CARLISLE ARCHAEOLOGY LTD

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REPORT ON AN ARCHAEOLOGICAL INVESTIGATION ON LAND BETWEEN THE A66 AND FRENCHFIELD FARM, PENRITH, CUMBRIA

For Eden District Council

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MAKING KNOWLEDGE WORK

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1 INTRODUCTION

1.1 This report covers a phased programme of archaeological work undertaken by Carlisle Archaeology Ltd on behalf of Eden District Council on land adjacent to Frenchfield Farm, Brougham, Penrith. The report describes the surviving archaeological deposits and provides provisional interpretations concerning form, function and date.

1.2 The archaeological work is identified in Carlisle Archaeology's site archive by the site codes CAR 99/00 BRM E-G.

1.3 Copies of this report have been submitted to Cumbria County Council Planning Department and English Heritage.

2 THE BRIEF AND NATURE OF THE INVESTIGATION

2.1 In the summer of 1999, Eden District Council commissioned an archaeological evaluation of two fields located between the A66 trunk road and Frenchfield Farm, Brougham, in order to ascertain the impact of proposed development upon a known archaeological site, part of which is a Scheduled Ancient Monument (SMR 1168). The development entailed a change of use from pasture to recreation, with the proposed construction of six football pitches, a cricket square, a pavilion and associated road access. An archaeological brief prepared by Cumbria County Council's Archaeology Service required that the evaluation should sample approximately 5% of the development area.

2.2 On the basis of a project design submitted in 1999 (McCarthy 1999), Carlisle Archaeology (formerly Carlisle Archaeological Unit) was commissioned to undertake the work.

2.3 The evaluation was conducted in two phases, the first being located within the scheduled area (designated Area 1), which comprised most of the westernmost field. The results of this work, which was assigned the site code CAR 99 BRM C, have been reported elsewhere (Martin *et al* 1999) and are not repeated here except in summary form. Aerial photography had already demonstrated that a Roman road crossed the field on its approach to the fort at Brougham, and evidence for other, possibly pre-Roman, activity was also visible in the form of probable ditched enclosures and ring-ditches. A small initial evaluation confirmed the line of the road and the presence of ditches cutting the natural subsoil, and provided information on the depth of modern topsoil covering the archaeological remains. Traces of Roman buildings fronting the road suggested that the civil settlement (*vicus*) associated with the fort might have extended as a ribbon development well to the north-west of the fort itself.

2.4 In the light of this work, it appeared highly probable that the second phase of evaluation, which was to be carried out in the unscheduled north-east corner of the western field and in the adjacent (also unscheduled) field to the east (designated Area 2), would reveal similar deposits. A mitigation strategy was therefore devised

which would endeavour to balance the desirability of *in situ* preservation of the archaeological remains with the requirements of the development proposals.

2.5 Archaeological evaluation representing 5% of the development area was combined with a targeted geophysical survey in an attempt to determine the spatial limits of the archaeological remains, their thickness, and the depth of overlying topsoil. Using this data, it was felt that it should be possible to provide appropriate guidance to the Sports Turf Research Institute so that the creation of the playing surfaces and associated facilities would cause minimum disturbance to the archaeology. This phase of work (coded CAR 99 BRM E) was undertaken between 1st December 1999 and 21st January 2000, with the geophysical survey being completed between 18th and 21st January.

2.6 Subsequent to the evaluation, a two-phase archaeological watching-brief was maintained during the initial stages of the construction programme. The first phase (coded CAR 00 BRM F) was undertaken from 3rd-26th July 2000 during mechanical stripping of the topsoil over almost the entire site. The second stage (coded CAR 00 BRM G) took place between 17th-18th August 2000 in response to the creation of an access road at the western end of the site and the excavation of a drainage pipe trench.

3 LOCATION AND TOPOGRAPHY

3.1 The site lies at a height of approximately 113m OD, close to the confluence of the rivers Lowther and Eamont (NY 5376 2941). It is situated on a terrace of the Eamont, bounded on the north and west by the steeply sloping sides of the terrace, to the east by the river, and to the south by the A66.

3.2 The land is well-drained, consisting of a topsoil of fine silt and loam (defined as brown-earths of the Wick Association) above a base of coarse sandy gravel. The date of the gravels and associated deposits has not been determined, but it is assumed that they were deposited during the late Pleistocene or early Holocene. Numerous paleochannels are visible from aerial photography; those encountered during the evaluation were filled predominantly with homogeneous, red-brown clay-silts up to a metre thick.

4 PREVIOUS WORK

4.1 Previous archaeological work in the Brougham area has been summarized in both the project design (McCarthy 1999) and the first evaluation report (Martin *et al* 1999), and the details are not repeated here.

4.2 During conversations with the former tenant farmer, Mr William Young, who farmed the land for about thirty years, a number of salient points were made that might have a bearing on the extent of the archaeological remains. It was noted that crop yields to the south (in the vicinity of the Roman road) were half as great as in the northern portion of the field. The incidence of worked stone and stone rubble was greater to the south following ploughing, and deep ploughing is unable to penetrate the ground in a number of places. Mr Young also mentioned the existence of a stone culvert fed by a natural spring, and the discovery of a Roman milestone (now in Tullie House Museum, Carlisle) in the unscheduled field during the 1960s.

5 METHODOLOGY

5.1 The evaluation (CAR 99 BRM E)

5.1.1 The second phase of evaluation (2.5 above) was undertaken by a team of seven Archaeological Workers directed by Gerry Martin, Archaeological Field Officer.

5.1.2 The evaluation consisted of 21 trenches (Trenches 6-26), a mix of conventional narrow trenches measuring about 30m x 2-2.5m and a number of larger areas approximately 20m x 20m (about 400m^2), disposed in such a way as to give adequate coverage of the entire field (Fig 1). The strategy was adjusted during the course of the work where the squares were clearly barren of archaeological deposits. In areas where no archaeological deposits were present, mechanical excavation of the topsoil continued down to the natural gravel. Where archaeological deposits were revealed, the topsoil was removed to the top of the latest archaeological levels.

5.1.3 Following machining, the trenches were cleaned by hand and recorded following guidance set out in Carlisle Archaeology's *Excavation Manual*. Trenches containing archaeological deposits were examined in closer detail, photographed and drawn in plan. For the most part, archaeological remains were not subjected to excavation but were retained *in situ*, although selective excavation was undertaken in three trenches (8, 24 and 26) in order to answer specific stratigraphic questions or to recover artefactual material. Removal of a modern land drain allowed a deep and continuous section to be observed which linked Trenches 8 and 24 and cut through the metalling of the Roman road in Trench 26. From this, an assessment regarding the depth of the surviving stratigraphy could be undertaken.

5.1.4 Upon completion of the fieldwork, the trenches were backfilled and reinstated to their former condition.

5.2 The geophysical survey

5.2.1 Details of the methodology employed during the geophysical survey are described in a report prepared by the survey team (Hamilton *et al* 2000), a copy of which accompanies this report. The site was surveyed using both a fluxgate gradiometer and an earth resistance meter (Fig 2).

5.3 The watching brief (CAR 00 BRM F-G)

5.3.1 Initial construction works involved the mechanical removal of turf from the greater part of the site and a partial topsoil strip (Fig 3). Removal of up to 0.1m of soil was permitted within the scheduled area (Area 1), whilst an average of 0.2m was removed in Area 2. This work was monitored by archaeological personnel, particularly in areas deemed to be the most archaeologically sensitive.

5.3.2 In order to create a level playing surface, a certain amount of cut-and-fill was required on some parts of the site. The whole of Area 1 and the north-western part of Area 2 were not affected by this process. However, a large area around evaluation Trench 16 in the central-southern part of Area 2 formed a low natural mound from which up to 0.75m of material had to be removed. In the event, archaeological remains were found to extend over much of this area, and in the area

northwards towards Trench 25, but due to time constraints only relatively small areas could be properly cleaned, recorded and excavated to the required level. Where full recording and excavation were not possible, the edges of features and deposits were surveyed using a Geodimeter 608 Total Station.

5.3.3 The line of the new access road (Fig 4) was approximately 235m in length and 4-4.35m wide, and was located wholly within the scheduled area (Area 1). Here, topsoil was removed mechanically to a depth of 0.2-0.4m prior to the construction of the road surface. Over much of the road line the strip was taken down to the top of the natural subsoil, but in some places it did not prove necessary to remove all of the topsoil.

5.3.4 The pipe trench was cut mechanically from east to west through the centre of the development area for a distance of approximately 300m. It crossed the greater part of the eastern field and extended into the north-eastern corner of the western field (Fig 4) where it turned through 90° and ran north for a further 60m. At no point did it impinge upon the scheduled area. The trench was 0.8m wide and 0.8-1m deep, and was dug for the most part without archaeological supervision. Although the whole length of the trench was inspected, nothing but alluvial sands and gravels were noted, except for a number of quite large rounded stones situated at the point where the trench turned north.

6 RESULTS

6.1 The evaluation (CAR 99 BRM E)

6.1.1 Archaeological deposits were positively identified in five of the evaluation trenches: Trenches 8, 24 and 26 which were interconnected and therefore formed, in effect, one large open area, and Trenches 10 and 16, which were independently sited (Figs 1 and 3). The important factor common to all these trenches was their close proximity to the Roman road. Elsewhere, a varying depth of topsoil directly overlay natural sands and gravels, but no archaeological remains were encountered.

6.1.2 Summary of archaeologically sterile trenches (Fig 1)

6.1.2.1 **Trench 6** 20m x 20m. 1m of topsoil overlay coarse natural gravel and pebbles with evidence of paleochannels.

6.1.2.2 **Trench 7** 20m x 20m. 0.6-0.75m of topsoil overlay coarse gravels and sands. Also contained one modern land drain and one undated (though probably recent) cow burial (153).

6.1.2.3 **Trench 9** T-shaped in plan, measuring 20m by 3.50m on the east-west alignment and 20m by 2m north-south. 0.3m of topsoil overlay coarse pebbles and gravel except in the eastern limb where it overlay coarse sand with manganese staining. Contained one fairly recent land drain (265).

6.1.2.4 **Trench 11** 30m by 2.2m; aligned north-south. 0.4-0.6m of topsoil overlying sand developing into fine rounded gravel.

6.1.2.5 **Trench 12** 19.5m by 2.2m; aligned north-south. 0.6m of topsoil overlay homogeneous fine sand (no gravel).

