A428 CAXTON TO HARDWICK IMPROVEMENT SCHEME CAMBRIDGESHIRE

ASSESSMENT OF POTENTIAL AND UPDATED PROJECT DESIGN

PART 2 - TECHNICAL APPENDICES

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Contents

1. APPENDIX 1: CONTEXTUAL DATASET DISCUSSION – ALL SITES

1.1 Contextual Data

1.1.1 Quantity of records

Table 9 presents a breakdown of the total quantity and type of structural records. These comprise the written description/interpretation of a deposit/feature (context sheets), a map-like drawing showing the location and inter-relationship between features (a plan), a profile drawing through a feature and its fills (section) and photographs.

SITE 1	Evaluation	Excavation	Total
Contexts	30	44	74
Plan Sheets	2	8	10
Section drawings	5	6	11
Number of photographs	7	3	10
SITE 2	**Evaluation**	**Excavation**	**Total**
Contexts	28	419	447
Plan Sheets	0	37	37
Section drawings	0	78	78
Number of photographs	0	108	108
SITE 3	**Evaluation**	**Excavation**	**Total**
Contexts	216	438	654
Plan Sheets	5	28	33
Section drawings	19	99	118
Number of photographs	46	141	187
SITE 4	**Evaluation**	**Excavation**	**Total**
Contexts	30	137	167
Plan Sheets	1	8	9
Section drawings	2	21	23
Number of photographs	25	74	99
SITE 5	**Evaluation**	**Excavation**	**Total**
Contexts	138	817	955
Plan Sheets	7	41	48
Section drawings	21	194	215
Number of photographs	65	318	383
SITE 7	**Evaluation**	**Excavation**	**Total**
Contexts	147	751	898
Plan Sheets	6	31	37
Section drawings	17	142	159
Number of photographs	33	230	263
SITE 8	**Evaluation**	**Excavation**	**Total**
Contexts	17	78	95
Plan Sheets	1	4	5
Section drawings	1	21	22
Number of photographs	6	25	31

SITE 9	Evaluation	Excavation	Total
Contexts	16	40	56
Plan Sheets	1	3	4
Section drawings	5	8	13
Number of photographs	7	36	43

Table 9: Quantity records

1.1.2 Methodological approach to assessing contextual data

The contextual data was rapidly assessed in order to establish whether it would provide a coherent spatial and chronological framework. The following context totals (by Site) were assigned to "temporary" Assessment Groups (AG's).

Site 1 - 71 contexts
Site 2 – 439 contexts
Site 3 - 641 contexts
Site 4 – 164 contexts
Site 5 - 946 contexts
Site 7 - 889 contexts
Site 8 – 95 contexts
Site 9 – 54 contexts

The decision over whether to assign contexts to AG or not was made on the basis of the following criteria:

Assessment Group (AG) – a collection of contexts which are contemporary and share a function (e.g. a circle of postholes which make up a roundhouse).

Assessment Landscape (AL) – a collection of AGs which are contemporary (e.g. a cluster of roundhouses, a water pit, a four-poster and an enclosure ditch, which together form a settlement enclosure).

Assessment phase – a collection of ALs which are all contemporary (e.g. a settlement enclosure, a stock enclosure and a cremation cemetery).

Period – Periods are chronological blocks of time (e.g. Iron Age, Roman etc). They are made up of phases; so ten phases of activity can all be Roman, even though they are earlier/later than each other.

Our structural hierarchy follows this pattern:

Contexts
|
Assessment Group (AG)
|
Assessment Landscape (AL)
|
Assessment Phase
|
Period

2. APPENDIX 2: STRUCTURAL HIERARCHY AND TECHNICAL DETAIL FOR SITE 1

2.1 Introduction

Assessment of the results of all phases of fieldwork has led to the identification of four main periods of activity, which are summarised below.

2.2 Phase 100 – Tree throw holes and root action (Period 0: Unknown)

Tree throw holes and root action were identified throughout the road scheme. They are created through natural processes (tree growth) and/or human action (tree removal), and can date to almost any period. Even examples containing datable artefactual material can be difficult to date accurately without reliable stratigraphic evidence to support the artefacts.

Tree throw holes can be of interest when studying the changes from a wooded to a cleared/agricultural landscape. In this case, it has not been possible to identify exactly when the trees were cleared.

2.2.1 Assessment Landscape 100 - Tree throw holes/root action

Four tree throw holes and/or root action were identified within the site. The lack of datable artefactual material and stratigraphic relationships with other features means that they remain undated.

Assessment Groups within Assessment Landscape 100	
AG100.01	Tree throw holes/root action.
These tree throw holes were 0.46m to 0.79m long, and 0.60m to 0.95m wide. They contained a mid greyish brown deposit of silty clay.	

2.3 Phase 101 – Field system (Period 10: Roman)

Ditches containing very little or no datable artefactual material were recorded at various points along the road scheme. They were most prominent within Sites 1 and 4, though also within the vicinity of site 3.

Such features have been in common, and sometimes continuous, usage in this area from the Iron Age to the present day. It is therefore hard to assign a date to such ditches without artefactual or stratigraphic evidence.

2.3.1 Assessment Landscape 101 – Ditches

The earliest features on the site were five ditches. They appear to be contemporary, forming sub-divisions within a field system.

Two sherds of Roman pottery were recovered from these ditches. In addition to this, their stratigraphic relationship with the medieval furrows (AL102) shows that they are earlier than the furrows.

The field system may have been in use during the Roman period. This is supported by the stratigraphic relationship between the ditches and furrows,

and the absence of any comparable late prehistoric field systems along the road scheme.

Assessment Groups within Assessment Landscape 101	
AG101.01	Ditches.
Four ditches were aligned NNW-SSE, and one was aligned E-W. They were up to 67m long, up to 1.3m wide, and 0.12m to 0.35m deep, with concave sides and a concave base. They contained mid greyish brown deposits of silty clay.	

2.4 Phase 102 – Field system (Period 14: Medieval)

The ploughed out remnants of ridge and furrow field systems were recorded throughout the road scheme. They represent the remains of the once common corrugated fields which dominated this region.

Such ridges and furrows were created by the repeated ploughing of a furlong of land. A field was made up of several furlongs, each ploughed in the same direction. Each furlong was often owned by one part (family) within a farming community. The field would have been rested intermittently, and the village-based farmers would have ploughed a nearby field as part of what is sometimes described as the 'three field system', as it involved ploughing one of three fields in a rotating use/rest cycle.

This system was used throughout the medieval period, and was often retained into the post-medieval period.

2.4.1 Assessment Landscape 102 - Furrows

The largely ploughed out remnants of seven medieval furrows were identified, on a NNE-SSW alignment. They were spaced at intervals of c.7m.

Assessment Groups within Assessment Landscape 102	
AG102.01	Furrows
The furrows were *c*.70m long and 0.6m to 1.4m wide.	

2.5 Phase 103 – Ploughsoil and subsoil (Period 17: Late post-medieval/modern)

Ploughsoil is the uppermost layer of earth in a ploughed field. It represents the depth of earth that is disturbed by modern ploughing. Its regular disturbance means that any artefacts in it might have been dragged up out of archaeological features below, but also might have been brought in from elsewhere.

Subsoil is the older layer of earth that lies between the topsoil and undisturbed geological deposits. It might have been formed during much earlier periods of ploughing, or by the gradual movement of soil down a slope. It is sometimes possible to identify the date at which the subsoil was formed, though artefacts in it are often unreliable as dating evidence.

2.5.1 Assessment Landscape 103 - Ploughsoil and subsoil

Ploughsoil and subsoil were both present across the whole site. Even though the subsoil has been assigned to this period, there is the possibility that it was formed at an earlier date.

Assessment Groups within Assessment Landscape 103	
AG103.01	Ploughsoil
The ploughsoil was *c.*0.35m thick and comprised dark greyish brown silty clay.	
AG103.02	Subsoil
The subsoil was *c.*0.2m thick and comprised dark orangey brown silty clay.	

3. APPENDIX 3: STRUCTURAL HIERARCHY AND TECHNICAL DETAIL FOR SITE 2

3.1 Introduction

Assessment of the results of all phases of fieldwork has led to the identification of six main periods of activity, which are summarised below.

3.2 Phase 200 –Tree throw holes/root action and field system (Period 0: Unknown)

Tree throw holes and/or root action were recorded throughout the road scheme. They are discussed in Phase 100 above.

Tree throw holes can be of interest when studying the changes from a wooded to a cleared/agricultural landscape. In this case, it has not been possible to identify exactly when the trees were cleared.

Field systems were also frequently encountered along the road scheme, and are common throughout England from the Iron Age onwards. It is therefore hard to assign them to a specific period without either datable artefactual material, or stratigraphic relationships with features whose date is known.

3.2.1 Assessment Landscape 200 - Tree throw holes/root action

Three irregularly shaped features were identified as the remains of tree throw holes and/or root action. They were located in the western half of the site (Figure 7).

These tree throw holes did not contain any datable artefactual material. One was truncated by a post-medieval ditch, but their stratigraphic relationships offer no further clue to their date, which remains unknown.

Assessment Groups within Assessment Landscape 200	
AG200.01	Tree throw holes/root action
These three features were sub-oval or irregular in shape. They were 1m to 3m long, 0.6m to 1m wide, and *c*.0.25m deep, with an irregular profile. They contained mid orangey to dark greyish brown deposits of silty clay.	

3.2.2 Assessment Landscape 201 - Unphased ditches

Three ditches were identified in the western half of the site whose date is uncertain. The longest of the three contained a small amount of late Bronze Age/early Iron Age pottery, but this might be residual.

It is likely that these ditches marked boundaries. The longest of the three, in particular, was heavily affected by root disturbance, suggesting that it was accompanied by a hedgerow.

Assessment Groups within Assessment Landscape 201	
AG201.01	Unphased ditch

This ditch was aligned WNW-ESE. Its surviving length was 16m long, with both ends completely truncated by ploughing. The ditch was *c*.0.5m wide and no more than 0.08m deep, with a concave base. It contained a mid greyish brown deposit of clay.	
AG201.02	Unphased ditches
These ditches were mainly aligned E-W, with the shorter one turning northward at its western end. This L-shaped ditch was in excess of 20m long, with its eastern end truncated by ploughing, whilst the other was in excess of 125m long. They were 0.75m to 1.5m wide and up to 0.28m deep, with concave sides and a flat or uneven base, and contained mid orangey grey deposits of silty clay.	

3.3 Phase 201 – Pits (Period 9: Iron Age)

Pits are a common feature on archaeological sites throughout the country, from the Bronze Age onwards. They are often associated with settlement activity, yet frequently also appear in isolation, particularly on prehistoric sites.

Pits were used for purposes such as storing grain, holding water, quarrying, and dumping rubbish.

3.3.1 Assessment Landscape 202 – Pits

Two isolated pits were identified near the western end of the site. Their function is uncertain, but the artefact assemblage recovered from them indicates that they were perhaps rubbish pits. The human activity associated with these pits is likely to have been transient, since no other features of a contemporary date were encountered within the site.

Assessment Groups within Assessment Landscape 202	
AG202.01	Pits
These sub-circular pits were 0.62m to 1.35m in diameter and 0.24m to 0.5m deep, with steep sides and a flat base or uneven base. They contained mid to dark greyish brown deposits of silty clay.	

3.4 Phase 207 – Droveway (Period 10.1: Roman 2nd century)

Droveways were also found on Sites 3, 5, and 7, and can be found on sites throughout England from the Bronze Age onwards. Droveways comprise a pair of either parallel or converging ditches that were used for herding animals. A slightly later droveway was recorded on this site in Phase 202.

3.4.1 Assessment Landscape 204 – Droveway

A NNW-SSE aligned droveway was identified in the eastern half of the site. It was *c*.7m wide, and continued beyond both the northern and southern limits of excavation.

No datable artefactual material was recovered from the droveway. However, it was parallel to a Roman droveway (AL205) *c*.40m to the east, which suggests that this one can be dated to the same period. The droveway was truncated by enclosure AL205, suggesting that the droveway to the east represents a reinstatement of this one.

No features were recorded that were obviously contemporary with the droveway, suggesting that it relates to activity that took place beyond the limit of excavation.

Assessment Groups within Assessment Landscape 204	
AG204.01	Droveway
These ditches were in excess of 75m long, up to 0.9m wide, and up to 0.32m deep, with concave sides and a concave base. They contained mid orangey brown deposits of silty clay. The southern extent of the droveway was particularly affected by plough truncation.	

3.5 Phase 202 – Enclosure, droveway, roundhouse, associated pits and postholes, and tree throw holes/root action (Period 10.2: Roman 2nd century)

Roman enclosures have been recorded on Sites 2, 3, and 5, and are a common feature in the rural landscape of Cambridgeshire and beyond. They differ from earlier Iron Age enclosures, such as those on Sites 3 and 7, by being generally more rectangular in shape. They were used either to keep animals in, or to keep them out of an area of human habitation.

Droveways were also found on Sites 3, 5, and 7, and can be found on sites throughout England from the Bronze Age onwards. Droveways comprise a pair of either parallel or converging ditches that were used for herding animals.

Roundhouses have been found throughout England. They were wooden, thatched structures which were primarily used for occupation, though some were also used for industrial purposes. Most roundhouses, such as those on Site 7, were built during the Iron Age, though a number or Roman ones have been found elsewhere.

Postholes are commonly found on sites associated with settlement activity, indicating where posts used to be, in this case gateposts. They often do not survive subsequent truncation from ploughing, however, and few postholes were revealed along this road scheme. Large postholes are sometimes reused as rubbish pits when the posts have been extracted.

Earlier examples of pits were encountered on this site in Phase 202, and examples of undated tree throw holes were recorded in Phase 200.

3.5.1 Assessment Landscape 203 – Tree throw holes/root action

Five tree throw holes were recorded along the course of the drip gully for roundhouse AL205. They contained no datable artefactual material, though four of them were stratigraphically earlier than the roundhouse.

It is possible that these tree throw holes represent deliberate clearance activity prior to the construction of the roundhouse. They perhaps even supplied the wood for its construction.

Assessment Groups within Assessment Landscape 203	
AG203.01	Tree throw holes/root action
These sub-oval tree throw holes were 1m to 1.5m long, 0.5m to 0.8m wide, and 0.2m to at least 0.4m deep, with irregular sides and bases. They contained mid orangey to mid greyish brown deposits of silty clay.	

3.5.2 Assessment Landscape 205 – Enclosure, roundhouse, droveway and pit

The drip gully of a roundhouse, *c*.9m in diameter, was identified in the eastern half of the site. The roundhouse was located within a rectilinear enclosure that continued beyond the southern limit of excavation, enclosing an area in excess of 2000m^2. This enclosure was comparable in shape and alignment to AL302 and AL305 on Site 3, and was perhaps contemporary.

A droveway or trackway was recorded on the eastern side of the enclosure, and was comparable to the earlier one AL204. It was primarily on a NNW-SSE alignment, but appeared to turn eastwards at its southern end, though this corner lay beyond the limit of excavation. The ENE-WSW aligned part of it was similar in size and alignment to AL307 on Site 3, and was perhaps also contemporary.

The enclosure and the roundhouse each had an entrance on its eastern side, with the entrance to the enclosure marked by two internal entrance ditches. It is possible that the northern one of these ditches created a subdivision of the enclosure. The function of these entrance ditches is unclear, though they might have acted as a holding pen for animals being herded into the enclosure. It appears that the southern entrance ditch was added slightly later, since it truncated a rubbish pit on the southern side of the entrance, and also reduced the width of the entrance.

Assessment Groups within Assessment Landscape 205	
AG205.01	Roundhouse drip gully
This ditch was 22m long, 0.3m to 0.6m wide, and *c*.0.15m deep, with concave sides and a concave base. It contained a mid greyish brown deposit of silty clay.	
AG205.02	Enclosure ditch
This ditch was in excess of 128m long, up to 2.8m wide, and up to 1m deep, with steep, convex sides and a mainly flat base. It contained mid orangey to mid greyish brown deposits of silty clay.	
AG205.04	Droveway
These two ditches were aligned NNW-SSE and were up to 78m long, as revealed within the site. They were 0.3m to 0.7m wide and up to 0.4m deep, with concave sides and a flat base. They contained mid greyish brown deposits of clayey silt.	
AG205.05	Droveway
These ditches were aligned ENE-WSW and were up to 21m long, as revealed within the site. They were 0.3m to 0.6m wide and 0.18m to 0.32m deep, with quite steep, concave sides and a flat base. They contained mid greyish brown deposits of clayey silt.	
AG205.07	Pit
This oval pit was 1.72m long, 1.5m wide and 0.77m deep, with nearly vertical sides and a flat base. It contained mid orangey to dark greyish brown deposits	

of silty clay.	
AG205.08	Entrance ditches
These curvilinear ditches were aligned roughly ENE-WSW, and were up to 15m long. They were mainly *c*.0.6m wide and were 0.14m to 0.32m deep, with quite steep, concave sides and a flat or concave base. They contained mid brown deposits of silty clay.	

3.5.3 Assessment Landscape 207 – Pits and postholes

Nine pits and two postholes were identified within enclosure AL205. Four of the pits were clustered near the northern edge of the enclosure, whilst the other five and the two postholes were all near its entrance. Four were stratigraphically later than the entrance and enclosure ditches, but it is likely that they were broadly contemporary.

The shape and profile of the two larger, sub-rectangular pits near the entrance to the enclosure suggests that they were storage pits, which were subsequently reused as rubbish pits. It is less clear what the other pits were used for; they generally contained few artefacts, and may all have been for storage.

The two postholes appear to have been associated with the entrance, and probably held gateposts. The larger of the two would have held a substantial post, perhaps as much as 0.5m thick, which could have supported a sizeable gate. The post appears to have been extracted when it was no longer needed, and the posthole reused as a rubbish pit.

Assessment Groups within Assessment Landscape 207	
AG207.01	Pits
These four oval pits were 1m to 2.5m long, 0.85m to 1.85m wide, and 0.2m to 0.65m deep, with sides ranging from shallow to nearly vertical and a flat or concave base. They contained mid to dark brownish grey deposits of silty clay.	
AG207.05	Pit
This sub-square pit was 3.4m long, 2.85m wide and 0.67m deep, with nearly vertical sides and a slightly concave base. It contained dark reddish grey to mid yellowish brown deposits of silty clay.	
AG207.06	Pits
These three oval pits were *c*.2.2m long, 1m to 1.87m wide, and 0.18m to 0.55m deep, with concave sides and a flat base. They contained dark orangey brown to dark brownish grey deposits of silty clay.	
AG207.07	Pit
This sub-rectangular pit was 2.5m long, 1.66m wide and 0.27m deep, with concave sides and an uneven base. It contained a black to mid orangey black deposit of silty clay.	
AG207.09	Posthole
This sub-circular posthole was 0.5m in diameter and 0.36m deep, with steep sloping and a ‘v’-shaped base. It contained a dark orangey brown deposit of silty clay.	
AG207.10	Posthole
This sub-oval posthole was 2.1m long, 1m wide and 0.7m deep. It had nearly vertical sides, with a shallow step on its north-western edge, and a flat base. It contained dark brownish grey to mid yellowish brown deposits of silty clay.	

3.6 Phase 203 – Disuse of site (Period 10.3: Roman 2nd/3rd century)

Tree throw holes and/or root action were identified throughout the road scheme. Earlier examples from this site were recorded in Phase 202, as well as a few which could not be dated (Phase 200).

In this case, stratigraphic evidence suggests that the tree throw holes and/or root action were created during the Roman period, subsequent to Phase 202. Backfilled ditches tend to provide more fertile ground conditions for the growth of trees and bushes, which are free to grow on a site once it has been abandoned.

3.6.1 Assessment Landscape 209 – Tree throw holes/root action

Eight irregular features were identified at the eastern end of the site. They contained no datable artefactual material. However, the majority of them truncated ditches dated to the Roman period. All are thought to represent root action caused by trees and bushes which grew over the abandoned and largely backfilled settlement remains.

Assessment Groups within Assessment Landscape 209	
AG209.01	Tree throw holes/root action
These irregularly shaped tree throw holes were 0.7m to 3.3m long, 0.2m to 1.1m wide, and 0.1m to 0.24m deep, with irregular sides and an uneven base. They contained mid orangey brown to mid grey deposits of silty clay.	

3.7 Phase 204 – Field systems (Period 14: Medieval)

The ploughed out remnants of ridge and furrow field systems were recorded throughout the road scheme, representing the remains of the once common corrugated fields which dominated this region. They are discussed further in Phase 102 above.

These field systems were used throughout the medieval period, and were often retained into the post-medieval period.

3.7.1 Assessment Landscape 210 – Furrows

The remnants of fifty-four medieval furrows were identified, all on a roughly N-S alignment. Slight variations in alignment suggest that they represent three separate ridge and furrow systems, though no field boundary ditches were present to confirm or deny this. The closeness of the furrows in the middle of the site perhaps indicates that the position of the ridges and furrows changed slightly with time.

Assessment Groups within Assessment Landscape 210	
AG210.01	Furrows
This furrow was 10.25m long, 0.8m wide, and 0.15m deep, with shallow sides and a concave base. It contained a mid orangey brown deposit of silty clay.	
AG210.02	Furrows
These furrows were mostly spaced *c.*2.5m apart. They were up to 62m long, 0.65-1.2m wide, and up to 0.15m deep, with shallow sides and a concave base. They contained mid orangey brown deposits of silty clay.	
AG210.03	Furrows

These two furrows were spaced *c.*8m apart. They were up to 54.5m long and up to 1.5m wide, and contained mid orangey brown deposits of silty clay.

3.8 Phase 205 – Boundary ditch and tree throw holes (Period 16: Post-medieval)

Post-medieval ditches were also identified on sites 3, 4, 5, 7, 8 and 9. They mark the edges of fields, many of which still survive. In many cases, the ditches support hedgerows and trees.

3.8.1 Assessment Landscape 211 – Ditch and tree throw hole

An N-S orientated boundary ditch was identified at the western end of the site. No datable artefactual material was recovered, but its similarity in profile and alignment to ditches AL310 on Site 3 suggests that it was post-medieval.

Two tree throw holes were identified near the middle of the site. They truncated the furrows (AL210), suggesting that they were post-medieval.

Assessment Groups within Assessment Landscape 211	
AG211.01	Ditch
This ditch was 50m long, *c.*0.75m wide, and 0.23m to 0.39m deep, with quite steep sides and a flat base. It contained dark orangey grey to mid orangey brown deposits of silty clay.	
AG211.02	Tree throw hole
These irregularly shaped tree throw holes were *c.*2m long and 0.7m to 0.95m wide. They contained dark greyish brown deposits of silty clay.	

3.9 Phase 206 – Land drains, ploughsoil and subsoil (Period 17: Late post-medieval/modern)

Land drains were found throughout the road scheme. They have been used from Victorian times to the modern day in order to aid land drainage, and are very common in this area, due to the heavy clay soils which require efficient drainage for the cultivation of crops.

Ploughsoil and subsoil are the layers of earth that overlie the undisturbed geological deposits. They are discussed further in Phase 103 above.

3.9.1 Assessment Landscape 212 – Land drains

Six land drains were identified across the site, on a variety of alignments.

Assessment Groups within Assessment Landscape 212	
AG212.01	Land drains
Six land drains were recorded on a variety of alignments. The longest was in excess of 150m, and they were up to 0.6m wide.	

3.9.2 Assessment Landscape 213 – Ploughsoil and subsoil

Ploughsoil and subsoil covered the entire site. Such deposits are formed through natural processes. The ploughsoil was darker in colour than the subsoil due to the increased levels of organic material.

Assessment Groups within Assessment Landscape 213	
AG213.01	Ploughsoil
The ploughsoil was *c*.0.3m thick and comprised dark greyish brown silty clay.	
AG213.02	Subsoil
The subsoil was 0.2m to 0.35m thick and comprised mid orangey brown silty clay.	

4. APPENDIX 4: STRUCTURAL HIERARCHY AND TECHNICAL DETAIL FOR SITE 3

4.1 Introduction

Assessment of the results of all phases of fieldwork has led to the identification of eight main periods of activity, which are summarised below.

4.2 Phase 300 –Tree throw holes/root action (Period 0: Unknown)

Tree throw holes and/or root action were recorded throughout the road scheme. They are discussed in Phase 100 above.

Tree throw holes can be of interest when studying the changes from a wooded to a cleared/agricultural landscape. In this case, it has not been possible to identify exactly when the trees were cleared.

4.2.1 Assessment Landscape 300 - Tree throw holes/root action

Ten irregularly shaped features were identified as the remains of tree throw holes and/or root action. No datable artefactual material was recovered from them, and they had no stratigraphic relationships with any other features. They consequently remain undated.

Assessment Groups within Assessment Landscape 300	
AG300.01	Tree throw holes/root action
These features were up to 1.74m long, 0.81m wide and 0.04m deep, with concave sides and a flat base. They contained mid greyish brown deposits of silty clay.	

4.3 Phase 301 – Enclosure, posthole and pit (Period 9.1: Early/middle Iron Age)

Iron Age enclosures are known from excavations throughout Britain, although they are more commonly associated with later Iron Age sites. Other early/middle Iron Age enclosures were revealed on Site 7. Such enclosures had a variety of functions: some were used for domestic occupation or industrial purposes, whilst others defined an area for farming or keeping animals.

4.3.1 Assessment Landscape 301 - Enclosure, posthole and pit

A curvilinear ditch was identified at the western end of the site, enclosing an irregularly shaped area of at least 550m^2. Part of the enclosure lay beyond the limit of excavation, yet one side of a possible entrance was identified on the southern edge of the site. A posthole was located at the northern end of the enclosure, and a pit was revealed beyond its eastern edge.

It is possible that the enclosure was used for livestock management. The wider, southern end may have functioned as a corral, aiding the movement of animals into the narrower, northern end.

There is also evidence for occupation in the vicinity. Only a single posthole was revealed within the enclosure, yet the absence of further postholes or other remains normally associated with settlement (e.g. hearths) may be the result of truncation from ploughing or the construction of the airfield. A largely complete pottery vessel was recovered from a pit to the east of the enclosure.

Assessment Groups within Assessment Landscape 301	
AG301.01	Enclosure
This curvilinear ditch was *c.*80m long, *c.*0.8m wide and up to 0.38m deep, with had concave sides and a flat base. It contained mid greyish brown to dark greyish black deposits of silty clay.	
AG301.02	Pit
This pit was 2m long, 0.9m wide and 0.34m deep, with concave sides and a flat base. It contained a dark brownish grey deposit of silty clay.	
AG301.03	Posthole
The posthole was 0.6m long, 0.55m wide and 0.08m deep, with a concave base. It contained a light orangey grey deposit of silty clay.	

4.4 Phase 302 – Enclosures, pits, water pit and droveway (Period 10.2: Roman 2nd century)

Roman enclosures were recorded on Sites 2, 3, and 5, and are a common feature in the rural landscape of Cambridgeshire and beyond. They differ from earlier Iron Age enclosures by being generally more rectangular in shape. Pits are a common feature on most rural sites of this period.

Droveways comprise a pair of roughly parallel ditches that were used for herding animals. They were also found on Sites 2, 5, and 7, and can be found on sites throughout England from the Bronze Age onwards.

Enclosures were used either to keep animals in, or to keep them out of an area of human habitation. Pits were widely used either to store material or dispose of it, and the former type was sometimes converted into the latter once it was no longer required for storage. Water pits could potentially have provided drinking water for humans, but were most likely watering holes for livestock.

4.4.1 Assessment Landscape 302 - Enclosure and pits

A Roman enclosure ditch was identified at the western end of the site. Only part of the enclosure was contained within the limits of the site, yet this was at least 1700m^2 in size. There was a possible entrance in the south-eastern corner, but any evidence of it was completely truncated by a later ditch (AL312). The enclosure contained water pit AL303, as well as two other pits whose function could not be ascertained.

The south-eastern corner of the enclosure appears to have been subdivided by an internal ditch, separating off an area of c.290m^2, with a narrow entrance at the south-west. The enclosure ditch was also reinstated at least once at this point, and possibly along the whole length of the ditch.

It seems likely that the enclosure was used for agricultural purposes. The size of the enclosure and the absence of any features obviously associated with

occupation both suggest this interpretation, though not all of the enclosure was revealed within the site.

Assessment Groups within Assessment Landscape 302	
AG302.01	Enclosure
This curvilinear ditch was at least 17m long, 0.4m to 0.8m wide, and up to 0.32m deep, with steep sides and a concave base. It contained a deposit of mid orangey brown silty clay.	
AG302.02	Redefinition of enclosure
This curvilinear ditch was c.75.00m long, up to 2.m wide and up to 0.77m deep, with concave sides and a concave base. It contained a light orangey brown deposit of silty clay.	
AG302.03	Pits
These two pits were 1.05m to 2.95m long, 0.8 to 1.4m wide, and up to 0.3m deep, with concave sides and a flat base. They contained light brownish orange deposits of silty clay in.	
AG302.04	Subdivision of enclosure
This ditch was aligned NE-SW. It was 43m long, 0.65m to 1.4m wide, and *c*.0.3m deep, with concave sides and a concave base. It contained mid orangey brown deposits of silty clay.	

4.4.2 Assessment Landscape 303 - Water pit

A deep, ovoid pit was recorded just within the southern edge of enclosure AL302. Although it truncated the fill of the enclosure ditch, it is likely to have been broadly contemporary. Its depth suggests that it might have been a water pit.

Assessment Groups within Assessment Landscape 303	
AG303.01	Water pit
This pit was 1.75m long, 2.4m wide and 1.15m deep, with nearly vertical sides and a concave base. It contained a yellowish brown deposit of silty clay.	

4.4.3 Assessment Landscape 305 - Enclosure

The southern edge of a Roman enclosure was recorded at the northern edge of the site. It was at least 360m^2 in size, continuing beyond the limit of excavation. No internal features were present within the part that was revealed.

Interpretation of this enclosure is complicated by the fact that only part of it lay within the site. The size of the enclosure and the relatively low artefact assemblage recovered from it suggest that it was used for agricultural purposes, perhaps keeping livestock. It is possible that the gap of *c*.15m between this enclosure and AL302 represents the southern end of a droveway.

Assessment Groups within Assessment Landscape 305	
AG305.01	Enclosure
The ditch was *c*.55m long, 1.1m to 2.1m wide, and *c*.0.8m deep, with steep sides and a concave base. It contained a mid orangey brown deposit of silty clay.	

4.4.4 Assessment Landscape 307 - Droveway

A NE-SW aligned droveway (AG307.01) was located at the eastern end of the site. It was *c*.5m wide, extending beyond the northern and southern limits of the site. The width and alignment are similar to those of Roman droveways AL207 and AL209 on Site 2.

Two further ditches (AG307.02) were identified *c.*10m east of AG307.01, on a similar alignment. It is possible that they represent part of the same droveway, which changed its source slightly over time when it was reinstated.

Assessment Groups within Assessment Landscape 307	
AG307.01	Droveway
These ditches were aligned NNE-SSW. They were *c*.67m long, 1.35m to 2.1m wide, and 0.37m to 0.64m deep, with concave sides and a concave base. They contained mid orangey brown to mid greyish yellow deposits of silty clay.	
AG307.02	Droveway
These NE-SW aligned ditches were up to 34m long, up to 0.85m wide and up to 0.17m deep, with concave sides and a concave base. They contained mid yellowish to mid greyish brown deposits of silty-clay. It is unclear whether their south-western extent genuinely terminated or was just completely truncated.	

4.5 Phase 304 – Enclosure, ladder enclosure, cremation, posthole, pits and tree throw holes (Period 10.4: Roman 3rd/4th century)

Examples of Roman enclosures were recorded in Phase 303. Sometimes these enclosures are grouped together to form a 'ladder' system, which is a familiar feature in the rural landscape of Cambridgeshire and beyond.

Ladder enclosures comprise a linear series of square or rectilinear enclosures, which might subsequently be expanded and reworked throughout their lifetime by the addition of extra enclosures and internal subdivisions. A further example of a ladder system was uncovered on Site 5.

The individual blocks of land within a ladder enclosure could be used either as pasture or for arable or horticultural purposes. Such enclosures are known to have existed throughout the Roman period, and sometimes formed a link between larger field systems or farmsteads.

Isolated human burials are common in rural settlements, where the population was perhaps not large enough to warrant a formal cemetery. Three more isolated burials were discovered on Site 5.

Tree throw holes and root action were identified throughout the road scheme. They can belong to almost any period, and even examples containing datable artefactual material can be difficult to date accurately without reliable stratigraphic evidence to support it.

Most of the tree throw holes on this site remain undated (Phase 300), although a few can tentatively be claimed to be contemporary with the ladder enclosure.

This suggests that a number of trees were deliberately cleared during the Roman period.

4.5.1 Assessment Landscape 304 – Tree throw holes

Three tree throw holes were identified within the area that was enclosed by the Roman ladder system (AL306). They were all truncated by the enclosure ditches. It is possible that they were deliberately cleared during the Roman period to make way for the ladder enclosure.

Assessment Groups within Assessment Landscape 304	
AG304.01	Tree throw holes
These tree throw holes were 1.1m to 3m long, 0.85m to 1.2m wide, and up to 0.24m deep. They had concave sides and a concave base, and contained mid orangey brown deposits of silty clay.	

4.5.2 Assessment Landscape 306 – Ladder enclosure, cremation, posthole and pits

A Roman ladder enclosure was identified near the centre of the site. Within the enclosure system were two pits, a posthole, and an urned cremation (AG306.04).

The ladder system initially comprised a single N-S line of rectilinear enclosures, two of which were partially contained within the site. The ladder was subsequently extended eastward, with the further addition of subdivisions within all but the north-western enclosure. As with the ladder enclosure on Site 5 (AL504, AL508, AL510), the initial layout was substantially retained throughout the enclosure system's period of use.

