ART. V. – *Old Penrith: Excavations 1977 and 1979*. By ANDREW POULTER*

THE second of three cropmarks identified by J. K. St Joseph in the vicinity of *Voreda* (Old Penrith) lies *c.* 500 m north-west of the Roman fort, immediately west of the line of the Roman road to Carlisle (NY 490389 Fig. 1).[1] Two sides of a rectangular, ditched enclosure with rounded corners were interpreted by J. K. St Joseph as a Roman temporary camp, although the absence of *tituli* and any clear indication of an entrance on the aerial photograph left the interpretation uncertain. (The line of the cropmark on its northern side is indistinct in the central section and could represent an entrance.) The purpose of the excavation, suggested by the RCHM in connection with its survey of Roman sites in northern England, was to determine whether the ditch continued south into the adjacent field and to check the interpretation of the cropmark as a Roman temporary camp. A two-week trial excavation was carried out in July 1977,[2] and a further two weeks excavation in July 1979.

## Description of the site

The site of Old Penrith II commands a steep bluff overlooking the River Petteril to the west and slopes gently to the south-east, towards a smaller escarpment above Galley Gill, which provides the best approach to the river in the vicinity of *Voreda*, since steep banks to the north and south render access to the river difficult. The geology consists of boulder clay, overlying Penrith sandstone. Glacial drainage channels cross adjacent fields although none are recorded as actually cutting the line of the excavation.[3]

## Area 1, 1977

A trench 18 m in length and 2 m wide to cut the projected line of the cropmark and 2 m from the hedge-line (Fig. 1) was hand-dug down to the natural boulder clay. Apart from occasional small concentrations of charcoal and one *mortarium* sherd, no finds or features were found in the eastern 8 m of the trench, outside the ditch. The ditch proved to be 80 cm deep and 2·10 to 2·20 m in width (Fig. 2 No. 1). The south lip of the ditch, where it cut through the natural orange subsoil had clearly proved difficult to consolidate and a large water-worn boulder had been set into the side to sharpen the profile, which steepened noticeably when it reached the boulder clay beneath. The upper fill of the ditch contained fragments of Roman tile and four sherds of Black Burnished Ware came from the grey silt immediately above boulders and stones lying in the bottom of the ditch.

West of the ditch, an unconsolidated stone spread extended for 6·5 m, decreasing in concentration away from the western lip of the ditch. Although the spread had been much disturbed by ploughing, the presence of boulders in the ditch suggest the collapse

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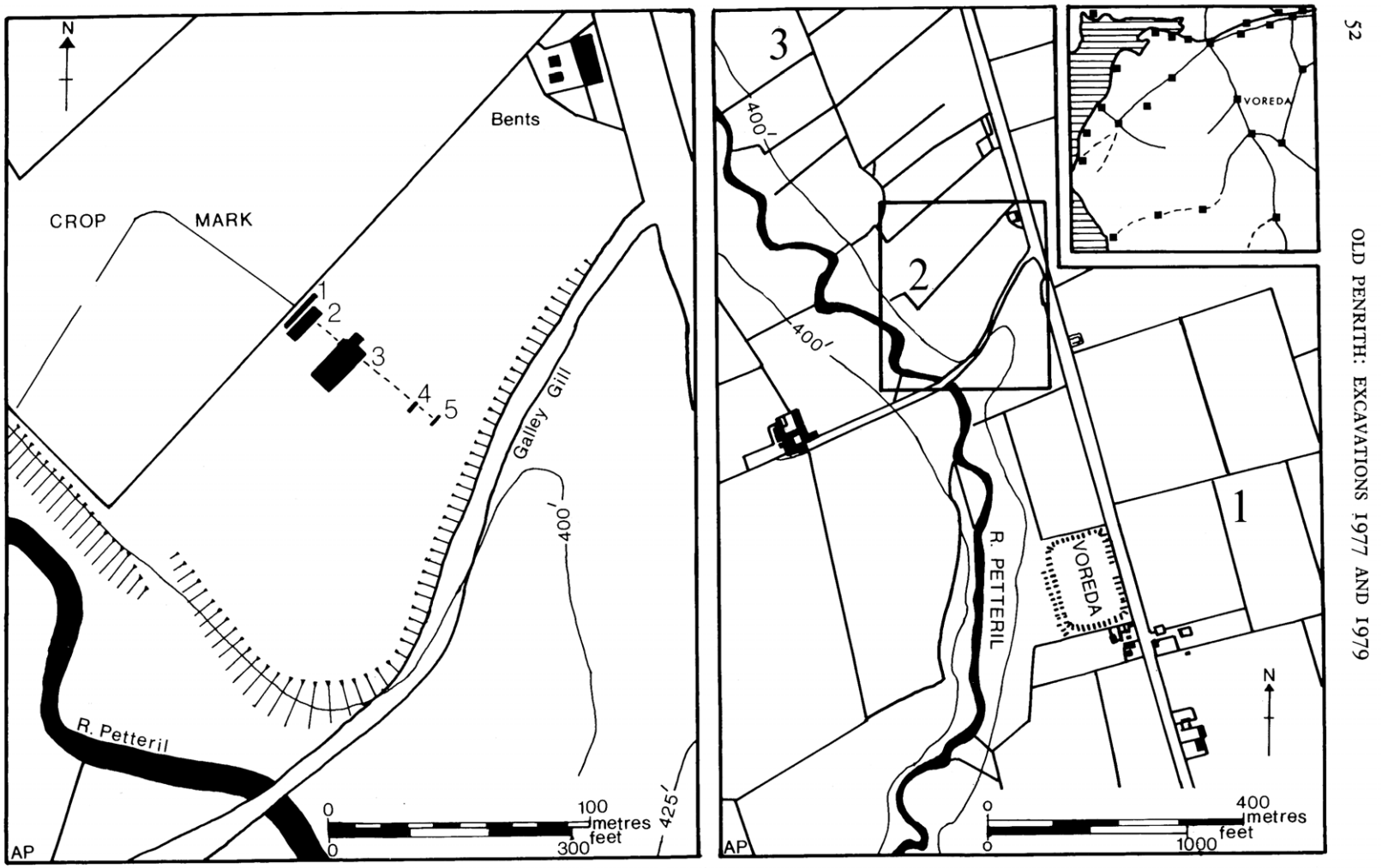