6.1.2.6 **Trench 13** 30m by 2.2m; aligned east-west. 0.8m of topsoil at the eastern end overlay fine gravels infilling a paleochannel. Topsoil depth decreased gradually to only 0.2m thick at the west end, where it overlay coarse cobbles of natural origin.

6.1.2.7 **Trench 14** 36m by 2.2m; aligned east-west. 0.5-0.6m of topsoil overlay a fine brown sand and topsoil mix.

6.1.2.8 **Trench 15** 30m by 2.2m; aligned east-west. 0.4-0.6m of topsoil overlay a fine sand and topsoil mix.

6.1.2.9 **Trench 17** T-shaped in plan, measuring 20m by 4m on the east-west alignment and 22.5m by 3.8m north-south. The east-west limb had 0.4m of topsoil overlying coarse sand and fine gravel. The north-south arm had 0.45m of topsoil overlying gravel developing into a sand/silt mix.

6.1.2.10 **Trench 18** 29m by 2.2m; aligned north-south. 0.25m of topsoil at the southern end, 0.8m in the centre and 0.7m at the northern end. This overlay the natural subsoil, which changed from cobbles and gravel to gravel and sand proceeding northwards.

6.1.2.11 **Trench 19** 30m by 2.2m; aligned north-south. 0.6m of topsoil at the southern end and 0.25m at the northern end overlay natural gravel and cobbles.

6.1.2.12 **Trench 20** 29m by 2.2m; aligned north-south. 0.7m of topsoil at the southern end and 0.3m at the northern end overlay sand and gravel spreads. Contained a single modern land drain.

6.1.2.13 **Trench 21** 33.5m by 2.2m; aligned east-west. 0.6-0.7m of topsoil overlay natural rounded cobbles.

6.1.2.14 **Trench 22** 30m by 2.2m; aligned east-west. 0.2m of topsoil at the western end and 0.6m at the eastern end overlay natural gravel and cobbles.

6.1.2.15 **Trench 23** 30m by 2.2m; aligned east-west. 0.5-0.65m of topsoil in the western and central parts of the trench overlay natural deposits changing from gravel to sand to cobbles proceeding eastwards. 0.2m of topsoil at the eastern end of the trench overlay natural gravel.

6.1.2.16 **Trench 25** 19m by 2.2m; aligned north-south. 0.4-0.6m of topsoil overlay natural gravel and cobbles.

6.1.3 Archaeologically productive trenches

6.1.3.1 ***Trenches 8, 24 and 26 (Figs 1, 5 and 6)***

6.1.3.1.1 As noted above, these three trenches formed in effect one large open area. Trenches 8 and 24 were a pair of roughly 20m x 20m areas situated some 10m apart. Trench 26 was opened in order to provide a link between the extensive archaeological remains revealed in both of the larger areas (Fig 1).

6.1.3.1.2 This complex of trenches was located at the extreme south-west corner of Area 2 (the unscheduled eastern field), straddling the line of the Roman road. The well-

preserved surface of the road itself, together with the remains of buildings and other features flanking the road, were encountered over the whole of the excavated area.

6.1.3.2 ***The Roman road (Figs 1, 5 and 6)***

6.1.3.2.1 The removal of a modern north-south land drain (context 160), which had been dug to a considerable depth across the line of the Roman road and beyond, provided a free section through the road construction levels and the sequence of archaeological deposits immediately north and south of the road. The backfill of the drain trench (161) produced an assemblage of Roman pottery of 2nd/3rd-century date, including fragments of Nene Valley ware and Mancetter-Hartshill mortaria. This material was presumably derived from the Roman deposits through which the trench had been dug.

6.1.3.2.2 The natural subsoil, visible at a depth of about 1.5m below the present surface, consisted of coarse sub-angular gravel (context 206) overlain by a layer of rounded pebbles and cobbles 0.04-0.1m thick (205). It was not clear if 205 was a natural deposit or represented a man-made cobbled surface, but it was overlain by 0.2-0.25m of compacted, moist, dark grey-brown/black organic silt (184, also seen in section further south, where it was numbered 259) that is interpreted on environmental evidence as a peat accumulation within an isolated paleochannel or oxbow (8.2.2 below). On this evidence, 205 is unlikely to have been man-made and may instead represent the bed of the paleochannel.

6.1.3.2.3 Directly above the layer of organic material was 0.15m of mixed grey and orange-brown coarse sand and cobbles (204), which appears to have been a make-up deposit for a well-constructed road surface 0.2m thick, composed of large, sub-rounded cobbles (203). No trace of a camber was noted, and the margins of the surface were fairly indistinct.

6.1.3.2.4 A second phase of road was represented by a layer of larger, rounded cobbles in a cream-coloured sandy matrix (202) that directly overlay 203. This deposit was 0.3m thick with a gentle camber and provided a compact road surface. However, this road may have existed within a small hollow-way as the clay levelling dumps upon which the buildings on either side of the road seem to have been constructed, were at a higher level.

6.1.3.2.5 The third phase of the road surface had been quite poorly constructed of large, ill-sorted cobbles and occasional sandstone fragments within a brown silt matrix (201, Figs 5 and 6). The cobbles had little or no bonding agent, and were lain haphazardly with occasional interstices. The surface appeared uneven but not rutted, whilst small spreads of pebbles may have represented localized repairs.

6.1.3.2.6 The road was clearly the key element determining local spatial organisation during the Roman period, as the layout of the properties flanking it attest (see below). Paleobotanical evidence recovered from the dark peat deposit (184/259) beneath the road indicates that this particular part of the flood plain was damp and boggy in the immediate pre-Roman period, and probably represents the remains of an oxbow or paleochannel colonized by aquatic vegetation (8.2.2). Vestigial traces of wood at first suggested a corduroy base for the road, but this interpretation is not borne out by the environmental data. Throughout the Roman period, the width of the road seems to have been maintained at approximately 9-10m. Unfortunately, no

diagnostic artefactual material was recovered that could provide a date for the establishment of the road.

6.1.3.3 ***The area north of the road (Trench 8; Figs 1 and 5)***

6.1.3.3.1 The land drain that cut across the line of the Roman road also extended on either side of the road, thus providing a useful free section through contemporary deposits to north and south. In this section, over 0.5m of stratified archaeological deposits, presumably all of Roman date, were visible beneath the latest Roman levels. It should be noted that all but the very latest phases of activity on the site were seen in this section only, for the archaeological brief did not require full excavation of the stratigraphic sequence. For this reason it has not been possible to give anything more than a sketchy interpretation of the earlier Roman remains.

6.1.3.3.2 The stratigraphic sequence on both sides of the road may have begun with the construction of a massive raft of yellow-orange sandy clay (253). This deposit was 0.15-0.3m thick, and sealed peat deposit 259 towards the south. It had presumably been laid in order to provide a level and relatively stable platform on which to construct buildings fronting the road.

6.1.3.3.3 North of the road, within Trench 8, clay layer 253 was overlain by an extensive deposit of brown sandy silt (186) containing much pottery of late 2nd/3rd-century date (a single abraded sherd of 4th-century Crambeck mortarium is probably intrusive). Towards the north-west corner of the trench, this layer may have overlain a number of unexcavated soil-filled features tentatively identified as construction slots and pits (195, 208-210). Nothing more can be said about the earliest phases of activity here, given the very limited exposure of all but the latest Roman deposits, although it is perhaps worthy of note that context 208 produced Severn Valley ware and Rhenish colour-coated ware of 3rd-century date.

6.1.3.3.4 Following removal of the modern topsoil (162) and the clean brown sandy silt that directly sealed the archaeological deposits north of the road (168, 172-5, 179), elements of the latest Roman layout, which included the remains of timber structures, were recognized and recorded in plan.

6.1.3.3.5 The spatial organization of this area and the significance of many of the deposits revealed in plan were difficult to determine without more extensive excavation. Given what is known of the layout of other *vici* in the north of England, however, we might expect to find the remains of long, narrow strip-buildings aligned end-on to the street frontage, together with associated external deposits such as yard surfaces, minor roads/paths, and pits.

6.1.3.3.6 On both sides of the road traces of buildings were clearly present, although it was often very difficult to determine the precise location of wall lines, since the timber superstructures of these buildings seem to have been erected for the most part either upon very crude sleeper walls of unmortared sandstone blocks and slabs, many of which were subsequently robbed, or directly upon the contemporary ground surface. With the occasional exception, the use of earth-fast posts or ground-beams set in trenches appears to have been eschewed, although full-scale excavation might have revealed more of these features.

6.1.3.3.7 A useful pointer to the likely position of buildings on the site, which must nevertheless be employed with caution, is what might be termed the 'negative

impression' formed by the demolition of timber structures. What appears to have happened is that buildings were erected over earlier soil horizons, after which contemporary external deposits such as cobbled yards and lanes were laid out, respecting the buildings. Since for the most part the buildings do not seem to have been provided with extensive floors or other internal deposits (or at least none that have left a trace in the archaeological record), their eventual demolition produced 'negatives' resulting from the obvious and often sharply-defined contrast between the exposed soils beneath and the adjacent heavily cobbled external areas.

6.1.3.3.8 North of the road, the most obvious structural remains comprised two fragmentary sleeper walls of undressed and roughly dressed sandstone slabs (275-6; Fig 5) that appear to have marked the position of the south and east walls of a rectilinear timber building (designated Building 2 on the schematic plan, Fig 7). In feature 276, which lay directly on the street frontage, the two terminal blocks and one of the central blocks were slightly raised, and may have marked the position of an entrance. The line of the west wall was less clear, but was probably defined by a sharp change in the nature of the surface deposits, from a comparatively stone-free brown clay-silt within the building (192; possibly the same as 213) to a patchy cobbled surface (221) on the west (an example of one of the 'negative impressions' described above). The position of the north wall could not be determined, but it is possible that the structure extended north of the trench edge.

6.1.3.3.9 The position of a second putative strip-building (Building 1, Fig 7) situated some 2.5m to the west was similarly suggested by a 'negative impression' marked by changes in the character of deposits 'within' and 'outside' the putative structure. Here, the east wall of the building was marked in part by the sharply-defined western edge of cobbling 221 and, further north, by probable slot 193 which shared the north-south alignment formed by the edge of the cobbling (Fig 5). The west wall of the structure probably lay on almost the same line as later linear feature 183, since once again the character of the deposits on either side were qualitatively different. In this instance, neither of the buildings' gable ends appears to have lain within the excavated area.