A hoard of fifteen mid-4th century copper alloy coins (AG306.01) was recovered from the ditch that formed the western side of the ladder system (Appendix 14). The fact that all the coins were close together suggests that they were originally held within a purse or something similar, though no evidence of such a container survived.

It seems likely that the enclosures represent part of a field system. No evidence was found for features associated with occupation, and the survival of a single, well-preserved posthole suggests that this cannot simply be ascribed to subsequent plough-truncation.

It is possible, however, that associated house plots may be located immediately north of the site. This is where the line of an E-W Roman road is postulated, and such a layout of house plots and field systems has been recorded on other roadside settlements (Smith 1987, 22-30). Burials have also been discovered to the rear of roadside house plots throughout Roman Britain (Smith 1987, 115-119), a pattern echoed by the urned cremation AG306.04 found here.

The backfill of the ditches that defined the northern enclosures contained a larger artefact assemblage than that of those defining the southern ones. This

further suggests that there was occupation not far beyond the northern edge of the site.

Assessment Groups within Assessment Landscape 306	
AG306.01	Initial layout of ladder system
These ditches were 0.6m to 1.4m wide and 0.2m to 0.39m deep, with concave sides and a concave base. They contained mid orangey brown deposits of silty clay.	
AG306.02	First changes to ladder system
These ditches were 0.5m to 1.8m wide and up to 0.66m deep, with steep sides and a flat base. They contained mid greyish brown deposits of clayey silt.	
AG306.03	Final changes to ladder system
These ditches were 0.55m to 1.9m wide and up to 0.56m deep, with concave sides and a concave base. They contained mid orangey brown deposits of silty clay.	
AG306.04	Cremation
This pit was 0.15m in diameter and 0.1m deep, and contained a cremation urn. The cremation deposit within the urn comprised mid greyish brown clayey silt.	
AG306.05	Pit
This pit was1.86m long, 0.85m wide and 0.35m deep, with steep, concave sides and a concave base. It contained a dark orangey deposit of silty clay.	
AG306.06	Pit
This pit was 0.6m long, 0.58m wide and 0.21m deep, with steep, concave sides and a concave base. It contained a light brownish orange deposit of silty clay.	
AG306.07	Posthole
This posthole was 0.45m in diameter and 0.26m deep, with steep, concave sides and a flat base. It contained a mid greyish brown deposit of silty clay.	

4.5.3 Assessment Landscape 314 – Enclosure

Four boundary ditches were recorded at the western end of the site, enclosing an area of *c*.1400m^2. The ditch that marked the eastern side of this area continued south beyond the corner of the enclosure, perhaps indicating a further enclosure beyond the southern edge of the site.

No contemporary features were recorded within the enclosure, and little artefactual material was recovered from the backfill of the ditches. This suggests that it was used for agricultural purposes.

The paucity of artefactual material also makes classification of the enclosure as being Roman slightly tentative. Only Roman pottery was recovered from the ditches, and the enclosure was on the same alignment as the ladder system (AL306), yet its alignment also matches that of the adjacent furrows (AL308). It is more likely, however, that the furrows followed the landscape alignment that was established by this enclosure and AL306. This is all the more probable if there was a Roman road to the north of the site.

Assessment Groups within Assessment Landscape 314	
AG314.01	Enclosure
These ditches were aligned roughly either E-W or N-S, and were up to 52m long. They were 0.55m to 1.9m wide and up to 0.55m deep, with concave sides and a flat or uneven base. They contained mid brownish grey to dark orangey	

brown deposits of silty clay.

4.6 Phase 305 – Field systems (Period 14: Medieval)

The ploughed out remnants of ridge and furrow field systems were recorded throughout the road scheme, representing the remains of the once common corrugated fields which dominated this region. They are discussed further in Phase 102 above.

These field systems were used throughout the medieval period, and were often retained into the post-medieval period.

4.6.1 Assessment Landscape 308 – Furrows

The largely ploughed-out remnants of seventeen medieval furrows were identified, all on a roughly N-S alignment. They were spaced at intervals of *c.*5-7m.

Although ridge and furrow field systems were used throughout the medieval and post-medieval periods, stratigraphic relationships with later ditches (AL309, AL312) suggest that the furrows on this site are more likely to be medieval in origin.

Assessment Groups within Assessment Landscape 308	
AG308.01	Furrows
These furrows were aligned roughly N-S, and were up to 48m long. They were up to 1.4m wide and up to 0.13m deep, with gently sloping sides and a flat base. They contained mid orangey brown deposits of silty-clay.	

4.7 Phase 306 – Roadside ditch (Period 15: Late medieval/early post-medieval)

Ditches have been dug along the sides of roads ever since the Roman period. Post-medieval and modern roadside ditches are particularly common within Cambridgeshire, and were also recorded within Sites 3 and 4. They help to keep roads free of surface water, and define which land is part of the road and which belongs to neighbouring fields.

4.7.1 Assessment Landscape 309 – Roadside ditch

An E-W aligned ditch was identified near the northern edge of Site 3, parallel to the modern road. Its stratigraphic relationships with other features suggest that the ditch is late medieval/early post-medieval in date. The backfill of the ditch contained only a small amount of Roman pottery, which was residual.

It seems likely that the ditch was dug parallel to a precursor of the modern road. It was probably used for drainage, though it would also have served to define the route.

Assessment Groups within Assessment Landscape 309	
AG309.01	Roadside ditch
This E-W aligned ditch was in excess of 257m long, mostly *c.*1.2m wide, and up to 0.48m deep, with steep, stepped sides and a concave base. It contained a mid to dark greyish brown deposit of silty clay.	

4.8 Phase 307 – Boundary ditch (Period 15: Late medieval/early post-medieval)

Boundary ditches dating from prehistory to the modern era were revealed throughout the road scheme. They were used either to define the edge of a parcel of land, or to separate it from another.

4.8.1 Assessment Landscape 312 – Boundary ditch

A roughly E-W aligned ditch was recorded across the middle of the site, parallel to the modern road. Although similarly aligned to AL309, the two ditches were not contemporary. It is possible that this ditch is related to a boundary on the other side of the road (OS 2nd Edition 25-inch, 1901, xxxix.14).

Stratigraphic relationships between this ditch and other features suggest that the ditch is late medieval/early post-medieval in date. The backfill of the ditch contained Roman pottery, but this is residual.

It seems likely that the ditch was dug parallel to a precursor of the modern road, acting as a boundary between the road and the neighbouring land.

Assessment Groups within Assessment Landscape 309	
AG312.01	Boundary ditch
This feature was in excess of 250m long, 1.2m to 2.8m wide, and *c*.0.9m deep, with steep sides and a concave base. It contained mid greyish brown deposits of silty clay.	

4.9 Phase 308 – Field system and tree throw hole (Period 16: Post-medieval)

Post-medieval ditches were also identified on sites 2, 4, 5, 7, 8 and 9. They mark the edges of fields, many of which still survive. In many cases, the ditches support hedgerows and trees.

4.9.1 Assessment Landscape 310 – Boundary ditches and tree throw hole

Two N-S aligned ditches were identified, *c.*110m apart. Artefactual and cartographic evidence indicates that they were backfilled in the 20th century (OS 1st Edition 25-inch, 1886). The ditches represent field boundaries.

A large tree throw, truncating the eastern boundary ditch, further indicates that field boundaries such as these were marked by hedgerows and mature trees.

Assessment Groups within Assessment Landscape 310	
AG310.01	Boundary ditches
These ditches were in excess of 40m long, 0.55m to 1.7m wide, and 0.2m to 0.5m deep. It had moderately sloping sides and a concave base. Deposits contained within it were dark blackish brown in colour and were typically clayey-silt in composition.	
AG310.02	Tree throw hole
This feature was 6.71m long, 5.27m wide and 0.53m deep. It had gently sloping sides and an irregular base. Deposits contained within it were dark blackish brown in colour and were typically a clayey silty loam in composition.	

4.10 Phase 309 – WWII airfield utilities, land drains, ploughsoil and subsoil (Period 17: Late post-medieval/modern)

During World War II, airfields were established throughout the south of England on prominent, flat spurs of land. Many of these are now disused, but features such as concrete runways, building foundations, and service trenches for runway lighting and drainage can be revealed by archaeological excavation. Prior to the construction of the airfield, the land would have been levelled, and any open ditches would have been backfilled with rubble.

Land drains were found throughout the road scheme. They have been used from Victorian times to the modern day in order to aid land drainage, and are very common in this area, due to the heavy clay soils which require efficient drainage for the cultivation of crops.

Ploughsoil and subsoil are the layers of earth that overlie the undisturbed geological deposits. They are discussed further in Phase 103 above.

4.10.1 Assessment Landscape 311 – Land drains and airfield utilities

Sixty-seven land drains and nine features associated with the WWII airfield were recorded, on a variety of alignments. The WWII features included service trenches and rubble-filled ditches.

Assessment Groups within Assessment Landscape 311	
AG311.01	Airfield utilities
These features were up to 200m long and up to 3.1m wide. They all contained deposits of brick rubble.	
AG311.02	Land drains
Sixty-seven land drains were recorded on a variety of alignments. They were *c.*0.2m wide.	

4.10.2 Assessment Landscape 313 – Ploughsoil and subsoil

Ploughsoil and subsoil were both present across the whole site. Even though the subsoil has been assigned to this period, there is the possibility that it was formed at an earlier date.

Assessment Groups within Assessment Landscape 313	
AG313.01	Ploughsoil
The ploughsoil was *c.*0.3m thick and comprised dark greyish brown silty clay.	
AG313.02	Subsoil
The subsoil was *c.*0.25m thick and comprised mid orangey grey silty clay.	

5. APPENDIX 5: STRUCTURAL HIERARCHY AND TECHNICAL DETAIL FOR SITE 4

5.1 Introduction

Assessment of the results of all phases of fieldwork has led to the identification of four main periods of activity, from the Roman to the modern periods. They are summarised below.

5.2 Phase 400 –Tree throw holes/root action (Period 0: Unknown)

Tree throw holes and/or root action were recorded throughout the road scheme. They are discussed in Phase 100 above.

Tree throw holes can be of interest when studying the changes from a wooded to a cleared/agricultural landscape. In this case it has not been possible to identify exactly when these trees were cleared.

5.2.1 Assessment Landscape 400 - Tree throw holes/root action

Thirty-nine irregularly shaped features were identified as the remains of root action. They remain undated.

Assessment Groups within Assessment Landscape 400	
AG400.01	Tree throw holes/root action.
These tree throw holes were 0.3m to 2.2m long, 0.3m to 1.5m wide, and up to 0.1m deep, with steep sides and an uneven base. They contained mid greyish orange deposits of silty clay.	

5.3 Phase 401 – Field systems and posthole structure (Period 10: Roman)

Ditches containing very little or no datable artefactual material were recorded at various points along the road scheme, most notably within Sites 1 and 4. Ditches are common to many different periods, and are therefore hard to date without artefactual or stratigraphic evidence. In this case, they were shown to be earlier than the medieval ridge and furrow field systems (AL403), suggesting a Roman date. A similar field system was identified on Site 1.

Posthole structures can date to several periods, and represent the remains of a timber structure. However, its stratigraphic relationship with the medieval furrows suggests that it dates to the Roman period.

5.3.1 Assessment Landscape 401 - Field system

A series of ten field boundary ditches was identified within the site, representing the remains of a field system. Such features have been in common, and sometimes continuous, usage in this area from the Iron Age to the present day.

The field system may have been in use during the Roman period. This is supported by the stratigraphic relationship between the ditches and furrows,

revealing that the ditches were formed first, and the absence of any comparable late prehistoric field systems along the road scheme.

Assessment Groups within Assessment Landscape 401	
AG401.01	Ditches
These ditches were aligned roughly either NW-SE or NE-SW. They were up to 77m long, 0.55m to 0.84m wide, and 0.11m to 0.25m deep, with concave sides and a concave base. They contained mid orangey brown deposits of silty clay.	

5.3.2 Assessment Landscape 402 - Posthole structure

A group of six substantial postholes was identified near the western end of the site, with post pipes visible in all but one of them. The postholes formed a sub-rectangular structure, which measured roughly 7.5m by 5m.

The postholes did not contain any datable artefactual material, nor did they have stratigraphic relationships with any other features. However, it is unlikely that the structure would have been built in an area of ridge and furrow agriculture (AL403), suggesting that it was constructed at an earlier date. The structure is therefore thought to be broadly contemporary with the Roman field systems AL401.

There seems little doubt that such substantial postholes held structural timbers. However, the relatively small size of the structure makes it unlikely to have been a domestic building. Instead, it may have served as a temporary shelter or storage building.

Assessment Groups within Assessment Landscape 402	
AG402.01	Postholes
These six oval postholes were 0.5m to 0.85m long, 0.6m to 0.8m wide, and 0.14m to 0.53m deep, with nearly vertical sides and a concave base. They contained mid brownish orange deposits of silty clay. The five post pipes were *c*.0.4m in diameter, and contained dark orangey brown deposits of silty clay.	

5.4 Phase 402 – Field system (Period 14: Medieval)

The ploughed out remnants of ridge and furrow field systems were recorded throughout the road scheme, representing the remains of the once common corrugated fields which dominated this region. They are discussed further in Phase 102 above.

These field systems were used throughout the medieval period, and were often retained into the post-medieval period.

5.4.1 Assessment Landscape 403 - Furrows

The largely ploughed out remnants of six medieval furrows were identified, on a roughly N-S alignment. They were spaced at intervals of c.4m.

Assessment Groups within Assessment Landscape 403	
AG403.01	Furrows
These six furrows were up to 38m long and up to 2m wide, with a flat base. They contained mid yellowish brown deposits of clayey silt.	

5.5 Phase 403 – Moat, entrance gully, roadside ditch, land drains, ploughsoil and subsoil (Period 17: Late post-medieval/modern)

Moats are well documented throughout England. Many survive as substantial earthworks, and some are still in use. Post-medieval moats were mainly dug as a form of folly, mimicking earlier moats such as those which are known to exist within the Childerley Estate (Cambridgeshire County Council, Historic Environment Record).

Ditches have been dug along the sides of roads ever since the Roman period. Post-medieval and modern roadside ditches are particularly common within Cambridgeshire, and were also recorded within Sites 3 and 4. They help to keep roads free of surface water, and define which land is part of the road and which belongs to neighbouring fields.

Land drains were found throughout the road scheme. They have been used from Victorian times to the modern day in order to aid land drainage, and are very common in this area, due to the heavy clay soils which require efficient drainage for the cultivation of crops.

Ploughsoil and subsoil are the layers of earth that overlie the undisturbed geological deposits. They are discussed further in Phase 103 above.

5.5.1 Assessment Landscape 404 – Moat, entrance gully and roadside ditch

The remains of a large, post-medieval moat were identified within the site. This feature was already known from a mixture of cartographic and archaeological sources.

The moat enclosed an area in excess of 5600m^2, and had an 18m wide entrance on its northern side. A gully was recorded on the northern side of this entrance, enclosing a rectangular area of *c*.170m^2. Although the moat truncated the gully, the two features were almost certainly contemporary, with the relationship indicating that the moat was cleaned out during its lifetime.

A ditch was recorded along the southern edge of the site. It was parallel to the modern road, and effectively defined the southern edge of the area that was enclosed by the moat. Its backfill contained post-medieval artefacts. This was probably a roadside ditch, dug immediately north of a post-medieval precursor to the modern road.

Artefactual evidence indicates that the moat was backfilled during the post-medieval period. The scale and shape of the moat further suggest that it was constructed during this period, as it was much larger than many medieval examples. It also respected the roadside ditch, indicating that the line of the modern road had already been established when the moat was created.

The moat was probably a post-medieval landscape feature associated with the Childerley Estate. The gully round its entrance might have held a hedge, or wattle fence, which would have sealed the entrance to the moat.

Assessment Groups within Assessment Landscape 404	
AG404.01	Moat
This ditch was in excess of 145m long, 5.4m to 7.3m wide, and up to 1.55m deep, with steep, concave sides and a flat base. It contained mid orangey brown to dark grey deposits, typically of silty clay.	
AG404.02	Gully at entrance to moat
This gully was *c*.55m long, 0.4m to 0.8m wide, and 0.1m to 0.2m deep, with concave sides and a convex base. It contained mid orangey brown deposits of silty clay.	
AG404.03	Roadside ditch
This ditch was in excess of 140m long, *c*.1.4m wide, and *c*.0.5m deep, with steep sides and a concave base. It contained mid greyish brown deposits of silty clay.	

5.5.2 Assessment Landscape 405 – Land drains

Two modern land drains were identified.

Assessment Groups within Assessment Landscape 405	
AG405.01	Land drains
These land drains were aligned roughly E-W. They were up to 58m and were *c*.0.2m wide.	

5.5.3 Assessment Landscape 406 – Ploughsoil and subsoil

Ploughsoil and subsoil were both present across the whole site. Even though the subsoil has been assigned to this period, there is the possibility that it was formed at an earlier date.

Assessment Groups within Assessment Landscape 406	
AG515.01	Ploughsoil
The ploughsoil was *c*.0.25m thick and comprised dark greyish brown silty clay.	
AG515.02	Subsoil
The subsoil was *c*.0.25m thick and comprised mid orangey brown silty clay.	

6. APPENDIX 6: STRUCTURAL HIERARCHY AND TECHNICAL DETAIL FOR SITE 5

6.1 Introduction

Assessment of the results of all phases of fieldwork has led to the identification of three periods of activity, which are summarised below.

6.2 Phase 500 – Tree throw holes/root action (Period 10.4: Roman 3rd/4th century)

Tree throw holes and/or root action were recorded throughout the road scheme. They are discussed in Phase 100 above.

Tree throw holes can be of interest when studying the changes from a wooded to a cleared/agricultural landscape. In this case, the tree throw holes are believed to provide evidence for the clearance of woodland during the Roman period.

6.2.1 Assessment Landscape 500 - Tree throw holes/root action

Thirty-nine irregularly shaped features were identified as the remains of tree throw holes and/or root action. They were concentrated in the north-eastern and north-western corners of the site (Figure 10).

No datable artefactual material was recovered from any of the tree throw holes, but several of them were truncated by features that were Roman in date. The lack of evidence for pre-Roman activity on the site suggests, therefore, that they were formed during the Roman period, assuming that they were all broadly contemporary.

They were mainly located outside the area of enclosures, suggesting that these enclosures were sited within a clearing. The surrounding trees would then have provided a convenient source of timber, as well as acting as a windbreak. This suggests that the trees were mostly felled during the later stages of occupation of the site (Phases 503 and 504).

Assessment Groups within Assessment Landscape 500	
AG500.01	Tree throw holes/root action.
These features were up to 3.6m long, up to 2.4m wide, and up to 0.5m deep. They had irregular sides and an uneven base. Deposits within them were typically light brownish orange silty clay. Most were left unexcavated.	

6.3 Phase 505 – Unphased ditches and pits (Roman: Period 10)

Most archaeological excavations uncover a number of features that cannot easily be assigned to a specific phase of activity. This might be due to a lack of artefactual material to provide a date for them, or because they belong to an archaeological landscape that has otherwise been ploughed out. It can also be impossible to assign these features confidently to a specific phase when two or more phases within a short period of time overlap spatially.

6.3.1 Assessment Landscape 512 – Unphased ditches, pits, and postholes

A total of twenty-six features could not confidently be assigned to a specific landscape or phase. These features comprised several ditches on various alignments, thirteen pits, and two postholes. They were all located in the centre or the eastern half of the site.

Although these features are unphased, they can still be said to be Roman, since Roman pottery was recovered from most of them. The reason for their being unphased is that a number of enclosures of different dates were either adjacent or overlapping. It is therefore not possible to decide to which enclosure they belong based solely on their spatial location, and the enclosures are often too similar in date for artefactual evidence to help.

There was little indication what any of the ditches or pits were used for. One of the pits (AG512.04) contained a layer of burnt material, but the pit was located on the very edge of the site and might have related to activity that took place further south. A number of the ditches were quite shallow, and are perhaps the sole remnants of enclosures or fields that have otherwise been ploughed out.

The postholes possibly represent the remains of a building, but this can only be conjecture with just two of them recorded. Both were very shallow, however, and it is easily conceivable that they were part of a larger group of postholes that has been badly truncated by ploughing.

Assessment Groups within Assessment Landscape 512	
AG512.01	Ditches
These nine ditches were aligned in various directions. They were up to 11m long, 0.35m to 1m wide, 0.06m to 0.5m deep, and mainly had concave sides and a flat base. Deposits within them varied from mid yellowish brown to dark grey silty clay.	
AG512.02	Pits
These seven pits were 0.6m to 1.7m long, 0.4m to 1.1m wide, and 0.06m to 0.4m deep, with a range of profiles. Deposits within them varied from mid yellowish brown to dark grey silty clay.	
AG512.03	Pits
These five pits were 0.65m to 2.75m long, 0.55m to 1.55m wide, and 0.17m to 0.3m deep, with concave sides and a concave base. Deposits within them varied from mid yellowish brown to dark grey silty clay	
AG512.04	Pit
This pit was more than 3m long, 2.65m wide, and 0.53m deep, with concave sides and a concave base. It contained a mid greyish brown silty clay deposit, in the middle of which was a thin layer of mid reddish brown silty clay with evidence of burning.	
AG512.05	Possible posthole structure
This possible structure comprised two postholes that were 0.35m in diameter and up to 0.16m deep, with nearly vertical sides and a concave base. They contained a mid orangey brown silty clay deposit.	

6.4 Phase 501 – Enclosure and pits (Period 10.2: Roman 2nd century)

Roman enclosures have been recorded on Sites 2, 3, and 5, and are a common feature in the rural landscape of Cambridgeshire and beyond. They differ from earlier Iron Age enclosures, such as those on Sites 3 and 7, by being generally more rectangular in shape. Pits are a common feature of any rural site associated with settlement activity.

Enclosures were used either to keep animals in, or to keep them out of an area of human habitation. Pits were widely used either to store material or dispose of it, and the former type was sometimes converted into the latter once it was no longer required for storage. Artefactual evidence recovered from the backfill of these ditches and pits allow them to be dated confidently as Roman.

6.4.1 Assessment Landscape 501 – Enclosure ditches and pits

Two ditches were recorded on a NW-SE alignment, enclosing an area of *c.*220m^2 towards the eastern edge of the site (Figure 10). The southern ditch was largely ploughed out, only surviving in short lengths. A total of four small pits were located at its eastern end, as well as a further one to the southeast.

The ditches represent the probable remains of an enclosure. It appears to have been open-ended, but this could be due to subsequent ploughing, or truncation by a later enclosure (AL504) in the case of the northwest end. Some of the pits were dug through the fill of the ditch, but they are still likely to have been broadly contemporary. Similarly, the enclosure is likely to have been broadly contemporary with the ladder system in Phase 502.

Too little of the enclosure survived to state confidently what it was used for, but the relative paucity of artefactual material makes it likely that it was used for livestock, not human occupation. The pits were perhaps used for storage; they do not seem, at least, to have been water, rubbish, or quarry pits.

Assessment Groups within Assessment Landscape 501	
AG501.01	Enclosure ditches
These two ditches were aligned NW-SE and spaced *c.*7.5m apart. They were up to 30m long, up to 0.6m wide, up to 0.18m deep, and had concave sides and a concave base. They contained a mid orangey brown silty clay deposit.	
AG501.02	Pit cluster
These four pits were 0.95m to 1.65m long, 0.7m to 1.05m wide, and 0.18m to 0.35m deep. They generally had concave sides and a concave base. They contained a mid brown silty clay deposit.	
AG501.03	Pit
This pit was 1.25m long, 0.85m wide, and 0.15m deep, and had concave sides and a flat base. It contained a mid brown silty clay deposit.	

6.5 Phase 502 – Ladder enclosure and associated pits and grave (Period 10.3: Roman 2nd/3rd century)

Numerous sites in East Anglia and beyond have revealed systems of land use that can be described as 'ladder' enclosures. They comprise a linear series of juxtaposed square or rectilinear enclosures, and often incorporate a trackway. A smaller example of such an enclosure was uncovered on Site 3 (AL306).

Ladder enclosures provided a series of distinct blocks of land, which could be used either as pasture or for arable or horticultural purposes. Such enclosures are known to have existed throughout the Roman period, and sometimes formed a link between larger field systems or farmsteads.

Isolated graves are not uncommon features on the edges of Roman farmsteads, where the population was perhaps not high enough to warrant a proper cemetery. A further isolated burial was discovered on Site 3.

6.5.1 Assessment Landscape 502 – Enclosure ditches and pit

Three ditches were recorded on the south-eastern side of the ladder enclosure (AL504), all aligned roughly NE-SW (Figure 10). They created a gap of *c.*5-7m between themselves and the ladder enclosure, with a 3m wide entrance between the termini of the two southern ditches. A small pit was recorded within the enclosed area.

The function of these ditches is slightly unclear, due both to their position near the edge of site and to truncation by later features. It is likely that they were contemporary with the ladder enclosure, perhaps forming a trackway on its southeast side. The northern ditch, however, is much more curved than any of those within the ladder, and appears to extend beyond the north-eastern end of the ladder. It is possible that this was part of a field system at the end of the ladder enclosure.

The pit was probably contemporary with this landscape, despite being physically truncated by one of the ditches. This is likely to represent an occasion when the ditch was redefined. The pit was too truncated to determine its use.

Assessment Groups within Assessment Landscape 502	
AG502.01	Enclosure ditches
These two ditches were aligned roughly NE-SW. They were up to 23m long, 0.7m to 1.15m wide and 0.11m to 0.42m deep, and had concave sides and a concave base. They contained a mid orangey brown silty clay deposit.	
AG502.02	Enclosure ditch
This curvilinear ditch was aligned roughly NE-SW. It was 39m long, up to 0.9m wide, and *c.*0.3m deep, with concave sides and a concave base. It contained a mid orangey brown silty clay deposit.	
AG502.03	Pit
The pit was 0.7m in diameter and 0.07m deep, and had concave sides and a flat base. It contained a mid orangey brown silty clay deposit.	

6.5.2 Assessment Landscape 503 – Enclosure, grave, and pit

A substantial enclosure ditch was recorded in the south-western corner of the site (Figure 10). The ditch was on the same orientation as the contemporary ladder enclosure (AL504), with which it formed a junction. A severely ploughed-out grave (AG503.02) was located near the corner of the ditch. A pit was located at the terminus of the enclosure ditch, truncated by the enclosure ditch and those of the ladder enclosure, though still broadly contemporary.

The land that was enclosed by this ditch was either a lateral extension of the ladder system, or a large enclosure or field at the end of the ladder. Interpretation of this parcel of land is hindered by the fact that it extends beyond the edge of the site. No conclusive evidence was forthcoming for the function of the pit.

Evidence that the grave was contemporary with this landscape (or, indeed, Roman) is only circumstantial, based on its location in the corner of the enclosure. It is possible that it belonged to a subsequent phase that retained the enclosure, or when the ditch was at least still visible as an earthwork.

The approximately east-west orientation of the grave might indicate that it was a Christian burial, or might just be coincidental. Its position in the corner of the enclosure matches the (provisionally later) graves AG510.12. The grave belonged to an adult, but the person's sex has not yet been determined due to the heavy truncation of the skeletal remains (Appendix 19).

Assessment Groups within Assessment Landscape 503	
AG503.01	Enclosure ditch
This ditch was aligned mainly NE-SW, turning towards the southeast at its northeast end. It was 44m long and mainly *c.*1.3m wide, becoming 3m wide at the corner, and was up to 0.8m deep, with concave sides and a flat base. It contained a primarily mid yellowish brown silty clay deposit. A basal fill of dark orangey grey silty clay that was rich in pottery was recorded at the corner of the ditch.	
AG503.02	Grave
This sub-rectangular grave was aligned roughly WNW-ESE. It was 1.55m long, 0.6m wide, and 0.1m deep, with vertical sides and a flat base. It contained a light greyish brown silty clay deposit. Only the legs, right arm, and right ribs of the supine skeleton survived.	
AG503.03	Pit
This pit was at least 1.45m in diameter and 0.51m deep, with concave sides and a flat base. It contained a mid yellowish brown silty clay deposit.	

6.5.3 Assessment Landscape 504 – Ladder enclosure and pits

The central part of the site contained a linear series of enclosures, arranged on a NE-SW orientation in a 'ladder' system (Figure 10). The ladder was *c.*35m wide at its southwest end, becoming gradually wider towards the northeast. The individual enclosures appear originally to have been either *c.*7.5m or *c.*11m wide, though redefinition of some of the ditches complicates this measurement.

The ladder system appears to have included a trackway, though the evidence for this has been partly truncated by a later enclosure (AL510). The NW-SE ditches that separate the enclosures generally appear not to extend all the way across to the north-western edge of the ladder, suggesting that a gap of *c.*6-7m was left open on this side for access.

A later enclosure ditch (AG510.01) was dug along the middle of this trackway. This perhaps suggests that a hollow was formed, which became a more pronounced earthwork than the ditches that bordered it.

A substantial deposit of pottery (AG504.10) was recovered from one of the enclosure ditches. The pots were all broken, and probably constitute a dump of rubbish rather than a deliberate placement. In contrast, the artefact assemblage from the rest of the ladder system was relatively small, suggesting that the ladder was used for agricultural purposes rather than settlement activity.

Ladder enclosures sometimes formed a link between field systems. This is possibly the case here, with the enclosure ditch in AL503 and the northern ditch in AL502 at either end of the ladder. There is also some doubt concerning the function of the two ditches forming a right angle at the north-eastern end of the ladder, which could be part of either the ladder or a separate field system. The grave (AG503.02) and the dump of pottery perhaps indicate that enclosure AL503 contained settlement activity beyond the limit of excavation.

Five pits were also recorded within the area of the ladder enclosure, located mainly in the proximity of the enclosure ditches. Their geographical location is the main reason for their inclusion in this phase of activity; it is possible that they in fact belong to a later phase. They contained generally too few artefacts to have been rubbish pits, and were too small to have been quarry or water pits, so were presumably used for storage.

Assessment Groups within Assessment Landscape 504	
AG504.01	Enclosure ditches
These two ditches were aligned NW-SE. They were up to 33m long, *c.*0.75m wide, 0.26m to 0.42m deep, with concave sides and a mainly flat base. They contained a mid yellowish brown silty clay deposit.	
AG504.02	Reinstatement of enclosure ditches
These two ditches were aligned NW-SE, and probably represent a reinstatement of AG504.01. They were up to 33m long, 0.8m to 1.1m wide, 0.18m to 0.61m deep, and had concave sides and a mainly flat base. They contained a mid yellowish brown silty clay deposit. Finds deposit AG504.10 was located in the top of the northern ditch.	
AG504.03	Enclosure ditches
These four ditches were aligned NW-SE. They were up to 31m long, 0.55m to 1.8m wide, up to 0.4m deep, and had concave sides and a concave or flat base. They typically contained a mid yellowish brown silty clay deposit. Three of the ditches only survived along part of their length due to plough truncation, and the fourth was truncated by quarry pit AG505.02.	
AG504.04	Enclosure ditch
This ditch was aligned primarily NW-SE, before turning towards the southwest at its southeast end, shortly after which it was completely truncated by quarry pit AG505.02. The ditch was 28.5m long, up to 0.9m wide and up to 0.47m deep, with nearly vertical sides and a flat base. It contained a mid greyish brown silty clay deposit.	
AG504.05	Enclosure ditch
This ditch was aligned NE-SW. It was 26m long, *c.*2.0m wide, up to 0.55m	

deep, and had concave sides and a concave base. It contained a mid orangey grey silty clay deposit. Both ends were completely truncated by later features.	
AG504.06	Enclosure ditch
This ditch was aligned NW-SE. It was 29m long, up to 0.85m wide and up to 0.31m deep, with a pronounced 'V'-shaped profile. The ditch contained a mid yellowish brown silty clay deposit.	
AG504.07	Enclosure ditch
This ditch was aligned NE-SW. It was 13.5m long, 0.45m wide, up to 0.33m deep, and had concave sides and a concave base. It contained a mid yellowish brown silty clay deposit. It is unclear whether its southwest end formed a genuine terminus, or whether it was merely truncated by ploughing.	
AG504.08	Enclosure ditches
These two ditches were aligned NW-SE or NE-SE, forming a right angle at their corner (though this was completely truncated by later features). The NW-SE ditch was 44.5m long, and the NE-SW ditch was 13.5m long. They were 1m to 1.1m wide, 0.15m to 0.37m deep, and had concave sides and a concave base. They typically contained a mid orangey brown silty clay deposit.	
AG504.09	Boundary ditches
These two ditches were aligned NE-SW, and formed the northwest edge of the ladder system. They were up to 64m long, *c.*0.5m wide, and up to 0.22m deep, with concave sides and a concave base. They contained a mid orangey brown silty clay deposit. It is unknown whether one ditch was a redefinition of the other, or whether they were contemporary. The eastern ditch was possibly segmented.	
AG504.10	Pottery dump
This was a concentrated dump of pottery within the fill of AG504.02, contained within a dark grey silty clay deposit. The deposit was contained within a nominal cut that was 4.3m long, 0.8m wide and 0.28m deep, with concave sides and a concave base.	
AG504.11	Pits
Five pits were recorded within the area of the ladder system. They were 0.7m to 2.95m long, 0.65m to 1.8m wide, and 0.16m to 0.64m deep. They had concave sides and a flat or concave base, and typically contained a mid to dark greyish brown silty clay deposit.	

6.6 Phase 503 – Enclosures, quarry pit, droveways, and associated pits, metalling, and timber structure (Period 10.4: Roman 3rd/4th century)

Enclosures and pits were recorded on several of the sites along the road scheme, and were present in both the earlier phases of this site. It is likely that the 'ladder' enclosure AL504 was largely still in use during this phase of activity.

Droveways were also found on Sites 2, 3, and 7, and can be found on sites throughout England from the Bronze Age onwards. They comprise a pair of either parallel or converging ditches that were used for herding animals, in this case towards a drinking hole.

