SALVAGE RECORDING ON THE HONEYBOURNE, BRETFORTON AND PEBWORTH SUPPLY MAIN: ARCHIVE REPORT

Robin Jackson, Annette Hancocks and Elizabeth Pearson
with illustrations by Carolyn Hunt and Steve Rigby

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Field Section,
County Archaeological Service,
Hereford and Worcester County Council,
Tolladine Road,
Worcester WR4 9LS

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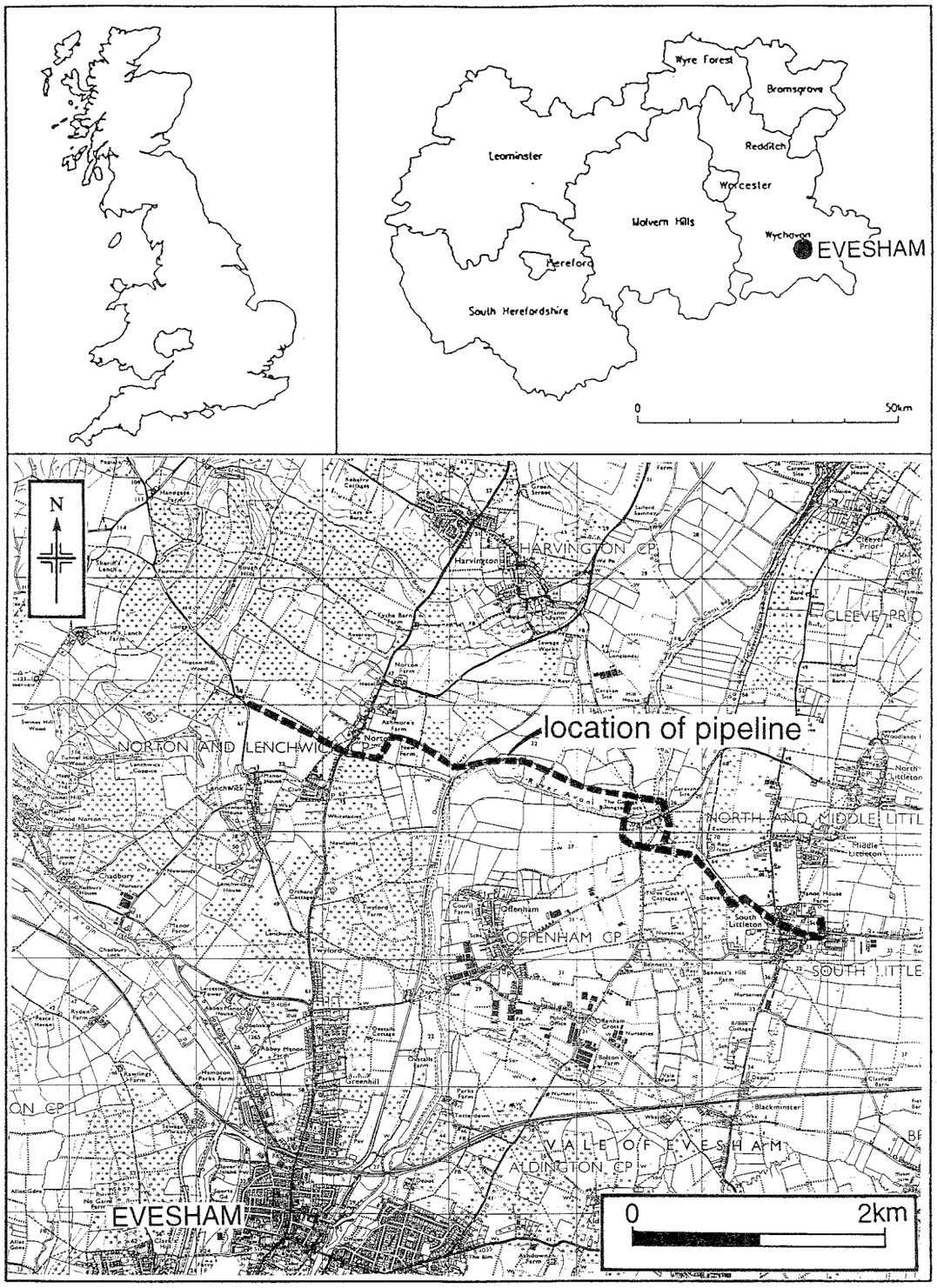


Figure 1: Route of pipeline

Salvage recording on the Honeybourne, Bretforton and Pebworth Supply Main

Robin Jackson, Annette Hancocks and Elizabeth Pearson with illustrations by Carolyn Hunt and Steve Rigby

1 Summary

Salvage recording was undertaken during the construction of a pipeline from Norton to South Littleton. The project formed part of a series of similar projects being undertaken by the County Archaeological Service on behalf of Severn Trent Water Limited during a major programme of mains construction and upgrading in the region. Deposits and features were excavated at three locations, at Norton, at the George Billington Lock on the River Avon and at South Littleton. In addition artefacts were recovered from a number of fields along the pipeline.

The site at Norton was limited in extent but has provided important information relating to Roman occupation in the area. A ditch contained a significant assemblage of Romano-British pottery and other material including animal bone. Dating suggested Roman occupation through to the 3rd/4th century. The domestic character of the assemblage suggested that this was probably part of the ditch of a typical Roman farmstead enclosure. This farmstead would have formed part of the fairly intense and varied settlement along the River Avon in this part of the County and extending east into Warwickshire. Particular interest lies in the relatively late date to which occupation continued and its contribution to a growing understanding of the character and composition of ceramic assemblages and trade in the region.

At the George Billington Lock, alluvial deposits and associated environmental remains were recorded and these are of interest in supporting the development of an understanding of the depositional history of the River Avon. Adjacent to the lock a Second World War pillbox and tank traps were identified. These are believed to have formed part of a series of anti-invasion defences constructed along the River Avon in the Summer of 1940. They have been reported to the ongoing Defence of Britain Project, a nationwide project to compile data on the rapidly disappearing remains of features from this major episode of world history. Deposits at South Littleton were limited in scope but included medieval and post-medieval material. Further finds were recovered from the ploughsoil during topsoil stripping along the easement and are considered to represent stray finds or result from manuring of arable land with domestic refuse.

2 Introduction

2.1 Background

Salvage recording was undertaken by the County Archaeological Service on behalf of Severn Trent Water Limited on a pipeline in south-east Worcestershire (Fig 1). The pipeline forms an element of the Honeybourne, Pebworth and Bretforton Supply Main and is one of a number of pipelines being constructed through a series of projects over several years to improve the reliability of water supplies in the region. The archaeological works were

undertaken alongside construction works which fell into two stages between January and May 1996.

The project took place within the framework for archaeological response established within a Code of Practice for Conservation, Access and Recreation issued by the Department of the Environment in July 1989, and attaching to the Water Industry Act 1991. Section 11, iv of the Code refers specifically to pipelaying and states that;

> ...where damage to features of archaeological interest is unavoidable, arrangements should be made for an appropriate level of investigation - by an appropriate conservation body, and subsequent publication of results.

The route of the pipeline ran in a broadly west to east direction from a junction west of Norton to South Littleton, a distance of approximately 5km (Figs 1 and 2). An initial consultation phase had already assessed the route against existing information for the presence of known sites of archaeological interest registered on the County Sites and Monuments Record (SMR). A number of known archaeological sites were, or potentially were, to be affected (Fig 2), however, it was not felt necessary to recommend revision of the route.

