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SECOND SEVERN CROSSING : ENGLISH APPROACHES
AN INTERIM STATEMENT ON THE 1992/93 FIELDWORK

by I. Barnes,
with N. J. Adam, P. Bellamy, C. Butterworth, D. Coe, A. H. Graham and A. Powell

Introduction

Wessex Archaeology

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Introduction

In the 1992 Annual Report, Wessex Archaeology's intended research design for the archaeological response to the Second Severn Crossing English approach roads was outlined (Newman 1992). This present paper describes the project's provisional results ahead of the main post-fieldwork analysis, which is scheduled to take place in 1994 following the completion of the watching brief, currently (July 1993) being conducted during the early phases of the construction programme.

The archaeological work is a mitigatory response to the building of the M4 and M5 links to the second road bridge across the Severn Estuary, 5km south of the present bridge (Figure 1). On the English side these motorway links cross the Avon Levels to the north of Bristol. These Levels comprise a flat low lying area drained by a network of ditches, known locally as 'rhines'. The area originated as marsh along the estuary littoral but centuries of drainage and sea defence construction have formed a stable, pasture-dominated agrarian landscape. This area of the Levels covers approximately 54km^2, and is bounded respectively to the north and east by the present M4 and M5 motorways, to the south by Bristol, and to the west by the Severn Estuary.

The Avon Levels are not well known archaeologically, there is little information contained in the Avon County Sites and Monuments Record. This made assessment of the archaeological potential of the proposed routes difficult and increased the importance of early field evaluation. Following preliminary assessment and geotechnic test pit observation by the Avon County Council Archaeological Unit (Porter 1990 and Russett 1990) a field assessment was undertaken during the summer of 1991 by the Glamorgan Gwent Archaeological Trust (GGAT 1992). This assessment, a combination of trenching and documentary research, concluded with the listing of 23 recommendations for the recording/preservation of archaeology along the routes prior to and during construction.

Wessex Archaeology were commissioned by English Heritage in November 1992 to organise and implement the Stage 3 fieldwork, the preconstruction excavation of selected sites and survey of earthworks. It was decided by English Heritage and Wessex Archaeology that 14 of GGAT's recommendations be followed whilst the remainder, mostly concerned with the procedure for the Stage 4 watching brief, were adapted.

The Stage 3 fieldwork commenced on the 7th December 1992 and continued until 12th March 1993. During this period Wessex Archaeology co-ordinated the following:

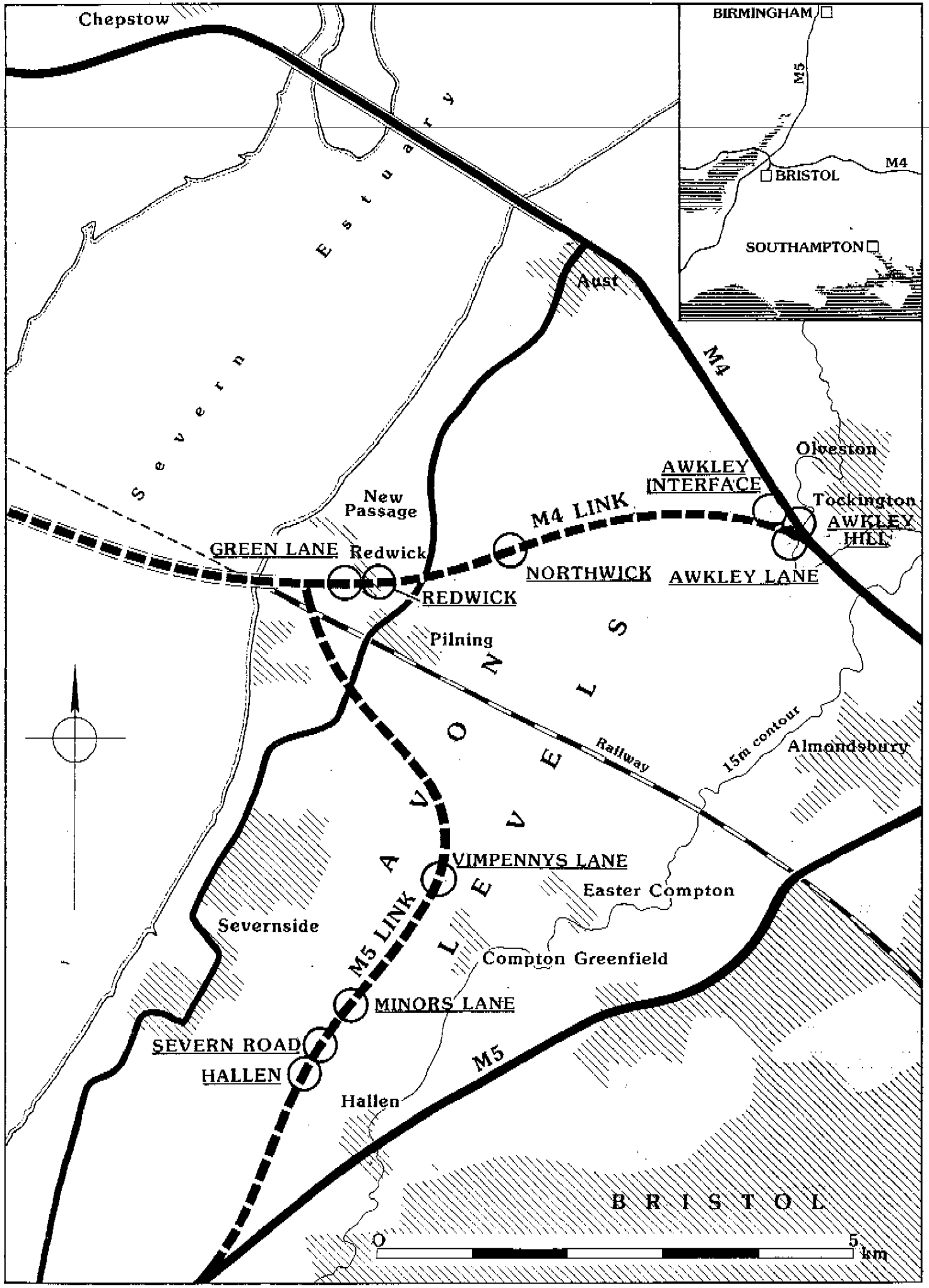

Fig. 1: Location of sites

- The excavation of ten archaeological sites and sites of palaeoenvironmental potential.
- The detailed earthwork survey of 14km of proposed motorway corridor.
- The plotting of all earthworks shown on existing aerial photographs covering 54km^2 of the Avon Levels.
- A full documentary search of records relating to the parishes covering the same area as that of the aerial photograph plot.
- A photographic survey of the village of Redwick, the most affected local community.
- The full architectural survey of an abandoned building, known as Pillhead, at Redwick, adjacent to the proposed new motorway link.

The aims of the work are to mitigate for the effect of the road construction and to provide a synthetic analysis of the landscape, providing a context within which to place the findings. In addition the work will enhance the Sites and Monuments Record. The work will enable the compilation of a better database than is currently available, allowing the likely impact of future developments to be more clearly predicted.

The results of Wessex Archaeology's work during the winter and spring of 1993 are presented as summarised data for most of the main elements of the research programme. No detailed artefactual or environmental analyses have yet been undertaken so only preliminary conclusions can be given at this stage .

Geomorphological and Archaeological Background

The geomorphology of the Avon Levels is the result of both natural and anthropogenic influences, notably the progressive rise in sea level since the end of the last Ice Age, and the recent construction of sea walls and drainage of the marshy Levels. The solid geology of Triassic/early Jurassic mudrocks is overlain by a thick band of alluvial deposits known as the Wentlooge Formation. The Wentlooge Formation, a post-glacial deposit, comprises a complex series of estuarine silt/sands and peat horizons, with a total depth of up to 15m (Allen 1992). The construction of drainage systems and sea defences over the last two millennia has halted the development of the Wentlooge Formation. The reclaimed estuarine marshes became a stable terrestrial environment, though a thick deposit of alluvium recorded above the Wentlooge Formation, and dated by associated artefacts, indicates a major period of inundation during the post-Roman period. On the seaward side of the sea defences three other estuarine formations have developed, the Rumney, Awre and Northwick Formations.

The dates of the five major peat horizons, representing periods of stabilisation, within the Wentlooge Formation were determined during the field assessment by radiocarbon dating (GGAT 1992). The 3rd, 4th and 5th peats, as they were defined (*ibid.*, pp. 8-10), date approximately to the early Neolithic, Neolithic and Late Bronze Age respectively. Though no evidence of human activity from these periods has yet been found in peats on the Avon Levels, similar deposits on the Somerset and Caldicot Levels have produced evidence for habitat exploitation.

Human activity on the Avon Levels in the later prehistoric period was demonstrated by the GGAT in their assessment (GGAT 1992, pp. 9-10) with an Iron Age site recognised at Hallen and Romano-British sites at Northwick, Ellinghurst Farm and at the foot of Awkley Hill. Romano-British sites had also been discovered previously within the Levels at Crooks Marsh Farm (Everton 1981) and on the low hills bordering them at Spaniorum, Cattybrook (Bennett 1980), Lawrence Weston (Parker 1984) and Kings Weston (Boon 1950).

Today's landscape displays plentiful evidence of medieval and post-medieval occupation and exploitation. The majority of farm land on the Levels is covered with earthworks, mostly of ridge and furrow, but with some representing former settlements. Remains of the recent industrial past include many abandoned former branch railway lines, especially around Redwick which formed a junction on the way to the pre-tunnel Severn ferry crossing at New Passage. Some of the most impressive remains are those connected with Brunel's still-used Severn railway tunnel opened in 1886, including the cutting which bisects the Levels and the still visible remnants of 'navvy' camps near the mouth of the tunnel.

Excavations on an Iron Age Site at Hallen

by A.H. Graham and I. Barnes

Introduction

During observations on a geotechnical pit (test pit 4446) at Hallen (ST 3543 1804 and 6.4m O.D: Figure 1) made during advanced works in 1990, several sherds of Iron Age pottery and other occupation remains were found in a humic layer 0.9m beneath the surface (Russett 1990, p. 5). To clarify the nature of the remains the GGAT machined a number of trial trenches around the geotechnic pit during their Stage 2 assessment (GGAT 1992, pp. 79-84). The GGAT assessment identified a series of negative features and a rubble spread sealed beneath a humic layer rich in artefacts, in particular Iron Age pottery. In an attempt to define the limits of the site the GGAT undertook a gridded auger survey around their trial trenches but no boundary could be defined. Given the undoubted potential of this, the first prehistoric occupation site identified on the Avon Levels, it was recommended by the GGAT that a full investigation should be undertaken of those parts of the Iron Age site which were to be directly affected by the proposed works.

