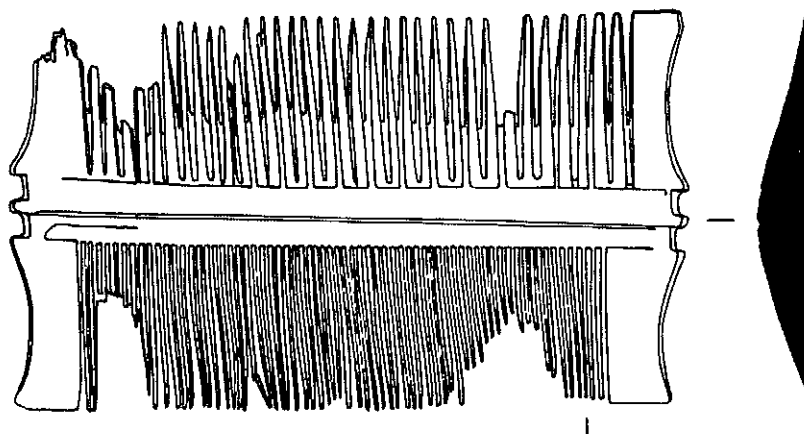


Archaeological investigations of the
Alcester Flood Alleviation Scheme
Area 3B, Newport Drive and Willow Close,
2002

Post-excavation assessment and proposal
for detailed analysis and reporting

SWA 21962

EWA 9105



Report 0744
May 2008

Archaeological investigations of the Alcester Flood Alleviation Scheme Area 3B, Newport Drive and Willow Close, 2002

Post-excavation assessment and proposal for detailed analysis and reporting

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Report 0744

May 2008

Warwickshire Museum Field Services

The Butts

Warwick

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Summary

This report comprises an assessment of the archaeological excavations carried out by Warwickshire Museum ahead of the Alcester Flood Alleviation Scheme by the Environment Agency at Newport Drive and Willow Close, Alcester. The archaeological work involved the excavation of Romano-British features on edge of the Roman town.

The gravel surfaces of a Roman road were revealed, with an associated drainage ditch. Further compact gravel surfaces adjacent to the road may have been a yard. Several postholes cutting the road may have been part of a later timber structure, but no substantial buildings were found on the site.

A large part of the site was probably used for industrial activities, and large quantities of metalworking slag show that one such activity may have been iron working. A stone-lined structure, likely to be of Roman date, had no direct evidence of its function, but was probably an oven rather than a kiln for pottery firing or for use in metalworking.

A well in the southern corner of the site was stone-lined and at least 2.2m deep. Its fills contained Roman pottery and waterlogged material including a leather sandal and a wooden comb. A second deep pit, possibly originally a well, contained two complete samian vessels, a writing tablet fragment and parts of at least two other leather sandals or shoes.

Four ditches were excavated. These may have marked property boundaries, and one possibly the limit of a nearby Roman cemetery area as two burials were revealed in the upper fills of one ditch. One adult female and an adolescent appear to have been buried in coffins in adjacent graves.

A large assemblage of Roman pottery was recovered, including a large quantity of samian ware comparable to that from a civitas capital rather than a small town. This important new evidence may suggest a significantly higher status and economic level for Alcester than previously thought. Waterlogged deposits yielded rare remains of leather shoes, a wooden comb and part of a wooden writing tablet. A significant metalwork assemblage included 47 Roman coins, brooches and an unusual copper alloy miniature axe. The animal bone is particularly important because previous excavations in this part of the town only recovered limited samples which did not permit meaningful analysis to take place. Environmental evidence included waterlogged deposits from which pollen and insect remains were recovered; again these are a rare and important find from the town, which should help clarify the nature of occupation on its periphery. Many finds came from an extensive layer overlying earlier features, suggesting a change in occupation and use of the area.

The assessment proposes that a report on the site should be published in *Transactions of the Birmingham and Warwickshire Archaeological Society*. As well as a description of the features excavated, this would include full analysis and illustration of the Roman pottery and the waterlogged environmental material, and illustrated reports on the significant metalwork and other finds. The results of the detailed analyses will be drawn together to review the activities carried out on the site itself, and their implications for the wider study of the town and its socio-economic position within Roman Britain. A detailed costed proposal is provided.

1. Introduction

1.1 The Alcester Flood Alleviation Scheme

1.1.1 The Alcester Flood Alleviation Scheme was proposed by the Environment Agency to improve and extend existing flood defences at a number of locations around the town of Alcester, Warwickshire, and increase protection for low lying areas likely to be affected by high water levels in the River Arrow. The proposals included increasing the height of existing flood banks north of School Road, similar work north and south of Stratford Road, and the construction of new defences at Willow Close and Newport Drive (Fig. 1, Areas 1-4).

1.1.2 As the works lie within areas of archaeological significance, including parts of the Roman settlement of Alcester (Fig. 1, Warwickshire Historic Environment Record WA 4495) and medieval Alcester Abbey (not on plan), it was recommended that a programme of archaeological work was undertaken to record any archaeological remains revealed or likely to be disturbed. Parts of the scheme were within the limits of a Scheduled Ancient Monument (SAM Warwickshire 128, Alcester Roman Town) and therefore required Scheduled Monument Consent.

1.1.3 Following consultation with Warwickshire County Council the Environment Agency agreed to fund the recommended archaeological mitigation strategy. The archaeological fieldwork programme was commissioned by the Environment Agency, and carried out by Warwickshire Museum Field Archaeology Projects Group in 2001-2003.

1.1.4 The various Flood Alleviation sites are listed in Table 1. The results of fieldwork from each archaeological site (as grouped by site code) are covered by separate reports (Warwickshire Museum 2001, 2006a, 2006b). Areas 1-3A and 4 revealed limited remains that did not necessitate detailed reporting.

Table 1 List of Alcester Flood Alleviation Scheme archaeological areas

Site Code	Site Name	Area	SAM	Grid Reference
AL71	Oversley Bridge desilting	1		SP 0932 5698
AL71	Colebrook Close/Gashouse Lane	2	128	SP 093 574
AL71	South of Stratford Road	3A	128	SP 092 579
AL80	Newport Drive / Willow Close	3B		SP 0887 5687
AL87	North of School Road	4		SP 0891 5775

1.2 Scope of this assessment and archaeological background

1.2.1 This post-excavation assessment report concerns the archaeological investigations located at Newport Drive and Willow Close, Alcester, Area 3B (Table 1, Warwickshire Museum site code AL80). Archaeological fieldwork in this area was necessitated by the construction of new flood defence banks and a wall, involving topsoil stripping and excavation for the wall foundations.

1.2.2 The site is on the southern edge of the Roman town, to the east of a major Roman road known as Ryknild Street, immediately to the south of a large area archaeologically investigated in the 1960s in advance of housing development (Mahany, 1994; Cracknell and Mahany 1994). Roman finds from this and other work include (Fig. 2):

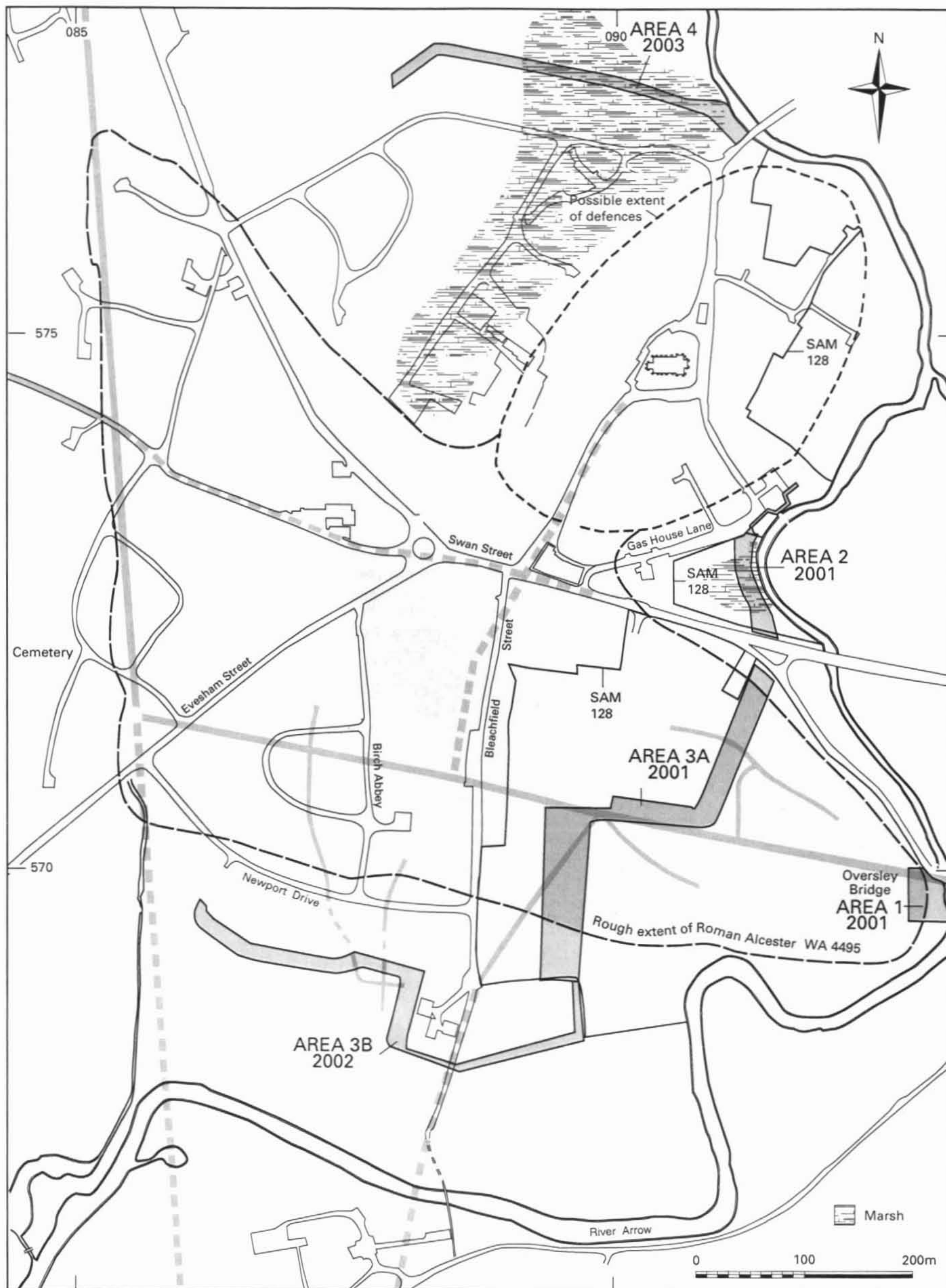


Fig. 1: Location of Alcester Flood Alleviation Scheme work and archaeological areas

<i>HER Ref</i>	<i>Description</i>
WA 443	Human remains
WA 445	Ryknield Street
WA 447	Possible cemetery (though now thought to be unlikely)
WA 449	Large ?boundary ditch
WA 450	Street in the Roman town
WA 451	Street in Roman town
WA 525	Buildings, streets etc. known from cropmarks and geophysics
WA 3881	Findspot - two Roman brooches
WA 3966	Findspot - Roman coin
WA 3981	Findspot - Roman coin
WA 4473	Buildings etc.
WA 4474	Ditches, pits etc.
WA 4475	Buildings, ditches etc.
WA 6730	Enclosure known from cropmarks

1.2.3 The agreed programme of archaeological work consisted of initial site stripping under archaeological supervision, followed by targeted observation and recording (Area A) and an area excavation (Area B; Fig 3). The fieldwork was undertaken between May 2002 and September 2002.

1.3 Organisation of the Report

1.3.1 This report briefly sets out the results of the fieldwork, assesses the potential for further analysis and proposes an updated project design for a programme of analysis leading to the production of a published report and the preparation of a research archive. The original research aims are set out in section 2.

1.3.2 Sections 3 and 4 summarise the results of excavation and post-excavation work carried out to date and its provisional conclusions. Sections 5 and 6 discuss how further work on the data can meet the research aims of the project. The proposed analysis and publication report are discussed in sections 7, 8 and 9.

2. Original research aims

2.1 The broad aims of the project were to record any significant archaeological remains or finds which would be damaged or disturbed within the footprint of the proposed flood defences, prior to the construction of the flood bank and wall. The initial observation of the topsoil stripping was followed by archaeological excavation and recording as appropriate.

3. Interim statement on the results of the fieldwork

Introduction

3.1 The site was divided into two areas (Fig. 2). Area A was a trench c.120m long and 2m wide located to the south of properties on Newport Drive. Area B, c.50m x 8m in extent, was located on the western side of Willow Close in open pasture land and lies close to the western limit of one of the areas comprising Scheduled Monument 128. In general the archaeological sequence recorded was relatively simple and no deeply stratified deposits were encountered.

