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EXCAVATIONS AT THE DORSEY, COUNTY ARMAGH

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with an appendix by GILL PLUNKETT

An excavation was carried out at the Dorsey, Co Armagh, in the summer of 2002 by the Centre for Archaeological Fieldwork, on behalf of the Environment and Heritage Service: Built Heritage. The excavation uncovered two palisade trenches approximately 30 m west of, and running approximately parallel to, Bonds Road where it runs through the Dorsey. Between, and later than, the two palisade trenches was a roasting pit and the possible remains of a flimsy shelter. Running beside and parallel to the west side of the road were the remains of a shallow ditch with a further palisade trench cut into its west edge, as well as a shallow linear gully and a pit. Radiocarbon dating suggests that these features date to the Early Iron Age.

INTRODUCTION

The Dorsey (SMR ARM 28:8) is a substantial earthwork of Iron Age date, composed of a series of embankments of varying size enclosing an irregular trapezoid area a maximum of 1.8 km long and 0.5 km wide (Fig 1). It is located approximately 5 km north-east of Crossmaglen in the south of Co Armagh (centred on IGR H9456 1935), straddling the

townlands of Dorsey and Tullynavall. The remains are most substantial at the south-east and south-west corners, where the embankments are up to 6.6 m in height and the ditch is up to 6.6 m deep and 13 m wide (Tempest 1930, 200-203); the northern remains are less extensive. At its north-eastern and south-western extremities the earthwork encloses elevated ground above 120 m OD. Although the embankments are not,

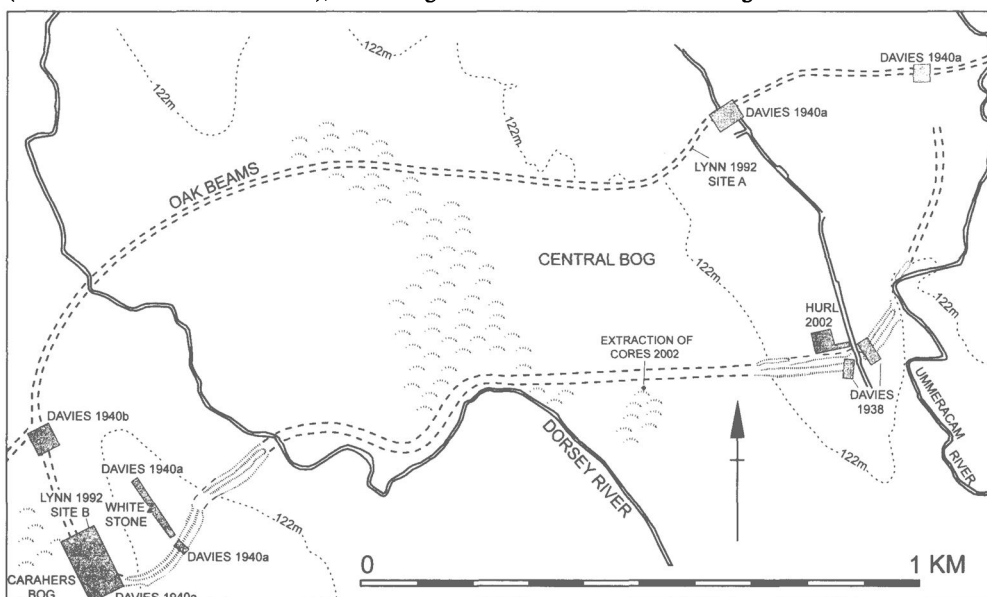


Fig 1 Plan of the Dorsey showing locations of excavations on the monument.

and may never have been, completely continuous, a number of sections which are not traceable today were formerly perceptible, and there is evidence that its line had been continued by piling through wetland areas (Tempest 1930).

At its south-west corner the Dorsey encloses a standing stone (Arm 28:23) known by a number of names, such as the White Stone, Cloghfin, Caillagh Biorra and Cloghameathair. The central portion of the monument is a wetland area which local informants relate as having been much reduced by peat cutting and drainage within living memory; corroboration of this information is given by Tempest (1930). The Dorsey River runs through the monument, while the Ummeracam River runs up to the earthwork at its south-east corner (the South Gate) before turning and running north.

The name 'Dorsey' or 'Dorsy' has been applied not just to the monument and townland but also generally to a strip of land, about 1.6 km east-west and 8 km north-south, along which ran the *Bealach Mór na Feadha*, the traditional road south from *Emain Macha*, or Navan Fort, which is locally identified with the modern road known as the Old Coach Road which ran from Dundalk to Armagh (Tempest 1930, 190), now called Bonds Road.

Previous archaeological investigations at the Dorsey

There have been a number of archaeological investigations at the Dorsey. Surveys were carried out and descriptions written from the 17th to 19th centuries, the results obtained from much of this work being synthesized by Tempest in 1930.

During the course of the 20th century research at the Dorsey has continued. Oliver Davies conducted extensive investigations of the monument. In 1938 he excavated at the South Gate area, close to the site of the 2002 excavation. He initially opened a number of trenches on top of the inner rampart to search for signs of a palisade, but found no evidence for this. He then excavated at the gap through which the Old Coach Road runs, discovering two lines of post-holes on the east side. One line, approximately 10 m long, was 'set in a slight trench' flanking the causeway (Davies 1938, 131); the second line, also 'set in a shallow trench' and of a similar exposed length, ran north-east from the causeway before curving around to run north-west, beneath the existing road, possibly acting as a deliberate constriction to narrow the entrance of the monument (*ibid*). In the field to the east of the road, immediately north of the inner ditch, he uncovered a series of post-holes and areas of paving which appeared to indicate occupation. He interpreted one phase as the remains of a round, post-built structure, approximately 4.5 m in diameter, which he suggested was similar to the guard houses of Welsh hillforts. He also excavated on the west side of the causeway, opening a trench through the outer ditch where he found a sherd of post-medieval pottery which, he suggested, might be evidence of a re-cut of

the ditch dating to the wars of the late 16th century. No post-holes were discovered on this side (Davies 1938, 131-4).

