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Bourne to Guthram Water Main
Archaeological Excavation

NGR: TF 11211 22088 – 11239 21909 – 11020 21865

Site Code: BGWM 07

Accession Number: 2007.109

Report for Anglian Water Services Ltd

by
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Summary

The archaeological excavation was undertaken ahead of the construction of a water main on land to the east of Dyke Village, north of Bourne. Analysis of aerial photographs, fieldwalking, geophysical survey and a desk-based assessment had suggested that the field in which the excavation was located had a high potential for the presence of Iron Age and/or Roman-British remains. In order to lessen the impact of the construction on the archaeological remains the route of the water mains, and therefore the excavation area, skirted the eastern and southern boundaries of the field. The excavation encountered evidence of prehistoric and Romano-British activity at the site. The limited assemblage of worked flint from the site suggests that it was used sporadically from the Mesolithic to Bronze Age, probably for hunting and perhaps grazing of animals later in the period. More intensive use of the site began during the early Roman period, probably in the later 1st century AD, when fencelines and a possible building were erected at the site, probably related to agricultural activity. During the 2nd century the land was reorganised and partitioned into small enclosures or fields, orientated approximately E-W to form a brickwork pattern. The earlier buildings were also replaced, possibly by sill beam constructed buildings. By the late 2nd or early 3rd centuries the small enclosures and buildings had fallen into disuse and been filled in and the area had been partitioned by a series of NE-SW orientated ditches which most likely formed much larger enclosures than the earlier enclosures. No significant remains were encountered which post-dated the 3rd century.

Introduction

Lindsey Archaeological Services was commissioned by Anglian Water Services Ltd in August 2007 to undertake an archaeological excavation along part of the route of a new water main. The new main linked Bourne Water Treatment Works with the Guthram Booster Works and the excavation area was located close to the village of Dyke (Fig. 1). The work was carried out in accordance with the Project Design (August 2007) and general requirements set out in *Lincolnshire Archaeological Handbook* published by the Archaeology Section, Lincolnshire County Council (1998). Work commenced August 6th 2007 and was completed on 3rd September 2007 under the site direction of Gavin Glover.

Site Location and Description

The excavation is located along the line of a new water main linking Bourne Water Treatment Works with the Guthram Booster Works. The water main route starts from the Bourne Water Treatment Works and runs east along Manning Road where it crosses the Car Dyke, then turns northward along

a disused railway line before turning east along the southern boundary of housing on the south side of Mill Drove and then north to Dyke village. Here it turns east, crossing farmland as far as the Guthram Booster at the side of the A151.

The excavation area was along part of the route which passes close to Dyke village. The excavation field is bounded by Dyke Drove to the north and Meadow Drove to the west. The excavation area itself formed an L-shape, measuring approximately 170m E-W x 175m N-S and 10m wide. Prior to the excavation, the area had been part of an, fairly level, open field given over to crop, lying at approximately 3 - 3.50m OD.

Planning Background

The excavation was undertaken ahead of the construction by Anglian Water of a water main linking the Bourne Water Treatment Works with the Guthram Booster Works. The excavation formed the third stage of a programme of archaeological mitigation works, which had included a desk-based assessment and a programme of geophysical survey (both BGWM 06).

Archaeological Background

Bourne lies on the edge of the fenland and numerous archaeological finds and settlement remains have been reported from the vicinity. The Roman Car Dyke canal runs east of the town centre and a Roman road (King Street) passes through the town centre.

Neolithic and Bronze Age flints have been found near the town, and a major Iron Age settlement at Mill Drove has been investigated, to the south of the excavation area. Roman occupation is known at several locations including Mill Drove, to the north of the Iron Age site, and Roman pottery kilns have been found close to the Car Dyke. The route also crosses the line of the Bourne-Morton Roman canal.

Geophysical survey of the specified section of the route east of Spinney Farm identified possible enclosures which could be associated with Romano-British remains recorded during installation of an earlier water main at the site. This crossed the field diagonally and on the basis of these results the present water main route was altered to run along the eastern and southern boundaries of the field, hoping to avoid the majority of archaeological remains.

Aims and Objectives

The purpose of the excavation was to record any archaeological remains present at the excavation area as groundworks associated with the construction of the water main are likely to destroy any remains present.

Methodology

A 360° mechanical excavator fitted with a wide blade, toothless dyking bucket was used to remove topsoil and overburden down to the highest significant archaeological level or to the top of natural deposits. Spoil was mounded to the side of the excavation, away from the working area. All machine excavation was undertaken under the supervision of an experienced archaeologist. Archaeological recording was carried out by a team of 6 experienced archaeologists, including a Site Director. A full written (single context) and photographic record was made of the site, including site plans at a scale of 1:50 and 1:20, along with sections at 1:20 and 1:10.

The excavation area was hand-cleaned where necessary to reveal features in plan and carefully selected cross-sections through the features were excavated to enable sufficient information about form, development date and stratigraphic relationships to be recorded.

Two temporary bench marks, 4.24m OD and 3.09m OD, were established at the site from a bench mark give of 4.24m OD located on a sluice gate adjacent to the northern edge of the site on Dyke Drove.

Results

Natural Deposits

The earliest deposit encountered at the site comprised compact limestone brash, **467**, which became progressively more sandy towards the southern end of the site. It was revealed between 3.05m OD towards the northern end of the site and 2.40m OD at the southeastern end of the site

Phase 1: Prehistoric

A series of alluvial layers, **103, 203, 295, 300 – 309, 316, 326** and **331** extended across much of the northern half of the site. Despite isolated animal or root disturbance, such as root boles **294** and **297** (with associated fills, **293** and **294**) the alluvial deposits were largely undisturbed. Layer **103** produced a serrated flint blade with Late Mesolithic/Early Neolithic characteristics, along with a flint flake more characteristic of late Neolithic/early Bronze Age technologies. An early Neolithic flint core was recovered from layer **326**. It is suggested that all of the alluvial layers assigned to this phase originated during a broad period of intermittent prehistoric activity at the site, dating from the Mesolithic through to the Bronze Age. The alluvial layers may represent fluctuations in the extent of the ancient marsh in this area, which is likely to have been a focus for hunting and wildfowling.

Phase 2: Late 1st -2nd Century AD activity

Features and deposits assigned to this phase were located solely in the northern half of the excavation area.

Fenceline 1

Posthole	Fill	Posthole	Fill
127	126	141	140
129	128	394	393
131	130, 343	396	395

Table 1. Fenceline 1

A series of postholes, **127**, **129**, **131**, **141**, **394** and **396** formed an approximately NE-SW orientated alignment, extending across part of the northern half of the site. The fills of the postholes, summarised in the table above, were broadly similar, generally comprising of dark silty clays. A sherd of pottery dating from the late 1st - 2nd century AD was recovered from fill **128** and a second sherd, with a wider, general Roman date, was recovered from fill **130**. It is suggested that the postholes most likely mark the line of a fence or similar boundary marker.

A curvilinear gully **384** was encountered adjacent to the fenceline. It was orientated N-S turning eastwards at its southern end and measured 4.70m in length x 0.45m wide x 0.18m deep. The gully contained a single fill, **383**, which was similar to the nearby postholes of the fenceline and produced a single sherd of Roman pottery. The gully had been cut by an elongated pit, **139**, containing a greyish brown silty clay fill, **138** which produced no dateable evidence. The function of the gully and pit are uncertain, but given their proximity to the fenceline it is possible that they are related to it.

Structure 1 posthole group

Posthole	Fill	Posthole	Fill	Posthole	Fill	Posthole	Fill
115	114	345	344	378=368	377=367	392	391
119	415, 414, 118	355	354	380	379	398	397
121	120	357	356	386	385	410	409
137	136	359	358	388	387	417	416
321	320	376	375	390	389		

Table 2. Structure 1 posthole group

Nineteen small pits, possibly postholes, summarised in the Table 2, were encountered at the northern visible extent of fenceline 1, some partially truncated by ditches and gullies assigned to Phase 3. The postholes contained broadly similar fills, generally comprising dark silty clays, which were similar to those contained within the postholes which formed Fenceline 1. Two deposits, fills, **415** and **118** of posthole **119** produced a total of 11 sherds of pottery dated to the late 1st - 2nd century whilst fills **354**, **356**, **367=377** and **385** produced small quantities of pottery of a general Roman date. Given the number of possible postholes it seems likely that a post-built structure stood in this area of the site, possibly during the late 1st - 2nd century and probably contemporary with fenceline 1. Insufficient evidence was available within the confines of the excavation area to fully ascertain the form of the structure, however, it seems reasonable to tentatively propose that a building had stood at this point. Whether the building would have been related to habitation or was non-domestic in nature is uncertain.

Loose pit group

Pit	Fill	Pit	Fill	Pit	Fill
159	158	310	311, 312, 313	336	335, 342
163	162	314	315, 329, 330	338	337
165	164	323	322	360	318, 349, 348
299	298	328	327	364	361, 362, 363

Table 3. Loose pit group

A loose group of pits, summarised above, was encountered towards the junction of the E-W and N-S orientated arms of the excavation area. No well dated material was recovered from the pits. However, they have been assigned to the same phase of activity as the posthole group as they form a relatively tight spatial group and pits **299** and **310** had been truncated by ditches assigned to Phases 4 and 3 respectively. The pits represent a collection of heavily truncated postholes and pits although no structural function was evident amongst the group.

Possible 4-post structure and possible storage pit

Posthole/pit	Fill
169	168
175	174, 350, 351, 352, 353
177	176
179	178
366	365

Table 4. Possible 4-post structure and possible storage pit

To the south of the loose pit group three further pits, **169**, **177** and **179** (**169** being the recut of an earlier posthole **366**) formed three corners of what is likely to have been a rectangular structure defined by four posts. The fourth corner of the structure had been truncated by Phase 4 ditch **181=187**. The siting of the postholes suggests that the structure would have measured 5m x 3.6m and was aligned NW-SE.

A substantial pit, **175**, was encountered adjacent to the northeastern side of the structure. It measured 1.81m x 1.53m x 0.71m deep. It had steep sides and a flat base and contained 5 fills, **174**, **350-353**. Roman pottery recovered was fill, **352** but could not be more closely dated. An environmental sample was taken of the primary fill, **353**, (Appendix **) but the only identifiable remains most likely represent intrusive material within the deposit. A second sample was taken from fill, **352**, but produced no environmental indicators or evidence of industrial activity such as hammerscale. The function of the pit is uncertain. Although relatively deep in the context of other features at the site it seems unlikely that it would have functioned as a well, and it is perhaps more likely that it was a waste or storage pit for perishable goods the evidence of which has not survived.

Four irregular pits, **370**, **382**, **402** and **408**, containing fills, **371**, **381**, **401** and **407** respectively were encountered to the west of the four post structure. They have been assigned to this phase of activity due to their similarity to other pits in this phase but could conceivably be assigned to any phase. The pits were largely ephemeral, did not contain any dateable evidence and are of little interpretative value

beyond suggesting that some form of activity took place in this area of the site.

A sinuous ditch, **189**, extended across the site amongst the irregular pits. It contained a single fill **188**, but produced no dating evidence. Two further ditches, or possibly elongated pits, **372** and **400**, partially extended into the excavation area, close to ditch **189**. Little of either ditch or pit was visible as both terminated within the excavation area. The fills of the features, **371** and **399**, did not contain any dateable evidence and the function of both features is uncertain.

Phase 3: 2nd Century AD activity

Possible building and land division

Ditch/Gully	Orientation	Fill	Ditch/Gully	Orientation	Fill
109	E-W	339, 108	204	E-W	206, 205
113=412	E-W	112, 411	341	N-S	340
117	E-W	200, 116	374	N-S	373
125	E-W	124	432=434	E-W	431, 433, 440, 441
198	N-S	199, 201, 202, 413			

Table 5. Possible building and land division

A group of ditches or gullies, summarised above, were encountered towards the northern limit of the excavation, truncated by features assigned to Phases 4 and 5. The ditches formed two distinct sub-groups, with the limited stratigraphic evidence suggesting that ditches **109**, **117**, **125** and **204** probably represented a later sub-phase than ditches **113=412**, **198**, **341**, **374** and **432=434**.

The earlier ditches measured between 0.85m and 0.34m wide and may represent the foundation trenches of a building constructed with sill beam foundations. A small assemblage of pottery, consisting of 22 sherds, was recovered from fill **112** of ditch **113** and has been dated to the 2nd century AD.

The later ditches, which measured an average of 1.50m wide are less likely to have been the foundation slots for sill beams and are perhaps more likely to represent plot boundaries which respect the alignments of the earlier building. Pottery recovered from fills **108** and **116** of ditches **109** and **117** respectively suggest that the ditches were backfilled or silted up during the later 2nd century. It seems likely that both the building and the boundary ditches are of 2nd century date, however, given the limited scale of the pottery assemblage it is possible that the building was for agricultural use rather than for habitation.

To the south of this group of ditches, a further E-W orientated ditch, **204** extended across the site. The ditch measured 1.33m wide x 0.38m deep and contained two fills, **206** and **205**. It was located approximately 36m to the south of the main group of ditches, but, given its size and orientation it seems likely that it is related to the later ditches in that group and therefore may be a further plot boundary.

A NE-SW orientated ditch, **149**, was encountered approximately 20m to the south of ditch **204**. The ditch measured 0.84m wide x 0.21m deep and contained 2 fills, **148** and **319**, which most likely represent the same deposit. Two sherds of 1-2nd century AD pottery were recovered from fill, **148** and it is suggested that the ditch was probably of 2nd century origin. As a result of the linear nature of the excavation area it was not possible to investigate the relationship of the ditch with the group of ditches to the north, however the limited dating evidence available suggests that there is a possibility that they were contemporary. A second NE-SW orientated ditch, **422=256**, was encountered in the E-W arm of the excavation. It measured 2.90m wide x 0.30m deep and contained fills **421**, **420**, **419** and **257**. The alignment and location of the ditch suggests that it represents a continuation of ditch **149** which in turn suggests that it measured in excess of 140m in length and probably represents either a land boundary or drainage ditch.

A heavily truncated, N-S orientated ditch, **443** was encountered approximately 20m to the east of ditch **422=256**. Its surviving remains measured 0.50m wide x 0.20m deep and it contained 2 fills, **460** and **442**. A second N-S orientated ditch, **445**, truncated ditch **443** and probably represents a recut of the earlier feature. It measured 1m wide x 0.50m deep and contained 3 fills, **462**, **461** and **444**, none of which produced any finds. A further N-S orientated ditch, **232**, truncated ditch **445**. The ditch probably represents a final recut of the same boundary. It measured 1.70m wide x 0.40m deep and contained 4 fills, **459**, **233**, **458** and **465**. Fill **233** contained 2 sherds of 2nd century AD pottery. The successive recutting of the same boundary suggested by ditches **443**, **445** and **232** is probably the result of maintenance of the boundary, possibly due to regular clearing out of the ditch. The only finds recovered suggest that this may have been undertaken during the 2nd century AD.

The southern terminus of a N-S orientated ditch, **451**, was encountered adjacent to the eastern edge of the recut boundary. It measured 1.80m wide x 0.50m deep and contained a series of fills, **464**, **463**, **450**, **449**, **448** and **447** but produced no finds. The southern terminus of a second ditch, **455**, truncated the western edge of ditch **451**. It was substantially smaller than ditch **451**, measuring 0.50m wide x 0.20m deep and contained a single fill, **454**. No finds were recovered from any of the fills from either of the ditches.

The two ditch terminal ends probably represent the northern edge of an entrance through a boundary. It is possible that the earlier boundary was defined by a ditch which was subsequently replaced by a fence or hedgeline. This might account for the substantially reduced dimensions of the later ditch, which marks the position of the fence or hedge rather than forming the physical boundary itself, unlike the more substantial earlier ditch.

The close proximity of the recut boundary and the boundary entrance suggests that it is unlikely that the boundary defined by ditches **443**, **445** and **232** and the boundary defined by ditches **451** and **455** were contemporary. The two groups of features may represent the phases of a single boundary, possibly maintained over a substantial period of time, the entrance of which was inserted or re-sited at

some point during its use. It was not possible, given the stratigraphic information available from the excavation area to suggest whether the continuous boundary pre-dated the entrance or *vice versa*.

A further N-S orientated ditch, **234**, was encountered approximately 6m to the east of ditches **451** and **455**. It measured 3.06m wide x 0.60m deep and contained 8 fills **424-430** and **235** but produced no finds. The ditch probably represents a boundary or drainage ditch and has been assigned to this phase of activity as it runs parallel to the other N-S orientated ditches. However, given the lack of finds from the feature it is possible that the ditch could be assigned to any of the phases of activity.

