Excavations of Iron Age Settlements at Sywell Aerodrome (1996) and at Ecton (1992-3) Northamptonshire

by

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SUMMARY

Two predominantly early/middle to middle Iron Age sites 2.5km apart, both part of a linear cropmark system along a valley side running towards the River Nene, Northamptonshire, were partially excavated at Sywell Aerodrome (1996) and at Ecton (1992/3) prior to the construction of offices and a water pipeline respectively. The earliest feature uncovered was at Ecton where a single late Bronze Age/ early Iron Age pit contained two pottery vessels. Apart from this feature, occupation seems contemporary with the Sywell site dating between the 5th or 4th to 1st centuries BC compared with the Ecton site dating from the 4th to 2nd centuries BC.

Early Iron Age pottery was recovered from a single linear ditch at Sywell. The early/middle Iron Age was represented by three pits found on the extreme north-east of the excavation, which may signify a focus of occupation in this period outside the area of excavation. The middle Iron Age formed the vast majority of the evidence and comprised parts of two enclosures, a four-post structure, and a scatter of pits all truncated by subsequent cultivation and presumably part of a single unenclosed farmstead c.0.5 hectares in area identified from more extensive cropmarks.

At Ecton, truncated features were excavated for 240m along the 15m wide water pipeline corridor with deposits ending abruptly on the northern side and quarried away on the southern side. The features comprised a group of five small circular enclosures and surrounding pits, together with three rectilinear enclosures and other associated pits, and two further small circular features nearby, to the north. In all, this Ecton site was part of an extensive settlement. A section through a separate cropmark site was examined when the pipe trench crossed the edge of a new set of enclosures 300m to the south west of the Ecton site. Sections through two parallel ditches and the western side of a rectangular enclosure recovered no dating evidence.

INTRODUCTION

The present article was written to bring together the evidence from two similar sites excavated at Sywell and Ecton by Northamptonshire Archaeology. An archaeological evaluation, magnetometer survey and excavation was carried out at Sywell Aerodrome in 1996 (Fig 1; NGR SP 8248 6750) and an excavation at Ecton during 1992/3 (Fig 1; NGR SP 8245 6470).

The Sywell work fulfilled an archaeological condition placed on the planning consent passed by Wellingborough Borough Council for development of the site. The excavation also met the requirements of archaeological briefs issued by Northamptonshire Heritage on 13 December 1995 and 29 March 1996 (Kidd 1995 and 1996). The Anglian Water pipeline development between Hannington and Lings, Northampton involved three excavation sites of which two were in Ecton. These excavations took place after an archaeological assessment of the impact had been carried out to a specification approved by the county archaeological curator.

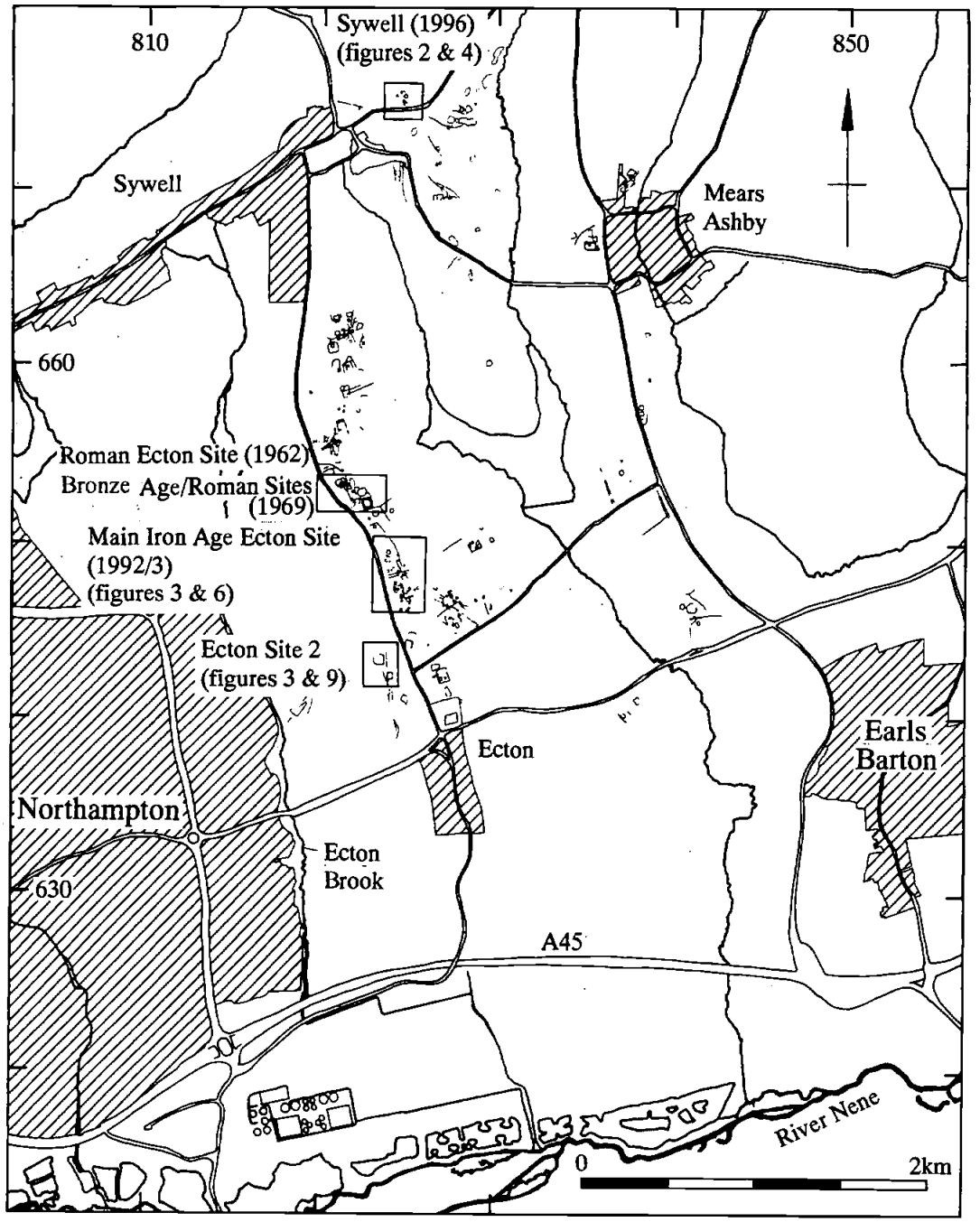

Fig 1 Location map and cropmarks at 1:35,000

The main objective for the Sywell site, as defined in the brief, was to preserve *in situ* all possible remains. Where monitoring of the construction works revealed it was impossible to preserve county or nationally important remains, the archaeology was to be excavated and recorded to determine its chronology, development, form and function and to recover related environmental data. The assessment of the Anglian Water pipeline tried to select the route with the lowest destructive impact upon the archaeology of the area. After this route was found all archaeological deposits, including those at Ecton, were excavated and recorded.

ACKNOWLEDGEMENTS

We are grateful to Sywell Aerodrome Ltd for the funding of the archaeological work. Helpful advice was given by Sandy Kidd, former Planning Officer at Northamptonshire Heritage during the various archaeological stages. The archaeological works was managed by Steve Parry with Michael Webster, Tony Baker, Mark Holmes and Peter Masters supervising the various works with a team of site assistants consisting of Rob Atkins, Chris Jones, Steve Morris and Paul Thompson. The illustrations were drawn by Cain Hegarty, Lesley Collet, Mark Roughley and Alex Thorne. The interim report was written by Steve Parry, Rob Atkins and Peter Masters.

The Ecton Site was funded by Anglian Water Services Ltd. The work was managed by Brian Dix, Mark Holmes carried out the pipeline assessment. Ian Meadows directed the excavations, Michael Webster supervised with a team of site assistants consisting of Tony Baker, Rob Butler, Lynn Denny, Chris Jones, Peter Masters, Steve Morris, Mike Parker, Tim Sharman and Rob Smith. Illustrations were drawn by Cain Hegarty, Leslie Collett and M Connell. The interim report was written by Mark Holmes and Ian Meadows and edited by Brian Dix and Michel Audouy. The present report has been compiled by Rob Atkins and Andy Chapman has commented on it.

TOPOGRAPHY AND GEOLOGY

The Sywell site lies approximately 4km to the north-east of Northampton and is situated at the junction between Northampton Sand with Ironstone and Lower Estuarine Series Pale Sand and Sandstone (British Geological Survey 1980). It is located on flat ground at the southern edge of a Boulder Clay plateau at approximately 120m above Ordnance Datum. To the south and east, the site overlooks a ridge of Northampton Sand with Ironstone dissected by two streams.

The Ecton site, 2.5 km to the south of Sywell, is on similar geology on the edge of Northampton Sand with Ironstone and Lower Esturaine Series Pale Sand and Sandstone (British Geological Society 1980 and 1989).

CROPMARK EVIDENCE (Figs 1, 2 and 3)

The Sywell and Ecton cropmarks are part of an extensive cropmark system seemingly related to the River Nene. The Royal Commission volume on Central Northamptonshire records part of these cropmarks, calling them the North Ecton Complex, and calculated that they occupied some 35 hectares of land north of Ecton village on sand and glacial gravel between 90m and 107m above OD (RCHM 1979, 47). The volume comments on the remarkable complexity of cropmarks and recorded that there had been a number of important discoveries made in these cropmarks (RCHM 1979, 47-9).

The Ecton cropmarks had been discovered by Mr A. Warhurst and photographed in 1959 (Hollowell 1971, 9-10). Aerial photographs taken since 1996 as part of a county-wide project of mapping all known and new cropmarks (including Sywell), has led Philip Markham to substantially modify these cropmarks. Philip Markham's modifications have been used in this report (Figs 1, 2 and 3).

The R.C.H.M. volume lists probable Bronze Age activity in the area. This can be seen in a possible double ring ditch 30m in diameter 150m to the north of the Ecton site (SP 8227 6517) which was dated as Bronze Age or early Iron Age (RCHM 1979, 49). Fieldwalking by Richard Hollowell had revealed traces of cremation burials and Bronze Age pottery sherds (Hollowell 1971, 9). The site was excavated in trial trenching by Dennis Jackson in 1969 (Jackson 1973). The excavation found that modern ploughing had destroyed most of the traces of burials, the barrow was truncated containing a few sherds of Bronze Age or early Iron Age pottery and a few Roman ditches were found.

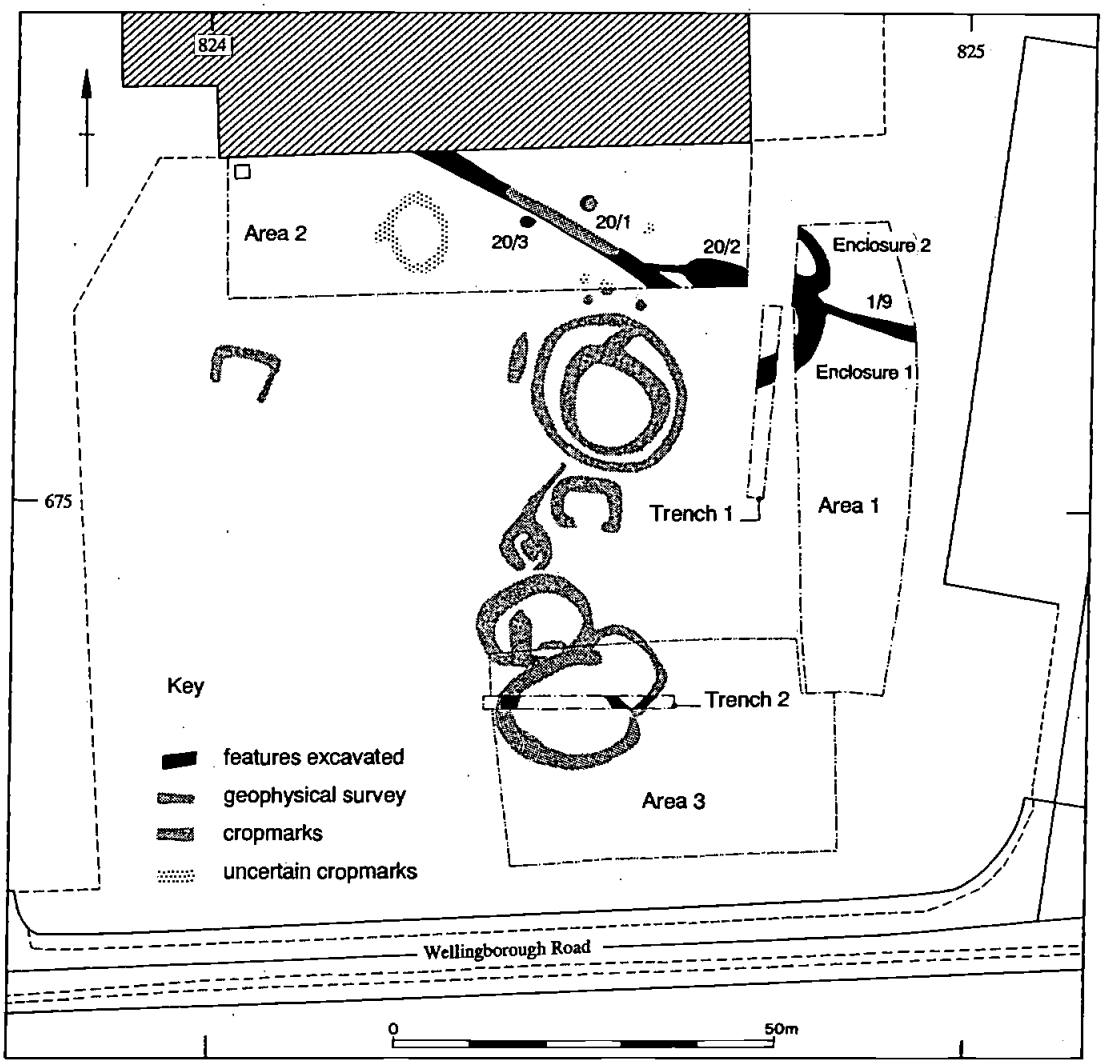

Fig 2 Cropmark of Sywell site and trial trenches at 1:500

A Roman pottery making area was partially excavated in the 1962 *c.*250m to the north of the main Ecton site. Four kilns damaged by ploughing were excavated and dated to the Antonine period though examination of the ground surface suggested that there were at least twelve more in the vicinity which were not looked at as they had not been damaged by ploughing (Johnson 1969; Fig 1).

The majority of cropmarks seem to consist of enclosures and field systems commonly found from the Iron Age and Roman periods representing farms and relatively small settlements. They appear to be situated on the valley sides along ridges to the south of the Sywell Aerodrome running parallel to the streams, for example, Ecton Brook feeding the River Nene.