6.1.3.3.10 If this interpretation is broadly correct (and it must be conceded that the evidence could be open to other interpretations), the excavated area north of the road contained the remains of at least two timber strip-buildings (Fig 7), each approximately 5-5.5m wide and perhaps in excess of 20m in length, separated by a minor road or lane about 2.5m wide (represented by cobbling 221). In Building 1, possible patchy surfaces of sandstone flags (211) and smaller, broken sandstone fragments (212) were recorded, together with a probable hearth (198) located at the rear of the structure (Fig 5). A layer of reddish-brown clay-silt (220) was also present within this building. In Building 2 no internal deposits were recorded, since soil layer 192 probably represented the underlying ground surface on which the building had been erected rather than an internal floor level.

6.1.3.3.11 In the (probably) external area along the western edge of Trench 8, no cobbled or flagged surfaces were recorded, with the exception of a patchy spread of brown silt and broken sandstone fragments (218) in the extreme south-west corner of the trench. Here, an extensive layer of orange-brown silty clay (215) was the earliest recorded deposit. This layer was cut by two probable pits (216, 219).

6.1.3.3.12 The area in the south-east corner of Trench 8 is also presumed to have been largely external in character, although the presence of a possible east/west-aligned sleeper wall (277) suggests that a small structure may have existed here, close to the street frontage (Fig 5). South of 277 and close to the south-east corner of Building 2 was a fragment of what may have been an open, stone-lined drain (279) aligned parallel with the street. Immediately south of this feature was an unexcavated strip of soil (278) which may have marked the position of a fence or gully running east along the edge of the road from the south-east corner of the strip-building.

6.1.3.3.13 Towards the north-east corner of Trench 8, and still within what is presumed to be an external area east of Building 2, was a sub-rectangular drystone-lined pit, probably a latrine or cess-pit (170), measuring approximately 1.3m by 0.9m and 1.5m deep. Within this feature, a basal fill of dark red-brown organic silt 0.1m thick (167; see 8.2.1 below) was overlain by several layers of deliberate backfill (163-6, 176). Some of these deposits contained numerous fragments and blocks of fire-blackened sandstone. No contemporary ground surface was identified in association with this feature. Two other pits (188, 189) were located just north of this structure.

6.1.3.3.14 Several of the contexts associated with the putative strip-buildings produced useful quantities of Roman pottery, although it should remembered that this material was recovered only from the very latest occupation levels, both here and over the site as a whole. In Building 1, slot 193 contained a sherd of Black Burnished ware fabric 1 (BB1) of 3rd-century date, whilst internal surfaces 211 and 212, together with soil 220, contained assemblages of mostly late 2nd/3rd-century material, including Nene Valley and Severn Valley wares. A probable 4th-century date is indicated by sherds of Crambeck mortaria from contexts 211 and 220, however. Soil layer 192, which may have pre-dated the construction of Building 2, also produced 3rd-century Nene Valley ware.

6.1.3.3.15 In the external areas adjacent to the buildings, 2nd- and 3rd-century pottery, including Mancetter-Hartshill mortaria, came from the upper fills of stone-lined pit 170, whilst pit 219 on the western edge of the site produced Nene Valley ware and a grey ware sherd of 4th-century type.

6.1.3.3.16 In addition to the pottery recovered from stratified Roman deposits, an assemblage of residual Roman material was also recovered from the modern topsoil (162) and the brown silt beneath (168, 174-5, 179). The assemblage is predominantly of the late 2nd to 3rd centuries (Nene Valley and Severn Valley wares and BB1 forms of that date are all represented), but also contained a fragment of Oxford mortarium that may be of late 3rd/4th-century date. Two *sestertii*, probably of Hadrian (AD 117-38) and Lucius Verus (AD 161-9), came from layers 168 and 179 respectively. Both coins exhibited heavy wear (particularly the Hadrianic issue) and had undoubtedly circulated well into the 3rd century, as 2nd-century bronzes commonly did in Britain.

6.1.3.4 ***The area south of the road (Trench 24; Figs 1 and 6)***

6.1.3.4.1 Following the removal of a general layer of brown silty soil that directly overlay archaeological deposits south of the road (247), the remains of stone wall-footings, cobbled and flagstone surfaces and a probable drain were encountered. As with the area north of the road, the features and deposits revealed in plan were difficult to

interpret without more extensive excavation. However, working on the assumption that the spatial organisation of the site broadly conformed to that of other *vici* in the north, a tentative interpretation of the remains can be attempted.

6.1.3.4.2 The most obvious structural feature was a sleeper wall of roughly dressed, unmortared sandstone blocks and slabs (282) situated towards the north-east corner of Trench 24 (Fig 6). This feature, of which two courses survived in places, undoubtedly marked the north end of a timber building fronting the road (Building 4, Fig 7). A little over 5m south of 282, the line of the east wall of the structure was defined by a line of four sandstone blocks 2.5m in length (274). The southernmost block displayed a circular socket in its upper face, suggesting the presence of an entrance. South of 274 no trace of the wall was noted, although its position was clearly marked by a sharp linear division between a cobbled external surface on the east and a comparatively stone-free soil layer within the putative structure. Similar evidence for the continuation of the wall between sleeper walls 282 and 274 was lacking, however, so it is possible that this gap represented the position of a second entrance in the east wall, although at about 5m it would have been extremely wide.

6.1.3.4.3 If it is assumed that the structure was a strip-building, it would have measured about 6.5m in width externally (about 5.5m internally) and in excess of 10m in length (the position of its south wall could not be determined). Building 4 would therefore appear to have been very similar in size to Buildings 1 and 2 on the opposite side of the road. At the north end of the building, a possible surface of broken sandstone slabs and cobbles (284) represented the only surviving internal deposit. Elsewhere, the internal area was defined by a relatively stone-free layer of red-brown clay silt (232), probably another 'negative impression', since this deposit seems to have represented the ground surface on which the building was constructed, rather than a floor.

6.1.3.4.4 West of Building 4 the deposits were far more difficult to interpret meaningfully, although the existence of a second structure almost immediately adjacent to the first is suggested by the fact that the 'negative' formed by the building described above (resulting in the exposure of underlying soil layer 232) also extended westwards, and was loosely associated with a few possibly structural features.

6.1.3.4.5 Partly overlying the south edge of the road was a spread of broken flagstones (281) measuring 5.5m east-west and up to 2.3m in width (Fig 6). Behind this, set back about 2m from the edge of the road, were two large sandstone blocks approximately 5m apart (280) that could conceivably represent post-pads marking the north-west and north-east corners of a strip-building. If so, the structure (Building 3, Fig 7) would have been, at approximately 5-5.5m, almost identical in width to the other buildings on the site, which lends some support to the hypothesis, although the remainder of the building is almost impossible to trace in plan. No wall-lines suggest themselves, whilst the only possibly internal deposit comprised two patchy areas of broken sandstone flags (283).

6.1.3.4.6 In the presumably external area on the western edge of Trench 24, west of the putative strip-buildings, rather patchy cobble and sandstone surfaces were present (231, 233). Also recorded here was an apparently linear arrangement of sandstone flags 2.7m long and up to 0.8m in width (285), the significance of which remains unclear. On the eastern edge of the trench was a much more substantial cobbled

surface (222-4) that respected the position of the east wall of Building 3 and probably represented the remains of either a yard or a minor north-south street or lane.

6.1.3.4.7 Presumably at some point after Buildings 3 and 4 had been demolished, a diagonally-aligned cobble-filled drainage channel 0.6m wide, 0.4m deep, and in excess of 9.3m in length (227) was cut across the site of both structures (Fig 6).

6.1.3.4.8 As in the northern property, ceramic evidence indicates that intensive occupation south of the road occurred during the 2nd and 3rd centuries AD. The pottery assemblage was more limited than that obtained from the northern property, but included 3rd-century Mancetter-Hartshill mortaria and Rhenish colour-coated ware from external surfaces 223 and 224 in addition to 2nd-century material. Nothing of definite 4th-century date was recovered from this part of the site.

6.1.3.5 ***Later activity (Trenches 8, 24 and 26)***

6.1.3.5.1 Later activity on the main part of the site was confined to the insertion of two parallel north/south-aligned trenches, approximately 0.6m in width and over 50m in length (183=230, 181), which cut right across the Roman road itself and the excavated areas to north and south (Figs 5 and 6). The westernmost feature (183) was not investigated, but the eastern trench (181) was partially excavated and found to contain a live, stone-lined culvert with a south-north flow. The culvert (251) consisted of a flagstone base and unmortared flagstone walls sealed by a flagstone lid.

6.1.3.5.2 Although 2nd- to 3rd-century pottery was recovered from the trench infill (180), no date could be ascertained for the construction of the culvert since all the pottery could have been residual, as was certainly the case in other post-Roman deposits on the site.

6.1.3.5.3 Features 181 and 183 shared a common alignment and appeared to be broadly contemporary. Both are undated, but they had been dug through the latest datable Roman levels and appeared to disregard the earlier spatial organisation of the site to the extent that they cut across the remains of buildings and even the road itself. It seems highly likely, therefore, that both features were post-Roman in date, and indeed the excavated culvert closely resembles features of late 18th/early 19th-century date excavated elsewhere in the region.

6.1.3.6 ***Trench 10 (Figs 1 and 8)***

6.1.3.6.1 This was a linear trench aligned north-east/south-west, about 2.25m wide and 29m in length, situated approximately 25m east of Trench 8. Archaeological deposits were recorded in the southern half of this trench, adjacent to the Roman road, but petered out to the north.

6.1.3.6.2 The remains consisted of a linear north/south-aligned surface (241) formed of broken red sandstone flags (Fig 8). Adjacent to and respecting the eastern edge of this deposit was a surface of tightly packed cobbles (242). To the south both deposits terminated at a layer of brown silty sand (240), which may have been the fill of an unexcavated feature that cut both surfaces. To the north, the surfaces may have been cut (or perhaps defined) by another feature filled with reddish clay-silt (245), which is tentatively identified as a ditch (it was not excavated). Immediately

north of 245 was another area of cobbles (244), possibly also east/west-aligned. Further north still were the remnants of a cobbled spread (237) and what may have been a patchy surface of broken sandstone slabs (246), but for the most part the northern part of the trench contained only a red clay silt (238). The archaeological remains were sealed by a similar layer of red-brown clay silt (200).

6.1.3.6.3 The significance of the interface between surfaces 241 and 242 is not entirely clear, but it is possible that 241 represents the remains of a timber building with cobbling 242 an adjacent external surface such as a yard. Feature 245 contained plenty of late 2nd/3rd-century pottery and, if its interpretation as a ditch is correct, may have marked the northern boundary of the intensively occupied strip adjacent to the road. Cobbling 244 may have been the remains of a path immediately north of feature 245, but in truth all the deposits within Trench 10 were seen in too small an area for there to be any certainty.