Phase 4: Mid 2nd – Early 3rd Century Activity

A substantial NE-SW orientated ditch, **111**, was encountered towards the northern limit of the site. It measured 2.60m wide x 0.65m deep and contained a single fill, **110**. Pottery recovered from the fill has been dated to the mid 2nd – mid 3rd century AD and it seems likely that the ditch was in use during the later part of this date range. A second NE-SW orientated ditch, **197**, was encountered in the E-W arm of the excavation. It measured 1.92m wide x 0.38m deep and contained 2 fills, **466** and **196**. The location and alignment of the ditch, along with evidence from aerial photographs, suggest that ditch **197** was a continuation of ditch **111** and formed a substantial linear land boundary.

A further ditch, **325**, was encountered to the south of ditch **111**, running parallel to it. It measured 2.10m wide x 0.12m deep and contained 3 fills, **324**, **292** and **150** which probably represent different elements of the same deposit. A second similar ditch, **193**, was encountered in the E-W arm of the excavation. It measured 2.25m wide x 0.35m deep and contained 3 fills, **418**, **423** and **192**. None of the fills from either ditch contained any finds. The location and alignments of the ditches suggests that they may represent the same feature, running parallel to the boundary represented by ditches **111** and **197** but approximately 35m from it.

A curvilinear ditch, **210**, truncated ditch **325**. It extended across the excavation area on an E-W orientation before turning towards the northeast at its eastern end. The ditch measured 0.90m wide x 0.21m deep and contained a single fill, **211**. The function of the ditch is uncertain and although it is included in this broad phase of activity it could equally have been assigned to a later phase.

A shallow, NE-SW orientated ditch, **153**, was encountered to the south of ditch **210**, running parallel to ditch **325**. It measured 2.15m wide x 0.28m deep and contained a single fill **152**. The northeastern end of the ditch may have been truncated away by modern ploughing as the feature did not appear to continue completely across the excavation area. The ditch may represent a further land boundary, similar to that established by ditch **325** or possibly a drainage ditch respecting the alignment of ditch **325**.

Close to the junction of the N-S and E-W arms of the excavation a ditch, **181=187** was encountered

which formed an L-shape in plan. It measured 1m wide x 0.18m deep and enclosed an area measuring 11.75m x 5m. The ditch contained a fill, 180=186, but produced no finds. The shape of the ditch in plan suggests that it may represent the surviving two sides of a rectangular enclosure possibly orientated NE-SW, respecting the alignment of the larger land boundaries assigned to this phase of activity.

A wide, shallow feature, 284 was encountered towards the western limit of the excavation area. It measured 5.5m wide x 0.12m deep and contained a single fill, 285. The feature may represent a wide, shallow ditch, although equally it may have been a natural depression within which deposit 285 had accumulated.

Phase 5: Modern

A number of features and deposits have been assigned to this phase of activity and are of modern origin. As a result of their low archaeological significance the features have not been described in detail. Thirty-one irregular features, 214-230, 236-246, 252, 254, 258, 260, 264-282, 288 and 290 (even numbers only) were interpreted as root or animal disturbance. A modern ditch, 436 and its fill, 439, were shown to be related to an earlier water main at the site and were sealed by a 0.10m thick subsoil layer, 102, and a 0.35m thick topsoil layer, 101.

Discussion

The excavation revealed 4 archaeologically significant phases of activity at the site, Phases 1-4. A further phase of activity, Phase 5, is of low archaeological significance.

The earliest activity most likely spans a considerable chronological period from the late Mesolithic through to the Early Bronze Age. The worked flint finds from the site suggest that the site saw sporadic visitations during the period but there were no archaeological features assigned to this early phase of activity and it seems more likely that the flints were the product of chance discard or disturbed surface scatters. During this period the site would have been sited at the margins of the Lincolnshire Marsh which are likely to have been rich in game and would therefore have been attractive to communities in the area which would still have been living an essentially hunter-gatherer lifestyle throughout much of this period. Later in the period the site may also have been used for grazing domesticated animals. A number of the sites around the marsh edge have produced small quantities of flintwork and probably were probably used in a similar way.

More substantial and structured use of the site began during Phase 2 and probably dates from the early 2nd century AD. The large number of pits and postholes present suggest that land divisions, probably fencelines, had been erected at the site during this period and it is possible that buildings were also constructed. Only a relatively small assemblage of pottery was recovered from features assigned to this phase, perhaps reflecting an agricultural rather than a domestic use of the site.

Later in the 2nd century the area was subdivided into a series of plots which probably formed an E-W aligned brickwork pattern of small enclosures. Buildings based on a sill beam construction method

may also have been constructed during this phase of activity (Phase 3) and their alignment may have formed the basis for the land enclosures.

By the early 3rd century (Phase 4) the site had changed been substantially altered again. The E-W orientated brickwork pattern of small enclosures had been abandoned and substantial boundary ditches orientated NE-SW had been constructed, possibly dividing the area into much larger blocks than the earlier enclosures. It is uncertain whether this represents a change in the type of agriculture or land usage practised at the site or reflects changes in ownership/tenancy. No significant features were encountered which post-dated this phase suggesting that the site may have been abandoned during the later 3rd century.

Activity at the site appears to have been largely continuous from the late 1st-2nd century AD to the 3rd century AD and although a small quantity of Iron Age briquetage was found at the excavation field during the Fenland Survey (Hayes and Lane 1992) no evidence of Iron Age activity was encountered during the excavation and it appears that the site had remained a marginal area on the fen edge throughout the Iron Age.

Conclusion

Archaeological remains survived at the site directly below the ploughsoil layer. The depth of a number of the remains suggest that a degree of horizontal truncation from ploughing had taken place and a similar degree of truncation should be expected across the field in which the excavation area was located and most likely within neighbouring fields. The ditches encountered suggest that the remains were part of a wider network of boundary ditches, likely to extend beyond the confines of the excavation area, an interpretation supported by the geophysical and aerial photograph evidence. As such, it is likely that any further development which impacts below the level of the ploughsoil within the excavation field and most likely the neighbouring fields would be likely to damage archaeological remains.

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Correspondence

Photographs: LAS film nos. 07/92, 07/93, 07/04, 07/95, 07/97, 07/98, 07/109, 07/113

Finds: 63 flints, 1 sherd Medieval pot, 349 sherds Roman pot, 4 frags CBM

Specialist reports

APPENDIX 1

Bourne - Guthram (BGWM 07) context list

Context	Type	Feature No	Phase	Description	Interpretation
100	-	100	-		Unstratified finds
101	Layer	101	5	Mid brown clayey silt, 0.35m thick (average)	Topsoil
102	Layer	102	5	Mid reddish brown clayey silt, up to 0.10m thick extending intermittently across the site	Subsoil
103	Layer	103	1	Mid grey silty clay, frequent light brown mottled patches	Alluvial material probably deposited at edge of prehistoric marsh
104	Fill	105	3	Mid to dark greyish brown with orange laminations clayey silt. 0.14m thick	Fill of pit 105
105	Cut	105	3	Sub-oval, concave sides and base, 1.18m x 0.80m x 0.14m deep	Pit
106	Fill	107	5	Mid to light greyish brown clayey silty sand	Fill of root bole 107
107	Cut	107	5	Sub-circular, irregular sides and base	Root bole
108	Fill	109	3	Mid to light greyish brown clayey silty sand, frequent charcoal flecks, 0.28m thick	Fill of ditch 109
109	Cut	109	3	Linear, steep sides, flat base, 1.50m wide x 0.40m deep	Possible boundary ditch
110	Fill	111	4	Mid to dark greyish brown silty clay, occasional limestone fragments, 0.65m thick	Fill of ditch 111
111	Cut	111	4	Linear, moderately steep sides, flat base, 2.60m wide x 0.65m deep, NE-SW orientated	Possible boundary ditch
112	Fill	113	3	Mid blueish grey silty clay, 0.07m thick	Fill of ditch 113
113	Cut	113	3	Linear, moderately steep sides, flat base, 0.32m wide x 0.07m deep	Boundary ditch?
114	Fill	115	2	Mid bluish grey silty clay, 0.15m thick	Fill of pit 115
115	Cut	115	2	Sub-oval, 1.35m x 1.07m x 0.15m deep, NE-SW orientated	Pit
116	Fill	117	3	Mid to dark greyish brown silty clay, 0.50m thick	Fill of ditch 117
117	Cut	117	3	Linear, steep sides, concave base, 1.66m wide x 0.50m deep	Possible boundary ditch
118	Fill	119	2	Mid to dark grey silty clay, 0.22m thick	Fill of pit 119
119	Cut	119	2	Sub-oval, moderately steep sides, flat base, 1.178m x 1.55m x 0.38m deep	Pit
120	Fill	121	2	Light to mid blueish grey silty clay, 0.10m thick	Fill of pit 121
121	Cut	121	2	Sub-oval, moderately steep sides, concave base, 0.15m x 0.15m x 0.10m deep	Small pit/posthole?
122				Void	Void
123				Void	Void
124	Fill	125	3	Mid to dark grey silty clay, occasional limestone fragments, 0.22m thick	Fill of ditch 125
125	Cut	125	3	Linear, moderately steep sides, flat base, 1.45m wide x 0.22m deep	Possible boundary ditch
126	Fill	127	2	Mid to dark silty clay, 0.25m thick	Fill of possible posthole 127
127	Cut	127	2	Sub-oval, moderately steep sides, flat base, 0.75m x 0.50m x 0.25m deep	Pit/possible posthole

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Context	Type	Feature No	Phase	Description	Interpretation
128	Fill	129	2	Mid to dark grey silty clay, occasional charcoal flecks, 0.28m thick	Fill of pit 129
129	Cut	129	2	Sub-circular, moderately steep sides, concave base, 0.70m x 0.55m x 0.28m deep	Pit/possible posthole
130	Fill	131	2	Mid to dark greyish brown sandy silt, frequent burnt limestone fragments up to 200mm x 140mm x 30mm, 0.10m thick	Secondary fill of posthole 131
131	Cut	131	2	Sub-circular, concave sides, flat base, 0.49m x 0.40m x 0.15m deep	Possible posthole
132				Void	Void
133				Void	Void
134	Fill	135	5	Light grey silty sand, 0.10m thick	Fill of Root bole 135
135	Cut	135	5	Irregular in plan, irregular sides and base, 6.04m x 1.41m x 0.10m deep, NW-SE orientated	Root bole
136	Fill	137	2	Mid to dark grey silt, 0.15m thick	Fill of pit 137
137	Cut	137	2	Sub semi-circular (as seen), moderately steep sides, concave base, 0.90m x 0.84m x 0.5m deep	Pit
138	Fill	139	2	Light to mid greyish brown silty clay, occasional charcoal flecks, 0.16m thick	Fill of pit 139
139	Cut	139	2	Sub-oval moderately steep sides, irregular base, 1.10m 0.50m x 0.16m deep, N-S orientated	Elongated pit
140	Fill	141	2	Mottled mid brown/mid brownish grey silty clay, moderate charcoal flecks, occasional limestone fragments, 0.18m thick	Fill of pit 141
141	Cut	141	2	Sub-oval, concave sides, flat base, 1m x 0.83m x 0.18m deep, N-S orientated	Pit
142	Fill	143	5	Mid brownish grey silty clay, 0.07m thick	Fill of possible disturbance 143
143	Cut	143	5	Curvilinear, shallow sides, irregular base, 2.40m x 0.25m x 0.07m deep	Possible animal disturbance
144	Fill	145	5	Light brownish grey silty clay, 0.05m thick	Fill of depression 145
145	Cut	145	5	Sub-oval, irregularly sloping sides, irregular base, 1.20m x 0.51m x 0.05	Possible natural depression
146	Fill	147	5	Light blueish grey silty clay, 0.10m thick	Fill of depression 147
147	Cut	147	5	Sub-oval, irregular sides, irregular base, 1.92m x 0.77m x 0.10m deep, NW-SE orientated	Root disturbance?
148	Fill	149	3	Mid to dark brownish grey silty clay, frequent limestone fragments, 0.21m thick	Fill of ditch 149
149	Cut	149	3	Linear, moderate to steep sides, steeper on NW side, flat base, 0.84m wide x 0.21m deep, NE-SW orientated	Boundary ditch
150	Fill	151	4	Mid blueish grey silty clay, 0.12m thick	Fill of ditch 151, same as 324
151	Cut	151	4	Linear, concave sides, unclear base, 2.10m wide x 0.12m deep, NE-SW orientated	Possible boundary ditch. Same as 325

Bourne - Guthram (BGWM 07) context list

Context	Type	Feature No	Phase	Description	Interpretation
152	Fill	153	4	Mid greyish brown silty clay, occasional limestone fragments, 0.28m thick	Fill of ditch 153
153	Cut	153	4	Linear, moderately steep sides, flat base, 2.15m wide x 0.28m deep, NE-SW orientated	Boundary ditch
154	Cut	154	1	Sub-oval, unexcavated, 1.67m x 0.64m, NE-SW orientated	Natural feature
155	Fill	154	1	Light grey silty clay, unexcavated	Fill of natural feature 154
156	Fill	157	1	Light grey silty clay, unexcavated	Fill of root bole 157
157	Cut	157	1	Sub-oval, unexcavated, 0.90m x 0.64m	Root bole
158	Fill	159	2	Mid grey with brown flecks silty clay, occasional sandstone fragments, occasional charcoal flecks, 0.30m thick	Fill of posthole 159
159	Cut	159	2	Sub-circular, steep almost vertical sides, flat base, 0.55m x 0.44m x 0.30m deep	Posthole
160	Fill	161	1	Light grey silty clay, unexcavated	Fill of root bole 161
161	Cut	161	1	Sub-circular, unexcavated, 0.51m diameter	Root bole
162	Fill	163	2	Mid to dark grey silty clay, frequent charcoal flecks, occasional small limestone fragments, 0.15m thick	Fill of posthole 163
163	Cut	163	2	Sub-circular, slightly concave sides, flat base, 0.40m diameter x 0.15m deep	Small pit/posthole
164	Fill	165	2	Light to mid greyish brown clayey silt, occasional small limestone fragments, 0.12m thick	Fill of pit 165
165	Cut	165	2	Elongated oval, concave sides, stepped irregular base, 0.70m x 0.15m x 0.12m deep, NE-SW orientated	Possible pit further eroded by water action
166	Fill	167	1	Light greyish brown silty clay, unexcavated	Fill of root bole 167
167	Cut	167	1	Sub-oval, not excavated, 0.90m x 0.64m	Root bole
168	Fill	169	2	Mid grey silty clay, frequent charcoal flecks, occasional flint fragments (natural), 0.35m thick	Fill of pit 169
169	Cut	169	2	Sub-circular, vertical sides, flat base, 0.74m diameter x 0.35m deep	Posthole, recut of posthole 366
170	Fill	171	1	Light grey silty clay, unexcavated	Fill of natural hollow 171
171	Cut	171	1	Sub-circular, not excavated, 0.51m x 0.50m	Natural hollow
172	Fill	173	1	Light grey silty clay, unexcavated	Fill of natural hollow 173
173	Cut	173	1	Sub-circular, 0.50m diameter, unexcavated	Natural hollow
174	Fill	175	2	Mid greyish brown clay with orange brown mottles, 0.20m thick	Fill of pit 175
175	Cut	175	2	Sub-circular, steep sides, flat base, 1.81m x 1.53m x 0.71m deep	Pit
176	Fill	177	2	Light to mid grey clayey silt, frequent organics, 0.14m thick	Fill of pit 177
177	Cut	177	2	Sub-oval, concave sides, concave base, 0.75m x 0.20m x 0.14m deep	NW-SE orientated
178	Fill	179	2	Light grey clay, 0.05m thick	Fill of natural feature 179
179	Cut	179	2	Sub-oval, moderately steep sides, irregular concave base, 0.60m x 0.40m x 0.05m deep	Natural feature