The Wessex Archaeology excavations commenced on the 7th December 1992 and lasted until 15th March 1993. At the beginning of the excavation most of the GGAT assessment trench, including the area of highest concentration of artefacts, lay beneath a temporary access road built for British Rail contractors. Access to this area was not gained until 18th February 1993. The remainder of the site was under pasture and covered with prominent ridge and furrow earthworks.

After recording the extant earthworks machining commenced. The clearance of the alluvial deposits, which the GGAT assessment had demonstrated covered the archaeological site, worked outwards from the assessment area. Before Christmas 1992 a total area of 1,400m^2 was cleared. Following the diversion of the access road

in February 1993 a further 200m² was cleared over the immediate area of the GGAT assessment.

Detailed excavation was restricted to two areas of the site, labelled Trenches 1 and 2 (Figure 2) where remains of Iron Age occupation had been identified. A third area, to the north of Trench 1 was uncovered too late to be excavated, after the removal of the contractor's track; it was recorded but not otherwise investigated.

Conditions during the excavation were extremely difficult; wet weather led to the water table being encountered at 5.5m O.D. and the trenches had to be continually pumped to enable work to proceed.

The Deposits

An average depth of 1m of reddish-brown alluvial clay was removed by machine. Beneath this alluvium, three areas of darker, greyer deposits rich in fragments of pottery, burnt clay and animal bone were uncovered. These deposits, up to 0.12m thick, were themselves clays, but appeared to be the gleyed remains of an originally humic soil and were of the same type as that demonstrated by the GGAT assessment as sealing the Iron Age settlement.

The occupation deposits lay upon the surface of a brown, slightly sandy clay at 5.6m O.D. The maximum observed thickness of this deposit was 0.75m, and it overlay blue-grey clay of the Wentlooge Formation. The surface beneath the occupation deposits, where not obviously eroded, was relatively flat across the site, with a very slight drop to the north of Trench 1, and the Iron Age settlement seems to have lain upon a level, alluvial plain. At a later stage there is evidence of a shallow channel eroding into this plain, separating the structures of Trench 1 from those of Trench 2. There is no conclusive evidence that this channel was contemporary with the period of settlement.

The Iron Age Settlement

Within the area opened up by machine, three separate zones of *in situ* Iron Age deposits were revealed, each sealed by the characteristically finds-rich layers described above. None of these covered an area of more than 12m across and they formed a north-south row, extending over a distance of 60m. Trenches to the east, north-east and north revealed no other 'islands' of stratigraphy, and three small trenches along the western limit of the site were similarly unproductive. Excavation of the two more southerly 'islands' (Trench 1 and Trench 2) revealed structures and palisaded enclosures that were similar in plan, proportions and orientation, each forming a seemingly independent compound.

Trench 1: With the exception of its western edge, a complete compound with internal structures was excavated in Trench 1 (Plate 1). The compound consisted of two conjoined sub-circular areas, defined by a ditch with an entranceway in the middle of the southern side.

A round house constructed around a setting of four posts was excavated within Trench 1. This structure covered an area 8.2m in diameter, with a doorway 1.4m wide opening to the south-east. The door posts lay at the corners of an internal threshold or

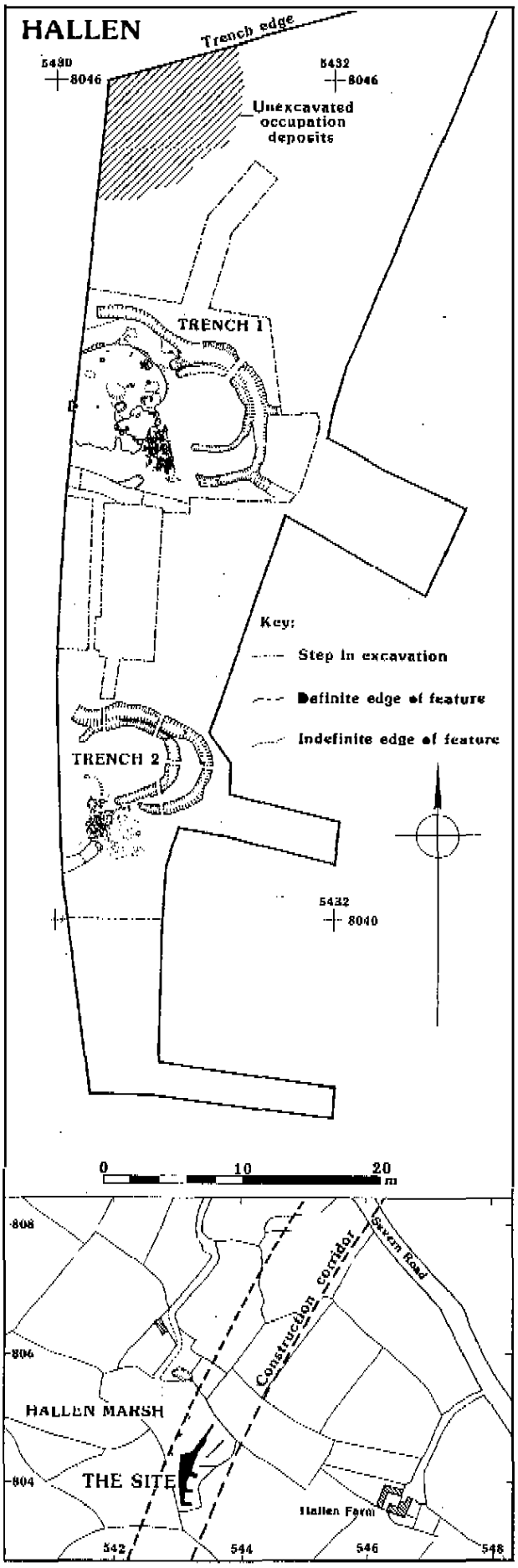

Fig. 2. Hallen: All archaeological features

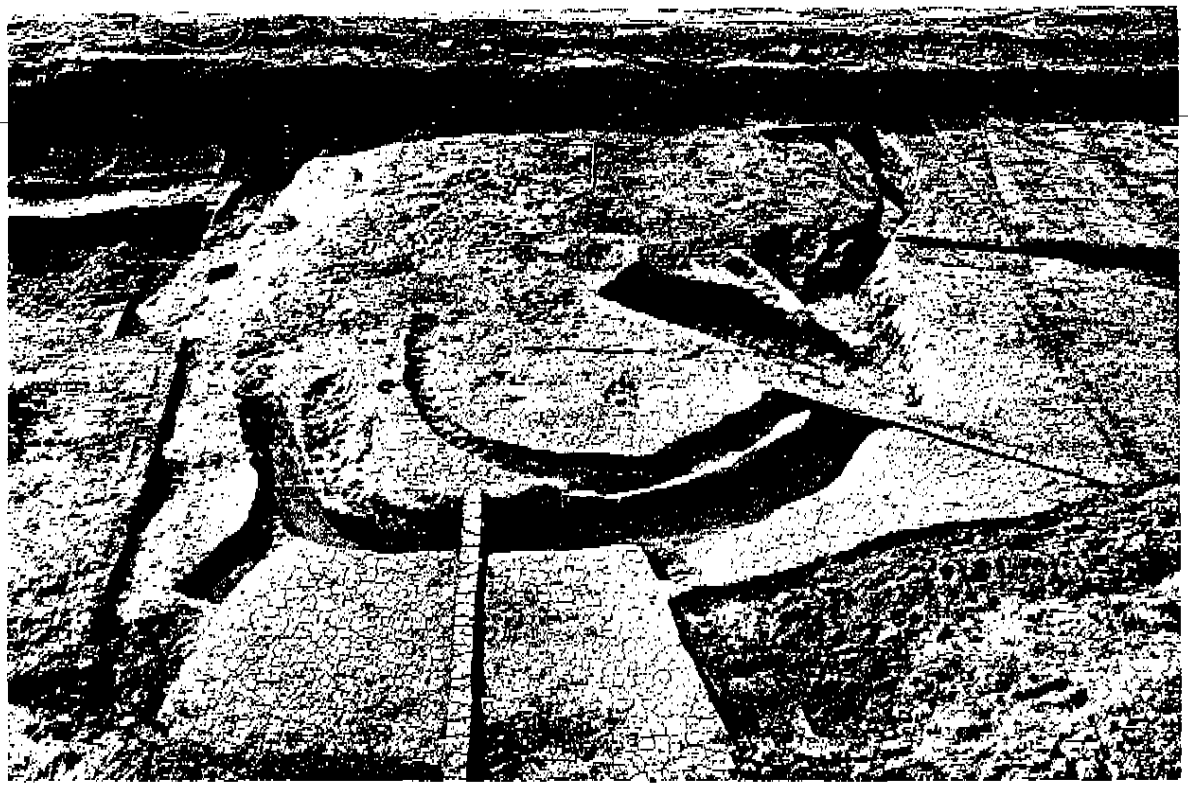

Plate 1. Hallen: Trench 1. Evidence of the palisaded enclosure can be seen in the foreground.