FIG. 1. – Location maps

Site plan (from O.S. 1:2500 and RCHM survey). Sites in the vicinity of *Voreda* (based on O.S. 6 in.) 1-3 are crop marks identified by St Joseph. Inset of forts near *Voreda*.

or demolition of a stone and rubble 'rampart' close to the inner lip. After a short period of natural silting, the ditch would seem to have been filled and levelled with a dark orange soil and some clay turfs. Ploughing had removed any Roman level inside the enclosure at this point, though not deeply penetrating the underlying subsoil.

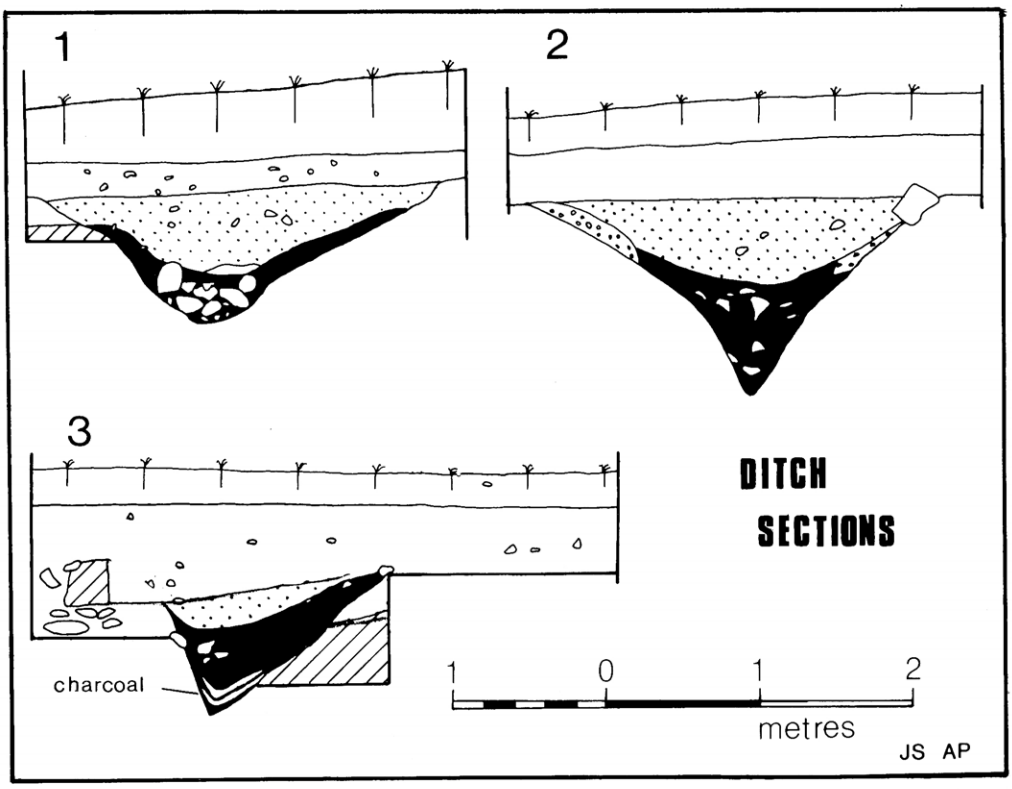


FIG. 2 – Old Penrith II, 1977 and 1979. North sections. 1 (area 1), 2 (area 2), 3 (area 5). The south section of area 3 is illustrated in FIG. 3.

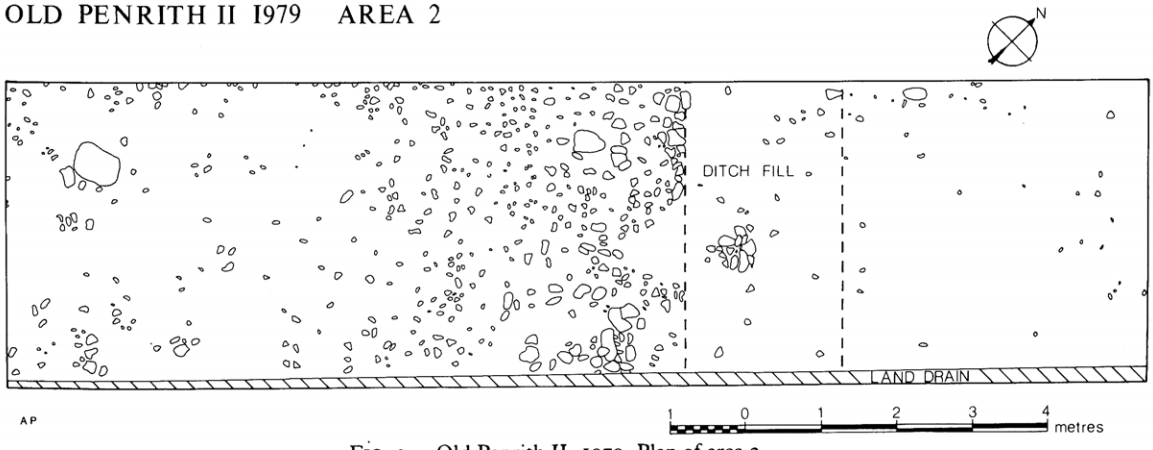


FIG. 3. – Old Penrith II, 1979. Plan of area 2.