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Context	Type	Feature No	Phase	Description	Interpretation
180	Fill	181	4	Mid grey silty clay, occasional small sub-angular stones, 0.16m thick	Fill of ditch 181
181	Cut	181	4	Linear, gradual sides, concave base, 0.43m wide, 0.16m deep, N-S orientated turning to E-W at northern end	Possible boundary ditch
182				Void	Void
183				Void	Void
184				Void	Void
185				Void	Void
186	Fill	187	4	Light to mid grey silty clay, occasional flint fragments, 0.18m thick	Fill of ditch 187
187	Cut	187	4	Linear, concave sides, flat base, 11.75m N-S x 5m E-W x 1m wide x 0.18m deep, N-S orientated turning to the east at the northern end	Possible boundary ditch
188	Fill	189	3	Mid greyish orange, silty clay, occasional charcoal flecks, occasional small rounded stones, 0.14m thick	Fill of ditch 189
189	Cut	189	3	Curvilinear, gradual sides, irregular base, 0.79m wide x 0.14m deep, N-S orientated	Curvilinear gully/ditch
190				Void	Void
191				Void	Void
192	Fill	193	4	Mid brownish grey silty clay, occasional charcoal flecks, occasional small stones, 0.26m thick	Fill of ditch 193
193	Cut	193	4	Linear, concave sides, flat base, 2.25m wide x 0.35m deep	Boundary ditch
194	Fill	195	5	Light grey silty clay, unexcavated	Fill of root bole 195
195	Cut	195	5	Sub-oval, unexcavated, 1.16m x 0.90m	Root bole
196	Fill	197	4	Mid grey silty clay, 0.24m thick	Fill of ditch 197
197	Cut	197	4	Linear, steep sides, uneven base, 1.92m wide x 0.38m deep, NE-SW orientated	Boundary ditch
198	Cut	198	3	Linear, moderately steep sides, concave base, 0.85m wide x 0.20m deep, N-S orientated	Ditch
199	Fill	198	3	Mid to dark grey silty clay, 0.20m thick	Fill of ditch 198
200	Fill	117	3	Dark grey silty clay, 0.05m thick	Primary fill of ditch 117
201	Fill	198	3	Dark grey silty clay, 0.20m thick	Fill of 198 . (Within slot at northern end of the feature)
202	Fill	198	3	Dark grey silty clay, 0.20m thick	Fill of ditch 198 . (Within central slot through the feature)
203	Layer	203	1	Mid grey silty clay, extends for c. 23m	Alluvial material probably remnants of a marsh. Same as 300 , 302 , 304 and possibly 306 combined
204	Cut	204	3	Linear, moderately steep sides, flat base. 1.33m wide x 0.38m deep, E-W orientated	Boundary ditch
205	Fill	204	3	Dark greyish brown silty clay, frequent limestone fragments, 0.28m thick	Secondary fill of ditch 204
206	Fill	204	3	Dark greysilty clay, occasional charcoal flecks, 0.10m thick	Primary fill of ditch 204
207				Void	Void
208				Void	Void

Bourne - Guthram (BGWM 07) context list

Context	Type	Feature No	Phase	Description	Interpretation
209				Void	Void
210	Cut	210	4	Linear, moderately steep sides, concave base, 0.90m wide x 0.21m deep, E-W orientated turning NE-SW at eastern end	Possible boundary ditch
211	Fill	210	4	Very dark grey silty clay, moderate gravel, 0.21m thick	Fill of ditch 210
212	Cut	212	3	Sub-circular, unexcavated, 0.90m diameter	Root bole
213	Fill	212	3	Light grey silty clay, unexcavated	Fill of root bole 212
214	Cut	214	5	Irregular in plan, unexcavated, 1.16m x 1.15m	Root bole
215	Fill	214	5	Light grey silty clay, unexcavated	Fill of root bole 214
216	Cut	216	5	Irregular in plan, unexcavated, 1.41m x 1.93m	Root bole
217	Fill	216	5	Light grey silty clay, unexcavated	Fill of root bole 216
218	Cut	218	5	Sub-circular, unexcavated, 0.39m diameter	Root bole
219	Fill	218	5	Light grey silty clay, unexcavated	Fill of root bole 218
220	Cut	220	5	Sub-circular, unexcavated, 0.51m x 0.55m	Root bole
221	Fill	221	5	Light grey silty clay, unexcavated	Fill of root bole 220
222	Cut	222	5	Irregular in plan, unexcavated, 1.03m x 0.77m	Root bole
223	Fill	222	5	Light grey silty clay, unexcavated	Fill of root bole 222
224	Cut	224	5	Sub-circular, unexcavated, 0.77m diameter	Root bole
225	Fill	224	5	Light grey silty clay, unexcavated	Fill of root bole 224
226	Cut	226	5	Irregular in plan, elongated, unexcavated, 1.16m x 0.51m	Root bole
227	Fill	226	5	Light grey silty clay, unexcavated	Fill of root bole 226
228	Cut	228	5	Sub-oval, unexcavated, 1.29m x 0.96m	Root bole
229	Fill	228	5	Light grey silty clay, unexcavated	Fill of root bole 228
230	Cut	230	5	Irregular in plan, unexcavated, 4.89m x 2.31m	Root bole
231	Fill	230	5	Light grey silty clay, unexcavated	Fill of root bole 230
232	Cut	232	3	Linear, steep western side, moderately steep eastern side, flat base, 1.70m wide x 0.40m deep, NNW-SSE orientated	Boundary ditch
233	Fill	232	3	Dark greyish brown clayey silt, occasional grey clay patches, occasional limestone flecks and fragments, 0.20m thick	Fill of ditch 232
234	Cut	234	3	Linear, steep sides, uneven generally flat base, 3.06m wide x 0.60m deep, N-S orientated	Boundary ditch
235	Fill	234	3	Light to mid grey silty clay with orange flecks, occasional small sub angular stones, 0.26m thick	Fill of ditch 234
236	Cut	236	5	Sub-circular, unexcavated, 0.39m diameter	Root bole
237	Fill	236	5	Light grey silty clay, unexcavated	Fill of root bole 236
238	Cut	238	5	Sub-oval, unexcavated, 0.64m x 0.45m	Root bole
239	Fill	238	5	Light grey silty clay, unexcavated	Fill of root bole 238
240	Cut	240	5	Irregular in plan, unexcavated, 1.86m x 1.60m	Root bole
241	Fill	240	5	Light grey silty clay, unexcavated	Fill of root bole 240
242	Cut	242	5	Irregular in plan, unexcavated, 3.60m x 0.90m	Root bole

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Context	Type	Feature No	Phase	Description	Interpretation
243	Fill	242	5	Light grey silty clay, unexcavated	Fill of root bole 242
244	Cut	244	5	Irregular in plan, unexcavated, 2.51m x 1.48m	Root bole
245	Fill	244	5	Light grey silty clay	Fill of root bole 244
246	Cut	246	5	Irregular in plan, unexcavated, 4.37m x 0.58m	Root bole
247	Fill	246	5	Light grey silty clay, unexcavated	Fill of root bole 246
248				Void	Void
249				Void	Void
250	Cut	250	4	Sub-circular, concave sides, concave base, 0.80m diameter, 0.20m deep	Pit
251	Fill	250	4	Mid brownish grey silty clay, occasional charcoal, 0.20m thick	Fill of pit 250
252	Cut	252	5	Irregular in plan, unexcavated, 1.54m x 0.58m	Root bole
253	Fill	252	5	Light grey silty clay, unexcavated	Fill of root bole 252
254	Cut	254	5	Irregular in plan, unexcavated, 1.35m x 0.51m	Root bole
255	Fill	254	5	Light grey silty clay, unexcavated	Fill of root bole 254
256	Cut	256	3	Linear, moderately steep sides, flat base, 2.90m wide x 0.30m deep, NE-SW orientated	Boundary ditch
257	Fill	256	3	Mid brown silty clay, occasional charcoal flecks, 0.13m thick	Tertiary fill of ditch 256, same as fill 419
258	Cut	258	5	Irregular in plan, unexcavated, 1.35m x 0.96m	Root bole
259	Fill	258	5	Light grey silty clay	Fill of root bole 258
260	Cut	260	5	Linear, rounded terminus at southern end, unexcavated, 4.44m x 0.45m, NW-SE orientated	Root bole
261	Fill	260	5	Light grey silty clay, unexcavated	Fill of root bole 260
262				Void	Void
263				Void	Void
264	Cut	264	5	Irregular in plan, unexcavated, 1.85m x 1.03m	Root bole
265	Fill	264	5	Light grey silty clay, unexcavated	Fill of root bole 264
266	Cut	266	5	Irregular in plan, unexcavated, 1.90m x 0.70m	Root bole
267	Fill	266	5	Light grey silty clay, unexcavated	Fill of root bole 266
268	Cut	268	5	Irregular in plan, unexcavated, 3.85m x 0.64m	Root bole
269	Fill	268	5	Light grey silty clay, unexcavated	Fill of root bole 268
270	Cut	270	5	Irregular in plan, unexcavated, 1.03m x 0.65m	Root bole
271	Fill	270	5	Light grey silty clay, unexcavated	Fill of root bole 270
272	Cut	272	5	Irregular in plan, unexcavated, 0.95m x 0.45m	Root bole
273	Fill	272	5	Light grey silty clay, unexcavated	Fill of root bole 272
274	Cut	274	5	Irregular in plan, unexcavated, 1.30m x 0.65m	Root bole
275	Fill	274	5	Light grey silty clay, unexcavated	Fill of root bole 274
276	Cut	276	5	Irregular in plan, unexcavated, 2.80m x 2.60m	Root bole
277	Fill	276	5	Light grey silty clay, unexcavated	Fill of root bole 276
278	Cut	278	5	Irregular, unexcavated, 1.20m x 0.65m	Root bole
279	Fill	278	5	Light grey silty clay, unexcavated	Fill of root bole 278
280	Cut	280	5	Irregular in plan, unexcavated, 2.80m x 2.70m	Root bole
281	Fill	280	5	Light grey silty clay, unexcavated	Fill of root bole 280

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Context	Type	Feature No	Phase	Description	Interpretation
282	Cut	282	5	Irregular in plan, unexcavated, 3.08m x 0.45m	Root bole
283	Fill	282	5	Light grey silty clay, unexcavated	Fill of root bole 282
284	Cut	284	4	Linear, slightly irregular, gradual sides, uneven base, 5.5m wide x 0.12m deep, N-S orientated	Shallow ditch, uncertain function - furrow? Natural hollow?
285	Fill	284	4	Mid brownish grey sandy silt with clay and sand patches, moderate small gravel fragments, occasional charcoal flecks, 0.12m thick	Fill of linear feature 284
286				Void	Void
287				Void	Void
288	Cut	288	5	Irregular in plan, unexcavated, 3.35m x 2.40m	Root bole
289	Fill	288	5	Light grey silty clay, unexcavated	Fill of root bole 288
290	Cut	290	5	Sub-oval, unexcavated, 1.30m x 1.15m	Root bole
291	Fill	290	5	Light grey silty clay, unexcavated	Fill of root bole 290
292	Fill	325	3	Mid to dark grey clayey silt, occasional limestone flecks, 0.12m thick	Fill of ditch 325
293	Fill	294	1	Light greyish brown sand with brown mottling, occasional small gravel patches, 0.26m thick	Fill animal disturbance 294
294	Cut	294	1	Not seen in plan, near vertical sides, concave base, 0.37m x 0.36m x 0.27m deep	Probable animal/root disturbance
295	Layer	295	1	Light greyish brown sandy clay, occasional limestone fragments	Alluvial material. Probably remnants of a marsh. Same as 316 and 331 combined
296	Fill	297	1	Light greyish brown silty sand, occasional fine gravel, 0.15m thick	Fill of animal disturbance 297
297	Cut	297	1	Not seen in plan, near vertical sides, flat base, 0.26m x 0.22m x 0.15m deep	Probable animal/root disturbance
298	Fill	299	2	Light greyish brown sand clay, occasional limestone fragments, 0.09m thick	Fill of scoop 299
299	Cut	299	2	Irregular in plan, irregular sides and base, 1.65m x 1.40m x 0.09m deep	Shallow scoop or natural feature
300	Fill	301	1	Mid to dark greyish brown silty clay, occasional small stones, 0.26m thick	Alluvial deposit, fill of ephemeral feature 301, same as 203
301	Cut	301	1	Irregular linear, gradual sides, flat base, 0.26m deep	Horizon between alluvial silting deposits originally recorded as a cut feature
302	Fill	303	1	Light blueish grey sandy silt and brown sand, occasional small stones, 0.22m thick	Alluvial deposit, fill of ephemeral feature 303, same as 203
303	Cut	303	1	Irregular linear, gradual sides, 0.22m deep	Horizon between alluvial silting deposits originally recorded as a cut feature
304	Fill	305	1	Light to mid blueish grey sandy silt and brown sand, occasional small limestone fragments, 0.10m thick	Alluvial deposit, fill of ephemeral feature 305, same as 203
305	Cut	305	1	Only visible in section, gradual sides, flat base, 0.10m deep	Horizon between alluvial silting deposits originally recorded as a cut feature
306	Layer	306	1	Orange brown sand with blueish grey sandy silt, occasional limestone fragments	Alluvial material, probably remnants of a marsh. Same as 203
307	Layer	307	1	Light to mid grey silty clay, moderate small stones, 0.17m thick	Alluvial deposit, probably remnants of a marsh. Same as 203
308	Layer	308	1	Orange and grey clay with grey silty clay, 0.06m thick	Alluvial deposit, probably remnants of a marsh. Same as 204
309	Cut	309	1	Gradual sloping sides, flat base	Horizon between alluvial silting deposits

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Context	Type	Feature No	Phase	Description	Interpretation
310	Cut	310	2	Sub-oval, variable sides between moderately steep and steep, concave base, 1.10m x 0.75m x 0.40m deep	Pit
311	Fill	310	2	Light greyish brown sandy silt, moderate small gravel, occasional charcoal flecks, 0.10m thick	Primary fill of pit 310
312	Fill	310	2	Mid to dark grey clay with sandy silt, frequent charcoal flecks, moderate small limestone fragments, 0.06m thick	Secondary fill of pit 310
313	Fill	310	2	Light to mid grey sandy silt, moderate small limestone fragments, occasional charcoal flecks, 0.25m thick	Tertiary fill of pit 310
314	Cut	314	2	Sub-rectangular, steep sides, concave base, 2.40m x 1.0m x 0.50m deep	Pit
315	Fill	314	2	Mixed light brown and light grey sandy silt, occasional small stones, 0.26m thick	Fill of pit 314
316	Layer	316	1	Light grey sandy silt, moderate small stones, occasional charcoal flecks	Alluvial deposit, probably remnants of a marsh. Same as 295
317				Void	Void
318	Layer	318	2	Mid brownish grey sandy silt, occasional small stones, 0.20m thick	Spread of silty material, possibly trample or a small localised flooding/puddling event
319	Fill	149	3	Light to mid grey silty clay, occasional organics, 0.24m thick	Fill of ditch 149 , same as fill 148
320	Fill	321	2	Mid grey with orange flecks sandy silt, 0.28m thick	Fill of pit 321
321	Cut	321	2	Sub-circular, steep near vertical sides, flat base, 0.50m x 0.45m x 0.28m deep	Posthole
322	Fill	323	2	Dark grey with orange flecks silty clay, occasional small stones, 0.14m thick	Fill of pit 323
323	Cut	323	2	Sub-oval, gradual sides, concave base, 1.50m x 0.90m x 0.14m deep	Pit
324	Fill	325	4	Mid to dark grey clayey silt, occasional organics, 0.12m thick	Fill of ditch 325
325	Cut	325	4	Linear, irregular slightly concave sides, 2.10m wide x 0.12m deep, NE-SW orientated	Ditch, same as 151
326	Layer	326	1	Light grey sand and clay	Alluvial material. Probably remnants of a marsh
327	Fill	328	2	Dark grey silty clay, occasional small stones, 0.03m thick	Fill of possible posthole 328
328	Cut	328	2	Sub-circular, gradual sides, flat base, 0.60m x 0.55m x 0.03m deep	Possible truncated posthole
329	Fill	314	2	Light to mid greyish brown sandy silt, occasional charcoal flecks, occasional small stones, 0.10m thick	Fill of pit 314
330	Fill	314	2	Mid to dark brownish grey silty clay, occasional charcoal flecks, occasional small stones, 0.30m thick	Fill of pit 314
331	Layer	331	1	Orange brown silty sand, moderate small limestone fragments, occasional charcoal flecks, 0.28m thick	Alluvial material. Probably remnants of a marsh
332				Void	Void