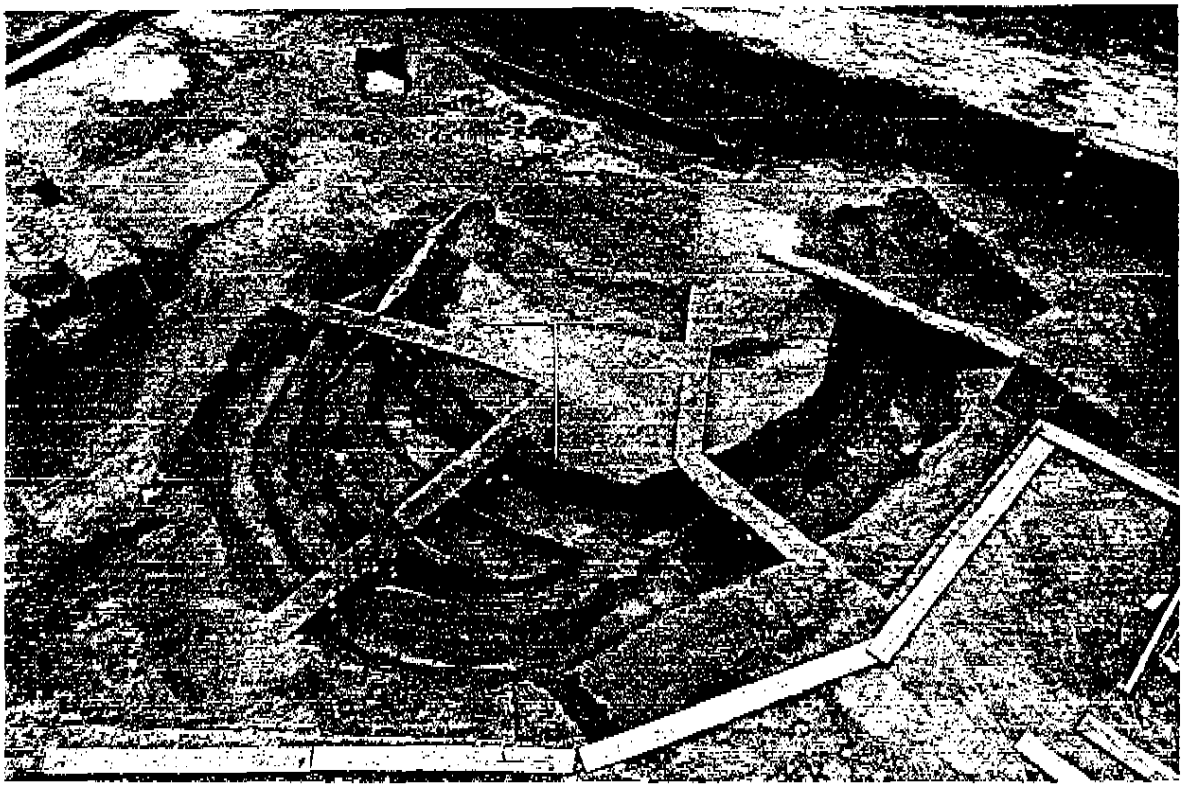

Plate 2. Hallen, Trench 2. The complexity of the eastern extension to the compound is clearly visible.

platform measuring 2.2m x 2m, made up of limestone rubble. A series of floor deposits were excavated within the structure, one of the latest of which had on it a hearth/oven of stone slabs and clay constructed. The round house may not originally have been enclosed within a well defined compound but a substantial ditch and possible bank was added after construction. This western compound measured 12m in diameter, the ditch was up to 0.8m wide and 0.65m deep.

Later, an eastern compound was added; this measured 5m east-west and 8m north-south, defined by a ditch and possible bank. The ditch varied in width but was up to 0.7m deep. Within this enclosure a small enclosure or structure defined by a gully was excavated. Internally, this defined an area of 5.5m north-south by 4m east-west and represented about two-thirds of a circle, open to the west. There was some evidence of vertical stakes or small posts along its line and it may represent a small, palisaded enclosure within the larger compound.

On the southern side of the enclosed area there was a gap in the boundary ditch of 3.5m. This appeared to have been the access to the compound and there was a cobbled trackway leading from this opening to the door of the round house. This consisted of random limestone rubble partly embedded in the surface of the underlying alluvial clay, it had a distinct straight edge along its eastern side, and a surviving width of 2m. The western and southern edges were, however, very eroded and its original extent southwards through the entranceway is unknown. The entranceway faced south, towards the compound and structures excavated in Trench 2, 16m away.

Trench 2: This trench contained the same range of structural modules present in trench 1, although the round house in Trench 2 (Plate 2) was badly disturbed by later channel erosion. The evidencecomprised a number of post holes and a scatter of pottery, some broken *in situ*. The post holes may represent the location of a doorway on the external wall line, which was suggested by a slight scarp, north of the post holes, in the surface of the underlying clay. From the available evidence it can be suggested that the round house had an overall diameter of approximately 8m. The structure was constructed within a circular compound 11.5m in diameter, defined by a ditch 1m wide and 0.4m deep. A gap, 3.5m wide, on the southern side of this compound ditch probably represents an entrance. A very eroded spread of limestone rubble, probably representing the remains of a trackway, lay between the round house and the entrance.

The northern side of the compound was cut away by a number of later features, representing an eastwards extension of the enclosed area, this extension contained several phases of a horseshoe-shaped palisaded enclosure. This later, extended compound, was defined by a ditch 1.4m wide and 0.9m deep which became progressively less substantial to the south and east. The extension to the compound measured 6m east-west and 5m north-south. Within this area were at least two phases of the horseshoe-shaped enclosure; the earlier of these was probably earlier than the ditch of the extended compound and defined an area of 5m x 6m; the later may have been contemporary with the extension and defined an area of 4.5m x 5m. The horseshoe-shaped enclosures were defined by a series of gullies, all phases of which were similar apart from one where there was evidence of the setting of small posts or stakes along its line.

The Abandonment Of The Settlement

Where not eroded and subsequently sealed by alluvium, all the deposits representing the period of Iron Age occupation were sealed by a dark grey clay layer containing large quantities of pottery, burnt clay and animal bone. In places the layer was up to 0.12m thick. This layer sealed the surfaces, structures and ditches of the settlement and represented the development of a humic soil above the abandoned site. The period of time over which this deposit formed is unknown; in Trench 1, however, within the eastern compound, the layer filled what appeared to be tree root holes, suggesting considerable regrowth of vegetation over the abandoned settlement prior to the periodic waterlogging and inundation of the landscape. Within these layers all artefacts and animal bone were recorded three dimensionally; in total c. 4,500 objects. During the excavation it was possible to observe specific concentrations, but a final plot of all objects and artefacts by category in relation to the underlying structures of the settlement remains to be done.

The whole area was finally covered by a sheet of reddish alluvium up to 1m thick. The inundation processes during which this alluvium was deposited were evidently on a large scale, though visible laminations within the layer suggested that it was a gradual build-up rather than a single event.

Artefacts and Environmental Analysis

A preliminary scan of the artefacts from the site suggest that the activity was confined to the Middle to Late Iron Age. Both pottery and animal bone were recovered from the site in large quantities, 3,618 sherds (28,736g) and 7,557 pieces (45,936g) being recovered respectively. Personal objects were found in less abundance, amounting to only two possible fired clay spindlewhorl fragments, one possible iron/copper alloy brooch, twelve worked stone objects including whetstones and spindlewhorls and one worked bone gouge.

A full suite of samples were obtained in order to recover carbonised seed, charcoal, faunal remains, and molluscs; and to undertake micromorphological analysis, particle size analysis, pollen analysis and for archaeomagnetic and radiocarbon dating. Full analysis on these samples will be completed during the future post-excavation programme.

Comment

Until the completion of the artefact and environmental analyses only preliminary conclusions can be derived. The excavated site represents the well preserved remains of a Middle to Late Iron Age settlement, the full extent of which remains unknown, but which definitely extended beyond the excavated area to the west. The possible permanent nature of the settlement is suggested by the sheer number of artefacts, albeit mostly pottery and animal bone, with few personal items. A major objective for the future programme of analysis will be to establish whether the settlement was of a permanent or seasonal nature, and the nature of its economic basis. It is clear that both areas of occupation underwent substantial modifications throughout their use. Whether these modifications were the result of improvements by a permanent settled population, or repairs carried out seasonally, is, at present, impossible to determine. Certainly the nature of the settlement, post-built structures at ground level, suggests

that it was constructed during a period when the Avon Levels were relatively dry, probably drier at least than the periods immediately pre- or post-dating the settlement.

The abundance of animal bone and the dearth of evidence for cereal processing would suggest a pastoral basis for the settlement with presumably pre-processed cereal products being imported to the Levels. Initial scanning of environmental samples has failed to identify any fish bones from the site, surprisingly for a settlement in a relatively wet landscape and reasonably close to the River Severn. The lack of fish bones may, however, be due to poor preservation.

The site at Hallen has fulfilled the expectations of its assumed potential as defined by the GGAT assessment and significant results are expected on conclusion of all the planned artefact and environmental analysis.

Excavations on a Romano-British Site at Northwick

GSMR 6389 11110

by P. Bellamy and I. Barnes

Introduction

During observations of a geotechnical pit (test pit 3421) at Northwick, near Redwick (ST 565 86● and 6.5m O.D: Figure 1) during advanced works in 199● the presence of a silted up ditch containing fragments of Iron Age and Romano-British pottery was noted (Russett 199●, 12). To elucidate these findings the GGAT opened a number of assessment trenches around the original geotechnic pit, rediscovering the recorded ditch (GGAT 1992, pp. 51-56). In conclusion the GGAT postulated that the ditch was situated on the edge of a long-established site, the extent of which was not determined, but which probably lay to the west of their trial trenches. It was recommended that a full investigation be made of those parts of the site to be directly affected by road construction.

Wessex Archaeology began site works at Northwick on the 11th December 1992 and continued until the 5th March 1993. The area delimited for study covered the entire road corridor around the GGAT assessment trenches and c. 19,325m^2 spread over three fields, crossed by a bridlepath. The two fields to the west of the bridlepath were under pasture and covered with prominent ridge and furrow earthworks, the field to the east was ploughed and ridge and furrow earthworks were not visible. All earthworks were recorded prior to the commencement of machine stripping.

The period over which the excavation was conducted was notable for extreme weather conditions. The period before Christmas 1992 was cold with the site being regularly frozen, January 1993 was so wet that a large area had to be covered with a scaffolding shelter (Plate 3), the weather then becoming unseasonably dry with the result that much of the site was baked hard; all of this conspired to make excavation difficult.