In 1939 Davies continued his programme of work at the north of the monument, investigating an area where the modern road runs through the north rampart and ditch. A section of the ditch was excavated, revealing a flat-bottomed ditch with sloping sides and two fills; a lower fill of probable antiquity containing fragments of worked wood, and an upper fill of 18th-century date. Trenches on either side of the modern road showed that there was no causeway across the ditch at this point, meaning either that this was not the original line of the *Bealach Mór na Feadha*, or that the road was carried by a bridge across the ditch. He postulated that the passage through the north section of the monument could lie to the east, the modern road diverging sharply from its original path to run further west. Although he opened a small trench at the north-east corner of the Dorsey to test the relationship between the enclosure proper and the apparent extension which runs to the Ummeracam River, the outbreak of Second World War prevented any recording of this trench (Davies 1940a, 283-4).

In 1938 and 1939, after excavating a number of trenches at the south-west of the Dorsey, just to the west of the standing stone, Davies confirmed the original presence of the rampart as well as a line of piles running in an approximately north-east direction and wedged in place by stones and logs. Davies believed that, in this area, the Dorsey consisted of a double bank with no excavated ditch, the natural properties of the bog undertaking that function (Davies 1940a, 284-7). At the west of the Dorsey, where the Black Pig's Dyke and the Dorsey appear to intersect, he uncovered the line of the dyke and its apparent junction with the Dorsey. This convinced him that the two monuments were contemporary earthworks (Davies 1940b, 33-4).

The next phase of archaeological investigations at the Dorsey was undertaken by Chris Lynn in 1977 when he excavated at two sites (Lynn 1992). Site A was at the point where Bonds Road runs through the northern rampart, and Site B was just to the west of the standing stone in the south-west corner of the Dorsey.

At Site A, Lynn excavated a section across the ditch and bank but did not fully bottom the ditch because of the presence of a modern sewage pipe. He did, however, recover charcoal from beneath the bank which produced dates ranging from the early 4th century BC to the early first century AD (Lynn 1992, 66).

During the excavation of Site A, Lynn's attention was drawn to some timbers which had been uncovered during mechanical excavation at the south-west of the monument. This site, designated Site B, consisted of a stretch of palisade trench containing thirty oak posts which averaged 0.2 m in diameter and which were wedged in place by oak planks. He believed that this

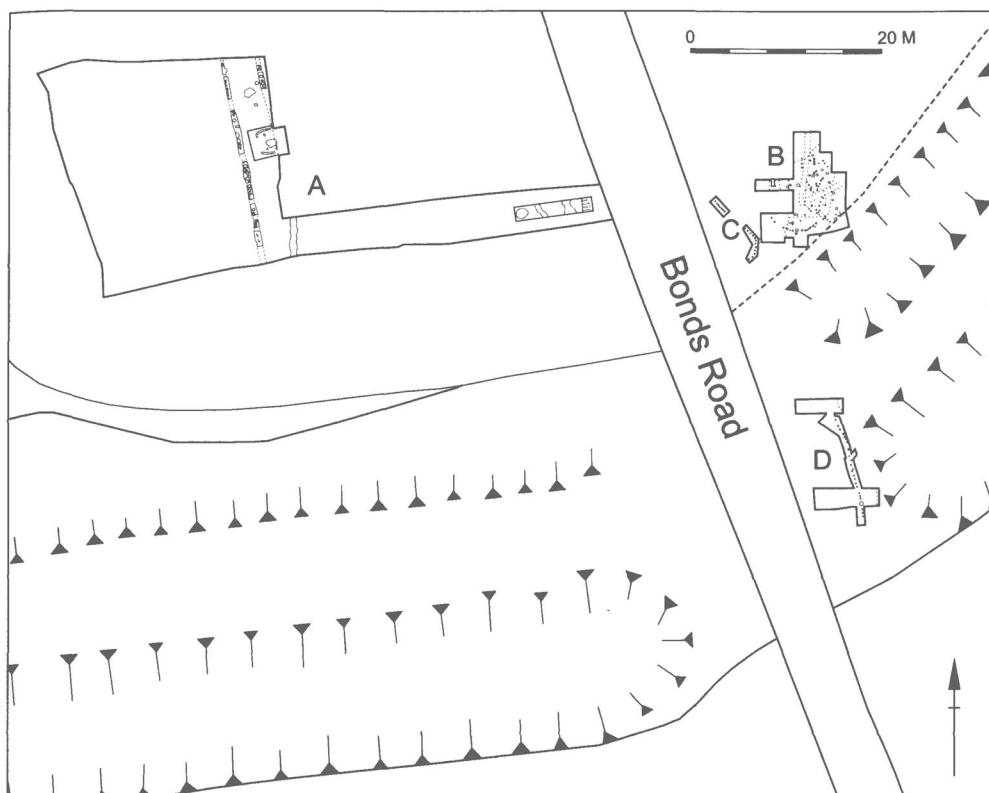


Fig 2 A: 2002 excavations.
 B: Davies 1938 excavation: 'guard house'.
 C: Davies 1938 excavation: post-holes set in trench cut into subsoil.
 D: Davies 1938 excavation: post-holes set in trench cut into subsoil.

piling was the same as that exposed and reburied by Davies (Lynn 1992, 73). Dendrochronological tests on three oak timbers dated them to the early first century BC (Baillie 1988, 39).