6.1.3.6.4 In addition to the pottery from feature 245, 2nd-century material was recovered from contexts 237, 238 and 241, whilst sherds of mid-2nd- and 3rd-century date came from cobbled surface 244. Occupation into the 4th century was suggested by a sherd of Crambeck grey ware on the surface of cobbling 242. Layer 200 produced a heavily worn *sestertius* of Trajan (AD 98-117) which had probably remained in circulation into the 3rd century.

6.1.3.7 ***Trench 16 (Fig 1)***

6.1.3.7.1 This was an L-shaped trench situated over 90m south-east of Trench 10, in the south-central part of Area 2. Its southern arm was approximately 20m in length by 3.5-4m wide, and was aligned roughly parallel to the projected line of the Roman road, which lay about 12m to the south. The western arm measured 21m by 4m.

6.1.3.7.2 Somewhat surprisingly, the only archaeological deposits recorded here were not situated in the south arm adjacent to the road but at the northern end of the western arm, set back some 30m from the street frontage. The only deposit of any substance was a spread of broken sandstone flags and cobbles (273) that petered out towards the south, and was overlain by a layer of red-brown silt containing 2nd/3rd-century pottery, including an abraded sherd of probable Mancetter-Hartshill mortarium (239).

6.2 The geophysical survey

6.2.1 Since a full report on the geophysical survey accompanies this report (Hamilton *et al* 2000), the results are presented here in summary form only. The survey was confined to the western and southern parts of Area 2 (Fig 2), and for the most part covered areas that had not been subjected to trial trenching. The work detected a number of anomalies of anthropogenic origin, together with several ferrous anomalies that could be discounted as stray iron objects of any date. The archaeological implications are listed below.

6.2.2 The exact limit of the *vicus* was not defined, but intensive occupation appeared to peter out approximately 20m north of the road. Some activity doubtless occurred beyond this limit, but its relationship with the *vicus* remains unknown.

6.2.3 Some signs of deliberate organization of space were noted on either side of the road. Parallel north/south-aligned anomalies may have represented property

divisions approximately 7m apart. The relatively poor definition within the area adjacent to the road may be due to robbing of stone and the non-survival of timber construction elements.

6.2.4 Putative ditches that did not appear to respect the layout of the *vicus* were also recorded. These features were of unknown date, but could pre-date the settlement; similar features visible on aerial photographs in the adjoining scheduled field (Area 1) were observed during the evaluation of that area in 1999. No clear configuration could be ascertained, but this could be resolved by further geophysical survey towards the north-eastern part of Area 2.

6.3 The watching brief (CAR 00 BRM F-G)

6.3.1 The topsoil strip (CAR 00 BRM F)

6.3.1.1 In order to prepare the ground for the construction of the new sports pitches, much of the site was stripped of some or all of the modern topsoil during the summer of 2000 (5.3.1-2 above). In the scheduled field (Area 1) only the eastern half was subjected to this process, but in Area 2 most of the field was stripped (Fig 3).

6.3.1.2 As no more than 0.1m of soil was removed from Area 1, very few archaeological deposits were encountered here. Apart from a few patchy and amorphous spreads of cobbles, the only remains recorded were two roughly linear cobble features (310, 311; not illustrated) situated on either side of the Roman road. These features were aligned north-west/south-east, at right angles to the road line, and may have been the remains of wall foundations for timber structures. A single possible post-pad was observed to the south-east of foundation 311.

6.3.1.3 In Area 2 slightly more topsoil was removed, but for the most part the work did not result in the destruction of archaeological deposits. The majority of the remains were left intact beneath a thin covering of topsoil and were observed, if at all, as spreads of cobbles and sandstone fragments protruding through the soil. Over most of the site, the watching brief broadly confirmed the findings of the evaluation and the geophysical survey, which suggested that Roman settlement took the form of a ribbon development extending along the main road. On the north side of the road, the zone of intensive occupation extended approximately 20m back from the street frontage (Fig 3).

6.3.1.4 In the south-west corner of the field, on and adjacent to the site of Trenches 8, 24 and 26, traces of what was almost certainly the uppermost surface (or surfaces) of the Roman road were observed during the topsoil strip. In addition to cobbling (286, 288-9), some areas of sandstone flags or slabs were also observed (287), suggesting possible repairs to the road surface.

6.3.1.5 As already noted (5.3.2 above), the only part of the site where archaeological remains were in danger of suffering severely was in the vicinity of Trench 16 and in the area extending northwards towards Trench 25 (Fig 1), where levelling of a low natural mound necessitated the removal of up to 0.75m of material. Here, time constraints meant that only selected remains could be recorded in any detail, within a series of machine-cut trenches where all the topsoil was removed and the deposits hand-cleaned. Since the trenches were quite widely scattered, and for the most part the limits of the deposits they contained could not be established, interpretation has proved difficult in the extreme.

6.3.1.6 All that can really be said about the deposits revealed in this area is that they appear to represent a complex of cobble and sandstone surfaces (292, 302, probably 297-8, 305) and possible timber structures, associated with spreads of heavily burnt flagstones, clay and charcoal (293-5), and what may have been debris associated with a hearth or hearths (301, 306-7).

6.3.1.7 Remarkably, some 27.8kg of Roman brick and tile were recovered from the deposits recorded in this area (almost all from contexts 292-4, 297 and 302), which amounts to approximately 89% of the brick/tile assemblage from the entire project. The significance of this concentration is difficult to determine, however; the assemblage is very mixed, comprising fragments of roofing material, box-flue tiles, bricks, and what is probably burnt daub or hearth lining. Most of the material is quite heavily abraded and some fragments are clearly over-fired, but only a few seem to have been burnt after firing. What remains unclear is whether the tile was brought onto the site from elsewhere, perhaps as hardcore for use in external surfaces, or represents demolition debris from an on-site building, or was even being produced on-site.

6.3.1.8 That the excavated remains may represent some kind of industrial complex certainly cannot be ruled out, given the character of the deposits, and the wide variety of brick and tile forms represented in the assemblage might support the idea of an on-site tilery. Against this hypothesis, however, is the abraded nature of the material and the fact that there is absolutely no good evidence for the presence of tile kilns. The mixed nature of the assemblage might also argue against it being demolition debris from a building on or close to the site, for this structure would have required a tiled roof and at least one heated room. Whilst this is clearly quite possible, the character of the buildings excavated elsewhere on the site suggest that it is perhaps unlikely, unless the structure was something out of the ordinary, as for example a bath-house. Against the idea that the tile was incorporated into external surfaces is the fact that well over half the assemblage (15.74kg), including most of the larger fragments, came from contexts 293 and 294 which were clearly not surfaces, although precisely what they were it now seems impossible to determine.

6.3.1.9 Whatever the significance of the tile may be, and whatever the precise nature of the activity it represents, the fact remains that this concentration of archaeological material clearly defined an area of intensive Roman activity (presumably including buildings) located over 70m north of the main road, well beyond the core area of settlement which, as the evaluation and geophysical survey demonstrated, comprised a narrow strip of development adjacent to the street frontage.

6.3.1.10 That the occupation here was broadly contemporary with the roadside development is indicated by the pottery assemblage, which is similar to that from the rest of the site. Severn Valley ware of 3rd-century or later date came from contexts 292, 294 and 307, and 292 also produced two small fragments of Nene Valley ware. Layers 294 and 295 contained fragments of BB1 dating to after c AD 125. The topsoil overlying the archaeological levels produced more Severn Valley and Nene Valley wares and BB1, together with sherds of Mancetter-Hartshill mortaria. In this area diagnostic 4th-century pottery was entirely absent.

6.3.1.11 Elsewhere, the topsoil strip revealed a pair of roughly north/south-aligned cobble-filled features close to the western edge of Trench 16 (312-3, not illustrated) that may have been the foundations for another building north of the road. Fragments of

other features such as pits, post-pads and possible sleeper walls (290-1, 309, 314) were observed close by but could not be fully recorded. Further north was a curvilinear arrangement of three large flat stones (299) set into a general brown sandy loam (300) that in turn sealed a possible pit (308). Another pit (304) filled with brown sandy silt (303) was located somewhat further west.

6.3.1.12 Whilst adding little to our understanding of the Roman settlement, the distribution of these features suggests that activity may have been spread widely but thinly over much of the site and was not confined exclusively to the street frontages, although it seems probable that intensive occupation was for the most part concentrated close to the road. As elsewhere, the pottery from these scattered deposits was of 2nd/3rd-century date, and included Mancetter-Harthill mortaria from contexts 308 and 309 and Severn Valley ware from context 291. No diagnostic 4th-century material was present.

6.3.2 The access road and pipe trench (CAR 00 BRM G)

6.3.2.1 Following the extensive topsoil strip, a watching brief was maintained during the construction of the access road on the western edge of Area 1 and the digging of a pipe trench across Area 2 (Fig 4). During the topsoil strip for the construction of the road, what was unquestionably the line of the Roman road was observed as a linear spread of cobbles aligned north-west/south-east (317). The position of the cobbling appears to confirm suspicions aroused by a study of aerial photographs that the road line shown on current maps of the scheduled area is inaccurate. On present evidence the road, at least at the north-west corner of the site, is somewhat to the north of the position shown on the map.

6.3.2.2 No evidence of activity south of the road was noted, but to the north the remains of what was probably part of a timber building were present. Here, an L-shaped cobble wall foundation was recorded (318), together with an irregular cobble deposit to the north-east (319). Foundation 318 contained one very large rounded stone that may have served as a post-pad.

6.3.2.3 Further cobble features of unknown (but probably Roman) date were also observed away from the road, but their significance was unclear. These remains included a linear arrangement of cobbles aligned NNE-SSW (316), a cobble spread at least 4.4m wide to the south-west of 316 (315), the south edge of which appeared to share the alignment of the road, and a north-south cobble alignment 0.4-0.8m wide and 2.24m long at the eastern end of the access road (320).

6.3.2.4 The pipe trench was excavated mechanically, after which the sides and base were scrutinized for archaeological deposits. With the exception of several fairly large stones at the point where the trench turned to the north, the trench appeared to be devoid of archaeological remains.

7 THE POTTERY AND FINDS

7.1 Introduction

7.1.1 All finds were recorded according to Carlisle Archaeology's standard methods. Quantitative summaries of the pottery and finds by context and type can be seen in the tables below.