Further Evaluation

Initially a series of 2m wide trenches were excavated in an attempt to define the limits of the suspected site. In the western fields only Trench 5 produced any archaeological deposits, consequently this trench was expanded. In the eastern field Trench 27

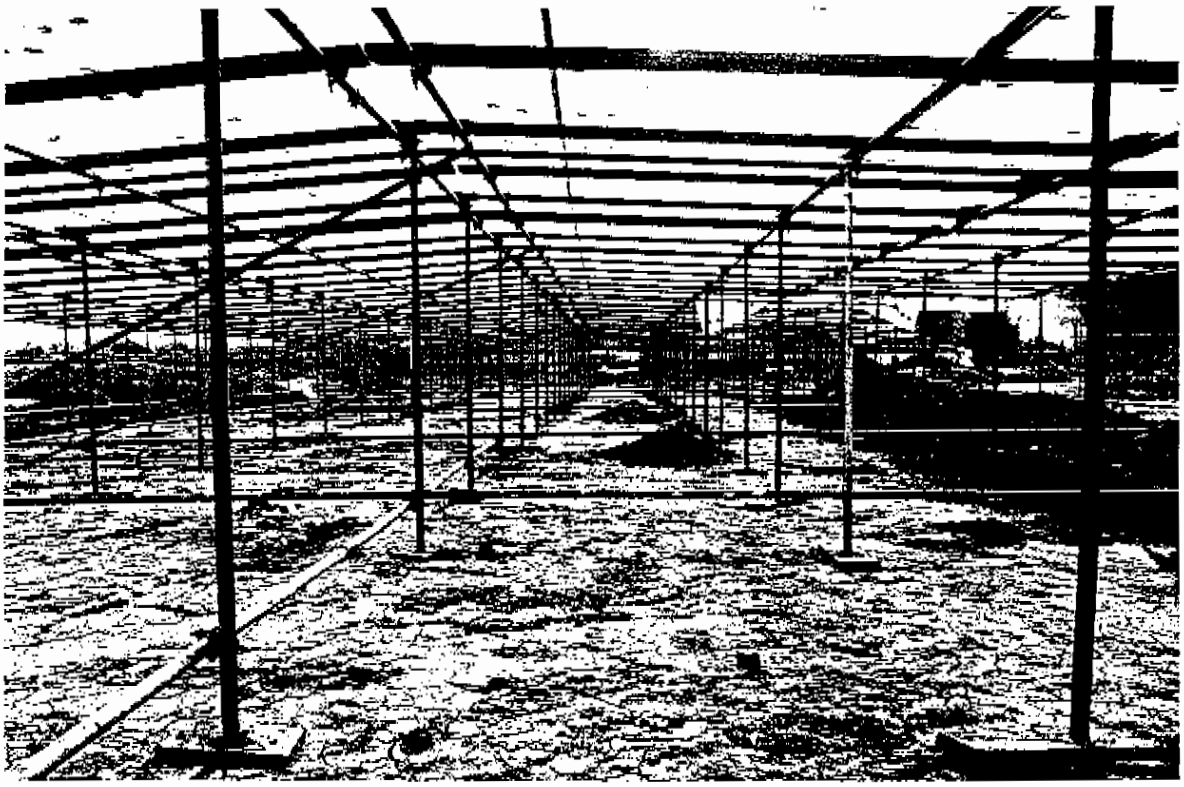

Plate 3. Northwick, Trench 27. The scaffolding shelter built to protect the site from the wet weather.

adjacent to the bridlepath revealed several archaeological features and was subsequently also expanded. Trench 29 in the north of the site, produced several finds, both pottery and iron, and Trench 28, in the east of the site, produced a single pot sherd, but no features were observed in either. All other evaluation trenches were archaeologically sterile.

The Excavation

Following the evaluation three trenches were expanded for full excavation; Trenches 5 and 8 to the west of the bridlepath in the area of the original GGAT assessment, and Trench 27 to the east of the bridlepath.

Trenches 5 and 8

Two trenches were opened up in the area of the GGAT assessment trenches G025, G026, and G027, Trench 5 measuring 31m x 9m and Trench 8 measuring 31m x 12m (Figure 3).

The trenches were stripped initially to a depth of c. 0.45m, about the depth of the overburden above the archaeological features exposed in the GGAT evaluation trenches. This depth marked the interface between a silty clay deposit, through which archaeological features were seen to be cut, and a yellowish brown silty clay, 0.12m thick, which lay directly beneath the topsoil. Soon after machining commenced it became apparent that this yellowish brown deposit contained a significant quantity of pottery. In response to this the southernmost two-thirds of Trench 8 were firstly stripped of topsoil then the artefact rich yellowish brown deposit removed in thin spits by machine, with all artefacts within it plotted three-dimensionally.

After machining several small discrete features, including the course of the ditch investigated by GGAT, could be seen, with difficulty, over the two trenches. After cleaning it was apparent that the archaeological activity could be divided into three zones: two ditch complexes, oriented roughly north-west/south-east, and the area between these which contained several small discrete features. It soon became apparent upon excavation that all the archaeological features had been truncated and the shape of the surface of the natural clay reflected the contours of the overlying ridge and furrow, indicating that the archaeological stratigraphy had been disturbed.

Of the three discrete areas of features it was the northernmost ditch complex that included that discovered during the GGAT assessment. The ditch was steepsided and flat bottomed, on average 4.5m wide and 1.2m deep, and had been recut at least twice. It was visible across the entire width of Trench 8 but could not be traced across either the full width of Trench 5 to the west nor, with any certainty, in Trench 27 to the east. To the north-east side of this ditch in Trench 8 there was the suggestion of another smaller ditch or gully.

The southernmost ditch system was much more complex and the features very unclear. Two parallel ditches crossed the two trenches, the northernmost terminating inside Trench 8. The ditches were similar in size and shape, being steep-sided and flat-bottomed, measuring 2.5m wide and 0.7m deep. Both displayed signs of having been recut and were mainly filled with clean silty clays. Both ditch fills had a thin layer containing charcoal, animal bone, and pottery, including an almost complete pot from the northern ditch. Most artefacts appeared to have been incorporated in fills

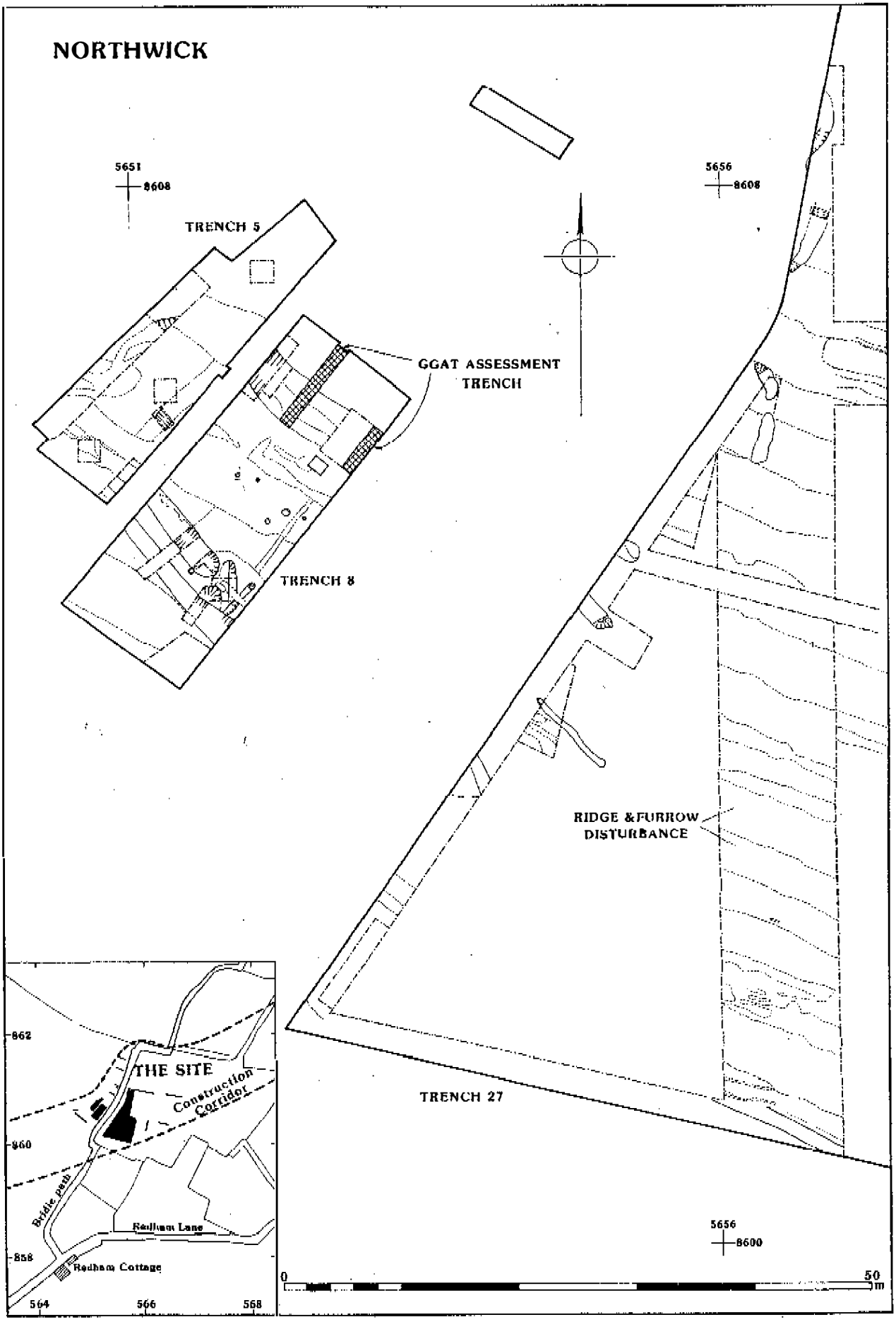

Fig. 3. Northwick: All archaeological features

originating from the north-east. Immediately south-east of the ditch terminal were several intercutting features comprising a series of gullies and oval scoops. Most of these were filled with a thin layer of charcoal-rich soil containing burnt bone, burnt clay and pottery, whilst the remainder were filled with a silty clay very similar to the natural subsoil.

Between the two ditch complexes in Trench 8 a total of five small features were exposed and excavated. All were shallow and only one contained any artefactual material. In Trench 5 a ditch running at right angles to the two complexes was excavated, this ditch had a V-shaped profile and was 1.45 m wide and 0.6m deep. The relationship between it and the two ditch complexes was never resolved. Also in Trench 5 a complex of features was observed along the base of the slightly deeper machine-cut evaluation slot on the western side of the trench; these comprised three short lengths of ditch and an oval scoop.