### Area 2 – 1979

Trench 2 was dug parallel to and 1 m from trench 1 (4 × 15 m Fig. 1). The top soil was removed by mechanical excavator. The rubble spread, trowelled by hand, here proved slightly better preserved, extending back from the inner lip of the ditch for *c.* 4 m with the concentration of larger boulders close to the lip of the ditch (Fig. 3 and Plate 1). The ditch was 2·10-2·20 m wide at the lip – as in area 1 – v-shaped in profile and 1·30 m deep. The fill was identical to that in area 1. (Fig. 2, No. 2).

### Area 3

The area excavation (initially 20 × 10 m) was located 12·10 m east of Area 2 to provide a more detailed picture of the ditch and associated stone spread, and to ascertain whether any buildings could be located immediately within the enclosure. Ploughing had removed any evidence for an occupation level and all features preserved were those which had penetrated the natural orange soil or boulder clay (Fig. 4). The spread of boulder clay appeared to be natural and bore no obvious relation to the features except immediately to the north of feature 2 where with stones it formed an arc of hard clay partly encircling f.2 and f.3. The ditch (1·60-1·75 m wide, 90 cm deep), steeply v-shaped in profile, slopes gently upwards to a narrowed butt-end, leaving an entrance over 4 m wide. The tumble of stones and boulders in the bottom of the ditch was particularly marked at the butt-end, and seems to have been purposefully pushed into the ditch, which was then immediately filled with dark orange sandy soil and clay turfs. From the primary grey silt at the bottom of the ditch came a mid-second century flagon sherd. Immediately inside the ditch five stake-holes were irregularly spaced along the lip (Fig. 4, Nos. 7-11). The rubble-stone spread behind the ditch was badly disturbed by ploughing, but where best preserved, close to the south section, extended *c.* 1·70 m back from the ditch.

The stake-holes along the inner lip of the ditch presumably indicate a light fence, probably of wickerwork. Since there was no evidence that the rubble layer of stones and boulders represented more than tumble and as the stones had collapsed or were pushed first into the ditch before it was backfilled with soil and turfs, the structure on the inside of the enclosure is unlikely to have been a turf wall on a stone foundation. It seems most probable that a fence along the inside of the ditch was backed by a mound of stone and boulders consolidated with turf and soil.

No features were found outside the ditch and, within the enclosure, only six postholes were identified (1-6, Fig. 4). None appeared to relate to any particular structure, although No. 6 preserved the impression of a post *c.* 10 cm in diameter, penetrating 25 cm into the natural boulder clay, which may have supported a light barrier across the entrance, set back 1·75 m from the butt-end of the ditch. Five shallow pits were found, (f. 1-5, Fig. 5). F.1-3 had been truncated with the removal of the Roman level by ploughing and it proved impossible to determine their function. F.4 was elliptical, with large stones at the bottom and a profile which suggested that a post had been packed with stones and later dug out before decomposition (likely maximum diameter of the post 25 cm).

### F.5 Grain Pit (Plate 2)

This circular pit differed markedly in profile, possessing a flat bottom. There were

