and Pl. VIII). A cutting (I) was also made to determine the entrance causeway, which was found to be 10 ft. wide, with sherds of Roman storage jars trampled into its surface and overlaid by tumbled stones (fig. 4).

The filling of the ditch was unexpected and extraordinary, for, with the exception of a few inches of silt in the narrow bottom, it was almost wholly packed with huge stones tumbled in from the inner side, lying in disorder with large air-spaces between. The stones were clearly those of the broch wall, and their disposition in the unsilted ditch could only be explained by deliberate destruction soon after the ditch had been dug. The broch had been slighted, and in a peculiarly methodical and ruthless manner. No finds were made in the filling of Cutting VI except a few Roman sherds, including fragments of an amphora-handle comparable with material from the broch floor.

The physical difficulties of excavation presented by this filling of huge blocks precluded further examination of the broch ditch except at its critical junction with that of the hill-fort in Cutting VII (figs. 8 and 9). Here the same tumble of blocks from the destroyed broch was encountered, and it was possible not only to obtain the slopes of the fort and broch ditches intersecting in plan, but also to see in section that the latter had cut through the silted-up hill-fort ditch, the filling of broch stones lying against the stones and silt in the fort ditch, and spreading over the upper surface of this silt as it lay clear at the time of the destruction. The broch ditch then must have been dug at a time when at least three feet of silt and stone debris had accumulated in the abandoned ditch of the hill-fort defences, and,

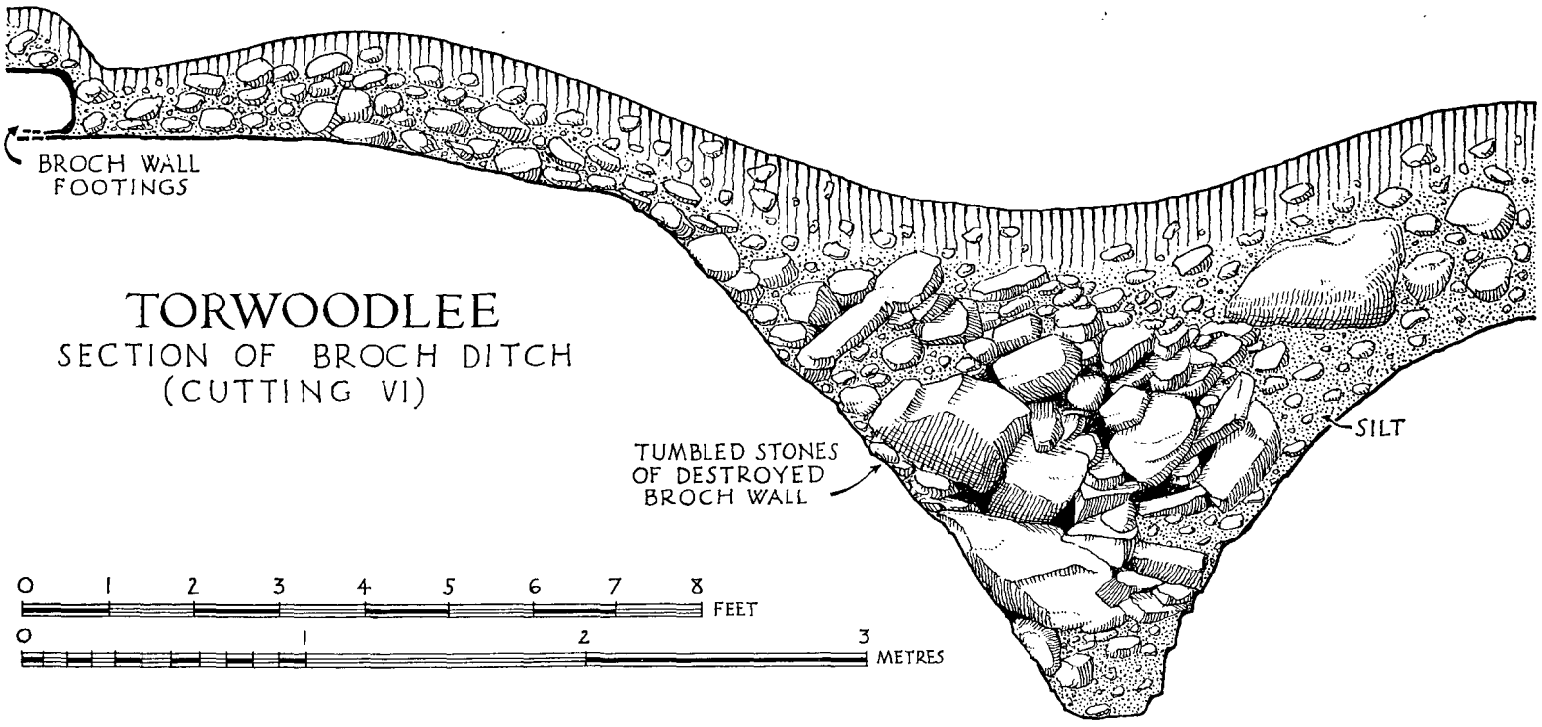

BROCH WALL
FOOTINGS
TORWOODLEE
SECTION OF BROCH DITCH
(CUTTING VI)
TUMBLED STONES
OF DESTROYED
BROCH WALL
SILT
0 1 2 3 4 5 6 7 8
FEET
0 1 2 3
METRES

Fig. 7.

as in Cutting VI, there was evidence that the destruction of the broch must have taken place very soon after this.