At the end of the excavation, a 3m deep sondage was dug in the north-west corner of Trench 5 to investigate the natural deposits. This sondage revealed a thin layer of peat at a depth of 4m O.D. which probably relates to the peat layer found in the GGAT assessment trench G024 (GGAT 1992, p. 51), beneath which a series of sandy and silty clays were noted. No archaeological material was encountered below the level of the excavation

Trench 27

A large area in the western part of the field to the east of the bridlepath was stripped of topsoil (Figure 3) where the evaluation trenches indicated archaeological activity. It was never the intention to excavate the whole of the stripped area but rather to trace the course of linear features across it, and to search for associated activity. Work in this area of the site was severely disrupted by the weather, machining was difficult due to rain and for several weeks the site was completely unworkable. Eventually, after the construction of a scaffolding shelter (Plate 3) over 2948m^2 of the site, it was possible to clean selected areas, including a strip 10m wide by 75m long and the base of the machine-cut evaluation trench (100m x 2m) along the western edge of the field.

After the ploughsoil was removed it became clear that ridge and furrow had formerly been present in this field and that it had not been completely ploughed out. After machining it became apparent that the archaeology survived better under the ridges than in the areas of the furrows, some of which were deeper than the base of the machine strip.

The first objective within Trench 27 was to ascertain whether the ditch found by the GGAT to the west in Trench 8 extended across the bridlepath. A ditch terminal 1.4m wide and 0.95m deep, with steeply sloping sides, was found on the correct alignment. This, however, appears to be too insubstantial and is not thought to be a continuation of the ditch to the north-west of the bridlepath.

Other archaeological features revealed in the cleaned areas within Trench 27 were chiefly linear features, probably ditches, oriented roughly north-west/south-east in approximately the same direction as the ditches in Trench 8. In general the features were concentrated in the northern part of the trench. No features were discovered in

the southern half of the 10m wide strip, except for a single ditch at the extreme southern end. Features were found along the whole length of the western side of the trench, including a few which did not appear in plan but were visible only in section.

There was an apparent cluster of features towards the northern end of the trench. This included two near parallel ditches. The northern of the two had a V-shaped profile and measured 1.1m wide and 0.55m deep, whilst the southern ditch was 1.5m wide and 0.75m deep, the section displaying a single recut. These ditches were filled with clean silty clays. The northern ditch primary fill contained an articulated animal skeleton, possibly of a lamb, whilst in the upper fills there was a thin layer containing charcoal, pottery and bone. The lower fills of the southern ditch were relatively free of artefacts whereas the recut was filled with a layer containing many artefacts.

To the south of the two ditches were two similar features, notable because each contained a near complete pottery vessel smashed *in situ*. The features comprised short lengths of ditch, 3m and 4.5m long respectively, and were 1m apart. Only the northernmost was excavated; this had steeply sloping sides, was 0.6m deep and had a flat base. The silty clay fills were rich in charcoal, pottery and animal bone.

One complete feature was identified towards the centre of the western extreme of the trench. This measured 8m in length, was 0.35m wide, and 0.7m deep with near vertical sides and a flat base. At its excavated north-western terminal the fill contained what may have been the stone packing for a post. The fill also contained a high proportion of charcoal, pottery and animal bone.

Artefacts and Environmental Analysis

A preliminary scan of the pottery recovered from the site shows a range in dates from Late Iron Age to Romano-British, the assemblage being predominantly first century A.D. in date. In addition there was also a very small element of medieval and post-medieval pottery in the assemblage, hardly surprising given the presence of ridge and furrow. In all 1,079 sherds (7,588g) of pottery, and 489 pieces (2,164g) of animal bone were recovered from the site during the excavation. Apart from animal bone and pottery other finds occurred in very small quantities: fired clay (mostly featureless fragments, but also one possible counter and a slingshot); 13 iron objects, including nails and a horseshoe; a copper alloy coin; a copper alloy pin, possibly from a brooch; and 3 lead objects. There were small amounts of ceramic building material, slag and stone (all unworked).

As at Hallen a full suite of environmental samples was taken. Bulk samples of the peat found in the machine sondage in Trench 5 were also taken.

Geophysical Survey

On completion of the excavation, and after the removal of the scaffolding shelter, a geophysical survey was undertaken across the site. This had a twofold objective: to attempt to trace the linear features in the unexcavated areas, and to evaluate the effectiveness of the technique on the alluvial deposits encountered on the Levels.

Approximately 1.25 hectares was surveyed using a magnetometer. The survey identified the major ditch recorded in both the evaluation and excavation, but otherwise located no archaeological features with any certainty. Geomagnetic anomalies were found to be weak and in many cases it was concluded that these could be the result of sedimentary structures within the underlying alluvium.

The survey was not a success and it was concluded that magnetometry was not a reliable technique for use on the Levels.

Comment

On the basis of the surviving recorded archaeology, it is difficult to reach any firm conclusions concerning the overall size, form and function of the site. The excavation appears to have defined the southern and eastern site limits, but it is likely that activity extended beyond the north and western extremes of the excavated area. There is also the area masked by the bridlepath and associated rhines which bisected the site and from which no information was available. The already incomplete picture was further obscured by the truncation of the archaeological deposits during the ridge and furrow cultivation, and the inability of the excavation team, due to the inclement weather, to clean up any large areas of the site until the erection of the shelter late in the programme. Nonetheless certain points can be made.

The large number of ditches identified were all orientated in the same direction, or at right angles to each other, which suggests that they were all part of the same system. The dates from the scan of the pottery assemblage suggest that this system was in use over a relatively short period of time during the 1st century A.D. Despite this, many of the ditches have evidence of recutting, and the two parallel adjacent ditches at the south end of Trench 8 may possibly indicate replacement. An examination of the ditch fills indicates that they filled rapidly, mainly with fairly clean silty clay. It is interesting to note that in many of the ditches the primary fill, or the primary fill of a recut, generally contained significant amounts of domestic refuse. This suggests that the ditches were only used for a very short time, before being allowed to fill up. The size and condition of the pottery sherds suggests that the artefacts recovered from the ditch fills were derived from close at hand. Thus, it seems that the evidence represents a ditch system, possibly forming rectangular enclosures, which was re-established on a number of occasions. It is assumed that the environment in which this site was situated was poorly drained, suggesting that the ditches were partly dug for drainage purposes. The frequent re-establishing of these ditches may suggest that it was seasonally occupied, ditches being recut at the start of each period of occupation.

Unfortunately the associated domestic settlement suggested by the artefact assemblage either lays outside the excavated area, or its remains were destroyed during the ploughing associated with the ridge and furrow. The amount of interpretative information available from the site will, therefore, remain limited. Where the site is of value is as a datable episode within the depositional sequence on

the Avon Levels. Already, before post-excavation, the information from the site is prompting questions. Why, for instance, did the remains at Northwick lie so close to the surface, when it is generally assumed that there was a major post-Roman inundation which resulted in the deposition of a considerable thickness of silt over much of the Avon Levels?

In conclusion, the excavation at Northwick has provided evidence of settlement during the first century A.D., possibly of a seasonal pastoral nature. It is expected that full post-excavation artefactual and environmental analysis will allow more secure hypotheses regarding the nature of the settlement, and its environment.

Excavations on a Medieval and Post-Medieval Site at Redwick

by C. Butterworth

Introduction

In the GGAT assessment report (GGAT 1992, p. 21) it was recommended that the area of a former house marked on a map of 1835 on the outskirts of Redwick (ST 5509 8580, 6.4m O.D.) (Figure 1) be investigated prior to the commencement of motorway construction. The objectives of the work were to recover the ground plan of the house, to extract dating and phasing information and to characterise the nature of the occupation, as well as to ascertain whether there had been any medieval activity in the area. The Wessex Archaeology excavation was undertaken between the 4th January and 5th February 1993.

Historical and Geographical Background

The site lies in an area between two dismantled railways (Figure 4). The earlier of these, the Bristol and South Wales Union Railway, was constructed between 1858-63 (GGAT 1992, p. 46); this line passed to the north of the site. The second railway, between Severn Beach and Pilning, was built in 1899-1900 (*ibid.*); this line ran south of the site before joining the Bristol and South Wales Union line a short distance to the south-east.

The construction of the Severn Beach to Pilning line necessitated the construction of a road bridge over the railway and resulted in slight realignment of the existing road between Redwick and New Passage. The line of the old road is preserved as a short length of metalled surface beside the houses south of the former railway and as a rough track to the north. The site lay to the north-east of the old road.

Documentary research by the GGAT indicated that the house was shown on the 1835 Commissioners of Sewers' survey and the Tithe Map. It also suggested that the building did not appear on maps after the 1881 Ordnance Survey twenty-five inch first edition, but comparison of that map with recent maps suggests that a building was standing on the site until relatively recently. Local inhabitants confirmed that a building stood on the site until the latter part of the 1960s and probably into the early 1970s, after which the structure became derelict and was demolished.