Evidence of timber structures is often found on Iron Age and Roman sites in Britain, and further examples were recorded on Site 7. They were generally used as houses, barns, or workshops, and sometimes amounted to substantial buildings. Usually, however, the only surviving trace of them is through

postholes and horizontal slots dug for timber beams, since wood rarely survives on archaeological sites.

Roman quarry pits can also be found throughout the country, though not often as large as this one. Quarry pits of a similar size, however, were uncovered nearby at Caldecote Highfields (Kenney, S. 2001). The Romans are known to have quarried a wide variety of deposits, primarily for either their manufacturing or their construction industries.

The presence of metalling is a less common occurrence, more usually found on sites associated with Roman roads. It comprised a dense, compact layer of mainly stones that was used to provide a hard surface along which to walk or ride.

6.6.1 Assessment Landscape 505 – Enclosure, quarry pit, and associated gully, pits, metalling, and timber structure

A sub-rectangular enclosure approximately 400m^2 in size was located near the centre of the site (Figure 10), possibly subdivided by an internal gully. The enclosure had a narrow entrance at its western corner, with a nearby posthole that was perhaps associated with it. A large quarry pit (AG505.02) was revealed on the north-western edge of the enclosure.

A total of four small pits were recorded round the outside of the enclosure, and a further two, slightly larger pits inside. The centre of the enclosure also contained a number of postholes and possible beam slots, which were on the same NW-SE alignment as the gully. A NW-SE aligned ditch continued beyond the edge of site from the southern corner of the enclosure, near which was a small area of metalling.

The position of the enclosure in relation to the quarry suggests that the quarry was either used to form the northwest side of the enclosure, or that the enclosure was left open here to gain access to the quarry. The two features are almost certain to have been contemporary, even though the enclosure ditch was cut through the fill of the quarry; the quarry was left to fill up naturally, and the enclosure ditch was perhaps extended as the quarry pit shrank.

The quarry pit was cut into a chalky geological outcrop. This material was alkaline, and could therefore have been used as a fertiliser in order to lower the acidity of the soil.

The lower fills of the quarry pit show clear evidence of standing water. It is likely that the quarry acquired a secondary use as a water pit, used in association with either the extant parts of the ladder enclosure, or the timber building AG505.03, or both.

The timber building comprised two NW-SE aligned beam slots, as well as two definite and two possible postholes. The form of the building is unclear, but the two definite postholes were so truncated by ploughing that related

postholes were perhaps completely destroyed. There is no indication what the building was used for, though it was perhaps associated with the quarry.

The function of the pits both inside and outside the enclosure is uncertain. The ones outside the enclosure can only tentatively even be interpreted as being contemporary with it.

The presence of metalling at the southern corner of the enclosure is not easily explicable. It appears to have been used in entranceways elsewhere on the site, but no entrance is obvious here. There is, however, some evidence that the ditch was cleaned out, with some of the metalling slumping into it, suggesting that this corner was briefly used as an entrance when the ditch had largely silted up. Alternatively, the explanation might lie beyond the edge of the site.

Assessment Groups within Assessment Landscape 505	
AG505.01	Enclosure ditches
These two ditches were 80m long in total, and were 0.8m to more than 2m wide, up to 0.7m deep, and had concave sides and a flat base. They contained a mainly dark brownish grey silty clay deposit.	
AG505.02	Quarry
This large pit was *c.*31m long and *c.*10m wide. It was 3.35m deep at its west end, but no more than 2m elsewhere, with a shallower ledge on its southern side. It contained a lower deposit that was mainly a mottled mid reddish grey clay with horizontal upper horizons. The remainder of the deposit mainly comprised mid yellowish or brownish grey silty clay.	
AG505.03	Timber structure
This structure included two NW-SE aligned beam slots that were 1.9m to 3.85m long, 0.25m to 0.35m wide, up to 0.16m deep, and had nearly vertical sides and a flat base. They contained a mainly mid greyish brown silty clay deposit. It also included two postholes that were 0.25m in diameter, 0.04m deep, had a concave base, and contained a mid orangey grey silty clay deposit.	
AG505.04	Gully
This ditch was aligned NW-SE, and was 10.5m long, 0.5m wide, and 0.09m deep, with concave sides and a flat base. It contained a mid orangey grey silty clay deposit.	
AG505.05	Pits
These two pits were 1.5m to 1.95m long, 1.55m to 2.05m wide, and 0.35m deep, with concave sides and a flat base. They typically contained a mid orangey brown silty clay deposit.	
AG505.06	Pits
These four pits were 0.75m to 1.4m long, 0.4m to 1.2m wide, and 0.11m to 0.24m deep, with concave sides and a flat base. They typically contained a mid orangey brown silty clay deposit.	
AG505.07	Metalling
This metalling comprised a compacted layer of stones in a silty clay matrix. It was contained within an irregularly shaped cut that was 3m long, at least 2.2m wide, and 0.17m deep, with concave sides and a flat base.	
AG505.08	Posthole
This posthole was 0.4m in diameter and 0.07m deep, with concave sides and a flat base. It contained a dark brownish grey silty clay deposit.	

6.6.2 Assessment Landscape 506 – Enclosure, pits, and metalling

Immediately north of enclosure AL505 was another enclosure, which was broadly contemporary and similar in size and shape. It had a *c.*1.5m wide entrance at its southern corner, which was widened to *c.*3m when the enclosure was subsequently redefined. A patch of metalling was present in this entrance. Two pits were also recorded along the perimeter of the enclosure.

The initial form of this enclosure is unclear, since the northern and western sides appear to have been open. The enclosure ditch perhaps acted just as a boundary, without actually enclosing anything. The later ditch only roughly followed the course of its predecessor, but did enclose the parcel of land on all sides, retaining the entrance that was defined by the earlier ditch.

There are no positive clues to what this enclosure was used for, though the lack of internal features suggests agriculture, not occupation. This lack, however, could be accounted for by plough truncation of the site. The use of metalling in the entrance perhaps suggests that it was regularly used as a human or vehicular thoroughfare, though this does not preclude the movement of animals.

The use of the two pits is unknown, though their dark fills perhaps indicate that they were rubbish pits. It is interesting to note that a similar pit was dug at the terminus of both the earlier and later enclosure ditches.

A pewter plate was recovered from the fill of the enclosure ditch, which has been provisionally dated to the 3rd of 4th century.

Assessment Groups within Assessment Landscape 506	
AG506.01	Enclosure ditch
This ditch was 34m long, *c.*2m wide, 0.5m to 0.7m deep, and had concave sides and a flat base. It contained a mid orangey brown silty clay deposit.	
AG506.02	Enclosure ditch
This ditch was 91m long, up to 1.5m wide, 0.1m to 0.54m deep, and had concave sides and a flat or concave base. It contained a mid to dark greyish brown silty clay deposit.	
AG506.03	Pits
These two pits were 1m to 1.55m long, 0.75m to 1.1m wide, and 0.19m to 0.38m deep, with concave sides and a flat base. They typically contained a dark greyish brown silty clay deposit.	
AG506.04	Metalling
This metalling comprised a compacted layer of stones in a silty clay matrix. It was contained within an irregularly shaped cut that was 3.3m long, 2.1m wide, and 0.31m deep. It had concave sides and an uneven base.	

6.6.3 Assessment Landscape 507 – Droveways, pits, and metalling

Two droveways were present in the eastern half of the site (Figure 10), both of which were aligned roughly NW-SE. The northern one was *c.*5.5m wide at its northwest end, widening to *c.*9.5m further southeast, and was roughly parallel to a contemporary boundary ditch. The southern droveway was *c.*4.5m wide at

its northwest end, but became at least 17.5m wide further southeast, forming a funnel. The funnel was narrowed further by an internal blocking ditch.

The ditch marking the western side of the southern droveway appears to have been segmented. Several pits were recorded near the junction of the two segments. In between the two droveways was a large water pit, on the southern side of which was an area of metalling.

The two pairs of ditches are believed to have been used as droveways, and indeed to have been contemporary, for three reasons. The first was that they were both in line with the water pit, which was probably used as a watering hole. The second was that the two northern ditches meandered slightly at the same point, strongly suggesting that they were contemporary. The third reason was the blocking ditch, which would have had no obvious function unless the ditches were contemporary, and were being used to herd animals. This ditch appears originally to have left a gap on the south-western side of the enclosure, before being reinstated with the entrance on the opposite side.

An opening was left between the southern droveways and the water pit, which the presence of metalling suggests was used frequently as a path. It is unknown whether a gap was left between the water pit and the northern droveway due to plough truncation of the site.

It is unclear what importance should be attached to the segmentation of the western ditch of the southern droveway. It perhaps represents an extension of the droveway ditch, which subsequently had to be reinstated twice, but might as easily be the result of different teams of diggers creating the ditches. The function of the pits along this ditch is also unclear, though the amount of artefacts recovered from them suggests that they were either used or re-used for dumping rubbish.

Assessment Groups within Assessment Landscape 507	
AG507.01	Droveway
These two ditches were aligned NW-SE, and were up to 33m long. They were 0.5m to 0.9m wide, up to 0.4m deep, and had concave sides and a flat base. They contained a mid greyish brown silty clay deposit.	
AG507.02	Boundary ditch
This ditch was aligned NW-SE and was 34m long, 1.2m wide, and 0.4m deep, with concave sides and a concave base. It contained a mid brown silty clay deposit.	
AG507.03	Water pit
This pit was 12.5m long, 7.5m wide, and 0.91m deep, with stepped sides and a flat base. It contained a dark greyish brown silty clay deposit.	
AG507.04	Metalling
This metalling comprised a compacted layer of stones in a silty clay matrix. It was contained within an irregularly shaped cut that was 5.4m long and 1.9m wide.	
AG507.05	Droveway
These two ditches were aligned NW-SE to NNW-SSE. They were 20m to 46m long, 1m to 1.7m wide, up to 0.55m deep, and had concave sides and a concave base. They typically contained a mid brownish grey silty clay deposit.	

AG507.06	Pits
These five pits were 0.35m to 2.95m long, 0.35m to 1.45m wide, and 0.07m to 0.48m deep, with concave sides and a concave base. Deposits within them varied from mid yellowish brown to dark brownish grey silty clay.	
AG507.07	Blocking ditch
This segmented ditch was aligned roughly NNE-SSW, and was 11m long. It was 0.75m to 1.4m wide, 0.14m to 0.34m deep, and had concave sides and a concave base. It contained a mid orangey brown silty clay deposit.	
AG507.08	Droveway ditch
This ditch was aligned NNW-SSE and was 25m long, 0.8m wide, and up to 0.53m deep. It had concave sides and a concave base, and contained a mainly mid orangey brown silty clay deposit.	
AG507.09	Droveway ditches
These two ditches were aligned NNW-SSE, and were up to 25m long. They were 0.5m to 1.5m wide, up to 0.75m deep, and had concave sides and a concave base. They contained a mid orangey brown silty clay deposit.	

6.7 Phase 504 – Enclosures, graves, timber structure, coin hoard, hearth, pits, gullies, and associated features (Period 10.4: Roman 3rd/4th century)

Most of the types of feature in this phase of activity have already been encountered in the earlier phases. The remaining types are less often found.

Coin hoards of various dates have been found on sites throughout Britain. The official definition of a coin hoard (The Treasure Act 1996) is a group of ten or more coins that were originally all part of one deposit. Large hoards are rare, and are usually composed of less valuable bronze coins. They might represent someone's savings, just as people in more recent times have hidden money under their mattress or floorboards, or they might have been stashed in advance of an enemy attack.

Hearths or ovens have also been found on Roman sites throughout Britain. They commonly just took the form of a pit with a ceramic lining. Most were probably for used for domestic tasks, mainly cooking, though it is possible that some had a more industrial use.

6.7.1 Assessment Landscape 508 – Enclosures

The remains of two enclosures with a trackway between them were visible in the centre of the site (Figure 10). The northern enclosure covered an area of *c.*600m^2 and the southern one *c.*200m^2, though the southern enclosure was poorly defined due to plough truncation of the ditches. The trackway between the enclosures was *c.*2m wide.

There are a number of problems in understanding how this landscape worked, in addition to those caused by plough truncation. It seems likely that the later enclosure ditch AG510.02 was a larger re-cut of an earlier ditch on the same line, completely removing all trace of it. This earlier ditch presumably formed the other half of the northern enclosure with ditch AG508.04, and also the north-western side of the trackway to the northwest of the southern enclosure.

No obvious entrance was visible for the northern enclosure. It was perhaps on the northeast or northwest side, with all trace of it removed by the re-cut. There is also no evidence what this enclosure was used for.

The trackway between the two enclosures is also problematic, since it appears to have been blocked when the north-eastern boundary of the southern enclosure was reinstated. This perhaps means that only the NW-SE element of the trackway was then used. Plough truncation has also made it hard to tell whither and whence the trackway was leading; there is the further possibility that part of the ladder enclosure (AL504) was retained in this landscape.

Assessment Groups within Assessment Landscape 508	
AG508.01	Enclosure ditch
This ditch was aligned roughly NW-SE. It was 20m long, up to 2.2m wide, up to 0.86m deep, and had concave sides and a concave base. It contained a mid brownish grey silty clay deposit.	
AG508.02	Segmented enclosure ditch
This segmented ditch formed a right angle, with one part aligned NE-SW, the other part NW-SE. It was 24.5 long, up to 1m wide, up to 0.3m deep, and had concave sides and a flat base. It contained a mid brownish grey silty clay deposit.	
AG508.03	Reinstatement of enclosure ditch
These two ditches were aligned NW-SE. They were up to 18m long, up to 0.95m wide, up to 0.31m deep, and had concave sides and a flat base. They contained a mid brownish grey silty clay deposit.	
AG508.04	Enclosure ditch
This ditch formed a right angle, with one part aligned NE-SW, the other part NW-SE. It was 47m long, 0.8m wide, up to 0.45m deep, and had concave sides and a mainly flat base. It contained a mid brownish grey silty clay deposit.	

6.7.2 Assessment Landscape 509 – Gullies, pits, possible structures, and hearth

Eight linear features were recorded across the site that appear to belong to this phase of activity, yet whose function is unclear. One of these (AG509.07) was appreciably narrower than the others, and was possibly a beam slot for a timber structure.

Three gullies were also recorded in the south-western corner of the site (Figure 10), as well as three pits near the centre. One of these pits had a baked clay lining, and has been interpreted as a hearth (AG509.05). Only its very base survived.

The gullies in the south-western corner appear to have formed part of at least two enclosures, both of which were *c*.250-300m^2 in size. They do not form enclosures on their own, however, and are likely to have used retained elements of enclosures AL503 and AL504.

The short linear features are difficult to interpret. Most were only *c*.4-6.5m long, but had clear termini, indicating that they were not merely the ploughed out remnants of more substantial ditches.

These linear features have been found on various other sites in Cambridgeshire, where their function has been similarly elusive. Some of them have been interpreted as corn driers, though the ecofactual evidence does not appear to support that theory on this site.

An alternative explanation of these features is that they were perhaps associated with buildings, acting either as drip gullies or as entrance barriers to keep animals out. The hearth (AG509.05) was located next to one of these ditches, and no other building was found with which it was obviously associated.

Assessment Groups within Assessment Landscape 509	
AG509.01	Gullies
Two of the three gullies were aligned NE-SW, and the third was NW-SE. They were up to 17m long, *c.*0.6m wide, and up to 0.18m deep, with concave sides and a flat base. They contained a mid yellowish brown silty clay deposit.	
AG509.02	Possible structural features
These two short, slightly curved features were aligned roughly NE-SW. They were 5.6m to 6.4m long, *c.*0.8m wide, and up to 0.25m deep, with concave sides and a concave base. They contained a mid yellowish brown silty clay deposit.	
AG509.03	Possible structural feature
This short, slightly curved feature was aligned roughly NW-SE. It was 6.25m long, 0.8m wide, and 0.2m deep, with concave sides and a flat base. It contained a mid yellowish brown silty clay deposit.	
AG509.04	Possible structural features
These five short, linear features were roughly aligned either NE-SW or NW-SE. They were 1.8m to 6m long, 0.55m to 1.3m wide, and 0.07m to 0.36m deep, with concave sides and a flat base. They contained a mid yellowish or greyish brown silty clay deposit.	
AG509.05	Hearth
This pit was 0.95m long, 0.8m wide, and 0.09m deep, with concave sides and a flat base. It had a dark, reddish black, baked clay lining, above which was a mid reddish grey silty clay deposit.	
AG509.06	Pits
These two pits were 1.1m to 3.4m long, 0.6m to 0.9m wide, and 0.1m to 0.53m deep, with concave sides and a flat base. They contained a mid greyish brown silty clay deposit.	
AG509.07	Possible beam slot and associated feature
The beam slot was aligned roughly NW-SE. It was 3.9m long, 0.3m wide, and 0.12m deep, with nearly vertical sides and a flat base. It contained a mid yellowish brown silty clay deposit. The adjacent feature was 1.45m long, 0.6m wide, and 0.1m deep, with concave sides and a concave base. It contained a dark brownish grey silty clay deposit.	

6.7.3 Assessment Landscape 510 - Enclosures and associated timber structure, graves, pits, and coin hoard

This landscape was dominated by larger enclosures than those seen previously, though they were still arranged predominantly on a NE-SW axis. The one defined by AG510.01 to the northwest and AG510.04 to the southwest enclosed an area of *c.*1700m^2, and the one defined primarily by AG510.02 was

*c.*2200m^2 in size. A smaller one to the north of where these two enclosures intersect was *c.*250m^2 in size, and the northern corners of two more enclosures were recorded on the southern edge of site.

The main problem with interpreting this landscape lies in knowing what elements of the earlier enclosures were retained, since this clearly seems to have been the case with some. Much of this landscape has been superimposed on the ladder enclosure (AL504), reinstating some of the earlier ditches and perhaps making use of some that were still extant, such as AG504.05.

It seems likely that much of AL505 was retained, fitting into the corner of the enclosure formed by AG510.02. A large cesspit that was dug into the top of the quarry was therefore perhaps associated with timber structure AG505.03.

Two other cesspits that were recorded to the north of the other one were perhaps associated with timber structure AG510.08. This building was composed of three beam slots, in which the beam pipes were still visible where the beams had either decayed or been removed. There was only evidence for two sides of the building, but ploughing might have accounted for the rest. There was no indication what the building might have been used for.

The most significant feature in this landscape, if not the most important, was the coin hoard AG510.11 (Appendix 12). This had been stashed in a pit in the corner of an enclosure, possibly in a slight hollow since it was in the top of one of the ladder enclosure ditches. It had been stored in either a bag or a box, though this has subsequently decayed. Although the feature had been truncated by ploughing, it is likely that the hoard was nearly intact. The coins all appear to have been barbarous radiates produced by irregular mints in Britain between *c.*275 and 296 (Guest and Parkes, 2006).

An unusually long plough coulter was also recovered from one of the enclosure ditches. Such a large, valuable Iron object is not an item normally associated with casual discard. Its presence in this context is interpreted as evidence of a votive deposit.

Two graves have tentatively been ascribed to this landscape. They were located in the western corner of the northern enclosure in AL508, but it is likely that this enclosure was retained when the northern half of the enclosure ditch was reinstated by AG510.02.

The two graves consisted of a NW-SE aligned inhumation and a separate neonatal or juvenile grave (Appendix 19). The inhumation is believed to be that of a young woman, suggesting that the neonatal grave was that of her child.

Five pits other than the three cesspits were also recorded in this landscape. It is uncertain what they were used for; they all had dark fills, suggesting that they might have been rubbish pits, but the fills in this landscape were mostly quite dark.

Assessment Groups within Assessment Landscape 510	
AG510.01	Enclosure ditch
This ditch was aligned NE-SW. It was 95m long, up to 3.8m wide, 0.55 to 1.1m deep, and had concave sides and a flat or concave base. It contained a mid yellowish brown silty clay lower deposit and a dark grey silty clay upper deposit.	
AG510.02	Enclosure ditch
This curvilinear ditch was 127m long and was mainly 0.9m to 1.2m wide, increasing to 3m at its western terminus. It was *c.*0.45m deep with concave sides and a concave base, becoming 0.71m deep at its western terminal. It contained a mid yellowish brown silty clay lower deposit and a dark grey silty clay upper deposit.	
AG510.03	Enclosure ditches
These two ditches were aligned NW-SE. They were up to 30m long, 0.9m to 1.7m wide, 0.25m to 0.71m deep, and had concave sides and a concave base. They contained a mainly mid brownish grey silty clay deposit.	
AG510.04	Enclosure ditch
This ditch corner was 17m long, 1.1m to 2m wide, and *c.*0.2m deep, with concave sides and a concave base. It contained a dark brownish grey silty clay deposit.	
AG510.05	Segmented enclosure ditch
This ditch corner was composed of a NE-SW aligned ditch, and one that was aligned NW-SE before turning towards the southwest at its northwest end and terminating. They were 11m to 21.5m long, 1.4m to 1.9m wide, 0.39m to 0.85m deep, and had concave sides and a concave base. They contained a mid brown to dark brownish grey silty clay deposit.	
AG510.06	Cesspits
These two pits were 3.05m to 4.7m long, 2.2m to 2.75m wide, and 0.59m deep, with concave sides and a flat or uneven base. Deposits within them varied from mid yellowish brown to dark greyish black silty clay. The eastern pit was recorded as one large pit that truncated two smaller ones, but it was probably all one pit, or they were at least filled up together.	
AG510.07	Cesspit
This pit was 6.85m long, 3m wide, and 1.06m deep, with concave sides and a concave base. Deposits within it varied from a mid brown to a dark grey silty clay. It was cut into the top of AG505.02, but was sealed by the rubbish layer in AL511. The upper fill was an apparent capping layer, containing frequent large stones.	
AG510.08	Timber structure
This timber structure was composed of three beam slots, two of which were aligned NW-SE and one NE-SW. They were 1.55m to 3.9m long, 0.4m to 0.55m wide, and 0.1m to 0.24m deep, with a mid yellowish brown silty clay deposit. They each contained a beam pipe, which was the same depth as its associated beam slot and approximately 0.15m shorter and narrower. The beam pipes contained a dark grey silty clay deposit.	
AG510.09	Pits
These three pits were 1.7m to 1.9m long, 1m to 1.2m wide, and 0.3m to 0.47m deep, with concave sides and a concave base. They contained a dark brownish grey silty clay deposit.	
AG510.10	Pit
This pit was 0.75m long, 0.6m wide, 0.19m deep, and had concave sides and a flat base. It contained a dark brownish grey silty clay deposit.	

AG510.11	Coin hoard
A hoard of 4473 copper alloy coins and 12 iron discs was contained within a circular pit that was 0.7m in diameter and 0.55m deep. It contained a mid greyish brown silty clay deposit. The majority of the coins came from an area in the centre of the pit that was 0.4m across and 0.1m deep.	
AG510.12	Graves
The sub-rectangular inhumation was aligned roughly NW-SE. It was 1.4m long, up to 0.55m wide, and 0.22m deep, with nearly vertical sides and a slightly concave base. The neonate/juvenile burial to the northwest was in a roughly circular grave. It was 0.4m in diameter and 0.05m deep. Both graves contained a mid orangey brown silty clay deposit.	
AG510.13	Pit
This pit was 0.95m long, 0.8m wide, and 0.62m deep, with nearly vertical sides and a concave base. It contained a dark brownish grey silty clay deposit.	

6.7.4 Assessment Landscape 511 – Water pits and rubbish layer

Two large water pits were recorded at ditch intersections near the centre of the site (Figure 10). A layer of dark earth that was particularly rich in artefacts was also recorded in the hollow formed in the top of quarry pit AG505.02.

The features in this landscape mark the final episode of use and the subsequent abandonment of the site. It is unclear how much of the earlier landscape was still in use at the time when the water pits were dug, though there were presumably still enclosures with which they were associated. The sides of the water pits were steeper than might be expected for animals' drinking holes, raising the possibility that they were dug primarily as sumps to drain the ditches.

The rubbish layer was probably a deposit that formed as the site went out of use. It was very similar to the upper fill of most of the ditches in AL510, suggesting that this layer once spread across the whole site, filling any earthwork hollows that were left. It is possible, therefore, that this layer postdates the Roman period.

Assessment Groups within Assessment Landscape 511	
AG511.01	Water pits
These two pits were 5.9m to 9m long, 3.8m to 5.1m wide, and 0.57m to 0.89m deep. They had stepped of concave sides and a concave base. They contained a dark brownish grey silty clay deposit.	
AG511.02	Rubbish layer
This layer was 29.5m long, up to 9.8m wide, and 0.41m thick. It comprised a dark grey silty clay deposit, and was contained in the top of AG505.02.	

6.8 Phase 506 – Field systems (Period 14: Medieval)

The ploughed out remnants of ridge and furrow field systems were recorded throughout the road scheme, representing the remains of the once common corrugated fields which dominated this region. They are discussed further in Phase 102 above.

Some of the ditches that marked the boundaries of these fields were also recorded, most notably in the vicinity of Site 4. They commonly contained

very little or no datable artefactual material, but are likely to be medieval in date, when ridge and furrow field systems were widely established.

6.8.1 Assessment Landscape 513 - Furrows and boundary ditch

The largely ploughed out remnants of five medieval furrows were identified on a WNW-ESE alignment, as well as a further two aligned NE-SW (Figure 10). A NE-SW aligned ditch was also recorded at the northern edge of the site.

These features contained no artefactual material, but were dug through the subsoil that sealed the Roman features on this site. They represent the remains of medieval field systems.

Assessment Groups within Assessment Landscape 513	
AG513.01	Furrows
These five furrows were aligned WNW-ESE and spaced *c.*5m apart. They were up to 90m long and up to 1.65m wide. They contained a mid yellowish brown silty clay deposit.	
AG513.02	Furrows
These two furrows were aligned NE-SW and spaced *c.*5m apart. They were up to 11.5m long and up to 1.3m wide. They contained a mid yellowish brown silty clay deposit.	
AG513.03	Boundary ditch
This ditch at the northern edge of site that was 9.5m long, 0.75m wide, and up 0.35m deep, with concave sides and a flat base. It contained a mid orangey brown silty clay deposit.	

6.9 Phase 507 – Boundary ditch, ploughsoil and subsoil (Period 17: Late post-medieval/modern)

Boundary ditches dating from the Iron Age to the modern period were identified throughout the road scheme. These ditches were used to mark the edges of fields.

Ploughsoil and subsoil are the layers of earth that overlie the undisturbed geological deposits. They often contain artefactual material that has been dragged up from underlying archaeological features as a result of ploughing. They are discussed further in Phase 103 above.

6.9.1 Assessment Landscape 514 - Boundary ditch

A boundary ditch was recorded that on a mainly WNW-ESE alignment, becoming NW-SE aligned at its western end. It had a contemporary ceramic land drain in its base.

The ditch was on the same alignment as the two sets of furrows in AL513. This suggests that the ditch was broadly contemporary in origin, but was cleaned out and perhaps enlarged when the land drain was added.

Assessment Groups within Assessment Landscape 514	
AG514.01	Boundary ditch
This ditch was 198m long, *c.*1m wide, and 0.64m deep, with concave sides and a flat base. It contained a dark yellowish brown silty clay deposit and had a land	

drain in its base.

6.9.2 Assessment Landscape 515 – Ploughsoil and subsoil

Ploughsoil was present across the whole site. It had a relatively uniform thickness, and contained a number of residual Roman artefacts.

Subsoil was present across most of the site, though little of it survived in some areas. It contained numerous Roman artefacts, evidence of the truncation that the site suffered in antiquity.

Assessment Groups within Assessment Landscape 406	
AG515.01	Ploughsoil
The ploughsoil was *c*.0.3m thick and comprised dark greyish brown silty clay.	
AG515.02	Subsoil
The subsoil was up to 0.2m thick and comprised mid brown silty clay.	

7. APPENDIX 7: STRUCTURAL HIERARCHY AND TECHNICAL DETAIL FOR SITE 7

7.1 Introduction

Assessment of the results of all phases of fieldwork has led to the identification of five main periods of activity, which are summarised below.

7.1 Phase 700 – Gully, pits, posthole and tree throw holes/root action (Period 0: Unknown)

Tree throw holes and/or root action were recorded throughout the road scheme. They are discussed in Phase 100 above.

Tree throw holes can be of interest when studying the changes from woodland to a cleared/agricultural landscape. In this case, it has not been possible to identify exactly when these trees were cleared.

Gullies, pits and postholes were also frequently encountered along the road scheme, and are common throughout England from the Bronze Age onwards. It is therefore hard to assign them to a specific period without either datable artefactual material, or stratigraphic relationships with features whose date is known.

7.1.1 Assessment Landscape 700 – Tree throw holes/root action

Eight irregularly shaped features were identified as the remains of tree throw holes and/or root action. Their stratigraphic relationships with other features indicate that they were not all contemporary, and as a whole they remain undated.

Assessment Groups within Assessment Landscape 700	
AG700.01	Tree throw holes
These two tree throw holes were 1.24m to 1.7m long, 0.7m to 1.35m wide, and 0.18m to 0.4m deep. They had irregular sides and uneven bases. They contained clayey or sandy silt deposits that were light yellowish grey to dark orangey brown.	
AG700.02	Root action/animal burrows
These four features were 0.12m to 0.55m long, 0.1m to 0.25m wide, and 0.07m to 0.18m deep. They had irregular sides and uneven bases. They contained a mid orangey brown to mid greyish orange deposit of silty clay.	

7.1.2 Assessment Landscape 701 – Undated pits

Four isolated pits were recorded in the vicinity of droveway AL719, in the south-eastern quarter of the site. They contained no datable artefactual material. Their proximity to the droveway might indicate that they were contemporary, although the fact that two were located in the middle of it suggests otherwise.

Assessment Groups within Assessment Landscape 701	
AG701.01	Pits

These four pits varied from 0.56m to 0.89m long, 0.55m to 0.76m wide, and 0.07m to 0.25m deep. They had concave sides and a concave or uneven base, and contained mid brownish orange to greyish brown deposits of silty clay.

7.1.3 Assessment Landscape 702 – Undated gully and posthole

A short segment of gully and a single posthole were recorded near the western edge of the site. Neither contained any datable artefactual material, and their function is unknown.

Assessment Groups within Assessment Landscape 702	
AG702.01	Gully
This gully was aligned NE-SW. It was 2.25m long, 0.3m wide, and 0.12m deep, with steep sides and a concave base. It contained a mid brownish orange deposit of sandy silt.	
AG702.02	Posthole
This posthole was 0.30m in diameter and 0.12m deep, with nearly vertical sides and a flat base. It contained a deposit of dark brown silt, with flecks of charcoal and small pieces of fired clay.	

7.2 Phase 701 – Colluvium (Period 0: Unknown)

Colluvial deposits form as a result of the downhill movement of soil particles. These deposits form at the bases of slopes, or in depressions on a slope. The reasons why soil particles move downhill are varied; typically it is the result of soil disturbance (caused by the removal of trees, or ploughing) combined with gravity. In this region and the rest of Britain, the human actions that can lead to the formation of colluvium have taken place from the Mesolithic period onward.

The presence of colluvium within Sites 7 and 9, and also within AAE 6 (Albion Archaeology 2005a, Trenches 42 and 57), provides potentially significant information on the changes that this landscape has seen in recent millennia. It is possible that human action is responsible for its formation, adding to its archaeological importance.

7.2.1 Assessment Landscape 703 – Colluvium

A layer of colluvium that was stratigraphically earlier than palaeochannel AL704 covered the north-western corner of the site. To the south-east of the palaeochannel, it was observed in two large pockets within natural hollows.

Several fragments of worked flint and prehistoric pottery were recovered from the surface of this deposit. Enclosures AL703 and AL710 were dug through the colluvium, meaning that its formation predated the Iron Age, and the type of human activity that lead to its formation could have taken place as long ago as the Mesolithic.

Assessment Groups within Assessment Landscape 703	
AG703.01	Colluvium
The colluvium was up to 0.7m thick, and comprised mid brownish orange sandy silt.	

7.3 Phase 702 – Palaeochannel (Period 0: Unknown)

Palaeochannels mark the locations of former watercourses. In Sites 7 and 9, palaeochannels were recorded which still contain active watercourses. In both cases, the modern-day streams were considerably smaller than the original palaeochannels recorded during archaeological works.

Rivers and streams become backfilled and fall into disuse, thus becoming palaeochannels, as a result of both human action and natural events. The number and size of streams and rivers vary as the climate becomes wetter or drier. Also, human actions, such as tree removal and ploughing, can release large amounts of soil into watercourses, causing them to become blocked and ultimately to cease functioning.

7.3.1 Assessment Landscape 704 – Palaeochannel

A NE-SW aligned palaeochannel was discovered on roughly the same alignment as the modern stream that crosses the site. A possible tributary was recorded on its south-eastern side, perpendicular to the main palaeochannel. Two auger transects were recorded across the palaeochannel and its tributary (Appendix 21).

Alluvial deposits from the palaeochannel both sealed and were cut by Iron Age remains. Since the Iron Age remains concerned are believed to be broadly contemporary, it suggests that at least two significant episodes of flooding took place during this period.

Assessment Groups within Assessment Landscape 704	
AG704.01	Palaeochannel
The palaeochannel was aligned NE-SW, and was 157m long, 24m wide, and 1.75m deep. It contained alluvial deposits of light orangey to dark greyish brown silty clay.	
AG704.02	Tributary palaeochannel
The tributary palaeochannel was orientated NW-SE, and was 15m long and up to 9m wide. It contained an alluvial deposit of light orangey brown silty clay.	

7.4 Phase 703 – Boundary ditch (Period 9.1: Early/Middle Iron Age)

Remains from this date are often fragmentary; the land was mainly open, with enclosures becoming more widely used later in the Iron Age. Boundary ditches might have been used to separate areas of land that were either in different people's territories, or were used for different purposes. Remains of a similar date were also identified on Site 3 and 8.