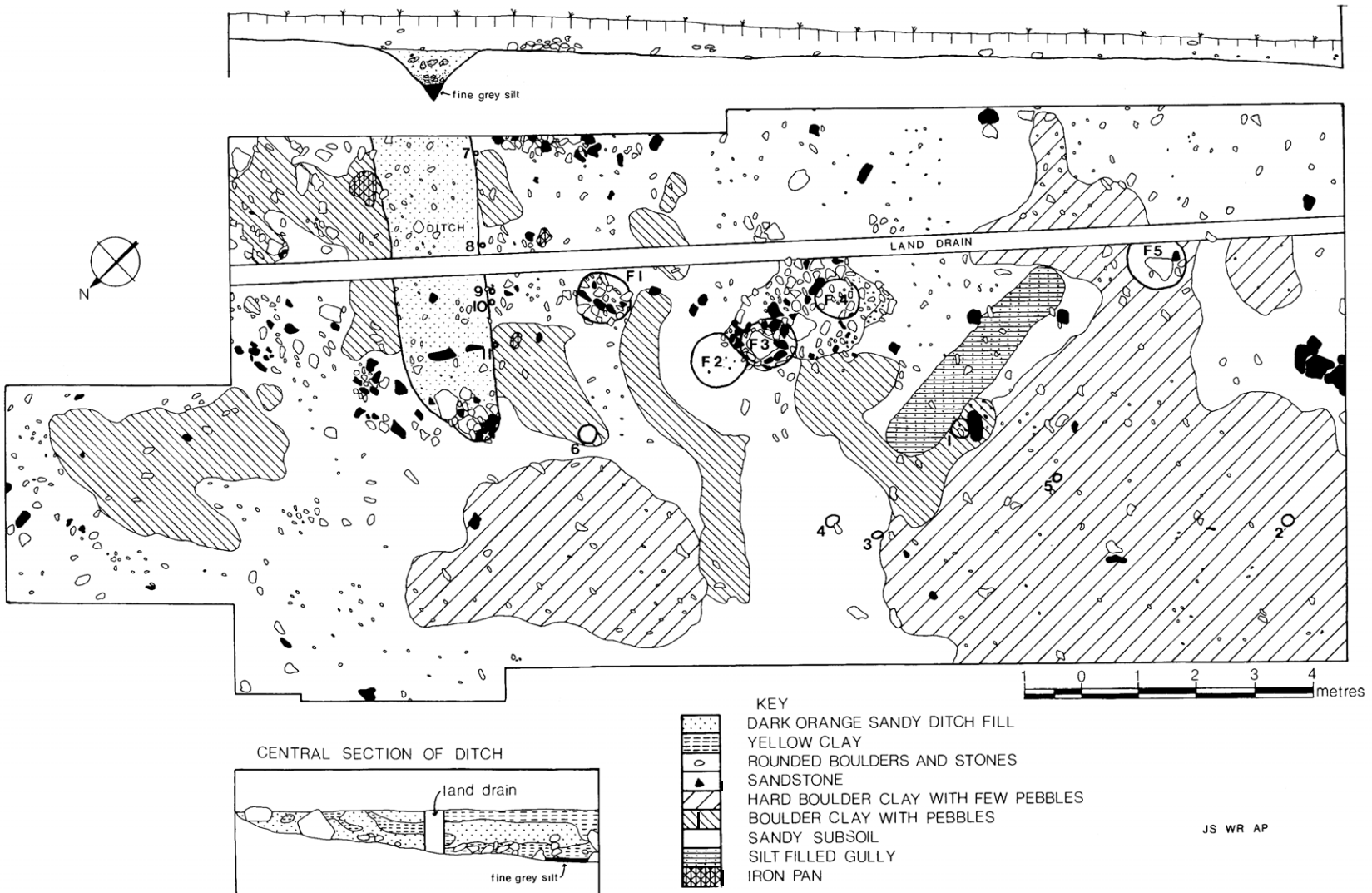


FIG. 4. – Old Penrith II, 1979. Plan and section. Area 3.

traces of a clay lining to which pieces of wickerwork adhered. Six stake-holes, arranged in pairs around the bottom of the pit, presumably supported a wicker-work basket, at least partly sunk in the subsoil. The lower fill of the pit contained both loose carbonized grains, predominantly of oats, and cakes of flax (see Appendix I). Since the two types of grain represent two distinct samples, the one consisting of loose grains and the other carbonized into cakes, it is improbable that the two grains were originally stored together. If the pit was a grain store then the two seed types must have been kept separately in different compartments, or more probably, in perishable containers within the wicker-work basket. Since the grains of oats showed signs of having germinated before being subject to intense heat, they may represent seed grain stored over the winter. It is possible however thay they may have been rubbish swept into a disused pit so that the interpretation of F.5 as a grain store must accordingly remain tentative. $C^{14}$ analysis of samples of flax and wood from the 'basket lining' provided a probable 10th or 11th century date for the pit (Appendix II).

## Areas 4 and 5

The projected line of the ditch was examined in trenches 4 (3·20 × 1·40 m) and 5 (3·75 × 1 m), respectively 30 and 38 m south-east of the entrance discovered in area 3. The fill of the ditch in area 4 was not excavated. In area 5, the ditch proved to be similar in character to the section excavated in area 3 (90 cm deep and 1·52 m wide) except that small amounts of charcoal and burnt wood fragments were found in the bottom fill and a remnant of the clay 'rampart' was preserved *in situ* on the inner lip of the ditch. (Fig. 2.3).

## Conclusion

*Roman period*

The north-west side of the ditched enclosure from the north-east corner to the bluff above the River Petteril can have been little in excess of 95 m in length. The long north-east side, passing through area 5 was more than 140 m in length, although, given the proximity of Galley Gill, this figure could not have been greatly exceeded (Fig. 1). Whether the ditch turned to run south-west above Galley Gill remains uncertain, since the present bluff was cut back for the modern road and the south-west side of the enclosure has probably been lost as a result of fluvial erosion. The area thus enclosed amounts to *c.* 1·3 ha. The tactically strong position of the enclosure, commanding the crossing of the Petteril, recommended an interpretation of the cropmark as a Roman temporary camp, pre-dating the establishment of the fort at *Voreda* in the late 1st or early 2nd century A.D.[4] However, the discovery of the evidence for a fence, backed by a rubble and earth mound, running along the inside of the ditch argues against such a military interpretation; there is no room for the berm which would hardly have been omitted if the rubble and earth mound was ever intended to serve as a rampart, and the pottery from the primary ditch silt in areas 1 and 3 suggest a date no earlier than the second quarter of the 2nd century A.D. The small quantity of pottery found during excavation offers no more accurate dating: much of the material is clearly residual and may derive from the fort or *vicus*.