The cropmarks do not continue to the north of the Sywell excavation and this may mean that the Roman and Iron Age field systems along these linear alignments stop here, giving the collective total

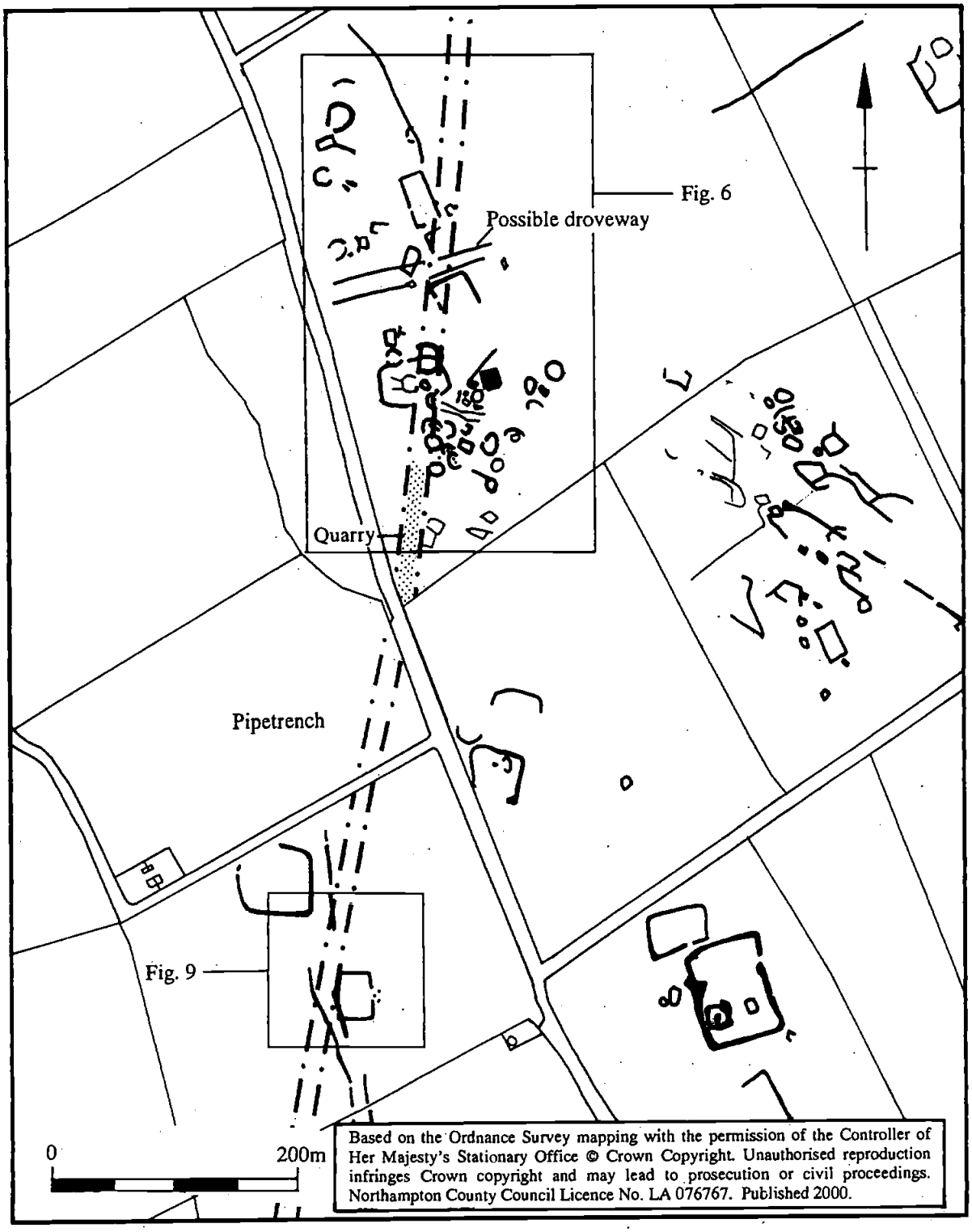

Fig 3 Cropmark of Ecton sites at 1: 5,000

distance for these linear cropmarks as *c.*4km north to south. This assessment that the cropmarks stop at this north point has been strengthened by the largely negative results of a recent extensive evaluation just to the north of the Sywell excavations. Here, a 36 hectare site starting just 300m north of the Sywell site comprised of a geophysical survey and trial excavation. The geophysical survey involved a magnetometer scan over the whole site which was followed by selected, detailed gradiometer survey totalling 4 hectares. These only identified two linear anomalies believed to indicate either archaeological features or land drains (WYAS 2000). Within this survey area, 12 trial trenches totalling 540m in length were excavated covering an area of 1000m by 400m (Walsh and Steadman 2000). This evaluation confirmed the geophysical results with only a single probable boundary which may relate to the Sywell enclosures. The ditch fill contained seven late Iron Age sherds which are likely to be from a single vessel.

The Sywell cropmarks consist of a group of linked and separate oval enclosures running roughly north-south across the site, together with open sided C-shaped ditched features (Fig 2). A sub-circular feature with a diameter of about 13m appears to be set within a slightly larger possible enclosure. The other enclosures are small with a maximum diameter of about 20m and were presumably intended as paddocks, stock pens or ring ditches that may have enclosed round houses. Pits and short lengths of apparently isolated ditches were also present and suggest that the cropmarks only reveal part of the original plan form.

One small enclosure identified as a cropmark to the northwest of the main group was not located in the watching brief. This may be due to the degradation caused by ploughing of the soft natural sand between taking the photograph and carrying out the fieldwork. Alternatively, other factors may have given rise to the cropmark. Other features not noted as cropmarks were identified in the 1996 excavations particularly in the north and north-east of the site where two enclosures, pits and other features were found (Fig 2, enclosure 1 and 2).

Two separate excavations in 1992/3 at Ecton, 2.5 km to the south of Sywell, examined parts of the cropmark complexes revealing evidence of an Iron Age settlement and an undated enclosure site (Fig 1). The cropmarks in the area of the 1992 Ecton pipeline development form at least four different small settlements within a relatively small area with the water pipeline trench cutting through two of them (Fig 3). The northern cropmark site is linear in appearance running roughly north to south for more than 300m and up to 150m wide covering an area of 4.5 hectares of which 0.5 hectares was excavated. The 1992 excavation recorded features covering a distance of 240m along the 15m wide pipeline development. The cropmarks and the excavated archaeology seems to tie in relatively well (Figs 3 and 6).

There is a small group of circular cropmarks on north and north west areas, this ties in with the two small circular features excavated at the most northern part of the trench. Directly to the south there are three or four rectangular enclosures. A possible droveway has been plotted running east to west at right angles to the rectangular enclosures. The excavation trench confirmed parts of three of the rectilinear enclosures, and the possible droveway, as well as some pits. On the southern side, cropmarks show a concentrated group of about 14 circular enclosures. The excavation evidence consisted of a group of five small circular enclosures (perhaps denoting houses) and surrounding pits. The four southernmost cropmarks, though they have been tentatively plotted, probably do not exist as the excavation found the southern side of the settlement had been truncated by 19th-century quarrying. The southern extent of the site will never be known.

The pipeline continued and 300m to the south-west bisected two cropmark rectangular enclosures and two roughly parallel ditches running north to south (Figs 3 and 9). This is a different occupation as can be seen by the rectangular enclosures here that are notably larger than those in the previous sites and there are no curvilinear features. The pipe trench cut through the parallel ditches and just clipped the western edge of one of the rectangular enclosures. The area had been affected by later ploughing and the site survived as truncated features.

THE EXCAVATED EVIDENCE

METHODOLOGY

The work at Sywell took place within the area of proposed new offices and car park. This meant that

only the extreme northern and southern cropmarks were affected, as well as an area of land immediately to the east of the cropmarks (Fig 2). The central cropmarks were therefore not investigated as they were not effected by the development.

The first stage of archaeological work involved the excavation of two 25m long trenches, one on the proposed office site to the east of the cropmarks, and the second; on the site of the proposed car park extension, was placed through the southernmost enclosure (Fig 2).

The trial trenches were excavated in February 1996 using a mechanical excavator with a toothless bucket and Iron Age features were uncovered in both (Parry 1996). As a result, the developers proposed measures to minimise their impact on the archaeology and resultingly the area of the proposed office block and its immediate surroundings was totally excavated in an area 61m by 15m as this part would be subject to large-scale ground disturbance (Area 1).

The northern area was stripped to a depth of 300mm and then landscaped with a bund and while the stripping took place an archaeological watching brief observed the process (Fig 2, Area 2). A watching brief and magnetometer survey took place in the area of the southern enclosure as the archaeological remains were to be substantially preserved under the car park (Area 3).

At Ecton in 1991/2 Northamptonshire Archaeology assessed alternative routes for the Hannington to Ecton Anglian water pipeline. A desk-based study of aerial photographs, together with the examination of cartographic and documentary evidence, was later supported by a programme of fieldwalking, comprising the surface collection of artefacts, and targeted geophysical survey (Holmes and Meadows 1995).

The pipeline route which was eventually chosen avoided most of the sites identified by the assessment but still affected two separate cropmark sites near Ecton (Fig 3) and a small concentration of early/middle Saxon pottery close to Mears Ashby. At the request of the archaeological curator, the three sites were excavated and recorded in advance of the pipeline-construction between September 1992 and March 1993.

The trench was excavated by machine with the stratification consisting of a 250mm to 400mm thick arable layer, or ploughsoil. The remains of a former strip-cultivation system survived as furrows running intermittently across the trench at intervals of 10-11m. No dating material was recovered from their fills. The quarried southern area was clearly seen after machining. Animal bone was not kept during the excavation.

IRON AGE ENCLOSURES AT SYWELL

Archaeological features were easily identified, with their brown sandy loam fills contrasting to the natural yellow sand bedrock. The fills contained a variable proportion of sand, which had presumably derived from the weathering of their original profiles in the soft sand. The results are described by area:-

AREA 1 (FIG 4; PLATE 1)

Topsoil (1) up to 300mm thick overlay a layer of re-deposited material (2) consisting of mixed soils and ironstone fragments which had apparently been used to level the site, possibly during the construction of the airfield. The layer was thicker to the east thereby masking the gentle slope of the original ground surface. The introduction of the layer probably explains the absence of cropmarks in this part of the site. A dark grey brown sandy subsoil (3) was identified below the make-up layer within the eastern part of the site but was absent to the west possibly due to its truncation during levelling operations.

Within the western part of the area Lower Estuarine pale sand was exposed beneath the subsoil but to the east the sand was sealed by hillwash material which varied from a yellowish brown loamy sand to a dark brown sandy loam. Archaeological features of Iron Age date were found cutting into the soft natural sand and hillwash material.

All pottery from features have been dated typologically to the middle Iron Age apart from ditch (9) which produced early Iron Age pottery, and pits (11, 12 and 13) which contained early to middle Iron Age pottery. Luminescence dating of pottery by Dr. Sarah Barnett of Durham University has obtained a date 430BC-130 AD with a standard deviation of 220 years. The weighted mean for the occupation for the site is 150 BC ± 80 ±95 (the results are quoted ± random error ± overall error at 68% confidence).

EARLY PRE-ENCLOSURE DITCH

The earliest phase was probably the eastern part of a single straight ditch (9) which ran NW-SE across the trench. Almost 2.5m across at its widest, the boundary ditch narrowed considerably to the west. To the east it had a single cut and four fills though just to the west this ditch had just two fills (Fig 5, S4 and S5). Primary fill (25) was a yellowish brown loamy sand with a high proportion of ironstone fragments. Overlying this was a fill with a similar matrix but with less stone and some charcoal pieces (24) and in one area contained a brownish pink ashy clay or silt deposit which had the appearance of hearth

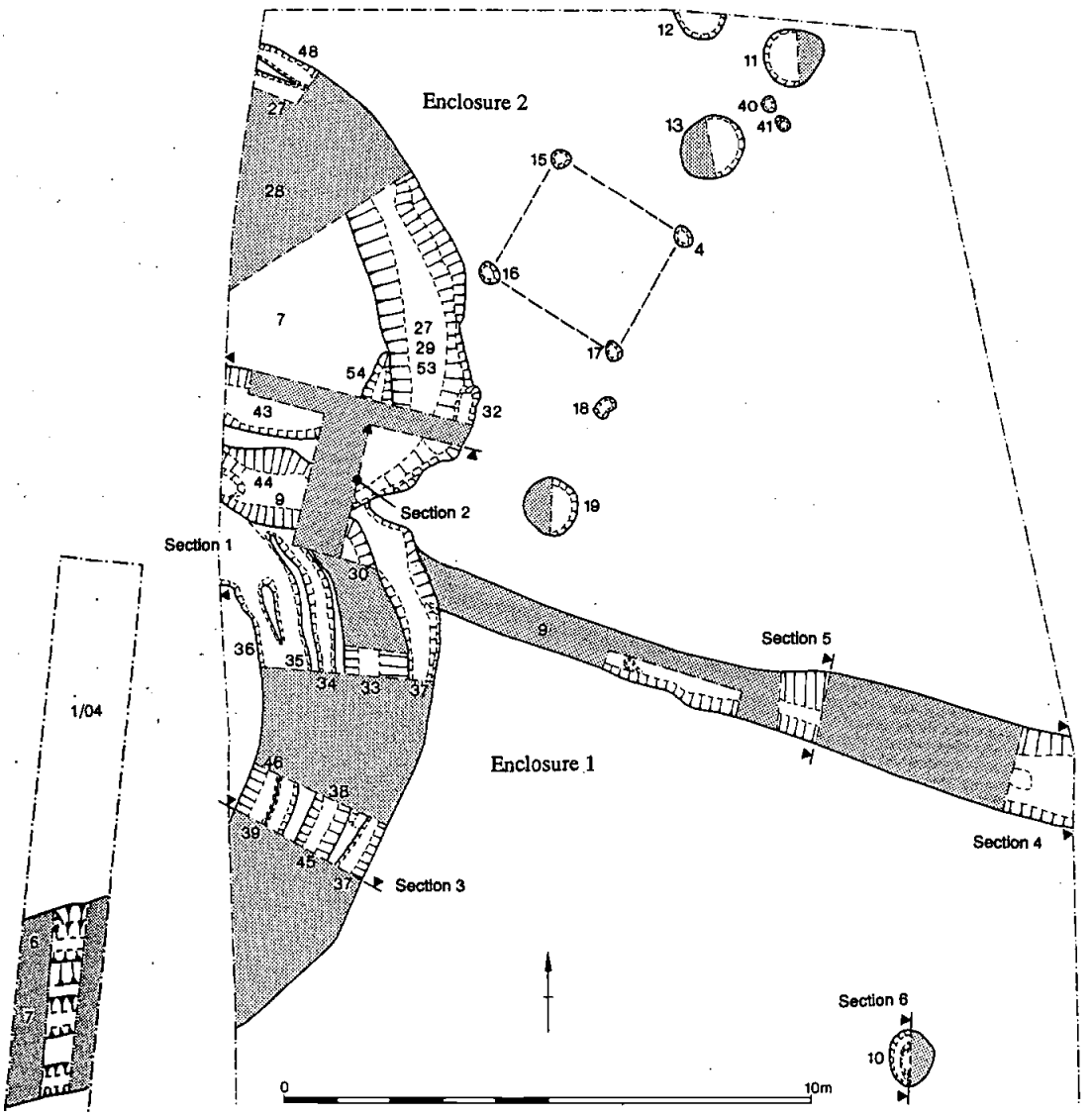

Fig 4 Plan of Sywell excavation area 1 at 1:100

cleanings. Above this layer was a similar fill (23) though with less charcoal. It was sealed by the latest fill (49) of yellowish brown loamy sand with occasional flints and ironstone fragments. This ditch may have been cut by the two enclosures but the evidence is equivocal since their junction was confused due to the number of features present. Thirty four sherds of early Iron Age pottery were recovered from ditch (9), and further similar material came from some of the pits to the north of this ditch.