The Burial Cist.—A totally unexpected discovery was made in the course of the excavation of Cutting VII, in the form of a massive burial cist constructed among the stones in the broch ditch (Pl. IX). The long axis of the cist lay NE.–SW., and since its presence was wholly unsuspected, some stones at NE. end were probably removed before its nature was realised. Its length appears to have been about 5 ft., its width 1 ft. 9 in. and its internal height the same. It had been constructed midway in the ditch filling, with its floor of the irregular blocks tumbled in from above, and its sides made either by slabs on edge or by blocks laid roughly horizontally to form walling, with a massive end-slab at SW. but some form of walling at the opposite end. The roofing was made of thin overlapping slabs laid across the width of the cist. Within the cist were the remains of a female skeleton represented by the skull in fair preservation at the NE., and a fragment of the left humerus nearby, and a piece of the right humerus near the SW. end of the cist. The skeleton may have been laid on its back, with the legs slightly flexed. There were no other finds with the bones. (See Dr L. H. Wells's report on the bones, p. 116.)

Constructionally, the cist was bonded into the stone filling of the broch ditch, and must have been built *pari passu* with the deposition of the blocks there, thus reinforcing the evidence for the filling being deliberate, and not a haphazard tumble from a slowly decaying structure.

The Finds.

It is convenient to consider the finds from the 1950 excavations in connection with those found in 1891, and indeed in the most abundant material, the Roman pottery and glass, it is impossible to separate the two groups since fragments representing the same vessels were found in both excavations. I am much indebted to Dr K. A. Steer for his report on the Roman pottery, and to Dr D. B. Harden for that on the glass, which are printed below.

Early Iron Age Pottery.—While some of the fragments of burnt clay daub found in the region of the earlier hut within the broch bore a deceptive resemblance to coarse pottery, the only undoubted sherds in the broch area were found in the lowest charcoal layer in the hearth, Pit 4. They are small, with no features of rims or bases, but in their rather hard, sandy texture they compare well with the pottery from Hownam Rings, Roxburghshire, associated with the multiple ramparts of the hill-fort, and there assigned to the early first century A.D.[1]

A single sherd of pottery was found at a depth of 6 in. in Cutting XII

[1] *P.S.A.S.*, LXXXII (1947–48), 193–225, esp. 214.

during the supplementary excavations of 1951. It is of hard, hand-made ware, 0·25 in. thick, and is red throughout, with a smoothed interior and an

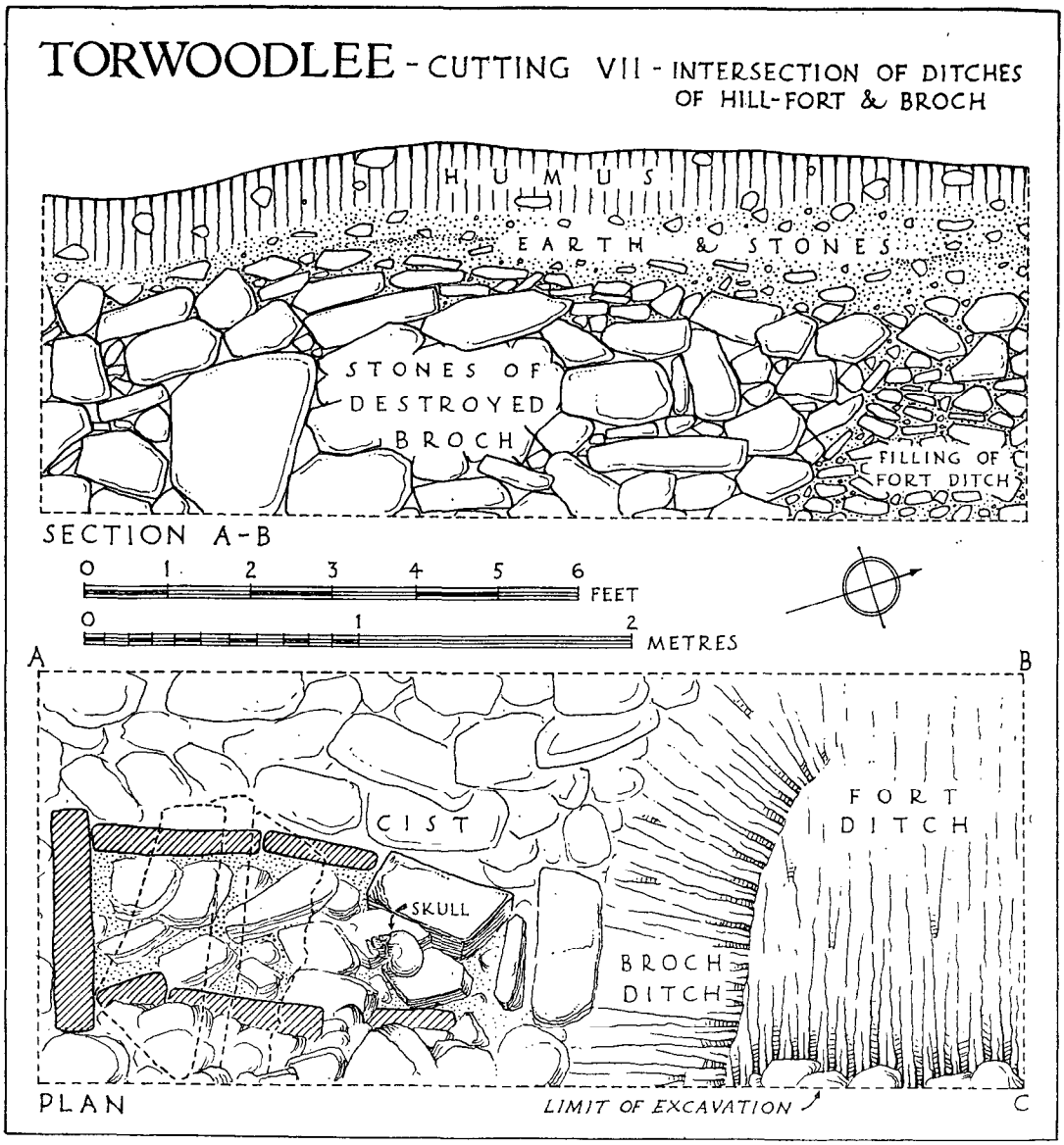


Fig. 8.