7.4.1 Assessment Landscape 705 – Boundary ditch

A NW-SE aligned boundary ditch was recorded roughly parallel to palaeochannel AL704, at a distance of *c*.20m (Figure 11). It was truncated by two later Iron Age enclosures (AL705, AL707).

This ditch represents the earliest demarcation of the site. It may have enclosed the area adjacent to the palaeochannel, which nutrient-rich alluvial soils would have made suitable for farming.

Assessment Groups within Assessment Landscape 705	
AG705.01	Boundary ditch
This ditch was orientated NW-SE. It was at least 64m long, 0.57m wide, and 0.2m deep, with concave sides and a flat or concave base. It contained a light yellowish to dark greyish brown deposit of silty clay.	

7.5 Phase 704 – Enclosures, paddocks, roundhouses, structural features, and pits (Period 9.1: Early/Middle Iron Age)

Iron Age enclosures are known from excavations throughout Britain, although they are more commonly associated with later Iron Age sites. Another early/middle Iron Age enclosure was revealed on Site 3.

The combination of enclosures and paddocks created small farmsteads. As well as living in them, people also used them for keeping animals and perhaps small-scale farming. Some enclosures had large ditches, such as those on this site, which suggests that they also had a defensive role. Animals were perhaps allowed to graze in the paddocks during the day, and then were brought into the enclosures for safety at night and at times of conflict.

Iron Age roundhouses have been found throughout England, and were the commonest type of building at that time. They were wooden, thatched structures which were primarily used for occupation, though some were also used for industrial purposes. Pits were used mainly for either storing food or disposing of rubbish.

7.5.1 Assessment Landscape 706 – Southern farmstead

The southern farmstead contained a sub-oval domestic enclosure that was *c.*610m^2 in size, and was defined by a substantial enclosure ditch. There was a paddock to the south-west of this enclosure that was at least 700m^2 in size.

The enclosure contained the drip gully of roundhouse AG706.03 measuring *c.*12m in diameter, and perhaps the truncated remains of a second roundhouse. A probable drainage gully led from AG706.03 towards the palaeochannel. Five pits were also recorded inside the enclosure, with a further three in the paddock.

A narrow entrance on the north-eastern side of the enclosure gave access to the unenclosed higher ground to the east. The use of stone surfaces perhaps became necessary to consolidate the marshy area around this entrance, since several large stones were found in the termini of the ditch.

A second entrance on the southern side of the enclosure provided access to and from the paddock. The terminus on the eastern side of this entrance was subsequently re-cut, apparently blocking off the opening.

The size of roundhouse AG706.03 suggests that it was used for occupation, although industrial use cannot be ruled out. The possible roundhouse next to it

is too truncated to determine its use; it was quite possibly not even a roundhouse, but a cattle pen or windbreak.

Two of the pits within the enclosure were probably used for storage, on the evidence of their steep profiles and the presence of a clay lining in one. A pit in the paddock contained large quantities of burnt stone, fired clay and fuel ash, which was perhaps cleared from a nearby hearth that did not survive medieval plough-truncation (Furrows AL718). Two loom weights were also found within the fill of the enclosure ditch, which would have been used for weaving.

Assessment Groups within Assessment Landscape 706	
AG706.01	Domestic enclosure
This curvilinear ditch comprised two segments, one 64m long, the other 33m. The ditch was 3.55m wide and up to 1.56m deep, with mainly 45^{o} sides and a flat or uneven base. It contained a primarily silty clay deposit that was light orangey grey to black in colour.	
AG706.02	Pits
These three pits were 0.3m to 1.31m long, 0.25m to 0.7m wide, and 0.06m to 0.30m deep. Their sides ranged from concave to nearly vertical, and they had flat or concave bases. They contained clayey silt deposits that were mid orangey to dark brownish grey in colour.	
AG706.03	Roundhouse
This curvilinear drip gully comprised two arcs, one 17m long, the other 11m. The gully was up to 0.55m wide and up to 0.3m deep, with generally concave sides and a flat base. It contained a light yellowish grey to mid greyish brown deposit of silty clay.	
AG706.04	Pit
This oval pit was 0.58 m long, 0.45m wide, and 0.1m deep, with concave sides and a concave base. It contained a deposit of mid grey clayey silt.	
AG706.05	Possible roundhouse
This possible drip gully was 5.4m long, 0.2m wide, and 0.03m deep, with concave sides and a concave base. It contained a deposit of mid greyish brown silty clay.	
AG706.06	Drainage gully
This gully was aligned NW-SE. It was 6.5m long, 0.95m wide, and 0.2m deep, with concave sides and a flat base. It contained a deposit of light grey to mid greyish brown silty clay.	
AG706.07	Paddock ditch
This ditch was aligned primarily NE-SW, before turning towards the north at its north-eastern end. It was 32m long, up to 1.55m wide, and up to 0.76m deep, with 45^{o} sides and a flat or concave base. It contained a deposit of mid bluish grey to mid greyish brown silty clay.	
AG706.08	Pits
These three sub-oval pits were 0.75m to 1.1m long, 0.63m to 0.9m wide, and 0.13m to 0.16m deep, with concave sides and a flat or concave base. They contained mid orangey grey to mid greyish brown deposits of silty clay.	
AG706.09	Pit
This oval pit was 0.9m long, 0.6m wide, and 0.23m deep, with concave sides and a flat base. It contained a dark greyish brown deposit of silty clay.	

7.5.2 Assessment Landscape 707 - Entrance gully and middle farmstead.

The middle farmstead contained a sub-rectangular domestic enclosure that was *c*.280m^2 in size. It was defined by a substantial enclosure ditch, with a single entrance on its north-western side that was *c*.2.5m wide, facing the palaeochannel. A single pit was recorded within the enclosure.

The entrance into the strip of land separating this enclosure from AL706 was controlled by a curvilinear gully. This appears to have been extended at some point to reduce the width of the entrance. Three pits, two stakeholes and a posthole were located nearby, though it is unclear what their function was.

The paddock associated with this enclosure was situated to the north-east, and was *c*.750m^2 in size. It was bordered by the northern enclosure (AL708) and a boundary ditch that appears to have been a partial re-cut of AL703. There was a 2m wide entrance at either end of this boundary ditch. The north-western side of the paddock was probably defined by the palaeochannel.

The drip gully for a roundhouse was recorded in the northern corner of the paddock, *c*.6.5m in diameter. Almost the full length of the drip gully survived, revealing an entrance on the eastern side. Two pits containing large burnt stones were located nearby.

The termini of the enclosure ditch contained several large stones. As with AL706, it is possible that stone surfaces were used to consolidate marshy ground near the entrance to the enclosure.

The fills of the enclosure ditch were arranged in such a way as to suggest that it originally had an external bank, which had subsequently collapsed back in. Slumps of dark material on the inner side of the ditch are indicative of nearby domestic activity. This suggests that there were originally more features within this enclosure than the single small pit that was recorded; it is likely that they were destroyed in antiquity by ploughing (AL718).

The function of the roundhouse is uncertain. It was significantly smaller than AG706.03, and was situated in the paddock, not the enclosure. This suggests that it might have been used primarily for industrial purposes, not habitation.

Assessment Groups within Assessment Landscape 707	
AG707.01	Entrance gullies
These curvilinear gullies were aligned roughly NE-SW. The southern gully was stratigraphically later than the northern one, apparently acting as an extension. The gullies were up to 7m long, up to 0.86m wide, and 0.33m deep, with concave sides and a flat or concave base. They contained silty clay deposits that were mid bluish grey to mid greyish brown in colour.	
AG707.02	Pit near entrance gullies
This pit was 0.5m long, 0.4m wide, and 0.12m deep, with concave sides and a flat base. It contained a deposit of mid greenish grey silty clay.	
AG707.03	Domestic enclosure
This ditch was 68m long, up to 1.94m wide, and up to 1.4m deep, with steep sides and a concave base. It typically contained a silty clay deposit that was	

light greyish yellow to dark greyish brown in colour.	
AG707.04	Pits
These two sub-oval pits were up to 1.5m long, 1.45m wide, and 0.55m deep, with concave sides and a flat base. They contained mid brownish grey deposits of silty clay.	
AG707.05	Stakeholes and posthole
The two stakeholes were 0.06m in diameter, and the posthole 0.3m. They were up to 0.1m deep, with nearly vertical sides and a flat base. They contained mid brownish grey deposits of silty clay.	
AG707.06	Pit
This sub-oval pit was 1.05m long, 0.45m wide, and 0.07m deep, with concave sides and an uneven base. It contained a deposit of mid grey clay.	
AG707.07	Paddock ditch
This ditch was aligned NE-SW. It was 28m long, up to 0.78m wide, and up to 0.32m deep, with steep, concave sides and a concave base. It typically contained a deposit of silty clay that was mid brownish grey to dark greyish brown in colour.	
AG707.08	Roundhouse
This curvilinear drip gully was 17m long, up to 0.54m wide, and up to 0.34m deep, with concave sides and a flat base. It contained a mid orangey grey to dark greyish brown deposit of silty clay.	
AG707.09	Pits
These two circular pits varied from 0.6m to 1.15m in diameter and were 0.08m to 0.12m deep, with concave sides and a flat or concave base. They contained deposits of mid reddish brown to dark brown silty clay.	
AG707.10	Pits
These three sub-oval pits were 0.74m to 0.84m long, 0.6m to 0.67m wide, and 0.12m to 0.2m deep, with concave sides and a flat or concave base. They contained mid yellowish to dark greyish brown deposits of silty clay.	

7.5.3 Assessment Landscape 708 – Northern farmstead

The northern farmstead contained a sub-rectangular domestic enclosure that was at least *c*.480m^2 in size, with a paddock to the south-east. The north-western edge of the enclosure was either truncated by the palaeochannel, or was defined by it.

Four isolated postholes and a beam slot were recorded within the enclosure, as well as a curvilinear ditch that might have formed part of the drip gully for a roundhouse. Five pits were also recorded within the enclosure, clustered in a group to the north of the possible roundhouse.

Within the paddock were four short, curvilinear features. A posthole in the midst of these features was probably associated with them. The paddock also contained four pits, two of which were near the entrance to the enclosure.

Only the southern half of the enclosure ditch survived subsequent re-cutting (AL715). The need for re-cutting was probably accentuated by inundation from the palaeochannel, as suggested by the presence of four possible drainage gullies within the enclosure.

Unlike AL706 and AL707, the paddock that formed part of the northern farmstead was situated upslope of the enclosure, away from the palaeochannel. This is perhaps further evidence that the ground in this farmstead was particularly wet. An entrance on the eastern side of the enclosure allowed access between it and the paddock. The extent of the paddock is unknown, since its north-eastern and south-eastern sides appear to have been open.

The fills of the pits within the enclosure suggest that they were perhaps storage pits, later reused for disposing of rubbish. One was a possible 'beehive' pit, a type that is thought to have been used for storing grain, although its proximity to the palaeochannel throws doubt on whether the pit would have been used for this purpose. The function of the pits in the paddock is unclear, though the two near the entrance might have been rubbish pits.

It is unclear what the short, curvilinear ditches represent. The one within the enclosure and the easternmost one in the paddock both became suddenly deeper for a short length, perhaps indicating a sump. This would suggest that they were drip gullies rather than structural slots. The other three in the paddock, however, are more likely to have been structural slots, perhaps for cattle pens or windbreaks.

Assessment Groups within Assessment Landscape 708	
AG708.01	Domestic enclosure and paddock
A single ditch defined the south-western edge of the enclosure and paddock, and the south-eastern side of the enclosure. It was up to 3m wide and up to 1m deep, with concave sides and a flat or concave base. It contained a light yellowish grey to dark greyish brown deposit of clayey silt.	
AG708.02	Possible roundhouse
This possible drip gully was 11m long, up to 0.5m wide, and mainly 0.2m deep, with mostly concave sides and a concave base. One short segment of the ditch was 0.4m deep, with nearly vertical sides. The ditch contained a light yellowish to dark bluish grey deposit of clayey silt.	
AG708.03	Postholes
These four circular postholes were 0.30m to 0.45m in diameter and 0.04m to 0.28m deep, with nearly vertical sides and a flat or concave base. They contained mid brown to black deposits of silty clay.	
AG708.04	Beam slot
This beam slot was 1.35m long, 0.3m wide, and 0.3m deep, with vertical sides and a flat base. It contained a dark greyish brown deposit of silty clay.	
AG708.05	Pit cluster
These five oval pits were 1m to 1.65m long, 0.55m to 1.2m wide and, 0.05m to 0.46m deep, with concave sides and a flat or concave base. They contained mid brownish orange to dark greyish brown deposits of silty clay.	
AG708.06	Possible beehive pit
This oval pit was 0.81m long and 0.54m wide at the top, increasing to 1.07m by 0.85m further down. It was 0.56m deep, with concave, undercut sides and a flat base. It contained a mid to dark greyish brown deposit of silty clay.	
AG708.07	Drainage gullies
Three of these gullies were aligned NW-SE with the fourth aligned NE-SW. They were up to 5.31m long, 0.2m to 0.75m wide, and 0.07m 0.14m deep, with concave sides and a concave base. They contained mid greyish to dark orangey	

brown deposits of silty clay.	
AG708.08	Pits
These two intercutting pits were 1.91m to 4.13m long, 1.59m to 1.79m wide, and 0.6m to 0.72m deep, with steep sides and a flat base. They contained mid grey to black deposits comprising a variable mixture of clay and silt.	
AG708.09	Pit
This sub-circular pit was 1.3m in diameter and 0.63m deep, with concave sides and a concave base. It contained a mid orangey brown to mid brownish grey deposit of silty clay.	
AG708.10	Pit
This circular pit was 0.9m in diameter and 0.2m deep, with concave sides and a flat base. It contained a mid orangey to dark greyish brown deposit of silty clay.	
AG708.11	Structural features
These two curvilinear features were 4.5m long, 0.48m to 0.97m wide, and 0.18m to 0.36m deep, with nearly vertical sides and a flat base. They contained mid brownish orange to mid greyish brown deposits of silty clay.	
AG708.12	Structural feature
This curvilinear feature was 11.5m long, up to 0.5m wide, and mainly up to 0.12m deep, with mostly concave sides and a concave base. One short segment of the ditch was 0.22m deep, with nearly vertical sides. The ditch contained a mid brownish orange to dark brownish black deposit of silty clay.	
AG708.13	Posthole
This circular posthole was 0.41m in diameter and 0.14m deep, with concave sides and a flat base. It contained a mid greyish brown deposit of silty clay.	
AG708.14	Possible roundhouse
This possible drip gully was 10m long, up to 0.69m wide and up to 0.24m deep, with concave sides and a concave base. It contained a mid greyish brown deposit of silty clay.	

7.5.4 Assessment Landscape 710 – Western enclosure

A substantial ditch was recorded on the north-western side of the palaeochannel, forming the western half of a sub-rectangular enclosure that was at least *c*.240m^2 in size. It seems likely that the other side of the enclosure was defined by the palaeochannel. Unlike the farmsteads on the opposite side of the palaeochannel, this enclosure does not appear to have been accompanied by a defined paddock.

The enclosure ditch had traces of a bank of upcast material along its inner edge. This extended just beyond its northern terminus. Some sections of the ditch showed traces of the bank's having collapsed back in.

A less substantial ditch was also recorded, apparently extending the enclosure northwards. It was probably designed to narrow the entrance between the larger ditch and the palaeochannel. A pit of unknown function was located at the eastern terminus of this ditch.

The function of this enclosure is unclear. No associated structures were found, and comparatively little pottery was recovered from the fill of the ditch. The fill was also lighter in colour. However, the size of the ditch is similar to that of the enclosures on the opposite side of the palaeochannel, suggesting a defensive function.

It seems likely that the enclosure was used for occupation, yet not as intensively as those to the east of the palaeochannel. What cannot be ascertained is whether it was contemporary with the other enclosures. Artefacts recovered from it indicate a broadly similar date, yet there is no evidence of how the enclosures might have been connected across the palaeochannel.

Assessment Groups within Assessment Landscape 710	
AG710.01	Enclosure ditch
This ditch was at least 31m long, with an internal bank. It was up to 4.5m wide and at least 1m deep, with 45° sides and an uneven base. It contained light bluish grey to mid orangey brown deposits ranging from clay to sandy silt.	
AG710.02	Enclosure ditch extension
This ditch was primarily aligned NE-SW, with an eastward curve at its north-eastern end. It was 14m long, 1.36m wide, and 0.61m deep, with steep sides and an uneven base. It contained mid greenish grey or brown deposits of silty to sandy clay.	
AG710.03	Pit
This sub-circular pit was 1.86m long, 1.63m wide, and 0.34m deep, with concave sides and a concave base. It contained mid greenish grey silty clay.	

7.5.5 Assessment Landscape 714/715 – Reinstatements of northern enclosure

The northern enclosure ditch (AL708) was subjected to several episodes of reinstatement. The initial ditch was not as substantial as those of AL706 and AL707, and the enclosure's proximity to the palaeochannel would have made regular flooding likely, thus creating the need for re-cutting.

The southern half of the ditch was reinstated only once (AL714). It followed roughly the same course as its predecessor, but terminated *c*.10m further south, and was probably contemporary with the first reinstatement of the northern half of the ditch (AL715). These two re-cuts gave the enclosure a more southerly entrance than before, which was *c*.4.5m wide. The reinstated ditch was a similar size to the initial one.

A substantial second reinstatement of the northern enclosure ditch (AL715) removed all trace of the original ditch, and created an entrance that was *c*.11m wide. This northern terminus was then cleaned out at a later date. This is the only enclosure on the site whose entrance changes location in this way.

Assessment Groups within Assessment Landscape 714	
AG714.01	Southern re-cut of enclosure ditch
This re-cut was 32m long, 1.55m wide, and 0.7m deep, with steep, concave sides and a flat base. It contained a mid brownish orange to dark greyish brown deposit of silty clay.	

Assessment Groups within Assessment Landscape 715	
AG715.01	First northern re-cut of enclosure ditch
This re-cut was 7m long, 1.3m wide, and 0.53m deep, with concave sides and a flat base. It contained a mid reddish brown to dark brownish black deposit of	

silty clay.	
AG715.02	Second northern re-cut of enclosure ditch
This re-cut was 19m long, 2.2m wide, and 1m deep, with 45° sides and a concave base. It contained a light brown to dark greyish brown deposit of silty.	
AG715.03	Re-cut of northern terminus
This re-cut was 5.5m long, 1.5m wide, and 0.77m deep, with steep, concave sides and a flat base. It contained a mid greyish brown to black deposit of silty clay.	

7.5.6 Assessment Landscape 716 – Reinstatement of northern paddock

The ditch that defined the edge of the paddock in AL708 was reinstated on the same line. The reinstated ditch was slightly shorter at both ends, creating a *c*.3.5m wide entrance between its north-western terminus and the enclosure.

A pit was recorded immediately north-east of the ditch. Its function is uncertain, but it was probably associated with the possible animal pens or windbreaks (AL708) that were nearby.

Assessment Groups within Assessment Landscape 716	
AG716.01	Re-cut of paddock ditch
This re-cut was 22m long, up to 0.8m wide, and 0.35m deep, with concave sides and a flat or concave base. It contained a mid orangey to dark greyish brown deposit of silty clay.	
AG716.02	Pit
This sub-oval pit was 1.35m long, 0.65m wide, and 0.94m deep, with concave sides and a concave base. It contained a mid greyish brown deposit of silty clay.	

7.6 Phase 705 – Gully and pit (Period 10: Roman)

Archaeological excavations often uncover features that are isolated, and cannot be associated with any wider area of activity. Evidence of Roman settlements and field systems was found on Sites 2, 3, and 5, making it clear that there was widespread activity in this area during the Roman period.

7.6.1 Assessment Landscape 717 – Gully and pit

A gully and a pit to the north-west of the palaeochannel were identified as being Roman. There is no indication for what either feature was used, though their position near the edge of the site makes it possible they were associated with other remains beyond the limit of excavation.

Assessment Groups within Assessment Landscape 717	
AG717.01	Gully
This gully was aligned NW-SE aligned gully. It was 4.15m long, 0.5m wide, and 0.24m deep, with steep sides and a flat base. It contained a mid greenish brown deposit of silty clay.	
AG717.02	Pit
This sub-oval pit was 2.13m long, 1.47m wide, and 0.24m deep, with steep sides and a flat base. It contained a mid greyish brown deposit of silty clay.	

7.7 Phase 706 – Field systems (Period 14: Medieval)

The ploughed out remnants of ridge and furrow field systems were recorded throughout the road scheme, representing the remains of the once common corrugated fields which dominated this region. They are discussed further in Phase 102 above.

These field systems were used throughout the medieval period, and were often retained into the post-medieval period.

7.7.1 Assessment Landscape 718 – Furrows

The remains of nineteen furrows were identified south-east of the stream, and a further fifteen to the north-west. They were spaced c.7.5m apart and were all aligned roughly WNW – ESE, though there was a slight difference in alignment between the two sets.

Assessment Groups within Assessment Landscape 718	
AG718.01	Furrows
These nineteen furrows were aligned WNW-ESE, and were spaced *c.*7.5m apart. They were up to 155m long, up to 3.4m wide, and up to 0.3m deep, with shallow sides and a flat base. They contained light greyish yellow to mid brown deposits of silty clay.	
AG718.02	Furrows
These fifteen furrows were aligned WNW-ESE, and were spaced *c.*4.5m apart. They were up to 34m long and up to 2.2m wide. They contained mid orangey brown deposits of silty clay.	

7.8 Phase 707 – Field boundaries, droveways, land drains, service trench, ploughsoil, and subsoil (Period 17: Late post-medieval/modern)

Boundary ditches have been used to define the edges of fields, and droveways to herd animals from one place to another, from prehistoric times to the modern era. Post-medieval boundary ditches were revealed throughout the road scheme, and droveways were also recorded on Sites 2, 3, 5, and 9.

Land drains are a widely used solution to problems with land drainage, and have been in use from the 19th century to the modern day.

Ploughsoil and subsoil are the layers of earth that overlie the undisturbed geological deposits, and in this case the layer of colluvium (AL703) as well. They are discussed further in Phase 103 above.

7.8.1 Assessment Landscape 719 – Field boundaries, droveway, land drains and service trench

A NE-SW droveway was recorded on the south-east side of the palaeochannel, and a similarly aligned field boundary ditch was present on either side of the stream. The eastern one of these boundary ditches had a land drain in its base, and there were three postholes next to it, probably indicating the remains of a fence. A modern E-W service trench was also identified.

It is likely that all these features date to the twentieth century. The field boundaries and the droveway parallel to the stream were still visible as ditches

on a 1949 aerial photograph (Cambridge AP, Fairy Air Photos series 1949). Additional anecdotal evidence, gathered from the former landowner (Adrian Peck), suggests that traces of these were still visible in the latter half of the 20th century.

Assessment Groups within Assessment Landscape 719	
AG719.01	Boundary ditches and fence line
These two ditches were aligned NE-SW. They were up to 140m long, up to 1.5m wide, and 0.81m deep, with 45° sides and a concave base. They contained light orangey to dark greyish brown deposits of silty clay, and the eastern ditch had a land drain in its base. The fence line comprised three sub-circular postholes. They were 0.19m to 0.29m in diameter and up to 0.22m deep, with nearly vertical sides and a flat base. They contained a mid brownish grey deposit of silty clay.	
AG719.02	Droveway ditches
These three ditches were aligned NE –SW. They were up to 140m long, up to 0.5m wide, and up to 0.5m deep, with 45° sides and a concave base. They contained mid orangey to mid greyish brown deposits of silty clay.	
AG719.04	Land drains
These land drains were aligned WNW-ESE. They were *c.*70m long and *c.*0.2m wide, and contained mid orangey brown deposits of silty clay.	
AG719.05	Service trench
This was aligned WNW-ESE. It was 85m long and 0.86m wide, with 45° sides. It contained a mid orangey brown deposit of silty clay.	

7.8.2 Assessment Landscape 720 – Ploughsoil and subsoil

Ploughsoil and subsoil were both present across the whole site, though the subsoil decreased in thickness towards the higher ground. Although the subsoil has been assigned to this period, there is a possibility that it was formed at an earlier date.

Assessment Groups within Assessment Landscape 720	
AG720.01	Ploughsoil
The ploughsoil was 0.3m thick, and comprised dark greyish brown silty clay.	
AG720.02	Subsoil
The subsoil was typically *c.*0.2m thick, increasing to a maximum of 0.8m along the palaeochannel. It comprised light greyish yellow to mid brown silty clay.	

7.8.3 Assessment Landscape 721 – Droveway

Two roughly parallel ditches crossed the site on a NW-SE alignment. They were a maximum of 10m apart, converging slightly towards the palaeochannel.

These ditches formed a droveway, leading down towards the palaeochannel. They were probably post-medieval in date, since they clearly predate the droveway adjacent to the palaeochannel (AL719) and appear to truncate the ridge and furrow cultivation (AL718).

Assessment Groups within Assessment Landscape 721	
AG721.01	Droveway
These ditches were up to 145m long, 0.75m wide, and 0.25m deep, with	

concave sides and a flat or concave base. They contained light to mid greyish brown deposits of silty clay.

8. APPENDIX 8: STRUCTURAL HIERARCHY AND TECHNICAL DETAIL FOR SITE 8

8.1 Introduction

Assessment of the results of all phases of fieldwork has led to the identification of five main periods of activity, from the early/middle Iron Age to the post-medieval period. These are summarised below.

8.2 Phase 800 – Postholes and tree throw holes/root action (Period 0: Unknown)

Postholes have been used to hold structural timbers during numerous periods of human existence. Isolated examples containing no datable artefactual material, such as the ones on this site, are notoriously difficult to date.

Tree throw holes and/or root action were recorded throughout the road scheme. They are discussed in Phase 100 above.

Tree throw holes can be of interest when studying the changes from a wooded to a cleared/agricultural landscape. In this case, it has not been possible to identify exactly when these trees were cleared.

8.2.1 Assessment Landscape 800 - Postholes

One posthole was identified in the western part of the site, with a second one in the north-eastern part of the site, within the space defined by the early-middle Iron Age ditches (AL802). These features remain undated.

Assessment Groups within Assessment Landscape 800	
AG800.01	Postholes
These oval postholes were 0.29m to 0.47m long, 0.2m to 0.43m wide, and 0.09m to 0.12m deep, with steep sides and a concave base. They contained mid greyish brown deposits of silty clay.	

8.2.2 Assessment Landscape 801 – Tree throw holes/root action

Twelve irregularly shaped tree throw holes were recorded across the site. Such features can belong to almost any period, and in this case remain undated.

Assessment Groups within Assessment Landscape 801	
AG801.01	Tree throw holes/root action
These tree throw holes were up to 2m long and up to 0.8m wide, with steep sides and an uneven base. They contained mid bluish grey deposits of silty clay.	

8.3 Phase 801 – Pits and ditches (Period 9.1: Early/middle Iron Age)

The features recorded on Site 8 are typical of those often found near to, but not within, an area of settlement. They were probably associated with the nearby early/middle Iron Age settlement on Site 7.

A settlement's hinterland supplied the raw materials that people needed to go about their lives; in this case, they appear to have been quarrying a chalky material that could have been used as fertiliser. The site was also used for this purpose in the post-medieval period, and larger-scale evidence of Roman quarrying was found on Site 5.

8.3.1 Assessment Landscape 802 – Pits and ditches

Fifteen pits and two NE-SW aligned ditches were recorded, representing the earliest episode of human activity within the site. Most of the pits were located within the area defined by the two ditches.

Artefactual evidence dates these features to the early/middle Iron Age, though a small amount of residual late Bronze Age/early Iron Age material was also recovered. Despite the fact that several of the pits were inter-cutting and, therefore, not in use at the same time, the pits and ditches are all thought to be broadly contemporary.

The function of the pits remains unknown, although the majority were cut into a chalky geological deposit, suggesting this material may have been quarried for use in liming local soils (altering the acidity for crop growth). The parts of the site where the geological deposit consisted of clay were noticeably bereft of pits. The ditches appear to have been used to define the main area of this quarrying.

Assessment Groups within Assessment Landscape 802	
AG802.01	Pits
These fifteen pits were 0.7m to 2.05m long, 0.6m to 1.3m wide, and up to 0.29m deep, with steep sides and a concave base. They contained light greyish brown to dark greyish black deposits of silty clay.	
AG802.02	Ditches
These heavily truncated ditches were up to 34m long and were spaced *c*.35m apart. They were up to 0.5m wide and up to 0.15m deep, with concave sides and a concave base. They contained mid greyish brown deposits of silty-clay.	

8.4 Phase 802 – Field system (Period 14: Medieval)

The ploughed out remnants of ridge and furrow field systems were recorded throughout the road scheme, representing the remains of the once common corrugated fields which dominated this region. They are discussed further in Phase 102 above.

These field systems were used throughout the medieval period, and were often retained into the post-medieval period.

8.4.1 Assessment Landscape 803 - Furrows

The largely ploughed out remnants of three furrows were identified. They were on a WNW-ESE alignment, at intervals of *c*.6m.

Assessment Groups within Assessment Landscape 803	
AG803.01	Furrows
These three furrows were up to 7m long and up to 1.3m wide.	

8.5 Phase 803 – Ditches and quarry pit (Period 16: Post-medieval)

Roadside ditches are particularly common within Cambridgeshire, and were also recorded within Sites 3 and 4. They help to keep roads free of surface water, and define which land is part of the road and which belongs to neighbouring fields.

Earlier examples of quarry pits were recorded on this site in Phase 801. Chalk extraction for liming acidic soils is known to continue into this period.

8.5.1 Assessment Landscape 804 – Ditches

Three ditches, forming two linear boundaries, were recorded along the western edge of the site. They represent post-medieval roadside ditches.

Assessment Groups within Assessment Landscape 804	
AG804.01	Ditches
These three heavily truncated ditches were aligned NNE-SSW, and were spaced *c.*3m apart. They were up to 116m long, up to 0.7m wide, and up to 0.04m deep, with a flat base. They contained a light greyish brown deposit of silty clay.	

8.5.2 Assessment Landscape 805 – Quarry pit

One large quarry pit was identified at the north-eastern limit of the site. It corresponded with a depression beyond the limit of the site, and is thought to be post-medieval in date.

Assessment Groups within Assessment Landscape 805	
AG805.01	Quarry pit
This pit was 4.9m long, 4.65m wide and in excess of 0.8m deep, with steep sides. It contained light grey deposits of clayey silt.	

8.6 Phase 804 – Geological deposits (Period 0: Unknown)

The geological deposits encountered within this site comprised heavy clay overlain by a patchy, eroded layer of chalk. The drift geology overlying these layers comprised scattered patches of glacial, chalky boulder clay.

Elsewhere along the road scheme, chalky boulder clay was the main geological deposit encountered, in places covered by colluvial and alluvial deposits.

8.6.1 Assessment Landscape 806 – Heavy clay

The underlying geological deposit was heavy, dark, blue clay. This clay was visible sporadically over much of the site, though it was concentrated in the south-western corner.

Assessment Groups within Assessment Landscape 806	
AG806.01	Heavy clay
This clay covered much of the site, and was dark bluish grey in colour.	

8.6.2 Assessment Landscape 807 – Chalk

Overlying the heavy clay (AL806) was a chalky deposit. This was only present in patches across the site.

Assessment Groups within Assessment Landscape 800	
AG807.01	Chalk
This deposit comprised light greyish white clayey chalk.	

8.7 Phase 805 – Ploughsoil and subsoil (Period 17: Late post-medieval/modern)

Ploughsoil and subsoil are the layers of earth that overlie the undisturbed geological deposits. They are discussed further in Phase 103 above.

8.7.1 Assessment Landscape 808 – Ploughsoil and subsoil

Ploughsoil and subsoil were both present across the whole site. The date of the subsoil is uncertain, but it is likely to have been formed by agricultural activity.

Assessment Groups within Assessment Landscape 808	
AG808.01	Ploughsoil
The ploughsoil was *c.*0.3m thick and comprised dark greyish brown silty clay.	
AG808.02	Subsoil
The subsoil was *c.*0.2m thick and comprised mid greyish brown silty clay.	

9. APPENDIX 9: STRUCTURAL HIERARCHY AND TECHNICAL DETAIL FOR SITE 9

9.1 Introduction

Assessment of the results of all phases of fieldwork has led to the identification of four main periods of activity, which are summarised below.

9.2 Phase 900 – Colluvium and palaeochannel (Period 0: Unknown)

Colluvial deposits form at the bases of slopes, or in depressions on a slope, as a result of the downhill movement of soil particles. In this region and the rest of Britain, the human actions that can lead to the formation of colluvium have taken place from the Mesolithic period onward. Colluvial deposits are discussed further in Phase 701 above.

Palaeochannels mark the locations of former watercourses. They are discussed further in Phase 702 above.

9.2.1 Assessment Landscape 900 - Earlier layer of colluvium

The earliest archaeologically significant deposit within the site was a layer of colluvium, from which three patinated flint flakes were recovered. This was formed at the base of a slope.

Assessment Groups within Assessment Landscape 900	
AG900.01	First layer of colluvium
The colluvium covered most of the site, and comprised mid reddish orange clayey sand.	

9.2.2 Assessment Landscape 901 - Palaeochannel

The north-western half of a palaeochannel was revealed on a similar course to the smaller modern stream. It truncated colluvial layer AL900, which it therefore post-dated, but its formation date is otherwise unknown. It was perhaps contemporary with palaeochannel AL704 on Site 7.

Assessment Groups within Assessment Landscape 901	
AG901.01	Palaeochannel
The palaeochannel was aligned ENE-WSW, and ran the length of the site. It was in excess of 12m wide and was *c*.1.2m deep, and contained light to dark greyish brown deposits of clay.	

9.3 Phase 901 – Field system and colluvium (Period 14: Medieval)

The ploughed out remnants of ridge and furrow field systems were recorded throughout the road scheme, representing the remains of the once common corrugated fields which dominated this region. They are discussed further in Phase 102 above.