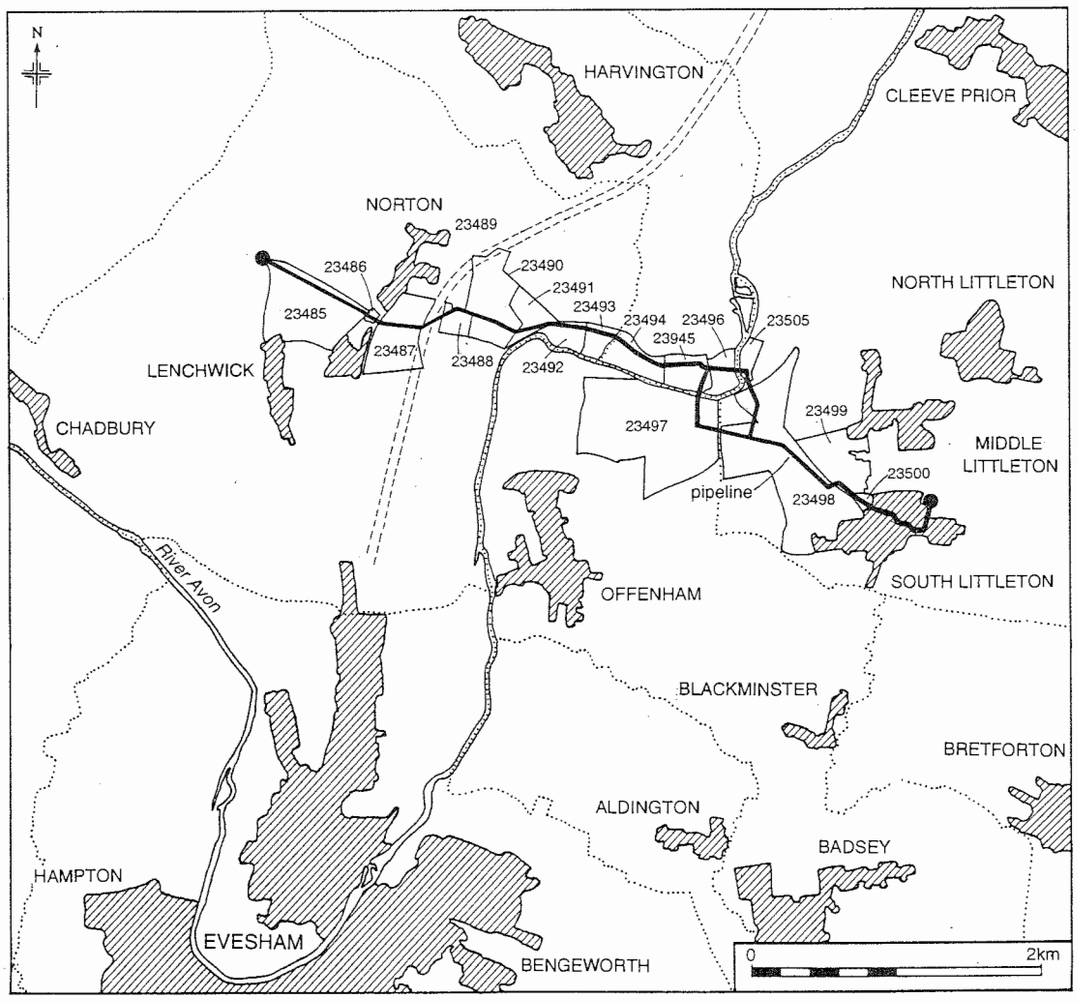


Figure 2: Sites along the pipeline

Since the pipeline would affect known sites, and as there was the potential for previously unknown sites to be discovered, it was recommended that provision for salvage recording be made along the entire route of the pipeline. Salvage recording enables identification of any new sites revealed and recovery of information about their nature. It will also usually enhance knowledge of existing sites and provide general information regarding landuse and agricultural practice around former settlements. Through provision of a contingency, adequate cover was provided for the recording of any substantial significant deposits encountered.

The results of such fieldwork are important, not only for enhancing our knowledge of past settlement and landuse, but also for the future management of archaeology in the county. Since only a narrow area of any one site is destroyed by the pipeline, not only is it possible to effectively preserve that area through a detailed archaeological record, but it also enables the development of effective future management of what survives to either side of the pipeline. In addition, by studying the results of a series of such linear developments, simple predictive models can be produced for settlement occurrence and landuse in different parts of the region. These allow a better understanding of the potential for survival of significant archaeological deposits in cases where future development may affect them.

2.2 Geology and topography

The route of the pipeline crosses gently undulating land which falls away to the floodplain of the River Avon. It affected a total of seventeen fields, crossing a mixture of arable land and pasture, with pasture predominant in the central section alongside the River Avon and arable land more common away from the river's floodplain.

The underlying geology of the area is also mixed with solid geology of both Lower Lias and Mercian Mudstone (Keuper Marl) represented, but mainly obscured by drift deposits (sand and gravel) of the terraces of the River Avon and also by alluvium adjacent to the river on its floodplain. Soils are similarly mixed, with soils of the Bishampton, Kearby, Drayton, Eardiston, Worcester, Whimple and Fladbury Associations represented (Ragg *et al* 1984). drainage and fertility of these is also varied and is reflected in the mixed agricultural regimes observed.

2.3 Historical and archaeological background

Five parishes were affected by the pipeline, Norton and Lenchwick, Harvington, Offenham, North and Middle Littleton and South Littleton, all of which have documentary references establishing at least early medieval origins for them (8th century). Of these Offenham and the three Littletons have the earliest documentation and are said to have formed part of lands gifted to the monastery at Evesham in 703 AD by the Mercian king, Ethelred (VCH III, 413). A further document dated 708 AD indicates that these lands were given to the monastery by Kenred and Offa and also records the gift of 7 *mansae* at Norton and 1 at Lenchwick. The abbot and convent of Evesham held these lands until the Dissolution in the 16th century. Harvington is first documented in 799 AD when land at Harvington was given to King Coenwulf of Mercia by Balthun, Abbot of Kempsey (VCH III, 387).

Medieval sites recorded in the vicinity of the pipeline include ridge and furrow earthworks and cropmarks (HWCM 2787, 2797 and 2798), deserted medieval settlement around North and Middle Littleton (HWCM 2799, 2800, 22161 and 22504) and associated features such as a vineyard (HWCM 11393) and barn (HWCM 2866). A medieval cross and moated site are known at South Littleton (HWCM 9266 and 2802) as well as a further vineyard (HWCM 11395). At the west end of the route is the medieval church of St Egwin (HWCM 2691).

Earlier activity along the route of the pipeline is evidenced through finds and cropmarks both on the route and in its general vicinity. Prehistoric activity along the route has been identified mainly towards the eastern end of the pipeline where flint finds (HWCM 5274), an enclosure (HWCM 2761), a Bronze Age barrow (HWCM 2800) and implement (HWCM 7339), Iron Age pottery (HWCM 7338 and 7574) and a hoard and currency bar (HWCM 2835) have been recorded. More centrally a cropmark complex includes a Bronze Age barrow (HWCM 2837). This complex includes a number of other sites, mainly enclosures, of prehistoric or Roman date (HWCM 2762, 2763, 2786, 2788 and 2789). To the south of these lies a double ditched rectilinear enclosure (HWCM 2808). Further undated cropmark enclosures in the area include a rectilinear enclosure near the west end of the route (HWCM 10127). Roman activity is also represented with a road (HWCM 9983) which crosses the south end of the route on a north-west to south-east alignment. A Roman farmstead or hamlet has been identified immediately to the north-west of the cropmark complex in the central section (HWCM 2848).

3 Methodology

Project design and preparation

The project design and methodology was based on similar pipeline projects already undertaken by the County Archaeological Service on behalf of Severn Trent. A number of these have already been completed and the results and methodology have been published (cf Dinn and Hemingway 1992).

An initial preparation period for the project allowed the collection of existing data on the archaeology, history, topography and geology of the area. Geological maps and published survey data were used to establish the solid geology and the soils of the fields crossed by the pipeline. Ordnance survey maps provided topographical details and the pattern of modern fields and settlements. These were used to provide base maps for the recording of data in the field.

Archaeological data available for the area was studied through use of the SMR to establish the existing archaeological framework for the area through which the pipeline was to pass. Historical data was collected through primary documentary sources (eg Domesday) and through secondary sources such as the Victoria County History (VCH III). These desk-based studies provided a framework and background for the archaeological data collected.

Fieldwork

The fieldwork was designed to fall into two clear stages, firstly recording of the stripped easement and secondly recording of the pipetrench. During the first stage the pipeline was visited during, or shortly after, removal of the topsoil. The freshly stripped area of the easement, was observed and rapidly scanned to identify surviving archaeological deposits and to record, locate and

retain artefacts so as to enable accurate plotting of the varying locations and densities of artefacts. All modern fields affected were recorded using a Field Survey Record (AS22) for each Ordnance Survey land-parcel and were allocated an individual Sites and Monuments Record number for ease of recording and data manipulation (Fig 2).

Any surviving archaeological deposits were investigated and artefacts, if present, were collected from within them. In addition the spoil at the side of the easement was examined for artefacts. A record was also made of the current landuse and topography, and of soils and geological deposits revealed. Archaeological deposits were identified and excavated at three locations. Roman deposits were recorded at one site (HWCM 23490), medieval and post-medieval deposits at another (HWCM 23500), and alluvial deposits and a Second World War pillbox and tank obstacles at a third (HWCM 23496, 22086 and 22087). Otherwise only unstratified artefacts were recovered along the route. Field survey, excavation, sampling and recording were undertaken following standard Service practice (County Archaeological Service 1996).

Monitoring of exposed sections was subsequently maintained during trenching in selected areas to ensure that no archaeological deposits survived in areas where they might have been masked by colluvial (hillwash) or alluvial (waterlain) deposits.

Post-fieldwork

The final phase of the project involved assessment and subsequent analysis of the data recovered and integration of the fieldwork results with the background research. All fieldwork records were checked and cross-referenced. A context finds record was compiled using the County context finds record sheet (AS8). This provided a basic quantification by weight (g) and count, of all finds recovered. Subsequent analysis involved identification of fabrics and forms, with comparison with Hereford and Worcester type fabric series (Hurst and Rees 1992). This enabled the archaeological deposits to be more closely dated by providing a *terminus post quem* (TPQ) and date range for each assemblage recovered. Results of this analysis are summarised in Tables 1 and 2.