almost burnished outer surface. It is certainly non-Roman, but without parallels in the Scottish Iron Age wares as known at present, and there is a

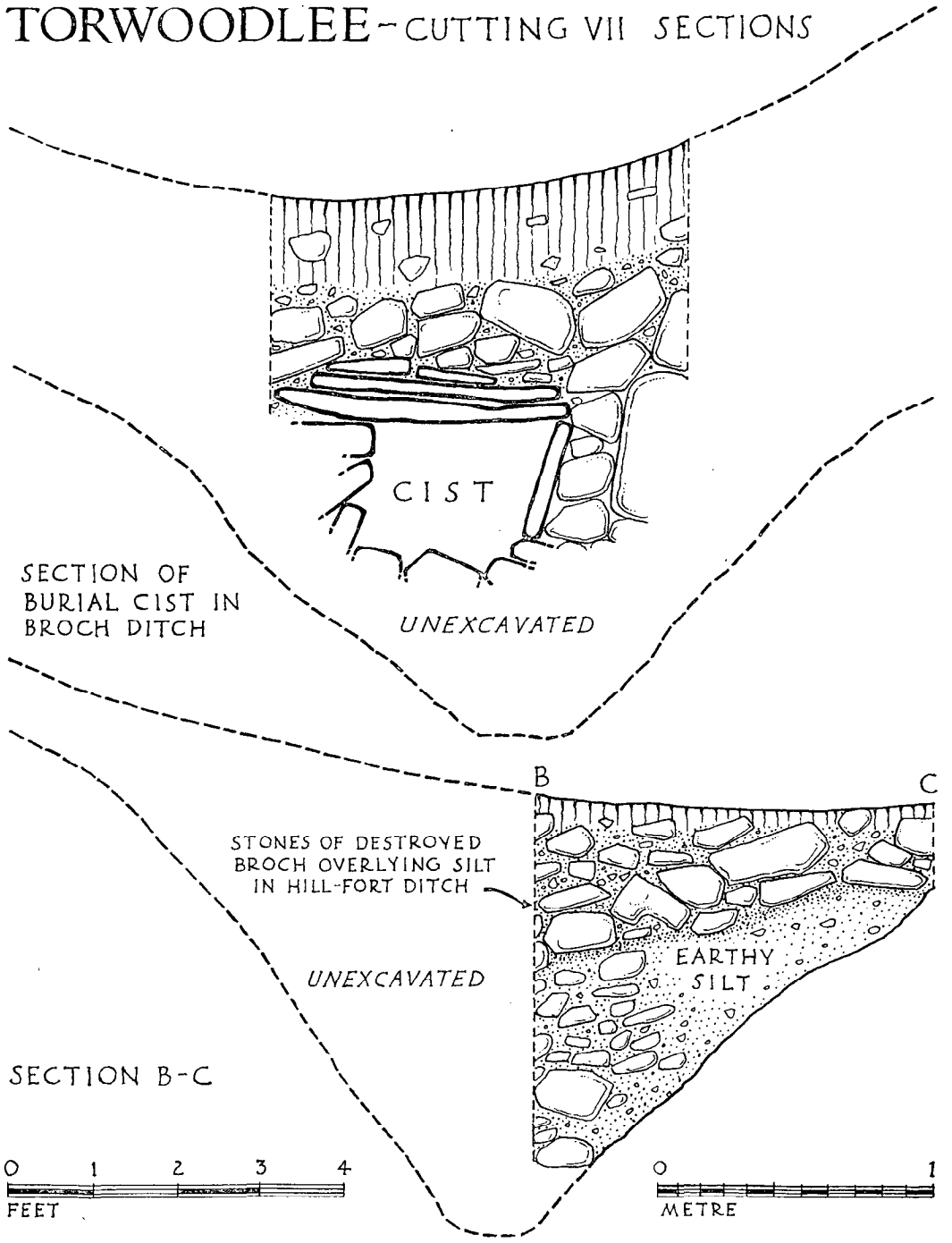

TORWOODLEE - CUTTING VII SECTIONS
CIST
SECTION OF BURIAL CIST IN BROCH DITCH
UNEXCAVATED
B
C
STONES OF DESTROYED BROCH OVERLYING SILT IN HILL-FORT DITCH
UNEXCAVATED
EARTHY SILT
SECTION B-C
0 1 2 3 4
FEET
0 1
METRE

Fig. 9.

possibility of connection with the red hæmatite-coated wares of the Iron Age A culture of southern Britain.

Early Iron Age Metal-work.—Two objects of Early Iron Age bronze-work were recovered in 1891, and are illustrated in the original report cited above (p. 94). The first is a *terret* with flat cross-bar and simple bow without knobs, of a type discussed by Fox in connection with an example from the Llyn Cerrig Bach hoard.[1] In addition to examples cited by him from Hunmanby, E.R., Yorks, and from the Middlebie hoard in Dumfriesshire, such terrets have been found in the Roman sites of Corbridge [2] and Ardoch, Perthshire.[3] Broken examples may be impossible to distinguish from the knobbed variety,[4] and such fragments of ambiguous type may be noted from Maryport,[5] Chesters,[6] and Carry House Camp, Birtley.[7] At all events the terret from Torwoodlee is one of a North British family with Brigantian affiliations, and probably in the main, as Fox suggested in the instance of the Llyn Cerrig terret, of the early first century A.D.