Unstratified fragments of oak, found in 1974 by Brian Williams and Mike Baillie at the point where the Dorsey River crosses the line of the northern Dorsey ramparts, was shown by dendrochronology to have been felled around 178 BC (Baillie 1988, 39-40). Three further unstratified oak timbers, found along the northern rampart of the Dorsey in 1989, provided dendrochronological dates in the mid-2nd century BC (Baillie & Brown 1989, 11).

THE 2002 EXCAVATIONS

The site was located in the south-east section of the monument, immediately north of the rampart and west of Bonds Road where it runs through the earthwork (IGR H9523 1923) (Figs 1, 2). Due to the proximity to the site of a proposed new house, garden and access road, the mechanical topsoil stripping of the site,

measuring 25 x 20 m and 35 x 5 m, was monitored by John O'Keeffe and Paul Logue. The discovery of a 20 m plus length of a dark linear feature, approximately 0.5 m wide, prompted a more thorough excavation to investigate the site.

The results of the excavation will be discussed in two parts; those from Area 1 to the east of the house plot, and those from Area 2 at the east end of the access road (Fig 3).

Area 1

Running the entire length of Area 1 in a north-north-west/south-south-east direction was Palisade I (Fig 4), which contained the remnants of post-pipes in its basal fill. Approximately parallel to Palisade I was Palisade II (Fig 5), which also ran into the north section of Area 1, and was slightly narrower and shallower than the first; it may have extended to meet the gully (280), which could have held a light fence. There was a possible hut complex (Fig 5) in the east of Area 1 between the two palisade trenches, comprising a pit

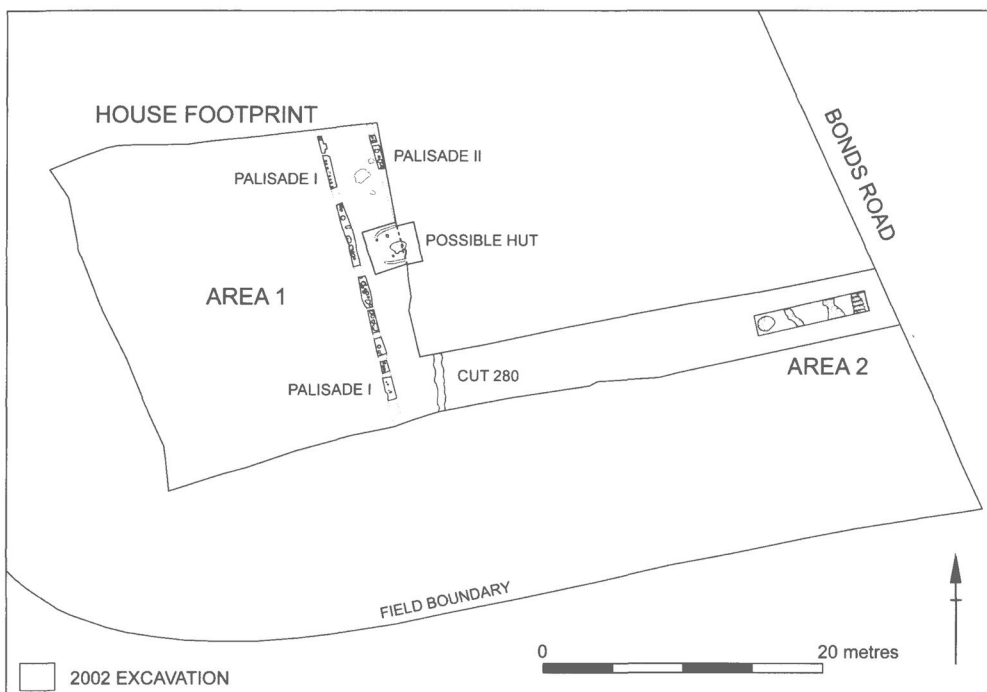


Fig 3 Plan of 2002 excavation showing Areas 1 and 2.

(17) filled with burnt stones, charcoal and burnt bone fragments, surrounded by three truncated post-holes (21, 22, 49) and two slightly curving clay deposits (59, 60). The pit cut through the upper fill of Palisade II and material derived from the pit appeared to form part of the upper fill of Palisade I.

Palisade I

This palisade trench (5) was in excess of 20 m long, 0.5 – 0.7 m wide and 0.7 – 1.0 m deep. Its basal fill was a layer of buff-yellow sandy clay (33), within which were imprints of 46 post-pipes (numbered, from north to south, 191, 164, 156, 154, 101, 112, 80, 104, 75, 132, 121, 122, 131, 127, 136, 137, 243, 245, 247,

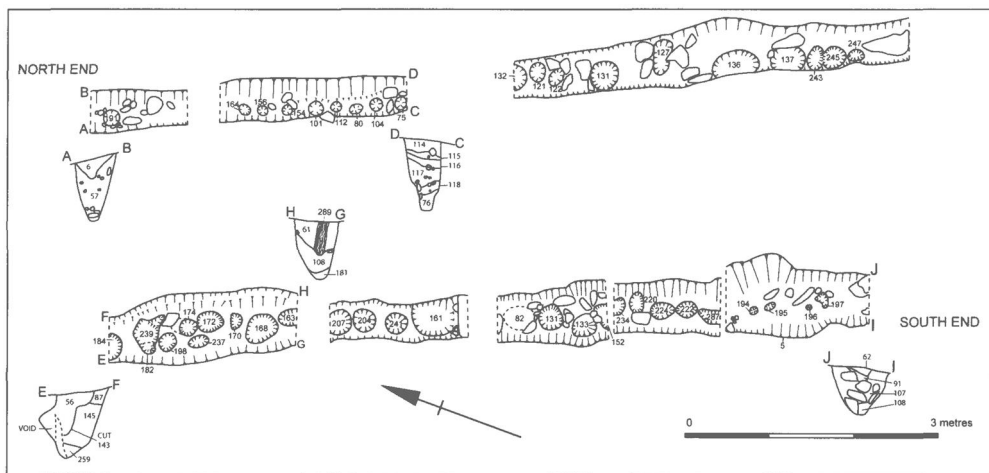


Fig 4 Plan and sections of Area 1, Palisade I.