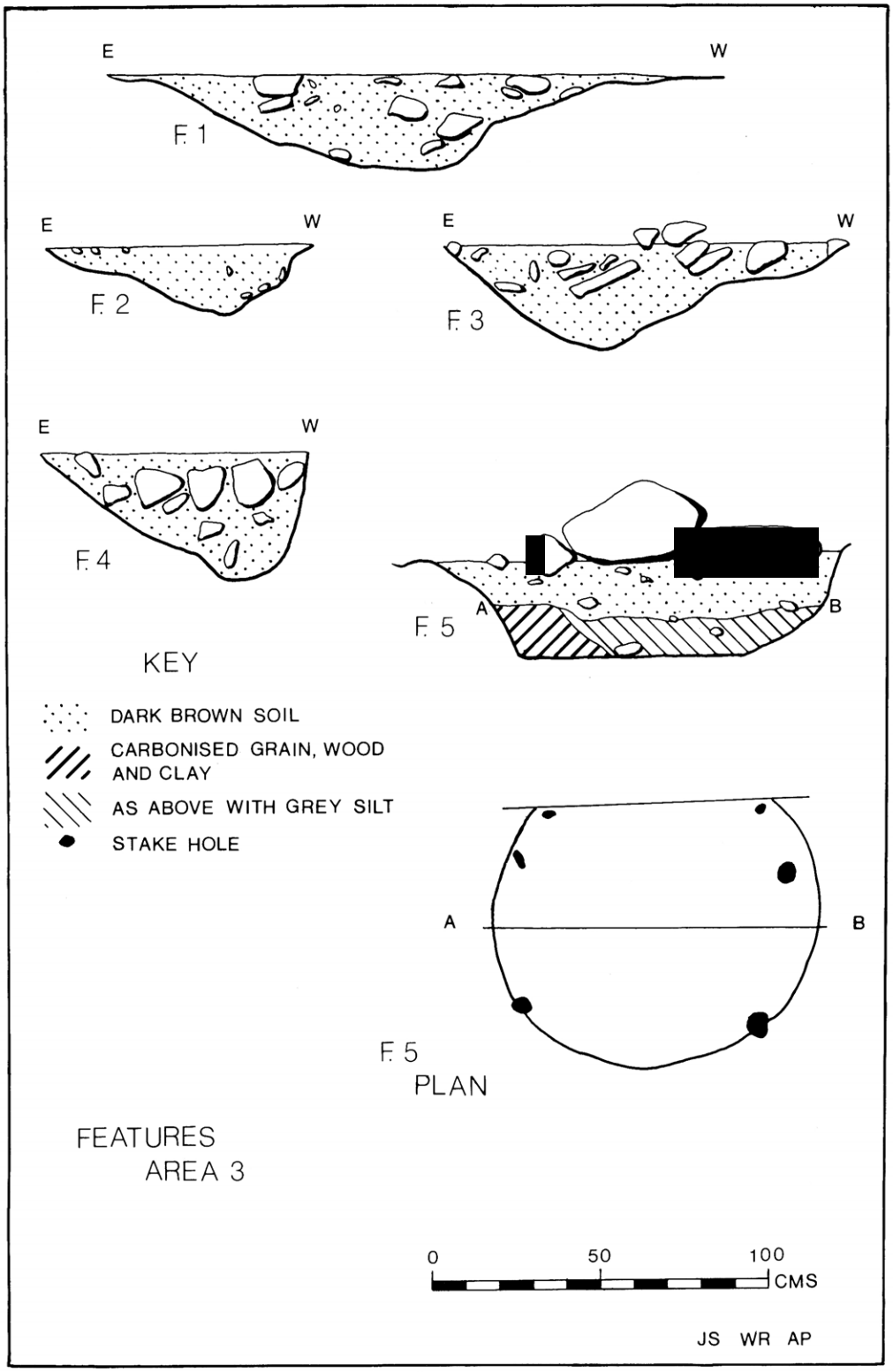


FIG. 5. – Old Penrith II, 1979. Features in area 3.

The enclosure ditch shows no clear signs of recutting and seems to have been back-filled with stones, clay sods and orange soil from the demolished 'rampart'. The destruction by ploughing of any occupation level within the enclosure precludes any confident association of the features and postholes with the ditch itself. They may as easily be associated with the early medieval 'grain pit'. (F.5)

The sherds from the primary ditch fill and the regular character of the enclosure suggest a Roman date. The stone and clay wall inside the ditch is of similar construction to those surrounding native farmsteads in Cumberland and Westmorland.[5] However, the native enclosures of north-west England do not display such a striking regularity of form and the enclosure of Old Penrith II suggests "Roman military inspiration" if not a strictly military function, the closest parallels for which would seem to be the rectilinear native sites of north-eastern England.[6]

The *vicus* at *Voreda* may have extended north as far as Galley Gill.[7] The enclosure of Old Penrith II may therefore have served as a farmstead or stock compound attached to the extra-mural settlement. The enclosure could conceivably have served a military function, although the absence of a berm, the character of the 'rampart', and the apparent absence of *titula* would seem to preclude its interpretation as a practice or temporary camp. As noted above, three cropmarks were identified by J. K. St Joseph in the vicinity of *Voreda* (Fig. 1). Old Penrith III is a rectangular enclosure with clear evidence for *tituli* and can be safely interpreted as a Roman temporary camp. Old Penrith I, however, lying immediately east of the fort, provides no clear evidence for *tituli* and may prove to have been of similar character to Old Penrith II.