The second bronze object from Torwoodlee is an *enamelled stud*, circular, of 1 in. diam., with a central rounded pin-head and the remains of red enamel over its surface. The use of enamel is usually considered to be a Belgic innovation in British bronze-work, and the large area of a single colour, red, and the central pin which suggests a reminiscence, at no great remove, of functional pins holding down the studs of red coral which the enamel imitated, would argue a relatively early date in any sequence of enamelling techniques in British Iron Age metal-work. It should, for instance, be earlier than the use of enamel of different colours in small angular cells, copied from Roman exemplars, as seen in Scotland for instance on the well-known Birrenswark horse-bit,[8] and in other pieces of northern metal-work such as the Embleton sword-scabbard.[9] A date early in the first century A.D. would then be appropriate for the Torwoodlee enamel.

Glass Armlet Fragment.—A fragment of an armlet of D section, of yellowish-green glass with opaque yellow inlay, was also found in the 1891 excavations, and has been discussed by Kilbride Jones.[10] He shows that its nearest parallel is an armlet fragment from the Milking Gap native settlement in Northumberland, which can be dated to the second century A.D., but that the type certainly goes back to the late first century. Their distribution is mainly between the two Roman Walls, and there is reason to think that they may have been manufactured at Traprain Law from reused Roman glass.

[1] *A Find of the Early Iron Age at Llyn Cerrig Bach* (1946), 35–37, 79.
[2] Corbridge Mus.
[3] *P.S.A.S.*, XXXII (1897–98), 461.
[4] Leeds, *Celtic Ornament* (1933), 125. Half a dozen additional examples could now be cited, almost all between the two Roman Walls.
[5] *Trans. C. and W.*, N.S., XV (1915), pl. xi, opp. p. 169.
[6] Chesters Mus., no. 2960.
[7] Alnwick Castle Mus., no. 278.
[8] *P.S.A.S.*, XV (1880–81), 320, fig. 4; Leeds, *Celtic Ornament* (1933), 116.
[9] *Proc. Prehist. Soc.*, XVI (1950), 20.
[10] *P.S.A.S.*, LXXII (1937–38), 366, 389.

The terret, enamelled stud and glass armlet described above were all found during the 1891 clearance of the broch interior, and there is no reason why they should not, in fact, be contemporary with the late first-century Roman pottery and glass found at the same time. On the other hand, the presence of a pre-broch phase on the site, represented by the hill-fort and the timber-framed hut within the broch area, renders it possible that at least the terret and stud could belong to this period of occupation. No certainty can be arrived at, but it is noteworthy that all three objects are of types proper to the pre-Roman and Roman Iron Age of the Scottish Lowlands—the terret of a type well known in the area, the stud in the early red enamel style as shown, for instance, on such pieces as the Eckford cheek-piece [1] and the Auchendolly terret,[2] both imports from southern England, and the glass armlet of local type and perhaps of local manufacture. Though the broch itself represents an intrusive type of defensive architecture having its origins and maximum concentration in W. and N. Scotland, the native objects found in it are no more characteristic of the broch culture than are those of Roman origin.

The Quern from the Hill-fort Ditch.—Nearly in the bottom of the hill-fort ditch in Cutting IX were found fragments making up about half the upper stone of a rotary quern of tuff (fig. 10). It is difficult to quote parallels for this flat form with slightly hollow upper surface, but it is something quite

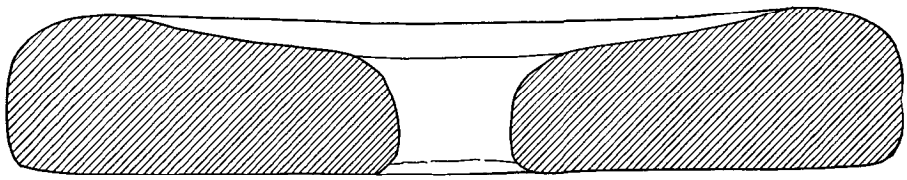


Fig. 10. Upper stone of quern from hill-fort ditch. (¼.)

distinct from the beehive or "bun-shaped" series known from several native Iron Age sites in the eastern Scottish lowlands.[3]

Fragments of Wooden Vessels from the Broch Area.—From three locations on the old surface of the broch floor came fragments of carbonised wood which appeared to be parts of turned or carved wooden bowls. There is little doubt about the fragment from the region of Post-holes 3 and 4, which is part of the simple curved side of a vessel from 1·0 to 1·5 cm. thick, and the other two fragments, from between the entrance of the broch and Post-hole 7, are less certainly similarly derived. It is impossible to assign these

[1] *P.S.A.S.*, LXVI (1931–32), 365.

[2] *Ibid.*, XX (1885–86), 396.

[3] *Cf.* the comments on the Bonchester quern, *P.S.A.S.*, LXXXIV (1949–50). Mr F. W. Anderson of H.M. Geological Survey comments that such tuffs are found associated with the felsitic and rhyolitic rocks of the Pentland Hills and in the Eildon complex (*e.g.* the Chiefswood volcanic neck at Melrose).

interesting pieces to a definite phase of occupation on the site, and they may be associated either with the early hut or the subsequent broch. At all events they are welcome pointers to the wooden vessels which must have been used by the native population of Early Iron Age Scotland in all areas and in all cultures. There have been a few previous records of such wooden objects in like contexts, notably the fragment of a lid and of an oval bowl from Castle Law, Abernethy,[1] the "wooden dish or scoop with everted rim . . . about 5 inches in diameter and 2 inches in depth" from the Broch of Ousedale,[2] the wooden trough from Lochlee,[3] and the fragments of a decorated vessel from the earth-house at Castle Newe.[4] The general place of such vessels in prehistoric European technology has been discussed by Grahame Clark,[5] and new finds are likely wherever natural conditions and the technique of excavation are favourable.[6]

The Roman Pottery from Torwoodlee. By K. A. STEER, M.A., Ph.D.