An environmental sample of 20 litres was taken from a late Roman ditch (HWCM 23490, context 107) and was processed by flotation followed by wet-sieving using a Siraf tank. The flot was collected on a 500µm sieve and the residue retained on a 1mm mesh. This allows for the recovery of items such as small animal bones, molluscs and seeds. The residue was fully sorted by eye and the abundance of each category of environmental remains estimated. The flot was fully sorted using a low-power EMT light microscope and remains identified using modern reference specimens housed at the County Archaeological Service. Large animal bone was hand-collected from datable contexts during excavation and also collected during rapid scan fieldwalking. However, only bone from excavated contexts was selected for further analysis. Details of the environmental remains recovered are summarised in Tables 3 and 4 with Tables 5, 6 and 7 detailing the animal bone recovered.

This archive report presents the results of the project and summarises the background, methodology and aims of the work. Finally a short report is intended to be submitted for publication in the Transactions of the Worcestershire Archaeological Society.

4 Analysis and results

Deposits and features were excavated at three locations, near New Farm, Norton (HWCM 23490), at the George Billington Lock on the River Avon (HWCM 23496) and at South Littleton (HWCM 23500). In addition, artefacts were recovered from a number of fields along the pipeline. Overall, a total of 213 sherds of pottery, weighing 3124g were recovered (Table 1).

4.1 **Deposits near New Farm, Norton** (HWCM 23490; Fig 2)

4.1.1 **Analysis**

Structural remains

This site, to the east of New Farm and the village of Norton (Figs 2 and 3), was identified through rapid scanning of the easement after topsoil stripping. A concentration of Roman pottery and potential archaeological deposits were observed and following discussions with the Resident Engineer, an area of the easement was fenced off leaving vehicle access along the north side and allowing archaeological investigation to the south. An element of the contingency was used to undertake this work.

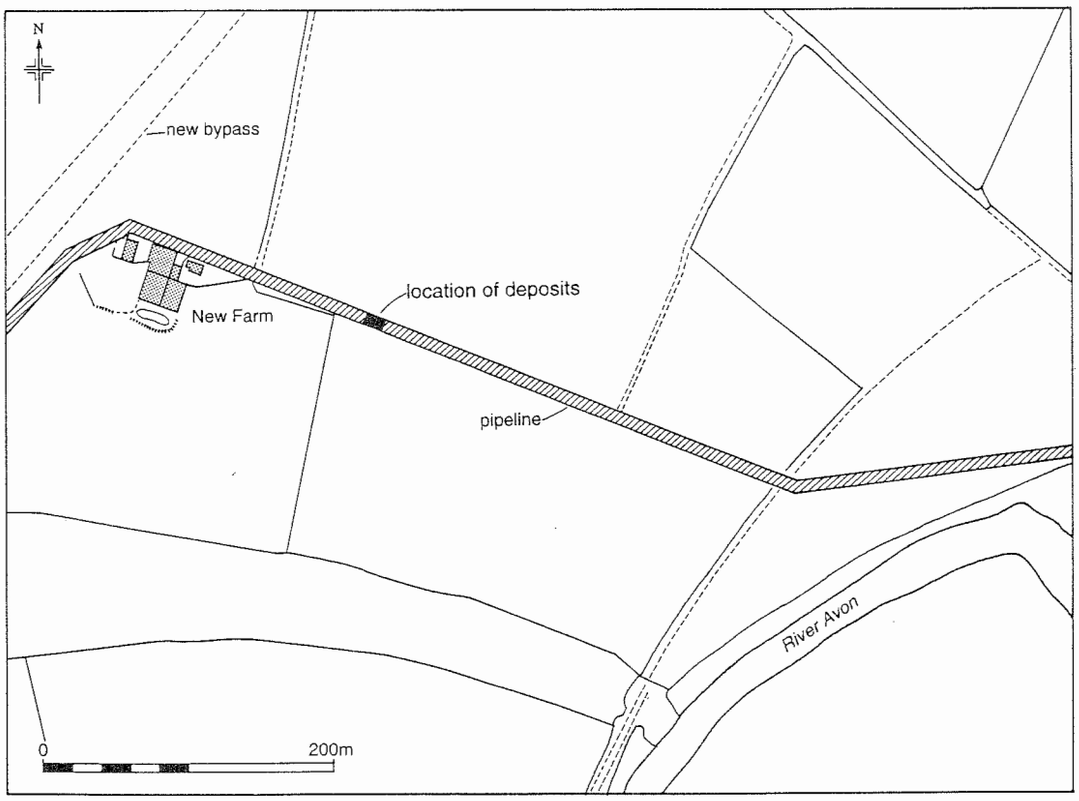


Figure 3: Location of ditch near New Farm, Norton

Investigation of the fenced area revealed two converging ditches (context 109; Fig 4) across which four sections were excavated to retrieve dating evidence and further determine their character. The ditch was U-shaped in profile with moderately sloping sides. Its maximum observed width was slightly over 2m and the maximum recorded depth was 0.45m. It had clearly been truncated, probably through ploughing, and consequently the eastern length of ditch was generally less well preserved, while the other section faded to the west. The two observed lengths were north-west to south-east and north-east to south-west aligned respectively and would have converged just to the south of the pipeline easement. The ditch fill (contexts 101, 103, 105 and 107) was of a charcoal flecked silty clay with pebble inclusions. The absence of a clearly defined silting deposit and backfill in the ditch indicate that this feature may have been relatively short-lived. Subsequent to the excavation of the four sections across the ditch a metal detector was used to scan unexcavated areas of fill and positive responses investigated to retrieve metal artefacts since these were felt liable to facilitate dating. Observation of the area enclosed by the two ditches (within the easement) failed to locate any further deposits. However, since truncation has been identified and since this presumably only represented a small part of the enclosed area, this absence is considered to be unsurprising.

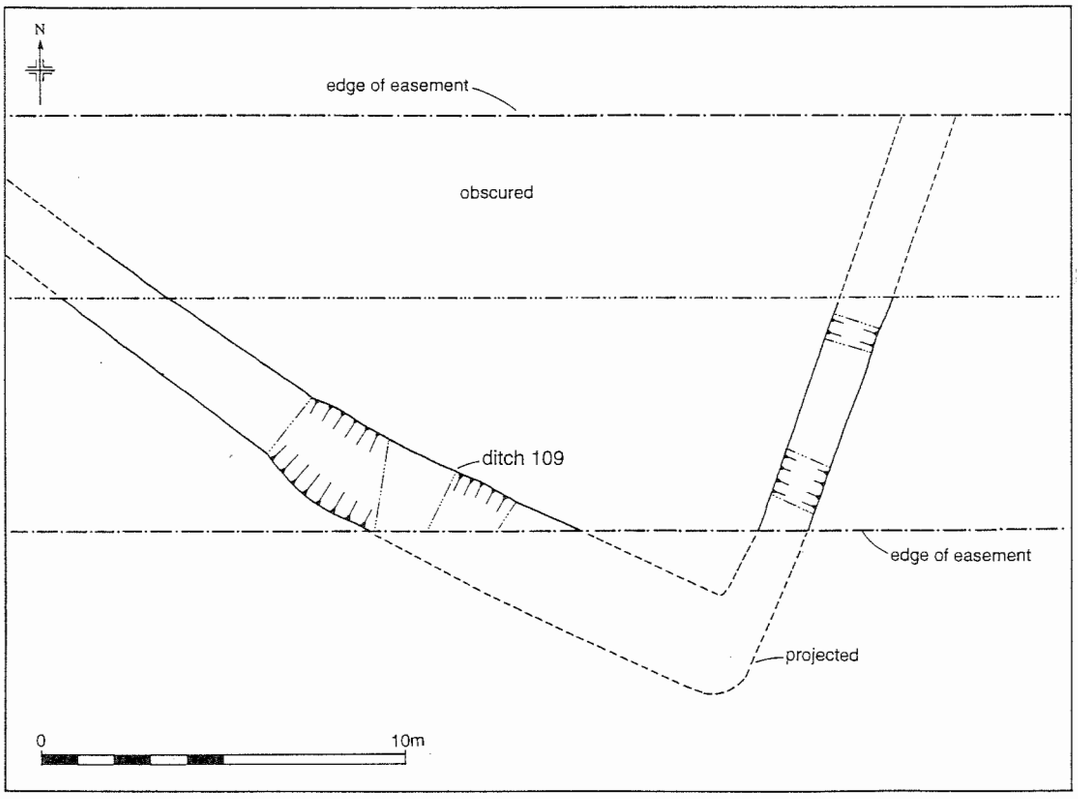


Figure 4: The ditch

Artefactual remains

Some 137 sherds, weighing 2230g were recovered from the site. This is a relatively small assemblage, but owing to the presence of material of 3rd/4th century date, further detailed analysis was undertaken, few assemblages containing late Roman pottery having been found in the County. Other finds recovered were typically Roman and included a lead object, which appears to be a distorted handle (Fig 5:1), a small quantity of animal bone, including a cows skull, and some slag waste (Table 1). Three flint flakes recovered are clearly residual but suggest some prehistoric activity in the vicinity.