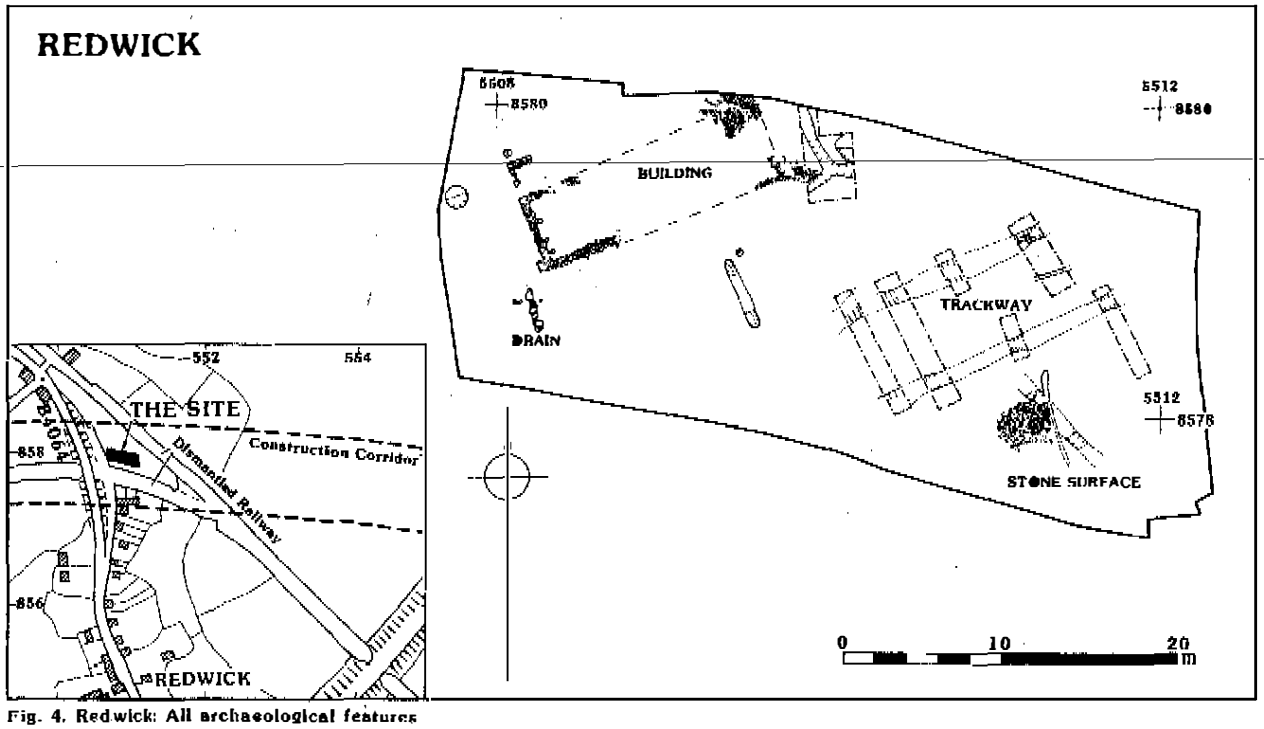

Fig. 4. Redwick: All archaeological features

The Excavation

Prior to stripping the site was covered with dense vegetation, including a small number of mature trees. An area at the centre of the site was less densely covered with undergrowth, and appeared a likely site for the position of the building, no recognisable traces of which were otherwise visible. An excavation area of approximately 47m x 19m was machine stripped (Figure 4).

Once machining was under way it became apparent that there was very little topsoil present in some areas, the greatest depth, 0.3m, occurring in the western part of the trench and immediately east of the area subsequently found to be the site of the house. Removal of the topsoil exposed the surviving elements of the building and other probably associated deposits, together with areas of alluvial silty clay subsoil over the rest of the trench.

Medieval Features

The earliest feature discovered on the site was a stone surface uncovered in the south-eastern corner of the trench. The surface was sealed by root-disturbed silty clay, up to 0.3m deep. The surface was sub-rectangular in plan and approximately 3.5m x 2.5m in size. The northern edge was clearly defined and straight but the other three sides were irregular. The eastern edge of the surface may have been damaged by the insertion of a later clinker-filled drain, although it appears more likely that the presence of the stones caused the drain to be diverted, since the latter veered northwards slightly as it met the surface.

The surface was not substantial, consisting of a few large stones forming a 'foundation' over which lay a spread of smaller stones. The majority of the utilised stone was limestone. A small number of large stones, mostly sandstone, lay on, or were incorporated in, the exposed surface, but overall the structure was not more than 0.15m deep. Cut into the north-western part of the surface was a sub-rectangular slot 0.67m long, 0.19m wide and 0.13m deep, which was filled with lightly charcoal and iron-flecked silty clay loam. Sherds of fourteenth- and possibly fifteenth-century pottery were recovered from the surface and two as yet unidentified iron objects lay less than 1m north of the structure.

There was a possible earlier linear feature running from south-east to north-west, which was sealed beneath the stone surface. The two sections excavated across the feature showed very different profiles and both were filled with compact, clean silty clay from which no finds were recovered. It seems highly likely that this feature was of natural origin.

A short length of sandstone drain on the same alignment as, but south of, the south-western wall of the post-medieval house, was sealed by at least 0.2m of alluvial silty clay. No associated features were seen and it is not known to what structure this drain relates. The drain had the same stratigraphic relationship as the stone surface, dated to the medieval period, though, two sherds of modern pottery were found within its fill.

The Post-Medieval House

Very little of the building survived. The south-western end was best preserved, other smaller sections of wall and/or drain lay to the north-east, giving an overall length for the structure of 15.5m The length of the building on both the 1881 map, and on the more recent editions, was measured as 15m. No internal details of the structure had survived demolition.

The surviving parts of the structure were principally built of sandstone, although bricks were used for drains, which were probably a later addition to the building. The walls were up to 0.6m thick. Although the walls were bonded with mortar, modern materials such as cement, sections of ceramic and iron drain, and steel piping, were also present. In general only a single foundation course from the walls survived, above which lay mortar studded with a few smaller stones which had formed part of the core of the wall. No foundation trenches were noted for any of the walls.

Possibly related to the occupation of the structure were two parallel ditches which crossed the eastern part of the site from south-west to north-east and appeared to coincide with a feature, probably a track turning off the main road through Redwick, shown on the 1881 Ordnance Survey map and on the more recent maps of the area. The ditches, which were on average 4.5m apart, had similar profiles. The southern ditch appeared to have been recut and had also had a line of concrete posts set along its southern edge, the bases of some of which were still *in situ*. The fills of both ditches were of greyish brown silty clay. The south-western part of the area between the ditches showed evidence of having been made up as a rough track. Clinker and road-metalling stones were machined away from this area and elsewhere dark loam, ash, charcoal, mortar, brick, tile and stone fragments were noted. A possible drain was recorded midway between the two ditches running along approximately the same alignment.

Artefact Analysis

A total of 847 sherds (18,954g) of pottery were recovered from the site, 761 were of post-medieval date; the remaining 86 were medieval, principally dating from the fourteenth and possibly fifteenth centuries. The largest concentration (32 sherds) of medieval pottery was found on the stone surface or in related deposits, the remainder coming from unstratified or residual contexts. Apart from pottery 204 pieces (2,998g) of animal bone were found along with substantial amounts of modern glass, clay pipe and metalwork.

Comment

The excavations at Redwick successfully identified the house shown on recent Ordnance Survey maps. Unfortunately little remained of the structure and it was not possible to ascertain a detailed ground plan or identify any phasing within the building other than to say it was of nineteenth-century origin. Evidence for medieval activity was recovered. The stone surface, and possibly also the stone drain, were medieval in date, which suggests that there was occupation in the vicinity.

Other Excavations and Environmental Sampling Trenches

By D. Coe and I. Barnes

Introduction

Apart from the three previously described excavations Wessex Archaeology undertook seven small excavations as part of their research programme. Four of the excavations were designed to investigate areas of archaeological potential. The other three were environmental sampling trenches designed to investigate the character, and chronological development, of the sedimentological sequence during the Holocene on the Avon Levels.

All trenches were opened by machine. In order to adhere to Health and Safety legislation trenches descending beneath 1.2m were stepped at one metre intervals along one longitudinal section and battered at 50° around the other three sides.

Severn Road

In their assessment report the GGAT had recommended (GGAT 1992, p. 27) that the site of a former farmstead off the Severn Road (ST 5444 8100, 6.25m O.D.) shown on the 1840 Tithe map of Henbury parish be investigated (Figure 1). Whilst the main house lay outside the construction corridor investigations in the area of the courtyard and adjacent pond were designed to investigate whether the farmstead had a medieval antecedent.

An area of approximately 400m^2 was stripped of topsoil and the site cleaned by hand. The only evidence of structures on the site were two unrelated wall footings and a series of large post holes from which no clear pattern could be discerned. The pond along the north and eastern edge of the site had been partially backfilled with demolition rubble from the former farm. The occupation of the site appears to be of recent origin (post-eighteenth century); the only artefact of medieval date was a single sherd of pottery which was clearly residual.

Minors Lane (SG-SMR 1112; 1113)

The GGAT assessment (GGAT 1992, p. 27) recognised Minors Lane (Figure 1), a major rhine and trackway, as a potentially early landscape feature and therefore recommended a field investigation take place prior to motorway construction. In order to investigate the lane a single trench was excavated across the trackway (ST 5481 8110, 6.42m O.D.), and the adjacent rhines investigated by means of an auger transect. A trench, 1.3m deep, was excavated across the track and auger holes made in and adjacent to the rhines. The work produced no evidence for the origin or date of Minors Lane.

Green Lane (1114; 6388)

Fieldwork undertaken as part of the GGAT assessment had identified an area of archaeological potential, represented by a layer containing horse bones and Iron Age and Romano-British pottery sherds. Consequently it was recommended (GGAT 1992, p. 20) that a further trench be excavated to investigate the remains.

In response a single trench, 13m in length, 2m wide and 2m deep, stepped and battered, was located off Green Lane, Redwick (ST 5455 8557, 6.45m O.D.) (Figure 1). At the north-eastern end of the trench a hollow was apparent in the section at a depth of 1m (5.4m O.D.) below the surface and with a maximum depth of 0.4m. This was filled with a gleyed clay. From the adjacent section five sherds of Iron Age pottery were recovered, these appeared to be from the fill of the hollow.

The results of the investigations at this site lend further support to the findings of the GGAT evaluation. There was certainly activity in this area of Iron Age/Romano-British date which unfortunately, cannot be more closely defined.

Awkley Hill 1115

Although no previous investigation had been carried out on the summit of Awkley Hill (ST 5970 8600 and 29.83m O.D.) it was recognised that this area of high ground marking the eastern boundary of the Avon Levels had strong archaeological potential (Figure 1). The plan to remove up to 30m from the summit of the hill as ground preparation for the new motorway clearly posed a threat to the survival of any archaeological deposits that may have existed there. The investigation comprised seven machine cut trenches evenly spread over the summit of the hill.

A total area of 280m^2 was opened up and two of the seven trenches produced deposits of archaeological origin. Both contained irregular linear features, five in all, which did not present any coherent pattern. From these features 15 sherds (76g) of pottery were recovered, of these four were of late Iron Age/Romano-British date whilst the other 11 were of medieval date, probably twelfth to thirteenth century. In addition 131 pieces (921g) of animal bone, as well as several pieces of metalwork and slag, were recovered.

Whilst some level of late Iron Age/Romano-British activity was evident on the summit of Awkley Hill the nature of this could not be discerned. The medieval pottery was associated with the slag and it seems likely there was limited industrial activity on the summit during the medieval period. It was not possible to discern which features belonged to which period, they were all irregular in nature and formed no coherent pattern. It is possible, however, that the area investigated lay on the fringe of larger sites and accordingly the area will be closely monitored during the construction watching brief.