Bourne - Guthram (BGWM 07) context list

Context	Type	Feature No	Phase	Description	Interpretation
333	Fill	334	5	Light to mid grey sandy clay, occasional charcoal flecks, occasional organics, 0.07m thick	Fill of pit 334. Same as fill 146
334	Cut	334	5	Sub-oval, elongated, slightly concave sides, flat base, 1.92m x 0.77m x 0.07m deep	Elongated pit, same as pit 147
335	Cut	336	2	Dark grey silty clay with orange brown patches, frequent small stones, occasional charcoal flecks, 0.18m thick	Fill of pit 336
336	Cut	336	2	Sub-circular, steep sides with slight step, concave base, 0.84m x 0.68m x 0.20m deep	Pit
337	Fill	338	2	Light to mid greyish brown silty clay, occasional small stones, 0.42m thick	Fill of pit 338
338	Cut	338	2	Sub-oval, steep sides, concave base, 1.38m x 0.52m x 0.42m deep	Pit
339	Fill	109	3	Dark brownish grey silty clay, frequent charcoal flecks, 0.13m thick	Primary fill of ditch 109
340	Fill	341	3	Mid brown/grey mottling clayey silt, frequent charcoal flecks, 0.20m thick	Fill of gully/ditch 341
341	Cut	341	3	Linear, moderately steep sides, flat base, 0.65m wide x 0.20m deep, N-S orientated	Possible boundary ditch
342	Fill	336	2	Light greyish brown silty clay, frequent small stones, occasional charcoal flecks, 0.20m thick	Fill of pit 336
343	Fill	131	2	Light to mid orange brown silt, 0.11m thick	Primary fill of posthole 131
344	Fill	345	2	Dark greyish brown silty clay, frequent limestone fragments, 0.40m thick	Fill of pit 345
345	Cut	345	2	Sub-circular, steep near vertical sides, flat base, 0.80m x 0.75m x 0.40m deep	Pit, probable posthole
346	Fill	347	3	Mid brown/grey mottled clayey silt, frequent charcoal flecks, 0.10m thick	Fill of ditch 347
347	Cut	347	3	Sub semi-circular, moderately steep sides, flat base, 0.60m x 0.50m x 0.10m deep	Ditch/gully. Probable continuation of gully 341
348	Fill	360	2	Mottled light blueish grey/orange brown/mid brown sandy silt, occasional small stones, 0.26m thick	Upper fill of pit 360
349	Fill	360	2	Light blueish grey sandy silt, occasional charcoal flecks, 0.20m thick	Primary fill of pit 360
350	Fill	175	2	Mid brownish grey silty clay, occasional charcoal, 0.26m thick	Fill of pit 175
351	Fill	175	2	Mid brownish grey silty clay, frequent limestone fragments, 0.18m thick	Fill of pit 175. Probable weathering
352	Fill	175	2	Dark brownish grey silty clay, moderate limestone fragments, occasional charcoal flecks, 0.25m thick	Fill of pit 175
353	Fill	175	3	Mid brownish grey silty clay, frequent limestone fragments, 0.16m thick	Primary fill of pit 175

Bourne - Guthram (BGWM 07) context list

Context	Type	Feature No	Phase	Description	Interpretation
354	Fill	355	2	Mottled mid grey/mid brown sandy silty clay, frequent charcoal flecks, frequent weathered limestone fragments, 0.46m thick	Fill of pit 355
355	Cut	355	2	Sub-circular, steep near vertical sides, flat base, 0.95m x 0.85m x 0.6m deep	Pit
356	Fill	357	2	Mottled mid grey/dark brown sandy silty clay, frequent charcoal flecks, frequent limestone fragments, 0.10m thick	Fill of pit 357
357	Cut	357	2	Sub-square with rounded corners at southern limit, moderately steep sides, flat base, 0.80m x 0.65m x 0.10m deep	Pit
358	Fill	359	2	Dark greyish brown silty sandy clay, frequent charcoal flecks, 0.37m thick	Fill of pit/posthole 359
359	Cut	359	2	Sub-circular with shallow scoop on western side, steep sides vertical in places, flat base, 1.15m x 0.65m max., 0.65m diameter x 0.37m deep central area	Pit or possible posthole
360	Cut	360	2	Sub semi circular (as seen), steep sides with a step. Concave base, 0.58m x 0.48m x 0.56m deep	Pit
361	Fill	364	2	Mid brown and grey sandy silt, occasional charcoal flecks, occasional small stones, 0.44m thick	Tertiary fill of pit 364
362	Fill	364	2	Mid grey clayey silt with mid brown silty sand, occasional small stones, 0.35m thick	Fill of pit 364
363	Fill	364	2	Mid to dark grey clayey silt with orange brown sand, occasional charcoal flecks, occasional small stones, 0.35m thick	Primary fill of pit 364
364	Cut	364	2	Sub-circular (only partially exposed), concave sides to concave base, 1m x 0.45m x 0.45m deep	Pit
365	Fill	366	2	Mid brown silty clay, occasional small stones, 0.56m thick	Fill of pit 366
366	Cut	366	2	Sub-circular, vertical sides, flat base, 0.74m diameter x 0.56m deep	Posthole
367	Fill	368	2	Mottles dark grey/mid brown/orange sandy silty clay, frequent charcoal flecks, frequent limestone fragments, 0.52m thick	Fill of posthole 368. Same as fill 377
368	Cut	368	2	Sub-circular, vertical sides, flat base, 0.55m x 0.40m x 0.52m deep	Posthole. Same as 378
369	Fill	370	3	Light to mid grey with orange mottling clayey silt, occasional small stones, 0.17m thick	Fill of pit 370
370	Cut	370	3	Sub-square, irregular sides, flat base, 1.70m x 0.90m x 0.17m deep	Pit
371	Fill	372	3	Light to mid grey silty clay, frequent shell fragments, 0.20m thick	Fill of gully 372
372	Cut	372	3	Linear with rounded terminus, concave sides, concave base, 1.16m x 0.50m x 0.20m deep, NW-SE orientated	Gully with terminus. Possible drainage function

Bourne - Guthram (BGWM 07) context list

Context	Type	Feature No	Phase	Description	Interpretation
373	Fill	374	3	Dark brownish grey silty clay, occasional charcoal flecks, occasional limestone fragments, 0.06m thick	Fill of gully 374
374	Cut	374	3	Linear, steep sides, flat base, 2.10m x 0.34m wide x 0.06m deep	Gully. Possible beam slot
375	Fill	376	2	Mid grey silty clay, frequent charcoal flecks, 0.18m thick	Fill of pit 376
376	Cut	376	2	Irregular in plan, moderately steep sides, concave base, 1.30m x 0.56m x 0.18m deep	Pit. Irregular shape possibly the result of weathering
377	Fill	378	2	Mottled dark grey/mid brown/orange sandy silty clay, frequent charcoal flecks, frequent limestone fragments, 0.52m thick	Fill of posthole 378. Same as 367
378	Cut	378	2	Sub-circular, vertical sides, flat base, 0.55m x 0.40m x 0.52m deep	Posthole. Same as 368
379	Fill	380	2	Mid grey with orange mottles silty clay, frequent charcoal flecks, 0.12m thick	Fill of pit 380
380	Cut	380	2	Sub-circular, moderately steep sides, concave base, 0.55m x 0.50m x 0.12m deep	Pit
381	Fill	382	3	Mid grey with orange flecks silty clay, moderate charcoal flecks, 0.22m thick	Alluvial material, within irregular hollow 382
382	Cut	382	3	Irregular and indistinct in plan, gradual sides, irregular base, 3.18m x 2.85m x 0.22m deep	Amorphous feature, possibly a natural hollow or puddle
383	Fill	384	2	Mid brownish grey clayey silt, occasional charcoal flecks, occasional small stones, 0.18m thick	Fill of gully 384
384	Cut	384	2	Curvilinear, moderately steep sides, undulating generally concave base, 4.70m x 0.45m wide x 0.18m deep, N-S orientated turning east at southern end	Gully. Possibly a truncated enclosure corner
385	Fill	386	2	Mid brownish grey with orange flecks silty clay, frequent charcoal flecks, 0.14m thick	Fill of pit 386
386	Cut	386	2	Sub-circular, moderately steep sides, concave base, 0.36m x 0.33m x 0.14m deep	Pit
387	Fill	388	2	Dark grey silty clay, frequent charcoal flecks, occasional limestone fragments, 0.08m thick	Fill of pit 388
388	Cut	388	2	Sub-circular, steep sides, irregular base, 0.38m x 0.30m x 0.08m deep	Pit
389	Fill	390	2	Mid grey sandy silty clay, frequent charcoal flecks, 0.12m thick	Fill of pit 390
390	Cut	390	2	Irregular, kidney shaped in plan, irregular but moderately steep sides, concave base, 0.75m x 0.45m x 0.12m deep	Pit
391	Fill	392	2	Mottled mid grey/mid brown silty clay, frequent charcoal flecks, 0.44m thick	Fill of posthole 392
392	Cut	392	2	Sub-circular, vertical sides, flat base, 0.40m x 0.35m x 0.44m deep	Posthole
393	Fill	394	2	Mid grey clayey silt, occasional flecks, 0.08m thick	Fill of pit 394

Bourne - Guthram (BGWM 07) context list

Context	Type	Feature No	Phase	Description	Interpretation
394	Cut	394	2	Sub-oval, moderately steep sides, flat base, 0.85m x 0.70m x 0.08m deep	Pit
395	Fill	396	2	Mid grey clayey silt, occasional charcoal flecks, 0.12m thick	Fill of pit 396
396	Cut	396	2	Sub-oval, steep sides, concave base, 0.70m x 0.30m x 0.12m deep, N-S orientated	Elongated pit
397	Fill	398	2	Mottled mid grey/mid brown silty clay, frequent charcoal flecks, occasional limestone fragments, 0.10m thick	Fill of pit 398
398	Cut	398	2	Sub-circular, moderately steep sides, concave base, 0.41m x 0.38m x 0.10m deep	Pit
399	Fill	400	3	Light to mid grey clayey silt, 0.08m thick	Fill of gully 400
400	Cut	400	3	Linear, concave sides, concave base, 0.70m (as seen) x 0.34m wide x 0.08m deep, E-W orientated	Gully
401	Fill	402	3	Mid to dark grey with black laminations silty clay, 0.18m thick	Fill of pit 402
402	Cut	402	3	Sub-rectangular, concave sides, concave base, 2m x 0.47m x 0.18m deep	Pit
403	Fill	406	3	Light to mid grey with orange laminations clayey silt, 0.07m thick	Alluvial deposit within possible palaeochannel 406
404	Fill	406	3	Dark grey clayey silt, frequent charcoal flecks, 0.10m thick	Deposit within possible palaeochannel 406
405	Fill	406	3	Light to mid orange brown clayey silt, frequent gravel, 0.05m thick	Primary fill of possible palaeochannel 406
406	Cut	406	3	Not visible in plan, concave sides, largely flat base, 0.60m wide x 0.33m deep	Possible palaeochannel
407	Fill	408	3	Mid to dark grey silty clay with black laminations, occasional charcoal flecks, 0.23m thick	Fill of pit 408
408	Cut	408	3	Sub-circular, concave sides, concave base, 0.70m x 0.55m x 0.23m deep	Pit
409	Fill	410	2	Mid greyish brown sandy silty clay, frequent charcoal flecks, 0.07m thick	Fill of possible posthole 410
410	Cut	410	2	Sub-circular, moderately steep sides, concave base, 0.30m x 0.25m x 0.07m deep	Possible posthole
411	Fill	412	3	Mid grey silty clay, occasional charcoal flecks, 0.01m thick	Fill of gully 412
412	Cut	412	3	Linear, gradual sides, flat base, 2.07m x 0.43m wide x 0.01m deep, E-W orientated	Gully. Possible continuation of gully 113
413	Fill	198	3	Mid greyish brown silty clay, moderate gravel, 0.14m thick	Fill of ditch 198. Same as 199
414	Fill	119	2	Mid greyish brown silty clay, frequent limestone fragments, 0.06m thick	Fill of pit 119
415	Fill	119	2	Mid greyish brown silty clay, occasional gravel, 0.15m thick	Fill of pit 119
416	Fill	417	2	Mid brownish grey silty clay, moderate limestone fragments, 0.40m thick	Fill of posthole 417

Bourne - Guthram (BGWM 07) context list

Context	Type	Feature No	Phase	Description	Interpretation
417	Cut	417	2	Sub-circular, near vertical sides, flat base, 0.31m diameter	Posthole
418	Fill	193	4	Mid grey silt and clay, moderate limestone fragments, occasional charcoal flecks, 0.10m thick	Primary fill of ditch 193
419	Fill	422	3	Mid brown silty clay, occasional charcoal flecks, 0.13m thick	Tertiary fill of ditch 422
420	Fill	422	3	Mottled light grey/yellowish brown silty clay, occasional charcoal flecks, occasional limestone fragments, 0.10m thick	Secondary fill of ditch 422
421	Fill	422	3	Light to mid grey silty clay, occasional gravel, 0.13m thick	Primary fill of ditch 422
422	Cut	422	3	Linear, moderately steep sides, flat base, up to 2.90m wide x 0.30m deep	Boundary ditch
423	Fill	193	4	Mixed mid grey and brown silty clay with orange brown sand, occasional small stones, occasional charcoal flecks, 0.20m thick	Fill of ditch 193
424	Fill	234	3	Mid grey silty clay frequent small stones, 0.10m thick	Fill of ditch 234
425	Fill	234	3	Mid grey silty clay with brown patches, moderate small stones, 0.16m thick	Fill of ditch 234
426	Fill	426	3	Mid grey silty clay with orange brown patches, frequent gravel, 0.16m thick	Fill of ditch 426
427	Fill	234	3	Light grey silty clay, frequent gravel, 0.34m thick	Fill of ditch 234
428	Fill	234	3	Mid to dark grey silty clay, frequent small stones, 0.10m thick	Fill of ditch 234
429	Fill	234	3	Mid grey sandy silt with orange patches, frequent gravel, 0.10m thick	Fill of ditch 234
430	Fill	234	3	Dark grey sandy silt, frequent gravel, occasional charcoal flecks, 0.04m thick	Fill of ditch 234
431	Fill	432	3	Mid to dark greyish brown clayey silt, occasional small stones, 0.30m thick	Fill of ditch 432
432	Cut	432	3	Liner, moderately steep sides, concave base, 0.60m wide x 0.30m deep, E-W orientated	Boundary ditch. Probable continuation of ditch 434
433	Fill	434	3	Mottled mid grey/mid brown silty clay, frequent charcoal flecks, 0.30m thick	Fill of ditch 434
434	Cut	434	3	Linear, steep sides, concave base, 2.82m x 0.72m wide x 0.30m deep, E-W orientated	Boundary ditch. Probable continuation of ditch 432
435	Fill	436		Compact limestone brash with light brown clay	Fill of modern service trench 436
436	Cut	436	3	Linear with a wider rectangular extension at SW end, vertical sides, not fully excavated, 1.50m wide (average), NE-SW orientated	Modern service trench with possible access pit for service repair
437	Fill	438	3	Mid to dark greyish brown clayey silt, frequent small stones, 0.20m thick	Fill of posthole 438
438	Cut	438	3	Sub-circular, near vertical sides, flat base, 0.50m x 0.36m x 0.40m deep	Posthole
439	Fill	436	3	Light mid orange brown limestone	Fill of modern service trench 436