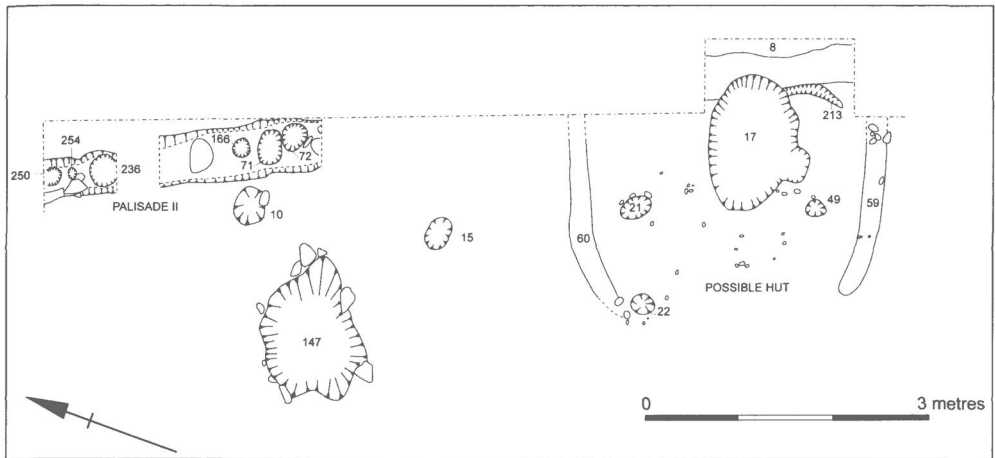


Fig 5 Plan of Area 1, Palisade II and possible hut.

184, 182, 239, 198, 174, 237, 172, 170, 168, 163, 207, 209, 241, 161, 82, 130, 133, 152, 234, 220, 224, 222, 287, 194, 195, 196, 187). The post-pipes measured 0.11 – 0.55 m in diameter and in most cases were well defined within the basal fill, though they were at most a few centimetres deep. The upper sections of some of the post-pipes, however, were discernible as containing more mixed and disturbed soils than the trench fills around them. Those post-pipes were mostly sealed by a mottled loam (87, 118), which contained packing stones (126), or were butted by similar loams, eg (108, 162). At the north end of Palisade I, loam (118) was overlain by a series of localized layers of sandy loams and sandy clays (114, 115, 116, 117). The post-pipes at the extreme north of the excavated palisade trench (101, 141, 154, 164,

191) were directly below or butted by a number of smaller layers, including a yellow-grey sand (157).

Throughout the rest of the trench, the mottled loam (87) was sealed by a large number of small layers of sandy clay and ash (28, 31, 32, 73, 77, 91, 99) which were capped by layers of charcoal and burnt timber (55, 58, 63, 92). In the section of the palisade trench between 10 m and 13 m from the north end, the intermediate mottled loams (87, 108) were recut (143) to accommodate another phase of posts. This recut was filled by a layer of mottled sandy loam and charred wood (142) which sat below a layer of charcoal-rich ash and clay (61), within which were two charred posts (109, 289). These were overlain by layers of charred wood fragments (85) and small stones (86), which in turn were sealed by the upper fill

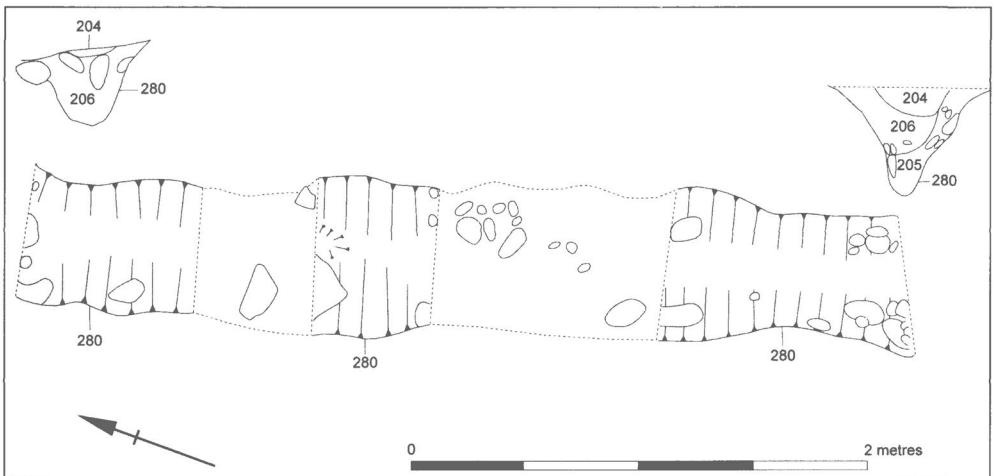


Fig 6 Plan and sections of Area 1, cut (280).

of the palisade trench (6), a charcoal-flecked, dark grey-brown silty loam with small fragments of burnt bone. This upper fill was disturbed by six sub-rectangular cuts (37, 39, 41, 43, 64, 96) which were all filled by topsoil; it seems likely that these were the remains of early modern cultivation ridges.

Three radiocarbon dates were obtained from material found within Palisade I. Charcoal from contexts (58), (77) and (289) provided 2 sigma calibrated date ranges of 360 – 100 cal BC, 360 – 90 cal BC and 360 – 90 cal BC respectively (see below). These show that Palisade I was constructed in the Early Iron Age.