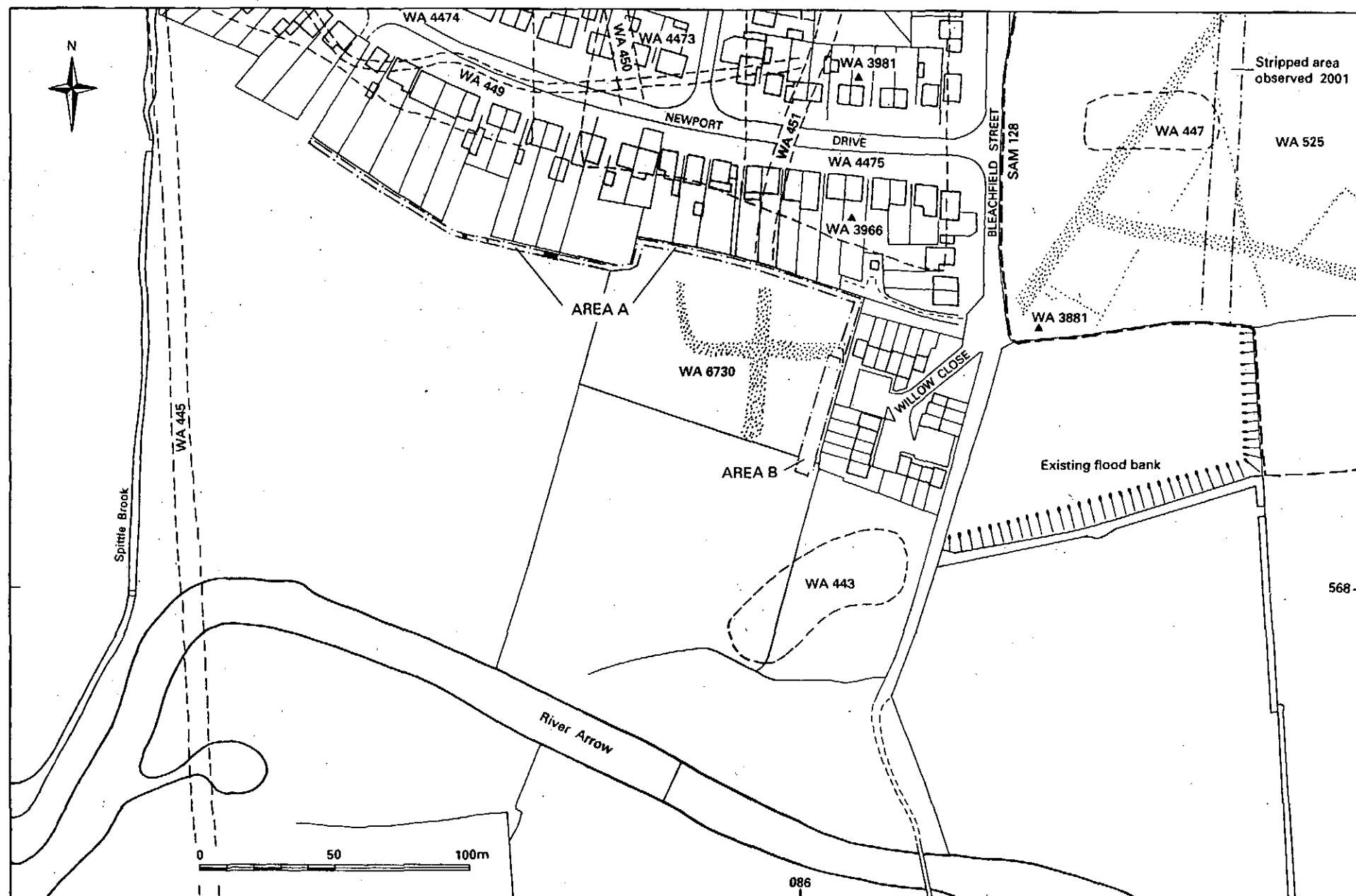


Fig. 2: Alcester Flood Alleviation Scheme, Archaeological Area 3B: Areas A and B, location

Area A

3.2 The line of the new flood wall was stripped of topsoil under archaeological supervision by a 360° excavator using a 2m wide ditching bucket (Fig 2).

3.3 Three ditches running approximately north to south were revealed, along with a single small pit or post hole and another pit or gully which was only visible in section. All are likely to have been Roman in date. A short section of stone wall at the eastern end of the trench, and only partially within it, may have been Roman.

Area B

3.4 The footprint of the proposed flood bank was initially stripped of topsoil under archaeological supervision by a 360° excavator using a 2m wide ditching bucket (Fig. 3).

3.5 An east-west aligned road with an associated drainage ditch was revealed at the northern end of the site (Fig. 4). This was part of the road system of the southern part of the Roman town, visible on air photographs. Further Roman ditches, probably property boundaries and drainage ditches, were also revealed, one of which contained waterlogged deposits (113, Fig. 5A).

3.6 A stone-lined feature (103), probably an oven and likely to be Roman, was excavated towards the centre of the site. Its exact function is not yet clear. A stone-lined well (117) was found at the southern end of the site. It contained waterlogged deposits from which a wooden comb (cover) and leather sandal fragments were recovered. A large pit (158, Fig. 5B) also contained waterlogged deposits, and a fragment of a wooden writing tablet and several leather sandal fragments with hobnails were recovered from it. It is possible that the feature may have originally been a well with a timber lining.

3.7 Two inhumations, one adult and one adolescent (107, 147), were found in the upper fills of an east-west running ditch (113). They appeared to have been buried in coffins, and also included evidence of hobnailed shoes or sandals.

3.8 The site yielded a large quantity of Roman pottery and industrial debris, including metalworking slag and cattle horn cores, much of which came from an extensive layer (102) overlying the majority of the recorded features, probably indicating the dumping of waste material on the edge of the town.

3.9 The waterlogged deposits in the large pit and well, and the extensive dump layer (102) are particularly significant. The former contained well preserved organic remains with the potential to provide information regarding the usage and surrounding environment of the site, which being on the periphery of the town could indicate contrasts in activity with the main occupation areas. The latter seems to suggest a change in use or abandonment of occupation on the site, which is important to understand in the context of the development of the Roman town. It contained a large quantity of finds, particularly pottery, which should help date this change, and also provide a significant assemblage to contrast with others from elsewhere in the town.

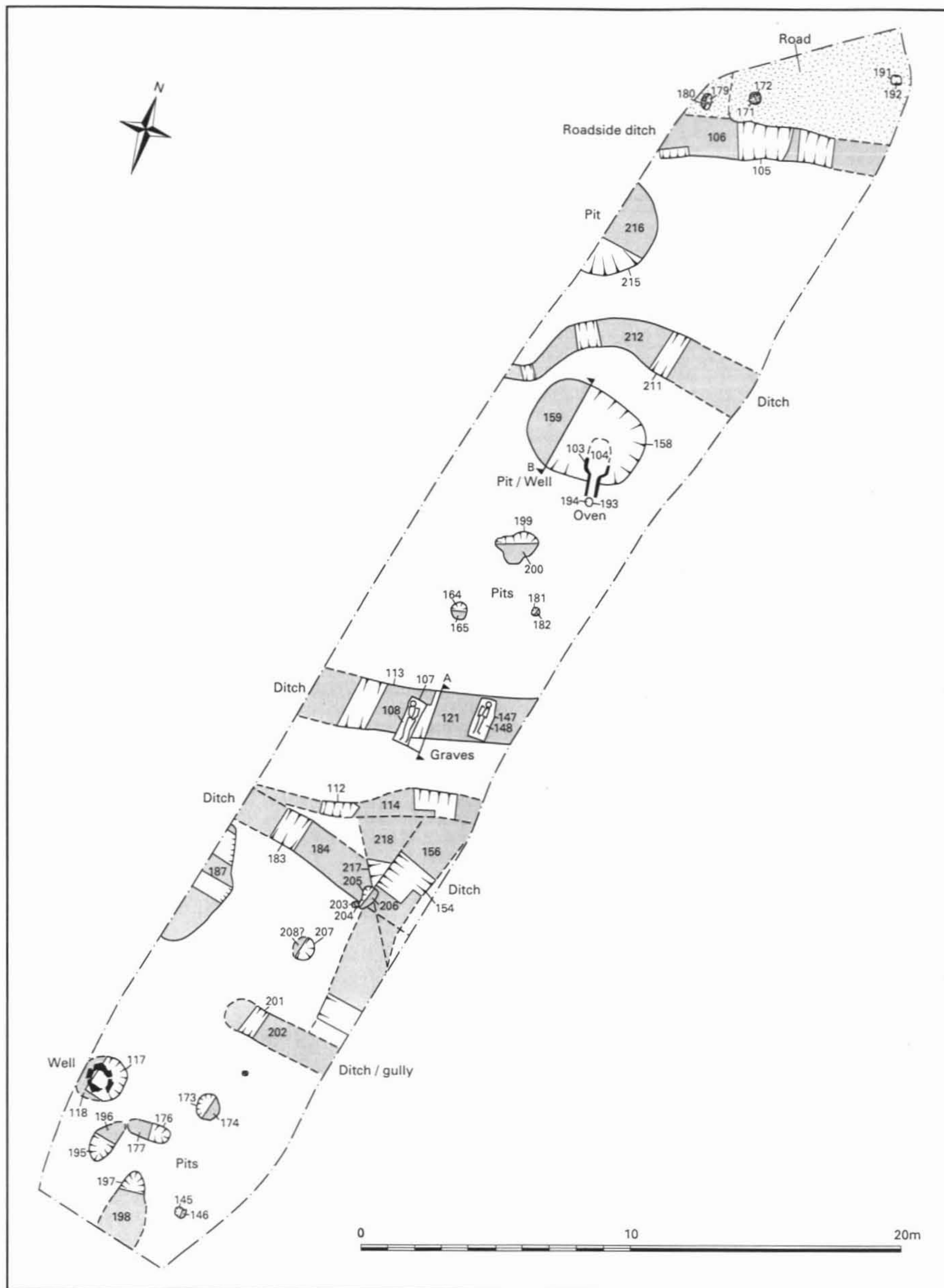


Fig. 3: Area B, plan



Fig 4: Area B, road surface and roadside ditch

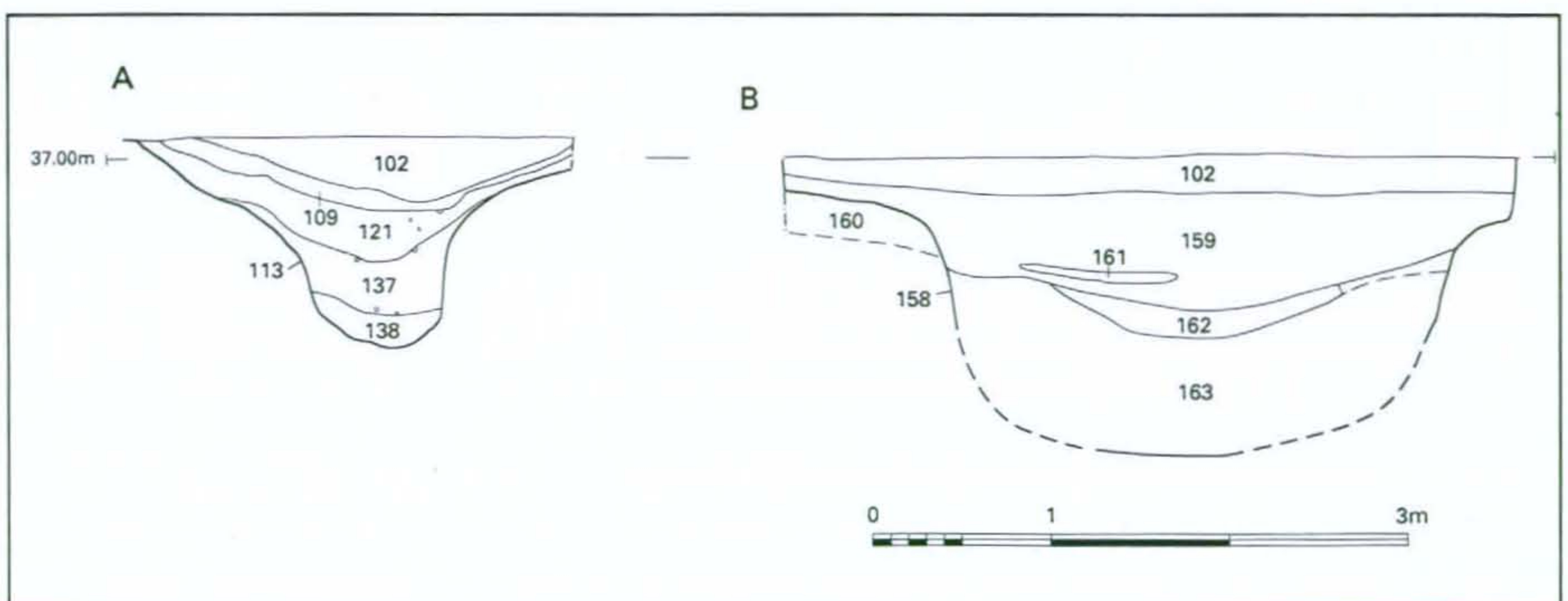


Fig 5: Sections

4. Summary of the site archive and specialist assessment reports

4.1 Archaeological sequence

4.1.1 During the fieldwork including both the main excavation and observation, the individual deposits, cuts, skeletons and masonry were given a unique context number from a single project sequence. This number, with the Warwickshire Museum site code, forms a unique reference number. All work on the site was carried out under the site code AL80. A list of recorded contexts from the project is given in Appendix A.