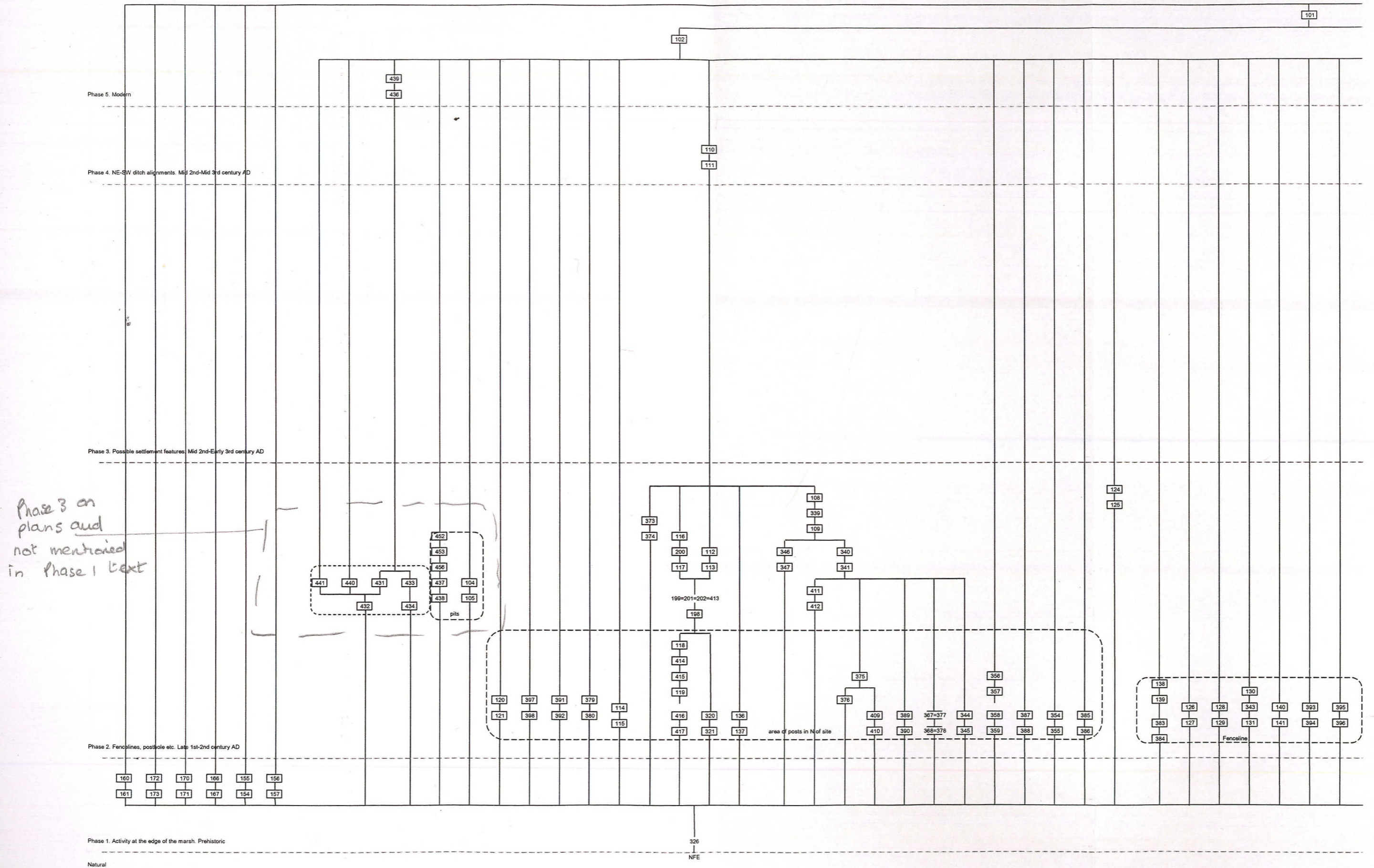
Bourne - Guthram (BGWM 07) context list

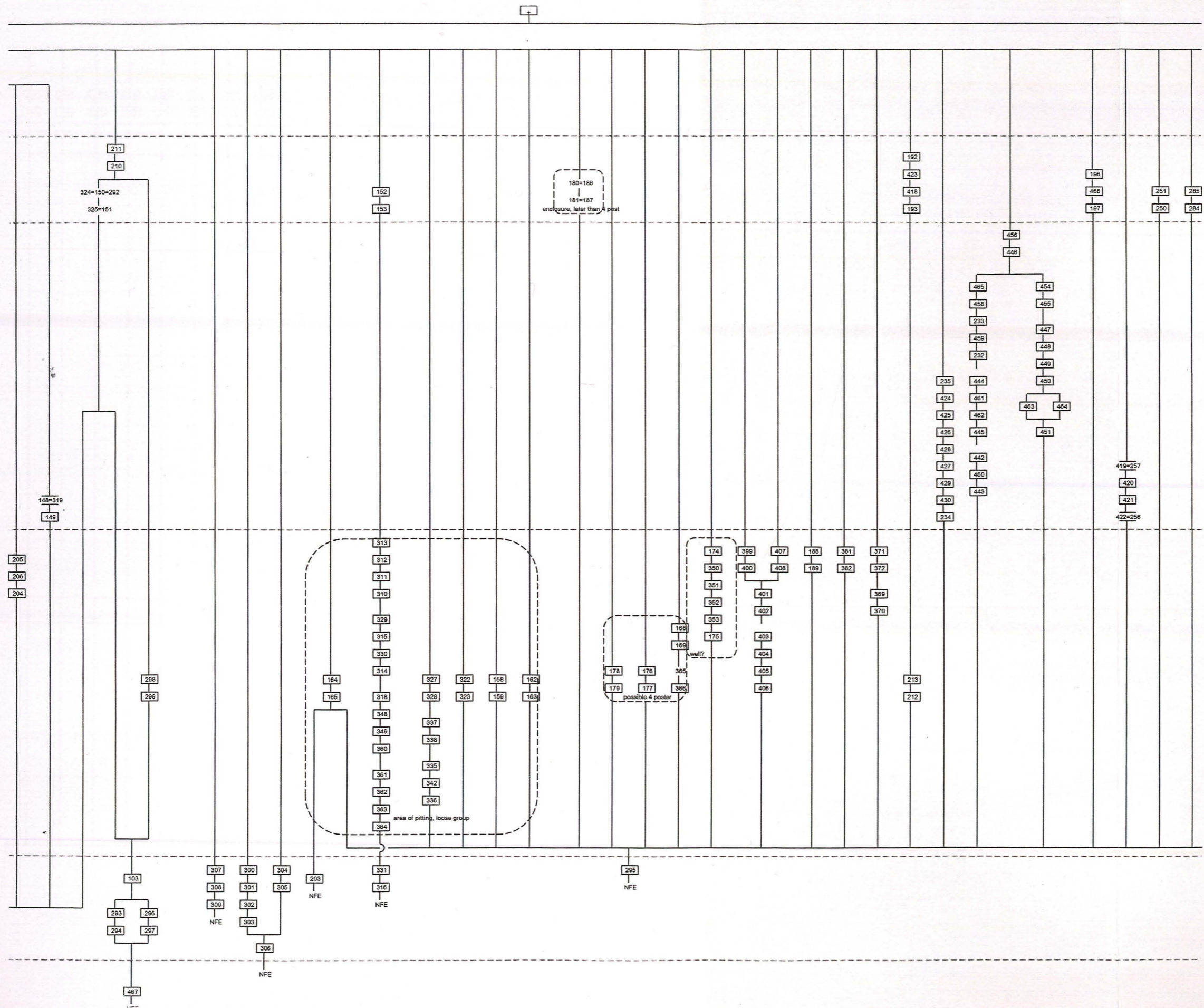
Context	Type	Feature No	Phase	Description	Interpretation
440	Fill	432	3	Dark greyish brown clayey silt, occasional small stones, 0.24m thick	Fill of ditch 432
441	Fill	432	3	Mid brown silty sand, frequent small stones, 0.10m thick	Fill of ditch 432
442	Fill	443	3	Mid grey silty clay, frequent gravel, occasional charcoal flecks	Fill of ditch 443
443	Cut	443	3	Linear, moderately steep sides, concave base, 0.50m wide x 0.20m deep, NNW-SSE orientated	Boundary ditch
444	Fill	445	3	Light to mid grey sandy clay, frequent gravel, occasional charcoal flecks, 0.32m thick	Fill of ditch 445
445	Cut	445	3	Linear, moderately steep sides, concave base, 1m wide x 0.50m deep, N-S orientated	Boundary ditch
446	Layer	446	3	Mid grey clay with mid brown mottling, occasional gravel, 4.40m wide x 0.10m thick	Spread of material accumulated in the earthwork left by a combination of ditches 232, 443, 445, 451 and 455
447	Fill	451	3	Mid grey sandy clay, frequent gravel, occasional charcoal flecks, 0.16m thick	Fill of ditch 451
448	Fill	451	3	Mid grey silty clay, occasional charcoal flecks, 0.10m thick	Fill of ditch 451
449	Fill	451	3	Mid to dark grey clayey silt, frequent charcoal flecks, occasional gravel, 0.12m thick	Fill of ditch 451
450	Fill	451	3	Light to mid grey silty clay, occasional gravel, 0.25m thick	Fill of ditch 451
451	Cut	451	3	Linear with rounded terminus at southern end, moderately steep sides, flat base, 1.50m (as seen) x 1.80m wide x 0.50m deep, N-S orientated	Butt ended boundary ditch, possible entrance
452	Fill	438	3	Mid to dark grey silty clay, occasional stones, 0.15m thick	Fill of posthole 438
453	Cut	453	3	Only visible in section, steep sides, pointed base, 0.28m wide x 0.14m deep	Probably represents a horizon between fills of posthole 438 rather than a separate feature
454	Fill	455	3	Mid grey silty clay, occasional charcoal flecks, occasional gravel, 0.15m thick	Fill of gully 455
455	Cut	455	3	Linear with rounded terminus to the south, moderately steep sides, concave base, 4.50m x 0.50m wide x 0.20m deep, N-S orientated	Gully
456	Layer	456	3	Mid brown silty clay and silty sand, 9.20m (as seen) x 4.20m wide x 0.10m thick	Spread of material accumulated in the earthwork left by a combination of ditches 232, 443, 445, 451 and 455
457				Void	Void
458	Fill	232	3	Mid greyish brown sandy clay, moderate gravel, 0.25m thick	Fill of ditch 232
459	Fill	232	3	Mid grey and mid brown silty clay, 0.08m thick	Primary fill of ditch 232
460	Fill	443	3	Light to mid grey silty clay, moderate gravel, 0.08m thick	Primary fill of ditch 443
461	Fill	445	3	Mid grey sandy clay, moderate gravel, 0.30m thick	Fill of ditch 445 . Possible slumping
462	Fill	445	3	Mid grey silty clay, moderate gravel, 0.18m thick	Primary fill of ditch 445
463	Fill	451	3	Mid grey silty clay and orange brown gravel, 0.25m thick	Fill of ditch 451 . Slumping deposit, same as 464

Bourne - Guthram (BGWM 07) context list

Context	Type	Feature No	Phase	Description	Interpretation
464	Fill	451	3	Mid grey silty clay and orange brown gravel, 0.10m thick	Fill of ditch 451. Slumping deposit, same as 463
465	Fill	232	3	Dark brown clayey silt, occasional charcoal flecks, occasional limestone flecks, 0.20m thick	Fill of ditch 232
466	Fill	197	4	Light grey silty clay with dark brown flecks, moderate shell fragments, occasional small stones, 0.12m thick	Fill of ditch 197
467	Natural		-	Compact fractured limestone	Limestone brash natural

APPENDIX 2





Appendix 3

APPENDIX 3

1.1 Introduction

The purpose of this study was to determine the effect of a certain treatment on the growth of a certain plant species. The study was conducted in a greenhouse under controlled conditions.

1.2 Method of study

The study was conducted in a greenhouse. The plants were divided into two groups: a control group and a treatment group. The control group received no treatment, while the treatment group received a specific treatment. The growth of the plants was measured over a period of six weeks. The data was analyzed using statistical methods to determine if there was a significant difference between the two groups.

1.3 Results

1.3.1 Growth rate

The results of the study showed that the treatment group had a significantly higher growth rate than the control group. This was determined by measuring the height of the plants at regular intervals and comparing the two groups. The treatment group showed a consistent increase in height over the six-week period, while the control group showed a much slower increase.

1.3.2 Leaf area

The leaf area of the plants in the treatment group was also significantly larger than that of the control group. This was measured by scanning the leaves and calculating their area. The larger leaf area in the treatment group suggests that the plants were able to capture more light energy, which contributed to their faster growth.

The results of the study indicate that the treatment used in this study has a positive effect on the growth of the plant species. The treatment group showed a clear advantage over the control group in terms of both growth rate and leaf area. These findings suggest that the treatment could be used to improve the growth of similar plant species in agricultural settings.

Further studies are needed to determine the long-term effects of the treatment and to identify the specific mechanisms by which it promotes growth. This study provides a foundation for future research in this area.

1.4 Conclusions and discussion

The study concluded that the treatment significantly increased the growth rate and leaf area of the plant species. This finding is important for understanding the effects of the treatment and for developing strategies to improve plant growth in agriculture.

References

**Bourne – Guthram Water Main, Lincolnshire
BGWM 07**

Lithic Materials: Assessment

Report by Jim Rylatt – January 2008

1.0 Introduction

This report concerns an assemblage of lithic material recovered during an archaeological monitoring of a pipeline route between Bourne and Guthram, Lincolnshire. A total of 63 pieces of struck or modified flint were retrieved. The items with diagnostic traits were indicative of activity extending from the late Mesolithic, throughout the Neolithic and potentially into the early Bronze Age.

2.0 Method of study

All of the artefacts that were submitted were physically examined in order to create an archive catalogue. The attributes of each piece were noted to determine its position in the reduction sequence, any observable characteristics of the reduction technology and an assessment of its functional potential. The catalogue also records the presence of patination, cortex, and whether any piece has been burnt. Additionally, metrical data was recorded for complete flakes, and each piece was weighed. Selected artefacts were also examined with a x3 hand-lens to determine whether there was any evidence of localised modification indicative of use.

3.0 Worked flint

3.1 Raw materials

All of the struck lithic artefacts were produced from flint. Surviving cortical surfaces are thin and abraded indicating that the raw materials were derived from secondary deposits. The latter consist of water-transported pebbles and cobbles, which form river terrace gravels or glacio-fluvial sheet deposits.

3.2 Condition

The collection contains four pieces of flint with recorticated surfaces and another 24 pieces that have some degree of patination. There is no clear correlation between the development of a patina and the relative age of different elements of the assemblage. The formation of a surface patina is therefore likely to result from localised variations in soil chemistry.

The assemblage contains five pieces of burnt flint and another three that may have been altered by fire (12.7% of the flint). There is no concentration of burnt material; these eight pieces were recovered from seven different contexts. Nevertheless, the identification of burnt flint provides an indication that several hearths were created within the immediate environs of the pipeline route.

Only six pieces of flint exhibited any clear evidence of post-depositional damage suggesting that a large proportion of the assemblage was recovered from primary contexts.

3.3 Composition of Assemblage

Insights into the chronology of prehistoric activity are provided by various elements of this collection. A utilised bladelet (S.F. 26) exhibits traits indicative of a late Mesolithic industry,

the piece having been detached from a carefully curated core. Another eleven pieces of worked flint have morphological attributes of the blade and bladelet production that is characteristic of both Mesolithic and early Neolithic technologies, but have insufficient indicators to establish a more precise chronology. These artefacts include a serrated blade (S.F. 3), a retouched blade (S.F. 64), a utilised blade (S.F. 38) and a scraper (S.F. 1).

Another eleven pieces have morphological attributes that distinguish early Neolithic industries. These traits include the creation of parallel-sided pieces (sometimes observed as scars of earlier removals), relatively careful platform edge preparation and removal from curated cores, which tend to have several platforms worked in a controlled, but less structured manner than Mesolithic cores. This group of material includes two serrated blades (S.F.s 18 and 22), a utilised blade (S.F. 19), a core (S.F. 20) and a leaf-shaped arrowhead (S.F. 60). The collection also contains five pieces with attributes that are broadly indicative of flint working during the Neolithic.

The collection contains one piece of worked flint that can be identified as being specifically of late Neolithic manufacture. This was a triangular arrowhead (S.F. 65), which is probably a derivative or debased form of the much more common oblique projectile points. There are also 19 pieces of worked flint with morphological traits typical of late Neolithic to early Bronze Age industries. This group of artefacts includes three flake cores, (S.F. 11, S.F. 17 and S.F. 57), a combination tool (S.F. 69 – possibly a combined scraper/knife/piercer) and a retouched flake (S.F. 13). The remainder of the identifiable late Neolithic to early Bronze Age lithic material consists of 14 flakes, which have traits associated with these industries, such as broad butts, the use of hard hammers and a tendency for pieces to be short relative to their width.

4.0 Discussion

This assemblage of worked flint was collected from a section of the pipeline route with a significant number of archaeological features that were primarily Romano-British in date. The excavated area was a narrow, elongated transect 9m wide and approximately 340m long. Only 63 pieces of worked flint were recovered, which constitutes a very low density of lithic material equating to one piece in every 48 square metres. Furthermore, it is evident that the collection is a palimpsest reflecting activity that spans several millennia; potentially beginning in the later 8th/7th millennium BC and continuing until the 2nd millennium. Consequently, it is clear that most, if not all, of this material constitutes a background scatter reflecting the unstructured discard or deposition of lithic material by many generations of prehistoric people who have inhabited and utilised this landscape.

The analysis of the collection provided an indication of only one possible location for any contemporary prehistoric settlement or focus of activity. This evidence consisted of a group of 13 pieces of struck flint that were recovered from the fill, (104), of sub-oval pit [105]. Eight of these artefacts had datable morphological traits. Seven formed a coherent group reflecting activity occurring within the early Neolithic period (4th millennium BC) (Table 1). The eighth piece had attributes most commonly associated with late Neolithic to early Bronze Age industries, but an earlier Neolithic date cannot be discounted, in which case the pit could be an early Neolithic feature. Alternatively, it is possible that all of these lithic artefacts were residual pieces incorporated into the fill of a later feature. These pieces could therefore have initially been elements of an early Neolithic surface scatter that was focussed upon the northern end of the excavated area. Several other pieces of early Neolithic flint were recovered from adjacent features and deposits, including a blade-like flake from ditch fill (431) and a core, S.F. 20, from (326), the alluvial deposit into which pit [105] was cut. An unstratified leaf-shaped arrowhead, S.F. 60, was also recovered from the same area. However, although this piece is of early Neolithic date, it is a projectile point and thus it may have no direct relationship with any adjacent lithic material.