Palisade II

Palisade II was located just over 3 m to the east of Palisade I and was also cut into the subsoil. A 3 m length of the trench (8) was excavated (Fig 5), which showed that it measured approximately 0.60 m in both width and depth. A thin layer of redeposited clay (34), which filled the bottom of the trench, contained the bases of six post-pipes (250, 254, 236, 165, 71, 72), all of which were filled by dark brown sandy soils (251, 255, 236b, 166, 177, 290 respectively). These were sealed by a series of compact brown sandy clays (30, 249, 235), and overlying them was the upper fill, a dark brown friable sandy clay (201), with spreads of charcoal (66) and burnt soil (65, 67).

A single radiocarbon date was obtained from material found within Palisade II. Charcoal from context (250) provided a 2 sigma calibrated date range of 360 – 110 cal BC. This date demonstrates that Palisade II was constructed in the Early Iron Age and is compatible with it being contemporary with Palisade I.

Possible hut

Between Palisades I and II, and roughly 5.5 m from the north section of the exposed area were a number of potentially related features (Fig 5). At the centre of this complex was a pit (17), 1.5 m long, 0.9 m wide and approximately 0.15 m deep. It was filled by a dark grey, soft sandy loam (18), rich in charcoal and burnt bone and containing scorched stones (19). The pit cut the upper fill of a section of Palisade II, and also disturbed a small narrow gully (213). Arranged around the pit were the remains of three shallow features (21, 22, and 49), each about 3 cm deep, 34 x 20 cm, and 20 cm and 17 cm in diameter respectively, and filled by brown loams (45, 46, 48). There were also two curving bands of silty loam (59, 60), both approximately 0.22 m wide and exposed lengths of 2 m, possibly representing the remains of a hut or other flimsy structure.

Charred hazelnut shell fragments from the fill (18) of the pit (17) were radiocarbon dated, giving a 2 sigma calibrated date of 180 to 10 cal BC. This date firmly places this pit within the Early Iron Age.

Other features in Area 1

To the north-west of the possible structure were three further cut features. One post-hole (10), 0.4 m in diameter, was adjacent to Palisade II, and was filled by a orange-red sandy clay (11). Some 1.75 m south of this was a second post-hole (15), which measured 0.3 x 0.2 m and was filled by a black, friable, sandy loam (16). A shallow pit (147) was to the west of the post-holes; it measured 1.5 x 1.1 m and was filled by a mid-brown sandy loam (148).

Gully (possible extension to Palisade II)

This gully (280) was located approximately 3 m east of the south end of Palisade I (Fig 6). It had an exposed length of 3.8 m, and was a maximum of 0.65 m wide and 0.40 m deep. The basal fill was a light brown soft clay (205) which was sealed by a dark grey-brown loam (204) and a yellow soft sand (206). The gully was originally thought to be a part of Palisade II as they appeared to be in line. Upon surveying them both, however, it became apparent that they were at a slight angle to each other; further, the palisade trench proved to be significantly deeper than the gully, which also lacked definitive signs of having contained posts. It is still possible, however, that the gully represented a less substantial section of the palisade trench.

Area 2 (Fig 7)

The presence of a very compact, almost metallised surface to the subsoil at the top of the slope toward the road, and the subsequent dip down to the road from that crest, prompted further investigation in this area. Initially, a trench was opened across the dip between Bonds Road and the hard-packed surface.

Flanking the modern roadway, and appearing to run beneath it, was a subsoil-cut, flat-bottomed ditch (202). A section, 1.5 m wide and 2.8 m long, was dug through the ditch, revealing that it was approximately 0.75 m deep. The fill was a yellow-grey clay (230), sealed by a topsoil-derived loam (203).

Running along the western edge of this ditch was a further palisade trench, Palisade III (277), which was orientated north-north-west/south-south-east and had a maximum depth and width of 0.80 m. A layer of redeposited subsoil (275) was present along the eastern edge within the cut. The base fill was a slightly burnt loam (274) which contained four post-pipes (211, 212, 227, 228) filled by a gravel (272) which also formed the upper fill of the trench; it was sealed by a silty loam (200/218). Charcoal from the basal fill (274) of Palisade III was radiocarbon dated giving a 2 sigma calibrated date range of 410 – 200 cal BC. As with Palisade I and II this places Palisade III in the Early Iron Age and is compatible with the palisade being either contemporary with or earlier than Palisades I and II.

To the west of the palisade trench was a gully (217), orientated north-west/south-east. Cut into the

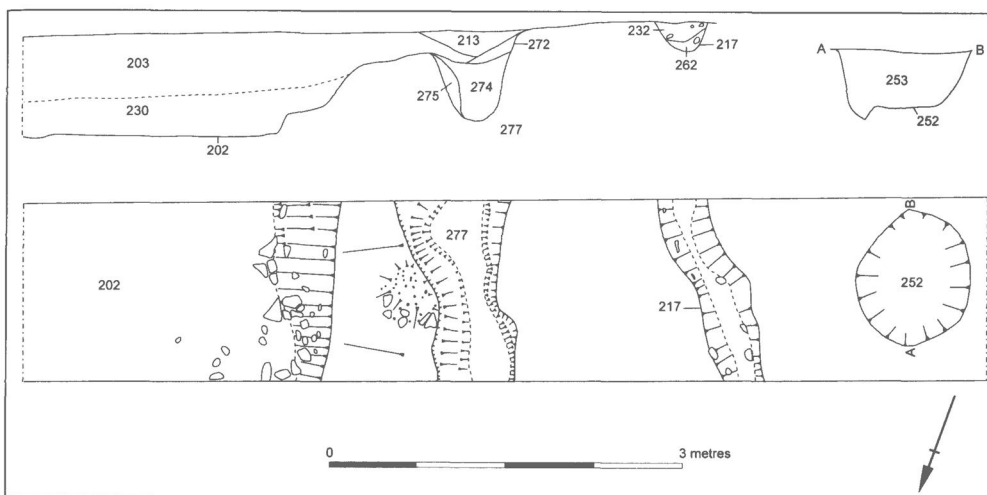


Fig 7 Plan of Area 2.

subsoil, it was 0.40 m wide and 0.25 m deep. Its basal fill was a thin charcoal layer (262) and its upper fill a dark brown sandy loam (232), which was beneath the topsoil. Further west was a subsoil-cut pit (252); it was 1.20 m wide and 0.60 m deep, and filled by a black-brown sandy loam (253). Charcoal from the basal fill (232) of this gully was radiocarbon dated to give a 2 sigma calibrated date range of 400 – 200 cal BC. This is very similar to the date for Palisade III and is compatible with them being contemporary.