These field systems were used throughout the medieval period, and were often retained into the post-medieval period.

An earlier layer of colluvium was identified within this site in Phase 900.

9.3.1 Assessment Landscape 902 - Furrows

The largely ploughed out remnants of eight medieval furrows were identified (Figure 13). They were aligned NW-SE, and were spaced at intervals of *c*.5m.

Assessment Groups within Assessment Landscape 902	
AG902.01	Furrows
These furrows were up to 18m long and were 0.85m to 1.8m wide.	

9.3.2 Assessment Landscape 903 - Second layer of colluvium

A second layer of colluvium was recorded, sealing palaeochannel AL901. It is possible that this layer was deposited when the medieval fields were in use. Medieval ploughing would have encouraged the loosening of soil upslope of Site 9, which could have been deposited as colluvium at the base of the slope.

Assessment Groups within Assessment Landscape 903	
AG903.01	Second layer of colluvium
The colluvial layer covered the whole site, and comprised mid greyish brown silty clay.	

9.4 Phase 902 – Droveway and root action (Period 16: Post-medieval)

Droveways usually comprise two parallel ditches, and are used for herding animals. Examples are known throughout the country from the Bronze Age to the modern era, and were revealed on Sites 2, 3, 5 and 7.

Features created by root action have been identified throughout the road scheme. They are notoriously difficult to date without a combination of artefactual and supporting stratigraphic evidence.

9.4.1 Assessment Landscape 904 – Droveway and root action

Two ditches were recorded on an ENE-WSW alignment, roughly parallel to the modern stream and at a distance of *c*.20m from it. No artefactual material was recovered from them, but their similarity to those of AL719 on Site 7 suggests that they formed a post-medieval droveway along the north-western bank of the stream.

Four small features were recorded in the vicinity of the droveway, which have been interpreted as the products of root action. They contained no datable artefactual evidence. Their date is uncertain, but it is possible that they were formed when bushes next to the stream were cleared to make room for the droveway.

Assessment Groups within Assessment Landscape 904	
AG904.01	Ditches
These ditches were spaced up to 3.5m apart, and were up to 121m long. They were 0.5m to 1.85m wide and up to 0.58m deep, with concave sides and a concave base. They contained light greyish brown deposits of silty clay.	
AG904.01	Root action
These oval features were 0.3m to 0.5m long, 0.2m to 0.45m wide, and *c*.0.25m	

deep, with steep sides and a flat or uneven base. They contained light greyish brown deposits of clayey silt.

9.5 Phase 903 – Ploughsoil and subsoil (Period 17: Late post-medieval/modern)

Ploughsoil and subsoil are the layers of earth that overlie undisturbed geological deposits, and in this case the earlier layer of colluvium (AL900) as well. They are discussed further in Phase 103 above.

9.5.1 Assessment Landscape 906 – Ploughsoil and subsoil

Ploughsoil and subsoil were both present across the whole site. The subsoil is likely to have been formed by earth moving downhill as a result of ploughing.

Assessment Groups within Assessment Landscape 906	
AG906.01	Ploughsoil
The ploughsoil was *c.*0.3m thick and comprised dark greyish brown silty clay.	
AG906.02	Subsoil
The subsoil was up to 0.4m thick and comprised mid greyish brown silty clay.	

10. APPENDIX 10: POTTERY

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10.1 Methodology

For each context, pottery was recorded by fabric type and quantified by minimum sherd count and weight. This information was entered onto the Context Assemblage Table in the project database. Unless otherwise stated, all quantitative statements are based on sherd count. Pottery was also spotdated by individual fabric type, and the date of the latest sherd used in the provision of an overall context spotdate. The latter has been used to assist in the establishment of the provisional phasing structure.

10.2 Quantification

A total of 7,582 sherds, weighing 96.4kg, was collected, the majority deriving from features associated with Site 5 (Table 1).

Site	Sherd No.	Weight (g)
1	2	7
2	617	6664
3	830	9639
4	27	556
5	4729	64962
7	1092	11787
8	280	2765
9	5	11
Total	**7582**	**96391**

Table 1: Quantity of pottery by Site.

10.3 Range and variety: pottery type series

Fabrics are listed below (Table 2) in chronological order, using common names and type codes in accordance with the Bedfordshire Ceramic Type Series, held by Albion Archaeology. For analysis, it is likely that a type series more compatible with previously excavated ceramic assemblages in Cambridgeshire will be used.

The range of Iron Age and Roman fabrics, and for the later material forms, is comparable with assemblages recovered from recently excavated sites within the Cambourne Development Area (Wessex Archaeology 2003).

		Site (sherd no.)							
Fabric Type	**Common name**	**1**	**2**	**3**	**4**	**5**	**7**	**8**	**9**
Late Bronze age/early Iron Age									
Type F01A	Coarse flint							3	
Type F01B	Fine flint						2		
Type F01C	Flint and quartz		3				7	60	1
Early to middle Iron Age									
Type F03	Grog and sand		21				8	4	
Type F04	Organic						2		
Type F14	Fine mixed						17	2	
Type F15	Coarse mixed						61	1	
Type F16	Coarse shell						112	15	
Type F18	Fine sand and shell			1			6		

		Site (sherd no.)							
Fabric Type	**Common name**	**1**	**2**	**3**	**4**	**5**	**7**	**8**	**9**
Type F19	Sand and organic			1			216	41	
Type F20	Calcareous			2		1	131	6	
Type F28	Fine sand			73			162	84	4
Type F29	Coarse sand			20		2	129	30	
Type F30	Calcareous and sand						81		
Type F35	Fine micaceous						2	1	
Type F37	Calcareous mixed			16			77	19	
Late Iron Age									
Type F06B	Medium grog					4			
Type F06C	Coarse grog					7			
Type F07	Shell			2		42			
Type F09	Sand and grog			2		56			
Iron Age									
Type F	Non-specific Iron Age		27	2			4	13	
Roman									
Type R01	Samian ware		29	2		27			
Type R03	Whiteware		1			9			
Type R03A	Fine whiteware (Verulamium)					2			
Type R03B	Gritty whiteware (Verulamium)		25	6		70			
Type R03C	Smooth whiteware		12	1		6			
Type R03E	Fine whiteware					1			
Type R05A	Orange sandy	2	14	23		140	16		
Type R05B	Fine orange sandy		6	1		27			
Type R05D	White-slipped orange sandy					1			
Type R06A	Nene Valley greyware		2	7		16			
Type R06B	Coarse greyware		117	244		1389			
Type R06C	Fine greyware		214	69		358	30		
Type R06D	Micaceous greyware		27	22		118	28		
Type R06E	Calcareous greyware					4			
Type R06F	Greyware grog and sand					26			
Type R06G	Silty greyware					105			
Type R06H	White-slipped greyware					1			
Type R07B	Black sandy		30	68		720			
Type R07C	Black gritty		3	9		8			
Type R07F	Black silty					8			
Type R08	Black micaceous			12		47			
Type R10A	Buff gritty			1		56			
Type R10B	Fine buff gritty		7	5		34			
Type R11	Oxford oxidised					40			
Type R11D	Oxford colour coat			1		34			
Type R11E	Oxford mortaria (white)					7			
Type R11F	Oxford mortaria (red)					16			
Type R12A	Nene Valley mortaria			2		21			
Type R12B	Nene Valley colour coat		5	14		294			
Type R13	Shell		1	92		308			
Type R14	Sand (red brown harsh)		69	117		571			
Type R17	Smooth orange					71			
Type R18	Pink gritty		1	4		2			
Type R19	Amphorae					3			
Type R21	Mortaria (source unknown)			2		1			
Type R31	Lumpy whiteware		1			11			
Type R36	Orange gritty		2						
Type R38	Colour coat (source unknown)			1					
Type R	Non-specific Roman			5		64			
Post-medieval & modern									
Type P01	Glazed red earthenware				2				
Type P03	Black-glazed earthenware				1				
Type P38	Creamware				1				

		Site (sherd no.)							
Fabric Type	**Common name**	**1**	**2**	**3**	**4**	**5**	**7**	**8**	**9**
Type P39	Mocha ware				1				
Type P43	Pearlware				3				
Type P48	English stoneware				1				
Type P	Non-specific post-medieval				1				
MOD	Non-specific modern			1	11				
UNID	Unidentifiable/undatable			2		1	1	1	

Table 2: Pottery Type Series

10.4 Provenance, Phasing and Date Range

Approximately 78% of the assemblage is datable to the Roman period. Pre-Roman pottery totals 21% and post-medieval/modern material the remainder. Although the degree of fragmentation is high (average sherd weight 13g), a sizeable proportion of vessels from pre-Roman and Roman periods are represented by more than one sherd. This suggests that much of the assemblage occurs in its primary context, close to areas where the vessels were used, and is further attested by the low incidence of residual or intrusive material.

10.4.1 Site 1

Two abraded early Roman coarse ware body sherds (fabric type R05A), weighing 7g, were recovered from ditches AL101.

10.4.2 Site 2

Site 2 features yielded an assemblage of 617 sherds, weighing 6.6kg, the majority of which were datable to the earlier Roman period.

Iron Age

Three undiagnostic flint and sand tempered sherds (type F01C) of late Bronze Age/early Iron Age date derived from ditches AL201, although they are not considered large enough to provide secure dating for the features. Other pre-Roman pottery comprises twenty-one abraded sherds (244g) from an undiagnostic Iron Age grog and sand tempered vessel (type F03), recovered from isolated pits AL202.

Roman

The Roman fabrics are predominantly reduced and oxidised sand tempered coarsewares (types R05, R06 and R14), probably of local manufacture. Suggested sources include the Horningsea and Nene Valley kilns, and various kilns in the vicinity of Cambridge (*c.f.* Hull and Pullinger 2000, 141). A small number of whiteware sherds from Oxfordshire, the Nene Valley and possibly the Verulamium region industries (type R03) also occur.

Imported finewares are represented by twenty-nine sherds of probable central and south Gaulish samian ware (type R01), including a number of sherds from a cylindrical bowl and vessel with an illegible stamp. Five small sherds from a Nene Valley colour coat beaker occur. Coarseware forms include flagons, reeded rim bowls, narrow-necked and neckless jars, everted rim jars, plain and

cornice rim beakers, plain rim bowls, cordoned and lid-seated jars, lids and a large (?storage) jar. Decoration is rare and comprises horizontal grooves, rouletting and slipping.

Fifty percent (by weight) of the Site 2 assemblage derives from pits and postholes AL207, including eighty sherds (924g) from a black-slipped coarse ware jar, the latter recovered from large posthole AG207.10. Forty-six percent is associated with AL205, the majority deriving from the fills of enclosure ditch AG205.02 and pit AG205.07. Despite a high incidence of abrasion and a low average sherd weight, many vessels are represented by more than one sherd and are likely to represent domestic settlement debris.

Phase	AL	Description	Sherd No: Wgt (g)
200	201	Unphased ditches	3:20
201	202	Pits	21:244
202	205	Enclosure, roundhouse, droveway and pit	316:3059
	207	Pits and postholes	276:3333
207	204	Droveway	1:8
		Total	**617:6664**

Table 3: Site 2 pottery by phase and landscape

10.4.3 Site 3

Site 3 features yielded an assemblage of 830 sherds, weighing 9.6kg, the majority of which were datable to the Roman period.

Iron Age

Fifty-seven undiagnostic, abraded sherds (697g) were associated with AL301. The sherds are tempered with a range of sand, organic and calcareous inclusions (types F18, F19, F28, F29, and F37). The majority were from pit AG301.02, which contained thirty-five base and lower body sherds (565g) of a thick-walled sand tempered vessel. The pottery has been provisionally assigned an early to middle Iron Age date, although further analysis may permit the material to be dated more closely within this range.

Roman

The assemblage spans the entire Roman period. The sherds are generally larger than pre-Roman examples, although surface abrasion is still apparent. The fabrics are predominantly reduced and oxidised sand tempered coarsewares (types R05, R06, R07, R10 and R14), probably of local manufacture. Suggested sources include the Horningsea and Nene Valley kilns, and various kilns in the vicinity of Cambridge (*c.f.* Hull and Pullinger 2000, 141). Shelly wares, possibly from the South Midlands, are present in smaller quantities, although are much better represented than on Site 2. A small number of whiteware sherds from the Nene Valley and Oxfordshire (type R03) also occur.

Imported finewares are represented by two tiny samian sherds (1g) of uncertain origin. British finewares comprise colour-coated wares from the Nene Valley and Oxfordshire. Diagnostic forms include everted rim jars, flanged bowls, dog dishes, cordoned vessels, jars with bead, triangular and

undercut rims, narrow-necked and neckless jars, large storage vessels and folded fineware beakers. A standard range of decorative elements occur, including horizontal and vertical combing, rilling, rouletting, slipping, burnished lattice and linear motifs. One shelly jar has evidence for repair, in the form of a drilled, post-firing perforation.

Seventy-nine percent (by weight) of the Site 3 Roman assemblage derived from AL306. Most of this was associated with the modifications to the ladder enclosure, AG306.02 and AG306.03, which each produced approximately 2.8kg of pottery. This included two large sherds (1.1kg) from a sand tempered coarseware jar. Despite a high incidence of abrasion and a low average sherd weight, many vessels are represented by more than one sherd.

Phase	AL	Description	Sherd No: Wgt (g)
301	301	Enclosure, posthole and pit	57:697
302	302	Enclosure and pits	52:336
	303	Water pit	32:304
	305	Enclosure	33:363
	307	Droveway	51:456
304	304	Tree throw holes	2:18
	306	Ladder enclosure, cremation, posthole and pits	562:7150
	314	Enclosure	5:55
306	309	Roadside ditch	8:32
307	312	Boundary ditch	18:102
309	313	Ploughsoil and subsoil	10:126
		Total	**830:9639**

Table 4: Site 3 pottery by phase and landscape

10.4.4 Site 4

The Site 4 assemblage derived entirely from AL404. Twenty-seven post-medieval and modern sherds, weighing 556g, were recovered, with the majority from moat AG404.1. Roadside ditch AG404.03 yielded nine sherds. The pottery comprises glazed earthenware bowls of 17th-18th century date and a number of 18th-19th century sherds, including transfer-printed ware, Creamware, Pearlware, Mocha Ware and salt-glazed stoneware.

10.4.5 Site 5

Approximately 67% of the total pottery assemblage derives from Site 5, and comprises 4,729 sherds, weighing 64.9kg. The assemblage spans the entire Roman period, and is similar in composition to the Roman material recovered from Sites 2 and 3.

The fabrics are predominantly reduced and oxidised sand tempered coarsewares (types R05, R06, R07, R10 and R14) of probable local manufacture. Suggested sources include the Horningsea and Nene Valley kilns, and various kilns in the vicinity of Cambridge (*c.f.* Hull and Pullinger 2000, 141). Sources further afield may include West Stow, Wattisfield, Much Hadham and Milton Keynes (*ibid.*, 142), although this requires confirmation. Shelly wares, possibly from the South Midlands and/or Bedfordshire, are present in smaller quantities, yet are much better represented than on Sites 2 or 3. There were also a small number of whiteware sherds from the Nene Valley

and Oxfordshire (type R03), and late Iron Age/early Roman grog tempered sherds (types F06 and F09) of probable local manufacture.

Diagnostic coarseware forms comprise a standard range of kitchen and tablewares associated with the production, consumption and storage of food. These include reeded rim bowls, cordoned jars and bowls, jars with triangular, undercut and everted rims, flanged bowls, plain and triangular rim bowls, large storage jars, narrow-necked and neckless jars, beakers, dog dishes, lids, bead rim vessels, strainers and a vessel with a frilled rim. A standard range of decorative elements, including vertical and wavy incised motifs, horizontal, vertical and random combed patterns, rilling, slipping, rouletting, overall burnishing and burnished lattice motifs occur. Two vessels have evidence for repair in the form of drilled, post-firing perforations. Modified sherds comprise a body sherd reused as a counter (diameter 37mm) and a sherd crudely incised with an 'X'.

Imported finewares are represented by twenty-six sherds of probable central and south Gaulish samian ware (type R01); diagnostic vessels are mainly bowls, including a form 37. Three *amphorae* sherds of probable Dressel 20 type comprise the only other imported wares.

Nene Valley colour coats, manufactured from the mid 2nd - late 4th century, dominate the Romano-British fineware assemblage. Vessel forms include plain rim dishes, flanged bowls, wide mouthed bowls and/or jars, folded and funnel rim beakers, some with rouletted and barbotine decoration, and a single flagon or jug. Later Roman vessels from the Oxford industry are also well represented by a range of common forms, including *mortaria*, flanged bowls, rouletted jars and bowls, and a painted jar.

The majority of the Site 5 assemblage derives from Phases 502, 503 and 504, which respectively yielded 40%, 28% and 29% (by weight) of the pottery. Significant among these deposits are 8.4kg recovered from rubbish layer AG511.02, and 18.8kg recovered from an enclosure ditch (AL504). The latter comprises a deposit (AG504.10) of 1,194 coarse ware sherds, representing sizeable proportions of approximately 78 vessels. All the vessels were broken in antiquity and are likely to constitute a dump, rather than a deliberate placement of material. Despite their abraded condition and low average sherd weight (16g), a vessel to sherd ratio of 1:15 suggests one episode of pottery deposition from a single, nearby source.

Phase	AL	Description	Sherd No: Wgt (g)
501	501	Enclosure ditches and pits	11:265
502	502	Enclosure ditches and pit	44:479
	503	Enclosure, grave and pit	245:3591
	504	Ladder enclosure and pits	1421:21366
503	505	Enclosure, quarry pit, gully, pits, metalling & timber structure	807:9786
	506	Enclosure, pits and metalling	299:3714
	507	Droveways, pits and metalling	400:4943
504	508	Enclosures	89:942
	509	Gullies, pits, possible structures and hearth	82:1329
	510	Enclosures, timber structure, graves, pits and coin hoard	526:7486

Phase	AL	Description	Sherd No: Wgt (g)
	511	Water pits & rubbish layer	695:8855
505	512	Unphased postholes, ditches and pits	75:872
506	513	Furrows and boundary ditch	1:11
507	514	Boundary ditch	1:4
	515	Ploughsoil and subsoil	43:1319
		Total	**4729:64962**

Table 5: Site 5 pottery by phase and landscape

10.4.6 Site 7

Approximately 12% of the total pottery assemblage derives from Site 7, and comprises 1,092 sherds, weighing 11.7kg, over 89% of which is of Iron Age date.

Iron Age

The sherds are tempered with a range of sand (types F03, F28, F29), organic (F04, F19) and calcareous (types F14, F15, F16, F18, F20, F30 and F37) inclusions, the latter predominating. The pottery has been provisionally assigned an early to middle Iron Age date, although further analysis may permit the material to be dated more closely within this range. Nine undiagnostic flint tempered sherds of late Bronze Age/early Iron Age date occur as residual finds in later features.

Diagnostic forms are relatively scarce. The majority of the assemblage appears to comprise thin-walled, round-shouldered vessels with rounded, flat, T-shaped or tapering rims, and simple, flat bases. Thicker-walled sherds in calcareous fabrics, some ranging up to 20mm, attest the presence of larger vessels. Decoration is rare, and comprises finger impressions around vessel shoulders and rims. Several examples are randomly twig-brushed, and nine sherds are scored/incised, suggesting they may belong to the East Midlands Scored Ware tradition. A few sherds in finer fabric types have smoothed/wiped or burnished surfaces.

Nearly all the Iron Age assemblage is associated with the farmsteads in Phase 704. The majority of this material derives from the Southern Farmstead AL706, in particular its enclosure ditch, which yielded 396 sherds, weighing 3.9kg. Despite the fragmentary nature of the assemblage (average sherd weight 10g), many vessels are represented by more than one sherd, indicating that much of the assemblage is undisturbed and occurs in its primary context.

Roman

Pit AG717.02 yielded fifty-eight Roman coarseware sherds (types R06C and R06D), representing two vessels, which weighed 1kg. The forms present are a flanged bowl and dog dish. Sixteen sherds (143g) from a coarseware jar (type R05A) were recovered from droveway AL721, where they are considered to be residual.

Phase	AL	Description	Sherd No: Wgt (g)
700	700	Tree throw holes/root action	3:17
701	703	Colluvium	4:21

Phase	AL	Description	Sherd No: Wgt (g)
702	704	Palaeochannel	3:21
703	705	Boundary ditch	8:35
704	706	Southern farmstead	419:4150
	707	Entrance gully and middle farmstead	168:1595
	708	Northern farmstead	161:1554
	710	Western enclosure	22:153
	714	Southern reinstatement of northern enclosure	22:238
	715	Northern reinstatement of northern enclosure	126:1210
	716	Reinstatement of northern paddock	82:1618
705	717	Roman gully and pit	58:1032
707	721	Droveway	16:143
		Total	**1092:11787**

Table 6: Site 7 pottery by phase and landscape

10.4.7 Site 8

Site 8 yielded 280 sherds, weighing 2.7kg, with over 99% of this assemblage recovered from pits AG802.01.

The sherds are tempered with a range of sand (types F03, F28, F29 and F35), organic (F19) and calcareous (types F14, F15, F16, F20 and F37) inclusions. As with Site 7, vessels with calcareous temper predominate. Most of the pottery has been provisionally assigned an early to middle Iron Age date, although sixty undiagnostic residual flint tempered sherds of late Bronze Age/early Iron Age date also occur. Further analysis may permit the early to middle Iron Age material to be dated more closely within this range.

Diagnostic forms are scarce. The majority of the assemblage appears to comprise thin-walled vessels with rounded or flat rims and flat bases. Decoration comprises finger impressions on five body sherds. The absence of scored sherds characteristic of the East Midlands Scored Ware tradition may suggest an earlier date for this assemblage, when compared with the pottery recovered from Site 7.

10.4.8 Site 9

The Site 9 pottery assemblage comprises four abraded sand tempered sherds (10g) from a hand-made early to middle Iron Age vessel (fabric F28), and a sand and flint tempered crumb (1g) of probable late Bronze Age/early Iron Age origin (fabric F01C). The former derived from palaeochannel AL901 and the latter from droveway ditches AL904.

10.5 References

Hull, M.R., and Pullinger, J., 2000, 'The Roman Pottery' in Alexander, J., and Pullinger, J., *Roman Cambridge: excavations on Castle Hill 1956-1988*, Proc. Cambridge Antiq. Soc. 88 for 1999, 141-144.

Wessex Archaeology, 2003, *Cambourne New Settlement, Cambridgeshire, Interim Statement of Results*, Report 45973.1.

11. APPENDIX 11: CERAMIC BUILDING MATERIALS

Jackie Wells, Albion Archaeology

11.1 Methodology

For each context, ceramic building material (comprising brick, roof tile and fired clay) was recorded by fabric type, and quantified by minimum fragment count and weight. Where possible, the brick and tile was also spotdated.

11.2 Quantification

Approximately ninety-nine brick and tile fragments, weighing 8.9kg, were recovered, the majority deriving from features on Site 5. Fired clay fragments weighing 4.5kg were collected, mainly associated with features on Sites 5 and 7 (Table 1).

	Frag No : Wgt (g)		
Site	Brick and tile	Fired clay	Total (g)
2	1:652	8:61	9:713
3	11:1249	16:135	27:1384
4	28:962	4:11	32:973
5	59:6057	189:2838	248:8895
7	-	169:1209	169:1209
8	-	39:259	39:259
Total	**99:8920**	**425:4513**	**524:13433**

Table 1: Quantity of Ceramic Building Material by Site

11.3 Range and variety

Brick and tile

With the exception of four post-medieval flat roof tile fragments, the assemblage is datable to the Roman period. The majority of the diagnostic material comprises sand tempered *tegulae*, with *imbrices*, combed flue tiles and brick fragments being less well represented. Nine pieces of shell tempered building material also occur, in Site 5 features only. The fragments are fairly sizeable (average weight 90g) and are generally abraded. No complete examples were recovered; the only measurements recorded were the thickness of *tegulae*, which range between 12-25mm. Several *tegulae* fragments are combed or have circular or linear finger impressed decoration.

Fired Clay

The majority of the fired clay assemblage comprises amorphous and abraded fragments in an oxidised calcareous and sand tempered fabric, while pieces in a purely sand tempered fabric constitute the remainder. A number of the latter have oxidised exterior surfaces and reduced interiors, and some may represent degraded pottery sherds or brick/tile. Several fragments have one surface, and a sizeable piece 30mm thick is perforated. Only one piece appears to have a wattle impression, although the fragmentary nature of the material (average fragment weight 10g) hinders identification. The material represents secondary deposition of occupation material and cannot be directly associated with the use of the features from which it was collected.

11.4 Provenance

11.4.1 Site 2

A sizeable sand tempered Roman brick fragment, weighing 652g, was recovered from pit AG207.05 (AL207). Eight amorphous fired clay fragments (61g) in a calcareous and sand tempered fabric derived from features in AL200, AL205 and AL207. The majority were redeposited in enclosure ditch AG205.02.

11.4.2 Site 3

Eight abraded sand tempered *tegulae* fragments and three pieces of brick (total weight 1.2kg) derived from AL306 (AP304), the majority associated with final changes to ladder enclosure AG306.03. AL306 also yielded 14 amorphous pieces of fired clay (129g) in a calcareous and sand tempered fabric. Two small fragments (6g) derived from tree-throw holes AL304 and enclosure AG301.01 (AL301).

11.4.3 Site 4

Moat ditch AG404.01 (AL404) yielded two sand tempered post-medieval flat roof tile fragments and a possible pantile. Twenty-five pieces of brick (896g), also derived from the feature, and are probably of similar date. Four amorphous sand tempered fired clay fragments (11g), possibly representing degraded brick or tile, derived from gully AG404.02.

11.4.4 Site 5

Sixty-eight percent of the brick and tile assemblage derives from features in Site 5, and comprises 59 fragments, weighing 6.0kg. Shell tempered building material occurs only on Site 5, which yielded the widest range of forms, including *tegulae, imbrices*, flue tile and brick. The bulk of the material was recovered from quarry pit and enclosure ditches in AL505 (AP502) and rubbish layer AG511.02 (AL511, AP504). Approximately 189 fired clay fragments, weighing 2.8kg were recovered. Over 76% of this material derives from rubbish layer AG511.02, and includes several fragments with one or more surfaces, and a sizeable, perforated piece 30mm thick.

			Frag No : Wgt (g)	
AP	**AL**	**Description**	**Brick and tile**	**Fired clay**
500	500	Tree-throw holes/root action	-	1:13
502	503	Enclosure, grave and pit	-	2:23
	504	Ladder enclosure and pits	1:14	9:103
503	505	Enclosure, quarry pit, gully, pits, metalling & timber structure	15:1281	19:188
	506	Enclosure, pit and metalling	12:811	3:17
	507	Droveways, pits and metalling	2:503	4:16
504	508	Enclosures	3:502	6:21
	510	Enclosures, timber structure, graves, pits and coin hoard	4:260	24:290
	511	Water pits & rubbish layer	13:1915	120:2165
507	514	Boundary ditch	-	1:2
	515	Ploughsoil and subsoil	9:771	-

	Total	**59:6057**	**189:2838**

Table 2: Site 5 Ceramic Building Material by phase and landscape

11.4.5 Site 7

Over 98% of the fired clay assemblage is associated with settlement features in AP704. The majority of this material derives from Southern farmstead AL706, in particular enclosure ditch AG706.01, which yielded 73 fragments, weighing 652g, including one piece with a wattle impression. The remainder of the assemblage comprises amorphous fragments, in an oxidised calcareous/sandy fabric, and a purely sand tempered fabric. No brick or tile occurred on Site 7.

AP	AL	Description	Frag No : Wgt (g)
704	706	Southern farmstead	81:664
	707	Entrance gully and middle farmstead	49:305
	708	Northern farmstead	19:128
	710	Western enclosure	3:14
	715	Northern reinstatement of northern enclosure	13:79
706	718	Furrows	1:3
707	721	Droveway	3:16
		Total	**169:1209**

Table 3: Site 7 fired clay by phase and landscape

11.4.6 Site 8

Site 8 yielded 39 calcareous and sand tempered fired clay fragments, weighing 259g. The assemblage derived entirely from pits and ditches AL802 (AP801), with the fills of pits AG802.01 yielding the majority this assemblage. Three amorphous fragments (7g) were recovered from ditches AG802.02. No brick or tile occurred on Site 8.

12. APPENDIX 12: CHILDERLEY GATE COIN HOARD

Phil Parkes, Cardiff Conservation Services and Dr Pete Guest, Cardiff University

12.1 Conservation Assessment

12.1.1 Introduction

The hoard comprises 4473 copper alloy coins and twelve iron discs, all found together in the fill of a shallow pit (AG510.11). Excavation of the hoard was undertaken in four spits in order to preserve any chronological variation in the deposition of the coins. Sixteen coins, almost certainly from the hoard, could not be allocated a spit number and so have been recorded as unstratified during the assessment. Table 1 shows the number of coins from each spit.

Spit	RA	Total	*No. assessed (10%)*
1	1 to 441 and 4485	442	*44*
2	458 to 1297 and 1299 to 2501	2043	*204*
3	2505 to 2507 and 2516 to 4221	1709	*171*
4	4222 to 4484	263	*26*
u/s	442 to 457	16	*2*
	TOTAL	4473	*447*

Table 1: Coins from each spit

The coins were x-radiographed prior to assessment by the numismatist. Because more detailed examination of the coins will require cleaning to remove surface dirt, a 1% sample of the coins was cleaned by a variety of methods, in order to determine which method would be most appropriate and to provide a realistic timescale for the cleaning of additional coins from the hoard.

12.1.2 Results

Almost all of the coins are covered with a light layer of dirt (Figure 1). Generally, they appear to be in a good condition, having a sound patina and very few voluminous corrosion products. As the coins had already been given individual registered artefact numbers, they were treated as individual objects rather than in bulk. Trial cleaning was carried out using three different methods:

- Mechanically clean using a scalpel
- Swab with industrial methylated spirits (IMS)
- Swab with de-ionised water

The different cleaning methods were used to clean forty-five of the coins under a binocular microscope. The dirt layer was most easily removed mechanically to reveal the surface detail beneath (Figure 2). The swabbing techniques took slightly longer to reveal the same amount of information.

		
Figure 1: Coin before cleaning	**Figure 2:** Coin cleaned for identification	**Figure 1:** Coin cleaned to display standard

This trial indicated that the coins could be cleaned mechanically at a rate of 25 per day (15 minutes per coin). This would remove the dirt from both sides of the coin, revealing the surface detail and allowing the coin to be identified to standard numismatic references (Figure 2). Completely cleaning the coin of all dirt (Figure 3) would require an extra 5-10 minutes per coin, reducing the rate of cleaning to 16 coins per day. It would therefore take between 179 and 280 days to clean the whole hoard.

12.2 Numismatic Assessment

12.2.1 Introduction

The assessment of the coins involved scanning each of the x-ray plates, followed by a more detailed examination of a 10% sample of the hoard.

The scan of the x-ray plates showed that the entire hoard consists of small copper alloy coins (generally between 5mm and 20mm in diameter). Where details of the obverse or reverse designs were visible on the x-rays, it was clear that these coins are all barbarous radiates struck during the later 3rd century AD. A significant proportion of the x-rays, however, did not reveal any details indicative of the coins' designs, and it is possible that some coins may pre- or post-date this period.

A 10% sample of the hoard (447 coins, see Table 1) was examined in more detail, in order to provide closer dating of the coins where possible and to assess the level of cleaning that will be required to allow the coins to be fully identified. The relative homogeneity of the assemblage, as observed during the scanning of the x-rays, suggests that the sample is relatively representative of the entire hoard.

12.2.2 Results

All the coins examined were accreted with soil, which, in most cases, obscured all details of the obverse and reverse legends and designs. Fortunately, some distinguishing features for the majority of the coins could be identified from their x-rays, and it is clear that all of those coins that could be identified are barbarous radiates struck between *c*. AD275 and AD296 (see Table 2). Furthermore, it was possible in a minority of cases, either from the coins themselves or their x-rays, to identify the ruler represented on the obverse or the reverse type. Of these, more than half (fifteen examples) were copies of

the CONSECRATIO (altar) type struck for Claudius II after his death in AD270, while the remaining coins were all copies of coins issued by the 'Gallic' emperors Victorinus and the Tetrici between AD268 and AD274.

The non-identifiable coins are all AE3 or AE4s, which could have been struck at some point during the later 3rd or 4th centuries. The diameters of each of the assessed 447 coins were also measured, and the average size of coins from each spit is summarised in Table 3. It is clear from Tables 2 and 3 that there is no significant variation between the spits, either in issue period or module. Indeed, it is very likely that the 25% to 38% of the coins which could not be closely dated are also late 3rd century barbarous radiates.

The hoard appears, therefore, to consist entirely of late 3rd century barbarous radiates produced by irregular mints in Britain between *c*.AD275 and AD296. The twelve iron discs may have been weights.

Spit	No. assessed	Barb. radiates	*%*	AE3/4	*%*
1	44	33	*75%*	11	*25%*
2	204	155	*76%*	49	*24%*
3	171	132	*77%*	39	*23%*
4	26	16	*62%*	10	*38%*
u/s	2	2	*100%*	0	*0%*

Table 2: Summary of identified coins

Spit	Average diameter	Deviation from mean (9.97)
1	10.30	+0.33
2	9.76	-0.21
3	10.23	+0.26
4	9.27	-0.70
Mean	*9.97*	

Table 3: Diameters of the coins

It should be possible, for a hoard of this type, to identify and catalogue 100 coins per day. Therefore, only to identify and catalogue the entire hoard would take approximately 45 days to complete.