Details of the ceramic assemblage recovered are shown by fabric in Table 2. Eleven Roman fabrics were identified. The assemblage was not too fragmentary having an average sherd weight of 16g. Few of the sherds showed any signs of abrasion and several larger sherds survived suggesting that the deposit may be rubbish dump into a disused ditch.

Recognisable diagnostic forms and fabrics within the type series and comparison with similar domestic assemblages recovered in Worcestershire, Jackson *et al* (1996a, b and c) indicate that some of the assemblage has a date range of 3rd/4th century. Earlier residual material was represented by an Iron Age/Early Romano-British fossil shell tempered ware (fabric 4.3) present within the ditch fill (contexts 105 and 107). The surfaces of these sherds were badly abraded and there were no diagnostic sherds.

Of the locally produced domestic wares, Severn Valley ware (fabric 12) was the dominant fabric in the assemblage. A few datable forms were recognised, including a Severn Valley ware tankard which can be closely dated to the 4th century (Fig 5:2; Webster 1976, 30-31). A reduced Severn Valley ware (fabric 12.1) dish was also recovered (Fig 5:3). Although no exact parallel can be identified for this it is considered to be of early Romano-British date (late 1st-early 2nd century; Webster 1976, 73).

In addition to these Severn Valley products, ceramics of the Malvernian pottery industry form the next largest fabric group including both handmade and wheelthrown wares (fabrics 3 and 19 respectively). These included a handmade Malvernian lid (fabric 3; Fig 5:4) which can be parallelled at several sites in Worcestershire (Peacock 1968, figs 1:18 and 4:84/85; Jackson *et al* 1996a, fig 13.2; Jackson *et al* 1996b, fig 8:1). There is also a straight-sided black burnished ware dish (Fig 5:5) of 3rd century date. The interior of the vessel is highly abraded. This may indicate that the vessel was in use for a considerable period.

Hand-collected animal bone

A total of 2.3 kg of animal bone was collected from the ditch (contexts 105 and 107), comprising 61 fragments, the majority of which were well preserved, and in relatively large fragments (Tables 5, 6 and 7). Butchery marks were visible on some of the bones, particularly on cattle long bones and a cattle scapula (context 105). The assemblage was dominated by cattle or horse/cattle size bones, in association with occasional horse and sheep/goat bones. A juvenile cow jaw, complete with teeth (context 105), and a juvenile cow horncore (context 107) were also present.

An almost complete cow skull with upper jaw was retrieved (context 107). However, as part of the skull was very friable and would disintegrate on removal of the surrounding soil, further work was not carried out.

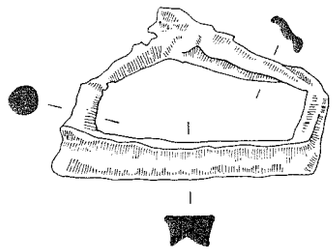
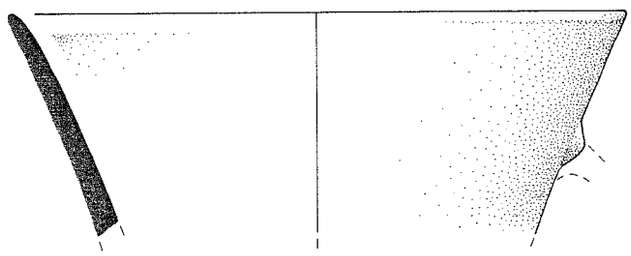


Figure 5.1 0 50mm



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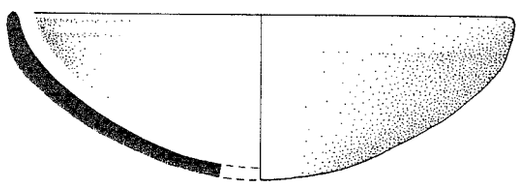

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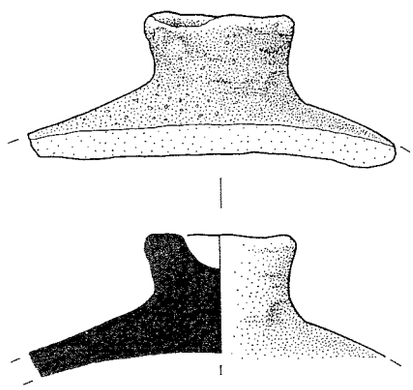

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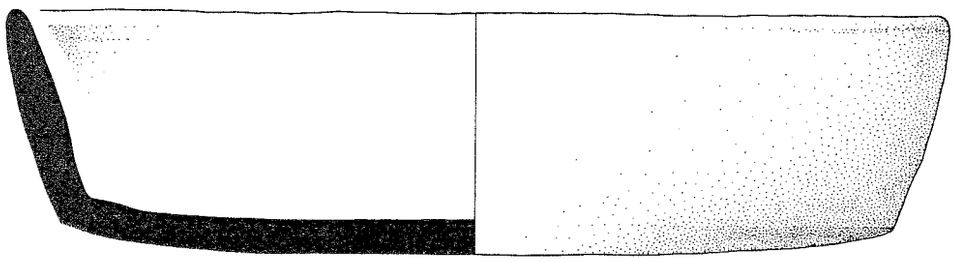


Figure 5.5 0 50mm

Figure 5: Artefacts from the ditch

As the majority of the bones were well preserved and showed little evidence of abrasion, it is likely that they were not exposed on the surface for any length of time prior to burial within the ditch. The clayey and slightly waterlogged nature of the fill in which they were found would have provided good conditions for their survival. However, as the assemblage was small, only limited conclusions can be drawn from their analysis. Various parts of the carcass are represented, giving no indication that the assemblage represents waste from an industrial process, rather, it is likely to represent general domestic waste.

Wet-sieved samples
Mineralised seeds were present and were tentatively identified as violet (*Viola* sp). Despite the presence of the latter, there is no evidence of phosphate concretions which are commonly found in association with mineralised remains. Molluscs were also present and were well preserved, however, no detailed analysis was undertaken due to the relatively small size of the assemblage and the fact that it came from an isolated feature.

A small number of charred plant remains, including barley (*Hordeum* sp) and grass grains (Gramineae sp indet), an emmer or spelt wheat glume fragment (*Triticum dicoccum/spelta* sp), and one cleavers (*Galium aparine*) seed were also present (Table 3). This material is likely to have been charred as a result of cereal processing or burning of crop waste on fires. Uncharred plant remains also survived, presumably as a result of the clayey and slightly waterlogged conditions. These included, twig and root fragments, seeds of fat hen (*Chenopodium album*) and dock (*Rumex* sp).

4.1.2 Discussion

The two converging ditch lengths can be interpreted as representing the southern corner of a rectilinear ditched enclosure. The presence of domestic waste in the form of animal bones and pottery indicate that the enclosure was probably that surrounding a small settlement such as a farmstead, or was associated with such a settlement. Similar sites have been previously recognised in the County such as at Hoarstone Farm (Jackson *et al* 1996a) and Areley Kings (Dinn and Hemingway 1992).

The period of use for the ditch appears to have been relatively short-lived, since evidence of silting was not observed. The ceramic assemblage suggests a relatively late date for this feature (3rd/4th century), however, the residual late Iron Age/early Roman material present in the fill indicates that activity at the site was long-lived.

The artefact assemblage is comparable with other similar small assemblages from sites in rural Worcestershire, such as Hoarstone Farm (Jackson *et al* 1996a), Norton and Lenchwick (Jackson *et al* 1996b), Strensham and Norton-Juxta-Kempsey (Jackson *et al* 1996c) and Frankley (Jackson and Hancocks 1996). All of these reflect the dominance of local and regionally produced Severn Valley and Malvernian wares. There is a distinct lack of finewares in this assemblage, with the exception of a small quantity of residual samian. However, again this is typical, as is the absence of large quantities of other regionally produced wares such as black burnished ware and Oxfordshire products, which are known to have had a wider sphere of distribution in the late Roman period.

The environmental remains appear to represent low concentrations of mixed domestic waste including animal bone and a small quantity of cereal crop debris. The possibility that the mineralised seeds may indicate a cess waste component can be considered. Mineralisation often occurs when calcium phosphate from faecal material impregnates remains in a deposit. However, the mineralised seeds are unlikely to be directly components of cess waste as seeds of edible plants (such as small-seeded fruits commonly found in cess deposits), were not present. Rather, it may be that seeds present in the ditch have become mineralised from cess material or from some other source.

Other remains such as molluscs and seeds are the remains of the flora and fauna which inhabited the ditch, or the surrounding environment. The former were well preserved because of the local calcareous soils, and the latter as a result of anaerobic conditions.