7.1.2 All the finds have been stored appropriately, using plastic bags, cardboard boxing and waterproof labels. For items requiring specific conditions, plastic boxes and pierced plastic bags with polyethylene foam have been used. Silica gel provides a dry micro-climate with a relative humidity of less than 15% in order to limit active corrosion. Humidity strips have been used to monitor any changes.

The pottery (by sherd count)

Code	Trench	Context	Roman pottery				Post-medieval pottery
			Samian	*Amphorae*	*Mortaria*	*Other*	
BRM E	**7**	155		4		7	
	8/24/26	161	2		3	9	1
		162	12	2	5	58	9
		163			1	5	
		164			1	5	
		166	4	2		25	
		168			1	9	1
		171				3	
		174	1			7	
		175	1			18	
		177	1				
		179	3			34	
		180	1			5	
		181	1			1	
		182	1			5	
		183				1	
		186	3		7	41	1
		187	1			3	
		190	2			2	
		191	1				
		192	5	4	6	49	
		193				8	
		194	1			4	
		195		2		21	
		196		2		2	
		199	1		1	3	
		208				4	
		211	7		2	17	
		212		1	1	28	
		213	3		4	23	
		215				1	
		219	1			5	
		220			3	15	
		222				7	
		223			1	6	
		224				4	
		225				1	
		226				2	
		228		1			
		229		1		1	
		247	1			8	
		262				4	
		267				5	
	10	237				1	
		238		1		5	
		241		48			
		242		2	1	6	
		244				5	
		245	5		2	59	
		246		2		6	
	16	239	4	1	4	77	

Code	Trench	Context	Roman pottery				Post-medieval pottery
			Samian	*Amphorae*	*Mortaria*	*Other*	
BRM F		100	19	6	9	84	1
		287-8		1		1	
		291				70	
		292				4	
		293		2		4	
		294				5	
		295				2	
		296		1			
		297		3		2	
		302	2				
		307	1			7	
		308		1	4		
		309	2	1	5	1	
BRM G		100				1	
		319				1	
TOTALS			86	88	61	797	13

7.2 The pottery

7.2.1 Apart from a few late post-medieval sherds, the entire pottery assemblage is Roman, dating from the late 1st to 4th centuries AD, although the great bulk of the material is mid-2nd to 3rd century. The total assemblage (1,032 sherds) has been examined by Louise Hird, whose comments are summarized here.

7.2.3 Examples of late 1st- to early 2nd-century pottery from the site include sherds from a possible Lincoln mortarium.

7.2.4 Sherds of 2nd-century date include fragments of Central and East Gaulish samian ware. Amongst the samian assemblage are sherds from a probable Form 18/31 cup of early to mid-2nd-century date, and a stamped cup of Form 27 or 33 dated to the second half of the century. Other 2nd-century material includes plenty of Black Burnished ware fabric 1 (BB1), local grey and oxidized wares, including flagon fragments, a few very abraded sherds of Wilderspool mortaria, *c* AD 110-160, and an incense cup (Gillam type 347) of *c* AD 140-200.

7.2.5 The late 2nd/3rd-century assemblage includes fragments of an East Gaulish samian mortarium (Form 45) dated to between *c* AD 170 and the first half of the 3rd century, 3rd-century BB1 and local grey ware forms, Dales-type ware, Mancetter-Hartshill mortaria, Severn Valley ware jars, Rhenish ware, and Nene Valley ware, including part of a hunt cup and a jar, the latter being an uncommon form in this area. A fragment of a Central Gaulish colour-coated cup (Gillam 210), dating to *c* AD 200-260, was also recovered.

7.2.6 Very little diagnostically late 3rd- to 4th-century material was recovered from the site. Although some of the 3rd-century pottery types mentioned above continued to be produced into the following century, the paucity of diagnostic 4th-century sherds strongly suggests that most of this material (including BB1, Severn Valley ware and Nene Valley ware) was deposited during the 3rd century rather than later (the complete absence of common late 3rd- and 4th-century coin types supports this view). The only really diagnostic late 3rd/4th-century pottery from the site comprises a few sherds of Crambeck mortaria, a sherd from a probable flanged grey ware bowl, and a single fragment of Oxford mortarium, the latter being an

unusual find in this area. Huntcliff-type calcite-gritted wares of the mid-late 4th century, which are quite common in late Roman levels at Carlisle, are conspicuous by their absence in the Frenchfield assemblage.

7.3 The finds

7.3.1 **Coins:** three Roman coins were found, all very worn:

- a *sestertius* of Trajan (AD 98-117);
- a probable *sestertius* of Hadrian (AD 117-38);
- a probable *sestertius* of Lucius Verus (AD 161-9)

The degree of wear exhibited by these coins indicates that they circulated well into the 3rd century. The complete absence of late 3rd-century radiate copies and the more common 4th-century issues of the House of Constantine complements the ceramic evidence, and suggests that intensive occupation of the site ended before the latter part of the 3rd century.

7.3.2 **Copper alloy:** seven copper alloy objects were found; two were tinned. These are:

- a small fitting (10mm across), rectangular in section and very corroded;
- a circular fitting (41mm diameter) with rouletting and heat damage on the outer edge;
- a probable buckle-plate, very fragmentary;
- a bead-like fitting (10mm diameter);
- a disc, 20mm in diameter, superficially coin-like but certainly too thin to be a Roman coin, and probably too thin to be a coin of any period;
- a fastener of unknown date (15mm diameter), tinned;
- a modern button, tinned.

7.3.3 **Iron and lead:** in addition to numerous nails and objects of indeterminate type, the site produced several noteworthy iron artefacts of certain or probable Roman date, including part of a joiner's dog, a chisel, an iron loop, the tip of a knife blade, and the tip or head of an artillery projectile. A single object of both iron and lead was recovered; it appears to be a clamp, probably for joining together pieces of masonry.

7.3.4 **Ceramic objects:** a gaming counter fashioned from a very worn sherd of samian pottery was the only Roman ceramic object recovered. There were also three post-medieval clay tobacco pipe fragments.

7.3.5 **Building materials:** the ceramic building material comprises Roman roofing tile, including *tegula* and *imbrex* fragments. There are also numerous examples of what appear to be box-flue tiles, although both the interior and exterior corners are sub-rounded which would imply that they would not fit together tightly. The whole tile assemblage is extremely abraded, damaged and fragmentary, however, with hardly a complete tile. There are also a number of tiles that are either heavily over-fired or burnt. One very over-fired fragment of tile is rather odd in shape and nature (sub-square), and could date from as late as the 18th century. There are also several fragments of unremarkable mortar, building stone and daub.

7.3.6 **Stone:** stone finds individually registered (IRF) include the upper part of a quernstone with a collar, made from tillite, a consolidated form of boulder clay deposited during the Pleistocene glaciation. It has a side-hole to insert a handle, and

The finds (by number or weight)

Code	Trench	Context	Coins	Copper alloy	Iron	Iron and lead	Glass	Stone IRF	Stone (g)	Tile/brick (g)	Daub (g)	Ceramic	Clay pipe	Slag (g)	Coal/charcoal (g)	Animal bone (g)	Burnt bone (g)
BRM E	**7**	155		1			1						1				
	8/24/26	161					3			151						7	
		162		3	4		8	1	387	70			1	93	9		7
		163															5
		164									21						3
		166							144							15	
		168	1														
		171														3	
		172					2										
		175			1		1										
		178			1												
		179	1		1		2	1	870	170							
		182			2												
		186			3				31					46		5	12
		187															4
		190			1												26
		192			8		1									3	3
		194															3
		195											1				
		199								18							
		211															7
		212			5		1										13
		213					1				8						
		220			2			1									
		223												69			
		224												263			
		228								54							
		232			2												
		247			2	1									20		
	10	200	1														
		237			1												
		241												54			
		242					1							486		4	
		245			7		1										
	16	239		1	6		2			146							
	25	236					1										
	Unstratified				19									95			
BRM F		100			7		3	1		2206.5		1					
		287-8					1										
		292								1146							
		293			1					6510							
		294								9230							
		295								44							
		296								13							
		297								5180							
		300								48.5							
		302								6039							
		307		2	2									3			
BRM G		100								18				26			
		315			1												
		318								49.5							
		319								15							
TOTALS			3	7	76	1	29	4	1432	31108.5	29	1	3	1109	29	37	83

is very worn. Other individually registered stone objects comprise a counter of fine-grained quartzite and two whetstones, one made from mica schist and the other worked from a river-worn pebble of fine-grained basalt, the latter with linear wear scratches. Other stone finds, recorded by weight in the table, comprise probable fragments of building stone.

7.3.7 **Glass:** the glass finds include a number of fragments from Roman vessels including square bottles, which are commonly found on most later 1st- and 2nd-century settlement sites. There are four rim fragments and a number of body sherds from other vessels, and also a small amount of window glass. A small (10mm) tubular dark green glass bead and a small (9mm base) dark blue glass ring inset were also recovered.

7.3.8 **Slag:** 1,109g of iron-working slag were recovered from the site as a whole.

7.3.9 **Animal bone:** the small bone assemblage has been examined in-house by Celia Harding. All of the bone, including the burnt material, is of animal origin, and derives from small to medium-sized mammals. The assemblage includes one cattle tooth, one sheep/goat tooth, a tooth from a mature *Canis* (dog, fox or wolf), and an astragalus from a small to medium-sized mammal. There is also a virtually complete articulated modern cattle skeleton.

7.4 Recommendations

7.4.1 If the material is eventually to be published, each category of material will require further study by specialists who will prepare definitive reports.

7.4.2 The iron and copper alloy objects should be sent for X-radiography, and recommendations sought regarding the desirability of conserving some of the more important artefacts.

8 THE ENVIRONMENTAL REMAINS

8.1 Introduction

8.1.1 Of the 133 individual contexts recorded during the evaluation (BRM E), only three were considered worthy of sampling for palaeoenvironmental remains. In order to assess potential, a 1kg sub-sample was taken (except from Sample 3, where a 0.5kg sub-sample was extracted). To extract organic material, each sub-sample was broken down into its constituent components using a combination of water and flotation. Flotation separates the organic fraction from the heavier mineral content (mainly sands, silts, clay and stones), producing a 'flot' and a 'retent' or residue. While the retent will expose larger fragments of bone, pottery, wood etc, the flot will generally comprise organic material such as plant matter, seeds, fine bones, leather and insect remains. A quick scan at this stage allows an assessment to be made of the different components, on the basis of which recommendations can be put forward regarding the potential for further study by specialist palaeobotanists and entomologists. Where preservation is good, the organic remains may provide important information regarding the depositional environment of the material, including seasonality and climate, anthropogenic activities, and elements of the economy.