12.3 Significance

More than two hundred Romano-British coin hoards are known that close with the end of the Gallic Empire (AD274) (Abdy 2002, 43), including the Cunetio hoard (Mildenhall, Wiltshire) of 54,951 coins, the largest Roman coin hoard found in Britain. Hoards of a similar size and date range to the Childerley Gate example include one from Shoreham, West Sussex which had 4,104 coins and one from Rogiet, Monmouthshire which had 3,778 coins. It should be noted, however, that both those hoards mainly comprised base silver radiates and not, as in the case of the Childerley Gate hoard, mainly copper alloy barbarous radiates.

The barbarous radiate Theatre Hoard from Verulamium (1937) may be more comparable. Although of lesser quantity (796 copies), it contained eighty coins of fairly large modules and another 100 of reduced module declining

down to 8.5mm, but no fewer than 616 Theatre coins range from 8mm to as low as 4.5mm. The Childerley Gate hoard had a similar range of coins, although the percentages of module sizes may differ.

A complete listing of all coin hoards of this date is not easily obtainable. Statistics published in the Treasure Annual Reports covering the years 1997 to 2001 indicate that eighteen coins hoards, with coins spanning AD270 to AD305, were discovered in England and Wales over this five-year period. None of these hoards were found in Cambridgeshire, although two coin hoards of this date were discovered in the wider East Anglian region (West Acre, Norfolk, eighteen base radiates; Langley with Hardley, Norfolk, 2,120 base-silver radiates).

The vast majority of these eighteen hoards were discovered during metal detecting; the other two were chance finds during construction or pipe laying. None were found during a controlled archaeological investigation. Generally, this pattern holds true for the more recent discoveries of Roman coin hoards of any date. For example, of the forty Roman coin hoards reported for the years 1988-1998, thirty-six were metal detected, two were chance finds, and two were found during archaeological investigations.

A few small clusters of coins dating to the 3rd/4th century AD have been recovered during recent excavations by the Archaeological Field Unit (Cambridgeshire County Council) at Love's Farm, St Neots (Mark Hinman *pers. comm*.). Further analysis of the Childerley Gate Hoard and the Love's Farm coin assemblage may yield important information on the distribution of, and exchange patterns, of specific types of Roman coin in this period.

The same may be true of a larger quantity of 2nd/3rd century Roman coins recovered as a hoard during excavations at Vicar's Farm, Cambridge. Excavations by the Cambridge Archaeological Unit revealed evidence for a possible rural marketplace on this location (Current Archaeology 2002).

13. APPENDIX 13: CAMBRIDGESHIRE CONTEXT FOR THE CHILDERLEY GATE HOARD

Sarah Poppy and Philippa Walton, Cambridgeshire Historic Environment Record

13.1 Comparison with other hoards

3rd century hoards are relatively common in southeast England, but are poorly represented in Cambridgeshire. Of the fifty-six Roman coin hoards recorded on the Cambridgeshire Historic Environment Record, only fifteen date to AD270-296. However, this number may only represent a small proportion of the real number of late 3rd century hoards discovered in the county, as the reporting of base metal coin hoards was not obligatory until the introduction of the Treasure Act (1996).

It is notable that this hoard is the only recorded Cambridgeshire example consisting entirely of barbarous radiates. However, it is possible that barbarous radiates made up part of previously discovered coin hoards from Cambridgeshire but were not recorded as such, particularly as no coin catalogues are available for these hoards. Hoards that consist entirely of barbarous radiates are documented elsewhere in Britain (Davies 1992), although it should be noted that the Childerley Gate hoard is by far the largest (Davies 1992: appendix category B hoards).

The circumstances surrounding the discovery and retrieval of late 3rd century Roman coins hoards from Cambridgeshire are poorly documented (Table 1). The majority were discovered pre-1950, and the published accounts, where they exist, lack details of the recovery circumstances or archaeological context.

Three late 3rd century hoards have been reported in the last twenty years, of which one was investigated with archaeological involvement. The Cottenham hoard was found by a metal detectorist in October 1986, and excavated the following day by the County Archaeology Officer. The excavations revealed that the coins had been buried in a greyware pot, placed at the edge of a ditch, but no record was kept of the stratigraphic makeup of the hoard. The hoard, which comprised 5085 copper and base silver coins, was taken to the Fitzwilliam Museum for further assessment, but no catalogue or analysis of the composition of the hoard can currently be located. The remaining two hoards discovered in the past two decades were metal detector finds, which had been recovered without any archaeological intervention.

HER ref	Parish	Date	Closing Emperor	Size	Container	Date of discovery	Circumstances of discovery
00683	Wood Walton	270s	-	-	2 pots	*c*.1886-9	Chance find by labourers
03916	Elm	270s	Tetrici	Many	Pot	1862	-
03925	Elm	270s	-	8	Pot	1962	Ploughing
04100	Newton	270s	Tetrici	-	-	*c*.1787-1792	-

HER ref	Parish	Date	Closing Emperor	Size	Container	Date of discovery	Circumstances of discovery
04703	Great Shelford	270s	Tetrici	44	-	?	-
05947	Wimblington	270s	-	25	-	1959	-
06010	March	270s	Tetrici	816 (including 8 barbarous)	Pot	1934	Ploughing
06032	March	270s	Postumus	15	Beaker	1949-1951	Amateur investigation
06032	March	280s	Victorinus	15	-	1949-1951	Amateur investigation
06033a	Wimblington	270s	Tetrici	25	-	?	-
06057	Wimblington	270s	Tetrici	2000	Pot	1848	-
08001	Wisbech	290s	Carausius	9	-		? Possible hoard only
08061	Cottenham	270s	-	5085	Pot	1986	Metal detecting, followed by archaeological excavation
MCB16023	Cottenham	270s	-	16	-	1990s	Metal detector find
MCB16156	Godmanchester	270s	-	c. 100	-	1990s	Metal detector find

Table 1: List of coin hoards from AD 270-296 recorded in the Cambridgeshire Historic Environment Record

Two other late 3rd century hoards from Cambridgeshire are broadly comparable in size to the Childerley Gate hoard, namely the Cottenham hoard and a hoard from Stonea Grange, of which little detail is known. Most coin hoards of this period from Cambridgeshire are much smaller, with 60% comprising 100 coins or fewer.

Nationally, 181 hoards (or additions to existing hoards) have been published in the Treasure Annual Reports between 1997 and 2003. Thirty-one of these date to the period AD 270- 296, none of which were recorded from Cambridgeshire. The hoards range in size from six to 4957 coins, although 61% of the coin hoards from this date contain no more than 200 coins. Only two other late 3rd century hoards from this published group comprise 4000 coins or more.

Three of the late 3rd and 4th century hoards recorded under the Treasure Act in 2003 were recovered during archaeological fieldwork. These include a dispersed hoard of at least 117 corroded base-silver radiates found during excavations at Barcombe, East Sussex (2003 T148). Thirty-eight copper alloy coins of late Roman date were also recovered from the fill of a pit near a Roman villa at Wootton, Northamptonshire (2003 T101). The vast majority of hoards reported in 2003 and previous years were located using metal detector, with no controlled archaeological investigation.

Two late 3rd century radiate hoards have been recovered sufficiently intact to permit their contents to be excavated under laboratory conditions. The Chalgrove II hoard (2003 T83), deposited around AD 279 and containing 4957 base silver radiates, was excavated in spits by British Museum conservators. This approach revealed no significant patterns in the structuring of the hoard (Ian Leins, pers comm.). The Aldbourne hoard, which was found in 1980 and comprised 4780 radiates up to AD274, was excavated in seven spits (based on the topsoil scatter and the arbitrary division of the fused hoard). The analysis showed that there was some bias towards earlier issues in the middle and base

of the pot, with later issues towards the upper levels, suggesting this was a "savings hoard" which had been assembled over time (Ian Leins, *pers. comm.*; Besly 1984).

To conclude, the Childerley Gate hoard is the first coin hoard from Cambridgeshire that has been excavated using modern archaeological techniques, and is one of the largest late 3rd century AD coin hoards recorded in the county. It is also potentially the first hoard of this date from Cambridgeshire for which an itemised catalogue will be prepared, even if for a representative 20% sample.

13.2 Bibliography

Besly, E. 1984. 'XI: The Aldbourne, Wilts Hoard' in *The Coin Hoards from Roman Britain IV*, British Museum Occasional Papers no 43: 63-104

Davies, J.A. 1992. *Barbarous Radiate Hoards: The Interpretation of Coin Deposits in Late Third-Century Roman Britain*. Oxford Journal of Archaeology 11(2): 211-24

Department of Culture, Media and Sport. 1997-2003. *Treasure Annual Reports*

Marsden, A. 2003. *Barbarous production sites in Norfolk and Suffolk*. PAS East of England Newsletter, available from http://www.finds.org.uk/documents/PASeastofenglandnewsletter03-2.pdf

14. APPENDIX 14: BOURN AIRFIELD COIN HOARD

Phil Parkes, Cardiff Conservation Services and Dr Pete Guest, Cardiff University

14.1 Conservation Assessment

The coins were examined visually to assess the nature of corrosion and the amount of time required to clean them for further examination. Generally, the coins are in an excellent condition. As a result, the coins will only need to be partially cleaned during analysis, in order to facilitate full identification by the numismatist.

14.2 Numismatic Assessment

The coins have been x-rayed and examined individually in order to assess their condition, potential for numismatic dating and further cleaning requirements. Table 1 provides summary descriptions of the coins, as well as recommendations for cleaning.

The small hoard consists of fifteen copper alloy coins dated to the middle of the 4th century, recovered from the fill of a late Roman enclosure ditch on Site 3 (AG306.01). The coins are all in excellent condition, having suffered apparently little corrosion since their deposition.

Eleven of the coins could be identified according to their reverse type. From this, it would appear that the majority were struck during the decade AD330-40, but that the hoard was buried some time after AD347-48 (the hoard's *terminus post quem* is provided by the single example of the two Victories issue).

RA no.	Denomination	Ruler/type	Date	Clean?
30001	AE3	Constantinopolis	330-40	Yes
30002	AE3	Urbs Roma	330-40	Yes
30003	AE3	Gloria Exercitus (2 stds)	330-35	Yes
30004	AE3	Victoriae dd augg qnn	347-48	No
30012	AE3		4th c.	Yes
30013	AE3	Gloria Exercitus (1 std)	335-40	Yes
30014	AE3	Urbs Roma	330-40	Yes
30015	AE3	Constantinopolis	330-40	Yes
30016	AE3	Constantinopolis	330-40	Yes
30020	AE3	Constantinopolis	330-40	No
30021	AE3		4th c.	Yes
30022	AE3	Gloria Exercitus (2 stds)	330-35	Yes
30023	AE3		4th c.	Yes
30024	AE3	Gloria Exercitus (2 stds)	330-35	Yes
30025	AE3		4th c.	Yes

Table 1: Bourn Airfield Hoard

15. APPENDIX 15: NON-HOARD COINS

Phil Parkes, Cardiff Conservation Services and Dr Pete Guest, Cardiff University

15.1 Introduction

4,554 Roman coins were recovered in total from Sites 3 and 5, including at least two hoards (Appendices 15 to 17). This assessment report deals with the sixty coins from Site 5 and six from Site 3 that were not obviously part of a hoard.

15.2 Conservation Assessment

The coins were examined visually to assess the nature of corrosion and the amount of time required to clean them for further examination. The coins which were not contained within a hoard appear to have suffered more from corrosion than those that were. The estimate of time necessary for conservation has been produced on the basis that the coins will be only partially cleaned in order to facilitate full identification by the numismatist.

15.3 Numismatic Assessment

All of the sixty-six non-hoard coins recovered from Sites 3 and 5, with the exception of a single plated *denarius*, are copper alloy coins from the Roman period. The coins have been x-rayed and examined individually, in order to assess their condition, potential for numismatic dating and further cleaning requirements. On the whole, the coins are in good condition, though in most cases some cleaning is necessary to remove soil and corrosion products from their surfaces to facilitate full identification. Table 2 provides summary descriptions of the coins, as well as recommendations for cleaning.

Site	RA no.	Context	Denomination	Ruler/type	Date	clean?
3	30000	30262	Radiate		260-96	Yes
3	30005	30260	AE3	Urbs Roma	330-40	No
3	30007	30260	AE2		mid 4th c?	Yes
3	30008	30260	Radiate		260-96	Yes
3	30017	30262	AE3	Gloria Exercitus (2 stds)	330-35	No
3	30018	30260	AE3		late 3rd – 4th c.	Yes
5	4487	5008	AE3	Gloria Romanorum	364-78	Yes
5	4488	5006	AE3	Gloria Romanorum	364-78	Yes
5	4489	4904	AE4	Salus Reipublicae	388-402	Yes
5	4491	5010	Barb. radiate		260-300	Yes
5	4492	5004	Radiate		260-96	Yes
5	4493	5010	Radiate		260-96	Yes
5	4494	5000	AE3		late 3rd-4th c.	No
5	4495	4939	Barb. radiate		260-300	No
5	4496	5000	Radiate		260-96	Yes
5	4497	5006	AE4		late 3rd-4th c.	Yes
5	50000	50064	radiate	Claudius II – consecratio	270	Yes
5	50001	51125	AE4		late 3rd-4th c.	Yes
5	50002	51125	Barb. radiate		260-300	Yes
5	50003	51007	AE4		late 3rd-4th c.	Yes
5	50005	51007	radiate	Aurelian?	270-75?	Yes
5	50006	51007	radiate		260-300	Yes
5	50007	51007	AE3		late 3rd-4th c.	Yes

Site	RA no.	Context	Denomination	Ruler/type	Date	clean?
5	50009	50001	AE4	Gloria Exercitus (1 std)	335-40	Yes
5	50011	50001	radiate		260-300	Yes
5	50013	51023	AE1		1st-2nd c.	Yes
5	50014	51127	AE1	Divus Antoninus Pius	161+	No
5	50016	50001	Barb. radiate		260-300	Yes
5	50017	50001	AE4	Gloria Exercitus (2 stds)	330-35	Yes
5	50018	50001	AE3	Urbs Roma	330-40	Yes
5	50021	51022	AE4		late 3rd-4th c.	Yes
5	50022	51023	AE4	Falling horseman copy?	353-64?	Yes
5	50023	51023	Barb. radiate		260-300	Yes
5	50024	51023	Barb. radiate		260-300	Yes
5	50025	51023	Barb. radiate		260-300	Yes
5	50026	51023	Barb. radiate		260-300	Yes
5	50027	51023	Barb. radiate		260-300	No
5	50028	51023	Barb. radiate		260-300	Yes
5	50029	51023	Barb. radiate		260-300	Yes
5	50030	51023	AE4		late 3rd-4th c.	Yes
5	50031	51074	AE3		4th c.	Yes
5	50032	51074	Barb. radiate		260-300	Yes
5	50033	51022	AE4 minim		late 3rd-4th c.	Yes
5	50035	51037	radiate	Postumus	260-68	Yes
5	50037	50425	AE3	Constantinopolis	330-40	Yes
5	50038	50425	AE3		4th c.	Yes
5	50039	50425	AE4 minim		late 3rd-4th c.	Yes
5	50041	50502	radiate	Postumus?	260-68?	Yes
5	50042	50423	AE3	2 victories	347-48	Yes
5	50047	51142	AE4	Falling horseman copy	353-64	No
5	50048	51007	AE3		late 3rd-4th c.	Yes
5	50051	51111	radiate		260-96	Yes
5	50052	51020	radiate		260-96	Yes
5	50054	u/s	AE4		late 3rd-4th c.	Yes
5	50055	51018	AE4		late 3rd-4th c.	Yes
5	50057	51018	radiate		260-96	Yes
5	50058	50288	AE3	Providentiae caess	324-30	Yes
5	50059	51018	radiate		260-96	Yes
5	50060	51018	AE4		late 3rd-4th c.	Yes
5	50061	51018	AE3		late 3rd-4th c.	Yes
5	50062	50423	AE4		late 3rd-4th c.	Yes
5	50064	50423	AE2		4th c?	Yes
5	50065	50423	AE1	Flavian bust	69-96	Yes
5	50071	50208	Plated denarius	Severus?	early 3rd c.	Yes
5	50072	50211	AE3	Urbs Roma	330-40	No
5	50073	50211	Barb. radiate		260-300	Yes

Table 2: Non-hoard coins recovered during evaluation

15.3.1 Non-hoard coins recovered from Site 3

Six copper alloy coins were recovered, four of which have been spot-dated to the late third to mid fourth centuries.

15.3.2 Non-hoard coins recovered from Site 5

Sixty coins were recovered from Site 5. These were mainly radiates (official and barbarous) of the late third century and copper alloy coins of the fourth century, although the assemblage also included three large bronzes of the first and second centuries and a plated silver *denarius* of the early third century.

The majority of the coins were recovered from stratified deposits (see Table 2), including eleven coins from the fill of an enclosure ditch (AG510.01) that might be part of a dispersed hoard. The possible hoard consists of an early Roman AE1, seven barbarous radiates of the late third century, two copper alloy coins dated to the late third or fourth century, and a copper alloy coin provisionally dated to the mid fourth century (providing a possible *terminus post quem* of AD353-64 for the burial of the hoard).

Most of the coins from Site 5 were struck between the late third and mid fourth centuries, though the latest coins from the site were two Valentinianic issues and a Theodosian Salus Reipublicae struck between AD388 and AD402. The coin assemblage generally suggests that Site 5 was occupied and abandoned during the later Roman period, although three coins from the first and second centuries indicate some level of activity at an earlier date.

Phase	Assessment Landscape	No. of coins
502	504 – Ladder enclosure and pits	2
503	505 – Enclosure, quarry, and associated features	7
504	508 – Enclosures	2
	509 – Gullies, pits, possible structures, and hearth	1
	510 – Enclosures,timber structure, graves, pits, and coin hoard	27
	511 – Water pits and rubbish layer	11
505	512 – Unphased ditches, pits, and postholes	1
506	513 – Furrows and boundary ditch	1
	TOTAL	52

Table 1: Stratified non-hoard coins from Site 5

16. APPENDIX 16: OTHER ARTEFACTS

Holly Duncan, Albion Archaeology

16.1 Methodology

Each object has been assigned a broad term and functional category. Provisional narrow terms and short descriptions have been entered into the project database. Objects have been quantified by number and/or weight, and date ranges have been allocated, where possible, by reference to standard typological works. As per IFA standards (IFA 2001), all ironwork and selected non-ferrous objects were x-rayed by Lincolnshire Archives Conservation Lab. The x-ray plate numbers have been entered into the database.

16.2 Quantification and range

A total of 114 artefacts (excluding coins, and twelve iron discs from the Childerley Gate hoard) and 2,989g of slag were recovered. Quantification of the assemblage by material type and Site is given in Table 1. The variety of object types by site and functional category (FC) can be found in Table 2.

Material	Site 2	Site 3	Site 4	Site 5	Site 7	Site 8	Site 9	Total
Ceramic					1			**1**
Copper alloy	1	3		9				**13**
Ferrous	6	8	13	32	0	1	0	**60**
Flint		2		1	10		1	**14**
Glass			1	2				**3**
Lead alloy		2		9				**11**
Stone		2		1	6	2		**11**
Timber				1				**1**
Total Nos.	**7**	**17**	**14**	**66**	**17**	**3**	**1**	**126**
Slag (ferrous)	286			541				**827**
Slag (fuel ash)					2162			**2162**
Total weight (g)	**286**			**541**	**2162**			**2989**

Table 1: Other Artefacts quantification

A scan of typologically datable artefacts indicates a wide, but discontinuous, date range. The earliest datable artefact is a flint pick of Mesolithic to early Neolithic date, whilst the latest include a button and a wine bottle from the 19th century.

The assemblage from each period (early/middle Iron Age, Roman, late medieval/early post-medieval and late post-medieval/modern) is discussed by site, with consideration given to provenance, including residual and intrusive components, and deposition patterns.

FC & Object Type	Site 2	Site 3	Site 4	Site 5	Site 7	Site 8	Site 9	Total
Fastenings & fittings								
Angle tie				1				**1**
Hinge				1				**1**
Nail	6	7	10	23		1		**47**
Staple				1				**1**
Stud				1				**1**
Household								

FC & Object Type	Site 2	Site 3	Site 4	Site 5	Site 7	Site 8	Site 9	Total
Fuel ash slag					2162g			
Plate				1				**1**
Prismatic bottle				1				**1**
Wine bottle			1					**1**
Craft & Industry								
Ferrous slag	286g			541g				
Loom weight					1			**1**
Spindle whorl				1				**1**
Scrap/waste				4				**4**
Timber off-cut				1				**1**
Blades & Sharpeners								
Whetstone						1		**1**
Measurement								
Steelyard weight				1				**1**
Transportation								
Horseshoe		1						**1**
Shoeing nail			1					**1**
Agriculture & Subsistence								
Plough coulter				1				**1**
Quern		2		1	3	1		**7**
Weaponry & Militaria								
Bell-shaped stud				1				**1**
Ferrule				1				**1**
Gun cartridge		1						**1**
Spear head				1				**1**
Dress & Adornment								
Bracelet				1				**1**
Brooch				2				**2**
Button				1				**1**
Hair pin		1						**1**
Hob nail				1				**1**
Pendant				1				**1**
Ring				2				**2**
Strap fitting	1							**1**
Flint								
Arrowhead		1						**1**
Flake					9		1	**10**
Notched flake				1				**1**
Pick		1						**1**
Utilised flake					1			**1**
Uncertain Identification								
Fragment (CA)		1						**1**
Fragment (Fe)			1					**1**
Fragment (Gl)				1				**1**
Fragment (PbA)		2		2				**4**
Cast iron plate			1					**1**
Bar iron off-cut?				1				**1**
Cast vessel foot? (CA)				1				**1**
Re-used saddle quern?					1			**1**
Perforated chalk weights?					2			**2**

Table 2: Other Artefacts by object type and site

16.3 Artefacts from early/middle Iron Age deposits

The earliest dated remains along the road scheme are from the early/middle Iron Age. Artefacts of this period are restricted to Sites 7 and 8, especially 7.

16.3.1 Site 7

The enclosure ditch of the southern farmstead (AG706.01) yielded 1,940g of fuel-ash or alkali silicate slag. These slags are not of themselves evidence for any specific industrial process, but simply indicate a fire at high temperatures. The deposition of this material within the enclosure ditch may suggest disposal of hearth material, or may relate to an accidental fire within the enclosure. Small quantities of fuel ash (171g) and vitrified clay (13g) were also recovered from the middle farmstead's enclosure ditch (AG707.03), with a further 38g from the northern enclosure ditch and its re-cut (AG708.01 and AG714.01).

Evidence of craft activity was limited to the southern farmstead (AL706). A corner of a triangular loom weight was recovered from the enclosure ditch. Although incomplete, the weight of the surviving fragment (747g) suggests it was fairly substantial. Barford notes that that the normal triangular loom weight was around 1kg (Elsdon and Barford 1996, 332). This loom weight would have been used in conjunction with a warp-weighted loom.

Two perforated pieces of chalk were also recovered from the terminal fills of this enclosure ditch. The exact use of these two items is uncertain. Although chalk spindle whorls dating to the early/middle Iron Age are known (Fasham 1985, figure 64), one of the perforated chalk pieces (RA70000) is too irregular even to have been an unfinished example, as its shape would have unbalanced the spinning process. The second example is of a more regular thickness, and may perhaps represent an unfinished spindle whorl.

It remains unclear whether these chalk pieces are small line weights or perhaps unfinished spindle whorls, yet their position within the terminus of the ditch is of interest. Critical points in space, such as the entrance to an enclosure, were often marked out through the deposition of objects, perhaps serving to mark the change from domesticated interior to wild exterior. It is believed that the material type of the object, rather than its original function, was the important factor in selection (Gwilt 1997, 162).

The remains of four saddle quern fragments, one possibly re-used, is evidence that grain was being processed. The distribution of these was restricted to the northern farmstead (AL708, AL715 and AL716). At least two of these querns appear to be of Old Red Sandstone, found mainly in outcrops in Somerset and Wales, although discrete boulders can also be found scattered in drift deposits.

16.3.2 Site 8

The artefacts from Site 8 all came from two pits in AL802. One contained the remains of a saddle quern fragment and a whetstone, both also thought to be of Old Red Sandstone, and the other contained a single iron nail shank. Although iron nails from earlier Iron Age deposits are not particularly common, they have been noted on other sites (Duncan *in prep;* Fasham 1985, 52).

16.4 Artefacts from Roman deposits

Sites 2, 3 and 5 all produced artefacts from deposits which were Roman.

16.4.1 Site 2

Only AL205 and AL207 contained artefacts, none of which were closely datable. The round house drip gully (AG205.01) yielded the fragmented remains of a possible strap fitting (maybe a buckle plate), with evidence of mineral-replaced organic material (perhaps leather) surviving. A single nail shank was found within the fill of pit AG207.05, while ditches AG205.08 produced the remains of three nails. One retained a flat rectangular head, and appears to belong to Manning's type 1B general purpose nails.

The large pits and postholes (AL207) situated within enclosure AL205 yielded small quantities of ferrous slag attached to vitrified clay, 36g from pit AG207.05 and 250g from posthole AG207.10. The latter also produced a single general purpose nail. Although the quantities of ferrous slag are small and not diagnostic of either smithing or smelting, they do indicate small scale craft activity being carried out in the vicinity, if not within the enclosure.

16.4.2 Site 3

The fills of the re-cut enclosure ditch AG302.02 (Phase 302) yielded fragmentary remains of decomposing lava stone, probably originating either from the Mayen quarries of the Eifel Hills of Germany or from Volvic in the Auvergne region of France (King 1986, 94).

Importation of lava querns into this region began in c.50AD, continuing into the 17th century, with an apparent hiatus in the early Saxon period (King 1986, 95). Although diagnostic traits can assist in dating lava quern, none of these survive on the Site 3 examples. Within the broader region, lava querns are rare on small rural sites, and are more typical of urban or villa sites (King 1986, 118). Trade in these quern stones occurred mainly during the 1st and 2nd centuries (Peacock 1980, 50).

A complete horseshoe was recovered from droveway AL307. Although there has been some debate concerning the existence of Roman horseshoes, the form of this example so closely matches Clark's Type 4 shoes of later medieval date (Clark 1995, 88-91) that it is considered intrusive in this context.

All the artefacts from Phase 304 were recovered from the enclosure ditches, in particular from AL306, and mainly comprised nails and nail shanks. Only three of the seven nails retained their heads, two of which had flat heads and belong to the general purpose category. A single nail had a domed, rounded head, and may belong to Manning's type 8, a common form of upholstery nail (Manning 1985, 136). Intrusive activity is also evident in the form of a modern gun cartridge from AG306.03.

A residual, well-executed barbed and tanged arrowhead of early Bronze Age date was found within the fills of enclosure ditch AL314.

16.4.3 Site 5

Site 5 produced the largest assemblage of artefacts from the Roman period, though 39% of them comprised nails or nail fragments (Table 3). Most of these are general purpose nails (Manning type 1b), but there was one example each of a triangular-headed nail (Manning type 2) and an L-shaped nail (Manning type 4) and two examples of nails with small T-shaped heads (Manning type 3).

A Phase	AL	AG	Feature Type	Description	Quantity
502	503	503.01	Ditch	Flat headed nail	1
502	504	504.10	Ditch	Nail shank	1
503	505	505.01	Ditch	T-shaped Flat headed	1 1
503	505	505.02	Quarry	Flat headed	2
503	505	505.06	Pit	Nail shank	1
503	506	506.02	Ditch	Flat headed Nail shank	2 3
504	510	510.02	Ditch	Flat headed Nail shank	1 1
504	511	511.02	Rubbish layer	Triangular T-shaped Flat headed L-shaped Nail shank	1 1 4 1 1
505	512	512.01	Ditch	Flat headed	1

Table 3: Nail distribution

Rubbish layer AG511.02 accounted for eight nails, and also had a concentration of other fastenings and fittings associated with buildings, such as angle ties, staples and hinge fragments. A small piece of worked timber was recovered from the base of quarry pit AG505.02 beneath this rubbish layer. Preliminary analysis of the wood reveals that it had been sawn, and also that it contained traces of woodworm. The piece of wood was perhaps an offcut from a plank or board, and did not form part of an *in situ* structure.

Domestic items were limited to a small fragment of thick, translucent 'blue-green' glass from cesspit AG510.06, which was probably part of a prismatic bottle of 1st to late 2nd century date, and a small pewter plate from enclosure ditch AG506.01.

The majority of Romano-British pewter finds come from hoards buried at the end of the 4th century (Brown 1979, 207). Two pewter plates of similar form and size to the Site 5 plate were found in late Roman contexts (AD375-400) in bog mud at Verulamium in loose association with coins, and were thought to be votive offerings (Goodburn 1984, 65-66). Whether the example from Site 5 was a 'votive' offering or buried for safe keeping is unclear.

There was little evidence in the way of craft activity. A fragment of a ferrous smithing hearth bottom (510g) was recovered from enclosure ditch AG502.01, while a smaller piece of undiagnostic ferrous slag (31g) was found within enclosure ditch AG505.01. Heat-affected waste fragments of lead (211.3g) and the misshapen remains of a possible lead spindle whorl were recovered from

rubbish layer AG511.02. A sinuous, tapering strip of copper alloy, possibly an off-cut, was found in enclosure ditch AG510.01.

Evidence for subsistence activity comprised the fragmentary remains (181g) of one or more Mayen lava querns from the enclosure ditches of AL507 (see Site 3 for discussion of stone type) and, unusually, a possible plough coulter from enclosure ditch AG510.05. Although lacking most of its blade, the coulter currently measures some 865mm, with the surviving blade comprising 50mm of this length. Given that known coulter blades vary from 185mm to 364mm in length, this would make the complete length of the Site 5 coulter somewhere between 1,000 and 1,179mm. The longest coulter reported (Rees 1979, 60) is 925mm, making the Site 5 coulter the longest known.

Of the twenty-eight coulters listed (Rees 1979, 59-61 and 287-93), fourteen were found as parts of hoards, but at least seven were found singly. The majority of dated examples fall within the 3rd and 4th centuries. No other artefacts were associated with the Site 5 coulter. Considering the quantity of iron contained within the object, it is surprising that it was discarded, despite the damaged blade. Its deposition within the ditch might represent safe-keeping or a 'votive' deposit, or a change of use of the enclosures.

A second large iron object (RA50067), surviving in very poor condition, was recovered from a cesspit (AG510.06). It comprises a socketed handle, possibly retaining mineral-replaced wood, which tapers to a solid-sectioned tapering 'bar' of rectangular section. Although it resembles a spear head in some respects, the absence of a blade-like end suggests it may have been a conical ferrule, perhaps for a staff or spear.

A small spear head with a flanged socket (Manning's type Ib or IIb, 1985, 162-66) was also recovered from a dump of pottery vessels within an enclosure ditch (AL504), and a cup or bell-shaped stud (RA50070) was found within the rubbish layer AG511.02. These objects are more usually associated with military sites. However, they had a wide range of uses, including dagger or sword pommels and terminals on furniture.

Site 5 also produced a small number of items of personal ornament and dress. The earliest datable object is an incomplete Colchester brooch, dating to the first three-quarters of the 1st century AD. This was found within rubbish layer AG511.02, and was definitely residual. The same layer yielded a small pentagonal sheet pendant with repousse dot ornament. Its delicacy suggests it may have been suspended from an ear-ring, necklace or bracelet.

A fragment of a bracelet with a punched dot border, probably dating to the 3rd to 4th centuries, was recovered from enclosure ditch AG510.02. The same deposit produced a cast annular ring. Such rings had a wide range of uses, but examples have been found worn as a finger ring in burials (Crummy 1983, figure 50, 1749 and 1755), so their function as a personal ornament cannot be ruled out. A second ring, in this case not cast but apparently stamped from a sheet of copper alloy, may also have had a decorative or dress function.

Similar small rings were found in association with glass and jet beads in a late 3rd to 4th century burial from the Biddenham Loop (Duncan *in prep*).

Only one hobnail was found in the whole project, and this came from the large quarry pit AG505.02.

Although Site 5 produced the largest assemblage of Roman artefacts, their number and range from the earlier phases of the site were not large, with most of them coming from Phase 504. Few were recovered from Phase 502, the only one of note being the incomplete spear head from AL504. Iron smithing might be hinted at by a hearth bottom fragment from AL502, but the quantity is too small to say definitively that ironworking was being carried out here.

Nails dominate the assemblage from Phase 503, which might suggest evidence for structures. The recovery of the pewter plate from AL506 suggests that it was deposited in the 3rd or 4th century, though it is unclear whether this was due to damage or for safe keeping. Some domestic activity within AL507 is hinted at by the presence of degraded Mayen lava stone fragments, presumably representing the remains of a rotary quern.

Phase 504 has the greatest quantity and range of finds. The bracelet, possible finger ring and small fragment of vessel glass from AL510 suggest a degree of domestic occupation. AL510 also produced the plough coulter and a large hoard of late 3rd century coins (see Appendix 12).

All the artefacts from AL511 came from the rubbish layer AG511.02. A slight concentration of building fasteners and fittings was noted within the assemblage, as well as elements of dress, a possible spindle whorl and a bell-shaped stud. This layer, however, produced finds of mixed dates, and is likely to have formed after the enclosures were abandoned. It is therefore difficult to determine from which phase of activity or which enclosure they originated.

Phase 505 yielded a single nail, and this, unfortunately, cannot assist in refining the date of the features within this phase.

16.5 Artefacts from late medieval/early post-medieval deposits

The only artefacts from late medieval/early post-medieval features came from Site 3. As well as undatable fragments of lead sheet, boundary ditch AL312 also contained a complete Roman hairpin belonging to Cool's type 25 (1990). The length of this hairpin suggests it belongs to the first two centuries AD. AL312 truncated the Roman ladder enclosure AL306, which was almost certainly the origin of this hairpin.