PITS AND POST-HOLES

To the east of enclosure two, there were a number of pits and postholes. Four of these postholes (14, 15, 16, 17) were similar in size (360mm x 340mm x 222mm deep), and filled with a similar soil matrix, a brown loamy sand with occasional ironstone fragments and charcoal flecks. The postholes are 2.5m apart and it is probable that they formed a square 4-post structure.

All the pits were of similar size and shape, roughly 1.0m -

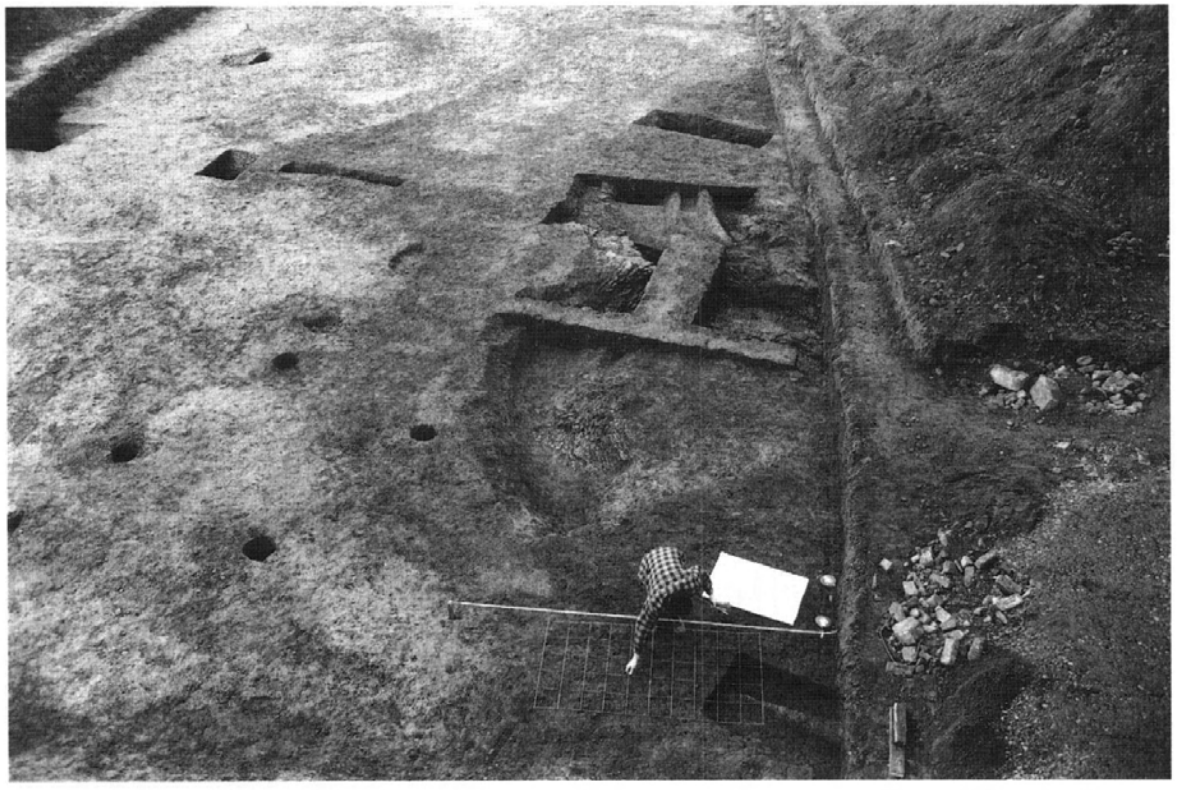

Plate 1 Sywell, Area 1 post-excavation

1.25m in diameter, and circular and they were shallow with their depths varying between 0.12m and 0.41m. Three lay close to the edge of the excavation (11, 12, 13) and one lay close to the junction of the enclosures, pit (19). All pits were filled with a dark brown loamy sand.

To the south of ditch (9) a large post hole (10) 1.0m x 0.70m with a distinct post pipe was situated on its own (Fig 5, S6). Other post-holes identified during excavation (18, 40, 41) suggested no specific clustering which could indicate their former use.

ENCLOSURES

The excavation revealed parts of two sub-circular enclosures. Enclosure 1 was seemingly sub-circular in plan, defined by a ditch which had been recut at least four times, gradually moving to the east (Fig 5, S1). The earliest (35), cut into the natural to a depth of 0.40m with a flat base and steep sides, and was filled with a dark yellowish brown loamy sand. This was cut by ditch (36) slightly to the west with a more U-shaped profile, the fill contained fragments of ironstone in a similar matrix. The next ditch lay to the east (34) cutting (35). It had a V-shaped profile with a flat base cut into the natural to a depth of 0.30m and was filled with a brown loamy sand. East of this, ditch (37) had a similar profile and cut into the natural 0.25m and was filled with a dark yellowish brown loamy clay. Enclosure ditch (37) cut boundary ditch (9). The final cut in this sequence was a large V-shaped cut (33) 0.70m deep filled with four different lenses of dark yellowish brown loamy sand with ironstone fragments. This implies the ditch filled up slowly in phases. Internally only a small part of the enclosure was examined in evaluation trench 1 and no features were found.

Enclosure 2 lay to the north and consisted of a possible C-shaped, open-ended loop of recut ditch with an entrance at the west (Fig 5, S2). The ditches were generally broader and shallower than those of enclosure 1 and did not shift position as much. The earliest (53) had a shallow U-shaped profile filled with a dark yellowish brown loamy sand. It was cut and sealed by ditch (29) which also cut two ditches, one either side (32 and 54) which both had shallow U-shaped profiles, and both were filled with dark yellowish brown sand. Along the southern edge a single length of recut ditch (44) contained a large number of stones, most of which showed signs of burning, and a large cow skull (Fig 5 S3).

Both enclosures seem to be contemporary. Stratigraphically, at least one phase of enclosure 1 seems to post-date enclosure 2 as ditch (35) cut ditch (44) (Fig 5, S1). At least one phase of enclosure 2 post dates enclosure 1 as ditch (53) cut ditch (30) (Fig 5, S2). As with enclosure 1, there was no evidence for internal structures in the small area examined.

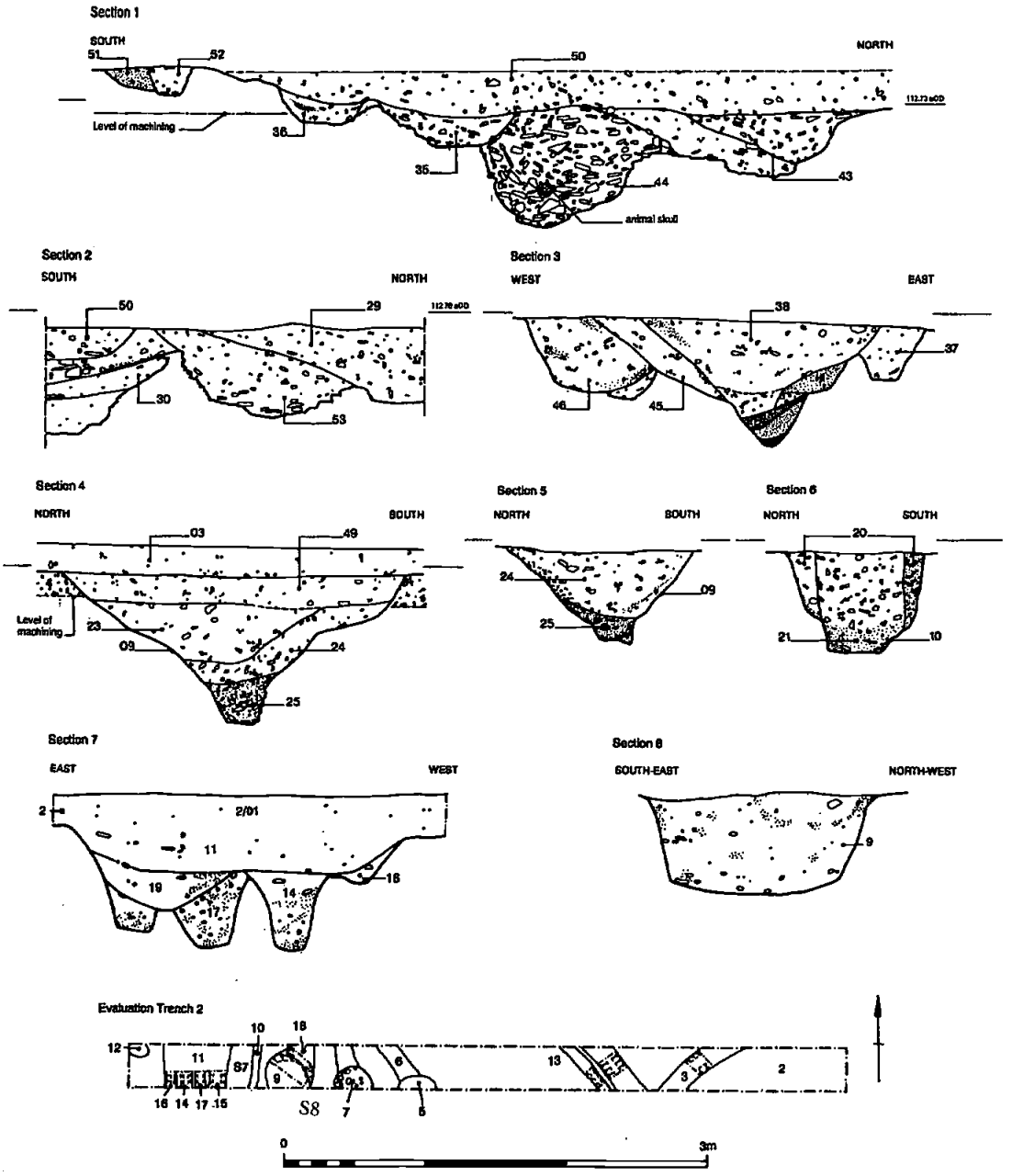

Fig 5 Sywell sections at 1:20 and plan of evaluation trench 2 and sections 1:20

AREA 2 (FIG 2)

An archaeological watching brief was maintained immediately to the west of the northern corner of the main excavation where cropmark evidence indicated the presence of archaeological features. The topsoil was stripped to reveal a series of features, which were not excavated but were recorded in plan.

A ditch or ditches (20/2) in the south-east corner of the trench represented the western terminals of the northern enclosure in Area 1 (Fig 2). Leading from this was a single narrow ditch which appeared to be the continuation of (9) in Area 2. It ran into ditch (20/01) which was 1.3m wide and ran NE-SW across the watching brief area.

An ovoid enclosure identified from cropmark evidence was not found during the watching brief suggesting that this feature had been destroyed by recent ploughing or was of non-archaeological origin. In addition to the ditches, a single pit (20/3) was recorded to the south of ditch 20/1. No other features were found.

AREA 3 (FIGS 2 AND 5)

Evaluation trench 2 uncovered archaeological features below shallow topsoil 0.25m thick though no subsoil was present. The ditches of the enclosure recorded in cropmark were identified at either end of the trench (Fig 5). The broad ditch forming the western side of the enclosure comprised a series of steeply sided small ditches or gullies, presumably representing ditch (Fig 5 S7). A small ditch (2/03) may form the eastern side of the enclosure. Nine sherds of Iron Age pottery were found in the ditch fills.

Four small ditches or gullies (2/8, 2/6, 2/13 and 2/04), sharing a roughly similar NNE-SSW alignment, were located within the enclosure, together with four small pits (2/9, 2/18, 2/07 and 2/5; Fig 5 S8). These features contained four sherds of Iron Age pottery. West of the enclosure was a single small pit (2/12).

The whole of area 3 was stripped for a car park but the depth taken off was insufficient to expose archaeological remains. Any archaeology from this area will therefore have survived *in situ* below the car park. A magnetometer survey was undertaken to find more information of the ground plan to this part of the site.

MAGNETOMETER SURVEY
by Peter Masters (Fig 2, Area 3)

The magnetometer survey was carried out after the removal of topsoil using a Geoscan research FM 36 fluxgate gradiometer prior to the construction of the southern car park. Two 20m x 20m and two 20m x 10m grid squares were surveyed. Within the north-west corner of the area were parts of two sub-circular ditched enclosures, which add to the pattern identified from cropmark and previous trial trenching evidence. Inside the enclosures and immediately to their south were isolated anomalies possibly denoting pits. A series of linear anomalies running in an east-west direction probably represent traces of medieval or later ridge and furrow cultivation (not illustrated).

A LATE BRONZE AGE/EARLY IRON AGE PIT AT ECTON

A pit F319 (context 216) was sub circular with a diameter of 1.3m and a depth of 0.5m (Fig 8, S3). The remains of two late Bronze Age/ early Iron Age vessels were in the fill (Fig 11.1 and 2). This is the only feature dated to this period on the site. A 20 litre soil sample from its fill produced only a few charred grains which may be intrusive from the later Iron Age settlement.

IRON AGE ENCLOSURES AT ECTON

SITE 1 (Figs 3 and 6)

Parts of seven individual small circular enclosures, perhaps denoting hut-circles, formed the southern half of the settlement area. Five enclosures, G1-5, clustered to the south of the rectilinear enclosures with the remaining two, G6-7, lying at the north end.

Enclosures G1-4

Enclosures G1-4 form a discrete string of connected features stretching over 50m in the southern part of the site. Apart from G2, which was stratigraphically later than G3, they all lay side by side within a few metres from each other. None was complete, with only the western part of each being exposed. All could have functioned as eaves-drip gullies which were maintained and re-cut several times around a central structure. The group broadly corresponds in plan with a cluster of three similar small circular enclosures at the southern end of the cropmark complex (Fig 6).