8.1.2 Whilst occasional invertebrate remains could be noted in the organic flot, paraffin flotation is a more suitable method for extracting insect remains. As this is a specialist procedure, a proportion of the raw soil sample is retained for this purpose, should further analysis be considered worthwhile.

8.2 Results

8.2.1 Sample 1 (Context 167)

8.2.1.1 This was the primary fill of stone-lined pit 170, situated towards the north-east corner of Trench 8 (6.1.3.3.13 above). The deposit was dark greenish-brown in colour and highly organic, with a soft silty texture. Analysis of the flot revealed an abundance of fine plant matter, especially moss and some charred roots. The presence of earthworm eggs suggests the re-deposition of topsoil and periods of open, dry conditions rather than water logging. The sample exhibited a distinct lack of seed and insect remains. The retent comprised fine gravels and sands derived from natural deposits. It contained no pottery, bone or other material associated with anthropogenic waste deposits. On balance, the preliminary assessment of the material supports the interpretation of the pit as a latrine or cess-pit.

8.2.2 Samples 2 and 3 (Contexts 184 and 259)

8.2.2.1 These samples were obtained from the deposit of organic material revealed in section beneath the earliest cobbled surfaces of the Roman road in Trenches 8, 24 and 26 (6.1.3.2.2, 6.1.3.2.6 above). Although recorded separately at the time, it later became clear that contexts 184 and 259 were essentially the same deposit recorded in different parts of the section. The material was found to be essentially a peat, formed by the build-up of plant matter within still, stagnant waters where lack of oxygen inhibits the breakdown of organic matter. The samples consisted predominantly of fine plant fibres, a preliminary scan revealing the flat plant fibres and seeds of sedge (*Carex pseudocyperus*) and evidence for lesser spearwort (*Ranunculus flammula*). No pottery, bone or other artefactual material was present, but a small suite of seed and insect remains was recovered, and infrequent fragments of decayed wood or bark were noted in context 259.

8.2.2.2 Given the location of the site on the flood plain of the Eamont, and the presence of many ancient river channels and oxbows visible from the air, it is suggested that deposit 184 was formed by the build-up of aquatic vegetation within an oxbow or paleochannel that had been isolated from the main river channel in the immediate pre-Roman period. In this case, it is unlikely that a layer of cobbles observed below context 184 was of anthropogenic origin; perhaps this deposit represented the bed of the ancient river channel.

9 CONCLUSIONS

9.1 Drawing together the evidence from all phases of the archaeological work, the significance of the Frenchfield site is summarized below.

9.2 A number of favourable conditions, including reliable water sources, a natural transport node and well-drained ground, made the site a suitable location for human activity during the Roman period, although at the beginning of the period parts of the site may still have been rather damp.

9.3 No definite proof of prehistoric occupation was found, although the geophysical survey found evidence of ditches which might be pre-Roman in date.

9.4 The preservation of Roman deposits adjacent to the Roman road was excellent. The stratigraphy was generally well preserved and in places was up to 0.5m deep. Away from the road, however, much of the site was archaeologically sterile.

9.5 The Roman road had at least three major phases of metalling, the earliest of which had been laid across a damp or marshy part of the site, perhaps the remains of an ancient river channel or oxbow.

9.6 The project demonstrated that Roman occupation occurred north of the river Eamont, at a considerable distance from the fort of *Brocavum*, which was situated south of the river. Settlement in this area consisted largely of ribbon development along the main road, and appeared to intensify southwards. This settlement was doubtless an extension of a *vicus* focused on the fort.

9.7 Settlement space may have been organized within a rectilinear system of properties containing timber strip-buildings and associated yards and lanes laid out on either side of the Roman road. Although this seems the most likely hypothesis, it is acknowledged that other interpretations could be put forward.

9.8 Although occupation was confined largely to the street frontages, the watching brief demonstrated that isolated areas of intensive Roman activity also occurred well away from the road.

9.9 The admittedly limited ceramic evidence suggests that the settlement may have been in decline by the late 3rd century AD. Although a small amount of 4th-century pottery was present, the complete absence of common late 3rd- and 4th-century coin types reinforces this view.

9.10 Later activity in the main excavated area comprises two parallel linear features cutting across the Roman road and other remains. Only one was excavated, and this proved to be a stone-lined culvert, probably of late 18th/early 19th-century date; the other feature is likely to be similar.

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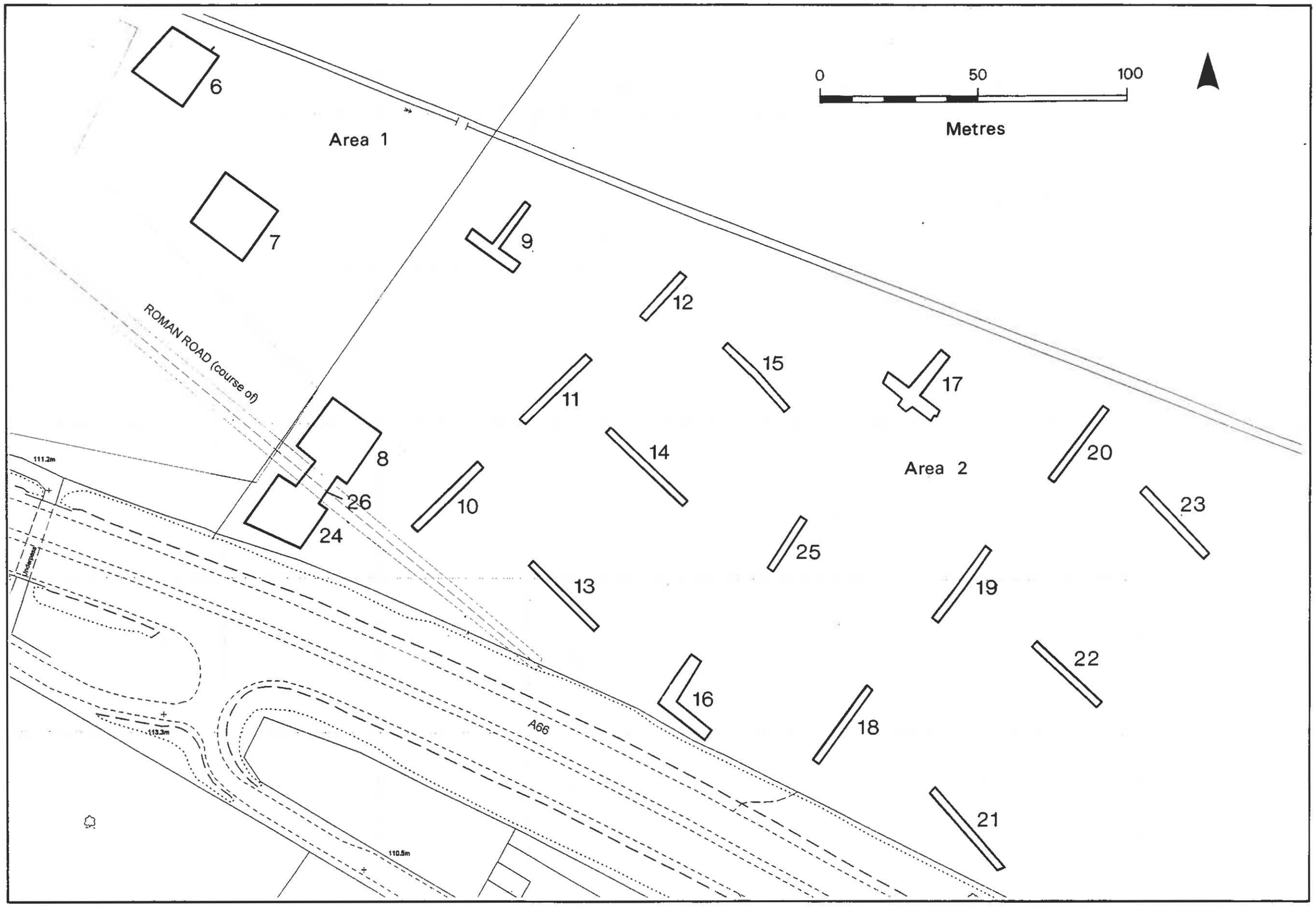

Fig 1 Evaluation BRM E: location of Trenches 6-26 (scale 1:1,250)