Overview

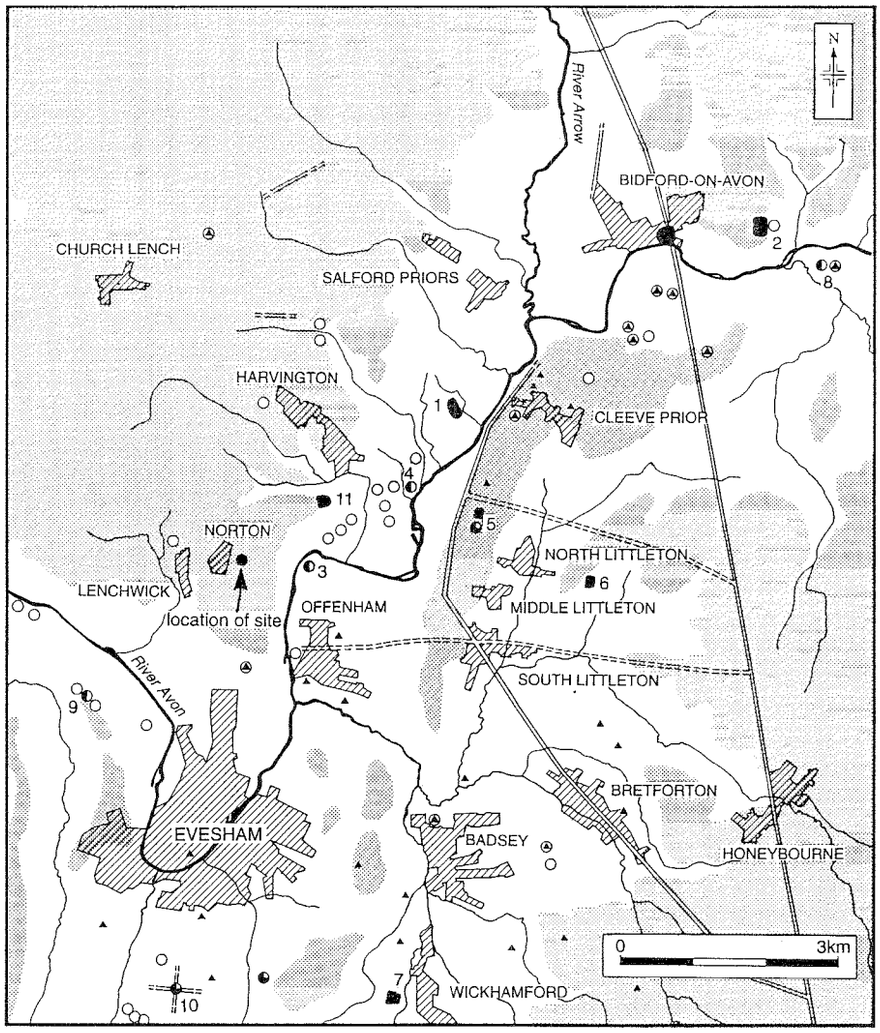
Studies of Romano-British rural settlement patterns suggest that the majority of such settlements in the north and west appear to consist of only a single enclosure surrounding one or more circular buildings (Hingley 1989, 23-4 and figs 26, 27 and 28) and this site at New Farm is likely to have been of this type. At such sites both domestic and agricultural buildings and structures have been observed, and, as in this case, local items dominate the finds assemblages with non-local items being typically scarce. The continuing occupation of the site at a relatively late date during the Roman period may reflect an apparent peak of population indicated by a proliferation of rural settlement sites of that date elsewhere in England (Esmonde Cleary 1989, 105).

The patterns of Roman landscape and settlement observed in regions where extensive surveys have been undertaken are complex (Miles 1989) and only further research is likely to enable an understanding of regional and local settlement patterns to be developed. It is however possible to draw some general tentative conclusions. The site lies within an area with evidence of fairly intensive and varied occupation during the Roman period (Fig 6). These include farmsteads or hamlets (Leylandii House Farm, Offenham and Harvington), villages (Hinton on the Green and Teddington), wealthy rural settlements (Middle Hill and Middle Littleton) and probable villas (Welford Pastures and Charlton). Although dating is poor and the settlements need not be contemporaneous, as a group they provide an impression of the Roman settlement pattern in the area. The fertility of the Vale of Evesham must have considerably influenced this settlement density. However, caution must be exercised as this may not reflect the former occupation pattern but result from a bias towards the river terraces where conditions are ideal for identification of former settlement through cropmarks and artefact scatters. Despite these reservations, this site supports the previous suggestion that locally there was a mixed and diverse pattern of occupation along the Avon Valley, focussing on the gravel terraces in both Worcestershire (Jackson *et al* 1996b) and in Warwickshire (Hart *et al* 1991).

4.1.3 Significance

The significance of the deposits revealed at New Farm can be assessed as far as the available information allows using the *Secretary of State's criteria for the scheduling of ancient monuments* (DoE 1990, Annex 4).

The site is not particularly *rare* or unusual for its *period* since farmstead enclosures of Roman date are relatively common, though have only had limited study in this County. The local *rarity* is increased by the fact that occupation continues to a late date. The *survival/condition* of deposits was poor with what had probably been a fairly substantial ditch surviving only shallowly. This is likely to result from truncation through ploughing. Although the associated artefactual and environmental assemblage has provided only a small amount of information on human activities, it demonstrates the potential for the good *survival/condition* of remains relating to the local economy and natural environment. In the latter case this probably is as a result of anaerobic and calcareous soil conditions. The *group value* of the site is high since it forms part of a fairly intensive pattern of Roman occupation along the terraces of the River Avon providing the potential for inter-site comparisons and reconstruction of settlement and landuse patterns. *Documentation* for the site is represented by this report.



▲ finds
finds strongly indicating settlement
excavation
road
undated cropmark
cropmark indicating Romano-British settlement
cropmark and finds indicating Romano-British settlement
=== postulated road

1 Abbot's Salford (WA 4923)
2 Bidford Grange
3 Offenham (HWCM 2808)
4 Harvington (HWCM 2786)
5 Middle Hill (HWCM 7333/3916)
6 Middle Littleton (HWCM 2803)
7 Wickhamford (HWCM 2736)
8 Welford (WA 4708/6015/6523/4986)
9 Charlton (HWCM 2755/2756)
10 Hinton on Green (HWCM 2704/2706)
11 Leylandii House Farm (HWCM 2848)

Figure 6: Roman sites in the area

These deposits have been disturbed by the pipeline in a relatively narrow corridor across part of the site, but *potentially* survive to the north of the route. Here, further remains relating to the enclosure ditch and deeper features such as pits are likely to survive though it is unlikely that less substantial features and deposits, such as post and stakeholes or yard surfaces, will survive except perhaps locally within the overall site.

In conclusion the remains are of some regional significance in that they provide information which can contribute towards increasing data from Roman rural sites within the County.

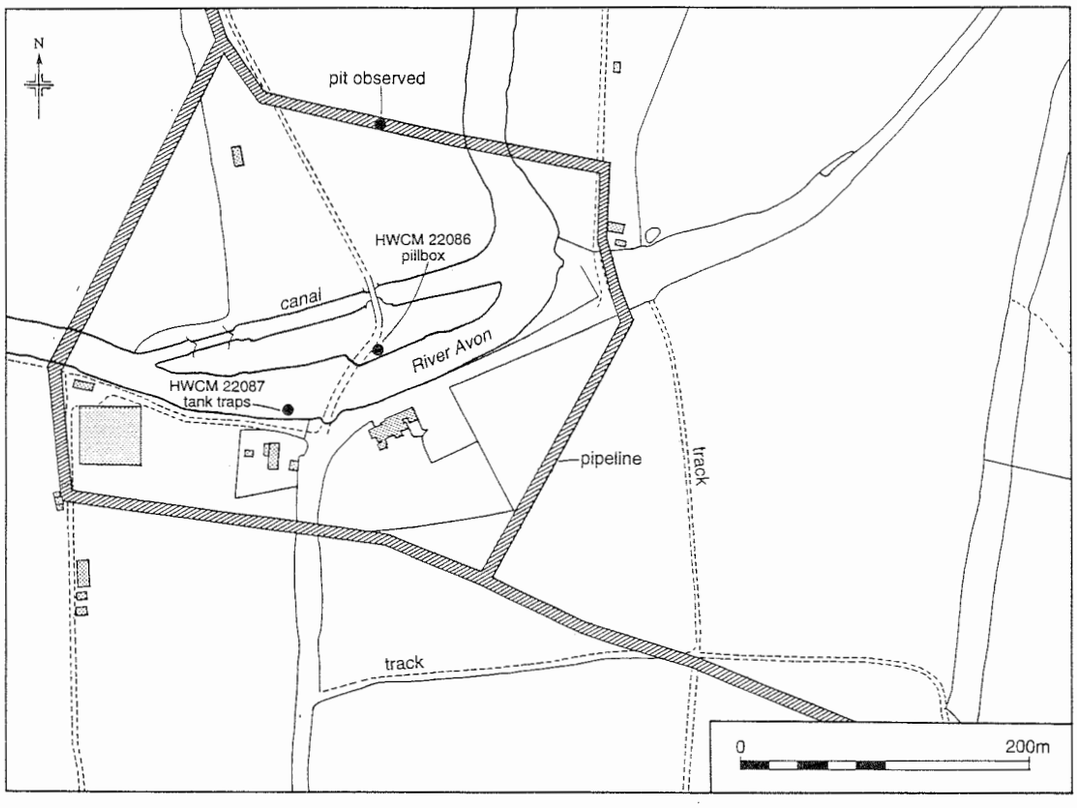


Figure 7: Location of deposits and features by the George Billington Lock

4.2 **Deposits and features near the George Billington Lock** (HWCM 22086, 22087 and 23496; Fig 7)