FINDS

No artefacts were recovered during the excavation.

Plant Remains

A total of 156 kg of soil samples were collected during the excavation. Sieving and flotation of these soil samples was carried out by John Davidson, Palaeoecology Centre, Queen's University, Belfast. The archaeobotanical material retrieved was examined by Dr Gill Plunkett of the School of Geography, Archaeology and Palaeoecology (see Appendix).

Burnt bone

A number of small fragments of burnt bone were recovered both during the excavation and during the sieving and flotation of soil samples. These were found within the fill (18) of the roasting pit (17) and in the upper fill (6) of Palisade I. The burnt bone fragments, which were examined by Dr Emily Murray of the School of Geography, Archaeology and Palaeoecology, were heavily calcined and badly fragmented and only one piece, a sheep's patella, was identifiable to species (Emily Murray, pers comm).

Radiocarbon dates

Seven samples were submitted for radiocarbon dating to Queen's University Radiocarbon Research Laboratory and results were as follows.

Charcoal from a fill (58) of Palisade I (UB-4894) provided a result of 2163 ± 30 BP (360 – 100 cal BC at 95.4% probability).

Charcoal from a fill (77) of Palisade I (UB-4895) provided a result of 2159 ± 30 BP (360 – 90 cal BC at 95.4% probability).

Charcoal from the charred timber (289) from Palisade I (UB-6327) provided a result of 2159 ± 34 BP (360 – 90 cal BC at 95.4% probability).

Charcoal from the post-pipe (250) from Palisade II (UB-6174) provided a result of 2171 ± 33 BP (360 – 110 cal BC at 95.4% probability).

Charred hazelnut shells from the roasting pit (17) (UB-6176) provided a result of 2073 ± 36 BP (180 – 10 cal BC at 95.4% probability).

Charcoal from the fill (274) of Palisade III (UB-6175) provided a result of 2302 ± 33 BP (410 – 200 cal BC at 95.4% probability).

Charcoal from the basal fill (232) of the gully (217) (UB-6030) provided a result of 2248 ± 43 BP (400 – 200 cal BC at 95.4% probability).

DISCUSSION

The excavations at the Dorsey revealed three palisade trenches, a ditch and a gully. In addition there was a roasting pit or hearth, a number of possibly truncated post-holes and two curving deposits of soil, which could signify the presence of a hut or similar structure. A single pit, of indeterminate function, was also discovered.

The three palisade trenches contained lines of oak posts, 11 – 50 cm in diameter. While there were no

traces of oak boards jammed between the posts and the edges of the trenches to help secure them, as with the palisade excavated by Lynn (1992) at the south-west corner of the Dorsey, in places large stones were found within the trenches which could have performed this function. The depth of the trenches, up to 1 m in the case of Palisade I, suggests that the palisades could have been quite high, possibly projecting 2 m or more above the ground surface. While it is possible that the shallow gully (217) may have held a light fence, it seems too slight to have supported a substantial structure.

As mentioned above, Bonds Road, known locally as the Old Coach Road, is believed to follow the same route as the *Bealach Mór na Feadha* (Tempest 1930, 190), which reputedly ran south from Navan Fort, or *Emain Macha*. As these palisade trenches respect the alignment of this ancient road, it seems reasonable to suggest that they are either contemporary with it or post-date its construction. As the edge of the roadside ditch was flanked by Palisade III, this suggests that the ditch could relate to an ancient pre-palisade roadway. Indeed, given the unusually compact surface of the area to the west of the ditch and palisade trench, this might be a candidate for the remains of the original road, especially as it describes a straight line from the two points in the north and south ramparts intersected by Bonds Road, though the latter takes a less direct route. Alternatively, the ditch may have flanked a roadway which ran in a more northerly direction than the current road and, therefore, was located somewhat further to the west of the modern road. It is also possible that the ancient road lies directly under the modern road at this point.

It is difficult to determine if the roasting pit or hearth (17), the truncated post-holes (21, 22, 49) and the slightly curving clay deposits (59, 60) represented the remains of a hut; in particular the clay deposits were very insubstantial. Whether the pit was a roasting pit or a hearth, it does demonstrate at least a brief period of occupation at the site.

Dating of the site

The radiocarbon dating of samples from the palisade and gully features has provided calibrated dates ranging between the first and 5th centuries BC. The dates from Palisades I and II in Area 1, and from Palisade III and the gully in Area 2, were all from wood charcoal. One of the dates from Palisade I was from a charred timber identified as oak (Dave Brown, pers comm); the other dates were from smaller pieces of wood charcoal. Consequently there may be an 'old wood effect' acting upon these dates which could mean that the actual age of the features is younger than the samples dated. The dated sample which was identified as wood charcoal (UB-6327) came from middle or outer heartwood and consequently would be less prone to the old wood effect than a sample from the centre of a tree. An old wood effect of 15 to 50 years might be expected for such a sample (Dave

Brown, pers comm). Given the similarity of all three radiocarbon dates from Palisade I and the date from Palisade II, it seems reasonable to assume that the old wood effect is not appreciably more significant for dates UB-4894, UB-4895 and UB-6174 than for UB-6327.