Vimpennys Lane 1116 6448

The GGAT assessment had identified a deposit of freshwater peat in the proximity of Vimpennys Lane (ST 5561 8211, 5.8m O.D.) (Figure 1). In response the GGAT report recommended (GGAT 1992, p. 22) that trenches be dug in the vicinity to further investigate the deposit. To comply Wessex Archaeology excavated two trenches in the area of the GGAT work to provide a full analysis of the sedimentary sequence, including an attempt at archaeomagnetic dating.

The trenches were placed on either side of a ditched field boundary, Trench 1 to the south-west and Trench 2 to the north-east. Both trenches were roughly 10m square,

and were excavated to a maximum depth of 3m. In addition a single auger hole was sunk into the base of Trench 1 using a Dutch auger to a maximum depth of 2.8m below the trench base.

The sequences in Trenches 1 and 2 were virtually identical. A series of greyish brown silty clay alluvial deposits 1.25m thick, were recorded overlying a dark grey silty clay buried soil (4.19m O.D.), 0.2m thick. There then followed a further 0.95m of dark grey silty clay alluvial deposits which overlay a narrow band of peat (3.04m O.D.), 0.05m thick. Beneath the peat was 1.15m of light grey silty clay alluvial deposits which overlay a second band of peat (1.74m O.D.), 0.4m, thick which was recognised in the auger hole taken in the base of Trench 1. The final 1.35m at the base of the auger hole comprised a series of grey silty clay and grey sand alluvial deposits.

In general the sequence was the same as that identified by the GGAT during their assessment (GGAT 1992, 74-75). The upper band of peat encountered in the trenches would appear to correspond to that found in the GGAT trial pit G009 (context 227) and which was dated by radiocarbon to 4420±90 bp (GU3121) (*ibid.*, p. 115). This would categorise it as a fourth peat as defined by the GGAT (*ibid* 1992, p. 8). The lower band of peat would also, by virtue of its relative height O.D., fall into this fourth peat category, and what we are probably seeing is an area where the fourth peat development was interrupted by inundation, with further development resuming at a later date. A full range of environmental samples was taken from Trench 2 which included mollusc columns, pollen monoliths, samples for particle size analysis and those for an archaeomagnetic dating sequence.

Awkley Lane 1117: 6438

The GGAT investigations in the area of Awkley Lane (ST 5932 8638, 6.41m O.D.) produced evidence of a well preserved sequence of freshwater peats (Figure 1). In order to further examine these deposits it was recommended (GGAT 1992, p. 26) that a trench be excavated to fully sample the sediments. In response Wessex Archaeology opened a trench 11m square to a maximum depth of 4.5m; a further 0.35m was investigated by means of hand dug trial hole at the base of the trench.

A total of twenty-two deposits was recognised and recorded (Plate 4). Of these ten were alluvial deposits, comprising light grey to greyish brown silty clays. Two buried soils were recognised, the first at 4.44m O.D comprising a dark grey clay 0.15m thick, and the second at 4.74m O.D comprising a dark grey silty clay, also 0.15m thick. These two soils were separated by a narrow band of alluvial material. A good sequence of peat deposits was recorded from a depth of 2.6m O.D. to 1.11m O.D. These peat deposits were similar to those found in the GGAT assessment trench G030 (*ibid.* pp. 57-58), where radiocarbon dates of 4190±70 bp and 4190±60 bp (GU3119 and GU3120 respectively) were obtained from excavated samples (*ibid.*, p. 115). This peat horizon has been assigned to the fourth peats using the criteria outlined in the GGAT assessment (*ibid.*, p. 8).

From the alluvial deposit immediately above the peat layer a large log was retrieved and an attempt will be made to date this dendrochronologically and by radiocarbon. A full suite of samples was taken from the deposits, including mollusc columns,

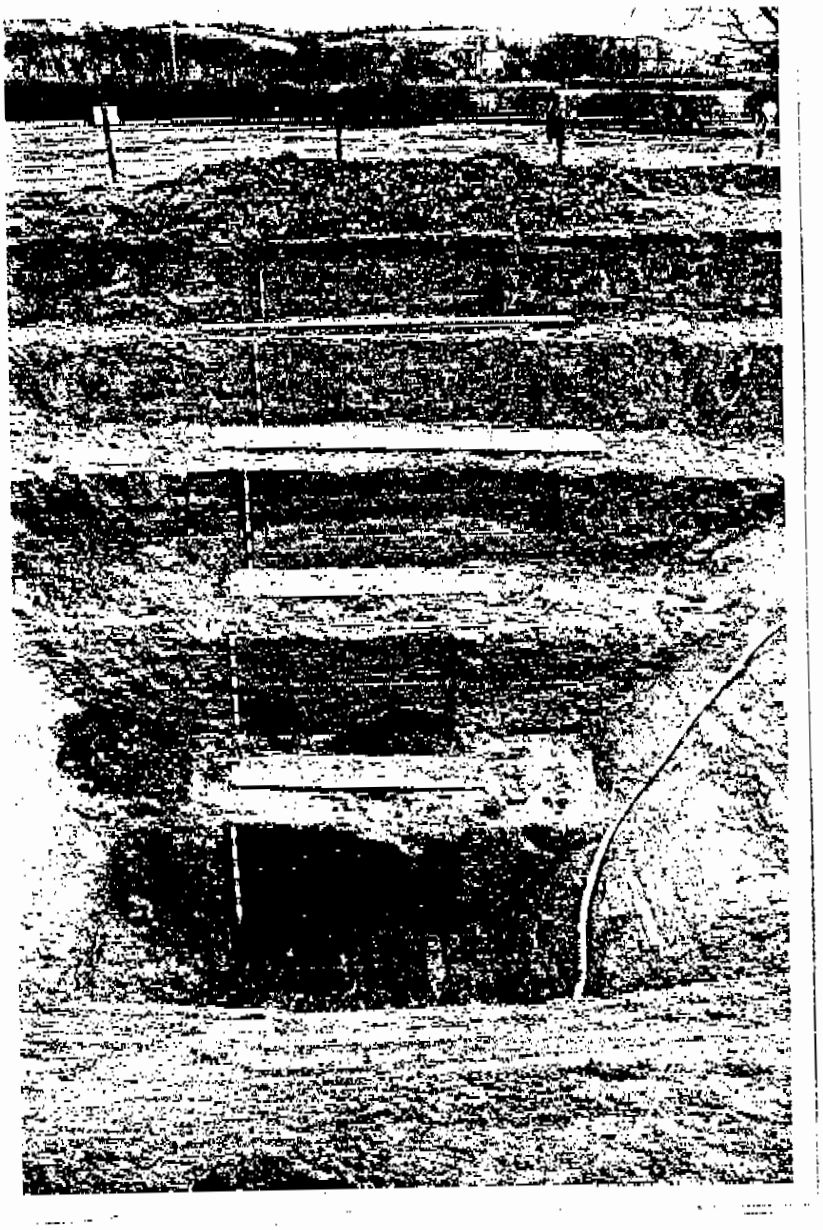

Plate 4. Awkley Lane. Peat deposits are clearly visible in the bottom 1.00m step of the trench.

pollen monoliths, samples for particle size analysis and samples for investigation of archaeomagnetic dating.

Awkley Interface 1115

Preliminary investigations by the GGAT in the area of the Awkley Interface (ST 895 863, 7.02m rising to 9.5m O.D.), located at the bottom of Awkley Hill adjacent to the old Awkley Lane (Figure 1), illustrated the presence of alluvial deposits in relation with colluvial deposits from the adjacent hill. A sequence of ditches of Romano-British date were also found in this area, although these were interpreted as field boundary ditches and not indicative of settlement. It was recommended (GGAT 1992, p. 26) that further investigation of this area should be undertaken in order to further examine the relationship between the alluvial and the colluvial deposits and to attempt to retrieve further palaeoenvironmental data which could be related to the Romano-British field system.

In response Wessex Archaeology excavated four trenches at Awkley Interface, one to the west of the old Awkley Lane and three to the east. The array of trenches traversed the edge of the Levels and the base of the rising ground to the east. A total length of 65m of trench, spread over a distance of 130m, covering 369m^2 was opened, and the trenches were excavated to a maximum depth of 3m.

As anticipated there was a gradual change in deposit types across the area. In the trench at the western extreme of the sample, to the west of old Awkley Lane, a series of interdigitating alluvial and colluvial deposits was recorded. Four separate colluvial events were recorded, the most substantial being 1.15m thick; likewise four alluvial events were recognised, but in contrast these were less substantial, three being only 0.05m thick with the fourth only 0.65m thick. The alluvial deposits in general comprised light grey silty clays whilst the colluvium comprised reddish sandy clays. Alluvium was only found in this, the most western of the trenches, and this situation must represent the edge of the Levels deposits.

The three trenches to the east of old Awkley Lane displayed an inconsistent spread of colluvial deposits with the greatest thickness, 2.1m, in the centre of the 100m spread of trenches up the hill slope, whilst at either extreme it was only 1.6m thick. In each of the three trenches the colluvial deposits were recorded as lying above Triassic Mudstone. The colluvial deposits in general comprised reddish brown silty and sandy loams, many of which had been contorted into strange configurations by later mass movements.

A buried topsoil was recorded in the two trenches immediately east of old Awkley Lane. This soil, a brown silty loam, was found approximately 0.7m below the surface at a height of 7.38m O.D. and was dated by artefacts and by its relationship with several excavated features. The features uncovered included a post hole, a ditch which appeared to be recut at least twice, an irregular pit and a series of floor/surface layers and occupation deposits. Pottery retrieved from the features suggests a date for this activity in the Romano-British period. The buried soil and features were sealed in both trenches by later colluvial deposits.

A number of Romano-British settlements are known to have existed on the slopes of the Triassic ridge overlooking the Levels. Recent investigations at the foot of Spaniorum Hill (GGAT 1992, p. 62) have revealed Romano-British activity at this interface between the ridge and the Levels. The site on the lower slopes of Awkley Hill appears to be similar.

A series of environmental samples was taken from the trench immediately west of old Awkley Lane; these included a mollusc column, samples for particle size/pollen analysis, micromorphology and a series of bulk samples from the fills of the larger archaeological features.

Although it was not possible more fully to investigate this site during the pre-construction phase it is hoped that the detailed ongoing watching brief during road construction will provide more information.

The Earthwork Survey

by N. J. Adam, A. Powell and I. Barnes

It was noted in the GGAT assessment report that much of the route of the proposed motorway links was covered in ridge and furrow (GGAT 1992, pp. 16-17), and it was consequently recommended that these should all be surveyed, firstly from existing aerial photographs, and secondly on the ground, prior to the commencement of construction.