4.2 Site records for AL80

4.2.1 The site records are summarised below. The archaeological finds are quantified and listed in Appendix B.

Context sheets	total	158
Site plans	total	12
Site sections	total	31
Black & white photographs	total	c.140
Colour photographs	total	128
Digital images	total	45

4.2.2 All the site archive records have been checked and filed in numerical order. A computerised index of the context, plan and section numbers has been compiled.

4.3 Specialist assessment reports

4.3.1 The artefact assemblages and environmental material from the site were assessed either in-house or by external contractors. The more extensive and significant were the subject of full assessment reports; the remainder a shorter appraisal.

4.3.2 Summaries of the assessment reports, the appraisal reports, and recommendations for further work are included below. The full assessment reports and recommendations are provided in Appendices C-F.

Pottery

4.3.3 The pottery assemblage contained approximately 5,500 sherds, of which c.1,800 were from an extensive Roman layer in Area B (102), probably representing waste dumping and sealing most of the features. The assessment was carried out by Dr Jerry Evans (Appendix C), whose comments and proposals are summarised below.

4.3.4 The assemblage provides another substantial group from Roman Alcester, mainly of 3rd- to early 4th-century date. Groups of this date have come from the defended area of the town, but material of this date from the extra-mural area is much scarcer. There is some material from the 'Explosion Site', 1-5 Bleachfield Street, close to the southern edge of the defended area, but the Baromix sites slightly further south have relatively little late material. Mahany's excavations in the 1960s were selectively sampled and did not produce a representative assemblage (Booth and Evans 2001).

4.3.5 The pottery evidence is essential to the dating of the site sequence, and in particular should help date the significant change suggested by the extensive dump layer (102). It has the potential to provide information about

the function of the site through a series of ceramic indicators which are quite sensitive markers of site type. The ceramic evidence will also provide quantified evidence of supply to this part of the town, particularly in the 3rd century, which can be compared with that from 1-5 Bleachfield Street and the defended area. The samian ware includes some complete items and forms a notably high proportion of the total assemblage, well above that which would be expected from a small town and comparable with that from a *civitas* capital. The bulk of it appears to be relatively late in date. It therefore has the potential to provide significant new information regarding the status of the town, particularly in comparison with other Romano-British urban centres.

4.3.6 The site samian ware will be reported on in full (by a specialist subcontractor to be agreed) for its chronological information about the site, and for comparison with other sites in Alcester and other urban centres. The stratified coarsewares from early Roman phases will only be recorded in terms of the dating evidence they will provide to the sequence. Comment will be obtained from a specialist on the mortaria stamp.

4.3.7 The pottery from the later Roman phases will be recorded by sherd numbers, weight, RE and minimum numbers of rims for form and fabric following the Warwickshire Museum fabric type series and recording system. Full determination to exact fabric will only be performed on rimsherds, with bodysherds and bases only being recorded to fabric class. This will capture the maximum information from this relatively large group for the least work. The material will be illustrated most economically by a fabric and form type series, although where possible all the stamped mortaria should be illustrated also for form. In the region of 350 examples will be illustrated, plus 30 examples of samian.

Coins

4.3.8 The site produced an assemblage of 47 coins, mainly Roman, but few were from closed contexts. Most were collected using a metal detector from either topsoil/recently redeposited contexts or the extensive dump layer 102. The assemblage has been cleaned and conserved by Barbara Clayton (Shakespeare Birthplace Trust) and inspected by Dr Melinda Mays.

4.3.9 The coins represent a significant group, and it is proposed that they will be identified and a catalogue prepared for publication by Dr Mays. Any unusual or particularly significant individual specimens will be highlighted.

Other metalwork

4.3.10 Excluding modern items, the site produced 29 copper alloy objects, 43 lead objects and 23 iron objects. The copper alloy objects have been cleaned and conserved by Barbara Clayton (Shakespeare Birthplace Trust). The iron objects, except for those initially identified as nails or hobnails, will be X-rayed prior to dispatch for specialist study.

4.3.11 A formal assessment of the metal objects has not been carried out. As relatively few of the finds are from closed contexts, and some were collected by metal detector, it is considered more cost-effective to record the material and prepare an appropriate report for publication without an initial assessment phase. The copper alloy assemblage contains a number of intrinsically important and interesting items, including a model axe, a number of brooches, part of a small steelyard, and a brooch or handle with traces of enamelling. Lead items include weights and a small ingot.

4.3.12 Data has been provided to Quita Mould, on the basis of which she proposes the following:

- Identification of iron objects (other than nails/hobnails) from initial X-ray images (additional images to be taken as required).
- Objects thought to be nails/hobnails to be X-rayed where identification cannot be readily confirmed by visual inspection.
- Preparation of a basic record of the material as defined by the Roman Finds Group (RFG & FRG 1993).
- Material will be summarised by feature, with the emphasis on finds closed contexts (pits, wells, burials).
- Objects illustrated (anticipated c.15 copper alloy and c.12 lead) will be accompanied by a catalogue entry in the publication text.

Table 2: Summary of metalwork finds

AL80	Cu alloy	Lead	Iron Objects	Iron Nails
Total	30	43	28	147*

* plus hobnails at feet of inhumation 111, and coffin nails found with inhumation 150

Leather

4.3.13 Two leather shoes and a quantity of leather fragments were recovered from waterlogged contexts. Identification and reporting will be by Quita Mould, as for metalwork. The shoes will be illustrated.

Glass

4.3.14 The glass assemblage consists of two significant objects, a ring and an almost complete bottle, plus 39 fragments. Approximately half the fragments and the ring were from recently redeposited contexts or the extensive Roman layer 102. No formal assessment has been carried out. Relevant data has been passed to Dr. Hilary Cool, on the basis of which she proposes a short report identifying the material as far as possible to type and date, with brief notes on comparable material where significant. It is anticipated that the bottle and the ring will be illustrated.

Wooden objects

4.3.15 Two Roman wooden artefacts were recovered from waterlogged deposits in the well, a comb and a fragment of writing tablet. The objects have been conserved by Graham Morgan of Leicester University.

4.3.16 The comb is an unusual and significant object, as most known examples are made of bone. It will be sent to Quita Mould for reporting, including identification of parallels, as for metalwork, after identification of the wood species by Jacqui Watson (English Heritage).



Fig. 6: Fragment of writing tablet

4.3.17 The writing tablet fragment (Fig 6) is an unusual object in the context of a small town, and provides evidence of literacy in Alcester otherwise indicated only by occasional finds of styli. It has been examined by Warwickshire Museum staff, and photographs have been sent to Dr Alan Bowman (Brasenose College, Oxford). There is no visible evidence of stylus scratches on the surface, indicating that either it has not been used, or the stylus did not penetrate the wax with which it would have been coated in use. Dr Bowman comments that this is neither unique nor surprising. A short note based on this section, with the addition of wood species identification by Jacqui Watson, dimension data and the drawing, will be prepared for publication.

Fired clay/daub

4.3.18 The site produced 108 fragments of fired clay/daub, of which 39 were from the extensive Roman layer (102) and the remainder from ditch fills.

4.3.19 The assemblage was assessed by Jerry Evans as part of the pottery assessment (Appendix C). The material does not appear to be from a pottery kiln or metalworking furnace. There are numerous flat pieces and indications of a wooden frame, perhaps suggesting some sort of oven.

4.3.20 It is proposed to include a short section based on this assessment in the published report, illustrated by a maximum of four fragments showing evidence for the wooden structure.

Ceramic building material (CBM)

4.3.21 The CBM assemblage consists of 253 tile fragments, of which 7 fragments were from recent topsoil or redeposited material, and 104 from the extensive Roman layer 102.

4.3.22 It is proposed to identify the tile to type (imbrex, tegula etc.), quantified by count and weight. Significant dimensions will be noted where

possible. A short report will be prepared summarising the data, highlighting any unusual aspects of the assemblage. In view of the small size of the assemblage more detailed analysis is not considered worthwhile. Any significant unusual features will be illustrated, although none have been identified thus far.

Stone

4.3.23 Four quern fragments were recovered from the site, two unstratified and two from the extensive dump layer 102 (the largest broken into two during excavation). The stone will be identified by John Radley and a short report identifying the type of quern and drawing parallels with other Alcester querns will be prepared by Caroline Rann. The large fragment, from which the overall diameter and that of the spindle hole can be calculated, and which shows wear patterns and the complete cross-section, will be illustrated.

Slag

4.3.24 The excavation produced an assemblage of 68 fragments of slag of which, unusually, only a small proportion was from recently disturbed contexts or the extensive Roman layer 102. A full assessment has not been carried out, but details of the assemblage have been passed to Luke Barber who proposes to identify the material to type and quantify the assemblage for archive, and prepare a short section of indicatively 200-300 words in length summarising its nature and size for the publication.

Miscellaneous non-Roman Finds

4.3.25 Small quantities of other finds were recovered, tabulated below. The flint was identified by Stuart Palmer and the clay pipe by Nicholas Palmer.

4.3.26 Table 3 will be included in the published report. The periods represented are not relevant to the main body of evidence from the site and no further work is proposed.

Table 3: Miscellaneous non-Roman finds

Type	Quantity	Context	Description
Flint	1	114 (SF 61)	Flake. Probably Neolithic, possibly Bronze Age. Unretouched. Very dark greyish brown colour with small area of cortex.
Clay pipe bowls	1	1	Bulbous bowl with stunted spur. Oswald (1975) type G17 (1640-70).
	1	2	Small bulbous bowl with splayed base. Small off-centre 'wheel' stamp on base. Oswald type By2b (1660-80). Wheel stamps are occasionally found on Broseley pipes c.1650-80 (Oswald 1975, 63).
Worked bone	1	101 (SF 27)	post-medieval/modern domino.

Human bone

4.3.27 The human bone, from two inhumations with a few fragments of possible cremated bone, was in relatively poor condition. No formal assessment has been carried out, but details of the assemblage have been discussed with Jacqueline McKinley (Wessex Archaeology).

4.3.28 A report will be prepared for the publication identifying the skeletons to age and sex, with basic dimensions and notes on any pathology observed. Fuller metrical data will be listed for archive as appropriate.

Animal bone

4.3.29 Details of the animal bone assemblage, along with details of other recently published animal bone assemblages from Alcester, has been sent to Sheila Hamilton-Dyer for comment, although no formal assessment has been carried out. The animal bone from the adjacent excavations carried out in the 1960s has not been published in detail because of the inadequacy of both the original selective sampling and the surviving records (Cracknell and Mahany 1994, 211). The present assemblage therefore provides a rare opportunity to compare a reasonable sized assemblage from an extra-mural site on the edge of Roman Alcester with the intra-mural sites at Gateway supermarket and Gas House Lane (Hamilton 1996), and the extra-mural but more central site at Bleachfield Street (Maltby 2001).

4.3.30 On the basis of this the following analysis is proposed by Ms Hamilton-Dyer: full recording of the animal bone specimens, to include where appropriate: species; anatomy; butchery and other modifications; ageing data; metrics; pathology; individual condition; context condition. The archive data will be held on a Microsoft Access database, with tables on Microsoft Excel spreadsheets.

4.3.31 The report for publication will aim to address the following: identification of disposal patterns (industrial, domestic, mixed, etc.); comparison with previous faunal analysis on material from Alcester and recent work on Roman material in a wider context; any other relevant factors identified during the analysis.

Shell

4.3.32 Six fragments of oyster shell were recovered from context 136, the lowest fill of the well. Oysters have been found from other Romano-British sites in Alcester, including examples from the fills of wells (Maltby 2001, 290), and their presence is not unusual. The small quantity from the present site does not add significant new information. These have been listed for archive and no further work is proposed. A short note based on this section will be included in the published report.