G1 had a probable diameter of 14m. A single excavated section revealed a sequence of at least 9 individual ditch cuts, each between 0.90m-2.20m wide and 0.50m-1.00m deep (Fig 7, S1: F460, F462, F464, F466, F468, F470, F472, F474, and F476). Forty-three sherds of Iron Age pottery, together with a copper alloy penannular brooch dateable to the period 250 - 50 BC, were found (Fig 14). A 20 litre sample was taken from the ditch (context 475), but only a few charred grains, including cereals, were recovered. G1 is too small for an agricultural enclosure but would have been large enough to contain a post-built structure (cf, for example, similar excavated examples at Ashville trading estate, Abingdon, Oxford: Parrington 1978, fig 6).

G2 was represented by a single curving ditch, between 1.10m-1.20m wide and 0.40m-0.80m deep, denoting the western half of a circular enclosure. At the south, it shallowed to a rounded butt end, within 1.7m of the edge of G1 but otherwise it was stratigraphically later than G3. Its sandy fill most probably derived from erosion of the sides and contained 22 sherds of Iron Age pottery.

Four postholes within the interior do not form a meaningful pattern. G2 may be equated with a cropmarked penannular enclosure with opposed ditch terminals. A large sub-rectangular pit F154 was within either G2 or G3. It measured 2.3m in length and 1.3m deep (Fig 8 S4). This pit had many lower fills and lenses which may mean it had been left open for a considerable period of time. Its latest context (8) contained some pottery including illustrated sherd (Fig 12.4).

G3 was defined by three individual shallow gullies enclosing part of an oval area at least 18m long and 8m wide. The earliest element of the group was a 3.5m length of a gully aligned north to south which had been cut at either end. The later features were up to 1.2m wide and 0.3m deep and had probably functioned for

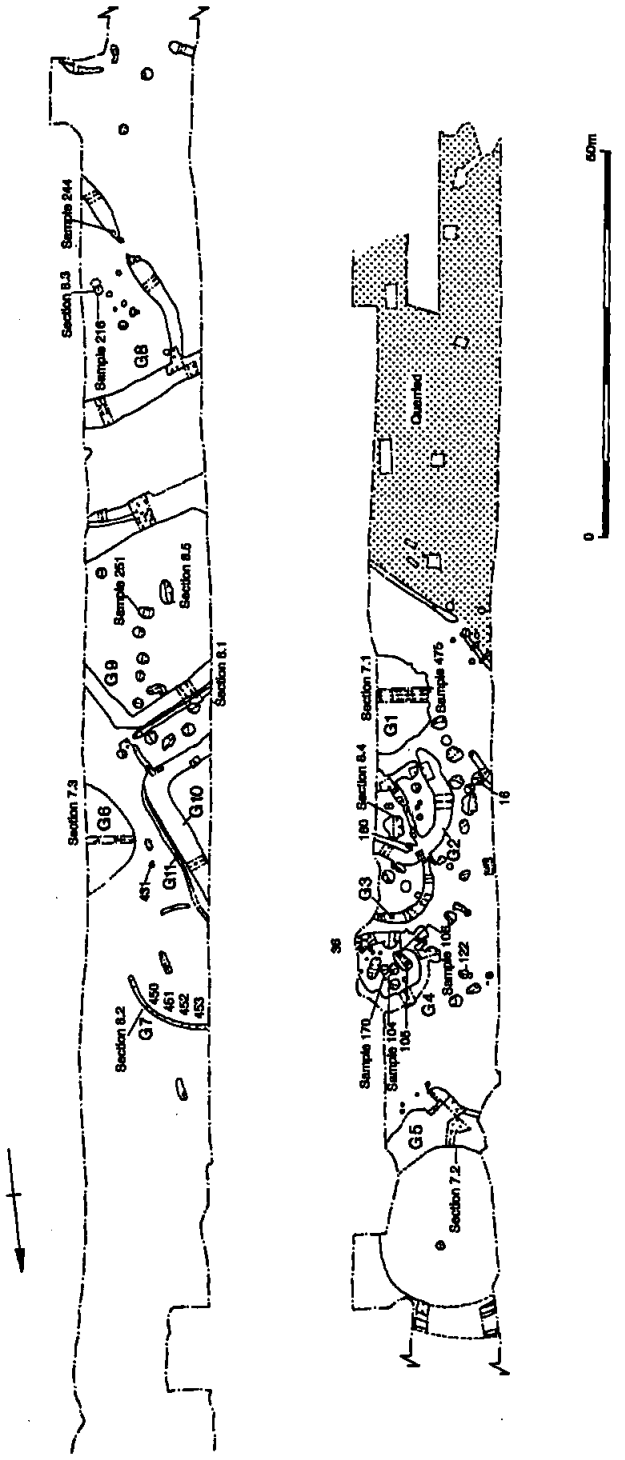

Fig 6 Plan of Ecton site 1 at 1:40

surface water drainage rather than stock-barriers since no trace of former post settings was present within their infills. Associated dating evidence comprises 134 sherds of pottery mostly dated to the early-middle and middle Iron Age (4th-2nd centuries BC).

G4 lay almost entirely within the excavation corridor. It enclosed a roughly circular area of about 11m diameter with an opening at the south-east. The ditch had been recut on at least one occasion but its flared profile suggests that it was more regularly maintained.

The south-eastern opening within the circuit fits well with the trend of orientations identified on similar sites (eg Knight 1984; Windell 1982). The precise width of the opening cannot be ascertained, however, since the eastern terminal lay beyond the limits of excavation. It may nevertheless be inferred to have been about 3 metres.

Thirteen postholes were present within the enclosure but none conformed to a meaningful pattern. Some had been partly filled with a deposit of non-local blue-grey clay which was absent from other contexts. This material could have been introduced for use as daub in the construction of buildings and may have fallen into disused postholes. The posthole diameters varied from 0.17m to 0.5m with most between 0.3 and 0.4m. The depth varied from 0.05m to 0.50m with seven of the postholes surviving as shallow features 0.10m or less deep.

The presence of an entrance and postholes suggest that enclosure G4 was associated with a building. As with G3, the shallowness of the encircling ditch and the evidence of recuting indicate that the gullies were for draining surface water around a circular timber structure. Two litre soil samples were taken from the fills of three pits (104, 106 and 170). The sample from 106 had moderately high charred remains which were mostly charred grass grains leading to the view that they may have been used as food. In this pit there was also a good collection of pottery (Fig 12.2, 12.3, 12.9 and 12.10). The two other samples produced only a few cereal and grass grains. A total of 134 sherds of Iron Age pottery were recovered from G4.

Enclosure G5

Enclosure G5, 18-20m in diameter, lay some 15m to the north of the G1-4 group. In addition to being much larger than any of its neighbours, it was denoted by a wider, more complex sequence of ditch re-cuts, each about 1m wide and 1m deep (Fig 7, S2). A series of ditch terminals on the south side of the circuit indicates the location of a former entrance. The enclosure is probably the circular cropmark of similar size located in aerial photographs (Fig 3).

Although no clear progression can be reconstructed from the stratification, it is likely that each recut represents a slight repositioning of the circuit in order to avoid the soft fills of its predecessor. The large number of recuts recorded should not necessarily be seen to indicate an extended period of occupation but rather may reflect the need for regular maintenance of ditches cut into the soft sand which would have weathered rapidly. No trace of a structure was found within the interior.

Dating evidence comprises a total of 32 sherds of pottery including three Romano-British pieces which were found in the fill of a hollow created by the settling of the lower fills of the ditches. The remaining sherds were all of Iron Age date but could not be tied down to any period.

Enclosures G6 and G7

Both enclosures lay some 100m to the north of enclosures G1-4, at the outer limit of the expanse of archaeological deposits.

G6 was of similar size to G1 and likewise represents the western half of a small circular ditched enclosure. A single section revealed a sequence of five individual ditches, all 0.70m deep but forming two distinct circuits separated by a flat-topped ridge of undisturbed natural ground, 2m wide (Fig 7 S3). The outer circuit comprised a single ditch-cut, F438/437, while the inner circuit had been recut, F442/441, F444/443, F446/445, and F448/447. A soil-filled subsidence hollow was also recorded above the fills of the outer ditch-system (F440/439).

The rather angular curve of the enclosure boundary is not usual for a ring-ditch. It has been recorded elsewhere, as at Clay Lane, Earls Barton, about 2 miles to the south-east (Windell 1982, Group 7). There was no evidence of an internal structure and no dating material was recovered from the excavated ditch-sections.

G7 was represented by a discontinuous curvilinear gully, 0.60m wide (F454). The main section to the north, was examined longitudinally in an attempt to identify former post-settings. The U-shaped profile of the cut, with almost vertical sides and a narrow flat base, 0.11m across, is typical of a foundation slot for the outer wall of a circular structure (Fig 8, S2). Slight con- centrations of stone in the sandy loam infilling at the south end of the slot, may represent the positions of former posts close to the terminal. About 180 sherds of Iron Age pottery were recovered from the fills of the gully, including at least one almost complete vessel (Fig 11.4). The large quantity of pottery is a strong indicator of domestic use.

RECTILINEAR ENCLOSURES (Fig 6)

Parts of three adjacent rectilinear ditched-enclosures, G8-10, can be linked to three cropmarks of similar plan. A fourth, G11, was indistinguishable from G10 in the cropmark plot. They lay side by side in a row aligned north-west to south-east, and at 5-10m intervals from each other.

Only the north-west corner of enclosure G8 was exposed. A 2m wide gap in the west side could represent an entrance. A 20 litre sample was collected from the southern ditch terminal (context 244) and the quantities of hulled wheat chaff recovered suggested that the de-husking of wheat grain took place in this enclosure. The single ditch which forms its north side appears to continue westwards beyond the corner of the enclosure. The other ditches had been re-cut many times, with the individual episodes between 0.3m-0.5m deep.

The enclosure could relate to a three-sided rectilinear enclosure, about 30-34m across, visible in aerial photographs, although the extension of the northern side does not show in the cropmarks (Fig 6). Within enclosure G8 there were a few pits including the pre-enclosure Bronze Age/ early Iron Age pit F319 (context 216).

Most of enclosure G9 lay within the pipeline corridor, some 10m to the north/north-west of enclosure G8. It is clearly recognisable in aerial-photographs as a small rectangular enclosure measuring *c.*18m x 22m (Fig 3).

The ditch along its south-eastern side had been recut five times, with each cut up to 0.60m deep. The loamier and homogeneous fills were characteristic of weathering deposits, and contrasted sharply with the north-west side where a single cut, 0.90m deep, contained interleaving layers of soil indicative of deliberate backfilling (Fig 8 S1, F384). Within the enclosure there were seven pits including pit F350 (context 251) which was sub circular 1.2m in diameter and 1.3m deep with vertical