Lithic scatter
L.Mes -

Table 1: The archaeological contexts from which the datable lithic materials were recovered.

Context No.	Small Find No.	Date	Type
001	58	✓ L.Mes/E.Neo	b-l flake
001	60	✓ E.Neo	leaf-shaped arrowhead
001	57	✓ L.Neo/EBA	core
100	63	✓ Mes/(E.Neo)	burin
100	64	✓ Mes/E.Neo	retouched blade
100	1	✓ L.Mes/E.Neo	scraper
100	66	✓ L.Mes/E.Neo	b-l flake
100	18	✓ E.Neo	serrated blade
100	19	✓ E.Neo	utilised blade
100	22	✓ E.Neo	serrated blade
100	20	✓ Neo	chunk
100	65	✓ L.Neo	triangular arrowhead
100	17	✓ L.Neo/EBA	core
100	29	✓ L.Neo/EBA	flake
100	62	✓ L.Neo/EBA	flake
100	69	✓ L.Neo/EBA	combination tool
103	3	✓ L.Mes/E.Neo	serrated blade
103	2	✓ L.Neo/EBA	flake
104	37	✓ Mes/E.Neo	b-l flake
104	42	✓ Mes/E.Neo	flake
104	39	✓ E.Neo	b-l flake
104	41	✓ E.Neo	b-l flake
104	47	✓ E.Neo	b-l flake
104	38	✓ E.Neo/Neo	utilised b-l flake
104	45	✓ Neo	flake
104	40	✓ L.Neo/EBA	flake
108	25	✓ L.Mes/E.Neo	bladelet
110	21	L.Neo/BA	flake
112	4	✓ L.Neo/EBA	flake
124	11	✓ L.Neo/BA	core
128	8	✓ L.Neo/EBA	flake
142	12	✓ E.Neo	flake
148	13	✓ L.Neo/EBA	retouched flake
178	26	✓ L.Mes	utilised bladelet
178	27	✓ L.Mes/E.Neo	b-l flake
199	6	✓ L.Neo/EBA	flake
202	5	✓ L.Neo/EBA	flake
208	14	✓ Neo	flake
292	55	✓ E.Neo	blade
326	20	✓ E.Neo	core
339	35	✓ Neo	flake
339	34	✓ L.Neo/BA	flake
354	31	✓ L.Neo/EBA	flake
358	30	✓ L.Neo/EBA	flake
377	23	✓ L.Neo/EBA	flake
389	24	✓ E.Neo	b-l flake
431	67	✓ L.Mes/E.Neo	b-l flake
431	51	✓ L.Neo/EBA	flake

allusion

FILL OF [104] PIT

FILL DITCH

DITCH

D.

D

P

DIST

D

NAT. F.

D

D

VOID NO.

D

ALU

D.

P

P

P/H.

P

D

BGWM 07: Catalogue of worked and modified lithic materials - key to abbreviations

Red. Seq.	(reduction sequence) (P) (S) (T)	Primary Secondary Tertiary
Date	Mes L.Mes E.Neo L.Neo EBA BA	Mesolithic Late Mesolithic Early Neolithic Late Neolithic Early Bronze Age Bronze Age
Size	no	complete – (if so, dimensions given*) Incomplete
Recort	(recorticated)	Yes Partly
Cortex	t r a	Thin Rounded Abraded
Burnt	poss	Yes Possible
Retouch	u/w poss prob	yes use-wear possible probable
Platf	(platform) comp cort	complex cortical
Bulb	pron sm.pr v.sm.pr	pronounced small pronounced very small pronounced
Term	(termination) feath hinge step	feathered hinged stepped
P-dep damage	(post-depositional damage)	Yes No
Comments	b-l dep dist frag irreg lat neg platf/platfs poss prob prox recort signif v	blade-like deposition/depositional distal fragment irregular lateral negative platform/platforms possible/possibly probable/probably proximal recortication/recorticated significant very

*Measurements are given only for complete flakes and complete tools. The first figure relates to the maximum length, measured perpendicular to the striking platform; the second to maximum breadth, measured at a right angle to the length; the third to maximum thickness. Figures for the percentage of cortex relate to the total area of the dorsal surface and platform or, the total surface of a core.

APPENDIX 4

**The Roman Pottery from Bourne-Guthram Water Mains, Watching Brief and
Excavation (BGWM07) for Lindsey Archaeological Services
Accession number 2007.109, (TF 11239 21909)**

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The pottery was retrieved from 34 contexts from an 'L' shaped excavation area. The pottery totalled 349 sherds weighing 4164g with an average sherd weight of 11.93g. No problems are anticipated for future storage. The pottery has been recorded according to the guidelines laid down by the Study Group for Roman Pottery (Darling, 2004) and to conform to Lincolnshire County Council's Archaeology Handbook. Pottery codes used are those developed for the recording system of the City of Lincoln Archaeology Unit, with sherd count and weight in grams as the measures. Complex fabrics have been identified using a x20 binocular microscope. The site archive has been collated using Microsoft, Excel (BGWM04.XLS), and forms part of the database of Lincolnshire Roman sites saved as Unix, data files. Site analysis was conducted using context information, a matrix, a site summary and plans provided by Gavin Glover using an Access database. The pottery was archived by BJP and the site report was compiled by the IMR under supervision.

Dating

Phase 1

This phase contained various natural deposits. None of the contexts attributed to this phase contained Roman pottery.

Phase 2- Late 1st- 2nd century AD

Eleven contexts containing Roman pottery at the north end of the site were attributed to Phase 2

context	F Type	Feature No	date range	sherds	grams	sh/wt	join	illust	comments
118	Pit	119	L1-2C	2	9	4.5			
128	Pit	129	L1-2C	1	14	14			
130	Post Hole	131	RO	1	38	38			
352	Pit	175	RO	2	7	3.5			
354	Pit	355	RO	6	38	6.33			
356	Pit	357	RO	3	38	12.67			
358	Post Hole	359	RO	1	23	23			
377	Post Hole	378	RO?	1	1	1			
383	Gully	384	RO?	1	3	3			
385	Pit	386	RO	1	4	4			
415	Pit	119	E-M2	9	129	14.33		1	Stamp
			TOTAL	28	304	10.86			

The pottery was from pits, postholes and a single gully probably associated with one or more buildings or structures. Little pottery was retrieved from these features. Despite the relatively low sherd weight there are few sherds which appear worn. Eight of the sherds showed signs of sooting or burning from use of vessels on the fire. There was little evidence of abrasion amongst the sherds from this phase. The vessel forms which could be discerned were mostly closed forms, probably all jars in grey reduced sandy or shell-tempered South Lincolnshire fabrics, most probably from production sites in the Bourne area (Precious n.d.). Only one vessel was of note, an unusual stamped mortarium from context 415 (No 1). The flange of this vessel suggests a date of early to mid 2nd century. The vessel is discussed further in the Catalogue below.

Phase 3- Mid 2nd- Early 3rd Century AD

Twenty contexts containing Roman pottery were attributed to Phase 3. Of these contexts eighteen were located at the north of the site and a further two contexts (233 and 430) were located to the south-west of the site. It was noteworthy that of the 301 sherds 91 were abraded or heavily abraded. Evidence of burning or sooting was evident on 24 sherds in the group, probably all jars. The pottery has a reasonably low average sherd weight and as such probably represents limited ceramic usage in the immediate area.

context	F Type	Feature No	date range	sherds	grams	sh/wt	join	illust	comments
104	Pit	105	RO?	1	1	1			
108	Ditch	109	2C	1	3	3			
112	Ditch	113	2C	22	189	8.6			1 -smash
116	Ditch	117	ML2	5	200	40		3	Near profile
124	Ditch	125	2C	11	109	9.91			
148	Ditch	149	1-2C	2	1	0.5			
199	Ditch	198	2C	6	65	10.83			
201	Ditch	198	RO	2	2	1			
202	Ditch	198	RO?	2	1	0.5			
205	Ditch	204	RO	50	94	1.88			V fragmented
233	Ditch	232	2C	2	13	6.5			
339	Ditch	109	RO	11	64	5.81			
340	Gully	341	3C?	4	37	9.25			
373	BS	374	RO	1	1	1			
413	Ditch	198	RO	1	52	52			Large vessel
430	Ditch	234	RO	1	6	6			
431	Ditch	432	L2-E3*	72	948	13.17	435	4;5;6	*Possible Iron Age or 12thC AD vessel No 6- see below
433	Ditch	434	L2-3	3	52	17.33			
437	Post Hole	438	L2-M3	22	301	13.68			

440	Ditch	432	ML2	58	1201	20.71			Smash
			TOTAL	277	3340	14.71			

Northern area

The vast majority of the pottery from this phase was retrieved from ditches at the northern end of the site. The most notable group was 431, fill of ditch 432. Contexts 205 and 204 also notably contained smashed vessels

116- Fill of Ditch 117

This context is a small group, illustrated from this context is a large bowl. This vessel dates the context to the mid to late 2nd century

431- Fill of Ditch 432

Although the context contains the majority of the Nene Valley colour-coat from the site, a meagre 4 out of 6 sherds, and one of only two samian sherds from the site it is also predominantly jar based assemblage with local shell and reduced sand-tempered wares most abundant. A small quantity of Nene Valley Grey Ware present in this group may also have functioned as tableware for the occupants of the sites (Precious 2001a). Illustrated from this group is a dish in a light oxidised fabric (No 2) which is also present in context 435, a fragment of a strainer (No 4) and a shell-tempered reeded rimmed bowl from Bourne (No 5) are illustrated. An unusual shell tempered jar rim is also illustrated (No 6), the date of this vessel is uncertain options include a range of dates from the middle Iron Age to being an intrusive 12th century AD vessel. Although a range of dates are possible it has been considered to possibly be Iron Age. The illustrated vessels are discussed in greater detail in the catalogue, below. As such this group should date to the late 2nd to early 3rd century AD.

South-eastern area

Ditches 149 (148) contained two abraded cream fabric fragments and ditch 204 (205) produced a scrap of fired clay and a rim sherd from a shell-tempered jar or bowl.

South-western area

From the southern area of the site ditch 234, context 430 produced a single sherd of Bourne shell-tempered ware. Ditch 232 (233) contained a shell-tempered sherd and the sites only other scrap of samian.

Phase 4- Mid 2nd to Mid 3rd century AD onwards?

context	F Type	Feature No	date range	sherds	grams	sh/wt	join	illust	comments
110	Ditch	111	M2-M3	3	8	2.67			

Three sherds from context 110 is the only group attributed to this phase and they are broadly dated to the mid 2nd- 3rd century.

Modern Service Trench 436, Context 435

context	F type	Feature No	date range	sherds	grams	sh/wt	join	illust	comments
435	Modern Services	436	ML2-E3	5	151	30.2	431	2	Profile

A small group of pottery was retrieved from a modern services trench, a dish from this context was selected for illustration from this context (No 2) which joins with context 431.

Unstratified Pottery- Context 100

context	F	Feature No	date range	sherds	grams	sh/wt	join	illust	comments
100	U/S	100	ML2-E3	36	361	10.03			Unstratified

The pottery from unstratified context 100 is very similar in composition to the material from the rest of the site both in range of fabrics and forms

Overview of the Fabrics

Fabric	Code	Sherds	%	Grams	%
Ceramic building material?	CBM?	1	0.29%	48	1.15%
Cream Ware	CR	3	0.86%	11	0.26%
Fired clay?	FCLAY?	8	2.29%	18	0.43%
Grey ware	GREY	34	9.74%	314	7.54%
Coarse grey ware	GREYC	5	1.43%	117	2.81%
Fairly fine grey ware	GRFF	2	0.57%	8	0.19%
Grog-tempered ware	GROG	1	0.29%	2	0.05%
Grey with dark grey core	GRSAN	6	1.72%	116	2.79%
Grey with brown surfaces	GYBN	7	2.01%	164	3.94%
Grey with minimum shell	GYMS	1	0.29%	37	0.89%
Mortaria	MORT	1	0.29%	110	2.64%
Nene Valley colour-coat	NVCC	6	1.72%	28	0.67%
Nene Valley grey colour-coat	NVGCC	1	0.29%	5	0.12%
Nene Valley grey ware	NVGW	13	3.72%	96	2.31%
Nene Valley sand-tempered grey ware	NVGY	25	7.16%	195	4.68%
Oxidised ware	OX?	4	1.15%	9	0.22%
Bourne kiln oxidised ware	OXB	1	0.29%	13	0.31%
Fine oxidised ware?	OXF?	1	0.29%	3	0.07%
Light coloured oxidised ware	OXL	5	1.43%	149	3.58%
Central Gaulish samian	SAMCG	2	0.57%	5	0.12%
Shell-tempered ware	SHEL	4	1.15%	58	1.39%
Fine shell-tempered ware	SHELF	3	0.86%	23	0.55%
South Lincs grey ware	SLGY	61	17.48%	1444	34.68%
South Lincs grey ware?	SLGY?	3	0.86%	9	0.22%
South Lincs grey ware variant	SLGYV	2	0.57%	31	0.74%
South Lincs shell-tempered	SLSH	13	3.72%	77	1.85%
Bourne South Lincs shell-tempered	SLSHB	28	8.02%	549	13.18%
Bourne South Lincs shell-tempered?	SLSHB?	27	7.74%	194	4.66%
South Lincs fine shell-tempered	SLSHF	51	14.61%	95	2.28%
Vesicular ware	VESIC	30	8.60%	236	5.67%

	TOTAL	349	100.00%	4164	100.00%
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The most abundant fabric present was the early South Lincolnshire sand-tempered reduced fabric SLGY and the Nene Valley equivalent NVGY. The miscellaneous GREY fabric was also well represented. Shell-Tempered Wares almost equally prevalent with the South Lincolnshire and Bourne fabrics being most common. One oxidised sand tempered sherd was highlighted during archiving (context 431) as possibly a Roman sand tempered Bourne product due to the similarity of the vessel to some of the products of the medieval industry (J. Young pers. com.). This raises the possibility that many of the grey reduced wares may have been made in the local area. Small quantities of the NVCC and NVGW fabrics were present.

The range of fabrics is typical of other groups from this area perhaps with a slightly lower quantity of finewares than some of the other rural assemblages from the area perhaps suggesting low status occupation.

Overview of the Forms

Form	Code	Sherds	%	Grams	%
Undiagnostic		54	15.47%	219	5.26%
Samian cup Dr 33	33	1	0.29%	2	0.05%
Samian cup	C	1	0.29%	3	0.07%
Open form	OPEN?	2	0.57%	19	0.46%
Bowl as samian Dr 36	B36	5	1.43%	184	4.42%
Bowl as samian Dr 36?	B36?	1	0.29%	14	0.34%
Cordoned bowl	BCOR	2	0.57%	6	0.14%
Bowl with no neck	BNN	1	0.29%	186	4.47%
Reeded -rim bowl	BREED	1	0.29%	36	0.86%
Groove rim dish	DGR	1	0.29%	6	0.14%
Closed form	CLSD	65	18.62%	507	12.18%
Beaker	BK	3	0.86%	7	0.17%
Cornice rim beaker	BKCOR	1	0.29%	1	0.02%
Flagon	F	1	0.29%	10	0.24%
Jar	J	57	16.33%	1434	34.44%
Jar or bowl	JB	51	14.61%	116	2.79%
Curve rim jar or bowl	JBCUR	2	0.57%	22	0.53%
Jar or beaker	JBK	2	0.57%	12	0.29%
Large jar or bowl	JBL	8	2.29%	193	4.63%
Wide mouth jar or bowl	JBWM	4	1.15%	160	3.84%
Cordoned jar	JCOR	22	6.30%	189	4.54%
Curve rim jar	JCUR	46	13.18%	319	7.66%
Everted rim jar	JEV	8	2.29%	73	1.75%
Unusual Jar type	JX	1	0.29%	22	0.53%
Large jar	JL	5	1.43%	174	4.18%
Storage jar	JS	3	0.86%	140	3.36%

Hook rim mortarium	MHK	1	0.29%	110	2.64%
	TOTAL	349	100.00%	4164	100.00%

This small assemblage is extremely heavily weighted towards jars, large bowls and other closed vessels typical of a very functional deposit. Fragments of cup, flagons, beakers small bowls and dishes were scarcer than on the majority of sites in the area (Darling 2008, 2005, 1999, Darling and Knight 1995, Precious 2005, 2004, 2002, 2001a, 2001b). The interpretation of activity in the northern area as an area of work or more basic settlement would fit with the poor range of forms present. Even the assemblage from the Saltern at Morton Fen, to the north of this site, produced a much greater range of ceramics (Precious 2001a). This assemblage is much more similar in composition to groups from Wherry's Lane (Darling 2008) and Guthram Gowt (Precious 1998).