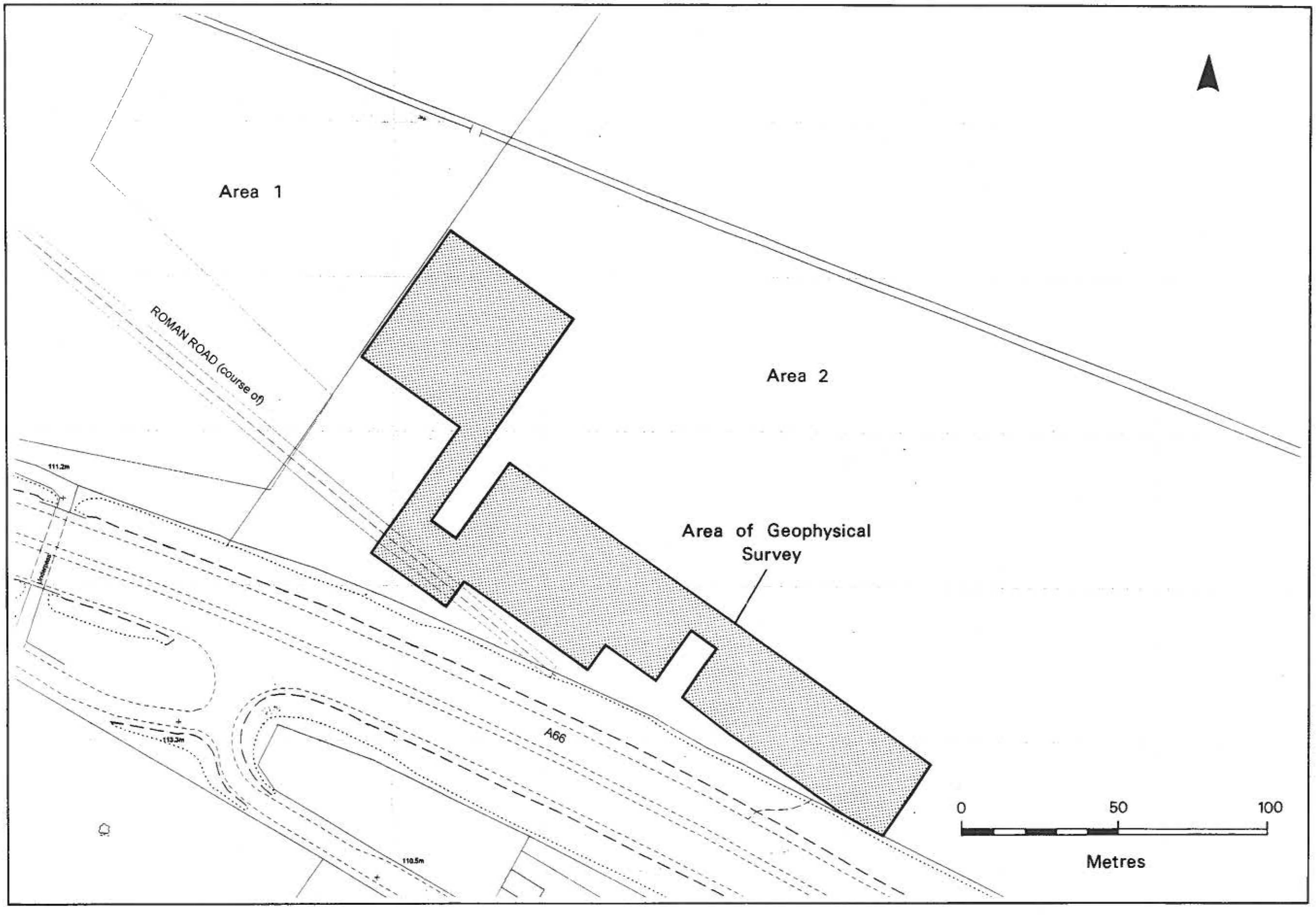

Fig 2 The area of the geophysical survey (toned) (scale 1:1,250)

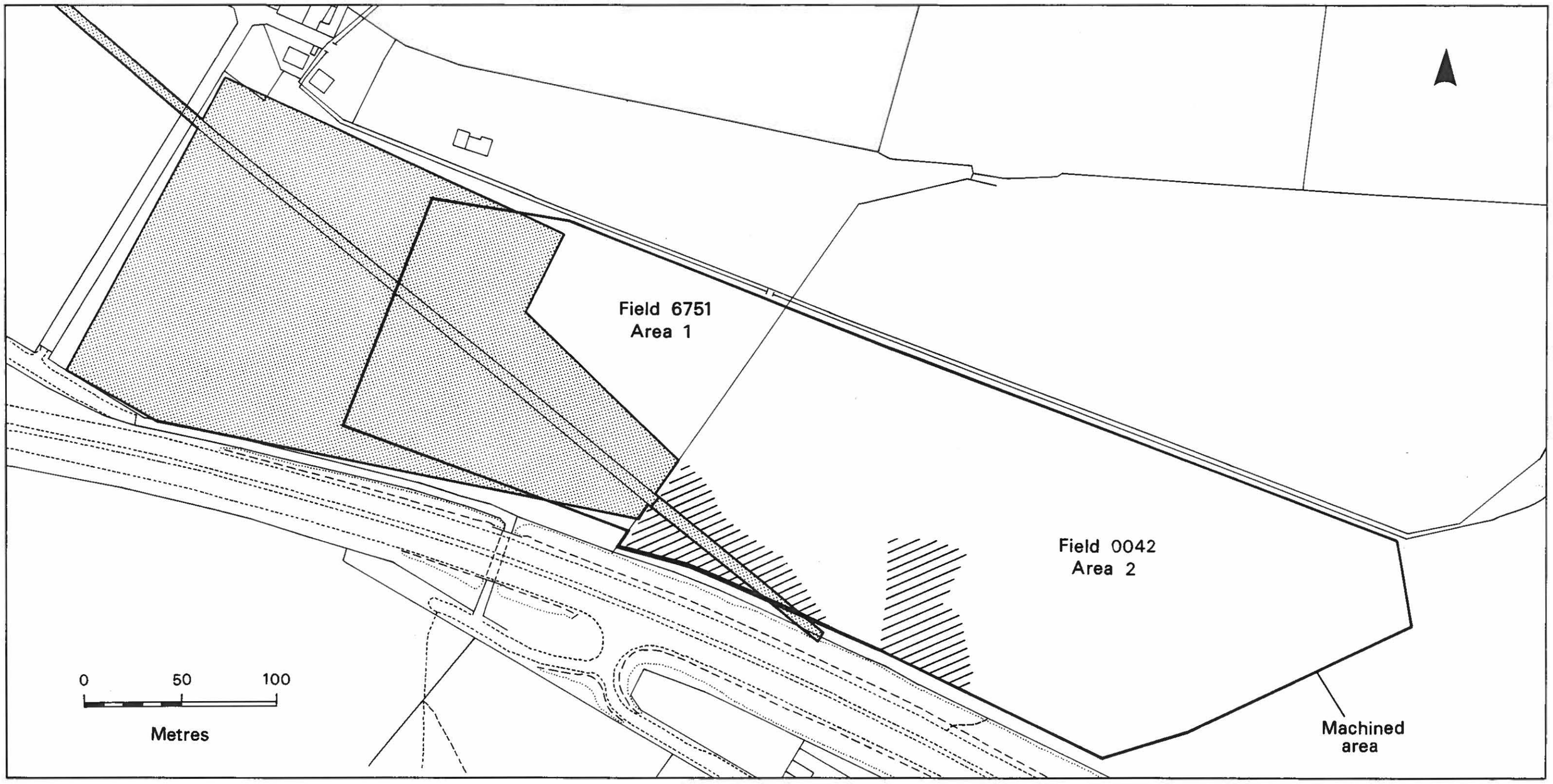

Fig 3 Watching brief BRM F: the machined area, and the main concentrations of archaeological remains recorded (hatched). The scheduled area (SMR 1168) is indicated by toning (scale 1:2,000)

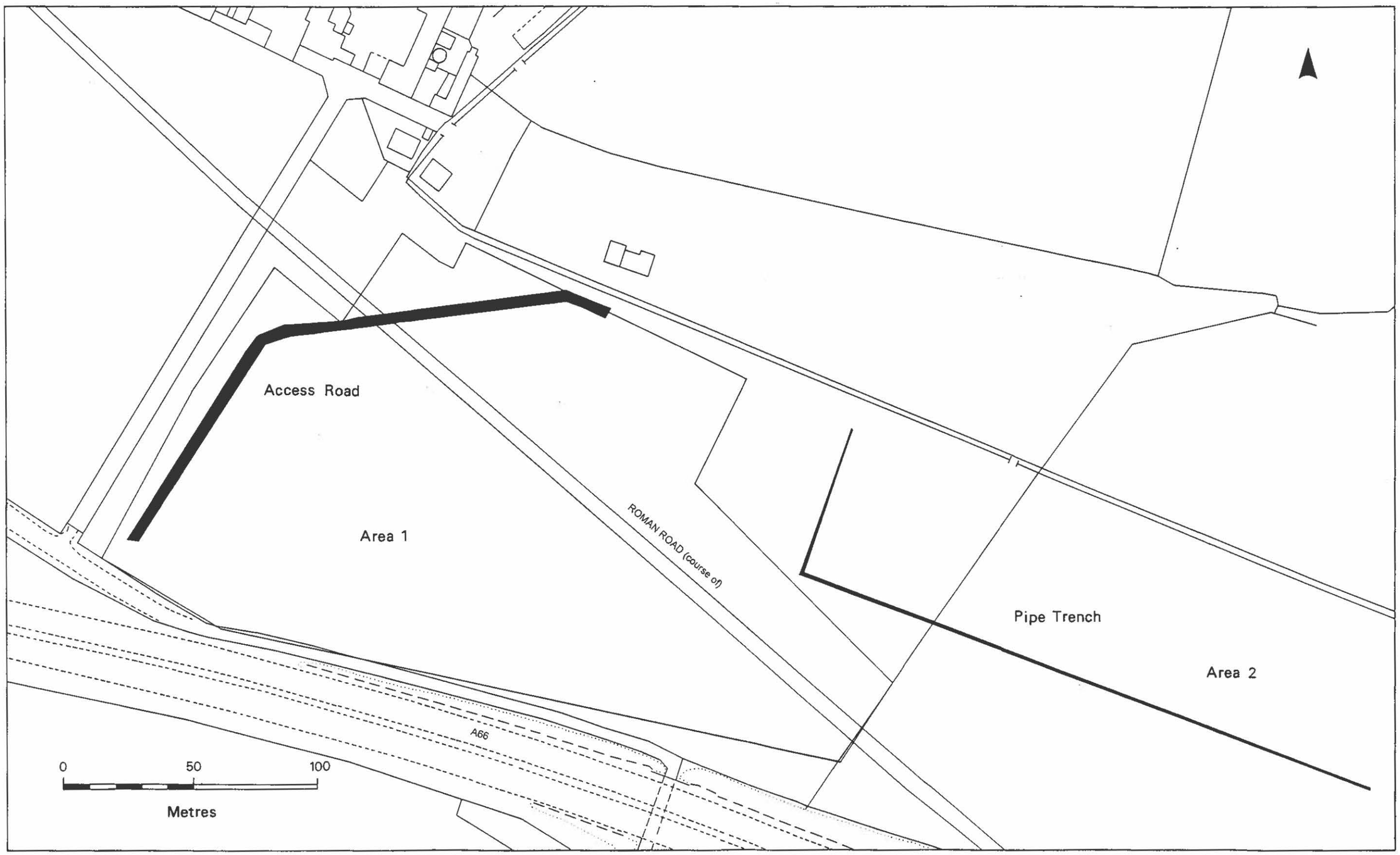

Fig 4 Watching brief BRM G: location of the access road and pipe trench (scale 1:1,500)

Fig 5 Evaluation BRM E: plan of Trenches 8 and 26 (scale 1:100)