During works involved in the river crossing for the pipeline at George Billingham Lock a series of deposits were observed in the section of a 1.20m deep pit excavated on the north side of the River Avon (HWCM 23496). The recorded sequence comprised topsoil (context 100), gravelly subsoil (context 101), a mixed subsoil and reddish marl interpreted as a dump (context 102), a dump of coarse sandy clay and gravel (context 103) and lastly a dump of sandy clay with black decayed organic lenses within it (context 104). Undisturbed natural deposits were not observed and no dating evidence was retrieved. Several of these layers may represent dumped dredgings from the river mixed with alluvial material. An environmental sample was taken of one of the layers, however, in the absence of dating evidence it was not considered justifiable to examine this.

To the west of the crossing, and just outside the easement, a Second World War pillbox (HWCM 22086) and associated tank obstacles (HWCM 22087) were recorded. The pillbox lay to the north of the river and was probably located so as to protect the lock and fording point here. It has been identified as being a Type FW3/24 variety (Dobinson 1996, 164 and fig 26) and has been described as being of a "Dorsetshire-type" construction (John Hellis pers comm). Type FW3/24 pillboxes are characterised by being hexagonal, with a long rear wall incorporating a door and two rifle loopholes, and having loopholes for light machine guns on the other five sides and an internal anti-ricochet wall. These were designed to hold a garrison of eight (Figs 8 and 9). The tank obstacles though disturbed (probably by dredging) were clearly associated with the pillbox. Six of these were identified, each being a cylindrical concrete block with a central hole. These were noted scattered to the south of the pillbox and slightly downstream from the ford. Cylindrical tank obstacles were commonly used to block roads and were deployed in groups of three (Dobinson 1996, 151). In this case two groups were probably used to defend the southern approach to the ford, or the ford itself, and would have supplemented the pillbox.

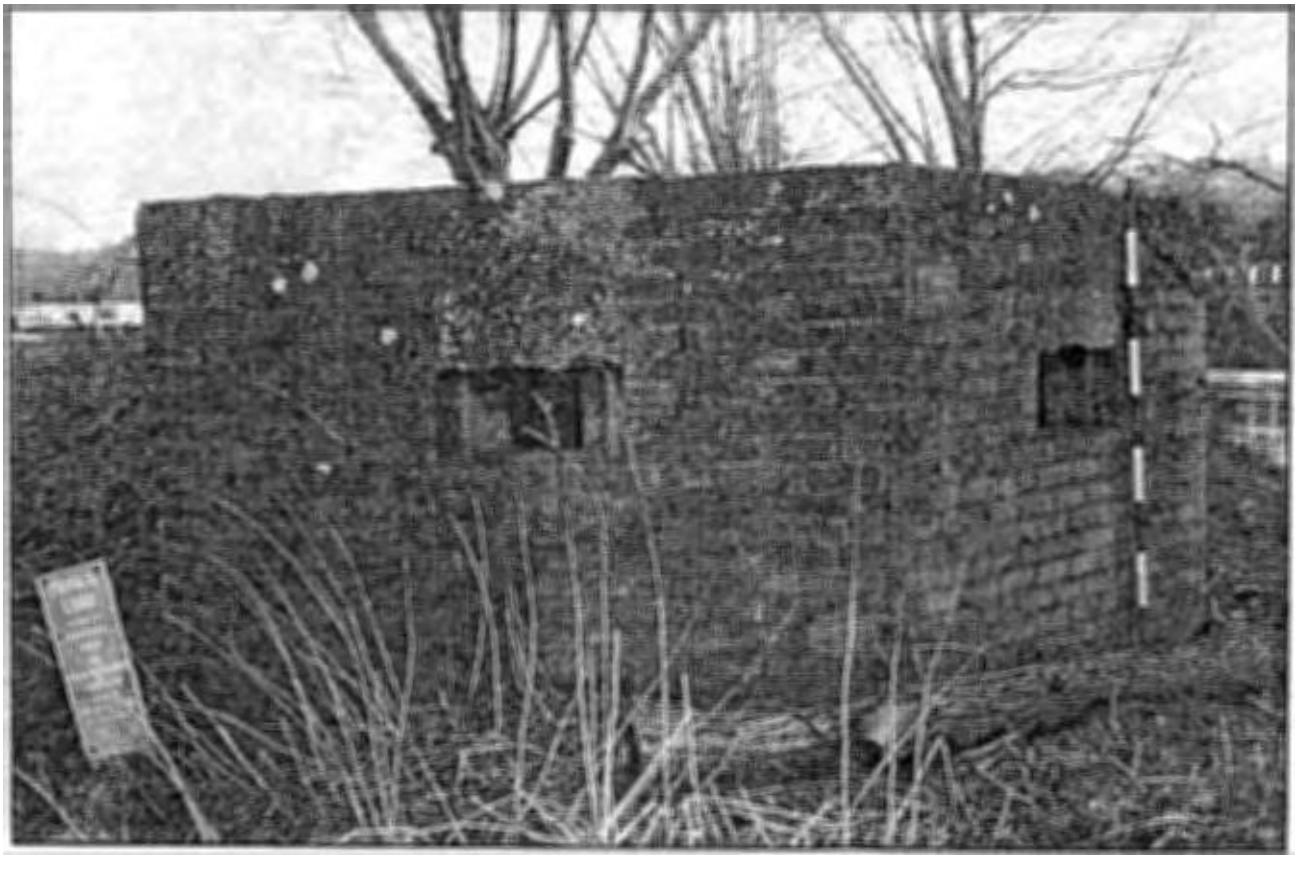


Figure 8: The pillbox

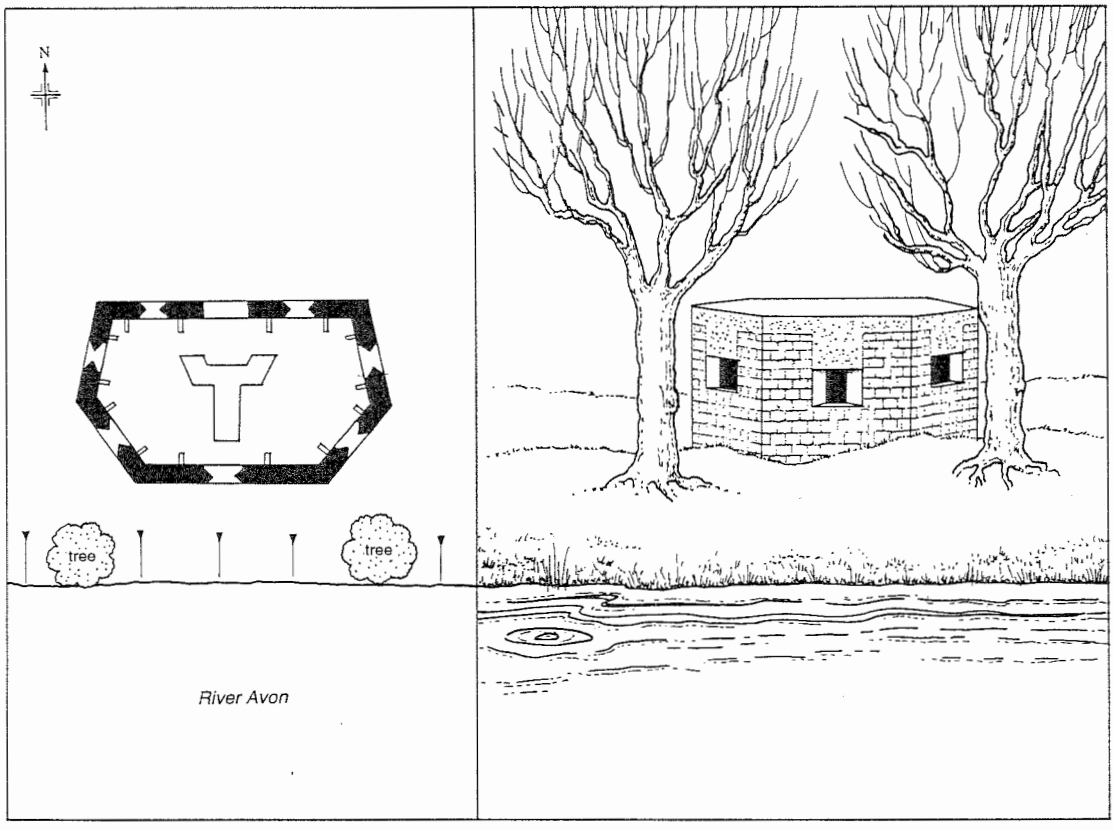


Figure 9: Sketch plan and elevation of pillbox (based on a sketch by Paul Godbehere)

The pillbox and tank obstacles are believed to have formed an element of the anti-invasion defences constructed in the summer of 1940. These would have fallen in the Western Command area and have formed part of one of three main lines of defence (stop-lines) in the region, in this case the Avon line (Dobinson 1996, 124). These features are considered to be of some significance since they formed part of this important regional defensive line. The pillbox may be considered to be of particular interest since pillboxes represent "the prime archaeological type fossil of the Second World War" (Dobinson 1996, 157).