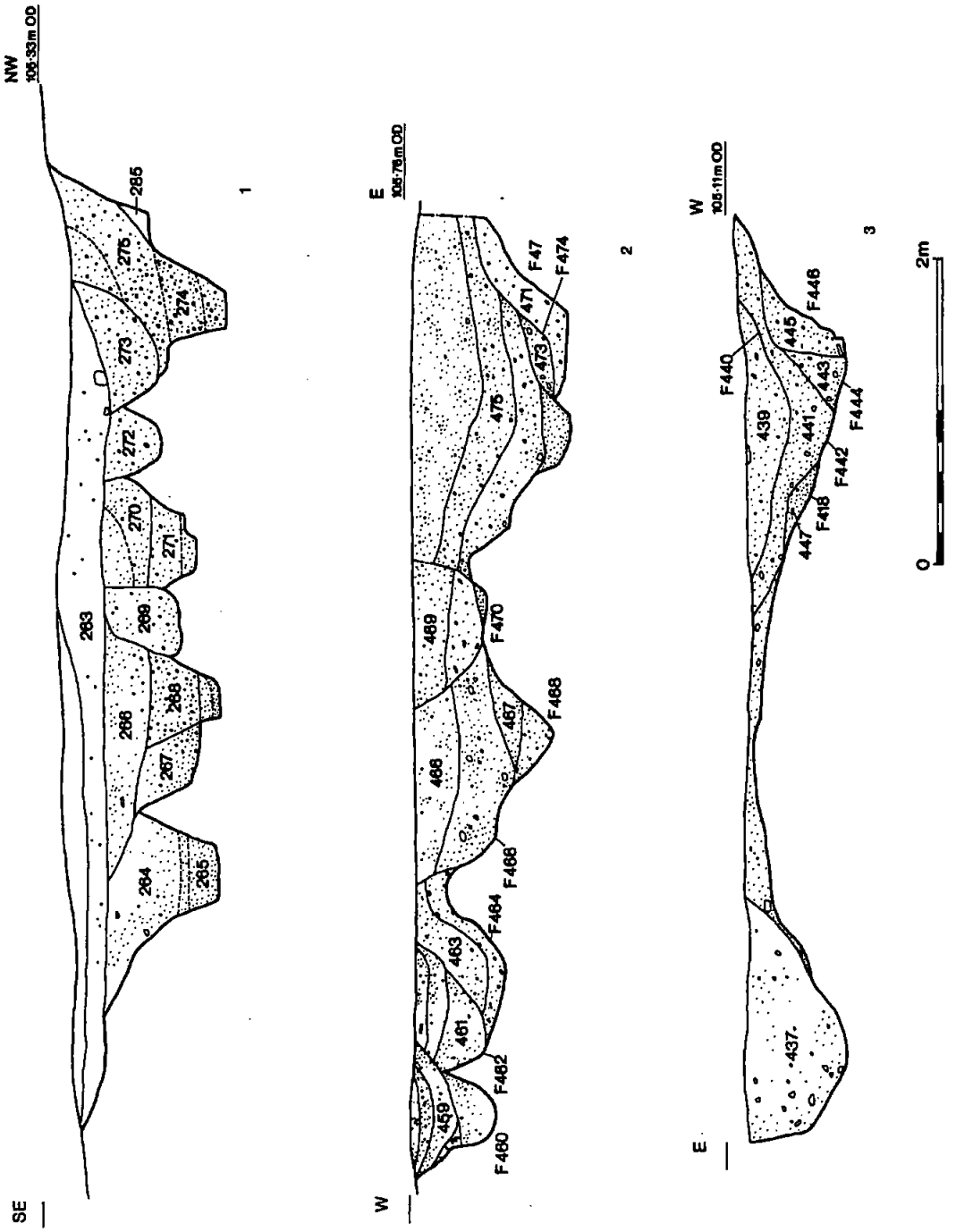

Fig 7 Ecton sections at 1:20

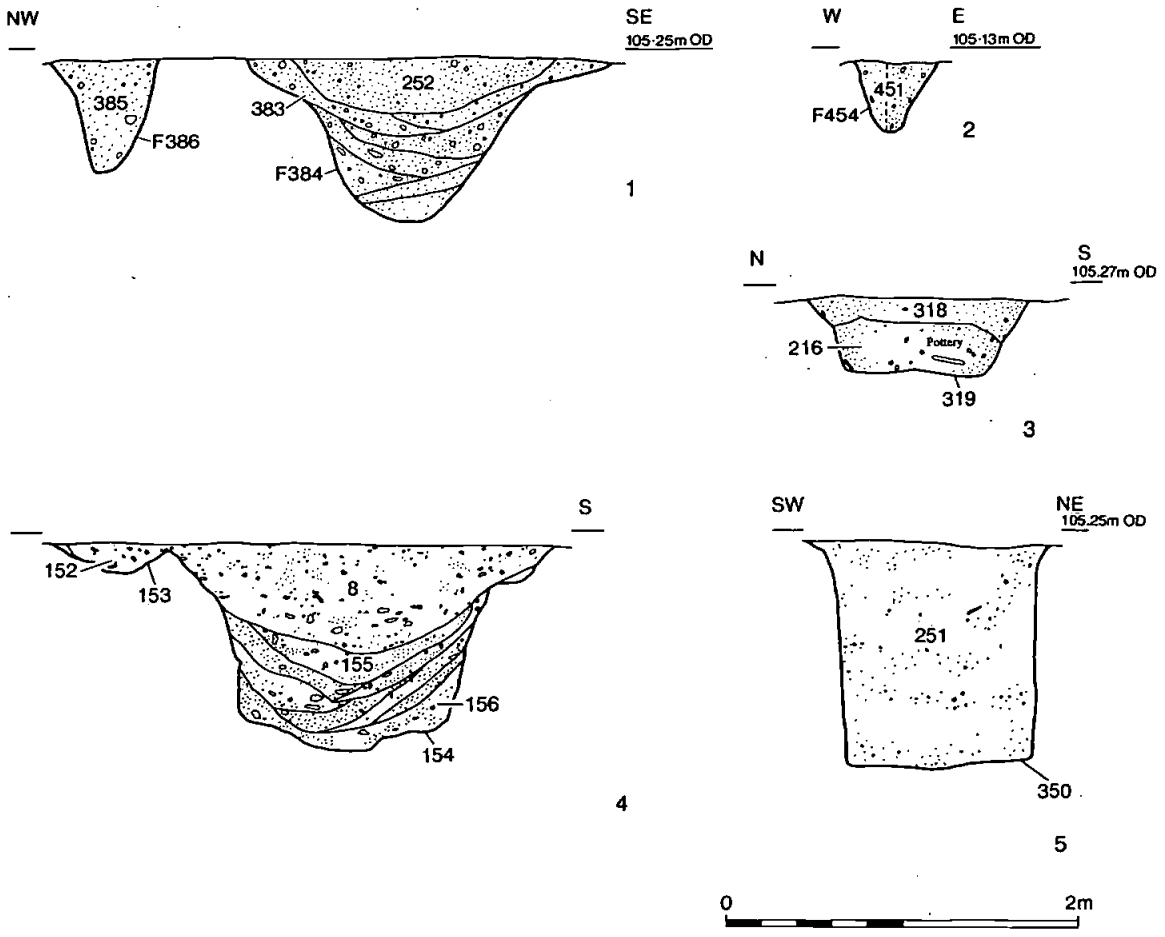

Fig 8 Ecton sections at 1:20

edges and a flat base (Fig 8 S5). A 20 litre soil sample from its fill found five charred grains.

In view of its small size, enclosure G9 may have contained a building or served as a small enclosure for stock-management. Parallels have been found locally at Wollaston (Jackson 1990) and Ringstead Grange (Shaw 1992).

Only the south-east corner of enclosure G10 was exposed in the pipeline corridor. It may be associated with the cropmarks of a three-sided narrow rectilinear enclosure, *c.* 50m x 20m.

A series of ditch-recuts, up to 1.20m wide and 0.80m deep, indicates regular maintenance, probably prompted by rapid silting through the weathering of the soft sides of the feature. Some of the fills had a very slight loam content (eg, 421) but most were largely redeposited naturals.

G11 may represent part of an earlier boundary system involving at least two narrow slots, between 0.50m-0.90m wide and up to 0.60m deep. They may have been intended for palisades of closely set vertical posts similar to those identified at Grendon about 3 km to the south-east (Gibson and McCormick 1985, 37-8). One slot aligned north-west to south-east, runs within 0.50m from the north-east side of enclosure G10 before swerving to follow the existing corner. A separate short section of gully projects to a terminal about 4m beyond and might also be associated. It almost meets the second slot which runs parallel to the north-west side of enclosure G9. If contemporary, the two could have formed the corner of an enclosure which preceded G10.

PITS

A total of 60 pits were identified within the pipeline corridor where they clustered around the two main groups of enclosures. Most were sectioned except where the presence of significant quantities of pottery justified total excavation. A greater number of pits in the southern group contained pottery, possibly reflecting a temporal or occupational distinction. The function of the pits remains unclear. None produced firm evidence for

storage-use and since the site is prone to flooding with surface water, such pits would have been unserviceable. The majority might therefore have been dug as borrow-pits for small amounts of sand, gravel or sand-ironstone, but the possibility that there may have been beliefs and rituals which prompted their formation should not be overlooked (cf Cunliffe 1992, 75).

No significant pattern emerges from the study of the form and dimensions of the features with the exception of a noticeable trend for a flat base amongst the northern group. Most of the pits elsewhere had rounded bases with a couple irregular in shape. One of the pits here, F391, had a distinctive hexagonal plan and near vertical sides which may reflect a different purpose. Some aspects of the pits were reasonably similar with, for example, the vast majority having steep sides, though a few were slack and one irregular.

The size of the pits did vary with their lengths ranging from 0.66m to 2.1m and widths from 0.35m to 2.1m though mostly the lengths were between 0.8m-1.8m and the widths 0.6m-1.6m. The depth of the pits survival also was very diverse ranging between 0.1m and 1.27m deep.

POSTHOLES

No coherent building plan can be identified from the sparse scatter of postholes which survived, although individual enclosures like G4, 5 and 7 had an undeniable structural purpose. The postholes within enclosure G4 almost certainly formed part of a timber structure, the complete plan of which has not survived.

Elsewhere a group of five small possible postholes could be associated with the entrance into enclosure G8. Another group of six is noticeable to the west of enclosure G4 where two contained possible packing. Sixteen isolated postholes scattered across the excavation area may represent the remains of former fences or vestiges of largely truncated timber structures.

***SITE 2** (SP 8235 6425; Fig 9)*

The excavation area lay about 300m to the south-west of Site 1 in a field where the course of the pipeline bisected one of two cropmark rectangular enclosures (30m x 40m) and two parallel ditches (Fig 3). The detailed correspondence between the excavated features and the cropmarks is accurate.

Enclosure 1

Part of the west side of the enclosure known from aerial photographs was exposed. A single section across it revealed two parallel ditches, between 0.80m-2.00m wide and 0.30m-1.40m deep, separated by a ridge of natural ironstone. The individual ditch cuts were filled mostly with ironstone derived soils, presumably from the weathering of the sides (Fig 9, S1). Without firm stratigraphic links, it is unclear whether the two ditches were open at the same time. The smallness of the sample and the absence of finds means it is impossible to assign a date or function to the features.

Ditch 1

Ditch F605 was 3-5m wide and 0.60m deep, and ran from north-west to south-east. It had clearly been re-cut on more than one occasion and its flared profile was shallower at the south-west side (Fig 9, S2). No dating evidence was present

Ditch 2

A second ditch, some 36m to the north of ditch 1, appears in aerial photographs as an isolated feature about 80m long. The ditch ran south-east from the western limit of excavation and curved to the east before terminating in a rounded butt-end. Its single cut, 4m wide and 1.5m deep, had a basal slot (Fig 9, S3). The lowest part of the fill (602) consisted of redeposited clay, presumably derived from the weathering of the upper levels of the cut. There was no associated dating material.

THE FINDS

IRON AGE POTTERY FROM SYWELL
by Dennis Jackson and Paul Blinkhorn (Fig 10)

INTRODUCTION

The quantification of the pottery and the analysis of fabric and form are by Paul Blinkhorn. The discussion of the chronology is by Dennis Jackson. The integration and editing of these contributions to form a single report is by Andy Chapman.

QUANTIFICATION

A total of 274 sherds (2.635kg) of Iron Age pottery were recovered. A further 49 sherds (0.330kg) from the earlier evaluation trenches (Blinkhorn 1996), and two small rim sherds found during the subsequent watching brief, have also been re-examined. As they do not provide any significant additional information they have not been incorporated into the quantification.

FABRICS

The fabrics are typical of Iron Age material recovered throughout Northamptonshire; they can be paralleled at numerous excavated sites in both the northern part of the county and along the Nene valley. In many of the sherds the inclusions have been dissolved to leave a pitted and corky fabric, and this is particularly true of sherds from the larger jars, some of which are decorated with scoring. Shell is likely to have been the dominant inclusion but other calcareous material may have been present.

The fabrics are as follows:

Fabric 1:	Moderate to dense shell or calcareous inclusions of up to 10mm.
Fabric 2:	Sparse to moderate shell up to 5mm.
Fabric 3:	As fabric 2, with red/buff grog
Fabric 4:	As fabric 2, with sparse to moderate subangular quartz sand up to 1mm.
Fabric 5:	Very sparse shell up to 1mm.
Fabric 6:	As fabric 2, with sparse to moderate rounded red ironstone up to 3mm.

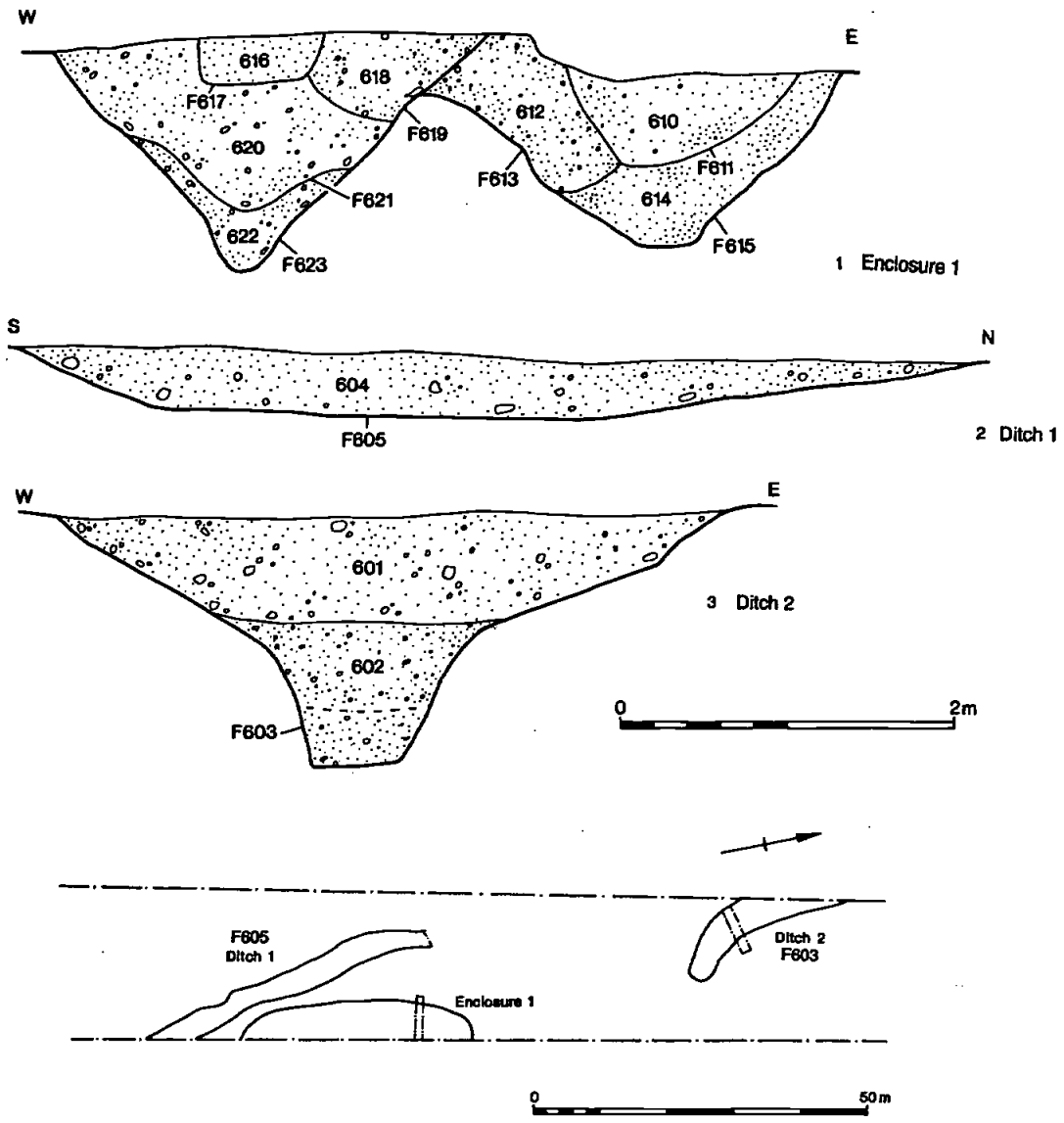

Fig 9 Plan of Ecton site 2. Sections at 1:20; plan 1:50

FORMS

The assemblage suggests there is a range of jars and jar/bowl forms present often with well-smoothed or lightly burnished surfaces. However, most context groups are small and fragmentary, and nine of the ten recovered rim sherds are less than 15% complete and most lack rim to shoulder profiles. They also mainly come from the smaller vessels, in the fine shelly fabrics (Fabrics 2, 4, and 5), with rim diameters 100-160mm. Larger jars, although present as base and body sherds, are not represented in the tabulation of rim diameters.

Analysis has shown that Iron Age pottery demonstrates a strong correlation between the rim diameter and vessel capacity, and the modal rim diameter values of 101-120mm and 141-160mm suggest modal vessel capacities of *c.* 0.5l and *c.* 1.5l (Woodward and Blinkhorn 1997). (See Tables 1 and 2 on p. 50).