16.6 Artefacts from late post-medieval/modern deposits

The only artefacts from late post-medieval/modern features came from Site 4. The moat (AG404.01) yielded the remains of ten nails, the majority being general purpose carpentry nails which are not typologically datable. A single robust nail had a domed head, and can be classed as a door stud. Studs were used on more robust timber work such as double timber doors and well covers

in the medieval and post-medieval periods. A single shoeing nail with a triangular sectioned head was recovered, dating from the late medieval to the post-medieval period. A cylindrical wine bottle dating from the late 18th to early 19th century was also found in the moat.

Two iron objects were recovered from gully AG404.02 at the entrance way to the moat, one a portion of a circular sectioned iron rod and the second a cast iron perforated plate, possibly from a large strap hinge.

Sites 3, 5 and 7 all produced finds from topsoil and subsoil deposits. These are summarised in Table 4. Of particular note is the flint pick of mesolithic to early neolithic date. The lead steelyard weight could be of Roman or later date, as there is little change in the basic form. A close parallel in shape can be found from Hill Farm, Gestingthorpe, Essex (Draper 1985, figure 17 no.137). If this weight is of Roman date, then, at 60g, it may be equivalent to 2 *unciæ*.

Site	Phase	AL	AG	Description
3	309.00	313.00	313.01	Flint pick
5	507.00	515.00	515.01	Copper alloy button
5	507.00	515.00	515.02	Lead waste fragment x 2
5	507.00	515.00	515.02	Lead sheet fragment
5	507.00	515.00	515.02	Cast copper alloy foot from small cast vessel or terminal for a socketed handle?
5	507.00	515.00	515.02	Lead steelyard weight and copper alloy suspension chain
5	507.00	515.00	515.02	Cast iron fragment
7	707.00	720.00	720.02	Flint debitage flake

Table 4: Other Artefacts from topsoil deposits

16.7 Bibliography

Alexander, J and Pullinger, J 2000 'Roman Cambridge Excavations on Castle Hill 1956-1988' *Proceedings of the Cambridge Antiquarian Society* Volume LXXXVIII for 1999

Allason-Jones, L 1985 'Bell-shaped studs?' in MC Bishop (ed) *The Production and Distribution of Roman military Equipment.* BAR International Series 275, 95-118

Beagrie, N 'The Romano-British Pewter Industry' in *Britannia* vol XX 1989, 169-91

Boylston, A. and Roberts, C. 2004 'The Roman Inhumations' in M Dawson *Archaeology in the Bedford Region*, 322-350

Brown, D 1979 'Pewter Vessels' in G Clarke *The Roman Cemetery at Lankhills*, 206-208

Clark, J 1995 *The Medieval Horse and its Equipment.* Medieval Finds from Excavation in London

Cool, HEM 1990 'Roman Metal Hair Pins from Southern Britain' in *Archaeological Journal* volume 147, 148-82

Cotton, MA and Frere, SS 1968 'Ivinghoe Beacon: Excavations, 1963-5' in *Records of Buckinghamshire* volume XCIII part 3,187-60

Crummy, N 1983 *The Roman small finds from excavations in Colchester 1971-9* Colchester Archaeology Report 2 Colchester

Draper, J 1985 *Excavations at Hill Farm, Gestingthorpe, Essex* East Anglian Archaeology 25

Duncan, HB *in prep* 'Other finds' in M Luke *Biddenham Loop: A Prehistoric and Roman Landscape.* East Anglian Archaeology Monograph

Elsdon, SM and Barford, PM 1996 'Loomweights' in J May 1996 *Dragonby: Report on Excavations at an Iron Age and Romano-British Settlement in north Lincolnshire Volume 1,* 330-332

Evans, C 2003 'Britons and Romans at Chatteris: Investigations at Longwood Farm, Cambridgeshire' in *Britannia* volume XXXIV, 175-264

Fasham, PJ 1985 The *Prehistoric Settlement at Winnal Down, Winchester.* Hampshire Field Club Monograph 2

Goodburn, R 1984 'The non-ferrous metal objects' in *Verulamium Excavations* Volume 3, 19-68

Gwilt, A 1997 'Popular practices from material culture; a case study of the Iron Age settlement at Wakerley' in A Gwilt, C Haslegrove (eds), 1997 *Reconstructing Iron Age Societies.* Oxbow Monograph 71 1997, 153-166.

IFA 2001 Standard and Guidance for the collection, documentation, conservation and research of archaeological materials. Institute of Field Archaeologists.

King, D 1986 'Petrology, dating and distribution of querns and millstones: The results of research in Bedfordshire, Buckinghamshire, Hertfordshire and Middlesex' in *Institute of Archaeology Bulletin 1986,* pt 23, 65-126

Manning, WH 1985 *Catalogue of the Romano-British Iron Tools, Fittings and Weapons in the British Museum.* London

Peacock, DPS 1980 'The Roman millstone trade: a petrological sketch' in *World Archaeology* volume 12.1, 43-53

Rees, SE 1979 *Agricultural Implements in Prehistoric and Roman Britain.* BAR British Series 69

Wessex Archaeology 2003 *Cambourne New Settlement, Cambridgeshire.* Interim Statement of Results

17. APPENDIX 17: OTHER ARTEFACTS CONSERVATION ASSESSMENT

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17.1 Condition

17.1.1 Ferrous

Ferrous objects constitute the majority of the assemblage, and were recovered from at least thirty-five separate contexts. All have surface accretions of (presumably mixtures of primarily) ferrous oxides and oxyhydroxides, within which the (oxide – magnetite?) layer, indicative of the approximate position of the 'original surface', is likely to survive to varying degrees.

Most of the iron objects appear to have a robust level of surviving metal, with surface corrosion/accretion that partly obscures morphology (i.e. potential surface features/decoration are not visible, but object shapes are evident to an extent). There are a few exceptions to this, where ferrous objects have deteriorated to a more significant extent resulting in the loss of a relatively large proportion of the metallic content, and a more fragile structure. However, original features/structure tend to be well preserved within corrosion layers in such cases, and associated features also survive as pseudomorphic evidence (in the case of socketed object RA50067, what appears to be wood has survived through mineral replacement).

17.1.2 Non-Ferrous

Four copper alloy objects were examined, one of which comprises numerous fragments (all from different contexts). The objects are all significantly deteriorated, though not suffering completely obscured morphology through dense blistery accretions of corrosion. Instead, there are varying (mostly localised) levels of survival of corrosion layers likely to be indicative of the approximate positions of 'original surfaces'. Where such layers have been lost, potentially active (often quite extensive) layers of corrosion are evident beneath. These are likely to be primarily cuprous chloride (nantokite), although this would need confirmation.

Two lead alloy objects were examined, one of which is fragmented. Both objects appear to have suffered similar levels/type of deterioration, with what appear to be carbonate based corrosion products preserving original morphology. However, the bowl fragments (RA50049) do appear to be more heavily mineralised, which may be an indication of more extensive working in manufacture, and the potential impact of this on factors such as intergranular corrosion.

17.2 Burial Conditions

The level/type of deterioration noted in the assessed material does not seem unusual in any way. The geological deposits of predominantly boulder clay are likely to support a slightly acidic and partially oxygenated burial environment. This would result in the type of mineralisation observed, with differences in

the extent of mineralisation being accounted for by potential microenvironments (for example, variations in levels of moisture and/or oxygen).

None of the artefacts demonstrated corrosion consistent with a waterlogged environment, although the least corroded/encrusted ferrous objects may have come from very wet, well oxygenated environments. The ferrous objects that were most mineralised (but which appear to retain faithful evidence relating to original features) may well have been subject to repeated cycles of corrosion through being in locally well drained areas. Equally, the non-ferrous objects (particularly the copper alloys), while deteriorated, do not appear significantly altered (i.e. encrusted with blistery corrosion products), which is consistent with a slightly acidic burial environment with perhaps low chloride concentration.

17.3 Impact on Information Retrieval

In all cases observed, it is envisaged that the potential for information retrieval would be high.

The ferrous element of the assemblage has the most obscured morphology, given the level of burial accretion and corrosion products. Investigative corrosion removal would complement the information already retrieved through x-radiography, and more accurately clarify corrosion layers likely to be indicative of the approximate position of the original surface.

Two objects in particular (possible plough coulter RA50076 and fragmented socketed object RA50067) would sustain the mechanical removal of obscuring accretion to a level which, in all probability, would further clarify their interpretation. RA50067 is in a more advanced state of deterioration, but original morphology is likely to have been faithfully preserved within corrosion layers. However, the level of risk to the physical integrity of the item would increase in line with the level of accretion removed, and action to recover this would be needed should a high degree of corrosion removal be performed.

The non-ferrous element of the assemblage would also sustain corrosion removal with little risk to physical integrity, although morphology is not obscured to the same level; the process would be based on a desire for aesthetic improvement.

18. APPENDIX 18: ANIMAL BONE

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18.1 Methodology

The significance of the bones has been assessed through an analysis noting various key aspects of the assemblage. Essentially, these include species-representation, skeletal part distributions, and age and size data. It is stressed that each of these aspects depend on the general state of the bones and the dating evidence, including the likelihood of residuality.

The recovery methods employed can be added to this list of potential limiting factors. The majority of the bones were recovered by hand, with a small number of additional bones from ecofact samples. All samples were washed through a flexible nylon 1mm mesh, and the resulting residues were dried and then sorted by hand.

The bones were recorded onto a spreadsheet, where each context assemblage is described in terms of the following major features: quantification (weight and approximate fragment count); state (level of fragmentation and preservation); species representation, referring to the approximate quantities of particular zoological groups and a rough species list; anatomical representation in terms of carcass-part; and a rough count of measurable (NMes) and ageable bones. The latter is divided into a count of mandibular cheek-tooth rows (NMnd) and of epiphyses (Nepi), whilst the former includes a straight count plus a note of the number of whole limb bones (NWLB), these being of value for calculation of overall size and stature. In addition, a note was made of the occurrence of particularly young individuals, and if particular species were represented by partial and/or complete skeletons.

Fragmentation was recorded according to the dominant fragment size of individual assemblages, where ‘1’ has fragments generally smaller than 25mm in length, ‘2’ between 75mm and 25mm, and ‘3’ greater than 75mm. Preservation is rated according to the level of surface damage: ‘1’ has little to no damage, ‘2’ moderate, and ‘3’ extensive or 100%. A note is also made of the presence of more than one preservation state, this acting as a possible indication of redeposition.

The quantification takes into account the fact that a large proportion of the bones are highly fragmented and have surface damage. As well as a straight total fragment count (N), an estimate was made of the quantity of bones after refitting (N2, hand collected only) and also of the N2 totals which can be identified to species (N.Id). The latter totals are limited to species in the sheep and larger categories, which provided almost all the identifiable bones from these sites.

The bone assemblage from each site is described below. These descriptions include summary tables, which incorporate information on quantification (numbers of bones as well as age and size data) and their state of survival.

The following key terms are used in the summary tables:

AL – Assessment Landscape
HC – Hand Collected
SIV – Sieved

18.2 Results

18.2.1 Site 2

Bones were recovered from Iron Age and early/middle Roman features, although the earlier phase was represented by just one bone (0.01kg). This was not identifiable to species level. The early/middle Roman assemblage amounted to 134 fragments (2.15kg) from hand collection and 10 (0.02kg) from the samples. Fragmentation amongst the hand collected assemblage was generally moderate to low, whilst surface damage tended towards medium to high (Table 1).

Period	Phase	AL	N.deposits		Degree of Fragmentation			Degree of Preservation			
			HC	SIV	F1	F2	F3	P1	P2	P3	Mixed
9	201	202	-	1	-	-	-	-	-	-	-
10.2	202	205	9	1	-	4	5	-	7	2	-
		207	6	1	-	2	4	1	2	3	-

Table 1: Site 2 - distribution and state of bone assemblages

The relatively poor state of the bone is clearly shown by the major difference between the N and N2 figures (Table 2), as well as by the rather slight representation of limb bones with articular ends (Nepi). The Roman assemblages were essentially distributed amongst the enclosure ditch fills of AL205 and the pit fills of AL207. They provided small collections of cattle, sheep/goat and horse bones, plus mouse/vole, represented by a tooth from the pit sample. There is no obvious concentration of particular parts amongst the larger assemblages or indeed throughout the site.

Period	Phase	AL	Hc N/N2	Hc N.Id	Siv	Siv N.I	NEpi	NMnd	NMes	NWLB
9	201	202	-	-	1	0	-	-	-	-
10.2	202	205	91/21	16	5	0	3	2	1	-
		207	43/18	18	5	0	3	1	1	1

Table 2: Site 2 - Quantity of bones and distribution of age and size data (hand collected only).

18.2.2 Site 3

The bones from this site were provided by early/middle Roman, late Roman and late medieval/early post-medieval deposits (Table 3), with particular concentrations within both the Roman assemblages. Fragmentation levels tended to be low, whilst the great majority of the assemblages had suffered a moderate level of surface damage (Table 4). Sieved collections were taken from the two Roman phases, all of which were rather poor in terms of identifiable fragments.

Period	Number of Fragments		Weight of Bones (kg)	
	HC	SIV	HC	SIV
10.2	163	1	1.33	0.01
10.4	383	4	6.55	0.02
15	16	-	0.41	-

Table 3: Quantification of bones by period

The early/middle Roman assemblage features a relatively large number of bones, taken mostly from just five deposits, the fills of droveway AL307 and water pit AL303. Notably, the refitted N2 total is somewhat smaller (Table 5), with a correspondingly small quantity of identifiable bones as well as age and size data. The species represented include cattle and sheep/goat only.

A substantial late Roman assemblage was recovered from the fills of the ladder enclosure (AL306). Cattle and sheep/goat are again present throughout these Roman deposits, as well as a good representation of horse. Each of these species features a general mix of skeletal parts. Other species include dog (one fragment), chicken (two fragments) and a small crow (partially articulated).

Period	Phase	AL	N.deposits		Degree of Fragmentation			Degree of Preservation			
			HC	SIV	F1	F2	F3	P1	P2	P3	Mixed
10.2	302	302	5	1	-	1	4	1	3	1	2
		303	1	-	-	-	1	-	1	-	1
		307	4	-	-	-	4	2	1	1	-
10.4	304	304	2	-	-	1	1	1	1	-	-
		306	33	1	1	2	30	11	18	4	1
15	306	312	2	-	-	-	2	-	-	2	-

Table 4: Site 3 - Distribution and state of bone assemblages

While a large proportion of the cattle and sheep/goat appear to be adult, there was evidence of younger individuals. A partial skeleton of an infant or very juvenile calf was found in the fill of ladder enclosure ditches AG306.02, as were a calf mandible, a lamb tibia and a foetal lamb humerus. The last bone is a clear indication of local sheep breeding.

Period	Phase	AL	Hc N/N2	Hc N.Id	Siv	Siv N.I	NEpi	NMnd	NMes	NWLB
10.2	302	302	30/13	2	1	1	1	1	-	-
		303	20/5	3	-	-	1	-	-	-
		307	113/24	15	-	-	2	2	1	-
10.4	304	304	4/3	3	-	-	1	-	-	-
		306	379/154	69	4	1	12	8	4	1
15	306	312	16/5	4	-	-	1	-	1	1

Table 5: Site 3 - Quantity of bones and distribution of age and size data (hand collected only).

The late medieval/early post-medieval assemblage, taken from ditch AL312, features a small number of cattle and horse bones, all in a very poor state of preservation.

18.2.3 Site 4

This site provided just two fragments of bone, weighing 1.17kg, from the post-medieval moat (AL404). These are a horse radius and femur, both relatively complete and in a good state of preservation. They are clearly from two different horses, both large, with one at about 16 hands and the other a little bit larger (comparing specimens in the MoLSS reference collection).

18.2.4 Site 5

The bones from this site were recovered from numerous deposits dating to the middle to late Roman periods (Table 6). The assemblages are generally in a medium to poor state of preservation, with a low degree of fragmentation (Table 7). However, there are a noticeably high number of well preserved collections from the late Roman period, including some of the largest assemblages.

Period	Number of Fragments		Weight of Bones (kg)	
	HC	SIV	HC	SIV
10	95	-	0.98	-
10.2	15	-	0.02	-
10.3	566	39	5.70	0.07
10.4	3043	314	51.07	0.28

Table 6: Quantification of bones by period

Large quantities of bones were recovered from the majority of the enclosures and associated features. There were obvious concentrations within quarry pit AG505.02 and the other pits in AL505, the various enclosures and associated cesspits in AL510, and also the water pits and rubbish layer (overlying the quarry pit) in AL511. A reasonable number of samples, especially from the AL511 features, provided moderate quantities of bones, a small proportion of which produced identifiable fragments.

Period	Phase	AL	N.deposits		Degree of Fragmentation			Degree of Preservation			
			HC	SIV	F1	F2	F3	P1	P2	P3	Mixed
10	505	512	10	-	-	3	7	2	5	3	1
10.2	501	501	1	-	-	1	-	-	-	1	-
10.3	502	502	2	-	-	1	1	-	1	1	1
		503	7	1	-		7	1	3	3	-
		504	23	5	-	2	21	7	11	5	1
10.4	500	500	1	-	-	1	-	-	1	-	-
	503	505	33	1	1	5	27	20	11	2	-
		506	14	1	-	2	12	2	8	4	-
		507	18	1	-	2	16	4	7	7	-
	504	508	17	-	-	4	13	5	11	1	-
		509	8	2	-	1	7	5	1	2	-
		510	45	11	-	5	40	21	17	7	1
		511	7	2	-	-	7	3	4	-	1

Table 7: Site 5 - Distribution and state of bone assemblages

Cattle, sheep/goat and horse were the dominant species recovered from these assemblages. Dog bones were found in a number of deposits, and in particular from one of the enclosure ditches (AG508.02), which provided a relatively complete skeleton of a small adult. This was unusual, considering that most of the dog bones recovered were from noticeably large animals.

Other species include red deer, represented by three antler fragments, one from AL506 and two from AL510. The first of these, from AG506.02, was from a rather large animal. Though it was a basal fragment, it could not be ascertained whether this was a dropped specimen or whether it had been cut from the carcass.

Single bones of cat and hare were also found, as well as a few pig bones recovered from the rubbish layer over the quarry pit. A few additional species were recovered from the samples, including mouse/vole and some mouse (identified from the mandibles), as well as a large concentration of amphibian bones (about 100 fragments) from the aforementioned rubbish layer.

While cattle and horse appear to be the main constituents of a large proportion of these assemblages, the better preserved ones, such as rubbish layer AG511.02, had approximately equal numbers of cattle and sheep/goat. The preservation state of this assemblage may also explain the presence of pig bones, which tend to be less robust than cattle or sheep/goat bones (Grant 1984a, p.500).

There is a generally mixed skeletal part representation of each of the major species, whether in poor or well preserved assemblages, clearly showing the presence of parts from all stages of the butchery process. There is perhaps a greater proportion of older cattle and sheep/goat compared to younger individuals. Noticeably, no very young calves or lambs were recovered, but there were a few infants/juveniles, which could either represent infant mortalities (and therefore evidence for on-site breeding) or the use of choice meats.

Period	Phase	AL	Hc N/N2	Hc N.Id	Siv	Siv N.I	NEpi	NMnd	NMes	NWLB
10	505	512	94/30	17	-	-	2	4	2	-
10.2	501	501	15/3	-	-	-	-	-	-	-
10.3	502	502	50/5	3	-	-	1	-	-	-
		503	161/41	22	5	-	3	2	-	-
		504	355/111	61	34	2	8	7	5	2
10.4	500	500	1/1	-	-	-	-	-	-	-
	503	505	611/287	150	10	-	20	7	9	2
		506	299/137	62	2	1	6	3	-	-
		507	365/111	56	2	-	10	6	3	-
	504	508	146/69	36	-	-	7	2	2	-
		509	100/35	20	25	-	3	1	-	-
		510	831/298	149	145	7	25	16	8	1
		511	691/354	144	130	-	6	4	1	1

Table 8: Site 5 - Quantity of bones and distribution of age and size data (hand collected only).

The wide distribution of the horse bones could suggest that they formed part of the local meat diet. However, a few deposits produced partial articulations, which could suggest that the spread of horse bones was related to redeposition. Clear evidence for this activity is provided by the presence of two very poorly preserved human long bones, one from an enclosure ditch (AG504.08) and the other from the fill of a pit (AG504.11). It is likely that these bones derived either from grave AG503.02, or from another one which was completely truncated by ploughing.

18.2.5 Site 7

The bones from this site were nearly all from deposits dating to the early/middle Iron Age, comprising 1,298 fragments (12.57kg) recovered by hand collection and 232 fragments (0.45kg) from the samples. The remainder of the assemblage was taken from a single late post-medieval/modern deposit, and consisted of one hand collected bone weighing 0.01kg. The greater proportion of the Iron Age assemblages show a low level of fragmentation and are fairly well preserved (Table 9).

Period	Phase	AL	N.deposits		Degree of Fragmentation			Degree of Preservation			
			HC	SIV	F1	F2	F3	P1	P2	P3	Mixed
9.1	704	706	43	4	1	7	35	21	10	12	1
		707	22	6	-	3	19	12	6	4	1
		708	22	10	1	5	16	8	10	4	1
		710	1	-	-	-	1	-	-	1	-
		711	1	-	-	-	1	-	1	-	-
		712	11	1	-	1	10	2	6	3	-
		713	5	1	-	1	4	3	2	-	-
		714	2	-	-	1	1	2	-	-	-
		715	11	2	-	3	8	5	6	-	1
		716	3	1	-	-	3	-	1	2	-
17	707	721	1	-	-	1	-	1	-	-	-

Table 9: Site 7 - Distribution and state of bone assemblages

Most of the Iron Age bones were recovered from the fills of the three farmstead enclosure ditches, with a particular concentration as well from the large pits AG708.08. Each of the farmsteads featured relatively similar bone assemblages, dominated by cattle and sheep/goat, with a good representation of horse bones.

There are some well preserved assemblages where sheep/goat is the dominant species, for example the bones from fill (70507) in AG706.01. An excess of cattle bones could result from the poor preservation of some of the bone collections, particularly in AL706 (Table 9). However, the same enclosure also provided well preserved assemblages which are predominantly composed of cattle bones.

Pig bones were found in just two deposits, both within AG706.01 and both from well preserved collections. The other species identified include dog (a partial articulation from one of the large pits associated with the northern farmstead AL708) and mouse/vole (a tooth out of a sample from the southern enclosure ditch AG715.02).

Each of the major species is represented by a wide distribution of skeletal parts, generally from adult individuals. Some juvenile calves were recovered, perhaps suggesting the use of choice meats, and there is one example of a foetal calf, from the northern enclosure AG713.01, which is a clear indication of local cattle breeding.

Period	Phase	AL	Hc N/N2	Hc N.Id	Siv	Siv N.I	NEpi	NMnd	NMes	NWLB
9.1	704	706	452/219	117	25	2	20	9	6	1
		707	253/77	46	16	2	10	3	2	-
		708	275/87	41	159	5	7	4	3	-
		710	6/3	1	-	-	-	-	-	-
		711	1/1	-	-	-	-	-	-	-
		712	127/58	29	7	1	4	1	1	-
		713	35/19	11	15	-	2	-	-	-
		714	4/4	2	-	-	1	-	-	-
		715	129/61	23	6	1	6	1	1	1
		716	16/9	5	4	1	-	1	-	-
17	707	721	1/1	1	-	-	-	-	-	-

Table 10: Site 7 - Quantity of bones and distribution of age and size data (hand collected only).

18.2.6 Site 8

A moderate quantity of animal bones were recovered from the fills of early/middle Iron Age pits (AG802.01), amounting to 139 fragments (0.32kg) by hand collection and a further 35 (0.05kg) from samples. In addition, there were 25 hand collected bones (0.07kg) from the post-medieval quarry pit (AG805.01). All but one of these assemblages featured a low level of fragmentation. The earlier bones were generally moderately well preserved and the post-medieval collection poorly preserved.

Period	Phase	AL	N.deposits		Degree of Fragmentation			Degree of Preservation			
			HC	SIV	F1	F2	F3	P1	P2	P3	Mixed
9.1	801	802	9	4	-	1	8	1	6	2	1
16	803	805	1	-	-	-	1	-	-	1	-

Table 11: Site 8 - Distribution and state of bone assemblages

The early/middle Iron Age pits provided a small number of bones which could be identified to species, and a very slight quantity of ageable bones. There is a clear dominance of cattle and sheep/goat, represented by a mixture of skeletal parts, within a very limited species list. The only other species represented is dog, with just two bones from two separate pits.

A notable feature was the recovery of bones representing a foetal calf and lamb, which are clearly the remains of infant mortalities and therefore proof of local cattle and sheep breeding. The single identifiable bone from the post-medieval deposit is a cattle tibia.

Period	Phase	AL	Hc N/N2	Hc N.Id	Siv	Siv N.I	NEpi	NMnd	NMes	NWLB
9.1	801	802	139/54	22	35	1	5	2	-	-
16	803	805	25/3	1	-	-	1	-	-	-

Table 12: Site 8 - Quantity of bones and distribution of age and size data (hand collected only).

18.3 Bibliography

Grant, A. 1984a, 'The animal remains' in Cunliffe, B. 1984. Danebury: an Iron Age hillfort in Hampshire. Vol.2. The excavations 1969-1978: the finds. *CBA Res.Rep.52*. (London). 496-526.

Grant, A. 1984b, 'Animal husbandry in Wessex and the Thames valley' in Cunliffe, B. and Miles, D. (eds), *Aspects of the Iron Age in Central Southern Britain*, Univ of Oxford: Committee of Archaeology Monograph No.2, 102-120

King, A.C. 1984, 'Animal bones and the dietary identity of military and civilian groups in Roman Britain, Germany and Gaul' in Blagg, T.C. and King, A.C. (eds). *Military and civilian in Roman Britain: cultural relationships in a frontier province*, British Archaeological Report 136**,** Oxford, 187-218.

Maltby, M. 1981, 'Iron Age, Romano-British and Anglo-Saxon animal husbandry - a review of the faunal evidence' in Jones, M. and Dimbleby, G. (eds), *The environment of man: the Iron Age to the Anglo-Saxon period*, British Archaeological Report 87**,** Oxford, 155-203.

Wilson, B., Hamilton, J., Bramwell, B. and Armitage, P. 1978, 'The animal bones' in Parrington, M (ed). *The excavation of an Iron Age settlement, Bronze Age ring ditchs and Roman features at Ashville trading estate, Abingdon (Oxfordshire)*, 1974-76, Council for British Archaeology Research Report 28, 110-139.

19. APPENDIX 19: HUMAN BONE

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19.1 Methodology

The human bone was assessed in accordance with the MoLSS Environmental Archaeology Procedures Manual (in preparation).

In the case of the cremation AG306.04, macroscopic observations were made with the weight and colour of the burnt bone recorded, along with the maximum size of bone fragment present.

AG503.02 was too heavily truncated to permit estimation of age-at-death. However, the size of the long bone fragments suggests the individual was most likely of adult age. Truncation also prevented observation of any of the pelvic or cranial sexual traits.

In the case of inhumations AG510.12, age-at-death was estimated for the adult, based on observation of dental eruption and auricular surface morphology, and sex was also able to be considered, based on expression of the pre-auricular sulcus. Ageing of the subadult was based upon observations of the size and epiphyseal fusion of the skeletal remains, with no attempt made to assign sex.

Apparently disarticulated bone recovered from the sampled grave fills was also scanned for evidence of additional individuals, though none were found.

All human skeletal remains were scanned for evidence of any pathological changes.

19.2 Results

19.2.1 Site 3

A single urned cremation burial AG306.04 was recovered from a late Roman enclosure (AL306). The cremation produced 278g of grey cremated bone, with a maximum fragment size of 38.7 x 32.6mm.

19.2.2 Site 5

Three inhumations were recovered from Site 5: AG503.02, the single, heavily truncated grave of an adult; and AG510.12, the graves of a (probably) female adult and a subadult. Both are believed to be Roman, though AG503.02 is provisionally thought to be earlier than AG510.12.

Preservation was consistent for all three inhumations, and was generally poor, with the adult remains in particular exhibiting marked weathering and erosion due to root action. Fragmentation was also moderate to severe, with no long bones present in their entirety.

AG	Skull	Torso	Pelvis	Arms	Legs	Condition	%	ID	
								Sex	Age
503.02				1	2	moderate	10	?	adult?
510.12	√	√	√	2	2	moderate	55	F?	adult
	√	√		1	2	moderate	35	N/A	subadult

Table 2: Site 5 - Summary of data from inhumation burials

AG510.12 includes one adult of possible female sex and one subadult individual. AG503.02 is most likely representative of a second adult individual, but age and sex were unable to be observed due to truncation of the context and poor preservation.

Rapid scanning of the remains indicated no gross pathological changes, though AG503.02 included an adult middle hand phalanx exhibiting marked enthesopathies to the mediolateral aspects of the diaphysis. Further study is recommended in order to allow more detailed observation.

20. APPENDIX 20: CHARRED AND WATERLOGGED PLANT REMAINS

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20.1 Methodology

A total of 135 environmental bulk soil samples were collected during the excavations from six of the sites (2, 3, 4, 5, 7 and 8), with over 65% of these samples being from Sites 5 and 7 (44 samples each).

Soil samples of mostly up to 40 litres were collected from individual features, although only ten litres from each sample have been processed for this assessment. Processing was carried out using a Siraf-type flotation tank, with mesh sizes of 0.25mm and 1mm for the recovery of the flot and residue respectively. Some of the clay soil samples were initially soaked in water and hydrogen peroxide to facilitate the break-up of the soil and the separation of the biological remains.

Once floated, the flots were dried and bagged (except if there was obvious waterlogged organic preservation, in which case the flots were stored wet). The residues were dried and sorted for any biological remains; any other finds were then passed to the relevant specialists for assessment.

All but two of the 135 samples produced flots with potential organic remains including charred botanical material. The size of the individual flots varied from 1ml to 100ml, although the vast majority were fairly small, with over 50% being less than 10ml and only nine flots having a volume greater than 50ml.

The assessment of the individual flots was carried out using a binocular microscope with a magnification of up to x40. The flots were initially divided into different size fractions using a stack of sieves for ease of scanning the material. Approximate item abundance and species diversity of botanical and any other biological remains was recorded onto paper records using the following rating system:

Item frequency: 1 = 1-10 items; 2 = 11-50 items; 3 = 50+ items
Species diversity: low = 1-4 species; moderate = 5-10 species; high = 10+ species

Notes were made of easily identifiable botanical material and on the general character of the plant assemblage or flot. The information from the flots was then put onto a MoLSS database together with processing data (including the results of the residue sorts). Tables were then produced showing processing details, biological remains and other non-biological finds from the sorted residues (held in the archive).

20.2 Results

20.2.1 Site 2

Seventeen samples were assessed from Site 2. Fourteen of these were from early Roman deposits, with one from the middle Roman period and two from the Iron Age.

Charred cereal grains were present in variable amounts in nine samples, though with a high frequency in only two, one (<2013>) from the backfill of a large early Roman posthole (AL207) and the other (<2007>) from a middle Roman tree throw (AL209). There were moderate grain numbers in two samples and only occasional grains in the other five flots.

Most of the grains appeared to be wheat (*Triticum* sp.) including the hulled cereal, either emmer (*Triticum dicoccum*) or spelt (*T. spelta*). Barley (*Hordeum* sp.) and oat (*Avena* sp.) grains were also noted in a few samples. The preservation of the cereal grains, including those in the rich assemblages, was generally poor.

Charred cereal chaff was also recorded in nine samples, with two of the richest assemblages (<2013> and <2014>) from the early Roman posthole (AL207) and one (<2007>) from the middle Roman tree throw (AL209). There were moderate numbers of chaff fragments in one (<2003>) and occasional chaff fragments in the other five. The cereal chaff consisted entirely of hulled wheat glume bases, including spelt and possibly emmer.

Only three flots contained occasional charred seeds of weeds/wild plants. These included dock (*Rumex* sp.), buttercup (*Ranunculus* sp.), vetch/tare/vetchling (*Vicial/Lathyrus* sp.) and small grasses, some of which may be from arable weeds harvested with the cereals.

Small amounts of very fragmented charcoal were present in fourteen of the seventeen flots. Four contained potentially identifiable fragments: an Iron Age pit (AL202); and an early Roman ditch (AL205) and posthole (AL207).

One sample produced a few uncharred and unidentifiable seeds. These are probably intrusive; rootlets were present in virtually all the flots.

20.2.2 Site 3

Eighteen samples were assessed from Site 3. Half of these were taken from early/middle Iron Age deposits, with four taken from early Roman deposits and the other five from late Roman ones.

Charred cereal grains were noted in six samples. Moderate numbers were present in two of these (<3001> and <3002>) from the late Roman ditches AL306. The other four, two each from early/middle Iron Age and late Roman features, yielded only occasional grains and fragments. The easily recognisable grains were all wheat, including the hulled cereals emmer and/or spelt.

Four flots contained charred cereal chaff, including one rich and one moderately rich assemblage from the late Roman ditches AL306 (<3000> and <3001>). There were a few chaff fragments in two other samples from early/middle Iron Age and late Roman deposits. The cereal chaff was made up entirely of hulled wheat glume bases, including spelt. Occasional charred seeds of weeds/wild plants were noted in only the two flots that produced the rich chaff assemblages. Easily identifiable seeds were dock and vetch/tare/vetchling.

Small amounts of fragmented charcoal were present in virtually all the samples, with occasional potentially identifiable fragments in four of the flots. Two (<3007> and <3014>) were from an early/middle Iron Age ditch (AL301), and two (<3000> and <3001>) were from late Roman ditches (AL306).

Occasional waterlogged seeds were noted in five samples, including goosefoots/oraches (*Chenopodium/Atriplex* spp.), brambles (*Rubus* spp.) and blinks (*Montia fontana*), whilst a hexaploid wheat (*Triticum aestivum*) rachis fragment was identified in another sample. This material is probably intrusive; rootlets were present in virtually all the flots.

20.2.3 Site 4

Four samples were assessed for charred plant remains from Site 4. Two samples were taken from Roman postholes (AL402), the other two from the late post-medieval/modern moat (AL404).