The date for the roasting pit/hearth in Area 1 was obtained from hazelnut shell fragments and consequently was not susceptible to old wood effect. It also gives us a *terminus ante quem* for the obsolescence/destruction of Palisade II, since it was presumably no longer functioning as such when it was cut by the pit.

There is no evidence from the site to establish a stratigraphic relationship between Palisades I and II. However their similarity in form, dimensions, contents and orientations, and the radiocarbon dates for each palisade trench, would suggest that they are contemporary.

There is no contextual evidence to establish a stratigraphic relationship between the features in Areas 1 and 2, and the radiocarbon dates for Palisade III and the gully (217), whilst allowing that they may be earlier than Palisades I and II, provide sufficient overlap to permit them to be contemporary. They appear, nonetheless, to be older than the roasting pit/hearth (17).

CONCLUSIONS

The function of the Dorsey is still a matter of debate. Early commentators such as Sir Charles Coote, writing in 1804, emphasized the enclosure aspect of the Dorsey, while in 1835 John O'Donovan speculated that it was used as a fortification into which a chief might place his cattle and property in time of war and where he could also command the pass to the north. Others, such as John Donaldson, have been sceptical of the enclosure theory and emphasized the association of the ramparts of the Dorsey with the Black Pig's Dyke, 'constructed by some Danish or Irish sept for the purpose of defending their country from the hostile inroads...of its neighbours' (Tempest 1930, 194-6). More recently it has been suggested that it was not an enclosure at all but two successive lines of defence, one replacing the other, which gives the impression of an enclosure (Davies 1940b; Lynn 1989). Lynn has suggested that it is unsatisfactory to consider the monument as a fort or strong-point because of its unsuitable location and topography. He also cast doubt on it being a ritual monument, noting its uniqueness and the fact that most Iron Age ritual monuments in Ireland are circular. He proposed that the impression of an enclosure is illusory and the Dorsey may be enhancement of an earlier line of defence by a newer, stronger one (Lynn 1989, 5-10).

A critique of both views was made by Aitchison (1993), in which he held that the defensive enclosure, frontier fortification and cattle kraal theories were fundamentally flawed, citing the form and location of

the Dorsey. He was also of the opinion that there was no strong evidence to support the contention that the Dorsey comprised two lines of linear defence giving the impression of an enclosure. Instead he put forward the proposal that the Dorsey was a ceremonial monument designed to enclose an area of bog and rivers of ritual significance.

There are several possible reasons why control over space would be exercised at this site, and the presence of the road is central to each interpretation. The road was obviously intended for the progression of some form of traffic along its route, though the nature of the traffic may have varied. The division of zones of control at the western side of the road may have been intended to separate different types of traffic; it is also possible that the road may have been reserved, at certain times at least, for ritual or ceremonial functions. If so, the palisades may have been intended to separate participants from spectators. The nature of the control of space around the road at this point, however, may have been of a different nature entirely. It may have been intended to exclude persons or animals from the vicinity of the road. The possibility of a pre-existing fortification at the gap in the south ramparts at the Dorsey has been mentioned by Lynn (1989, 8), and Palisades I and II could have formed part of such a fortification.

The results obtained by the 2002 excavations have raised additional questions, which still require answers. A number of issues, however, could be addressed with only a little extra work in the future.

The nature of the zone of control imposed by the three palisades, and by Davies' lines of posts in trenches, is a question for further research. At present we do not know if they continued to line the route of the road or were parts of a more limited structure.

It would be informative to know if there are structures on the east side of the road similar to the palisade trenches on the west side.

There has been an assumption that the routes of Bonds Road, the Old Coach Road and the *Bealach Mór na Feadha* are the same. However, Davies' excavations revealed no trace of a causeway where Bonds Road ran through the north rampart and ditch, which should have existed had this been an original gap in the embankment, although the road could have crossed the bank using a bridge (Davies 1940a, 283). Around 250 m into the Dorsey, Bonds Road turns to the north-east. It is possible that the *Bealach Mór na Feadha* did not make this turn but continued in a straight line towards the northern bank. Further, if Bonds Road was indeed the old coach road, it is strange that an important route through the earthworks – indeed the main road from Dundalk to Armagh in 1707 – should be represented by a small *cul de sac* in the first edition Ordnance Survey maps of 1835.

A programme of geophysical survey at the Dorsey could potentially answer some of these questions. The burnt contents of the palisade trenches could be detected by a magnetometry survey, helping to determine not only if they extend significantly beyond the excavated area, but also if similar structures occur on the east side of the road. Geophysical survey could also help to answer the question as to whether Bonds Road follows the route of the *Bealach Mór na Feadha*. If a large positive linear feature is detected branching off from the current road, it would imply that the ancient road followed a different course and may also point to an original route through the north rampart. If so it would present an excellent opportunity to excavate a section of Iron Age road at a future date.

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APPENDIX: ARCHAEOBOTANICAL ANALYSIS OF SOIL SAMPLES FROM THE DORSEY, DORSY, COUNTY ARMAGH

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INTRODUCTION

Five samples containing archaeobotanical remains from the Dorsey 2002 excavations were submitted for analysis. Details of these contexts are provided below. The remains were examined under a magnification of x10 to x60 using a Nikon binocular microscope. Identification of the remains was assisted by the use of the cereal reference collection in the Palaeoecology Centre, Queen's University, Belfast, and following criteria described by Renfrew (1973) and van der Veen (1992).

RESULTS

The archaeobotanical remains from the Dorsey samples are summarized in Table 1.