Charred plant remains

4.3.33 The charred plant remains were assessed by Pamela Grinter. The full assessment and recommendations are presented in Appendix D.

4.3.34 Charred material was recovered from samples 7/1, 104/1, 104/2, 156/1, 221/1 and 136/1. Sample 136/1 was taken as waterlogged (see also below, *Waterlogged plant remains*), of which a sub-sample was processed by flotation, and uncharred material was also noted along with the charred

remains. Sample 7/1 also contained uncharred remains; this was not taken as a waterlogged sample, and their presence suggests there may be intrusive modern material.

4.3.35 The charred plant assemblage is limited in size, and consists of a few wheat and barley grains together with a small quantity of crop processing waste in the form of spelt chaff. The uncharred plant remains contained species from rough/waste ground, those associated with wet-ground, a few species from more open habitats, these included a fragment of hazelnut shell (*Corylus avellana* L.) dock (*Rumex* sp.), buttercups (*Ranunculus* sp.) bramble (*Rubus fruticosus* L.), elder (*Sambucus nigra* L.), stinging nettle (*Urtica dioica* L.) and goosefoots (*Chenopodium* spp).

4.3.36 The cereal grains and clearly represent crop harvesting or processing activities which may have taken place nearby and have been incorporated within the contents of the features, although there is no evidence from the samples taken for large-scale cereal processing on site. It is not recommended that any further work is undertaken to analyse the charred plant remains.

Waterlogged plant remains

4.3.37 Samples from a pit, a ditch and a well were assessed for waterlogged plant remains by James Greig:

Well 117 (2nd- to 4th-century): 136/1

Ditch 113 (2nd- to 4th-century): 138/1 (Fig 5, section A)

Pit 158 (late 1st- to 2nd-century): 159/2, 162/1, 163/1 (Fig 5, section B)

In addition, sub-samples from 136/1 and 138/1 were assessed for pollen. The full assessment is presented in Appendix E.

4.3.38 The three samples from pit 158 contained plenty of seeds, and the floras represented are generally rather similar. All contained charred and waterlogged cereal remains, which look like waste from cereal processing. A few weeds were also present. Roman sites have often shown signs of such a flora (Greig 1988), which suggests that in an occupied areas such as the surroundings of Alcester, there were both cultivated plots of land and also ones which were let go to weeds. A number of grassland plants provide evidence of either local grassland or the remains of hay from meadows, and there are a few wetland plants.

4.3.39 The pollen and seeds from ditch 113 also have charred cereal grain, probable spelt chaff and associated weeds such as *Bromus* (brome grass), together with a cereal pollen record. The main indication is that of being overgrown with tall weeds such as nettles and hemlock. The sample also contained fragments of wood and wood charcoal, buds and a pollen grain of willow, a few annual weeds and grassland plants. The pollen slide also had parasite ova of roundworm and whipworm which suggest that the deposit contained faeces.

4.3.40 The remains from well 117 were generally similar to those from the pit fill and the ditch already described. A fish scale was present, maybe from waste or bird droppings.

4.3.41 The plant remains from Roman wells at Tiddington and Mancetter (Warwickshire), Droitwich (Worcestershire) as well as other sites in Alcester have similarities to these results. Although examination of more material from

the remaining samples may find other evidence which was not present in this assessment, such as further cultivated plants, the results to date suggest that this would be unlikely to change the overall picture. These results have subsequently been reviewed in relation to the question of the origin of the fills of pit 158 raised by the results of the insect analysis (section 4.3.47 below), and it is considered that the evidence from this assessment is sufficient to confirm that the pit fills are unlikely to be derived from washed-in material. It is therefore proposed that no further analysis be carried out. The publication report will be based on an edited version of the full assessment (Appendix E).

Waterlogged insect remains

4.3.42 Samples from one feature (large Roman pit 158) contained waterlogged material with good potential for the preservation of insect remains. Two contexts (159 and 162) from this were assessed by David Smith to examine if further work on the insect fauna present is needed. The full assessment and recommendations are presented in Appendix F.

4.3.43 Both of the insect faunas recovered are relatively well preserved, and both samples produced relatively large assemblages that are clearly interpretable.

4.3.44 The faunas of both samples are dominated by a range of species that indicate the presence of the dung of large grazing herbivores, such as dung beetles and pill beetles. Also present are a number of species that appear to often be present in stabling matter in the archaeological record (Hall and Kenward 1997). There are also indications that the local area contained rough ground and/or grasslands, suggested by the presence of a number of species, such as *Sitona spp.*, that are associated with clover (*Trifolium spp.*) and other plants from this environment. An alternative is that these may have been incorporated in field hay subsequently used as fodder or bedding which was then dumped into the feature.

4.3.45 Also present are a small number of species, such as woodworm, that are associated with human settlement and wastes in the archaeological record (Kenward and Hall 1995). The numbers of water beetles incorporated into the deposit also suggests that this feature may have been periodically flooded.

4.3.46 There appear to be two possible explanations for the origins of this material and the insect faunas contained in the pit. It is possible that it was washed from the surrounding local environment that was predominantly a cattle pasture. Alternatively, the material may represent intentional dumping of stabling material and/or settlement waste.

4.3.47 This is a rare and important assemblage, as at present there are only a few Roman insect faunas from this part of the Midlands. Mainly this consists of Osborne's work from the interior of Roman Alcester and at Droitwich (Osborne 1971; 1997; 1994), a limited ditch fauna from the Villa at Salford Priors, Warwickshire (Smith and Langham 2000) and three well samples from Tiddington (Palmer, *pers comm*).

4.3.48 It is therefore proposed that these insect faunas are fully analysed. (There is no need to process further sediment from each sample.) A fuller analysis would add to the *corpus* of insect fauna from the area, and result in an improved understanding of the origin of this material and the function of this feature. It may also help to identify the origins of this deposit by differentiating stabling material from the in-washing of animal dung from

pasture surrounding this feature, in conjunction with the pollen and plant macrofossils results (subsequent review of the waterlogged plant assessment in light of this comment indicates that no further work on the latter is required: section 4.3.40 above).

5. Potential of the data and updated research aims

5.1 The excavation confirmed that occupation of Roman Alcester extended slightly further south than that excavated by Mahany in the 1960s, adjacent to roads known from aerial photographs. (No archaeological work was carried out on the relatively recent Willow Close development immediately to the east of the present site because, it is understood, it was assumed that its site would have been severely truncated by the former sewage works.) The restricted extent of the present excavation did not provide sufficient data to understand fully the nature of this occupation, but it will give an indication of activity on the periphery of the town.

5.2 The results, in particular the quality and size the pottery, copper alloy objects, animal bone and waterlogged insect remains assemblages, plus a number of significant individual finds such as the writing tablet, provide evidence to address a number of questions:

- the date of the occupation and use in the area, which will help confirm the period during which the Romano-British town reached its maximum extent.
- the nature of the occupation of the area, in particular whether waste disposal patterns indicate domestic and/or industrial uses, and whether the nature of the occupation or use changed over time. It is possible, for example, that the area may have been used purely for waste disposal in the later Roman period as settlement became concentrated in the defended part of the town, although present evidence suggests that the extra-mural suburbs contracted more in the north than the south (Booth and Evans 2001, 305).
- whether there are any significant contrasts between assemblages from the present site on the edge of the town and those from other extra-mural sites nearer to the centre of the town and from within the defended area.
- the status of the Romano-British town in relation to both other small towns and larger urban centres.

6. Post-excavation team

6.1 Core staff (Warwickshire Museum)

PT = Peter Thompson
NP = Nicholas Palmer
CS = Candida Stevens,
AI = Andy Isham
ST = Technician/Senior Technician
JR = John Radley
CR = Caroline Rann

Author/Project Manager
Editor
Draughtsperson/ Illustrator
Draughtsperson/ Illustrator
Post excavation assistant
Geological identification
Querns

6.2 Specialists (External)

JE = Dr Jerry Evans (Barbican Research Associates)	Romano-British pottery
MM = Dr Melinda Mays (freelance)	Coins
QM = Quita Mould (Barbican Research Associates)	Metal, leather, wood
HC = Dr Hilary Cool (Barbican Research Associates)	Glass
LB = Luke Barber (Sussex Archaeological Society)	Slag
JM = Jacqueline McKinley (Wessex Archaeology)	Human bone
SHD = Sheila Hamilton-Dyer (freelance)	Animal bone
PG = Pamela Grinter (Birmingham University)	Charred plant remains
DS = Dr David Smith (Birmingham University)	Insect remains
JG = James Greig (freelance)	Waterlogged plant remains, pollen

7. Publication proposal and archive

7.1 Further research and analysis of the site will be carried out to produce a report for publication in the *Transactions of the Birmingham and Warwickshire Archaeological Society*. The report would include the sections listed below:

Contents

Summary

Project background (PT)
Archaeological background (PT)

Site description (PT)

Finds and environmental evidence:

Roman pottery	by J. Evans
Coins	by M. Mays
Metalwork	by Q. Mould
Leatherwork and wooden artefacts	by Q. Mould
Glass	by H. Cool
Fired clay/daub	by J. Evans
Ceramic building material	(PT)
Querns	(J. Radley/CR)
Slag	by L. Barber
Miscellaneous non-Roman finds	(SP/NP/PT)
Human bone	by J. McKinley
Animal bone	by S. Hamilton-Dyer
Shell	(PT)
Charred plant remains	by P. Grinter
Waterlogged plant remains	by J. Greig
Pollen	by J. Greig
Insects	by D. Smith

Discussion (PT)

Acknowledgements (PT)

Bibliography (PT)

Provisional List of Figures

1. Site location
2. Area A detail of that part of trench with features
3. Area B general
4. Area B detail of kiln/oven
5. Sections
- 6-20. Pottery
- 21-23. Metal objects
24. Leather shoes
- 25-26. Misc - Glass bottle; wooden comb and writing tablet; quern

7.2 The records from site investigations under the site code AL80 will be checked, collated and organised to form the excavation archive.

7.3 A final research archive for the project will be formed of the excavation archive and additional material produced during the post-excavation programme in accordance with English Heritage recommendations and Warwickshire Museum practice. It will be deposited at Warwickshire Museum.

8. Programme and Budget

8.1 Resourcing

Staff and Task	Days	Rate	Cost
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Stratigraphic analysis, background, discussion, archiving etc.

Project manager/author (PT)

Liaison with specialists	1		
Stratigraphic and dating analysis	1		
Publication text: Research	2		
Introduction and background	1		
Site description	4		
Integration of specialist reports	5		
Discussion	3		
Conclusions	2		
Administration/Project management	3		
Preparation of site archive	1		
sub-total	23		

Post-excavation assistant (ST)

Archive security copy preparation	1		
Archiving tasks (Final project archive)	4		
sub-total	5		

Illustration

Location plans (AI)	1		
Detailed site and phase plans (AI)	4		
Sections (AI)	2		
Roman pottery (CS)	40		
Metalwork/Other finds (CS)	27		
Publication page layout preparation (CS)	4		
sub-total	78		

Staff and Task	Days	Rate	Cost
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Specialist Analysis and Reports

External

Roman pottery (JE) (a) coarsewares	33.5		
(b) samian	*		
(c) mortaria stamp	*		
* sub-contract to be arranged by Dr Evans			
Coins (MM)	3		
Metalwork - analysis (QM)	4		
Leather and wood objects			
- analysis (QM)	1.5		
- report, catalogue (QM)	4		
Glass (HC)	1		
Slag (LB)	1.5		
Human bone (JM)	2		
Animal bone (SHD)	5		
Waterlogged insect remains (DS)		(lump sum)	

Internal

Post Roman pottery (PT)	0.5		
Fired clay/daub (PT)	0.25		
Ceramic building material (PT)	1		
Stone Objects(CR)	1		

sub-total

Editing and collation of report

Editing text (NP)	2		
Text edits and corrections (PT)	2		
Drawing edits and corrections (AI/CS)	2		
Final checking (NP)	1		
Publication proof reading	2		

sub-total

Sub-tot staff costs

Miscellaneous

Materials, overheads etc.	Sub-total		
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TOTAL £

The above figures are valid to December 2008 and are exclusive of VAT.

8.2 Materials and overheads

The following services, materials and facilities would be provided through the Warwickshire Museum: office facilities, computer and IT facilities, drawing office facilities, photographic enlargement and reduction services, stationery, materials, storage, filing facilities, telephone and e-mail facilities, travel expenses and other specialist services.

8.3 Health & Safety

The Warwickshire Museum will conduct all works in accordance with the Health and Safety at Work Act 1974 and the Warwickshire Museum Field Services Health and Safety Policy.