4.3 **Deposits near the Post Office, South Littleton** (HWCM 23500; Fig 10)

A total of 24 sherds of pottery, weighing 322g were recovered from two small box-trenches which were excavated following the recovery of 12 sherds (weighing 270g) during rapid scanning. The trenches (Trenches 1 and 2; Fig 9) measured 1.00 x 0.40 x 0.70m and 2.00 x 0.50 x 0.70m respectively were excavated to test an apparent horizon of buried soil or dumping from which the pottery appeared to have derived. Undisturbed natural deposits were not revealed in either trench, both of which contained a layer of dumping (contexts 101 and 201) overlying a layer of brown charcoal flecked silty loam. Investigation of the latter was not possible due to rising water levels within the trench. Observation of the final pipetrench was similarly limited.

Fifteen sherds (weighing 190g) were recovered from Trench 1. There was a small amount of post-medieval material in the assemblage from this trench, with the majority (by count) of the ceramics dating to the early/late medieval period. In addition, medieval brick and roof tile fragments, were recovered along with a small quantity of bone and shell. Material from Trench 2 was predominately post-medieval with nine sherds of post-medieval pottery and a few fragments of brick.

As a result of these two test trenches, a small quantity of information has been obtained concerning medieval and post-medieval activity in the area. This is believed to result from the dumping of soil and domestic debris perhaps from an adjacent property to the south. The latter can be dated from the early 19th century at least, as it is shown on the 1814 Inclosure map for the Littletons (HWRCO ref BA 307/47 S143/47). The problems of rising water in the trenches may suggest that this had been a silted pond or marshy area onto which material was dumped to consolidate or backfill it. A series of irregular earthworks to the north-east were sketched (Fig 9) and may result from quarrying or possibly represent former occupation though the irregularity of the earthworks argues against the latter option.

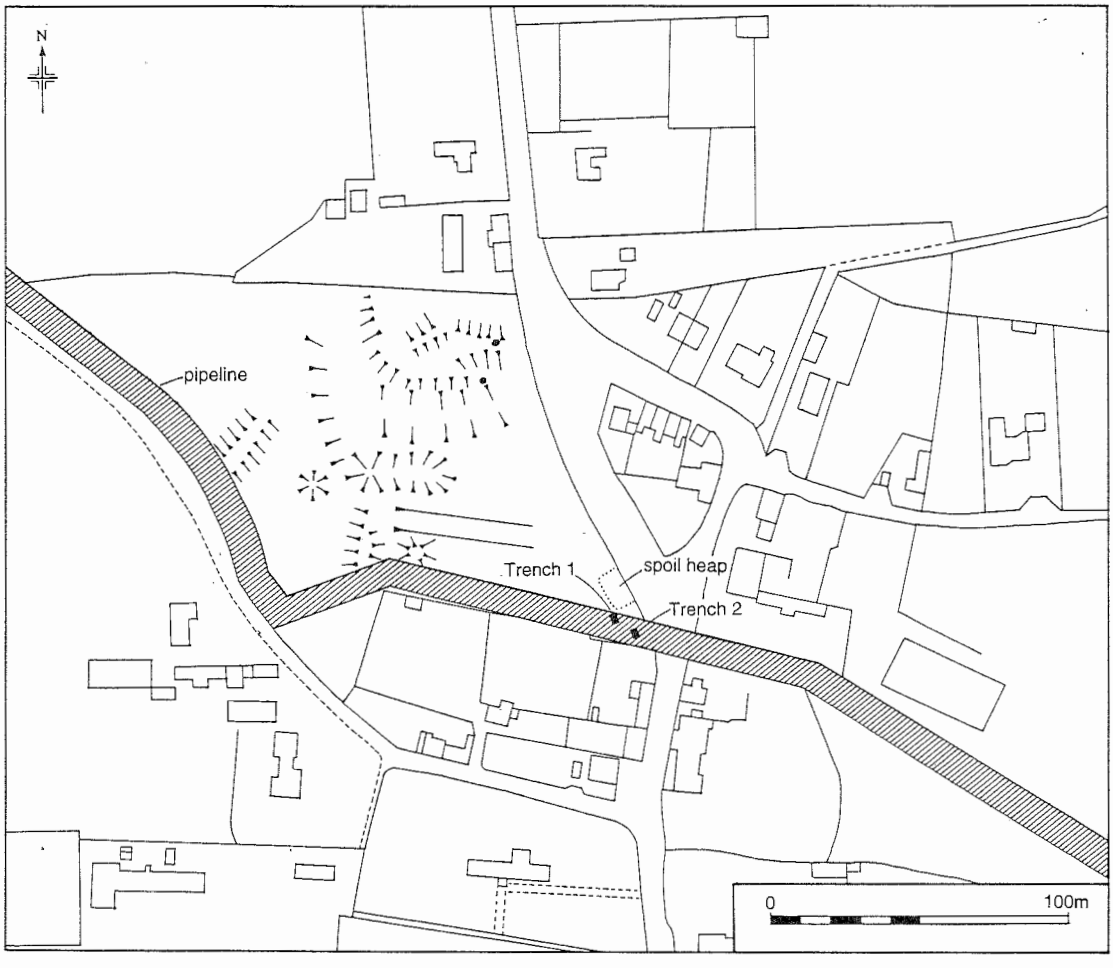


Figure 10: Location of deposits near the Post Office, South Littleton

4.4 The remainder of the pipeline

During rapid scanning of the remainder of the route following topsoil stripping, a small range of material was collected. Sixty-one sherds (weighing 694g) were retrieved and this material was predominately post-medieval in date. It probably reflects manuring scatters within the ploughsoil. This sort of use of ceramic material is quite typical activity in the post-medieval period. Earlier material, including flint and pottery is likley to represent similar activity or stray losses.

5 Conclusions

The project has furthered our understanding of the Roman settlement pattern in this part of the Avon Valley, providing evidence of a previously unknown farmstead near New Farm, Norton (HWCM 23490). Although only an enclosure ditch was identified, the pottery assemblage has further enhanced our understanding of Roman activity and markets of trade and distribution within the area. In conjunction with other artefacts, animal bone and plant remains, all representing domestic waste dumped into the ditch, these have contributed to our understanding of the character and range of activities at this type of site in the County.

Near the George Billingham Lock the recording of a pillbox (HWCM 22086) and tank obstacles (HWCM 22087) have contributed to the ongoing Defence of Britain Project identifying two elements of an important anti-invasion defensive line established along the River Avon in the summer of 1940.

In conjunction with other finds and deposits, including late medieval dumped deposits at South Littleton (HWCM 23500), the project has added to our overall understanding of former activity along the route of the pipeline from the prehistoric to the present day.

6 Acknowledgements

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7 Personnel

The project was coordinated by Robin Jackson, BA AIFA.

Nigel Topping PIFA supervised much of the fieldwork, assisted by Martin Cook BA AIFA, Paul Godbehere and Dave Wichbold. Finds identification and reporting was undertaken by Annette Hancocks MA PIFA. Environmental analysis and reporting was undertaken by Elizabeth Pearson MA. Illustrations for the report were undertaken by Carolyn Hunt and Steve Rigby. The report was edited by Simon Woodiwiss BA AIFA.