Context (16) was the fill of a posthole (15) located between the two palisades and to the north of the possible hut structure. The sample produced a single cereal grain. The grain was too poorly preserved to allow a definite identification but its general shape suggests that it is oat.

Context (18) comprises the fill of a pit (17) within the possible hut feature. The sample also contained burnt bone. This proved to be the richest sample regarding archaeobotanical content, yielding 30 cereal grains and 20 fragments of hazelnut shell. The cereals are dominated by wheat (73%), with apparently three types present. Absolute identification of wheat species is frequently problematic for charred remains (cf

Hillman *et al* 1996), and in this context, was further hindered by heavy encrustation of the grains by soil residues. The remaining grains in the sample are of barley, and include the naked six-row variety.

Contexts (56) and (62) were both part of the fill of Palisade 1. Each sample yielded a single grain of barley; the grain from (62) was of the hulled variety. Context (52) also contained a small fragment of a hazelnut shell.

Context (83) is the fill of a post-pipe (82) in Section D of Palisade 1. The sample yielded five small fragments of hazelnut shell.

DISCUSSION

Despite the processing of large quantities of soil from the 2002 excavations at the Dorsey, few archaeobotanical remains were recovered. Twenty-seven samples from post-holes or post-pipes located within the palisade trenches were processed but only one, (83), produced any archaeobotanical material, consisting of small hazelnut fragments. The lack of plant remains from these contexts is perhaps not surprising, as the samples by their nature were small (not exceeding 390 g in weight), (83) being the largest amongst them.

The fill (16) of a second post-hole, not associated with the palisades, yielded what appears to be an oat grain. Oats were cultivated from early medieval times at least, but the wild variety (*Avena fatua*) can be

Context		(16)	(18)	(56)	(62)	(83)
Sample weight (kg)		2.4	10.0	3.4	8.1	3.9
Charcoal content (% total weight)		1.2	2.8	2.4	3.5	0.6
Cereals						
<i>Triticum</i> spp.	Wheat		10			
<i>T. cf. aestivo-compactum</i>	Bread/club wheat type		6			
<i>T. cf. emmer</i>	Emmer wheat type		4			
<i>T. cf. spelta</i>	Spelt wheat type		2			
<i>Hordeum</i> spp.	Barley		4	1		
<i>Hordeum</i> spp. (hulled)	Hulled barley				1	
<i>Hordeum vulgare</i>	6-row barley		2			
<i>H. vulgare</i> var. <i>nudum</i>						
Naked 6-row barley			2			
<i>cf. Avena</i>	Oat type	1				
Total cereals		1	30	1	1	
Other						
<i>Corylus avellana</i>	Hazelnut (shell fragments)		20	1		5

Table 1 Archaeobotanical remains from the Dorsey, Co Armagh.

found as an occasional weed in earlier periods (eg Monk 1986). Without the presence of identifiable chaff remains, the variety of oat in question here cannot be established, and its economic significance is uncertain. The relationship of this pit to the palisades or hut structure is also unclear.

A more significant cereal assemblage was obtained from the pit-fill (18) within the possible hut structure. The feature has been interpreted as a possible roasting pit (above, p 47) and the plant remains are consistent with food refuse. Wheat grains predominate, and appear to include emmer, bread/club and spelt varieties. Emmer and bread wheat were both cultivated since the Neolithic, but the evidence available to date suggests that spelt wheat was introduced in the Later Bronze Age (eg Monk 1986; van der Veen 1992). The importance of wheat, however, appears to decline from the early medieval period, when barley and oats tend to become dominant (Monk 1991). The barley remains in the pit-fill demonstrate the presence of the naked six-row variety. The absence of processing by-products in the form of cereal chaff or weed seeds was notable from this rather sizeable sample, and implies that such processing took place elsewhere. Hazelnut shell fragments were frequent.

Contexts (56) and (62) produced limited plant macrofossil material. These contexts comprise upper fill material from Palisade 1, and must therefore post-date the primary phase of palisade use but could be broadly contemporary with the roasting pit (17). Both samples contained a single grain of barley, and in (56), this is of the hulled variety. It seems likely that the incidental inclusion of cereal grains in these samples stems from general activity associated with the roasting pit.

Few archaeobotanical assemblages dating to the Early Iron Age have been reported and evidence for crop cultivation during this period is poor. At Carrowmore, Co Sligo, an intrusive pit in a passage tomb contained naked and hulled barley, rye (*Secale cereale*) and oats (possibly of the wild variety, and was dated to 2480±55 BP (790-410 cal BC) (Hjelmqvist 1980). At Rathtinaun, Co Sligo, naked and hulled barley, wheat and flax (*Linum usitatissimum*) were found at the edge of the crannog and were dated to 2160±130 BP (550 BC-AD 150) (McCauley & Watts 1961; Mitchell 1976). In both instances, naked barley was predominant.

In view of the paucity of the evidence for Early Iron Age crop cultivation, the archaeobotanical remains from the 2002 Dorsey excavations offer a new, albeit limited, contribution to the archaeological record and reveal that a range of wheat varieties were current as well as barley. The archaeobotanical assemblage is largely confined to a feature interpreted as a roasting pit that post-dates the palisade features and seems to represent a brief period of domestic activity soon after the palisades fell into disuse.

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CONCLUSIONS

Although a large number of samples were processed, only that from the roasting pit yielded any substantial archaeobotanical remains. The cereals and hazelnut shell from this context, as well as the burnt bone, point towards domestic activity. The same activity probably accounts for the occasional inclusions of cereals in other nearby contexts. The quantity of material is small and the pit may relate only to a single episode of food preparation. The archaeological evidence suggests that use of the pit took place not long after the construction of Palisade I at least, and ¹⁴C determinations from the upper fills of this feature indicate an Iron Age date. The range of cereals present in the pit fill is consistent with this date.

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