Table 1: Sywell, Iron Age pottery; fabric occurrence

Fabric	Sherds	Weight (g)
1	41	664
2	120	907
3	10	104
4	11	97
5	91	868
6	1	5

Table 2: Sywell, Iron Age pottery; rim diameters

Rim diameter (mm)	No. of Examples
101-120	3
121-140	1
141-160	4
161-180	1
181-200	1

DECORATION

There is no decoration on any of the sherds apart from scoring but this may be due to the small size of the assemblage. Surface decoration of vertical scoring occurred on 11 sherds (482g), six in fabric 2 the rest in fabric 1. These include the base of a jar from pit (12) and a body sherd with handle from ditch 27; these are identical in fabric, colour and decoration and could be from the same vessel (Fig 10.7 and 8). The proportion of scored ware, (4% by the number of sherds and 18% by weight) is about normal for Iron Age sites of this period in central Northamptonshire. A small bowl/jar with a small applied boss (9) is unusual, it is similar to a vessel from Ashley, Northants (Taylor and Dix 1985, fig 5.1). Three bosses were found on pottery from a mid to late Iron Age site at Clay Lane, Earls Barton, Northants (P Aird, Level III archive report).

CHRONOLOGY

Only a small proportion of the site defined by cropmarks was examined, and although the Iron Age pottery recovered can be divided into two broad phases, the nature of the assemblage suggests that activity on the site was probably continuous, or intermittent, from at least the 4th century onwards. The main phases can be related to Knight 1984.

Early Iron Age

Diagnostic pottery of this phase was found mainly at the east end of ditch (9), layer 23 (Fig 10.1-3). In appearance, many of the 34 sherds from this context have lighter coloured external surfaces, and they include a long necked rim sherd (1), a flat-topped rim from an inturned bowl (2), and a sherd from a carinated or shouldered bowl (3).

This pottery has been found in the region at Wilby (Blinkhorn and Jackson the Iron Age pottery in Thomas and Enright 2000) and is probably best compared to the material from eastern England and the south Midlands dated to the 5th to 3rd centuries BC (Cunliffe 1978. A:9 and A:10).

A single rim sherd from pit (13) is probably of this period (Fig 10.4), and this feature also produced a well made small, rounded jar (Fig 10.6). One of the other pits nearby, (12), produced a middle Iron Age scored ware jar (Fig 10.8), and if pits (11-13) formed a broadly contemporary group than the combined pottery assemblage might suggest that they date to the transition between early and middle Iron Age forms (early 3rd century?). Pottery from the filling of one of the enclosure ditches, context 31 may also date to this phase, although it could possibly be in a residual context.

Middle Iron Age

The pottery recovered from the two adjoining enclosures and most of the pits forms a typical middle Iron Age and pre-"Belgic" assemblage. It contains some scored ware jars, typically poorly finished (Fig 10.7 and 8), and smaller, well made jars or rounded bowls with smoothed and lightly burnished outer surfaces (Fig 10.5, 6 and 9). The quantity recovered is too small and lacking in diagnostic rim sherds to provide anything more than a broad dating to the late third to first centuries BC.

ILLUSTRATED VESSELS (Fig 10)

1: Fabric 5; grey with grey surfaces. Well made, smoothed surfaces. Ditch 9, layer 23

2: Fabric 3; light grey with grey-brown surfaces. Well made, smoothed surfaces. Ditch 9, layer 23

3: Fabric 1; light grey core and inner surface, orange-brown outer surface. Body sherd from carinated or shouldered bowl. Ditch 9, layer 23

4: Fabric 2; grey core and browner surfaces. Well made, outer surface well smoothed and lightly burnished. Pit 13.

5. Fabric 2; grey with orange-brown surfaces; outer surface heavily sooted and smoke-blackened, some sooting patches on inner surface. Small rounded jar, outer surface well smoothed to lightly burnished. Layer 31 which overlies ditch 43.

6: Fabric 5; dark grey fabric, orange-brown outer surface below grey-brown surface skin. Well made with smoothed outer surface. Small rounded jar with flat-topped rim. Pit 13

7: Fabric 1; grey fabric with orange-brown inner surface and brown, smoke-darkened, outer surface. Scored ware jar with handle. Ditch 12, layer 26

8: Fabric 1; grey fabric with orange-brown inner surface and brown, patchily smoke-blackened outer surface. Base of scored ware jar, very similar in form, fabric and decoration to 7, may be same vessel. Pit 12

9: Fabric 5; dark grey fabric with browner surfaces. Small bowl or jar with applied boss. Ditch 33

LUMINESCENCE DATING OF POTTERY FROM SYWELL
by Dr. Sarah Barnett

Twelve samples of soil around pottery were collected from various features on the site for luminescence dating. Afterwards, seven of the samples were sent to Dr. Sarah Barnett of Durham University. The report on these samples appeared in full in the interim report of the 1996 Sywell excavation (Barnett 1999). These Sywell samples were part of a larger project involving 18 different sites to see the usefulness of luminescence dating of

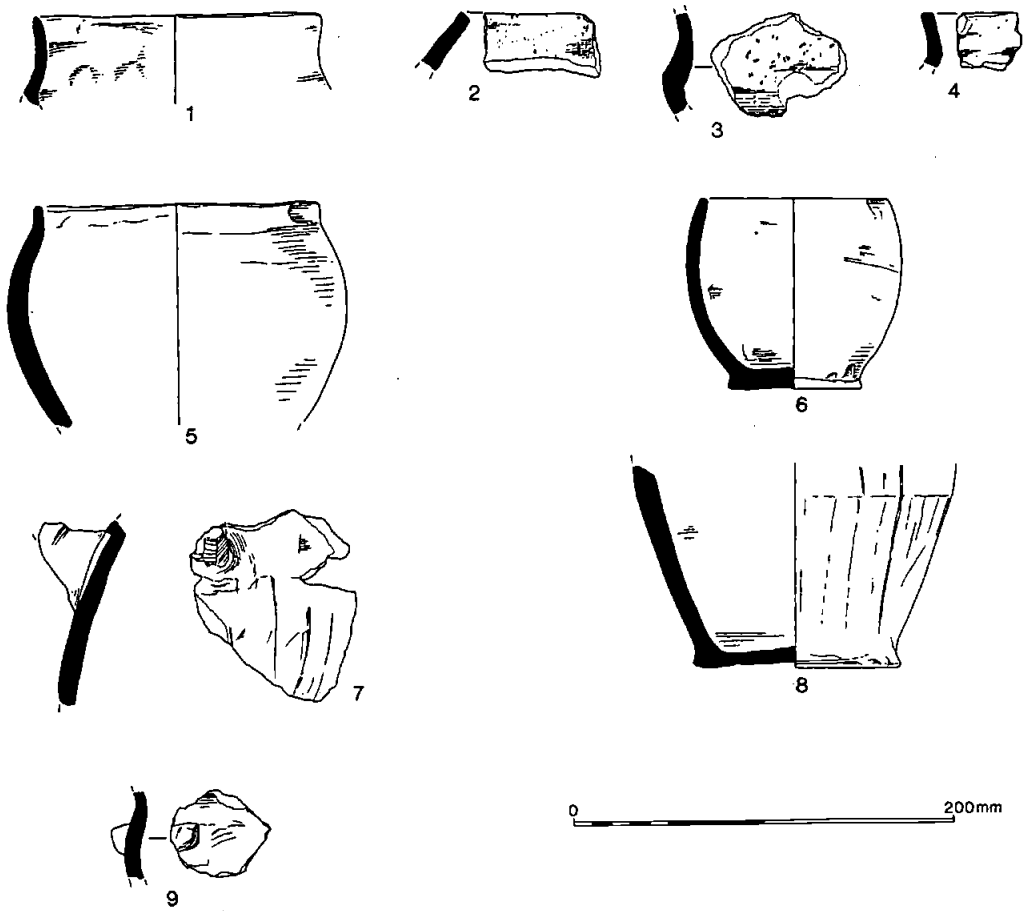

Fig 10 Sywell pottery at 1:4

pottery from later prehistoric period (Barnett 2000). The reason was that for most of eastern and northern England there are currently no secure pottery typologies and it was hoped that luminescence dating would answer the dating and duration of use of the different pottery types.

It is important to note before discussing the outcome of the dating that there were some problems with the taking of the Sywell samples. There was uncertainty of the exact burial location of the sherds - whether the sherds were from the middle or edge of the fill - which is reflected in the error estimates for the dates. A correction for the geometry of the contexts has been applied in the case of every sherd dated. Also no "natural" soil sample was taken which is an important factor in the modelling. It was possible, however, to make an assumption on the typical natural radioactivity in this area from the measurements made on natural soil samples from neighbouring sites at Wollaston, DIRFT East and Wilby Way. In the experience of the author, a reasonable estimate of the activities of the natural subsoil gravels and sands can be made in this way.

When the corrections are applied, the range of dates obtained is 430 BC – 130 AD with a standard deviation of 220 years. The dates are sufficiently close, with no statistical outliers, to justify the calculation of a weighted mean date for the occupation of the site: 150 BC ±80 ±95. It should be noted that if no corrections are made for the geometry of the features in which the pottery sherd was found then the dates for the Sywell range from 600 BC to 600 AD with a standard deviation of 460.

The resolution in the dates determined from Sywell is not

Table 3: Luminescence dates from Sywell

TL Single Dates: ± random error, ± overall error at 68% confidence level	Lab Ref	Material	Archaeological Reference
110 AD ± 180 ± 200	Dur96TLqi 194-5AS	Pottery	SA 96 TR 2 2/15
130 AD ± 225 ± 255	Dur96TLqi 194-8AS	Pottery	SA 96 TR 2 2/14
430 BC ± 275 ± 315	Dur96TLqi 194-11AS	Pottery	SAE 96 Pit 22
285 BC ± 170 ± 220	Dur96TLqi 194-13AS	Pottery	SAE 96 Ditch 27
AD ± 385 ± 395	Dur96TLqi 194-14AS	Pottery	SAE 96 Ditch 27
210 BC ± 185 ± 235	Dur96TLqi 194-16AS	Pottery	SAE 96 Ditch 09
240 BC ± 215 ± 250	Dur96TLqi 194-18AS	Pottery	SAE 96 Pit 54

sufficient to confirm the stratigraphic relationships identified during the excavation. Ditch (27) cuts pit (54) and it is therefore expected that the dates for samples 193-13 and 14 would be more recent than that for sample 194-18. Such resolution is not shown in the luminescence dates *unless* it is the case that the discard in pit (54) really is contemporary with that in ditch (27) which would mean that both features were filled in relatively quick succession or that pottery from pit (54) was put there during the filling of ditch (27). This would imply a short duration of use for ditch (27) since pit (54) is a *terminus post quem* for its digging and (27) pot is a *terminus ante quem* for its filling. (see Table 3).

THE BRONZE AGE AND IRON AGE POTTERY FROM ECTON

by Dennis Jackson and Paul Blinkhorn

The Ecton site produced 972 sherds of pottery (11.885kg) of which 10 were Romano-British pieces (77gm), and the remainder prehistoric. The amount of diagnostic pottery is small with rimsherds from only 20 vessels present in the assemblage, and very few examples of decoration or scoring.

CONTEXTS

Many of the features produced small amounts of Iron Age pottery but rim sherds were sparse. The contexts that produced the more significant material were Pit 319, in Area G8, ring gully G7, and the group of ring gullies and pits at the southern end of the excavated section (area of gullies G2-4).

Very little pottery was found in the enclosure ditches (G5 and G8-11), or the northern group of pits.

FABRICS

Five distinct fabric-types are present:

Fabric 1: Moderate shell. Fairly Fabric 2: Fairly soft black fabric with shell inclusions up to 5mm. Occasional rounded/sub-rounded limestone fragments. Usually self slipped, 288 sherds, 3044 gms.

Fabric 2: Fine shell. Similar to Fabric 1 but with sparse to moderate temper of fine shell platelets up to 2mm. 431 sherds, 5826 gms

Fabric 3: Soft black fabric with many fine lacunae, burnt out organic temper or leached out shell. Usually self-slipped. 110 sherds, 1416gm.

Fabric 4: Fine shell and Grog. As fabric 3, with sparse, rounded, reddish orange grog up to 3mm. 130 sherds, 1602gm.

Fabric 5: Cornish Gabbro-tempered? 2 sherds, 8gm.

The first four fabrics are typical of the early and middle Iron Age pottery of the area, and may be compared with the wares from such Northamptonshire sites as Twywell (Harding in Jackson 1975), Gretton (Jackson and Knight 1985) and Wilby Way (Blinkhorn and Jackson the Iron Age pottery in Thomas and Enright 2000). The Cornish Gabro-tempered ware, Fabric 5, is rare in the area but examples associated with later middle Iron Age pottery (2nd or 1st century BC) were found during excavations at Weekley, some 15km to the north-east. It is notable that no pottery containing course shell or ironstone grits was recovered at Ecton.

Apart from Fabric 1, which is possibly late Bronze Age/ early Iron Age (LBA/EIA), all the wares contain a relatively small amount of fine shell and usually have a self slipped or wet-hand finish. A characteristic colour of much of the pottery, particularly the earlier material, is the black or dark grey fabric together with a brown or chocolate-brown outer face.

Pit 319 (Area G8).

The remains of two large jars of LBA-EIA type were recovered from the filling of this pit. One vessel (Fig 11.2) is a high shouldered, slack-sided vessel of a type found in many EIA assemblages in the region, but with an unusual triple finger tip decoration on the shoulder. This is similar to a small decorated sherd from the EIA site at Gretton (Jackson and Knight, 79, and fig 8.59). The other vessel from Pit 319 is also slack-sided, but with a cordon below the neck (Fig 11.1). This is a feature found on vessels of LBA or LBA-EIA date. There are other examples in the county from Gretton (opp cit) and the early ring work at Thrapston (Hull forthcoming). It is assumed that the two vessels found in this pit at Ecton are contemporary. Similar associations have been found elsewhere on LBA-EIA sites such as Staple Howe, Yorkshire (Brewster 1963, fig 41, 4,5).

Area G7 (contexts 450. 451 and 453)

There is no diagnostic late pottery from this area and in appearance the material seems likely to date to the latter part of the EIA or the EMIA. Traces of early scored ware in the

assemblage suggests it may be the latter. There are two sherds from context 450 with grooved lines, and on one they form a crude chevron pattern.

The enclosures G5 and G8-G11, and the northern group of pits
The amount of pottery recovered from these features is small, and apart from the pottery from Pit 319 (described above), it lacks both forms and other diagnostic material.

Ring gullies G1-G4 and the southern group of pits
Much of the pottery recovered during the excavation derives from the southern section and most of it dates to the MIA period (3rd-2nd centuries BC). The material lacks the bipartite globular vessels and La Tene decoration found at Weekley (opp cit), and other pre Roman late Iron Age (PRLIA) sites such as Hunsbury, Northampton (Fell 1936), and the date of the assemblage may not extend into the 1st century BC. At the other end of the timescale the occurrence of a few long necked vessels (Figs 11.6, 11.7 and Fig 12.5) may suggest some EMIA features may also occur in the southern area.