Acknowledgements

The Warwickshire Museum would like to express its thanks to the Environment Agency for commissioning this work. Particular thanks go to Alan Hawkins and Bill Gerrard. The project was managed and directed by the Peter Thompson and much of the fieldwork supervised by Bryn Gethin, Robert Jones and Kevin Wright. Further thanks go to Andrew Isham for administrative and logistical support during the completion of the fieldwork. The drawings in this report were completed by Andrew Isham and Candy Stevens. it was written by Peter Thompson and Ian Greig, and checked by Nicholas Palmer.

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Appendix A: List of recorded contexts

Area A 23 contexts (pro forma sheets)

<i>Context No</i>	<i>Context type</i>	<i>Context No</i>	<i>Context type</i>
1	Topsoil	13	Ditch Fill
2	Layer	14	Layer
3	Layer	15	Layer
4	Layer	16	Layer
5	Layer	17	Layer
6	Ditch	18	Layer
7	Ditch Fill	19	Layer
8	Layer	20	Pit/Gully
9	Ditch	21	Construction Trench
10	Ditch Fill	22	Wall
11	Ditch	23	Layer
12	Ditch Fill		

Area B 129 contexts (pro forma sheets)

<i>Context No</i>	<i>Context type</i>	<i>Context No</i>	<i>Context type</i>
100	Layer	134	Layer
101	Layer	135	Layer
102	Layer	136	Well Fill
103	Wall	137	Ditch Fill
104	Kiln Fill	138	Ditch Fill
105	Ditch	139	Layer
106	Ditch Fill	140	Not Used
107	Grave	141	Layer
108	Grave Fill	142	Layer
109	Layer	143	Ditch Fill
110	Layer	144	Layer
111	Human Skeleton	145	Posthole
112	Layer	146	Posthole Fill
113	Ditch	147	Grave Cut
114	Ditch Fill	148	Ditch Fill
115	Layer	149	Grave Fill
116	Layer	150	Human Skeleton
117	Well Cut	151	Ditch Fill
118	Well Fill	152	Layer
119	Well Lining	153	Ditch
120	Well Fill	154	Ditch
121	Ditch Fill	155	Ditch Fill
122	Ditch	156	Ditch Fill
123	Pit	157	Ditch Fill
124	Pit Fill	158	Pit
125	Layer	159	Pit Fill
126	Layer	160	Pit Fill
127	Layer	161	Pit Fill
128	Layer	162	Pit Fill
129	Layer	163	Pit Fill
130	Pit Fill	164	Posthole
131	Layer	165	Posthole Fill
132	Layer	166	Layer
133	Layer	167	Road Surface

<i>Context No</i>	<i>Context type</i>	<i>Context No</i>	<i>Context type</i>
168	Road Surface	199	Pit
169	Layer	200	Pit Fill
170	Layer	201	Gully
171	Posthole	202	Gully Fill
172	Posthole Fill	203	Posthole
173	Pit	204	Posthole Fill
174	Pit Fill	205	Pit
175	Layer	206	Pit Fill
176	Gully	207	Pit
177	Gully Fill	208	Pit Fill
178	Coffin	209	Gully
179	Posthole	210	Gully Fill
180	Posthole Fill	211	Ditch
181	Posthole	212	Ditch Fill
182	Posthole Fill	213	Gully
183	Ditch	214	Gully Fill
184	Ditch Fill	215	Pit
185	Pit	216	Pit Fill
186	Pit Fill	217	Ditch
187	Layer	218	Ditch Fill
188	Layer	219	Pit Fill
189	Posthole	220	Layer
190	Posthole Fill	221	Layer
191	Posthole	222	Layer
192	Posthole Fill	223	Posthole
193	Posthole	224	Posthole Fill
194	Posthole Fill	225	Layer
195	Gully	226	Layer
196	Gully Fill	227	Pit Fill
197	Gully	228	Pit Fill
198	Gully Fill		

Appendix B: Finds

Animal bone

<i>Context</i>	<i>Qty</i>	<i>Context</i>	<i>Qty</i>
2	33	141	2
4	12	149	24
7	5	155	9
102	211	156	19
104	6	157	2
106	110	159	49
109	69	163	64
110	7	165	2
112	3	169	4
114	67	170	3
118	1	174	2
120	7	184	7
121	40	198	4
124	4	208	1
125	4	210	2
126	13	212	21
128	20	214	4
129	30	216	2
134	10	218	102
136	70	221	9
137	32	226	1
139	3	228	2

Animal bone (worked)

<i>Context</i>	<i>SF No</i>	<i>Type</i>
101	27	Bone Domino

Coins

<i>Context</i>	<i>SF No</i>	<i>Type</i>
2	41	Cu Alloy
	189	Cu Alloy
4	137	Cu Alloy
	138	Cu Alloy
	190	Cu Alloy
	191	Cu Alloy
	192	Cu Alloy
5	42	Cu Alloy
	43	Cu Alloy
	48	Cu Alloy
101	28	Silver
	29	Cu Alloy
	39	Cu Alloy
	40	Cu Alloy
	49	Cu Alloy
	101	Cu Alloy

	154	Cu Alloy
	168	Cu Alloy
	169	Cu Alloy
	170	Cu Alloy
	171	Cu Alloy
	172	Cu Alloy
	180	Cu Alloy
	181	Cu Alloy
	182	Cu Alloy
102	4	Cu Alloy
	6	Cu Alloy
	7	Cu Alloy
	8	Cu Alloy
	9	Cu Alloy
	11	Cu Alloy
	12	Cu Alloy
	14	Cu Alloy
	20	Cu Alloy
	46	?Silver
	95	Cu Alloy
	106	Cu Alloy
	107	Cu Alloy
	124	Cu Alloy
	126	Cu Alloy
	127	Cu Alloy
	129	Cu Alloy
	130	Cu Alloy
106	59	Cu Alloy
109	83	Cu Alloy
159	87	Cu Alloy
174	115	Cu Alloy

Cu Alloy Objects

<i>Context</i>	<i>SF No</i>	<i>Description</i>
2	44	Buckle
	193	Belt Fitting
	194	Button
	195	Object
	151	Steelyard
101	18	Ring
	38	Fragment
	47	Bracelet
	102	Fragment
	136	Buckle
	173	Object
	174	Object
	175	Object
	196	Button
102	1	Buckle
	2	Axe
	13	Brooch
	45	Crucible
	100	Object

	105	Object
	125	Fragment
	132	Brooch
	133	Brooch
	134	Object
109	55	Spoon
110	65	Object
121	98	Object
121	167	Object
155	91	Pin

Flint

<i>Context</i>	<i>SF No</i>	<i>Description</i>
114	61	Flake

Glass

<i>Context</i>	<i>SF No</i>	<i>Description</i>
4	156	Fragment
101	37	Fragment
	109	Fragment
	121	Fragment
	139	Fragment
102	22	Ring
	57	Fragment
	58	Fragment
	60	Fragment
	62	Fragment
	74	Fragment
	75	Fragment
	76	Fragments
	77	Fragment
	80	Fragment
	89	Fragment
	108	Fragment
	159	Fragment
	160	Fragment
106	150	Fragment
109	53	Fragment
	54	Fragment
110	64	Fragment
114	63	Fragment
116	66	Fragment
121	73	Fragment
	81	Fragment
	116	Fragment
125	78	Fragment
131	84	Fragment
142	142	Fragment
149	90	Fragment
159	86	Fragment
	88	Fragment
163	141	Bottle

174	155	Fragment
187	144	Fragment
212	119	Fragment
	120	Fragment

Iron objects

<i>Context</i>	<i>SF No</i>	<i>Description</i>
2	143	Object
101	36	Object
	140	Object
102	10	Fragment
111	70	Object
	71	Object
	72	Object
114	147	Object
121	85	Object
	146	Object
	148	Object
125	67	Object
136	123	Ring
	197	Object
159	92	Object
	93	Object
167	117	Object
174	110	Object
175	111	Object
212	122	Object

Iron Hobnails and Coffin nails from inhumations

<i>Context</i>	<i>SF No</i>	<i>Description</i>
111	68	Nails
	69	Nails
150	161	Nails

Iron Hobnails
Iron Hobnails
Iron Coffin Nails

Iron nails

<i>Context</i>	<i>Qty</i>	<i>Context</i>	<i>Qty</i>
102	56	125	2
104	1	128	5
106	4	137	1
109	6	155	35
110	10	170	1
111	2	177	2
112	1	187	3
114	1	196	1
120	1	212	1
121	9	214	2
124	2	216	1

Lead

<i>Context</i>	<i>SF No</i>	<i>Description</i>
2	183	Disc
	184	Musket Ball
	185	Fragment
	186	Fragment
	187	Fragment
4	17	Weight
	135	Object
	157	Fragment
	188	Fragment
101	30	Weight
	31	Fragment
	32	Fragment
	33	Fragment
	34	Fragment
	118	Weight
	176	Fragment
	177	Ingot
	178	Object
	179	Spindle whorl
102	3	Fragment
	5	Fragment
	15	Sheet
	16	Weight
	24	Sheet
	25	Fragment
	26	Fragment
	35	Weight
	50	Weight
	51	Weight
	79	Fragment
	82	Fragment
	128	Object
	131	Object
	152	Fragment
	153	Fragment
	163	Fragment
	164	Fragment
	164	Fragment
	165	Object
106	149	Fragment
112	162	Fragment
121	96	Weight
163	114	Sheet

Leather

<i>Context</i>	<i>SF No</i>	<i>Description</i>
136	199	Shoe
162	113	Sandal

Pottery

Context Quantity

1	2
2	33
4	103
12	2
100	11
101	50
102	1821
104	12
105	14
106	298
109	210
110	178
112	54
114	344
115	39
118	8
120	11
121	178
124	33
125	58
126	47
128	132
129	126
131	54
134	157
136	110
137	48
139	73

Context Quantity

141	10
143	7
144	11
146	6
149	84
153	1
155	100
156	49
157	9
159	313
161	17
163	122
165	3
169	7
170	24
174	16
175	41
177	52
184	11
187	40
194	1
196	7
198	32
200	18
202	27
206	11
208	8
210	6

Pottery small finds

<i>Context</i>	<i>SF No</i>	<i>Description</i>
102	56	Flagon neck
	97	Pottery Spindle whorl
	158	Pottery Samian disc
163	112	Pottery Samian bowl
	198	Pottery Samian bowl

Slag

<i>Context</i>	<i>SF No</i>	<i>Description</i>
102	19	?
	23	Pb
	52	Cu

Stone

<i>Context</i>	<i>SF No</i>	<i>Description</i>
101	94	Quern fragment
	103	Quern fragment
102	99	Quern fragment
	104	Quern fragments

Tile

<i>Context</i>	<i>Qty</i>		<i>Context</i>	<i>Qty</i>
4	2		121	22
101	5		128	2
102	104		129	1
104	5		134	11
106	35		136	6
109	20		139	2
110	20		149	10
112	4		165	2
114	8		175	2
120	1		206	1

Wood

<i>Context</i>	<i>SF No</i>	<i>Description</i>
163	206	Writing tablet fragment
136	200	Wood comb

Appendix C: Assessment of Roman pottery by Jeremy Evans

C1. Introduction: factual data

C1.1 Around 5568 sherds of Roman pottery were presented for examination from the site, around 5472 coming from stratified Roman contexts. The sites are located on what has been regarded as the southern periphery of the town (or beyond it). The data in this assessment was collected from a rapid scan of the material during spot dating.

C1.2 Material dates throughout the Roman period, but most of it is of 2nd- to early 4th-century date, with the vast weight of the material dating to the 3rd- to early 4th-century. It is of note that the sort of late Roman assemblage with major elements of shell-tempered ware and late finewares found on sites in the defended area such as Gas House Lane (Evans 1996) is entirely absent here. Whereas on rural sites in the area (Evans 1999) this might be for distributional reasons, in Alcester this must argue strongly for a lack of occupation in the last quarter of the 4th century (and beyond).

C1.3 Groups of 3rd- to 4th-century date have come from the defended area of the town, but material of this date from the extra-mural area are much scarcer. There is material from the Explosion site (AES 76/7; Booth and Evans 2001, Fig 2) near the entrance to the defended area, although it is contaminated with quite large quantities of residual material, but the Baromix sites (Booth and Evans 2001) have relatively little late material.

C1.4 Table C1 shows the approximate breakdown of the main Warwickshire Museum fabric classes from the site. Class E fabrics are all but absent suggesting little mid 1st century activity, in contrast to sites around the 'fort' further north on Bleachfield Street. Amphorae are scarce in the assemblage (although at 1.3% are well above rural levels) suggesting no military connections to the site. BB1 is quite well represented, most being of 3rd-early 4th century date.