*Early Medieval Occupation*

The discovery of the 'grain-pit' containing the two distinct samples of carbonized flax and oats and dated, on the evidence of $C^{14}$ analysis, to the 10th or 11th centuries A.D. provides welcome confirmation that the environs of *Voreda* were occupied during this period. Whether the postholes and other features noted in area 3 should be associated with the 'grain-pit' could not be determined given the limited extent of area excavation. The absence of any pottery or other finds associated with the 'grain pit' suggests that the centre of occupation fell outside the area of excavation; more post-Roman material may therefore be expected in the neighbourhood, possibly within the fort of *Voreda* itself. However, in view of the sparsity of pottery from sites of this period its absence in these excavations cannot be considered decisive. Any future excavation in the vicinity of the fort should therefore take account of the possible existence of aceramic post-Roman occupation.

## The Pottery

The quantity of pottery found during both seasons of excavation was remarkably small. Most sherds were heavily abraded, all were small and only a few sherds from the ditch fill can be regarded as stratified. The total weight of Roman sherds amounted to only 383 grams. With the possible exception of the sherds and tile from the primary silt of the ditch in areas 1 and 3 all the sherds could easily be residual.

PLATE 1. – Enclosure ditch and north section, area 2.

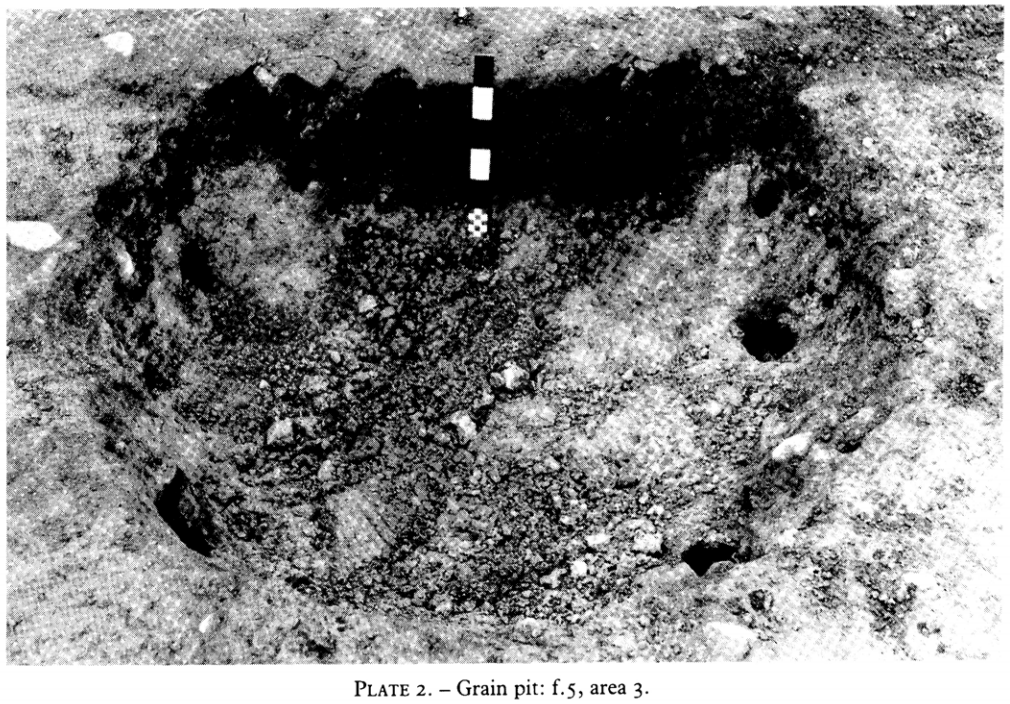

PLATE 2. – Grain pit: f.5, area 3.

*Samian by B. Hartley*

Area 2 Upper ditch fill. Many South Gaulish flakes, 1st century A.D.

Area 2 Stone spread, unstratified. Central Gaulish fragment, burnt. Hadrianic or, more probably, Antonine.

Area 3 Above stone spread. Central Gaulish fragment, probably from Les Martres-de-Veyre. Certainly 2nd century, and not impossibly Trajanic.

*Coarse Ware by J. Gillam and R. Alvey*

*Fig. 6*

1. Jar, grey to black sandy fabric with calcite tempering. A single groove near to the rim top on the inside for a lid seating. Huntcliffe Ware. Post A.D. 360. Trench 3 unstratified.
2. Beaker, soft orange buff; slightly sandy fabric with some limestone present. The external surface has traces of a grey slip coating. Flavian/Trajanic. Area 2, stone spread.
3. BBI cooking pot with quartz inclusions and characteristic cindery texture. Early Hadrianic/Antonine. Area 2, stone spread.
4. Colour coated Castor Ware beaker. Off white creamy fabric with the odd sand grain and bits of red iron. Grey slip coating on both sides. Mid-2nd to mid-3rd century A.D. Area 3, f.5.
5. Flagon neck, orange slightly sandy fabric with a grey core. Neck applied to body of the vessel. Runs of white slip down the inside of the neck. Similar in fabric to the Eden Valley mortaria. Hadrianic or early Antonine. Area 3, primary ditch fill.
6. Base of beaker, blue grey core with reddish orange surfaces; sandy with red iron and limestone, similar fabric to no. 2. Flavian/Trajanic. Area 3, upper ditch fill.