The Roman pottery found in the broch in 1950 is of the same general character as that recovered in 1891,[7] many vessels being represented in both groups. All the Roman pottery from the site has therefore been included in the following catalogue, which is divided into two parts. Part A lists the sherds found in 1950, and an asterisk placed after a serial number indicates that one or more pieces of the same vessel were discovered in 1891. Part B comprises the residue of the sherds found in 1891, *i.e.* those which are not duplicated in the 1950 group. Ignoring indeterminate scraps, the maximum number of vessels included in both groups is seen to be 21. It is probable however that this figure should be slightly reduced since, though it cannot be proved, it is unlikely that all the Samian pieces separately listed in the catalogue represent individual vessels.

A. *Pottery found in 1950.*

Broch Floor.

1. Fragment of rim of Samian F. 18.
2. Fragment of base of Samian F. 18 or 15/17.
3. Wall fragment of Samian platter.
4*. Wall fragment of buff storage jar or flagon.
5*. Many fragments, including parts of the handles, of a carrot-shaped amphora.

Also indeterminate scraps of grey ware and a chip of plain Samian.

[1] *P.S.A.S.*, XXXIII (1898–99), 32.
[2] *Ibid.*, XXVI (1891–92), 355.
[3] *Ibid.*, XIII (1878–79), 197. For the type, *cf.* Sayce, in *ibid.*, LXXIX (1944–45), 106, and note 7 below.
[4] Dr Grierson's Museum, Thornhill; unpublished.
[5] *Prehist. Europe* (1952), 212–17.
[6] As recently at Stanwick, Yorks, *Ant. Journ.*, XXXII (1952), 12, with references to Lochlee, Glastonbury and the Roman fort of Caersws.
[7] *P.S.A.S.*, LXVI (1931–32), 367–68.

Broch Floor in Entrance Passage.

6*. Two wall fragments of a globular amphora.

7*. Three wall fragments of a mortarium in soft whitish ware.

Also several wall fragments of no. 4.

Guard-chamber Floor.

Five wall fragments of no. 4.

Pit 1.

8. Rim of dark grey fumed jar (fig. 11).

9. Rim of grey jar similar in section to no. 8.

10. Rim of buff jar (fig. 11).

Also scraps of grey ware, probably from no. 8 or 9.

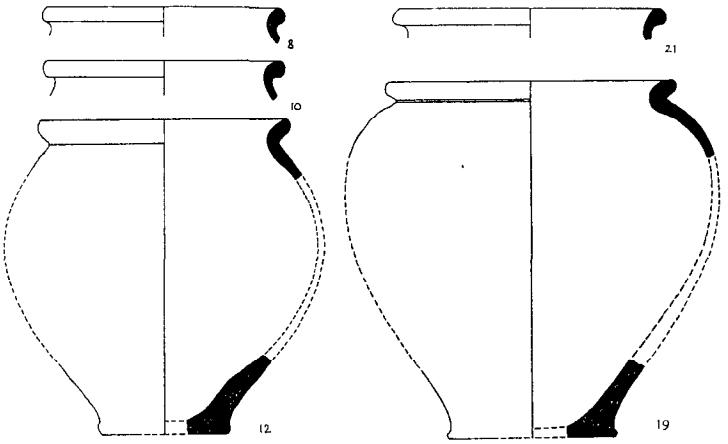


Fig. 11. Roman pottery from broch. (¼.)

Pit 2.

Fragments of no. 5 and of grey ware; chip of plain Samian.

Pit 3.

11. Base fragment of Samian F. 18 or 15/17.

Cutting II through Broch Wall.

12*. Rim of jar in dark bluish-grey ware, whitish in fracture (fig. 11).

Cutting IV through Broch Wall.

13*. Base fragment of Samian F. 18 or 15/17. This is not from the same vessel as no. 11, but joins on to one of the two similar fragments found in 1891. The other of these two fragments cannot now be traced.

Cutting I across Causeway of Broch Ditch.

Numerous fragments of no. 4.

Cutting VI across Broch Ditch.

14. Fragments of a hard smooth pinkish-red vessel.

Also fragment of the handle of a globular amphora, possibly the same vessel as no. 6.

B. *Roman Pottery found in 1891.*

15. Wall fragment of Samian F. 18.
16. Fragment (now lost) of the side and rim of Samian F. 15/17.
17. Two rim fragments of a cup or beaker in reddish-brown ware.
18. Fragments of one or two storage jars or flagons similar to no. 4.
19. Fragments of the rim and base of a very hard gritty jar with blackish surface and reddish-brown core (fig. 11).
20. Wall fragment of jar in soft coarse red ware.
21. Rim of pinkish-buff jar (fig. 11).

Conclusions.—All the above pieces seem to be pre-Hadrianic, and all could be Flavian. In particular, the carrot-shaped amphora, a Claudian-Neronian type which is rarely found in the north, can hardly be dated later than the Flavian period.

The Roman Glass from Torwoodlee. By D. B. HARDEN, M.A., Ph.D.

A. *Glass found in 1950.*

Broch Floor. There are numerous fragments of *green glass*, but nothing of special note. All come from bottles; there is no window glass among them. Again, it is noteworthy that many are fused and misshapen in a hearth or similar fire.

Amber glass is represented by a group of fragments of the body of a ribbed jug; three have been fused and misshapen in a fire, and some show portions of ribbing. The general type is as Thorpe, *English Glass*, pls. iii, *a*, *c*, or IV, *a*, *b*, *d* or *f* (the last being of similar amber glass). The two fragments of amber glass from Pit *3* may well come from the same vessel as those from the broch floor.

Pit 3. Amber glass; two fragments of body, probably from a ribbed jug, as one fragment seems to show a slight thickening which may be the end of a rib.

Post-hole 3. Two fragments of the body of a large cylindrical bottle of green glass, and a group of tiny fragments of heavily strain-cracked colourless glass, presumably all from the same vessel, but the shape of the vessel is quite indeterminable.