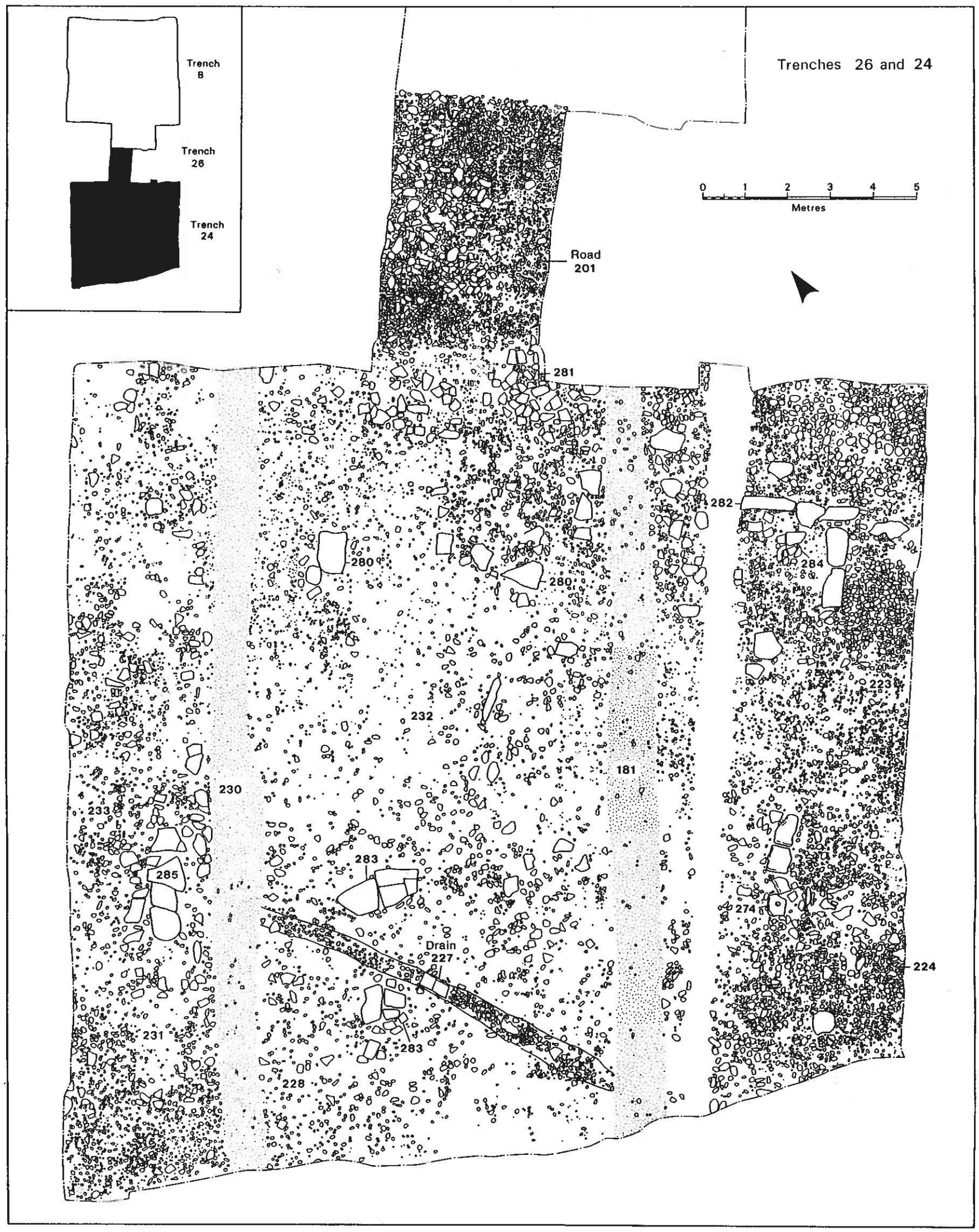

Fig 6 Evaluation BRM E: plan of Trenches 24 and 26 (scale 1:100)

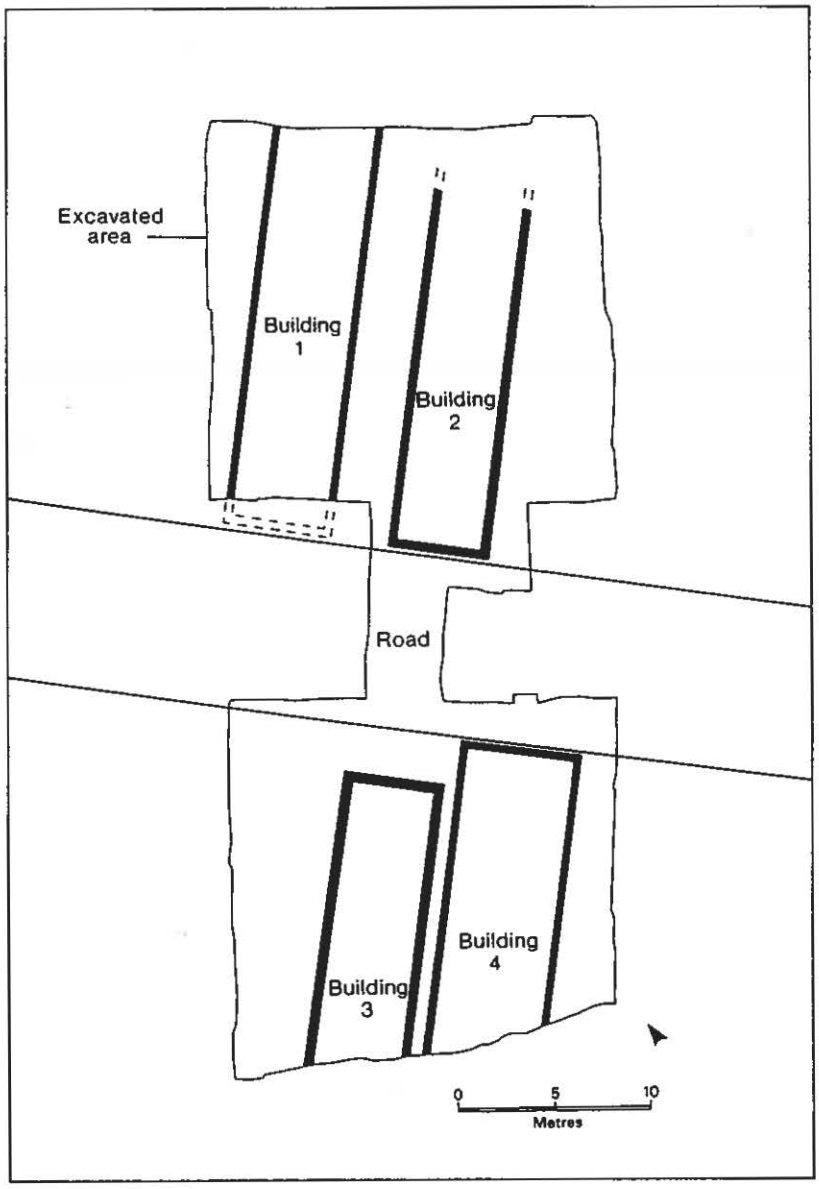

Fig 7 Evaluation BRM E: schematic plan of Trenches 8, 24 and 26, showing the line of the Roman road and the postulated strip-buildings (scale 1:400)

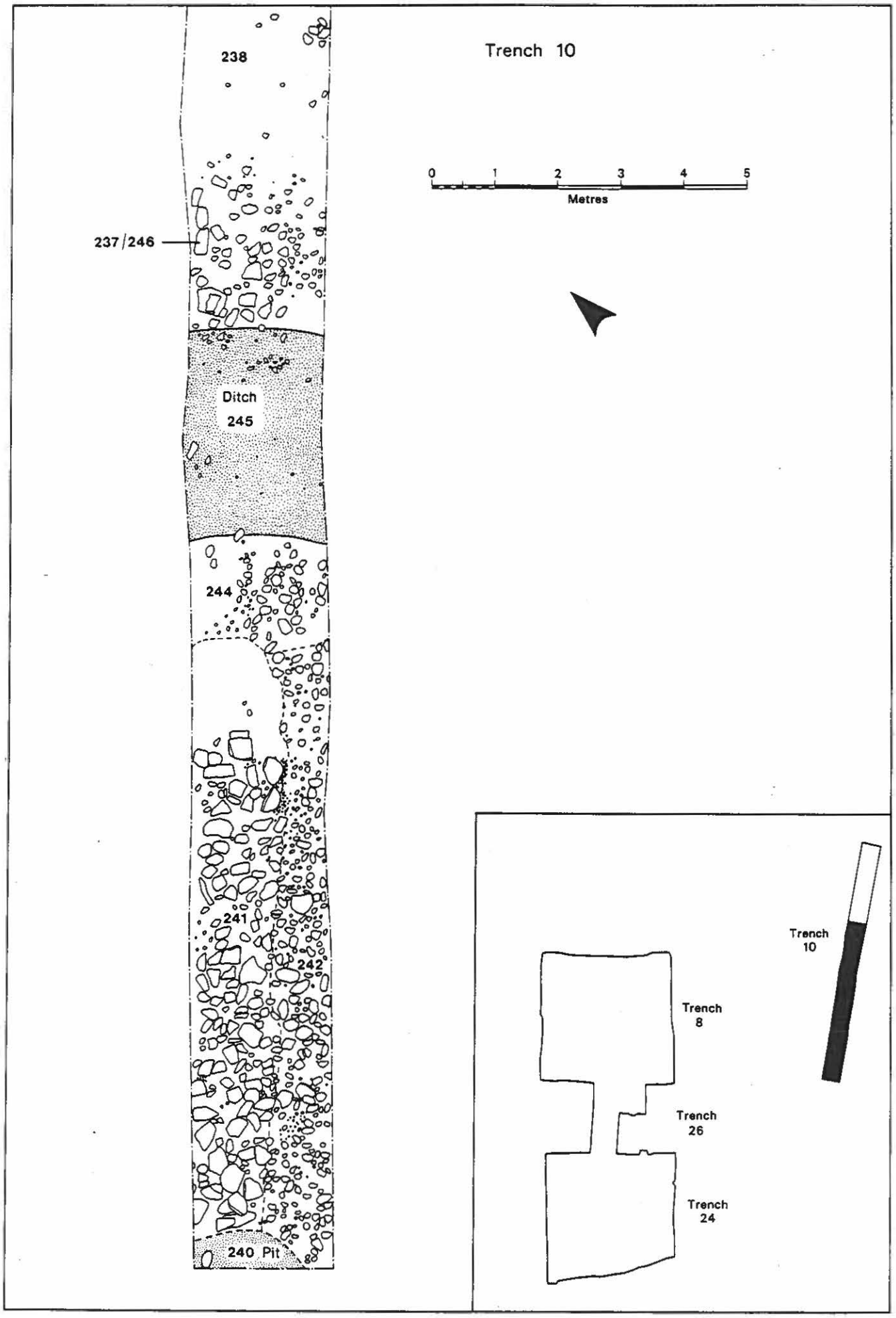

Fig 8 Evaluation BRM E: plan of part of Trench 10 (scale 1:80); inset: location of Trench 10 in relationship to Trenches 8/24/26