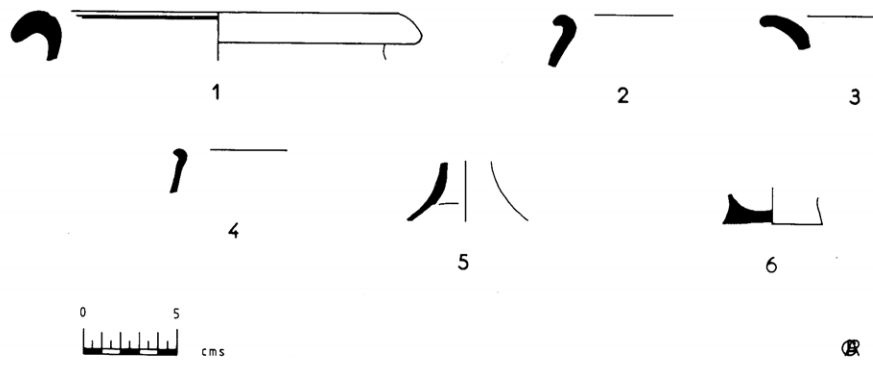


FIG. 6. – The pottery.

*Not illustrated*

*Area 1*

4 small sherds from the same vessel (2 wall and two base) of Black Burnished Ware from the silt immediately above the stones in the bottom of the ditch. 2nd to 3rd centuries A.D.

*Area 2*

A body sherd from a thin-walled mortarium. Probably of South Midland manufacture. Early 3rd to mid-4th century A.D. Rubble spread west of ditch.

**Acknowledgements**

I would like to express my gratitude to Major J. H. Harrison, the owner of the site, and to Mr Hogarth, the tenant farmer for his help and interest in the excavation and the welfare of the excavators. I am much indebted to the Institute of Archaeology, University of London and the School of History, University of Leeds for funding the excavation, and to Professor S. S. Frere and the Haverfield Bequest for financing the $C^{14}$ dating and to Dr R. E. G. Williams, Dept. of Geological Sciences, University of Birmingham, for undertaking the analysis. I would particularly like to thank Ray Farrar (RCHM) for his advice and encouragement; Tom Clare, archaeological officer for Cumbria, and Colin Richardson of the Carlisle Museum, for their practical help and advice, and also J. P. Gillam and B. Hartley for examining the pottery finds. The postgraduate students of the Institute of Archaeology and the undergraduate students of the School of History, Leeds University, worked particularly hard to complete the excavation in often inclement weather, and I am especially indebted to John Shepherd of the Institute of Archaeology for his help and considerable effort during both seasons of excavation. I am also grateful to the Royal Commission on Historical Monuments for assisting in the cost of publishing this report. The finds and site notebooks are deposited in the Carlisle Museum with a fuller version of the appendix on grain samples.

## Appendix I

*Carbonised Grain from Feature 5, Area 3.* R. C. ALVEY

F.5 South side depth 200 mm (E)

*Hordeum vulgare* (Hulled barley)

| *Length (mm)* | *Width* (mm) | *Thickness* (mm) | |
|---|---|---|---|
| 230·2 | 112·0 | 90·3 | Total |
| 6·5 | 3·7 | 3·2 | max. |
| 3·6 | 1·6 | 1·1 | min. |
| 5·0 | 2.43 | 1·96 | average. |

| | |
|---|---|
| % Germinated of measurable grains | 17·3% |
| Total number of grains measurable | 46 |
| Total number of grains unmeasurable | 35 |
| | 81 |

weight 1 g 160 mg.

*Oats*

*Avena sativa* or *strigosa*

Grains still contained in glumes or separate glumes

212 Weight 758 mg

*Avena fatua* wild Oat

Grains still contained in glumes or separate glumes

11 Weight 56 mg

*Avena Spp.*
Grains separated from glumes some showing signs of having germinated before becoming carbonized.

1,030 Weight 4 g 60 mg

Total number of Avena present 1,253
Total weight of Avena 4 g 874 mg
Percentage of barley to oats is 6·5%

Bits, fragments of grains, carbonized wood etc. Weight 24 g 256 mg

Weed seeds 73 mg (not all weed seeds have been extracted from the bits sample).

Feature 5C N. Section

*Hordeum vulgare* (Hulled)
16 damaged unmeasurable grains.

| *Length* (mm) | *Width* (mm) | *Thickness* (mm) | |
|---|---|---|---|
| 24·7 | 12·5 | 10·6 | |
| 4·4 | 2·2 | 1·7 | Min. |
| 5·8 | 2·8 | 2·6 | Max. |
| 4·9 | 2·5 | 2·12 | Aver. |

Total number of Hordeum 21
Total weight of Hordeum 140 mg
*Avena Sp.* Grains separated from glumes. Signs of germination.
Number 883
Weight 3 g 700 mg

*Avena sativa* or *strigosa*. Grains still contained in glumes or separate glumes.
Number 936
Weight 4 g 215 mg

*Avena fatua*
Number 31
Weight 150 mg

*Weeds* 65 mg

1 spelt wheat fork.

Rubbish bits 24 g 370 mg

Feature 5A N. Section

Charcoal (wood) bits weight 11 g 750 mg

*Avena Sp.* separated from glumes.
Number 913
Weight 4 g 50 mg

Rubbish bits 22 g 830 mg

*Hordeum* (Hulled) 9 Germinated
Number 60
Weight 600 mg

Weeds 40 mg

*Avena Sativa* or *strigosa*
Number 99
Weight 480 mg

*Triticum dic* (?)
Number 2
Weight 11 mg

Feature 5A S. Section 100 mm deep

*Avena Sp.* 786 Weight 3 g 510 mg

Weeds 35 mg

Charcoal Weight 2 g 620 mg

Rubbish Weight 18 g 137 mg

Barley Number 39 Weight 390 mg Most germinated.