Cutting IV through Broch Wall. Two indeterminate green glass fragments, presumably each from a bottle.

Cutting V into Broch Wall. Fragment of neck of bottle, green glass; one edge has been accidentally smoothed in a fire after fracture; the fragment shows no original edges, but is from the bottom of a neck.

B. *Glass found in 1891.*

GA 367.[1] Two fragmentary multi-ribbed handles from large rectangular bottles, green glass.

GA 368–9. These join and form part of the neck and shoulder of a large bottle, probably with rectangular body, though possibly cylindrical.

GA 370. Fragment of rim, green glass, folded outwards and downwards. Probably from an olla, type as Thorpe, *op. cit.*, pl. iii, *b*, which is a very common first–second century shape, but perhaps from a rectangular jar like Thorpe, *op. cit.*, pl. ii, *c* (a much rarer shape).

[1] The reference numbers are those of the National Museum of Antiquities of Scotland.

GA 371. Fragment of rim and top of handle and fragment of base, both probably from the same bottle, which had a cylindrical body. The simple rim, folded outwards, looks more like that of a cylindrical bottle than that of a rectangular one, and there are two other fragments, one a rim with simple outward fold and the other heavily fused and misshapen, which may be included here.

GA 372. Rim of a bowl of amber glass; rim folded outwards and downwards, complete shape probably a splay-sided bowl on a base-ring.

General Notes.—This group of glass is remarkably uniform. Both the amber and the green pieces are typical of the first–second century A.D., and could belong either to the earliest occupation of Scotland or to the Antonine Period, but with a slight preference for the pre-Antonine. The colourless fragments are more likely to be Antonine or later; colourless glass of this type is not found in Britain before the beginning of the second century, so far as I know, and is mainly later second and third century in date.

There can be no question here of factory waste, I think; the fragments are normal pieces of glass vessels, and the fused pieces can all be due to contact with ordinary fires. Had there been a real conflagration, *e.g.* the destruction of the broch by fire, one would expect more of the pieces to be fused.

Conclusions.

The primary objects of the 1950 excavations, to establish the chronological and structural relationship of the broch to the hill-fort, and of both to the Roman material on the site, may be said to have been achieved. A stratigraphical sequence can be shown in which the first feature is the construction of the fort, and probably, though not certainly, of the timber-framed hut within the broch area: the sparse scatter of burnt daub and the sherd of native pottery found within the inner rampart of the fort outside this area is presumably of the same date. No Roman pottery or glass can be related to this phase, and the only object that can be directly related to the fort is the fragmentary upper stone of a rotary quern from the primary silting of the inner ditch.

At a period when the fort ditch was considerably silted up, the broch and its surrounding ditch was constructed, cutting into and re-utilising the fort ditch on the west. The presence of Roman pottery and glass in or under the broch wall in each of the three separate areas examined, and the identity of these finds with those recovered from the dark ashy layer in 1891, and from the underlying stony earth covering the undisturbed old surface in 1950, shows that no appreciable interval of time can have separated the building of the broch from the occupation of its interior. The only features within the broch area which can with certainty be assigned to this same phase are the central well-cut post-hole (Pit 3) and the less regularly made Pit 1, which structurally must precede the building of the wall. The status of the large irregular Pit 2 is uncertain, and it may well be of recent date.

The Roman pottery and glass fragments form a consistent assemblage of Flavian date, for which a central date of *c.* 100 A.D. would be appropriate.

However acquired, they must be regarded as the property of the broch builders on the site, and give at least a *terminus a quo* for the date of this phase, so that the hill-fort may be regarded as being, in all probability, of the early first century A.D., or possibly a little earlier.

The evidence from the broch ditch makes it clear that within a very short time of its construction, before any appreciable deposit of silt had accumulated, the stones of the broch wall were deliberately thrown down into it in a systematic and complete destruction of the building. The efficient ruthlessness with which this must have been carried out can be interpreted in one way only—a punitive slighting of a native stronghold by Roman military forces. The Torwoodlee broch, with its neighbour at Bow, represent in their characteristic architecture the defensive buildings of those Iron Age tribes whose homelands lay in the Atlantic west and the most northerly parts of Scotland, and their presence in the south, together with that of their few congeners, must indicate raids and sporadic settlement in the area by intruders from the north. The datable Roman objects acquired by these chieftains at Torwoodlee indicate well enough the historical context of the events suggested by the archæology—those troubled years of the early second century in which the Roman punitive raid of *c.* 117 and the re-occupation of Dere Street by Lollius Urbicus in 139 point the way to the Antonine re-advance into native territory *ad maiorem terrorem populorum*.[1] In the selection of strategic sites where a blow might be struck at native prestige, the enclave of northerners established on the Gala Water, with their twin strongholds on the hills of Bow and Torwoodlee, would be an obvious enough objective for a punitive expedition; and at Torwoodlee certainly, and at Bow most probably, the brochs were deliberately dismantled to their foundations.

The details of the broch at Torwoodlee, and its curious contents of predominantly Roman material, deserve further comment. It will have been seen that there is no archæological evidence in the form of post-holes to suggest roofing arrangements comparable to those established at Dun Troddan and surmised elsewhere.[2] Pit 3, which might well have been a large, well-cut post-hole, is at the geometric centre of the broch and contained Roman pottery and glass, but its filling appears to have been deliberate, and it was certainly not holding a post at the time of the destruction and desertion of the site. We would have to assume either that the internal area of the broch was not roofed, though occupied, or that the structure was never finished, and that the Roman finds represented temporary settlement during the actual process of building.

The presence of the abundant, and on the whole superior, Roman pottery

[1] *Cf.* Professor I. A. Richmond, in *Hist. Northumb.*, XV (1940), 60–128.