8

Bibliography

County Archaeological Service, 1996 *Manual of Service practice: fieldwork recording manual*, HWCC County Archaeological Service internal report, **399**

Dinn, J L, and Hemingway, J A, 1992 Archaeology on the Blackstone to Astley Aqueduct, *Trans Worcestershire Archaeol Soc*, 3 ser, **13**, 105-119

Dobinson, C S, 1996 *Twentieth century fortifications in England, Volume 2: anti-invasion defences of WW2*, Council for British Archaeology

Esmonde Cleary, A S, 1989 *The ending of Roman Britain*

Hart, P, Osgood, R, and Palmer, N, 1991 *Bidford Grange, Bidford-on-Avon, Warwickshire*, Warwickshire County Council, Field Archaeology Section internal report

Hingley, R, 1989 *Rural settlement in Roman Britain*

Hurst, J D, and Rees, H, 1992 Pottery fabrics; a multi-period series for the County of Hereford and Worcester, in *Iron Age and Roman salt production in the medieval town of Droitwich* (ed S G Woodiwiss), 200-9

Jackson, R, and Hancocks, A, 1996 *Salvage recording on the Frankley to Norton Link Main*, HWCC County Archaeological Service internal report, **482**

Jackson, R, Bevan, L, Hurst, J D, and de Rouffignac, C, 1996a Salvage recording on the Trimpley to Blackstone Aqueduct, *Trans Worcestershire Archaeol Soc*, 3 ser, **15**, 93-126

Jackson, R, Hurst, J D, and Pearson, E A, 1996b A Romano-British settlement at Leylandii House Farm, Norton and Lenchwick, *Trans Worcestershire Archaeol Soc*, 3 ser, **15**, 63-72

Jackson, R, Hurst, J D, Pearson, E A, and Ratkai, S, 1996c Salvage recording on the Strensham to Worcester Aqueduct, *Trans Worcestershire Archaeol Soc*, 3 ser, **15**, 1-62

Miles, D, 1989 The Romano-British countryside, in *Research in Roman Britain 1960-89* (ed M Todd), Britannia monograph ser, **11**, 115-26

Peacock, D P S, 1968, Romano-British Pottery in the Malvern District of Worcestershire, *Trans Worcestershire Archaeol Soc*, 3 ser, 1965-7, **1**

Ragg, J M, Beard, G R, George, H, Heaven, F W, Hollis, J M, Jones, R J A, Palmer, R C, Reeve, M J, Robson, J D, and Whitfield, W A D, 1984 *Soils and their use in midland and western England*, Soils survey of England and Wales, **12**

VCH III, Page, W (ed), 1913 *Victoria History of the County of Worcestershire*

Webster, P V, 1976, Severn Valley ware: a preliminary study, *Trans Bristol and Gloucestershire Archaeol Soc*, **94**, 18-46

9 Abbreviations

Numbers prefixed with "HWCM" are the primary reference numbers used by Hereford and Worcester County Sites and Monuments Record.

HWCC - Hereford and Worcester County Council

VCH - Victoria County History

HWCRO - Hereford and Worcester County Record Office

10 The archive

The archive consists of:

17	Context record (AS1)
46	Fieldwork progress records (AS2)
3	Context number catalogue (AS5)
1	Sample record (AS17)
17	Field survey records (A22)
7	Field/route plans (1:2500)
1	Environmental assessment form
2	Bone assessment recording sheets
3	Scale drawings
26	Colour slides
34	Black and white prints
1	Plastic wallet of assorted documents and annotated plans
1	Box of finds
12	Weekly timesheets
2	Defence of Britain Project site report forms

It is intended that all primary records and finds will be deposited at:

Hereford and Worcester County Museum
Hartlebury Castle
Hartlebury
Nr Kidderminster
Worcestershire DY11 7XZ

Tel Hartlebury (01299) 250416

A security copy of the archive will be retained at:

County Archaeological Service
Hereford and Worcester County Council
Tolladine Road
Worcester WR4 9NB

Tel Worcester (01905) 611086

HWCM	23485 R/S		23486 R/S		23490		23490 R/S		23492 R/S		23494 R/S		23496 R/S		23498 R/S B		23498 R/S C		23500		23500 R/S		TOTAL	
FINDTYPE	NO	WT(g)	NO	WT(g)	NO	WT(g)	NO	WT(g)	NO	WT(g)	NO	WT(g)	NO	WT(g)	NO	WT(g)	NO	WT(g)	NO	WT(g)	NO	WT(g)	NO	WT(g)
POTTERY	8	92	1	28	137	2228	27	190	3	26	1	16	2	34	6	36	1	2	24	322	12	270	213	3124
CLAYPIPE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	4	2	6
SLAG	0	0	0	0	2	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	90
TILE	3	74	1	32	0	0	4	394	0	0	2	80	0	0	0	0	0	0	3	308	1	6	10	788
GLASS	0	0	0	0	1	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10
BRICK	1	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	34	7	144	1	8	9	186
BONE	1	212	5	74	62	1720	4	28	0	0	0	0	0	0	0	0	0	0	2	6	6	88	74	1842
FLINT	1	1	0	0	2	6	1	1	0	0	0	0	1	4	2	8	0	0	0	0	0	0	6	19
SHELL	0	0	0	0	3	28	0	0	0	0	0	0	0	0	0	0	0	0	1	8	0	0	4	36
IRON	0	0	0	0	3	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	14
COPPER ALLOY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	1	2
LEAD	0	0	0	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14
FIRED CLAY	6	228	0	0	3	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	14
MISCELLANEOUS	0	0	0	0	0	0	0	0	0	0	1	20	0	0	0	0	0	0	0	0	0	0	1	20
STONE	1	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	21	737	7	134	214	4124	36	613	3	26	4	116	3	38	9	46	2	36	38	790	21	376	330	6165

Table 1: Finds summary

CONTEXT	100		101		103		105		107		TOTAL	
FABRIC	NOSH	WT(g)	NOSH	WT(g)	NOSH	WT(g)	NOSH	WT(g)	NOSH	WT(g)	NOSH	WT(g)
3	0	0	0	0	0	0	1	134	2	30	3	164
4.3	0	0	0	0	0	0	2	16	9	36	11	52
12	6	94	20	232	5	28	17	222	16	124	64	700
12.1	1	32	1	44	0	0	3	38	10	142	15	256
14	0	0	0	0	0	0	0	0	4	112	4	112
17	0	0	2	58	0	0	0	0	0	0	2	58
19	1	38	4	49	1	4	0	0	3	84	9	175
22	2	32	0	0	0	0	11	432	5	96	18	560
23	0	0	1	14	4	96	0	0	0	0	5	110
29	0	0	0	0	0	0	0	0	1	6	1	6
33	0	0	0	0	0	0	1	44	0	0	1	44
43	0	0	0	0	0	0	2	6	1	1	3	7
TOTAL	10	196	28	397	10	128	37	892	51	631	136	2244

Table 2: Proportions of fabrics in ceramic assemblage from HWCM 23490

The plant remains

botanical name	common name	habitat	107
Charred plant remains			
Hordeum vulgare grain	barley	F	1
Cereal sp indet grain	cereal	F	2
Graminae sp indet grain	grasses	AF	5
Galium aparine	cleavers	ABCD	1
Waterlogged plant remains			
Chenopodium album	fat hen	AB	++
Rumex sp	sorrel/dock	ABCDE	+
Mineralised plant remains			
cf *Viola* sp	violet	ABCD	++

Habitat key
A = cultivated ground
B = disturbed ground
C = woodlands, hedgerows and scrub etc
D = grasslands, meadows, and heathland
E = aquatic/wet habitats: ditches, streambanks etc
F = cultivar

Abundance key
+ = 1-10
++ = 11-50
+++ = 51-100
++++= 100+

Table 3: The plant remains from HWCM 23490

HWCM 23490: Environmental remains from wet-sieved sample Sheet1

HWCM	Context	Type	large mammal	frog/td bone	mollusc	charred plant	waterlog plant
23490	107	ditch	occ	occ	abt	occ	mod
Key:							
occ = occasional							
mod = moderate							
abt = abundant							

Table 4: Environmental remains from HWCM 23490

context	weight	preserv	fragmentn	species	part	age	state	data	frags
105	1800	good	3	hor	u limb	juv		age	1
105	1800	good	3	cow	horncor	juv		age	1
105	1800	good	3	cow	head			age	3
105	1800	good	3	cow	u limb		bt		3
105	1800	good	3	cow	l limb				1
105	1800	good	3	l ungul	u limb				1
105	1800	good	3	s mammal	indet				1
105	1800	good	3	indet	indet				11
107	1500	good	3	hor	head		age		1
107	1500	good	3	cow	horncor				2
107	1500	good	3	cow	head	juv		age	2
107	1500	good	3	cow	head			age	4
107	1500	good	3	cow	u limb				2
107	1500	good	3	l ungul	vertebr				6
107	1500	good	3	shp/gt	head			age	1
107	1500	good	3	shp/gt	l limb				1
107	1500	good	3	s ungul	vertebr				3
107	1500	good	3	s ungul	limb				1
107	1500	good	3	ungul	limb				7
107	1500	good	3	indet	head				1
107	1500	good	3	indet	indet				33

Table 5: Hand-collected animal bone from HWCM 23490: summary

Sum of frags	species								
context	hor	cow	shp/gt	l ungul	s ungul	ungul	s mammal	indet	Grand Total
105	1	8	0	1	0	0	1	11	22
107	1	10	2	6	4	7	0	34	64
Grand Total	2	18	2	7	4	7	1	45	86

Table 6: Hand-collected animal bone from HWCM 23490: species distribution

Sum of frags	part							
context	horncor	head	vertebr	u limb	l limb	limb	indet	Grand Total
105	1	3	0	5	1	0	12	22
107	2	9	9	2	1	8	33	64
Grand Total	3	12	9	7	2	8	45	86

Table 7: Hand-collected animal bone from HWCM 23490: anatomical part distribution