*Avena sativa* or *strigosa*
Number 87
Weight 400 mg

*Avena fatua*
Number 3
Weight 9 mg

Feature 5D S. Section 150 mm.

| | | | |
|---|---|---|---|
| Charcoal | | 3 g | 850 mg |
| *Avena Sp.* | 702 | 2 g | 840mg germinated |
| *Avena st.* | 46 | | 190 mg |
| *Avena fat.* | 1 | | 2 mg |
| Barley | 32 | | 260 mg germinated |
| Weeds | | | 60 mg |
| Rubbish | | 12 g | 360 mg |

Feature 5B N. Section

| | | | |
|---|---|---|---|
| Charcoal | | 5 g | 830 mg |
| Rubbish | | 10 g | 265 mg |
| *Avena Sp.* | 339 | 1 g | 340 mg |
| *Avena st.* | 41 | | 180 mg |
| *Avena fat.* | 1 | | 2 mg |
| Weeds | | | 50 mg |
| Barley | 31 | | 250 mg |

Feature 5E N. Section

Cake of flax, some charcoal and bits, some other weeds.

| | | | |
|---|---|---|---|
| | | 164 g | 750 mg |

Feature 5 S. Section

| | | | |
|---|---|---|---|
| Flax cake | | 75 g | 420 mg |
| Some other weeds | | | |

Feature 5B S Section 150 mm

| | | | |
|---|---|---|---|
| Charcoal | | 1 g | 885 mg |
| *Avena Sp.* | 510 | 2 g | 305 mg |
| Weed, mainly flax | | | 85 mg |
| Barley | 30 | | 260 mg |
| *Avena sat.* | 33 | | 160 mg |

| | | | |
|---|---|---|---|
| *Avena fat.* | 2 | | 20 mg |
| Flax cake | | 3 g | 940 mg |
| Rubbish | | 8 g | 335 mg |

Feature 5C S. Section 200 mm

| | | | |
|---|---|---|---|
| Charcoal | | 1 g | 420 mg |
| *Avena Sp.* | 719 | 2 g | 940 mg |
| *Avena sat.* | 268 | 1 g | 240 mg |
| *Avena fat.* | 31 | | 155 mg |
| Weeds | | | 165 mg |
| Barley | 87 | | 775 mg |
| Barley Rachis | 4 | | 5 mg |
| Rubbish | | 21 g | 560 mg |

Feature 5 No number

| | | | |
|---|---|---|---|
| Charcoal | | 10 g | 500 mg |
| *Avena Sp.* | 135 | | 650 mg |
| Barley | 4 | | 35 mg |
| Weeds | 3 | | |
| Rubbish | | 3 g | 750 mg |

Barley

| Weight | No. | *Avena Sp.* | No. | *Avena sat.* | No. | *Avena fat.* | No. | |
|---|---|---|---|---|---|---|---|---|
| 3·870 | 385 | 25·395 | 6017 | 7·623 | 1722 | 464 | 90 | Totals |

| Charcoal Weight | Rubbish Weight | Weeds Weight | Wheat Weight | Wheat No. | Totals |
|---|---|---|---|---|---|
| 62·111 | 121·607 | 570 | 11 | 3 | |

Flax

| *Length* | *Thickness* | |
|---|---|---|
| 36·8 | 12·3 | Totals |
| 4·0 | 1·6 | max. |
| 3·4 | 1·0 | min. |
| 3·6 | 1·2 | average |

164·750
75·420
240·170 = 61·027
3·940
224·110 — 4 grains = 1 mg

Percival = 4,3-4,5 per 1000
= 55·813-

Oat
max. 7·6 mm
min. 3·6 mm

Total Avena

| Weight | No. |
|---|---|
| 33·482 | 7·829 |

## Appendix II

*$C^{14}$ Analysis of Wood and Flax Samples from F.5, Area 3.* By R. E. G. WILLIAMS

Laboratory reference number: Birm-1076
Nature of sample: Plant (wood)
$^{14}C$ Half life (Libby) = 5570 years
Age in years (B.P.): 1000 ± 60

Laboratory reference number: Birm-1075
Nature of sample: Plant (Flax)
$^{14}C$ Half life (Libby) = 5570 years
Age in years (B.P.): 1030 ± 100.

## Notes

[1] *J. R. S.*, xli (1951), p. 54.
[2] *Britannia*, ix (1978), p. 425.
[3] R.C.H.M. Records.
[4] For the interpretation of the cropmark, above note 1. *Britannia* ix (1978), pp. 424-5; E. Birley, *Old Penrith and its Problems*, CW2, xlvii, 175-6.
[5] R. A. Webster, *A morphological study of Romano-British settlements in Westmorland*. CW2, lxxi, 64-74; N. J. Higham and G. D. B. Jones, *Frontiers, Forts and Farmers: Cumbrian aerial survey*, 1974-5, *Arch. J.* cxxxii (1975), 16-53.
For a ditched enclosure probably backed by a clay and rubble stone wall cf. G. G. S. Richardson, *A Romano-British Farmstead at Fingland*, CW2, lxxvii, 53-9.
[6] cf. G. Jobey, *Excavation of a native settlement at Marden, Tynemouth, A.A.4*, xli (1963), 19-35.
[7] E. Birley, *op. cit.* p. 169; O. H. North, *Roman finds at Voreda*, CW2, xxxvi, 132.