Wessex Archaeology, in conjunction with English Heritage, decided that, valuable as such a survey would be, it would be more beneficial to set such work into context. To implement this a two stage approach was adopted. First, all aerial photographs covering 54km^2 of the Avon Levels bordered by the present M4 and M5 motorways, the Severn Estuary and the northern extent of Bristol were plotted at 1:10,000. In addition any earthworks in fields directly affected by the proposed construction corridors were plotted at 1:2,500 (Figure 5). Secondly, a survey using an Electronic Distance Measurer, coupled to a data logger, was undertaken on the ground along the entire lengths of the proposed motorway links. The information from this survey will, during post-excavation, be plotted using Wessex Archaeology's Computer Aided Design package.

The survey aimed to differentiate between 'straight' ridge and furrow and 'reverse-S' ridge and furrow which is thought to be the result of largely medieval ploughing, and to plot furlongs and other pre-modern field boundaries. In addition particular attention was paid to earthworks which may indicate former settlements, eight sets of which were identified (none of which lay on the line of the proposed routes), and to gaps within the spread of ridge and furrow which may indicate a site of former settlement.

The earthwork survey has produced a wealth of data which, when studied in detail and especially when complemented by the results of the documentary research, should enable a broader understanding of the post-Roman development of the landscape of the Avon Levels.

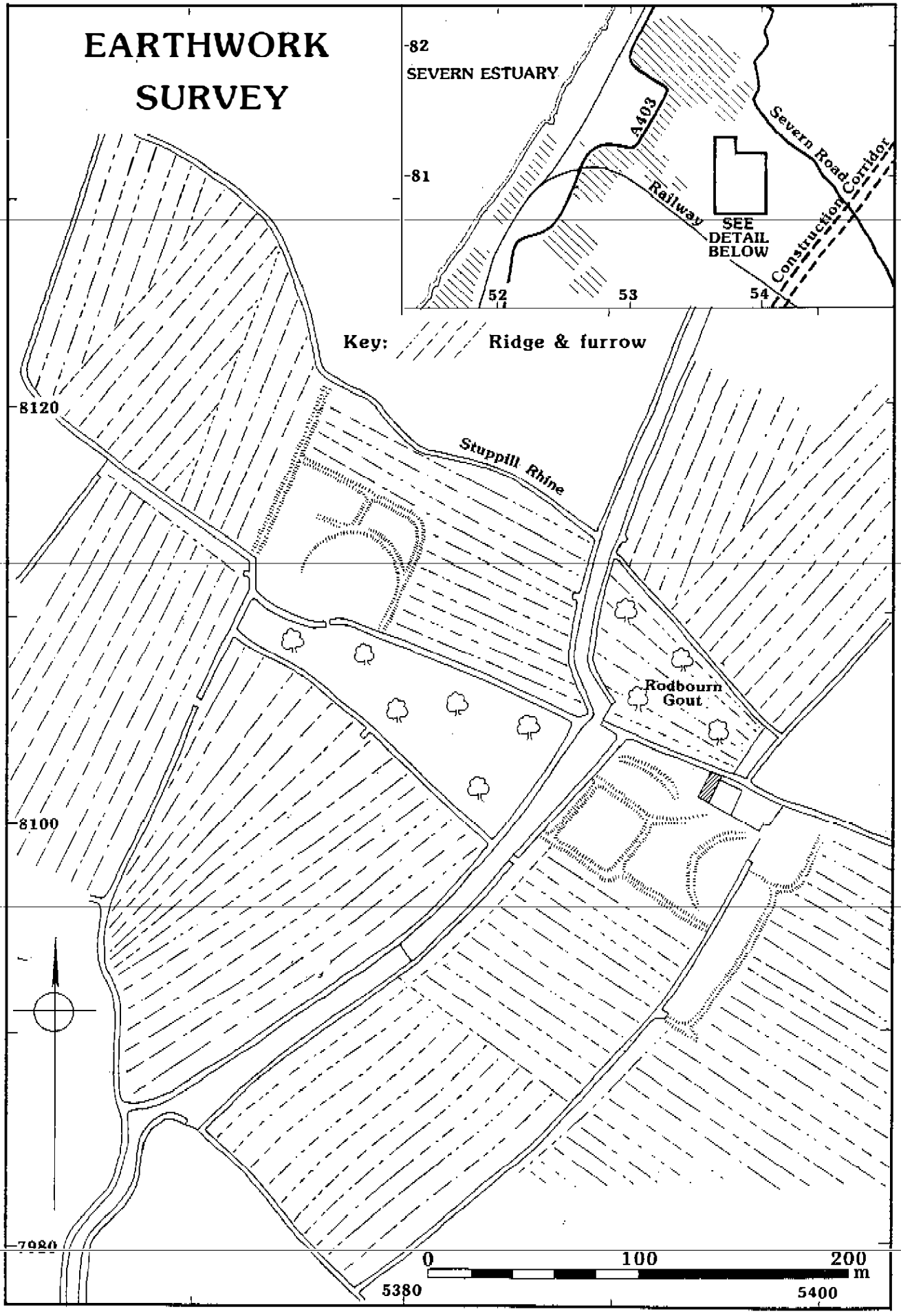

Fig. 5. Earthwork Survey: Detail around Rodbourn Gout

Project Overview

The Wessex Archaeology excavations and associated surveys mark the culmination of several years of research into the archaeology of the Avon Levels, work which has significantly enhanced our understanding of the past of the area.

Through the work undertaken previously by Avon County Council and the GGAT, Wessex Archaeology was able to propose several research aims in the Research Design (Newman 1992). Though analytical work is still in its early stages the data gathered should allow a full exploration of the cited aims, namely:

- the characterisation and chronological development of the Holocene sedimentological sequence
- the reconstruction of the evolution of the palaeo-environment
- the characterisation of the nature of the Iron Age and Romano-British settlements and settlement pattern
- the definition of the extent and nature of post-Roman alluviation
- the development of the medieval and post-medieval landscape.

At this stage, prior to the full post-fieldwork analysis, no detailed statements on the archaeology of the Avon Levels can be made, though it is possible to make more general observations. The depositional histories of the Hallen and Northwick sites are quite distinct. Hallen, a late Iron Age settlement, lay beneath a metre of sediments whereas Northwick, an early Roman site, was not sealed by alluvium, and has consequently been badly eroded by later ploughing. Evidently the Levels did not have a universal depositional history and inundations were localised in nature. Certainly the preliminary results of the auger survey, at present being conducted across the Levels, seems to bear this out, deposits varying dramatically across the landscape. Perhaps this suggests that the late prehistoric/early Roman land surface was more undulating than that of the present day.

The site at Hallen demonstrates that this area was being exploited in the middle-late Iron Age. Preliminary results indicate that the settlement existed in a relatively dry and stable environment. This could be indicative either of land reclamation or of a period of lower water levels due to environmental factors.

Above all, however, work to date has confirmed the difficulties inherent in exploring the archaeology of this type of landscape. Unlike other wetlands which are being eroded, the Avon Levels have undergone continued accretion over much of their area, ensuring that the pre-medieval archaeology is becoming ever more deeply buried. Prior to the Second Severn Crossing assessments and excavations, very few sites were recorded in the Avon Levels, largely due to the masking effect of depths of alluvium. By the observation of geotechnic test pits a number of significant archaeological sites, including Hallen and Northwick, were discovered, and it would seem reasonable to suggest that many such sites remain undiscovered in, and under, the alluvial deposits across the Avon Levels. Certainly it is highly likely that sites remain undiscovered along the motorway routes. The technique of observing geotechnic pits, followed by machining further trenches around those which proved of interest, did identify, and partially define, a number of sites. One wonders, though, how many sites remained

undiscovered by the relatively small and widely spaced geotechnic pits (106 along 14km of route).

Geophysical survey may have found the previously unknown site at Northwick, but would definitely have not identified the site at Hallen; no great confidence could, therefore, be given to this technique, and its application at anything other than at a scan level would not have been practical along the entire route. Augering would have shown the presence of the deposits likely to be associated with settlement but would have only fortuitously and sporadically, if at all, provided evidence of date or function. Fieldwalking and aerial photography would generally have produced only evidence for the latest activity on the Levels. Trenching was, and remains, the only viable option for assessing these masked landscapes. This can take the form of large stepped trenches or smaller, but more frequent, shuttered trenches. As with all other landscapes, however, the larger the percentage sample the better the results. Although such trenching is expensive, expenditure at the assessment stage will save on resources later in the archaeological programme of investigations. It cannot be doubted that, as a result of an inadequate assessment database, resources were targeted in some cases to areas of poor potential, whilst sites of higher potential were given insufficient attention. These are not criticisms of the organisations who carried out the assessment stages, for the problems faced in gaining a sufficient level of investigations at an assessment stage on road scheme developments are common to all archaeological organisations. It is to be hoped that as the Department of Transport will be funding the entire programme of road scheme archaeological works in future, adequate investment at assessment stage will not only be seen to make sense archaeologically but will also be viewed as a cost-effective approach. Investment at the outset may result in savings in the long term.

Even though the excavations are complete, fieldwork on the project is continuing. A watching brief on all earthmoving during the construction of the motorways is likely to last until Christmas 1993. An auger survey, of six transects across the Levels, three north-west/south-east, and three north-east/south-west, is presently being undertaken (July 1993). Auger bores of 2m depth are being taken at 50m intervals in an attempt to map the post-Roman alluviation. Preliminary results from the auger survey show that deposits do vary over the Levels and already several possible 'islands' of settlement deposits, and palaeochannels, have been recognised.

In conclusion, the work undertaken by Wessex Archaeology during the winter of 1992/3 has resulted in the amassing of a large amount of data on the archaeology of the Avon Levels. When the final two elements of fieldwork are complete, an assessment of the requirements for the final report will be prepared for English Heritage and the Department of Transport. It is hoped that the report will tie together the strands of research into a landscape history of the Avon Levels, of use both as an academic reference source and as a planning tool.

Acknowledgements

Wessex Archaeology's fieldwork was undertaken during a period of often adverse weather conditions and the efforts of all field staff are gratefully acknowledged. Apart from the named contributors, comments on the artefacts were supplied by Lorraine

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