The only type of charred plant remains in these samples was charcoal. The samples mostly contained just occasional flecks, with the exception of sample <4003> from the late post-medieval/modern moat (AL404), which included identifiable charcoal fragments. It also produced a rich 'waterlogged' plant assemblage, with a high item frequency and species diversity of fruits and seeds indicative of an aquatic and bankside/marshland habitat. This material, however, may be of very recent origin.

20.2.4 Site 5

Forty-four samples were assessed for charred plant remains from Site 5. Thirty-four of these were taken from late Roman deposits, with nine from deposits dated to the middle Roman period and one whose date within the Roman period has not yet been refined.

Charred cereal grains were present in fourteen flots, with one rich assemblage (sample <5000>) from a pit in AL510. A ditch and another pit from AL510 also produced moderate grain numbers (samples <5016> and <5040>). The grains were mainly wheat, including hulled cereals of spelt and emmer/spelt. There were also barley grains noted in a few samples. Preservation of the charred grains, including those in the richer assemblages, was not particularly good, and there were many grain fragments.

Nine flots contained charred cereal chaff, with two rich assemblages (samples <5000> and <5014) from a pit in AL510 and a ditch in AL504, and two fairly rich chaff assemblages (samples <5016> and <5037) from a ditch and another ditch in AL510. The cereal chaff was entirely from hulled wheat, with emmer/spelt glume bases and occasional rachis fragments.

Charred seeds of weeds/wild plants were present in twelve of the flots, with two rich assemblages (samples <5008> and <5035>) coming from ditches in AL504 and AL506. Moderately rich weed seed assemblages were recovered from two other flots (samples <5000> and <5016>) from pits in AL10.

The species diversity of the weed seeds was not particularly high, but included potential arable weeds: dock, knotgrass (*Polygonum aviculare*), black bindweed (*Fallopia convolvulus*), goosefoots/oraches, poppy (*Papaver* spp.), vetch/tare/vetchling/pea (*Vicia/Lathyrus/Pisum* spp.), medick/trefoil (*Medicago/Trifolium* spp.), ribwort (*Plantago lanceolata*), 'buttercup' and grasses including brome (*Bromus* sp.).

Small amounts of fragmented charcoal were noted in forty of the forty-four flots. Six of them (<5008>, <5016>, <5020>, <5024>, <5030> and <5035>) contained potentially identifiable fragments, and came from a range of feature types in AL504, AL505, AL506, AL507, AL509 and AL510.

Waterlogged plant remains were present in nearly half of the samples, with nineteen containing seeds and fruits. These were mostly represented by occasional seeds of goosefoots/oraches, though four samples (<5018>, <5020>, <5022> and <5024>) from the quarry (AL505), a water pit (AL507) and a cesspit (AL510) yielded rich assemblages. Two further samples (<5010 and <5019>) produced moderately rich seed numbers, one from the quarry and the other from a ditch (AL504).

The rich waterlogged assemblages contained a high species diversity of wetland (aquatic and bankside/marshland) species, particularly duckweed and crowfoots, plus horned pondweed (*Zanichellia palustris*), sedges and rushes (*Juncus* spp.). There was a shrub/disturbed ground element in sample <5024> from the quarry (AL505).

There were small amounts of very fragmented wood in ten of the flots, while rootlets were present in virtually all the samples. It is likely that some of the waterlogged material is intrusive, though it is also likely that at least some of the richest assemblages may be contemporary.

20.2.5 Site 7

Forty-four samples were assessed for charred plant remains from Site 7. All the samples were taken from early/middle Iron Age deposits.

Charred cereal grains was noted in twelve samples, though only two flots (samples <7015> and <7027>) from the enclosure ditches in AL706 and AL707 produced moderate numbers of grains. The grains consisted of a mix of

barley (including six-row hulled barley (*Hordeum vulgare*)) and wheat, the latter including spelt and emmer/spelt.

Only one sample (<7029>) from the enclosure ditch in AL707 contained any charred cereal chaff, with occasional hulled wheat glume bases. There were very few charred seeds of weeds/wild plants in any of the flots; six samples contained occasional seeds, which were mainly of grasses, including brome.

Fragmented wood charcoal was present in all the flots, albeit in relatively small quantities. There were possible identifiable fragments in eleven samples (<7000>, <7003>, <7006>, <7007>, <7008>, <7009>, <7012>, <7015>, <7019>, <7022> and <7033>), taken from ditches and pits in AL706, AL707, AL708 and AL713.

Very few waterlogged plant remains were present in these samples. There were small numbers of seeds and fruits in just six flots, including wetland (aquatic and bankside/marshland) species such as duckweed, crowfoots, and water plantain (*Alisma* spp.), and waste/disturbed ground plants such as brambles and nettles (*Urtica* spp.). There were also occasional wood fragments in two of the flots, with rootlets present in virtually all the samples. It is probable that at least some of this material is intrusive.

20.2.6 Site 8

Six samples were assessed for charred plant remains from Site 8. All the samples were taken from early/middle Iron Age pits.

Two flots contained charred cereal grains, with one (<8004>) producing a moderate number of grains, including barley and wheat/barley. The other sample (<8005>) produced the only cereal chaff from this site, with a few hulled wheat glume bases. No charred seeds of weeds/wild plants were noted in any of the flots.

Small amounts of fragmented charcoal were present in all six samples, with possible identifiable fragments in three (<8003>, <8004> and <8005>).

A few waterlogged seeds of goosefoots/oraches were noted in two flots, but these are probably intrusive; rootlets were present in virtually all the flots.

20.3 Bibliography

Berggren, G. 1981, *Atlas of seeds and small fruits of North-west European plant species. Part 3 Saliceaea-Cruciferae.* Stockholm

Beijerinck, W. 1947, *Zadenatlas der Nederlansche Flora* I-II. Veenman and Zonen Wageningen.

Hillman, G., 1981, 'Reconstructing crop husbandry practices from charred remains of crops', in Mercer, R. (ed) *Farming practice in British Prehistory*, Edinburgh University Press, 123-162

Hillman, G., 1984, 'Interpretation of archaeological plant remains: The application of ethnographic models from Turkey', in van Zeist, W. and Casparie, W. A. (eds) *Plants and Ancient Man. Studies in Palaeoethnobotany*. Rotterdam, 1-41.

21. APPENDIX 21: GEOARCHAEOLOGICAL SURVEY AND POLLEN

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21.1 Methodology

Two transects, each of 5 auger-holes, were drilled across the valley bottom on Site 7 (Figure 1). One transect (Figure 2) was placed across the main channel which was aligned north-east to south-west down the slope; the other (Figure 3) was placed longitudinally across a tributary channel, which was aligned roughly south-east to north-west into the main channel.

The auger holes were drilled with a hand held, petrol driven, Cobra pneumatic power auger fitted with various diameter window sampling bits.

The deposits brought up in each window sampler were cleaned and described according to standard geoarchaeological practice, which attempts to characterise the visible properties of each deposit, in particular relating to its colour, compaction, texture, structure, bedding, inclusions, clast-size and dip. A provisional on-site interpretation of each deposit was made.

For each profile, every distinct unit was given a separate number (eg: for AH 1: 1.1, 1.2 etc from the top down) and the depth and nature of the contacts between adjacent distinct units were noted.

A number of small grab samples were taken throughout AH 3, which could provide material suitable for microfossil analysis.

The end points of the auger-hole transects were surveyed onto the OS grid with GPS, with levels at metres OD taken at the top of each auger hole. The stratigraphy recorded in each auger-hole was compared along each transect. Similar units occurring in several auger-holes were allocated to a range of 'deposits', which represent a sequence of different depositional and post-depositional environments. These deposits are used as an aid to interpreting and presenting the data and discussing the results. The distribution of these transect-wide deposits is illustrated in Figures 2 and 3.

21.2 Results

The deposits recorded in the auger-hole transects are discussed in this section in roughly stratigraphic order, from the oldest to the most recent. The units recorded within each auger-hole are discussed with reference to the transect-wide deposits.

21.2.1 Deposit 1a/1b: Boulder Clay

The Pleistocene deposits on the site, which were recorded within all the auger holes, consisted of a very firm, mid grey boulder clay, with frequent rounded calcareous inclusions (Deposit 1a). Boulder clay, which is often referred to as till, is formed through the action of glacial ice sheets grinding up and redepositing the underlying material. The chalky clasts derived from the

underlying eroded Cretaceous chalk deposits, but other, much further travelled lithologies also occur. The boulder clay in this part of Cambridgeshire is likely to date to The Anglian Glaciation, which reached its height around 500Ka BP.

The upper 0.2-0.4m of the boulder clay was weathered (Deposit 1b). It had similar characteristics to the undisturbed boulder clay, but contained oxidised (decalcified) light orangey brown iron-stained patches within it. The oxidised/decalcified nature of the upper boulder clay results from the exposure of the deposit to the elements during the Pleistocene period, when harsh periglacial conditions weathered the upper part. Bioturbation during the Holocene period would also have contributed to the weathering processes.

21.2.2 Deposit 2: Colluvial deposit.

This deposit was only recorded within AH 2 (Unit 2.2), and consisted of firm, mottled light grey/mid brown clay, with occasional chalky inclusions. The deposit was 0.15m thick and occurred at 49.83m OD. The deposit was very similar in appearance to the upper weathered boulder clay. However, the deposit was generally less compact, and slightly browner in colour.

The unit is likely to have derived from boulder clay that was eroded from upslope and deposited through colluvial action. However, as colluvial processes are likely to have included the action of water runoff down slope, it is difficult to distinguish between alluvial and colluvial sedimentation.

Early Holocene soils may also have started to form within this deposit. A similar deposit to this (AL703) was observed elsewhere across the site, overlying the weathered part of the boulder clay.

21.2.3 Deposit 3: Enclosure ditch fills (AL706)

These deposits were only recorded within AH 1, where the auger-hole the fills of an enclosure ditch (AG706.01). The deposit was composed of three fills (Units 1.1, 1.2 and 1.3).

The uppermost fill (Unit 1.1) consisted of 0.28m thick mid to dark greyish brown, slightly silty clay, occurring on the surface at 50.21m OD. The fill probably derived from humic topsoil material washing into the ditch, combined with some dumping of organic and domestic material. Fragments of daub and charcoal were also visible within the sediment. A lower, more compact part to this deposit (Unit 1.2) was 0.22m thick.

The primary fill of the ditch (Unit 1.3) consisted of firm, light greyish brown clay, with some iron-stained flecking, and occasional mollusc and charcoal flecks. The unit occurred at 49.71m OD, and was 0.3m thick. It was similar in characteristics to the underlying boulder clay and the colluvium recorded in AH 2, which suggests that it derived primarily from the natural deposits on site, rather than by deliberate infilling of domestic and waste material.

The fine clays may represent erosion of the natural boulder clay from the cut edges. It is also possible that some of unit 1.3 may have formed in standing

water. The heavy clays, through which the ditch was cut, are certainly impermeable enough to retain rainwater running off the higher ground. However, the ditch is likely to have undergone drier episodes, as indicated by the iron-stained oxidised patches visible in the sediment. This probably occurred during the summer months when the trapped pools of standing water within the ditch evaporated under warm conditions.

21.2.4 Deposit 4: Alluvial clays infilling channel

This deposit relates to the main channel (AG704.01), which was aligned north-east to south-west across the site. It was characterised by a series of fine-grained minerogenic deposits, infilling the course of the channel and flooding the adjacent areas.

Within AH 2, 4 and 5 (Units 2.1, 4.2 and 5.1), the alluvial deposits consisted predominantly of soft, mid tan brown clay. The deposit was up to 1.3m thick and occurred at 50.4m OD (within AH 4). The unit was generally very fine in appearance with few inclusions, although occasional small rounded chalky clasts were visible within the lower 0.3m of unit 4.2.

This browner alluvial deposit only appeared on the periphery of the channel edges, and appears to delimit areas of overbank flooding adjacent to the main channel course. The deposit is likely to have derived from the heavy clay subsoils, and boulder clay from further upslope. Slope erosion, and the effects of water runoff down the slope, carried this material into the main course of the channel. Overbank flooding then deposited the clays in a fan, under standing water conditions, following the initial runoff and stream discharge.

The fine nature of the sediment suggests the channel flowed sluggishly, with still or standing water at the margins of the main thread of the stream, which would have had insufficient energy to carry coarser grained sediments. The light brown colour of the sediment suggests the flooding would have been ephemeral and intermittent, allowing areas adjacent to the channel to dry out and oxidise the flood sediments.

Flooding appears to have occurred mainly on the western side of the channel, where there were thick oxidised deposits of alluvium. The alluvium on the east of the channel in AH 2 was only 0.4m thick, in contrast to the 1.3m thickness recorded to the west. More significantly, a deposit of colluvium (Deposit 2) existed below this alluvium, suggesting that colluvial deposition continued relatively undisturbed on the eastern side of the channel for a period of time.

Very little lateral variation was observed within the alluvial deposits, and episodes of deposition, whether from down-valley flow or as inputs from the valley sides, are difficult to distinguish from one another. This is compounded by the fact that the processes and source material upstream and up the valley side, both at any one time and through time, are likely to have been similar. Inputs of colluvial material into the sedimentation processes are likely to have become mixed up or masked within the alluvium, particularly as any input of

chalk clasts from the eroded boulder clay (which appears to distinguish the colluvium from the alluvium) may have gradually dissolved in solution.

Within AH3, an alluvial unit was noted that was distinctly different to the brown oxidised alluvial deposits. This unit (3.4), which consisted of a soft, slightly silty, mid grey clay, with occasional small rounded chalky clasts, occurred at 49.61m OD and was up to 0.9m thick. It was also recorded within AH 10 (Unit 10.2), where it was 0.6m thick and occurred at 48.93m OD. This deposit occurred where the channel appeared to be deepest, at around 1.75m.

The greyer, gleyed appearance of these clays suggests they were deposited under predominantly waterlogged conditions, with little opportunity for the deposits to become dry and oxidised. They therefore represent the main part of the channel, where permanently waterlogged conditions are most likely to have existed. One abraded fragment of late pre-Belgic pottery was recovered from this unit in AH3 at around 49.11m OD.

The upper part of the alluvium in AH 3 was oxidised, and the modern topsoil and subsoil had developed in it. The oxidation and soil development may have followed the culverting of the stream, or could represent an earlier period of channel migration.

21.2.5 Deposit 5: Alluvial clays infilling tributary channel

This deposit relates to the alluvial deposits infilling a tributary channel (AG704.02), which was aligned roughly south-east to north-west into the main channel. This deposit occurred in AH 6, 7, 8 and 9, and consisted of a predominantly soft, mid tan brown clay with very few inclusions, other than very occasional small rounded chalky clasts. The deposit generally became thicker towards the north-west. In AH 6 it occurred at 50.06 m OD and was 0.2m thick, whilst in AH 9 it occurred at 49.69m OD and was 0.35m thick.

The deposit was very similar to the oxidised alluvial deposits recorded within the main channel. These units would have been deposited under sluggish flow conditions, perhaps in isolated pools of water as episodic runoff abated. The channel is likely to have been ephemeral, becoming mainly active during the wetter winter months when water runoff from further up the slope would have found a route of flow into the dip created by the channel. During the summer months, it is likely that all sign of this ephemeral channel would have disappeared, leaving a dried out channel bed, with isolated waterlogged hollows remaining in some places.

21.2.6 Deposit 6: Modern ploughsoil

The ploughsoil consisted of firm, mid to dark greyish brown, slightly humic clay, with moderate quantities of brick rubble, occurring at roughly 50.7m OD and up to 0.3m thick. It was only recorded within AH 3 and AH 4.

21.3 Conclusions

It is clear that the channels would not have been substantial in terms of size or flow rate, except perhaps following rainstorms. The alluvial deposits are

characterised by oxidised clays deposited in standing water during flooding events, which would subsequently have dried out. Only two deposits were indicative of a permanently waterlogged environment, which would explain why virtually no organic material was present within the in-channel deposits or alluvial clays. This suggests that both the channels were ephemeral, with water only present permanently in the deepest part of the main channel.

There was very little evidence for migration of the main channel. Although this may be masked by the nature of the depositional / post-depositional processes and source material, it may reflect the compact nature of the boulder clay and the overlying alluvium / colluvium. Such deposits would have to be subject to rapid flow for erosion and channel migration to occur.

The course of the main channel appears to have been determined by a natural dip or 'valley' in the topography. For such a dip to occur, a substantial flow rate would have had to have been present to scour out the boulder clay. It is likely that the 'valley' was initially carved out during the Late Glacial period, when the rapidly warming conditions at the start of the Holocene would have melted the periglacial ice, leading to high runoff and a high flow rate.

For the channel to have provided a useful and constant source of water, a certain amount of management was probably required to maintain it, as large quantities of clay would have been carried in suspension, accumulating as the water flow subsided. However, it is unclear whether the Iron Age settlers did need to clean out the channel on a regular basis.

The alluvium occurred to a significantly greater depth on the western side of the channel than on the east. The Iron Age farmsteads were perhaps on the eastern side located to minimise the problems of flooding, while still being able to make use of pools of standing water. Pollen recovered from the deposits suggests that the farmsteads were situated in an open environment that was dominated by grasses.

21.4 Bibliography

English Heritage, 2002, *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation*

English Heritage, 2004, *Geoarchaeology: using earth sciences to understand the archaeological record*

Jones, A. P., Tucker, M. E., and Hart, J. H. 1999, *The description and analysis of Quaternary stratigraphic field sections.* Technical Guide No.7, Quaternary Research Association, London

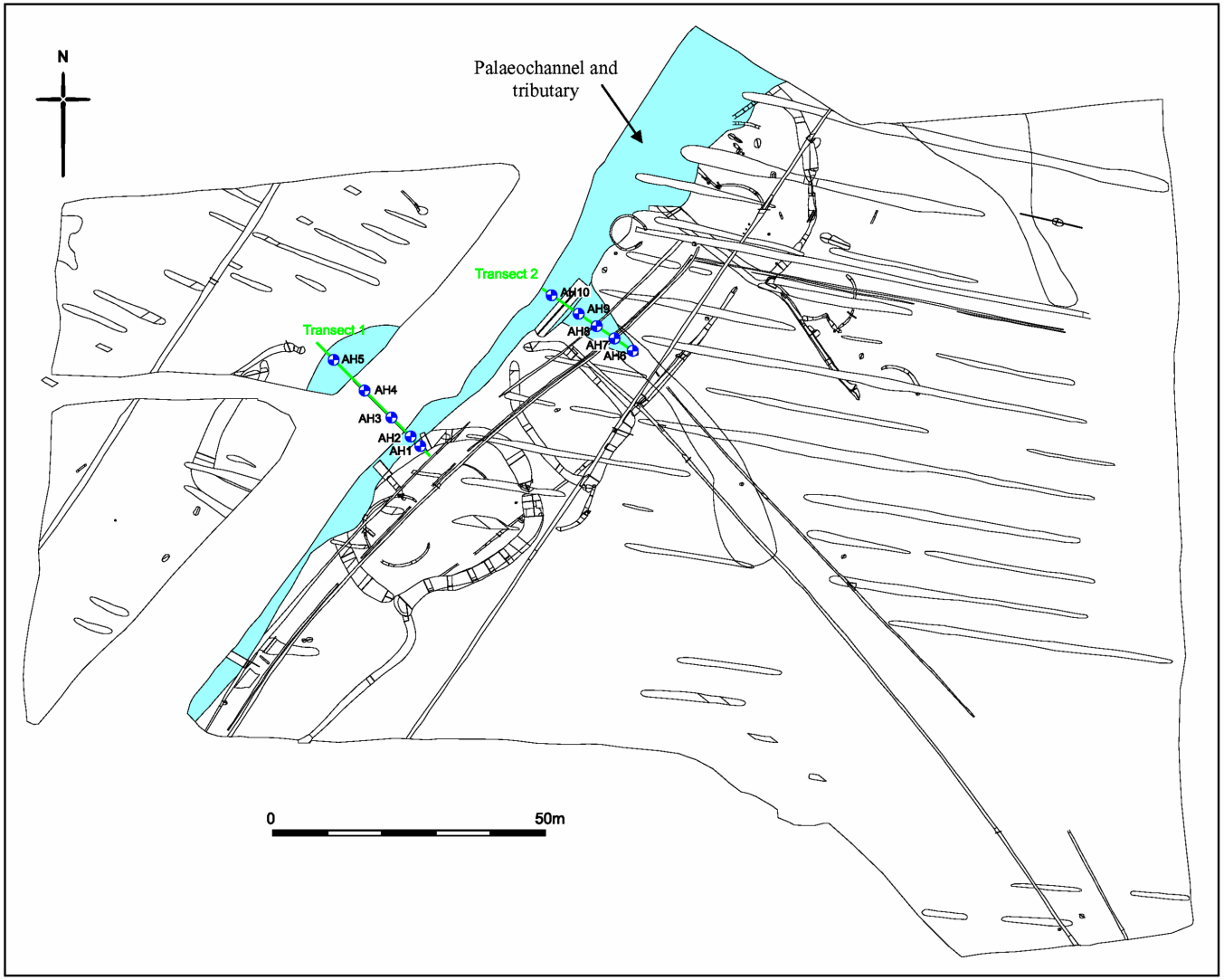

Figure 1: Location of auger transects, Site 7

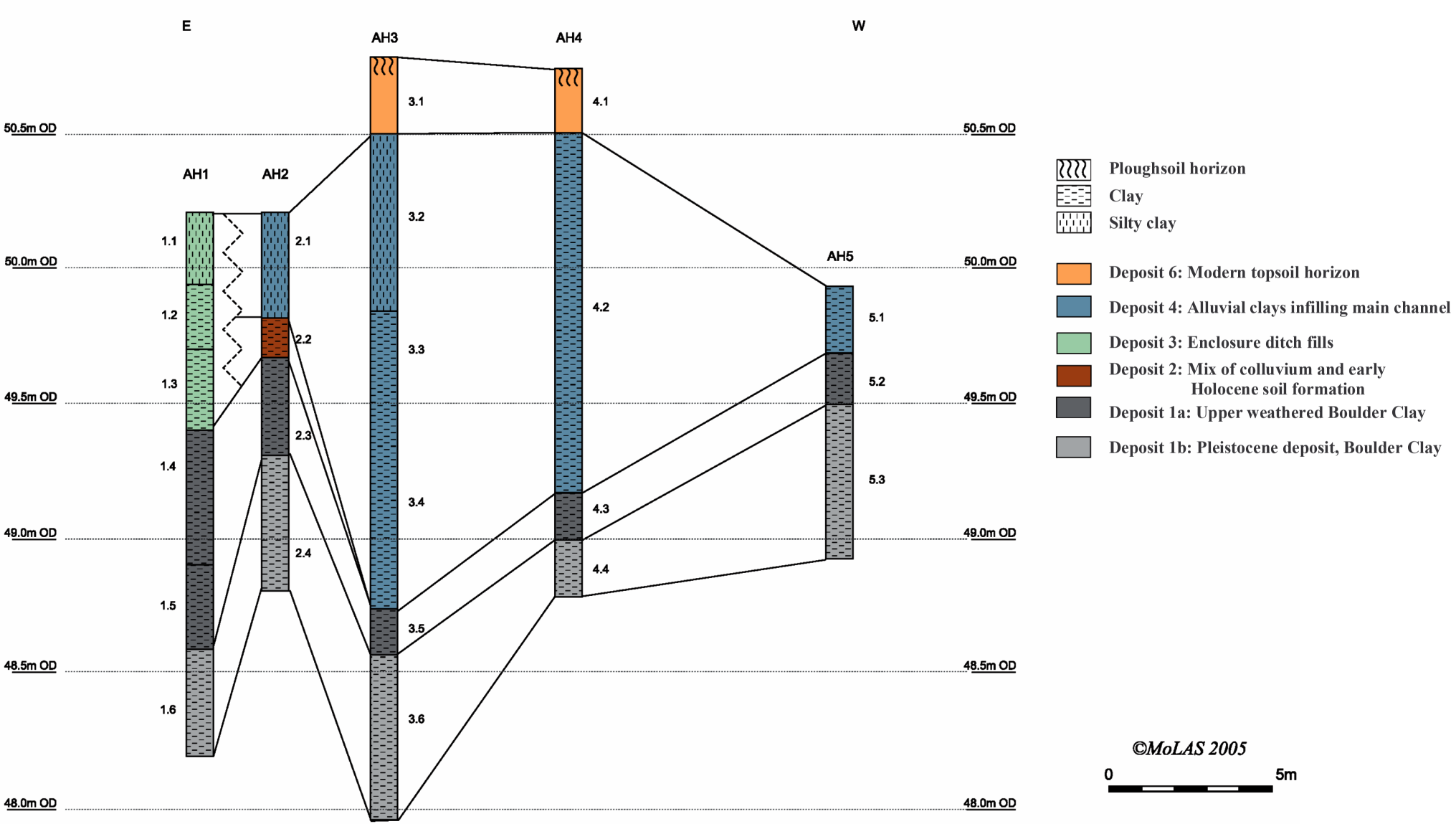

Figure 2: Southern transect across main channel (transect 1)

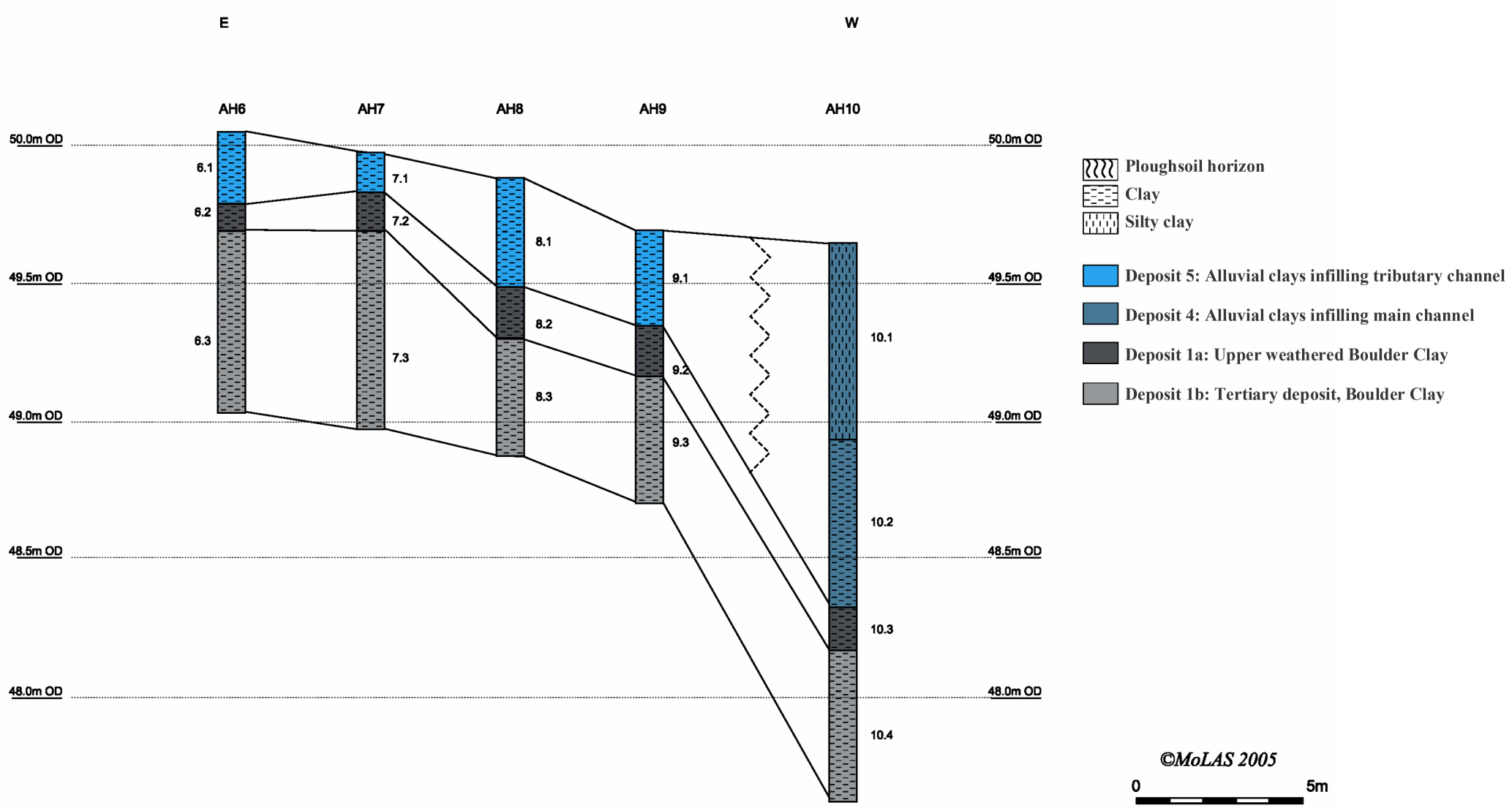

Figure 3: Northern transect along tributary channel (transect 2)

22. APPENDIX 22: MOLLUSCAN REMAINS

Alan Pipe, Museum of London Specialist Services

22.1 Assessment of molluscan assemblages

22.1.1 Site 2

This site produced ten valves of marine/estuarine mollusc, which were the common/flat oyster *Ostrea edulis*. The shells were in a moderate state of preservation with slight surface damage, and bore negligible encrusting marine growth.

Terrestrial and freshwater molluscs were recovered mainly from ditch and gully deposits, with smaller groups from pits and postholes. The deposits produced a total of approximately 195 snail shells, with no recovery of freshwater bivalve molluscs.

Terrestrial snails derived from two unidentified taxa (designated as unidentified terrestrial taxa 1 and 2), recovered as numerous small groups ranging mainly between 5 and 50 shells.

Freshwater snails derived from two unidentified taxa. One taxon provided the bulk of the assemblage, with the other present as only a few examples (these were respectively designated as unidentified freshwater taxa 1 and 3). They were recovered as individuals or occasional small groups, ranging mainly between 5 and 20 shells.

With the exception of two deposits from an Iron Age pit and a deposit from a middle Roman tree throw, all material derived from the early Roman period.

22.1.2 Site 3

This site produced nine valves of marine/estuarine bivalve mollusc, which were the common/flat oyster *Ostrea edulis*. The shells were in a moderate state of preservation with slight surface damage, and bore negligible encrusting marine growth.

Terrestrial and freshwater molluscs were recovered mainly from enclosure and ditch deposits. These deposits produced a total of approximately 261 snail shells, with no recovery of freshwater bivalve molluscs.

Terrestrial snails derived from four unidentified taxa (designated as unidentified terrestrial taxa 1, 2, 4 and 6), recovered as numerous small groups ranging mainly between 5 and 20 shells.

Freshwater snails derived from two unidentified taxa (designated as unidentified freshwater taxa 1 and 2); they were recovered as individuals or occasional small groups, ranging mainly between 5 and 10 shells.

The material derived mainly from middle and late Roman deposits, with a small number from the early/middle Iron Age.

22.1.3 Site 4

This site produced only freshwater snails, with just 5 shells recovered from the moat. They derived from a single taxon (designated as unidentified freshwater taxon 1), and were recovered in one group from a late post-medieval/modern deposit.

22.1.4 Site 5

This site produced small numbers of marine/estuarine mollusc shells, 19 of which were the valves of common/flat oyster *Ostrea edulis* and two of which were very fragmented valves of common mussel *Mytilus edulis*. The shells were in a moderate state of preservation with slight surface damage, and bore negligible encrusting marine growth.

Terrestrial and freshwater molluscs were recovered mainly from ditch and pit deposits. These deposits produced a total of approximately 1231 shells, the largest site group from the overall assemblage, with no recovery of freshwater bivalve molluscs.

Terrestrial snails derived from five unidentified taxa (designated as unidentified terrestrial taxa 1, 2, 3, 4 and 7), recovered as numerous small groups ranging mainly between 10 and 50 shells. There was also occasional recovery of grass snail *Vallonia sp.* and moss snail *Cochlicopa sp.*, which respectively are species of grassland, and damp, sheltered places.

Freshwater snails derived from four unidentified taxa (designated as unidentified freshwater taxa 1, 2, 3, and 4), recovered as numerous small groups ranging mainly between 5 and 50 shells.

Roughly a quarter of the material derived from deposits dated to the middle Roman period, with the remainder deriving from late Roman deposits.

22.1.5 Site 7

This site produced no marine/estuarine mollusc shells.

Terrestrial and freshwater molluscs were recovered mainly from enclosure and pit deposits. These deposits produced a total of approximately 584 shells, with no recovery of freshwater bivalve molluscs.

Terrestrial snails derived from six unidentified taxa (designated as unidentified terrestrial taxa 1, 2, 3, 4, 5 and 6), recovered as numerous small groups ranging mainly between 5 and 50 shells. There was also occasional recovery of grass snail *Vallonia sp.* and moss snail *Cochlicopa sp.*, which respectively are species of grassland, and damp, sheltered places.

Freshwater snails derived from two unidentified taxa (designated as unidentified freshwater taxa 1 and 2), recovered as very occasional small groups ranging mainly between 1 and 5 shells.

All the material derived from early/middle Iron Age deposits.

22.1.6 Site 8

This site produced no marine/estuarine mollusc shells, and no freshwater taxa.

Terrestrial molluscs were recovered mainly from pit deposits, which produced a total of only 22 shells. They derived from two unidentified taxa (designated as unidentified terrestrial taxa 1 and 4), recovered as very occasional small groups ranging between one and 10 shells.

The material derived from early/middle Iron Age deposits.

22.2 Bibliography

Cameron, R. A. D. and Redfern, M. 1976, *British land snails*. Linnean Society of London synopses of the British fauna no.*6*

Kerney, M. 1999, *Atlas of the land and freshwater molluscs of Britain and Ireland*

Macan, T. T. 1977, *A key to the British fresh- and brackish water gastropods*. Freshwater Biological Association scientific publication no. 13