[2] *Cf.* W. L. Scott, in *Proc. Prehist. Soc.*, XIII (1947), 1–36; A. Graham, in *P.S.A.S.*, LXXXI (1947–48), 48.

and glass in contexts which make it inevitable that it was in the possession of the broch builders is remarkable. The only likely explanation seems to be that it was looted from the Roman fort at Newstead, six miles away, by the new-comers during its temporary abandonment by Roman forces, or less probably obtained from camp-followers. If the two brochs represent the strongholds of invading chieftains, travelling light and without their womenfolk, the acquisition of ready-made vessels from a convenient local source would not be surprising.

Finally, a note is necessary on the burial in the broch ditch. The circumstances in which a woman, whose skull shows her to have been of local Iron Age stock, came to be buried in a cist among the stones of the slighted broch during the process of its demolition, is a question "beyond antiquarism," and we can only record the fact with some surprise. The burial is, however, linked to others in southern Scotland both by the physical type represented (as noted in Dr Wells' report on p. 116), and by the manner of burial. One may cite the massive short cist containing an Iron Age burial at Moredun, Gilmerton,[1] and another, less certainly of Iron Age date, from Dolphinton,[2] and the long cist containing a lightly flexed skeleton with bronze spoon-shaped objects of a well-known Iron Age type at Burnmouth, Berwickshire.[3] A somewhat similar grave at Blackness Castle contained an inhumation with a bronze bangle which might be either Early Iron Age or Dark Ages.[4]

APPENDIX I

Report on the Carbonised Wood from Torwoodlee.

By Mr M. Y. Orr, Royal Botanic Garden, Edinburgh.

1. Wood object, probably part of bowl, from near Post-holes 3 and 4—Birch (*Betula* sp.).
2. Possible wooden bowl fragment, near Post-hole 7—Birch.
3. Possible wooden bowl fragment, near Post-hole 7—Oak (*Quercus* sp.).
4. Pit 1—Alder (*Alnus glutinosa*) and Willow (*Salix* sp.).
5. Pit 3—Alder and Willow.
6. Pit 4—Alder and Willow.
7. Pit 6—Oak and Alder.
8. Post-hole 4—Alder and Willow.
9. Scattered on broch floor—Oak, Alder and Willow.

[1] *P.S.A.S.*, xxxviii (1903–4), 432.

[2] *Ibid.*, lv (1920–21), 45. The fragments of "iron plates" may be natural iron "pan," as Mr R. B. K. Stevenson points out.

[3] *Ibid.*, lviii (1923–24), 143.

[4] *Ibid.*, lix (1924–25), 117.

APPENDIX II.

NOTE ON THE HUMAN SKELETAL FRAGMENTS FROM TORWOODLEE. By L. H. WELLS, Senior Lecturer in Physical Anthropology, University of Edinburgh.

The remains from the Torwoodlee burial comprise: the left half of the skull, the vault and occiput being extensively corroded and warped along the median line and the premaxillary region abraded; the head and upper part of the shaft of the left humerus, and a large portion of the shaft of the right humerus. These fragments belong to an adult skeleton; the head of the humerus has coalesced with the shaft, the basi-sphenoid and basi-occipital bones are united, and the wisdom teeth fully erupted. The coronal and sagittal sutures are only partially effaced on the internal aspect of the skull, indicating an age of not more than thirty years. This individual was rather small, but robustly built and of strong muscular development. The characters of the skull show it to be almost certainly that of a female.

Owing to the imperfect state of the skull, none of the significant measurements can be exactly determined. The maximum cranial length can, however, be estimated fairly accurately as 175 mm.; the maximum breadth cannot have been less than 130 mm. and is unlikely to have exceeded 135 mm. From these measurements the cranial index would have fallen between 74 and 77. The basi-bregmatic height cannot have been less than 125 mm. and may have reached 130 mm. The portion of the face which is preserved indicates a bizygomatic breadth between 115 mm. and 120 mm., and a nasal breadth which may not have exceeded 20 mm.

There is no adequate series of Early Iron Age female crania from Scotland with which these measurements can be compared, but two small series are available from south of the Border, one of pre-Roman Iron Age skulls from the "Danes' Graves," Driffield, Yorkshire (Wright in Morant, 1926), the other of Romano-British skulls from the Brigantian territory (Buxton, 1935). The mean measurements for these two series are shown in Table I. From this it will be seen that they agree closely in their mean cranial diameters, except that the Danes' Graves series appears to be somewhat narrower than the Brigantian.

By its estimated measurements the Torwoodlee skull would fit quite well into either of these series, though in cranial breadth it seems to approximate

TABLE I.

Comparative Measurements of Female Skulls.

	Torwoodlee skull.	Danes' Graves mean.	Brigantian mean.	Lowland Scottish mean.
Cranial length . .	±175 mm.	178·4 mm. (14)	177·3 mm. (18)	179·6 mm. (28)
Cranial breadth . .	130–135 mm.	133·4 mm. (14)	137·4 mm. (16)	138·2 mm. (28)
Basi-bregmatic height .	125–130 mm.	125·0 mm. (2)	125·3 mm. (15)	127·3 mm. (27)
Bizygomatic breadth .	115–120 mm.	117·7 mm. (3)	..	122·6 mm. (20)
Nasal breadth . .	± 20 mm.	23·0 mm. (6)	..	22·2 mm. (23)

Figures in parentheses indicate the number of skulls measured.

more closely to the mean of the Danes' Graves series. In facial breadth it seems also to correspond with the few Danes' Graves crania in which this region is preserved. On this evidence we may conclude that the Torwoodlee remains are those of a quite typical (perhaps rather small-headed and thick-skulled) British woman of her period.