Discussion

This site is a useful addition to a number of sites in the Bourne area have been excavated as a result of developer funded archaeology in the area around Bourne (Darling 2008, 2005, 1999, Darling and Knight 1995, NA 2001, Precious 1998 etc.) the most notably in the area around Bourne Grammar School where a pottery kiln and dense settlement was located (Darling 2005, 1999, Precious 2005, 2004, 2002, 2001b, n.d., JSAC 2000).

This site, located to the east of the Lincolnshire Car Dyke, to the north-west of the Bourne Grammar School sites and c. 1km to the north-east of the Mill Drove site which produced evidence of late Iron Age (Darling and Knight 1995). To the north of the Mill Drove site ceramic building material and later Roman pottery found by The Fenland Survey was interpreted as evidence for the presence of a Roman villa. The evidence from the Mill Drove site is that there was a settlement focus located to the west from the excavation area which, in the Roman period, was across the Car Dyke from this site. In contrast the occupation in the vicinity of the Grammar School this site produced a limited range of ceramics and is more typically a 'rural' assemblage.

It should be noted that there are no groups within this assemblage which appear to date to later than the middle of the 3rd century.

The pottery is in good condition and should be retained for further work. Analysis of the stamped mortarium sherd and the local coarsewares by thin section and ICPS analysis should be considered as part of any future research project into pottery from the Bourne area.

Catalogue

No 1 (D3) A hook-rimmed mortarim in an unusual white-slipped fabric. Although the form is likely to be of an early-mid 2nd century date the fabric of the vessel is extremely unusual and atypical of other mortaria known from the area.

The vessel has an oxidised mid orange fabric with a grey core with-
Quartz- moderate sub-angular 0.5-1mm

Fe (orange/red where oxidised)- moderate sub-angular 0.2-2.5mm

Calcareous sparse, sub-angular 0.2- 3.5mm

The mortarium has a worn patchy white slip which appears to have sparse silver mica

The mixed trituration grits are 2-5mm angular ?quartzite/sandstone, quartz and flint.

Further analysis might help to establish a likely source for this vessel.

K.F. Hartley writes 'When complete the stamp probably reads VATOR. It is likely that it is a die of Viator, who had many dies, several workshops and may be more than one individual. The potter using the die concerned worked at Aldborough, Yorkshire (Jones 1971, 65-67). All but one of his mortaria there are in the cream fabric produced there, but there is good evidence to indicate that they also produced a red-brown fabric with cream slip (ibid and nos. 14-16; Snape, Bidwell and Croom 2002, 89). AD100-140'.

No 2 (D1) A full profile of a dish in a lightly oxidised (or underfired) fine sandy OXL fabric. The dish form loosely mimics the Samain form 36. This vessel is present in contexts 431 and 435.

No 3 (D2) A large bowl with no neck in the SLGY fabric. The vessel has scored lines forming a cordon effect with a faint zone of diagonal line burnishing.

No 4 (D6), A strainer in a GREY fabric with a curved rim. Strainers were also produced at the kiln at the Bourne Grammar School kiln in the shell tempered fabric (Precious n.d., Samuels 1983, Fig 214. 65) an example in grey ware with a similar curving body was found during excavations at Sapperton from a layer attributed a mid 3rd century date (Samuels n.d. Phase W, A29)

No 5 (D5) A reeded rimmed bowl in a Bourne shell-tempered fabric (SLSHB). This form is known from the kiln (Precious n.d., Samuels 1983 ?Fig214,63) and is discussed by Precious in the Morton Saltern report (2001a Fig 42.23, p140).

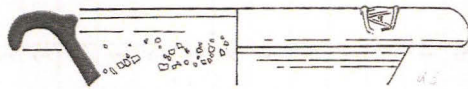
No 6 (D4) This vessel is unusual and its identification is problematic. The sherd was shown to Jane Young who considered it possible that the sherd may be post Roman in date (e.g. French et al. 1993 Fig 41.25) but it was not associated with any other vessels of this period so has been considered to be of an earlier date. Superficially this finely shell tempered jar rim (JX) has some similarities with the typical 'Dalesware jar' (Gillam 1970, Type 157) but is handmade and has a thumb tip impression on the rim. This rim finger tipping evokes Middle Iron Age Scored Ware types (eg Elsdon 1993 D13a No. 8) and the splayed rim, although not a common feature of Iron Age pottery in the area, might find a parallel with the Middle Iron Age 'Fiskerton jar' form (Elsdon 1993, C5). The proximity to the Bourne Mill Drove site (Darling and Knight 1995, 5-6, Elsdon 1993, C18) where quantities of Middle and Late Iron Age pottery were found suggests that this rim sherd is probably an Iron Age sherd re-deposited in this Roman feature. The form itself, merging elements of the splayed rim and the 'finger-tipped' decoration,

is an interesting addition to our knowledge of Iron Age pottery in the area and reminds us that it is likely that land in the area was occupied from at least the 5th century BC onwards.

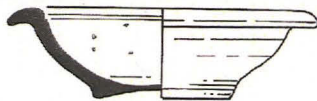
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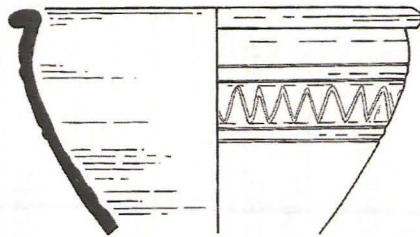
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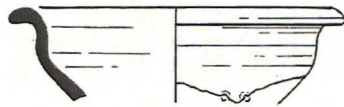
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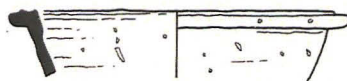
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5



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The Pottery from BGWM07, pottery 1:4, mortarium stamp 1:1

The Roman Pottery from Bourne-Guthram Water Mains, Watching Brief and Excavation (BGWM07) for Lindsey Archaeological Services Acc. 2007.109 (TF11239 21909)- Archive BGWM07.xls02/12/2008

CONTEXT	FABRIC	FORM	DEC	VESS	ALTER	DRAW	COMMENTS	JOIN	SHS	WT
100	SLGY	J					BS		1	7
100	VESIC				BURNT		BS BN EXT; DKGRY INT; PROB SHEL		1	7
100	VESIC		HM?		VABR		FRAG; COAR; LEACH		1	8
100	VESIC	JCUR		1	ABR		RIM BS SOME ODD INCS		2	14
100	VESIC	CLSD			LEACH		BS RDBN DKGY CORE COAR Q		1	7
100	SLSHB?				VBURNT		BS GY ; NO OBV PUNC		1	9
100	SLSHB?			3			BSS BLK; NO OBV PUNC		3	27
100	SLSHB?	JEV			BURNT		RIM FRAG BLK; NO OBV PUNC		1	7
100	SLSH				ABR		FRAG; RDBN; PUNC		1	2
100	ZDATE						ML2-E3			
100	SLGY	JCUR					RIM		1	5
100	SLSHB	J		1			GYBN		3	24
100	NVGW	JBK	ROUZ				BS BLK EXT		1	9
100	NVGW	CLSD		1?	ABR		BSS CARIN		4	17
100	NVGCC	BK					BS POSS NVCC BUT GY CORE		1	5
100	GYBN	JL		1	ABR		BSS; LGE BLK INC		3	126
100	GYBN	J			VBURNT		BS		1	6
100	GRSAN	JL			VABR		BSS DK GRY CORE PITTED		2	48
100	GREY	J					BS HIGH FIRED		1	9
100	GREY	J		1			BSS		3	9
100	SLGY	JEV					RIM		1	6
100	SLGY?				ABR		BSS MISC		3	9
104	ZDATE						RO?			
104	VESIC				VABR		FRAG		1	1
108	GREY	J					BS		1	3
108	ZDATE						2C			
108	ZZZ						GREY ONLY			
110	GYBN	J					BS RDBN CORE		1	5
110	NVGW	CLSD					BS		1	2
110	OX?						BS RDBN SILTY		1	1

The Roman Pottery from Bourne-Guthram Water Mains, Watching Brief and Excavation (BGWM07) for Lindsey Archaeological Services Acc. 2007.109 (TF11239 21909)- Archive BGWM07.xls02/12/2008

CONTEXT	FABRIC	FORM	DEC	VESS	ALTER	DRAW	COMMENTS	JOIN	SHS	WT
110	ZDATE						M2-M3			
112	NVGY	JCOR	SLA	1	SMASH		FTMS BSS SHLDR; RANDOM SLA		22	189
112	ZZZ						HIGH FIRED BLK SURFS GY CORE			
112	ZDATE						2C			
116	GREY	CLSD			VABR		BS COARSE Q SAMPLE <9>		1	7
116	SLGY	BNN	BDL			D2	DIAM		1	186
116	SLGY	JCUR		1?			RIM FRAGS		3	7
116	ZDATE						ML2			
118	ZDATE						L1-2C			
118	FCLAY?						FRAG RDBN		1	3
118	SLGY	J					BS		1	6
124	SLSH	JBL		1?	ABR		BSS FRAGS RDBN PUNC		2	9
124	ZDATE						2C			
124	SLSHB?	J		1			BASES BSS FLAKE GY NO OBV PUNC		5	82
124	FCLAY?				BURNT		FRAG		1	4
124	VESIC				OOTEX		BASE SILTY PROB SHEL		1	11
124	NVGY	J		1			BSS BLK EXT GY INT		2	3
128	GYBN	JCUR					BOURNE		1	14
128	ZDATE						L1-2C			
130	VESIC	JBL	WM?		VBURNT		BS PROB SHELL VITRIF		1	38
130	ZDATE						RO			
148	CR			1	VABR		FRAGS		2	1
148	ZDATE						1-2C			
199	NVGY	CLSD					BS BLK RDBN MARGINS		1	3
199	ZDATE						2C			
199	SHEL	JBL			LEACH		BS NECK CORDON BLK		1	39
199	SLSHB?	J		1			BSS GYBN NO OBV PUNC		4	23
201	SLSHF						BOURNE		2	2
201	ZDATE						RO			
202	SHELF			1	VABR		FRAGS		2	1

The Roman Pottery from Bourne-Guthram Water Mains, Watching Brief and Excavation (BGWM07) for Lindsey Archaeological Services Acc. 2007.109 (TF11239 21909)- Archive BGWM07.xls02/12/2008

CONTEXT	FABRIC	FORM	DEC	VESS	ALTER	DRAW	COMMENTS	JOIN	SHS	WT
202	ZDATE						RO?			
205	ZZZ						PROB 2C+			
205	SLSHF	JB		1	VABR		RIM FRAG FRAGS; FRIABLE		49	93
205	ZDATE						RO			
205	FCLAY?				VABR		FRAG		1	1
205	ZZZ						1 FRAG BONE			
233	SAMCG	C			VABR		FTRG		1	3
233	SLSH	CLSD			EACH		BS BLK MORE PUNC + 1 VLGE INC		1	10
233	ZDATE						2C			
339	SLSHB				X		BS FLAKED RDBN MIN SHEL		1	9
339	ZZZ						2C+?			
339	ZDATE						RO			
339	VESIC				VABR		FRAGS BLK SANDY		5	9
339	SLSHB?	J		1			BSS J; BLK NO OBV PUNC		2	14
339	SLSH	JBL			ABR		BS GREY MOD PUNC		1	29
339	FCLAY?				RNT		FRAG RDBN CF BOURNE Q		1	2
339	SLSHB?				VABR		FLAKE MIN PUNC RDBN		1	1
340	SLSH	CLSD					BS RDBN ABUN PUNC		1	7
340	ZZZ						DATE ON GREY			
340	GREY	JBL			ABR		BS		1	25
340	GROG				VABR		FRAG BURNT		1	2
340	SLSH						BS BLK MIN PUNC		1	3
340	ZDATE						3C?			
352	SLSH				BURNT		FLAKE MOD PUNC; RDBN		1	4
352	SLSH				ABR		BS GYBN MOD PUNC SAMPLE <7>		1	3
352	ZDATE						RO			
354	SHEL				ABR		BS FLAKED RDBN MIN SHEL		1	11
354	ZDATE						RO			
354	SLSHB?	CLSD					BS BLK NO OBV PUNC		1	4
354	SLSHB?	CLSD			SOOTIN		BS RDBN MIN PUNC		1	8

The Roman Pottery from Bourne-Guthram Water Mains, Watching Brief and Excavation (BGWM07) for Lindsey Archaeological Services Acc. 2007.109 (TF11239 21909)- Archive BGWM07.xls02/12/2008

CONTEXT	FABRIC	FORM	DEC	VESS	ALTER	DRAW	COMMENTS	JOIN	SHS	WT
354	SLSH				SOOTIN		FRAG MIN PUNC RDBN		1	1
354	SHEL	CLSD			VBURNT		BS PALE BN NO OBV PUNC		1	7
354	ZZZ						2C+?			
354	SLSHB	CLSD					BS DKBN		1	7
356	ZZZ						POSS 2C+			
356	GREY	J					CP		1	31
356	SLSH			1?	BURNT		FLAKES; BN		2	7
356	ZDATE						RO			
358	SLSHB	CLSD			LEACH		BS RDBN		1	23
358	ZDATE						RO			
358	ZZZ						PROB 2-3C			
373	OXL	JB					BS		1	1
373	ZDATE						RO			
377	FCLAY?						FRAG		1	1
377	ZDATE						RO?			
383	FCLAY?				VABR		FRAG		1	3
383	ZDATE						RO?			
385	SLSHB	JCUR					RIM FRAG BLK NO OBV PUNC		1	4
385	ZDATE						RO			
385	ZZZ						PROB 2-3C			
413	SLSHB	JBL			SOOTIN		BS; PALE BN		1	52
413	ZDATE						RO			
413	ZZZ						PROB 2-3C			
415	MORT	MHK	NAME		BURNTR	D3	ATOR;<49>		1	110
415	SLSHB?	CLSD		1?	VABR		BASE FRAGS RDBN SOME PUNC		8	19
415	ZDATE						E-M2			
415	ZZZ						<49>			
415	ZZZ						<49>			
430	SLSHB	CLSD					BS PUNC BLK		1	6
430	ZDATE						RO			

The Roman Pottery from Bourne-Guthram Water Mains, Watching Brief and Excavation (BGWM07) for Lindsey Archaeological Services Acc. 2007.109 (TF11239 21909)- Archive BGWM07.xls02/12/2008

CONTEXT	FABRIC	FORM	DEC	VESS	ALTER	DRAW	COMMENTS	JOIN	SHS	WT
431	GREY	STR				D6	BASE		1	47
431	SLGY	J		2			BSS MISC		2	18
431	CBM?				VABR		FRAG ORANGE FAB		1	48
431	FCLAY?						FRAG COARSE SAMPLE <13>		1	1
431	VESIC	CLSD		1			BSS J ORIGIN SHEL BOURNE? BLK		2	22
431	SLGY	JCUR		1	BURNT		RIM BS		2	12
431	SLGYV	J			SOOTEX		BS COARSER VAR		1	20
431	SLGYV	JB					RIM FRAG; MORE Q		1	11
431	SLSH				VABR		FLAKE BLK SOME PUNC SAMPLE <13>		1	2
431	SLSHB	BREED				D5	NO OBV PUNC		1	36
431	SLSHB	CLSD					BSS NO PUNC; RDBN		2	12
431	SLSHB	J		1	SOOTIN?		BASE NAROOV 100%; BLK; NO PUNC		2	135
431	SLSHB	JEV		1	LEACH		RIMS BSS; BLKBN NO OBV PUNC		5	47
431	SLGY	JBWM		1			CORE; TALL NECK		4	160
431	SLSHB						FRAGS MIN PUNC; GYBN		3	3
431	ZZZ						VAR			
431	VESIC	CLSD			SOOTEX		BS CAORSE SAND SAMPLE <13>		1	4
431	VESIC	JCUR		1	SOOTR		SHELL		8	79
431	ZDATE						L2-E3			
431	ZZZ						COARSER SHEL FORM DIFF			
431	ZZZ						PRODUCT			
431	GREY	CLSD		1			BSS		7	43
431	ZZZ						4 BONE FRAGS			
431	SHELF	JX	HM; FT		LEACH	D4	JFISK?		1	22
431	SLSHB				BURNT		BS NO PUNC; GYBN		1	5
431	GRSAN	J					<13>		1	21
431	GREY	CLSD		1			BSS BLK SOME CALCAREOUS INC		3	14
431	GREY	J					BS SAMPLE<13>		1	5
431	GREY						BS		1	2
431	GREYC	CLSD					BS		1	5