C1.5 Colour-coated finewares are relatively rare at 2.7%, the principal fabrics being Nene Valley Colour-coats and Oxfordshire colour-coated ware, with some local 1st-2nd century fabrics. Gritted wares are chiefly represented by Malvernian Metamorphic Tempered ware (G44/G46) in both handmade and wheelmade variants. Forms are jars with straight everted rims of 3rd century date, and Antonine 'Tubby Cooking Pots'. Mortaria are rare at 0.9%. They are dominated by Mancetter and Oxford products as is usual at Alcester where Oxford replaces Mancetter as the major supplier in the course of the 3rd century.

C1.6 Oxidised wares, chiefly Severn Valley wares, form the largest fabric group, as is usual particularly for sites of the 3rd-mid 4th century. They have a 2nd-4th century date range with most being probably 3rd century. The commonest types are wide-mouthed jars, followed by other jars, with around a sixth being tankards. Reduced wares form 21% of the assemblage. Much of this material is residual rustic ware of later 1st-late Hadrianic date, the remainder of datable forms being mainly Hadrianic-Antonine or early 3rd century BB copies.

C1.7 Samian wares are quite strongly represented in the assemblage at 8.9%, a level comparable with that from civitas capitals and well above the average small town level, if directly compared with Willis' (2005) figures by weight. Given the date of the assemblage the figures might be regarded as being particularly high. The composition of the assemblage, with high levels of Dr 31 and 31R and many Dr 33 cups compared to few Dr 27s suggests a late date for the bulk of it. The unusual aspects of the assemblage make it worthy of detailed analysis, as it may present new evidence for the status and economy of the town.

Table C1 Occurrence of major fabric classes in AL80 assemblage by sherd count

Fabric Class	% Nosh	Fabric class	% Nosh
Amphora	1.3%	Oxidised wares	44.2%
BB1	14.2%	White-slipped wares	0.9%
Class E	0	Reduced wares	20.6%
Finewares	2.7%	Samian wares	8.9%
Gritted wares	4.0%	Whitewares	1.1%
Mortaria	0.9%	Post Roman	0.1%

C1.8 Table C2 shows an approximate functional analysis of the assemblage. Jar levels are relatively high at 45.5%, but tablewares are reasonably represented at 34.1%.

Table C2 Approximate functional analysis of the AL80 assemblage by minimum numbers of rims

Flagons	Constricted-necked jars	Other jars	Wide-mouthed jars	Beakers & cups & tankards	Bowls	Dishes	Mortaria	Amphorae	Lids	n
1.6%	3.9%	34.6%	9.9%	7.7	22.5%	11.6%	2.4%	0.0%	1.5%	853 rims

C1.9 Cups, beakers and tankards are notably weak for a site in the Severn Valley region and compared with other sites in Alcester, (cf Evans 1996, Table 28). These function figures suggest the site falls somewhere between the urban and rural range, which perhaps reflects its peripheral location (cf Evans 2001, Fig 5).

C1.10 There is a box of fired clay from the site which derived from the 'kiln/oven'. There is nothing in this which suggests that this was a pottery kiln, and the clay is not massively overfired, as it might be if metalworking were the aim, it also contains many flat pieces of fired clay and some indication of a wooden frame, perhaps suggesting some form of oven.

C1.11 The evidence from these two sites suggests it took until the 2nd century for Alcester to expand to its southern limit, but that this was then maintained until the early 4th century.

C2. Summary of Potential

C2.1 The assemblage provides another decently sized group from Roman Alcester. As noted above it is mainly of 3rd- to early 4th-century date. Groups of this date have come from the defended area of the town, but material of this date from the extra-mural area is much scarcer. There is some from the Explosion site, 1-5, Bleachfield Street (Booth and Evans 2001), near the entrance to the defended area, but the Baromix sites (Booth and Evans 2001), which are further away, have relatively little late material. Material was not retained from the Mahany

excavations in a manner which would enable meaningful quantification, and this group to the south of the extensive Birch Abbey excavations provides an opportunity to derive accurate statistics of pottery use in this part of the town at this date.

C2.2 The pottery evidence is essential to the dating of the site sequence. It has the potential to provide information about the function of the site through a series of ceramic indicators which are quite sensitive markers of site type. The ceramic evidence will also provide quantified evidence of supply to this part of the town, particularly in the 3rd century, which can be compared with that from 1-5 Bleachfield Street and the defended area.

C2.3 All the stratified material should be retained and requires no particular conservation measures other than stable storage conditions. Discard of the unstratified material is not recommended, but if it is to be undertaken the mortaria, amphorae, samian, stamped vessels and those bearing graffiti, and colour-coated wares should all be retained, as should vessels which are good examples of their type and a record should be kept of all material discarded.

C3. Specific Research Aims

C3.1 The main research aims of the excavation were to obtain 'an adequate record of any archaeological deposits or finds within the footprint of the proposed flood barrier'. The updated research aims are to:

1. establish the date of the occupation and use in the area
2. establish the nature of the occupation, its change with time
3. investigate contrasts between assemblages from AL80 and other sites in the town, both intra mural and extra mural
4. investigate the pottery supply to the site, and its economy

C3.2 The following research aims are those to which the ceramics may contribute significantly:

1. Dating - the pottery will provide the principal dating evidence for the sites. The samian ware is worth examining fully, whether stratified or not, for evidence of the dating of the site and its nature and can be compared with other sites in the town.
2. Nature of the occupation - the pottery assemblage will provide important indicators, which may be compared with data from other sites in Roman Alcester in terms of functional analysis, fineware levels, proportions of decorated samian ware, functional composition of the samian assemblage, levels of amphorae etc. These are relatively sensitive indicators of site type (cf Evans 2001). Preliminary indications from the functional analysis (Table 2) suggest that by this measure the overall bulk of the assemblage has a rather rural aspect. This is a ceramic pattern which has been observed on the periphery of other towns and coinage patterns sometimes also show such contrasts between intra mural and extra mural areas.
3. Contrasts between assemblages - many of the measures discussed above in 'Nature of the occupation' will provide valuable tools for comparing and contrasting this ceramic assemblage with those from other areas of the town and should provide interesting results, as the preliminary functional analysis in Table 2 suggests.

4. Economy and supply - The pottery will provide much of the evidence of supply to this part of the town and its economy. It will be interesting to see how consistent the assemblage from this peripheral site is with others in the town.

C4. Publication synopsis

C4.1 Synopsis

	Text (words)	Figs (A4)
Introduction	100	
Phase dating (for separate section of report)	250	
Fabric supply & form occurrence	3,500	12
Samian ware	1200	2
Functional analysis	200	
Finewares	200	
Taphonomy	350	1
Ceramic small finds and graffiti	100	
Discussion of the sites in their context in the town	1000	1

Bibliography

Appendices needed in publication: Fabric descriptions, Fabric and form occurrence tables etc.

C5. Methods

C6.1 The site samian ware will be reported on in full for its chronological information about the site and for comparison with other sites in Alcester. The stratified coarsewares from early Roman phases will only be recorded in terms of the dating evidence they will provide to the sequence.

C5.2 The pottery from the later Roman phases will be recorded by sherd numbers, weight, RE and minimum numbers of rims for form and fabric following the Warwickshire Museum fabric type series and recording system. Full determination to exact fabric will only be performed on rimsherds, with bodysherds and bases only being recorded to fabric class. This will capture the maximum information from this relatively large group for the least work. The material will be illustrated most economically by a fabric and form type series, although where possible all the stamped mortaria should be illustrated also for form.

C5.3 The quantification of form data is one of the most important recommendations of the Fulford report (Fulford and Huddleston 1991, sections 4.3.3 and 5.4.1). Sub-sampling the assemblage is unlikely to produce the data necessary to address the research aims. The recent examination of over 16,000 sherds from a sequence at Lower Farm, Newnham Courtney, has demonstrated that this is not an adequate database for reviewing the Oxfordshire coarse wares and Millett's (1983) examination of typological diversity and group size suggests that very large group sizes are necessary.

C6. Resources and programming

C6.1 Staff: Dr J Evans, freelance Archaeological Consultant, and Philip Mills freelance pottery specialist.

C6.2 Tasks, timetable and budget

	Days	Cost (£)
a) Code stratified coarse later Roman pottery rims	15	3150
b) Select material for illustration	0.5	105
* Samian catalogue & sherds required		
c) Code samian for pot database	2	420
d) Code data onto computer	1	210
e) Specialist samian report		(3000)
* Information on coins, animal bone, tile, glass, nails and small finds required		
f) mortarium stamp		(100)
g) Analyse data	2	420
h) Write report & prepare text figures	12	2520
i) Check drawings and proofs	1	210
TOTAL		£10,135

* - Time critical inputs

- Phasing lists in context number order will be required (from Warwickshire Museum).
- The transport of the pottery to and from Birmingham is the responsibility of the Warwickshire Museum..
- Pottery drawings required:
 - Coarse pottery x 350
 - Samian x 30
 - Text figures x 2

C7. Spot dating

The spot dates given are to serve as *termini post qua* for succeeding deposits. They are based on the latest material in each deposit. Dates are arrived at from the pottery without regard to the stratigraphic sequence.

Context	Date
1	19th-century or later
2	18th-century or later
4	Later 3rd- to early 4th-century.
12	Roman
14	AD120-200
100	19th-century or later
101	19th-century or later
102	c.AD270-320
104	AD120+
105	4th-century?
106	AD 270-300
109	Later 3rd- to 4th-century.
110	3rd-century
112	early 3rd-century?

<i>Context</i>	<i>Date</i>
114	Later 3rd- to early 4th-century.
115	AD50-140
120	Mid 3rd- to early 4th-century.
121	AD270+
124	Hadrianic or later
125	2nd-century
126	2nd-century
128	Early 3rd-century
129	AD 160+
131	Hadrianic-Antonine
134	Antonine
136	Mid 3rd-century
136/1	Roman
137	3rd-century
139	AD50-140
141	Roman
143	Roman
144	Later 2nd-century or later.
146	Mid 2nd-century
149	Mid 3rd-century or later?
149/1	AD 120+
155	Antonine
156	Antonine
157	Antonine
159	AD240-270
161	AD160+
163	3rd-century, perhaps later 3rd-century
165	1st- or 2nd-century
170	Hadrianic-Antonine
174	Later 2nd- to early 3rd-century
175	Antonine
177	Mid-late 2nd-century
184	Hadrianic-Antonine
187	Hadrianic-Antonine
194	Roman
196	Hadrianic or later
198	AD270+ if developed beaded and flanged bowl is not intrusive, otherwise Hadrianic-Antonine
200	Mid-late 2nd-century
202	Hadrianic-Antonine
206	1st- or 2nd-century
212	AD160+, probably 3rd-century
214	Antonine
216	AD120+
218	Mid-late 2nd-century?
221	AD120+
222	4th-century
226	Roman
228	AD160+

Appendix D: Assessment of charred plant remains by Pamela Grinter

(Institute of Archaeology and Antiquity, University of Birmingham, Edgbaston, Birmingham, B15 2TT)

D1. Introduction

D1.1 Archaeobotanical samples were collected from deposits during Warwickshire Museum excavations of Roman features at Alcester Flood Defences, Warwickshire in order to recover charred remains. Samples were from a range of features including kiln/ovens, ditches, pits and a grave fill. These samples were assessed to determine:

- if plant remains were present and of interpretable value.
- if the plant remains provide information about the Roman economy.
- if the plant remains provide information about the surrounding environment.

D1.2 In total, Warwickshire Museum selected eight samples for assessment; in most cases, selection was directly related to the significance of the archaeological context sampled.

D2. Laboratory Method

D2.1 Sample volumes ranged from 12 to 20 litres in volume. Staff at Warwickshire Museum used water flotation to process samples. The flots and heavy residues were sieved to 500 microns. Flots were scanned by the author under a low-power microscope at a magnification of x15. Identification was aided by use of various seed identification manuals (Anderberg, 1994; Berggren 1969 & 1981 and Cappers *et al* 2006). Nomenclature follows Stace (1997) for indigenous taxa and Zohary and Hopf (2000) for economic plants.

D3. Results

D3.1 Table 1 presents the results for the Alcester flots. Charred plant remains were present in six flots (samples 7/1, 104/1, 104/2, 156/1, 221/1 and 136/1) in low numbers. The charred plant remains comprised grains of barley (*Hordeum vulgare*), and spelt (*Triticum spelta*) together with small quantities spelt chaff. Six flots (samples 104/1, 104/2 149/1, 161/1, 221/1 and 136/1) contained quantities of charcoal. Two of the flots (samples 7/1 and 136/1) contained quantities of uncharred plant remains and the remains of coleoptera, formerly waterlogged and subsequently dried.