The assemblage from this part of the site consists mainly of moderate sized jars and slack-sided bowls and the only unusual vessel is a jar with a handle just above the base (Fig 12.1). Some of the vessels can be paralleled in the MIA assemblage from Twywell (*op sit*), a site some 10km to the east. There is only one example from Ecton of finger tipping on the rim (Fig 12.4) and the only sherd of random scored ware came from the gully. G4. The spaced grooves found on three other sherds (Fig 12.9, 12.7 and 12.8) are probably designed to be decorative and not to score the surface of the vessel.

CONCLUSIONS

The excavated area at Ecton is a strip through a larger area of Iron Age activity, and perhaps the absence of certain types of pottery in the features investigated may not be meaningful. It is uncertain for instance if the LBA-EIA pit (319) is in isolation or if, as seems likely, it is indicative of settlement during this period. It is reasonably certain that Iron Age occupation or activity occurred on the site from the 4th to the 2nd century BC, and the possibility of it being continuous, or intermittent, from an earlier period can not be ruled out.

ILLUSTRATED POTTERY (Figs 11 and 12)

Fig 11.1 Fabric 1; dark brown, extremely friable, with a black core. Most of the inclusions have leached out. Pit: F319, context 216

Fig 11.2 Fabric 2; reddish/brown fabric with pale grey and black patches on the inner surface. Rim and shoulder from large jar,. Over 100 sherds of this vessel were present, but reconstruction was not possible. Pit: F319, context 216.

Fig 11.3 Fabric 2; relatively hard, dark grey, with variegated reddish brown and dark grey surfaces, evenly and lightly tool-smoothed. Enclosure G4: F45, context 36

Fig 11.4 Fabric 1; black patches of thick black residue on the outer surface. Squat jar. Enclosure G7, F454, context 451.

Fig 11.5 Fabric 4; black with brown patches on the upper exterior body; lightly and evenly burnished surfaces. Fairly large jar. Enclosure G7: F454, context 452.

Fig 11.6 Fabric 2; dark grey vessel with uneven surfaces. Slack-sided jar. Enclosure G1, context 475.

Fig 11.7 Fabric 2; dark grey fabric with smooth brown surfaces. Long-necked jar? Pit context, 160.

Fig 12.1 Fabric 4; dark grey with a brown, lightly burnished outer body. Lid as well as base and lower body from a vertically-lugged vessel. Enclosure G3: F480, context 18.

Fig 12.2 Fabric 2; black, with largely unfinished surfaces. Small bowl. Very similar to vessels from Twywell (Jackson 1975, fig 21, nos. 1-3). Pit: F219, context 106

Fig 12.3 Fabric 4; black with dark grey-brown, smoothed surfaces. Rimsherd from a squat jar Pit: F219, context 106)

Fig 12.4 Fabric 2, black with reddish brown surfaces, light uneven burnish on outer surface. Rimsherd from large jar. Rimform similar to an example from Twywell (Jackson 1975, fig 22, no.8). Pit: F154, context 8

Fig 12.5 Fabric 2; black, with greyer surfaces. Rimsherd from large vessel. Pit: F139, context 16)

Fig 12.6 Fabric 4; dark grey fabric with orange-red surfaces. Lug handle. Pit: F194, context 192.

Fig 12.7 Fabric 2; black with a reddish/brown patch on the inner surface Scratch-decorated bodysherds. Pit: F139, context 16.

Fig 12.8 Fabric 2; black with brownish inner surface, diagonal incised decoration. (Unstratified).

Fig 12.9 Fabric 2; dark grey with smooth surfaces. Jar or bowl with interned upper wall. Pit 219, context 106.

Fig 12.10 Fabric 2; dark grey ware with dark grey/brown smooth surfaces. Slack-sided jar. Pit 219, context 106.

Fig 12.11 Fabric 1; burnished dark grey to brown surfaces. Bowl . Pit 220, context 105.

Fig 12.12 Fabric 3; dark fabric with brown surfaces. Small jar or bowl. Pit 220, context 122.

OTHER FINDS FROM SYWELL

METALWORK
by Tora Hylton

The only metal find was part of a copper alloy needle found at the junction between the topsoil and the upper fill of the ditch sequence (1/05) in evaluation Trench 1. It comprises part of a lozenge-shaped head with an elongated eye above a short length of shaft. The needle appears to have been cut by hand and could be of Iron Age or more recent date.

WORKED ANTLER
by Tora Hylton (Fig 13)

The evaluation produced a small piece of utilised antler tine, possibly red deer. This tine terminal (length = 50mm) shows some degree of modification with a sharpened point and a knife trimmed exterior surface; longitudinal facets are evident. On one side there are a number of parallel oblique grooves, which may have been made during the shaping process. Surface wear is apparent, particularly around the cut-end which also shows signs of knife trimming. Cancellous tissue has been removed from the interior of the tine.

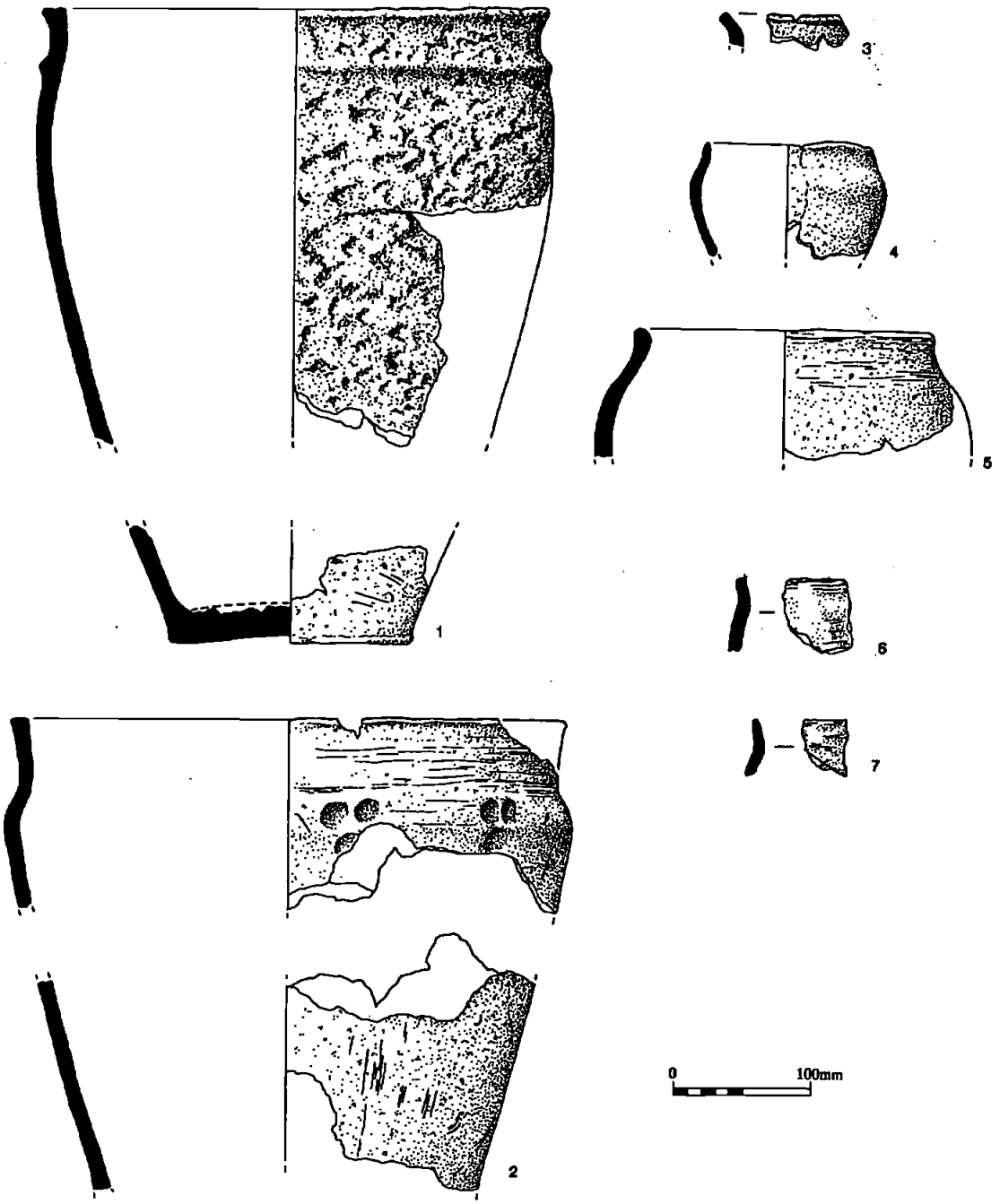

Fig 11 Ecton pottery at 1:5

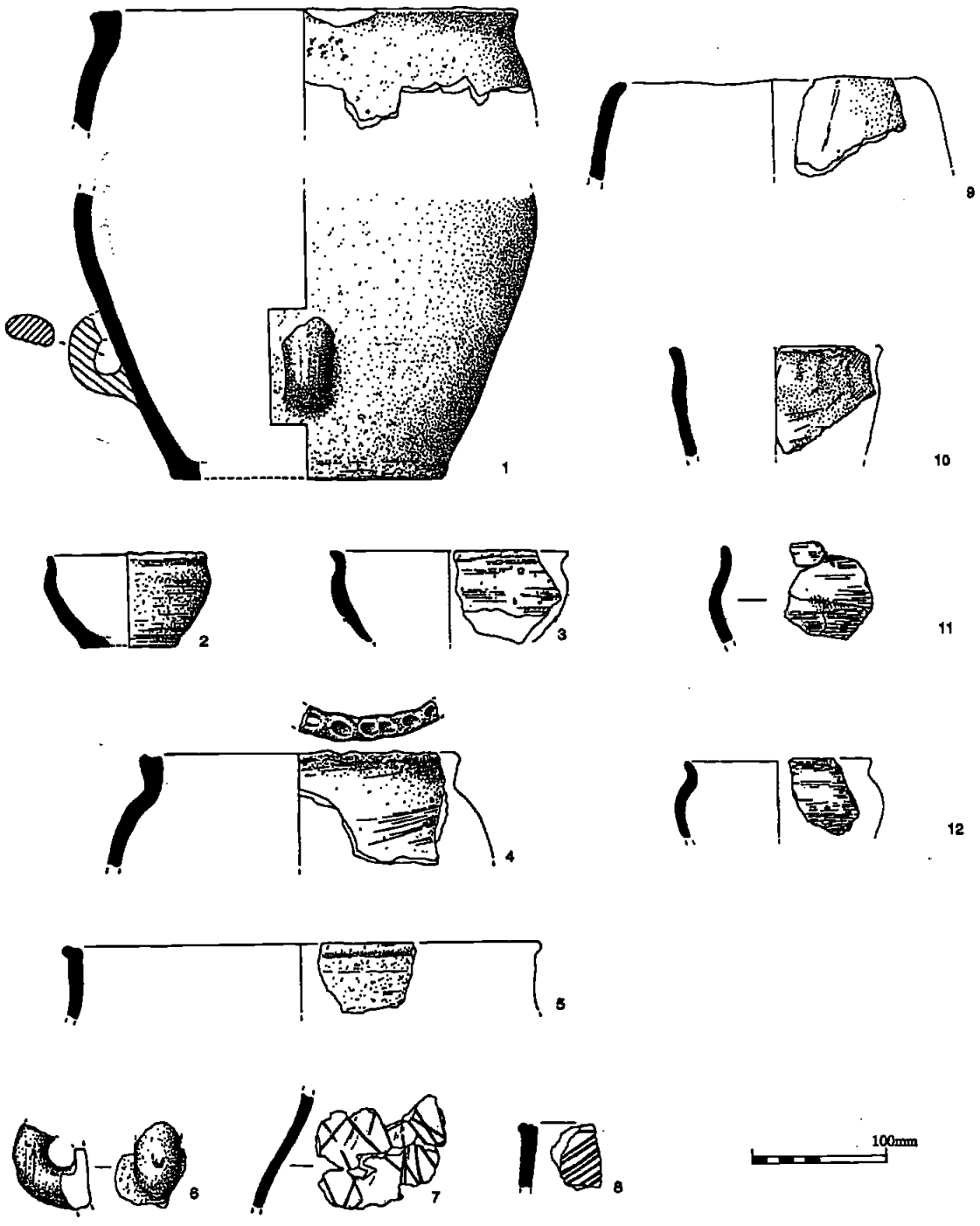

Fig 12 Ecton pottery at 1:5

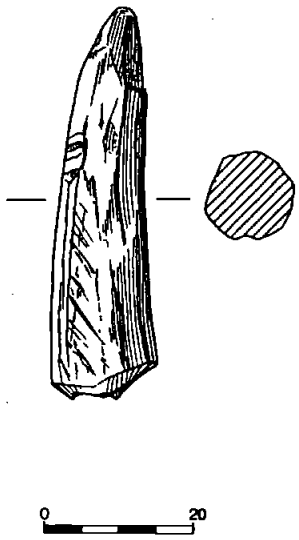

Fig 13 Sywell, worked antler at 1:1

It is possible that this piece may be a bone working off-cut, although a similar artefact from the Iron Age settlement at Weekley, Northamptonshire (Jackson and Dix 1988, fig 27, 69) has been identified as a handle. The position of the wear and grooves on this example may however indicate that it may have been used as a wedge (MacGregor 1985, 176). It has also been suggested that such objects may have been used for pegging out hides during tanning (Radley 1971, 51).

FLINT
by Andy Chapman and Alex Thorne

Sixteen pieces of flint were found in Iron Age contexts and three other pieces were recovered from the spoil heap. All pieces are of brown to grey/black vitreous flint except for an end scraper found in the evaluation (Tr2/04) which is light grey with a granular texture. An end scraper from (44) in the excavation is a particularly fine piece. The flints probably date to the Neolithic or Bronze Age and are most likely to be residual finds. They comprise 11 flakes, 3 scrapers, 3 retouched pieces, a small core and a burnt flake.

OTHER FINDS FROM ECTON

Site 1 produced several minor finds comprising fragments of 4 individual grinding stones, an iron rod (perhaps part of a nail), part of a triangular object of baked clay, possibly from oven furniture, and a bronze penannular brooch from enclosure G1. Five flint flakes were recovered at Site 3. No finds were present at Site 2.

Two of the grinding stones were found in pits but the others were recovered from the excavation upcast. Each was worn smooth on one face, suggesting that it had served as either the rubbing or base stone of a saddle quern. This method of processing grain was largely replaced during the Iron Age by the rotary quern (see discussion in Cunliffe 1984, 418), so its use at the site supports the early dating suggested by the ceramic evidence.

THE PENANNULAR BROOCH
by D F Mackreth (Fig 14)

A copper alloy penannular brooch was found in enclosure G1 (F466/465). Its ring has a circular section and the upper surface of each terminal is marked by grooves giving a shallow moulded effect. The wrap-round of the pin is carefully made, with a ridge on each side. The pin has a profile like that of a bow brooch and has lost its point. The terminals are, in effect, merely ends of the ring itself.