Finally, the Torwoodlee skull may also be compared with a recent Lowland Scottish series compiled from the data of Sir William Turner (Hooke, 1926). In its cranial measurements this series differs very little from the Brigantian; the average width of the face is somewhat greater than that of the Danes' Graves specimens, while the nose is relatively narrow. The Torwoodlee skull, although somewhat smaller and decidedly narrower-faced than the average of this series, would not be out of place in it. So far as it goes, the Torwoodlee find is thus quite consistent with the view that the Early Iron Age type is the most conspicuous element in the composition of the modern Lowland Scottish population (Hooke and Morant, 1926).

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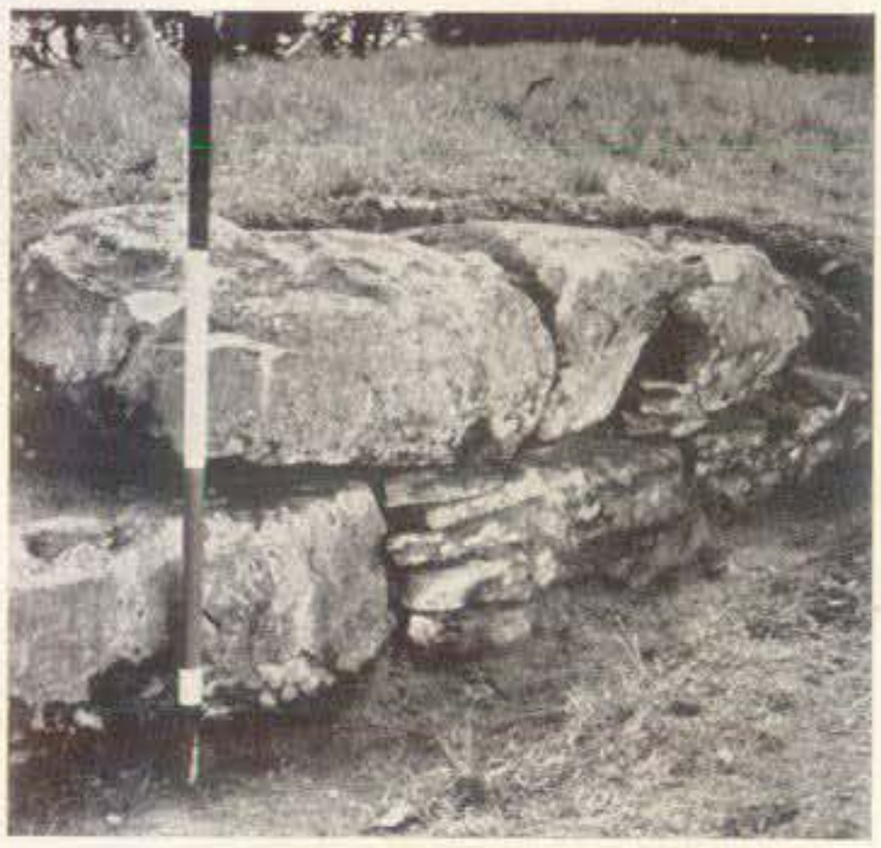
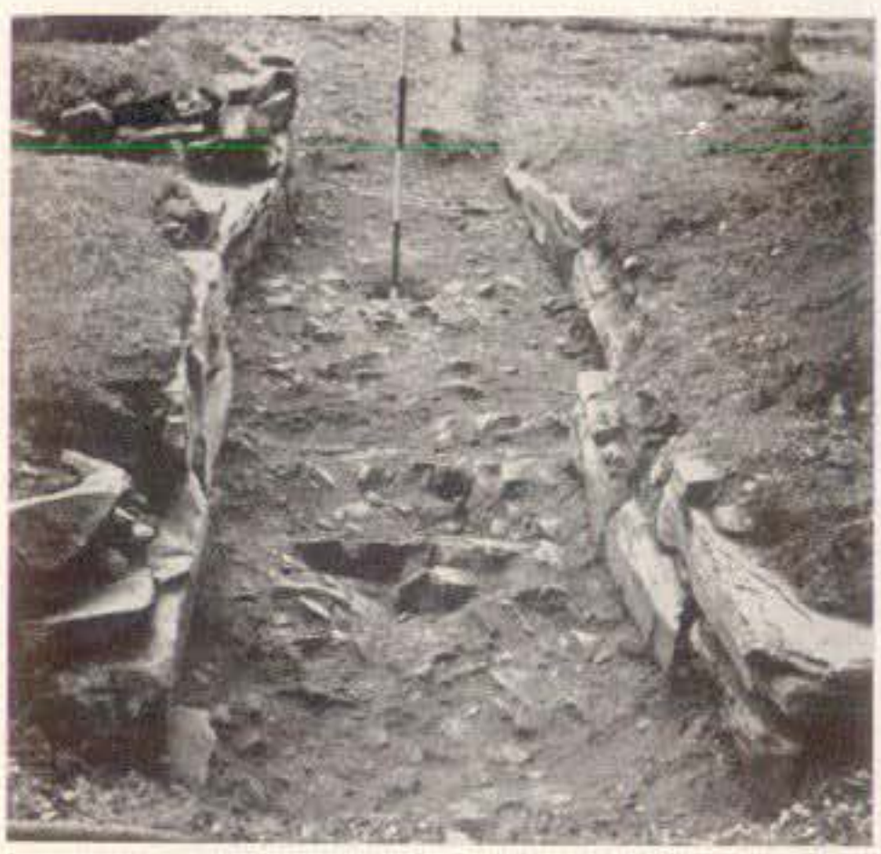
1. Post-hole of hut in broch area.



2. Exterior footings of broch wall.



3. Broch entrance: ranging pole in post-hole.

Cutting VI in broch ditch, showing stones from destroyed broch.

Cutting VII, general view of burial cist.

Detail of burial in cist.

Stuart Piggott.