D4. Discussion

D4.1 The features which produced the plant remains were part of a Roman site which contained a burial, pits, ditches and kiln/oven features. The assemblage contained both waterlogged and charred plant remains together with coleoptera fragments. The highest quantity of spelt chaff came from context 221/1, which was identified as an occupation layer by the excavators.

D4.2 The cereal grains and spelt chaff clearly represent crop harvesting or processing activities which may have taken place nearby and have been incorporated within the contents of the features, although there is no evidence from the samples taken for large-scale cereal processing on site. The uncharred plant remains contained species from rough/waste ground, those associated with wet-ground, a few species from more open habitats, these included a fragment of hazelnut shell (*Corylus avellana* L.) dock (*rumex* sp), buttercups (*Ranunculus* sp.) bramble (*Rubus fruticosus* L.), elder (*Sambucus nigra* L.), stinging nettle (*Urtica dioica* L.) and goosefoot (*Chenopodium* spp).

Table D1: Assessment results for charred plant remains from Roman features

Area	Context	Sample Vol. (L)	Context Type	Bone	Charcoal	Coleoptera	Waterlogged Plant Remains	Charred Plant remains observed (flot only)		Further Analysis	Comments on Flot
								Grain	Chaff		
B	07	n/a	fill of ditch	-	-	++	+	+	+	NO	100% of the sample scanned. The sample was originally waterlogged and the flot has been subsequently dried. The sample contains the remains of coleoptera. The waterlogged plant species included <i>rumex</i> sp., <i>Rubus fruticosus</i> , <i>Sambucus nigra</i> , <i>Urtica dioica</i> and <i>Sontia fontana</i> . Charred remains included 2 grains of <i>Hordeum vulgare</i> , 1 grain <i>Triticum spelta</i> and 1 fragment of spelt chaff. ASSESSED AS POOR.
B	104/1	15L	kiln/oven AD120+	-	+	-	-	+	-	NO	100% of flot scanned. Charred plant remains present 1 cereal indet. grain noted. ASSESSED AS POOR.
B	104/2	n/a	kiln/oven AD120+	-	+	-	-	-	+	NO	100% of sample scanned. Charred plant remains present 1 fragment of cereal chaff noted. ASSESSED AS POOR.
B	136/1	n/a	n/a	+	++	-	++	+	+	NO	100% of the sample scanned. The sample was originally waterlogged and the flot has been subsequently dried. The sample contains the remains of coleoptera. The waterlogged plant species included <i>rumex</i> sp., <i>Ranunculus</i> sp. <i>Corylus avellana</i> L. <i>Rubus fruticosus</i> , <i>Sambucus nigra</i> , <i>Urtica dioica</i> and <i>Chenopodium</i> spp. Charred remains included 2 grains of <i>Triticum</i> indet. and 4 fragments of spelt chaff. ASSESSED AS POOR.
B	149	20L	Grave fill mid 3 rd or later	-	+	-	-	-	-	NO	100% of sample scanned, no plant remains present. ASSESSED AS POOR.
B	156	n/a	Ditch fill Antonine	-	-	-	-	-	+	NO	100% of sample scanned, Uncharred seeds of <i>Rubus fruticosus</i> present together with fragments of spelt chaff present. ASSESSED AS POOR.
B	161	12L	Pit fill AD 160+	-	+	-	-	-	-	NO	100% of sample scanned, no charred plant remains present. ASSESSED AS POOR.
B	221	n/a	Occupation layer AD 120+	-	++	++	+	-	++	NO	100% of the sample scanned. Charred plant remains present 2 seeds of <i>Hordeum vulgare</i> , >20 fragments of spent chaff and 1 <i>Bromus</i> sp. seed present. ASSESSED AS POOR

n/a no information available

+ <10 items

++ 10-30 items

+++ > 30 items

D5. CONCLUSIONS

D5.1 The charred plant assemblage obtained from samples 7/1, 104/1, 104/2, 156/1, 221/1 and 136/1 is limited in size. It comprises of a few wheat and barley grains together with a small quantity of crop processing waste. It is not recommended that any further work is undertaken to analyse the plant remains.

APPENDIX E: Assessment of waterlogged plant remains and pollen by James Greig (Archaeobotanical Consultant)

E1. Summary

E1.1 The site is at Newport Drive on the southern edge of Alcester. A number of features such as pits, a well and a ditch had conditions suitable for the preservation of waterlogged plant remains and pollen, and samples were collected during the excavation. Plant remains were investigated to obtain further evidence for the interpretation of the site and its surroundings at the time of its occupation, part of the work on the flood defences of Alcester.

E2. Laboratory work

Plant macrofossils

E2.2 A subsample of 100 ml (125 ml for 136/1) from each sample was measured out. It was broken down in water, and the lighter, organic, fraction washed over to separate it from the inorganic material, and caught in a 500 micron sieve. The washover was sorted in water under a x10 stereo microscope and the plant remains identified and checked with the writer's own reference collections. The results are listed in taxonomic order (Kent 1992) in Table E1. A few other remains were also noted in the assessment; these are listed at the end of table E1.

Pollen analysis

E2.3 Pollen samples of 136/1 and 138/1 were processed using the standard method; about 1 cm³ subsamples were dispersed in dilute NaOH and filtered through a 70 micron mesh to remove coarser material, which was then scanned under a stereo microscope. The finer organic part of the sample was concentrated by swirl separation on a shallow dish. Fine material was removed by filtration on a 10 micron mesh. The material was acetolysed to remove cellulose, stained with safranin and mounted on microscope slides in glycerol jelly. Counting was done with a Leitz Dialux microscope. Identification was using the writer's pollen reference collection, seen with a Leitz Lablux microscope. Standard reference works were used, notably Fægri and Iversen (1989) and Andrew (1984). The pollen count is given in Table E2. The nomenclature and order of the taxa follow Bennett (1994) and Kent (1992) respectively.

E3. Results

Pit 158 (samples 159/2, 162/1 and 163/1)

E3.1 All three samples contained plenty of seeds, and the floras represented are generally rather similar.

Crops and weeds

E3.2 All contained charred and waterlogged cereal remains, including glume bases (chaff) probably of spelt wheat, which was widely grown in Roman times, other chaff remains and some grains. These remains look like waste from cereal processing, perhaps done on a small scale as part of everyday food processing of glumed wheats such as spelt, which had to be parched and pounded to free the grain from the chaff. A few weeds were also present, such as charred *Bromus* sp. (brome grass) which could have been a cornfield weeds and then grain contaminants. Other probable cornfield weeds include fragments of *Agrostemma githago* (corn cockle), *Spergula arvensis* (corn spurrey) and *Tripleurospermum inodorum* (scentless mayweed).

E3.3 More generalised annual weeds were abundant, but as they are not weeds particularly of cornfields, nor were they found broken or charred as though they had been through grain processing, they may have been part of the local weed flora which grew wherever there was open ground. These include *Urtica urens* (nettle), the various species of *Chenopodium* (goosefoot) and *Atriplex* (orache) species, *Stellaria media* (chickweed), *Solanum nigrum* (black nightshade). A record of *Ranunculus sardous* (hairy buttercup) is a plant that is found among Roman remains, representing damp weedy habitats, although it is rare today (Stace 1991).

E3.4 A somewhat different, longer-lived weed community includes *Urtica dioica* (nettle), *Rumex* (dock), *Conium maculatum* (hemlock), *Arctium* (burdock), *Cirsium* (thistle). These weeds need more than a year to become established, and such communities can be seen in waste places today, and in places beside the channel of the river Arrow. Roman sites have often shown signs of such a flora (Greig 1988), which suggests that in an occupied areas such as the surroundings of Alcester, there were both cultivated plots of land and also ones which were let go to weeds.

Grassland

E3.5 A number of grassland plants provide evidence of either local grassland, or the remains of hay from meadows, or the grazing of pastures such as animal dung. These include *Ranunculus* (buttercup), *Trifolium* (clover), *Linum catharticum* (fairly flax), *Prunella vulgaris* (self-heal), *Rhinanthus* (yellow rattle), *Leontodon* (hawkbit) and the grass *Cynosurus cristatus* (crested dog's tail). Damp meadow could be indicated by *Thalictrum* (meadow rue) in 162/1. A wayside element is seen in the record of *Malva* (mallow) in 163/1.

Other plant communities

E3.6 There are scattered records of wetland plants such as *Ranunculus flammula* (lesser spearwort), *Montia fontana* (blinks), *Apium nodiflorum* (fool's watercress), *Eleocharis* (spike-rush), *Carex* (sedge) and occasional aquatic ones such as *Ranunculus* subg. *Batrachium* (water crowfoot) which could represent plants growing in damp conditions in the pit as the waterlogged deposit formed, or wetland plants that were around, or perhaps some, such as the sedges, brought in for use.

Ditch 138/1

E3.7 The pollen and seeds from this sample also have the charred cereal grain, probable spelt chaff and associated weeds such as *Bromus* (brome grass), together with a cereal pollen record.

E3.8 The main indication is that of being overgrown with tall weeds such as *Urtica dioica* (nettles) and *Conium maculatum* (hemlock). Thorns were present of rose or bramble, and those of hawthorn or sloe, and both of the latter are present in the pollen record, although the evidence of trees and shrubs is otherwise not great, but the sample contained plenty of fragments of wood, and of wood charcoal. *Salix* (willow) buds and a pollen grain were present.

E3.9 There are a few annual weeds, grassland plants such as a *Leontodon* seed and the corresponding Lactuceae pollen, *Centaurea nigra* (knapweed) pollen. The pollen slide also had parasite ova of *Ascaris* (roundworm) and *Trichuris* (whipworm) which suggest that the deposit contained faeces.

Well 136/1

E3.10 The remains were generally similar to those from the pit fill and the ditch already described, with charred cereal remains, and charcoal, together with a range of annual weeds which could have grown in the vicinity, and including *Polygonum*

aviculare (knotgrass) which survived in places that are trampled such as beside paths, reflecting the surroundings that could be expected of a well. A fish scale was present, maybe from waste or bird droppings.

E4. Correlation with other sites

E4.1 The plant remains from Roman wells at Tiddington and Mancetter (Warwickshire), Droitwich (Worcestershire) as well as at another site in Alcester were compared (Greig 1988), and the results have similarities to these results from AL80 in the large numbers of weed seeds such as nettle and hemlock, and the suggestion that particular areas such as individual properties were allowed to become overgrown leading to this evidence of weeds in a settlement, while the signs of charred chaff suggest continued occupation and domestic activity there. The consistency of such results from so many sites allow the interpretation of this part of the Roman landscape.

E4.2 It could be worthwhile to float off and look at more material from the remaining samples to find other things which were not present in these rather small samples, such as further cultivated plants.

E4.3 The results of the assessment were subsequently reviewed in light of David Smith's comments about the origin of the fills of pit 158 (Appendix F, section F6.1 below). This indicates that these fills are "[not] likely to represent animal dung washed in from surrounding pasture because the plant remains are very consistent with occupation waste as known from a great many sites, including a flora of cornfield weeds (from straw or grain processing), other more local weeds, and grassland plants including hay meadow taxa such as *Rhinanthus* (yellow rattle) suggesting hay or dung....[it is not thought that] further analysis on the plant material from the pit would change this evidence significantly" (James Greig, email dated 9/5/08).