Plain or decorated terminals of such simplicity are uncommon and the writer has only recorded the following plain examples: Huntow, Yorks (Stead 1979, 71, and fig 26, 9); Burton Fleming, Yorks (*ibid*, fig 26, 10); Waukmill, Camelon (Christison 1901, 401, and fig 35), and near Kings Lynn (Hattatt 1987, 295, and fig 96, 1277). Examples with decorated terminals with shallow mouldings like those on the present brooch, only carried further round the rings, are: Rudston, Grave R11 (Stead 1991, 188, and fig 101, 2); Gussage All Saints, phase 2 (Wainwright 1979, 109, and fig 84, 3002); and two from Maiden Castle (Wheeler 1943, 264, and fig 86, 1). The balance of the evidence suggests that the brooch from Ecton dates somewhere in the period *c.* 250-50 BC.

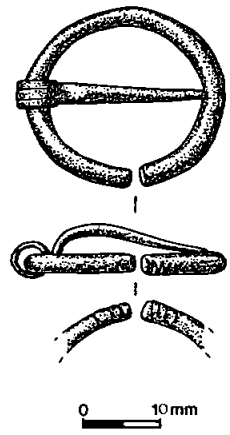

Fig 14 Ecton, penannular brooch at 1:1

ANIMAL BONE FROM SYWELL
by Paul Thompson

A total of 562 bones were recovered from eighteen contexts of which 41% were identifiable. These showed that the following species were present: Cattle (*Bos*), Sheep/Goat (*Ovis/Capra*), Horse (*Equus*), Pig (*Sus*) and Deer (*Cervus*). The majority of identified bone were of Cattle 32% and Sheep/Goat 6%.

Only bone from stratified contexts were examined and the overall bone preservation was good, as was recovery of material as judged by the presence of small bones for example two bird bones were recovered from context (36). Of particular interest are two horse bones from context (44). A first and second phalanges that had extensive bone growth cementing both bones together causing pain and inability to move the joint. Horses were more likely to be affected by disease or injury as they were often kept longer than cattle, sheep or pigs (Davis 1987, 181).

Three contexts contained large quantities of bone, context (27) and (31) both had 87 fragments each while context (44) held 164 bones, although much of this was from a broken cattle skull in many fragments which affects both table 4 and 5 figures.

The assemblage seems to represent mainly domestic refuse as several of the bones bore butchery marks and the limb bones were the most fragmented. Gnawing marks were found on bones from contexts (27, 31 and 33) which indicated a lapse of time before final depositioning.

Table 4: Number of Animal Bones per context

Context	Cattle	Sheep/Goat	Pig	Horse	Deer	Bird	Unidentified	Total
9		1					21	22
11	1						28	29
12							25	25
13	2	1					12	15
21		2					2	4
27	8	5		3	1		70	87
28	4	1					25	30
29		1					5	6
31	14	2	1	3	1		66	87
33	2	1				2	11	16
34	2	1					8	11
35	1	9					12	22
36	2	2					8	12
37	2	2					15	19
38	4						1	5
43	1						3	4
44	142	1	1	3			17	164
45		1					3	4
	185	30	2	9	2	2	332	526

Table 5: Identified animal bone per species

Bone (type)	Cattle	Sheep/Goat	Pig	Horse	Deer	Bird
Skull	129					
Lower Jaw	4	5				
Tooth	13	11				
Scapula	2	3				
Pelvis	11	3				
Vertebre	3					
Humerus	6	6	1			
Radius	6	2				1
Ulna	2			1		1
Tibia	7			4		
Metacarcepal	1			1		
Astragalus					2	
Phalanges	1		1	3		
TOTALS	185	30	2	9	2	2
MNI	4	3	1	2	1	1

ENVIRONMENTAL EVIDENCE FROM SYWELL

Two 10 litre soil samples were taken from the base fill of ditches (33) and (44) and processed in a Siraf type tank using standard flotation methods. The flots were recovered in 1mm and 0.5mm meshed sieves. As the Sywell site soil was free draining sand, the acidity has meant that no seeds have survived. There was a few charcoal flecks recovered but too little to be of interest.

ANIMAL BONE FROM ECTON

Only very small quantities of animal bone were found from the Ecton excavations and have not been reported on.

ENVIRONMENTAL EVIDENCE FROM ECTON
by Gill Campbell (table 6)

A total of ten samples was taken from a number of different features across Site 1. Nine of these were floated onto a 0.5mm mesh using a simple wash-over technique. The residue was sieved to 0.5mm and sorted for any material that failed to float as well as for bones, pottery and other finds. No environmental samples were taken from Site 2.

Seven samples produced charred plant remains but only two (samples 3 and 8) yielded moderately high quantities of material. The samples were analysed in full and the results are given in the Table 6. Nomenclature follows Clapham *et al* 1989. Very little material was recovered from the residues. Charcoal was only present in very small quantities and no analysis was undertaken.

All the samples analysed come from features dated to the Iron Age, with the exception of sample 4 from pit fill 216 (F319) which contained pottery of late Bronze Age/ early Iron Age date. The small amount of material recovered from this context may be the result of intrusion and cannot provide any reliable information regarding the earlier use of the site.

Sample 3 from the butt end of enclosure G8 (F302/context 244) contained hulled wheat chaff with a few weed seeds and very little cereal grain. This assemblage would suggest that the

Table 6 : Ecton, Charred plant remains from Site 1

	Sample number	2	3	4	5	7	8	10
	Context	251	244	216	475	105	106	170
	Sample size	20	20	20	20	2	2	2
TAXA (element if not a seed)	COMMON NAME							
Spergula arvensis L.	spurrey	-	3	-	-	-	-	-
cf. Caryophyllaceae indet.		-	1	-	-	-	-	-
Chenopodium cf. *Album* L.	fat hen	-	-	-	-	-	2	-
Legumniosae (small) indet.		-	-	-	-	-	1	-
Rumex acetosella agg.	sheep's sorrel	-	-	-	-	-	2	-
Rumex sp.	dock	-	1	-	1	-	3	1
Polygonaceae indet.		-	-	-	-	1	-	-
Tripleurospermum sp.	mayweed	-	-	-	-	-	5	-
cf. *Sherardia arvensis* L.	field madder	-	-	1	-	-	-	-
Bromus hordaeceus /secalinus type	brome grass	-	5	1	6	1	28	2
cf. *Bromus* sp.	brome grass	-	-	-	-	-	1	-
Large Gramineae indet.	grass	1	3	-	1	1	2	-
Small Gramineae indet.	grass	1	3	1	1	-	2	1
Small Gramineae indet. (culm base)	grass	-	-	-	-	-	1	-
Triticum spelta L. (glume base)	spelt wheat	-	15	1	-	-	-	-
Triticum spelta L. (spikelet fork)	spelt wheat	-	1	-	-	-	-	-
Triticum cf. *Spelta* (glume base)	spelt wheat	-	5	-	-	-	2	-
Triticum dicoccum/spelta (grain)	emmer/spelt wheat	-	-	-	2	-	-	-
Triticum dicoccum/spelta (glume base)	emmer/spelt wheat	-	35	2	1	2	3	2
Triticum dicoccum/spelta (spikelet fork)	emmer/spelt wheat	-	2	1	-	-	1	-
Triticum sp. (grain)	wheat	1	1	-	1	-	1	-
Triticum sp. (glume frag.)	wheat	-	1	-	-	-	-	-
Triticum sp. (glume base)	wheat	-	-	-	-	-	-	1
cf. *Triticum* sp. (grain)	wheat	-	-	-	-	-	-	-
Hordeum vulgare L. (rachis frag.)	six-row barley	-	1	-	-	-	-	-
Hordeum sp. Hulled, straight (grain)	barley	-	-	-	-	-	1	-
Hordeum sp. Hulled, twisted, (grain)	barley	-	-	-	1	-	1	1
Hordeum sp. (grain)	barley	-	-	1	-	-	-	-
cf. *Hordeum* sp. (grain)	barley	-	-	1	-	-	-	-
Cereales indet. (grain)	cereal	2	6	1	1	4	10	3
Cereal size (culm nodes)	cereal	-	-	3	-	-	-	-
IGNOTA		-	1	3	-	-	4	1

de-husking of wheat grain was one of the activities that took place within the rectangular enclosures.

Sample 8 from pit F219 (context 106) was dominated by the remains of brome grass (*Bromus hordaeceus/ secalinus* type) with some cereal chaff and grain. A few weed seeds were also present. The large amount of brome grass recovered from the settlement at Ashville Trading Estate, Oxon, was thought to indicate the possible deliberate collection of this species for food (Jones 1978). More recently, Green (1981) has concluded that this taxa was merely a persistent weed of cereal crops and that it occurs with chaff elements as a result of an attempt to clean it from the crop. This appears to have been the case on the middle Iron Age site at Whitehouse Road, Oxford where an assemblage of brome grass was recovered in association with hulled wheat chaff (Letts, 1993). Very little chaff was recovered from sample 8, which might lend support to the view that this plant was used for food, though the assemblage could equally represent the result of the final sieving of the grain to remove weed seeds.

Taking the evidence from the samples at a whole it is clear that spelt wheat (*Triticum spelta* L.) was being processed at the site. Similarly, the presence of both twisted and straight hulled barley grain and the single barley rachis fragment indicate that hulled six-row barley (*Hordeum vulgare* var. vulgare) was also being processed at the site. There is no evidence for the use of emmer wheat.

Whether the spelt wheat and six-row hulled barley were being grown by the inhabitants of the site or the crops were brought in from elsewhere remains in doubt. The presence of cereal-size culm nodes in sample 4 might indicate crop production. However, the small-diameter charcoal also noted in sample 4 would suggest the use of fuel from general undergrowth. This might also have included uprooted grasses and thus large grass culm nodes.

The weed assemblage from the site is consistent with that expected on the dry soils derived from the Northampton Sand with Ironstone but is equally characteristic of circum-neutral soils on gravel which would have been found on the adjacent floodplain. There is no evidence for the exploitation of Boulder Clay or Upper Lias geologies.

DISCUSSION

The excavations of parts of probably three discrete enclosure systems at Sywell and Ecton, situated along the same geological ridge within three kilometres of each other, has helped to clarify the date and function of some of the occupation along this ridge. This information is added to previous excavations along this ridge which found a Bronze Age barrow and some Roman ditches (Jackson 1973) and Roman pottery kilns (Johnson 1969).

A few flint flakes which date to the Neolithic and Bronze Age periods show there was activity and possibly occupation in the Neolithic period. The excavations have increased our knowledge of Bronze Age and early Iron Age occupation along the ridge. The Sywell and the main Ecton site had a few pits dated as late Bronze Age to early Iron Age. This could show a change of use on the ridge from burial in the early Bronze Age with the barrow excavated in 1969 to settlement in the late Bronze Age/ early Iron Age.

The ridge seems to have been occupied mostly during the Iron Age and Roman periods. The Sywell site predominantly dates to 5th-1st centuries BC while the main Ecton site is 4th-2nd centuries BC with the other Ecton site undated. As only parts of all three cropmark sites were looked at, it is not possible to identify what happens to the sites in each period so they are given fairly broad dates. It is not known if there was continuous occupation from the middle to late Iron Age or if there were periods of abandonment.

The linear cropmarks depicted in Figure 1 are probably a relative accurate representation of the archaeological features under the ground though there are a few discrepancies. In particular, the Sywell excavations have shown that most of the cropmarks transcribed are quite accurate with only one enclosure not located in the watching brief, perhaps as a result of ploughing of the soft sand natural. At the same time the Sywell excavations uncovered two small new enclosures as well as more pits outside the cropmarks marked.

The site at Sywell appears to have been a farm. As the interiors of the enclosures were not excavated it is unclear which function they fulfilled, but their small size and the relative scarcity of artifacts suggests stock penning rather than occupation, with the latter nearby, but outside the excavated area. The enclosure ditches are well preserved and the excavation revealed no contemporary floor or other occupation levels. The limited areas of excavation have meant that the exact relationships of some of the features has not been found. A four-post structure was the only recognisable feature uncovered and this equates with similar structures which have been found elsewhere in the county, for example, within the middle Iron Age settlement on the site of Daventry International Rail Freight Terminal (DIRFT) near Crick, Northamptonshire (Chapman pers comm).

The main Ecton site seems to be larger and more than a single farmstead. The cropmarks cover an area of 4.5 hectares of which 0.5 hectares was excavated. Apart from the three or four rectilinear enclosures, the small sample which was excavated of a larger cropmark complex consists almost exclusively of traces of circular and sub-circular hut-circles (up to

20 in number) and related enclosures. This could be a small settlement at any one time consisting of a few houses and enclosures. The evidence for a domestic settlement comes from both the pottery and charred seeds. Most ditches and gullies demonstrate frequent scouring or recutting which may reflect either an extended period of occupation or simply the need for maintenance of rapidly silting boundaries.

Due to the lack of stratigraphic links it is not possible to determine the inter-relationship of the rectilinear enclosures. However, since they share a common alignment and do not interfere with each other, they could have functioned together as a settlement separated by earthen droveways. The large number of ring gullies as seen in the air photographs implies a number of probable family units. The later sand quarrying has meant that the original size of the settlement is unknown.

The second enclosure site is 300m to the southwest of the main Ecton site and is almost certainly not related. Parts of two parallel ditches and the extreme western edge of a rectangular enclosure were excavated of a much larger enclosure site. Though undated the morphology of the enclosures implies an Iron Age and/or Roman date.

The character of the cropmarks along these ridgeways are different to other Iron Age/Roman settlements in Northamptonshire. These cropmarks are very closely spaced, extensive and due to the geology are linear in extent running north to south for up to 5.5 km parallel to streams feeding the River Nene to the east of Northampton. The Royal Commission notes that the ridge shows a remarkable complexity of cropmarks (RCHM 1979, 47). This contrasts with the findings of extensive excavations down on the valley bottom at Wollaston where both Iron Age and Roman farmsteads are far less closely spaced, on average one farmstead every 300 metres and 400 metres (Meadows forthcoming).

All these three sites at Sywell and Ecton as well as the previously published Roman pottery site seem to show these enclosures along the ridges are individual settlements of varying sizes. The main Ecton site compares with some other Northamptonshire cropmarks such as at DIRFT (Chapman forthcoming) or Wilby Way (Thomas and Enright 2000) which are extensive and represent significant settlements. The latter is just a few kilometres to the south-east of Ecton, of the same size covering 4 hectares with the settlement broadly the same dating between 5th century to 1st century BC.

Overall, by the unusual density along these ridgeways, occupation on it must have been seen as desirable. The mid to late Iron Age and later settlements seem much more numerous which seems to show that settlements (and presumably a larger population), were more common in this period than earlier times.

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