Table E1: Plant list, names and order according to Kent (1992).

sample:	136/1	138/1	159/2	162/1	163/1	
<i>Ranunculus</i> cf. <i>acris</i> L.	1		1			meadow buttercup
<i>Ranunculus</i> sect. <i>Ranunculus</i>				1	2	buttercup
<i>Ranunculus</i> <i>sardous</i> Crantz				1		hairy buttercup
<i>Ranunculus</i> <i>sceleratus</i> L.		1				celery-leaved buttercup
<i>Ranunculus</i> <i>flammula</i> L.				1		lesser spearwort
<i>Ranunculus</i> subg1 <i>Batrachium</i> (DC) A. Gray	1		1			water crowfoot
<i>Thalictrum</i> <i>flavum</i> L.				1		meadow rue
<i>Urtica</i> <i>dioica</i> L.	1	76	6	2	7	common nettle
<i>Urtica</i> <i>urens</i> L.	2	1	1	1	2	small nettle
<i>Chenopodium</i> <i>rubrum/glaucum</i>				1		red goosefoot
<i>Chenopodium</i> <i>polyspermum</i> L.			1	4	27	many-seeded goosefoot

<i>Chenopodium album</i> L.	cf.1	2	1	1	3	fat-hen
<i>Chenopodium</i> sp.				2	14	goosefoot
<i>Atriplex</i> sp.	1	2	1	2	9	orache
<i>Montia fontana</i> subsp. <i>minor</i> Hayw.			2	1		blinks
<i>Stellaria media</i> (L.) Villars	11	1	4	2	2	chickweed
<i>Stellaria graminea</i> / <i>palustris</i>				3	1	lesser / marsh stitchwort
<i>Agrostemma githago</i> ? L. fragments	1			1	?2	corn cockle
<i>Spergula arvensis</i> L.				1		corn spurrey
<i>Polygonum aviculare</i> L.	4					knotgrass
<i>Rumex acetosella</i> L.			2			sheep's sorrel
<i>Rumex obtusifolius</i> L.					1	broad-leaved dock
<i>Rumex</i> sp.	6	7	4	46	14	dock
<i>Malva sylvestris</i> L.					1	common mallow
<i>Salix</i> sp. seed capsules		1				willow
<i>Salix</i> sp. buds, scales		6	cf. 1			willow
<i>Potentilla erecta</i> (L.) Räusch	2					tormentil
<i>Potentilla reptans</i> L.				1		creeping cinquefoil
<i>Prunus</i> / <i>Crataegus</i> thorn	3					slow or hawthorn
<i>Trifolium</i> sp. corolla fragments			1	3	1	clover
<i>Linum catharticum</i> L.			1	4	1	fairy flax
<i>Conium maculatum</i> L.	1	31	1		4	hemlock
<i>Apium</i> cf. <i>nodiflorum</i> (L.) Lag.				2		fool's watercress
cf. <i>Torilis japonica</i> (Houtt.) DC	1	1				upright hedge parsley
<i>Solanum</i> cf. <i>nigrum</i> L.	1		22		1	
<i>Prunella vulgaris</i> L.	2		1	4	1	self-heal
cf. <i>Mentha</i> sp. seed				1		mint
cf. <i>Mentha</i> sp. capsule				1		
Lamiaceae cf. <i>Lamium</i>	1					? dead-nettle
<i>Plantago major</i> L.				?		greater plantain
<i>Rhinanthus</i> sp.				2		yellow rattle
<i>Sambucus nigra</i> L.	1					elder
<i>Arctium</i> sp.	1				1	burdock
cf. <i>Cirsium</i> sp. seed	2			1		spear thistles

cf. <i>Cirsium</i> sp. flower base				1		thistle
<i>Leontodon autumnalis</i> / <i>hispidus</i>	1	1	2	3		hawkbit
<i>Sonchus asper</i> (L.) Hill			2		1	prickly sow-thistle
<i>Tripleurospermum inodorum</i> (L.) Schultze-Bip.			1			scentless mayweed
<i>Eleocharis</i> sp.				1	1	spike-rush
<i>Schoenoplectus lacustris</i> (L.) Palla		1				common club-rush
<i>Carex</i> subg. <i>Vignea</i>				4	1	sedge
<i>Carex</i> subg. <i>Carex</i> , perhaps <i>C. riparia</i>	1	1	2	2	3	sedge
cf. <i>Bromus</i> sp.		6*		2*	1*	brome-grass
Poaceae		1*		6*, 3	1*, 1	grasses
cf. <i>Cynosurus cristatus</i> L.		2*			1	? crested dog's tail
<i>Triticum</i> cf. <i>spelta</i> L. glume bases	3*, 1	5*	4*	23*, 1	2*, 5	? spelt wheat
<i>Triticum</i> cf. <i>spelta</i> L. spikelet fork					1*	? spelt wheat
<i>Triticum</i> sp. grain	2*					wheat
cf. <i>Cerealia</i> grain	1	3*	1, 1*	1	1	cereals
<i>Cerealia</i> /large grass		7*				cereal or grass
<i>Cerealia</i> awn			1*			chaff
Other remains						
wood fragments	+	++	++	++	+	
charcoal	+++	++	++	++	++	
tree bud scales		+		+		
moss		+	+	+	+	
fly puparia	+		+	+	+	
beetle elytra	++			+	++	
weevil head		+				
fish scale	+					

Table E2: Pollen and spores (sample 138/1)

spores		
<i>Pteridium</i>	5	bracken
<i>Polypodium</i>	3	polypody
pollen		
<i>Pinus</i>	+	pine
<i>Urtica</i>	6	nettle
<i>Fagus</i>	1	beech
<i>Quercus</i>	2	oak
<i>Alnus</i>	6	alder
<i>Corylus</i>	1	hazel
Chenopodiaceae	6	goosefoot
Caryophyllaceae	1	stitchwort family
<i>Persicaria bistorta</i> -tp.	3	bistort etc.
<i>Rumex</i> -tp.	7	docks and sorrels
<i>Tilia</i>	1	lime
<i>Salix</i>	1	willow
Brassicaceae	2	brassicas
<i>Filipendula</i>	1	meadowsweet
<i>Prunus</i> -tp.	1	sloe, cherry
<i>Crataegus</i> -tp.	5	hawthorn
<i>Trifolium repens</i> -tp.	1	white clover
Apiaceae	34	umbellifers
<i>Plantago lanceolata</i>	7	ribwort plantain
<i>Plantago media</i> /major-tp.	1	hoary / greater plantain
<i>Centaurea nigra</i>	3	knapweed
Lactuceae	23	a group of composites
<i>Aster</i> -tp	4	daisies etc
<i>Artemisia</i>	1	mugwort
<i>Anthemis</i> -tp.	12	mayweeds etc.
Poaceae	96	grasses
Cerealia-tp.	7	cereals
other remains; intestinal parasite ova		
<i>Ascaris</i>	1	whipworm
<i>Trichuris</i>	9	roundworm

APPENDIX F: Assessment of waterlogged insect remains by David Smith

(Institute of Archaeology & Antiquity, University of Birmingham, Edgbaston, Birmingham, B15 2TT. University of Birmingham Environmental Archaeology Services Report 138)

F1. Introduction

F1. Only one feature (pit 158) from the 2002 excavations at Newport Drive/Willow Close, Alcester, Warwickshire contained waterlogged material with good potential for the preservation of insect remains. Two contexts (159 and 162) from this large Roman pit have been now been assessed to examine if further work on the insect fauna present is needed.

F2. This assessment was carried out in order to establish the following:

1. Are insect remains present? And if so, are they of interpretative value?
2. Do the insect remains from these samples provide information about the nature of the environment in the area at the time of these deposits formed?
3. Do the insect remains suggest what materials may have been deposited in the feature?
4. What were the water conditions in the feature?

F2. Methods

F2.1 The samples were processed for the recovery of insect remains using the standard method of paraffin flotation as outlined by Kenward et al. (1980). Both samples were 10 litres in volume. Insect remains were sorted from the flot and examined under a low-power binocular microscope. The system for 'scanning' faunas as outlined by Kenward et al. (1985) was followed in this assessment.

F3. Results

F3.1 The insect taxa recovered from the flots are listed in Table F1. The taxonomy used for the Coleoptera (beetles) follows that of Lucht (1987).

F3.2 The numbers of individual insects present is estimated using the following scale: + = 1-2 individuals ++ = 2-5 individuals +++ = 5-10 individuals ++++ = 10+ individuals +++++ = 20+ individuals.

F3.3 When discussing the insect assemblages recovered, two considerations should be taken into account:

(i) The identifications of the either the insects or the plant macrofossils present are provisional. In addition, many of the taxa present could be identified to species level during a full analysis, producing more detailed information. As a result, the data presented here should be regarded as incomplete and possibly biased.

(ii) The various proportions of insects or plant remains suggested are very notional and subjective.

F4. Discussion

F4.1 Both of the insect faunas recovered are relatively well preserved, and both samples produced relatively large insect faunas that are clearly interpretable.

F4.2 The faunas of both samples are dominated by a range of species that indicate the presence of the dung of large grazing herbivores. Particular indicators are the *Aphodius* 'dung beetles', *Sphaeridium* spp. and the small staphylinid *Platystethus arenarius*. Equally, the histerid 'pill beetles' are often associated with animal dung. Also present are a number of species, such as *Trogophloeus* spp., *Oxytelus* spp and *Neobisnius* spp. that appear to often be present in stabling matter in the archaeological record (*sensu* Hall and Kenward 1997). Similarly, a pupa of the fly *Sepsis* was also recovered. This genera is often associated with animal dung. There are also indications that the local area contained rough ground and/or grasslands. This is suggested by the presence of a number of species, such as *Sitona* spp., that are associated with clover (*Trifolium* spp.) and other plants from this environment. An alternative is that these may have been incorporated in field hay subsequently used as fodder or bedding which was then dumped into the feature.

F4.3 Also present are a small number of species, such as the 'woodworm' *Anobium punctatum*, the *lathridiids*, the *cryptophagids* and *Aglenus brunneus* that are associated with human settlement and wastes in the archaeological record (i.e. Kenward and Hall 1995).

F4.4 There is also evidence that this feature may have been periodically flooded. The numbers of *Octhebius* and *Helophorus* 'water beetles' incorporated into the deposit suggests this.

F5. Conclusions

F5.1 There appear to be two possible explanations for the origins of this material and the insect faunas contained in the pit. It is possible that it was washed from the surrounding local environment that was predominantly a cattle pasture. Alternatively, the material may represent intentional dumping of stabling material and/ or settlement waste.

F6. Recommendations

F6.1 A fuller analysis of the samples assessed here would result in an improved understanding of the origin of this material and the function of this feature. At present there are only a few Roman insect faunas from this part of the Midlands. Mainly this consists of Osborne's work from the interior of Roman Alcester and at Droitwich (Osborne 1971; 1997; 1994) and a limited ditch fauna from the Villa at Salford Priors, Warwickshire (Smith and Langham 2000). [There are also three well samples from Tiddington (Palmer *pers comm*).]

F6.1 It is recommended that these insect faunas are fully analysed. Given the size and nature of the faunas recovered there is no need to process further sediment from each sample. It is important that both the pollen and plant macrofossils from this deposit are also analysed since they may also help to identify the origins of this deposit by differentiating stabling material from the in-washing of animal dung from pasture surrounding this feature. [Further review of the waterlogged plant assessment evidence in the light of this comment suggests that this material is unlikely to be washed in from surrounding pasture: Appendix E section E4.3 above.]

F7. Costing to complete full analysis

1 day laying out of insect remains at £ 125 per day	£125.00
Half day identification of the fauna at £ 670 per day	£335.00
Half day tabulation and statistics at £ 125 per day (rounded up)	£ 65.00
Half day report writing at £ 670.00 per day	£335.00

Sub-Total:	£860.00
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Table F1: Assessment results for the insect remains

Sample No.	159/2	162/2
COLEOPTERA		
Carabidae		
<i>Bembidion</i> spp.	+	+
Dytiscidae		
<i>Agabus</i> spp.	-	+
Hydraenidae		
<i>Octhebus</i> spp.	++	+++++
<i>Hydraena</i> spp.		
<i>Limnebius</i> spp.		
<i>Helophorus</i> spp.	+++	+++++
Hydrophilidae		
<i>Sphaeridium</i> spp.	-	++
<i>Cercyon</i> spp.	++	+++
<i>Laccobius</i> spp.	-	+
<i>Hydrobius fuscipes</i> Leach	+	+
Histeridae		
Histeridae Gen. & spp. Indet.	++	++
Staphylinidae		
<i>Omalius</i> spp.	+	+
<i>Trogophloeus</i> spp.	+	++++
<i>Oxytelus</i> spp.	+++++	+++++
<i>Platystethus arenarius</i> (Fourc.)	+++	+++
<i>Xantholinus</i> spp.	+	++
<i>Neobisnius</i> spp.	++	++
<i>Philonthus</i> spp.	-	++
Aleocharinidae Genus & spp. Indet.	++	-
Nitidulidae		
<i>Meligethes</i> spp.	-	++
Cryptophagidae		
<i>Cryptophagus</i> spp.	-	++
<i>Atomaria</i> spp.	+	++
Lathridiidae		
<i>Enicmus minutus</i> (Group)	-	++
Colydiidae		
<i>Aglenus brunneus</i> (Gyll.)	-	+
Coccinellidae		
<i>Coccidula rufa</i> (Hbst.)	-	+
Anobiidae		
<i>Grynobius planus</i> (F.)		
<i>Anobium punctatum</i> (Geer)	-	+
Anthicidae		
<i>Anthicus</i> spp.	++	-
Scarabaeidae		
<i>Aphodius</i> spp.	++	+++++
Chrysomelidae		
<i>Phyllotreta</i> spp.	-	++
<i>Chaetocnema</i> spp.	-	+
Cuculionidae		
<i>Apion</i> spp.	+	++
<i>Sitona</i> spp.	-	++
<i>Gymnetron</i> spp.	-	+

+ = 1-2 individuals ++ = 2-5 individuals +++ = 5-10 individuals ++++ = 10+ individuals +++++ = 20+ individuals.

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