The Roman Pottery from Bourne-Guthram Water Mains, Watching Brief and Excavation (BGWM07) for Lindsey Archaeological Services Acc. 2007.109 (TF11239 21909)- Archive BGWM07.xls02/12/2008

CONTEXT	FABRIC	FORM	DEC	VESS	ALTER	DRAW	COMMENTS	JOIN	SHS	WT
431	GREYC	JCUR					RIM FLAT CUR; PALE GRY COARSE Q		1	15
431	GRFF	CLSD					BS 0,2 Q		1	3
431	SLGY	J		2			BSS		2	35
431	GRSAN	J					BS SANDWICH DK GRY CORE		1	39
431	NVCC	BKCOR			VABR		<13>		1	1
431	OXF?	CLSD	ROUZ		VABR		BS POS NVCC NO TRACE CC		1	3
431	SHEL				VABR		FRAG GRY SAMPLE <13>		1	1
431	GRSAN	CLSD					BS DKGRY CORE		1	5
431	OXL	B36?					BASE SAME IN	435	1	14
431	NVCC	DGR			VABR		RIM LWR WALL CC LOST CRFB		1	6
431	OXB	JEV					FS		1	13
431	NVGW	JB	SLA?		VABR		NECK CORDON		1	12
431	NVGW	CLSD					BS		1	3
431	NVGW	CLSD					BS		1	3
431	NVCC	OPEN?		1	VABR		BSS J CC EXT LOST MIN ON INT CRFB		2	19
431	SAMCG	33			ABR		RIM ML2C		1	2
433	NVGW	CLSD			VABR		BS BKGRY CORE		1	6
433	SLSHB	J					BASE STRING RDBN MIN PUNC		1	43
433	ZDATE						L2-3			
433	GRSAN	B36					CORE		1	3
435	ZZZ						LGER Q			
435	ZZZ						CLSD DKGRY SHLDR GROOVE			
435	OXL	B36		1	BURNTR	D1	18 DIAM	431	3	134
435	GRFF	CLSD					SLGY		1	5
435	GREYC	J					BS SHLDR BLK; DENSE Q CF BB1		1	12
435	ZDATE						ML2-E3			
437	VESIC	CLSD					BS RDBN		1	4
437	GREY	CLSD					BASE W CALC VESIC		1	20
437	ZDATE						L2-M3			
437	SLGY	BCOR		1			RIMS UPRIGHT NECK CORDON		2	6

The Roman Pottery from Bourne-Guthram Water Mains, Watching Brief and Excavation (BGWM07) for Lindsey Archaeological Services Acc. 2007.109 (TF11239 21909)- Archive BGWM07.xls02/12/2008

CONTEXT	FABRIC	FORM	DEC	VESS	ALTER	DRAW	COMMENTS	JOIN	SHS	WT
437	NVGW	JBK			ABR		BS		1	3
437	NVGW	CLSD	ROUZ	1			BSS LGE VESS		2	41
437	NVCC	BK					BS CRFB		1	1
437	GYBN	JBCUR					CALCEREIOUS IMCS		1	13
437	GREYC	CLSD	WM	1	ABR		BASES J; HIGH INT KICK		2	85
437	GREY	JCUR		1			RIM BS FLATTER CURVE		2	38
437	GREY	J		1			BSS MIN SANDWICH		2	20
437	GREY	J		1			BSS		2	10
437	GREY	CLSD					BSS MISC		4	23
437	GYMS	CLSD	WM		ABR		BASE HIGH KICK		1	37
440	NVCC	BK			ABR		BS; CRFB		1	1
440	ZZZ						FRAG BONE			
440	ZDATE						ML2			
440	VESIC	CLSD		1			BSS		5	32
440	SLSHB						FRAG MIN PUNC BLK		1	3
440	SLSHB	JS		1	NT		BOURNE		3	140
440	SLGY	JCUR		1?			RIM BSS ANGLED SHLDR		25	131
440	SLGY	JBCUR					RIM THICK BEADED TOP		1	9
440	SLGY	J		1?	SMASH		CORDON		13	846
440	CR	F					BS		1	10
440	OX?				VBURNT		FRAGS BURNT REDBN		3	8
440	GREY	J		1			BSS		2	8
440	FCLAY?				ABR		FRAG; SILTY		1	3
440	SLGY	CLSD		1			BSS BN CORE		2	10

APPENDIX 5

Pottery Archive for Bourne Guthram Water Main, Bourne, Lincolnshire (BGWM07)

Jane Young

context	cname	full name	sub fabric	form type	sherds	weight	part	description	date
100	BOU	Bourne D ware	slightly sandy	jug/jar	1	2	BS	abraded;no glaze	mid 14th to 15th

Ceramic Building Material Archive for
Dorthe Gudmund Water Main, Boston
Lincoln (DCW 107)

APPENDIX 6

Ceramic Building Material Archive for Bourne Guthram Water Main, Bourne, Lincolnshire (BGWM07)

Jane Young

context	ename	full name	fabric	frags	weight	description	date
100	DRAINDISC	Drain (general) (discarded)	fine oxid	1	11	field drain	19th to 20th
100	TEG	Tegula	OX/R/OX;fine fabric	1	27	possibly cut to form a Tessera 23mm square;fairly fresh	Roman
430	FIRED CLAY	fired clay	fine- medium sandy	1	5	shapeless;abundant subround to round quartz sparse ca	-
430	FIRED CLAY	fired clay	fine- medium sandy	1	9	shapeless;moiderate to common subround to round quartz moderate to common ca lumps >1mm moderate shell	-

APPENDIX 7

The animal bones from Bourne Guthram (BGWM07)

by Jane Richardson

06/11/2008

In total, 399 animal bone fragments were recovered from prehistoric (Phase 1) and Romano-British (Phases 2-4) deposits (Table 1). Given the small assemblage, all fragments were recorded but diagnostic element zones, which by definition are easily identifiable and non-reproducible, were also noted (Table 2). Only 13% of the bones are classified as zones and this reflects the fragmented nature of the assemblage. The assemblage falls below the minimum reliable sample size of around 500 (with reference to a number of statistical parameters after Van der Veen and Fieller 1982, 296).

Table 1. Animal bone fragments by phase

	Cattle	Horse	Sheep/goat	Pig	Dog	Cattle-sized	Sheep-sized	Total
Phase 1	1							1
Phase 2	5	2	2			27	25	61
Phase 3	134	7	23	2	2	145	21	334
Phase 4	1					2		3
Total	141	9	25	2	2	174	46	399

Table 2. Animal bone zones by phase

	Cattle	Horse	Sheep/goat	Pig	Dog	Cattle-sized	Total
Phase 1	1						1
Phase 2	4	1	1				6
Phase 3	24	3	11	1	1	3	43
Total	29	4	12	1	1	3	50

Methods

Bones were identified to taxa wherever possible, although lower-order categories were also used (e.g. sheep/goat, cattle-sized). For age-at-death data, epiphyseal fusion (after Silver 1969) and the eruption and wear of deciduous and permanent cheek teeth were considered. Dental eruption and wear for cattle, sheep and pigs were recorded using the letter codes of Grant (1982) and age stages were calculated using Halstead (1985) for cattle and Payne (1973) for sheep. Bone condition, erosion and fragment size were recorded in order to assess bone preservation, while gnawing, burning and butchery marks were noted to determine bone treatment. Finally, biometrical data were recorded following the standards given by von den Driesch (1976).

The animal bone assemblage was phased according to a matrix provided by Lindsey Archaeological Services, but given the small quantity of bones recovered, comparing

the data by phase is meaningless. Instead, Phases 2-4 are treated as a single Romano-British assemblage below. Bone from modern features has not been recorded.

Results

Overall, bone preservation is excellent with little evidence for eroded bone surfaces. The minority of eroded bone was almost exclusively recovered from Phase 2 deposits. In contrast, gnawed and butchered bones are exclusive to Phase 3 deposits (5% and 0.6% respectively). The two butchered bones are a sheep/goat humerus and a horse metatarsal. Thirteen burnt bones are associated with Phase 2 and one burnt bone with Phase 3.

Cattle (and cattle-sized) bones are most commonly recorded and beef presumably offered most in terms of dietary meat, despite the absence of butchered cattle bones. Sheep/goat will have provided dietary variability, but pig rarely so. Horse may have been eaten, although Roman prohibitions against the consumption of horseflesh did exist (Toynbee 1973, 185). Certainly the cut marks around the shaft of the horse metatarsal is more indicative of skinning than consumption. One of the dog bones (although fragmented and not measureable) represents a very small animal.

Age data are limited given the small assemblage, but nevertheless sub-adult and adult cattle and sheep/goat are represented. These suggest that some animals were slaughtered specifically for their meat (when sub-adult), while others were maintained to maturity for breeding and perhaps for their secondary products such as milk, wool and traction. The full range of body parts represented (including low-utility and meat-rich joints) suggests local slaughter and consumption. Sub-adult pigs are also present; reflecting the slaughter of an animal raised only for its meat.

Very little metrical data were recorded given the fragmented nature of the majority of the bones. Two cattle metapodials, however, provide withers' heights of 1074mm (Phase 3) and 1244mm (Phase 2).

Conclusions

The animal bone assemblage is in good condition and is limited only due to its small sample size. When divided by phase, the problem of sample size is exacerbated. Romano-British deposits are dominated by butchery and food waste largely from cattle and to a lesser extent from sheep/goat and pigs. The presence of sub-adult and adult cattle and sheep/goat attests to the presence of prime meat and breeding animals, while pigs tended to be slaughtered earlier for their meat. Horses were probably kept as working animals, while dogs (given the small size) might have been pets.

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APPENDIX 8

BGWM07

1. **Introduction**

- 1.1 Archaeological Services WYAS (ASWYAS) was commissioned by Lindsey Archaeological Services to undertake the analysis of twelve soil samples from archaeological investigations at Bourne Guthram. The resulting twelve flots and two bags of sorted retent material were assessed for carbonised plant remains and charcoal.

2. **Methodology**

- 2.1 Bulk samples were subjected to a system of flotation in an Ankara-style flotation tank (French 1971). The floating remains (the flot) were collected in a 300 μ m sieve and the heavy fraction (the retent) was collected in a 1mm mesh. The flot, once dry, was scanned using a low-powered binocular microscope and the results are presented below (Table 1). The retent was scanned by eye for both ecofacts and artefacts by ASWYAS prior to disposal. This included a scan with a magnet to recover any hammerscale present. The reference photographs of Schweingruber (1990) were consulted for charcoal identification. All charcoal and cereal grain was bagged separately by type.

3. **Results**

- 3.1 The flots were generally quite small and carbonised plant remains were scarce with <2.5ml to 5ml of tea-leaf sized charred detritus present. The exceptions to this were samples 12 (377) and 13 (431), which contained small amounts of cereal grain. Occasional samples produced no charred plant material. Modern root fragments and non-carbonised seeds were recovered in low amounts, typically <2.5ml to 2.5ml (Table 1).

4. **Discussion**

- 4.1 The twelve samples produced a small amount of carbonised cereal grain and occasional charcoal fragments. A single rhizome fragment was also present. Seven samples also contained small quantities of non-marine mollusc shells, which may prove more useful as environmental indicators than the plant remains at this site.
- 4.2 Carbonised cereal grain was confined to samples 12 (377) and 13 (431), and in both cases was in a poor state of preservation, being quite degraded and vesicular. It was possible to identify the grain roughly to type, however, and this was found to be cf. *Triticum* sp. (cf. wheat), with the possibility of both spelt and bread wheat types being present. No weeds of cultivation were recovered.
- 4.3 Charcoal was generally poorly preserved and contaminated by iron panning or water-born chemicals from the soil. Samples 1 (130) and 2 (168) produced charcoal pieces large enough to attempt identification, with these originating from the sorted retent portion of the samples, whilst sample 13 (431) contained

charcoal in the flot. *Quercus* (oak) was the only type identifiable and this was present in sample 1 (130). Material from samples 2 (168) and 13 (431) was found to be indeterminate due to poor preservation. Oak may have been used for fuel or construction purposes and the small amounts present here may represent a single burning event or hearth-place. One rhizome fragment in sample 11 (110) may have arrived with peat used as fuel, but the evidence is scant and it was more likely to be a chance inclusion.

5. Conclusions

- 5.1 The samples produced poorly preserved specimens of wood charcoal and cereal grain. The recovery of charred cf. wheat grain in two of the samples provided a tentative indication of agricultural practices occurring in the area. No short-lived types of wood charcoal suitable for radiocarbon dating were recovered. No further work is needed on this set of samples as all identifiable plant material has been analysed. Non-marine mollusc shell may be suitable for identification by an appropriate specialist.
- 5.2 Future sampling at the site has a fairly low potential to produce further quantities of charred plant remains as preservation conditions seem to have been quite poor.

Table 1. Results from the flots and retents

	Sample	1	2	3	4	5	6	7	9	10	11	12	13
	Context	130	168	312	315	349	350	352	116	233	110	377	431
	Total CV	5ml	2.5ml	0	<2.5ml	<2.5ml	0	0	0	0	<2.5ml	5ml	5ml
	Modern	5ml	<2.5ml	<2.5ml	2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	2.5ml	<2.5ml	<2.5ml	<2.5ml
Carbonised cereal grain	Common name												
cf. <i>Triticum</i> sp.	cf. wheat											8	4
Carbonised wild resources													
Rhizomes											1		
Charcoal													
<i>Quercus</i>	oak	3 (0.34g)											
Indeterminate			2 (0.2g)										1 (0.18g)
Other remains													
Non-marine mollusc shell			5	10+	1	5+			10+	3	10+		
Modern seeds (non-carb.)				1	1		1	3			10+		

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Client

Lindsey Archaeological Services

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Report

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APPENDIX 9

2008/13

**Evaluation of biological remains recovered from excavations and monitoring
along the route of the Bourne to Guthram Water Main, Lincolnshire
(site code: BGWM07; 2007.109)**

by

John Carrott, Alexandra Schmidl and Alex Beacock

Summary

A single sediment sample recovered from deposits encountered during excavations and monitoring along the route of the Bourne to Guthram Water Main, Lincolnshire, was submitted for an evaluation of its bioarchaeological potential. A variety of cut features was revealed, including ditches, gullies, pits and post-holes, of unknown date, together with some fills of natural features such as tree boles and alluvial layers.

Although waterlogged plant and invertebrate material was present in the investigated pit fill, identifiable remains were rare and most were probably of relatively recent origin. Other organic remains comprised traces amounts of land snail shell and bone, but these were also unidentified. Overall, the biological remains were of no interpretative value and, given the evidence for modern intrusion and bioturbation within the context, considered unsuitable for submission for radiocarbon dating.

No further study of the biological remains from this deposit is warranted.

KEYWORDS: BOURNE TO GUTHRAM WATER MAIN; BOURNE; GUTHRAM; LINCOLNSHIRE; EVALUATION; UNDATED; PLANT REMAINS; CHARRED PLANT REMAINS; INVERTEBRATE REMAINS; BEETLES; LAND SNAIL; VERTEBRATE REMAINS

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28 February 2008

Evaluation of biological remains recovered from excavations and monitoring along the route of the Bourne to Guthram Water Main, Lincolnshire (site code: BGWM07; 2007.109)

Introduction

Archaeological excavation and monitoring was undertaken by Lindsey Archaeological Services along the route of the Bourne to Guthram Water Main, Lincolnshire (NGR TF 11211 22088 to TF 11239 21909 to TF 11020 21865), during 2007.

The excavations and monitoring revealed a variety of cut features, including ditches, gullies, pits and post-holes, of unknown date, together with some fills of natural features such as tree boles and alluvial layers.

A single bulk sediment sample ('GBA'/'BS' *sensu* Dobney *et al.* 1992), from the primary fill of pit 175, was submitted to Palaeoecology Research Services Limited (PRS), County Durham, for an evaluation of its bioarchaeological potential.

Methods

The lithology of the sample was recorded, using a standard *pro forma*, prior to processing. A subsample was taken and processed, broadly following the techniques of Kenward *et al.* (1980), for the recovery of plant and invertebrate macrofossils. Before processing the subsample was disaggregated in water and its volume recorded in a waterlogged state.

Plant and invertebrate remains in the processed subsample fractions (residue and washover) were recorded briefly by 'scanning' using a low-power microscope, identifiable taxa and other biological and artefactual components being listed on paper. The residue was primarily of inorganic material and was dried prior to examination. The washover was also mostly inorganic (fine sand) but contained a component of waterlogged organic remains as was stored in alcohol.

During recording, consideration was given to the identification of suitable remains for radiocarbon dating by standard radiometric technique or accelerator mass spectrometry (AMS).

Nomenclature for plant species follows Stace (1997) and insects follow Kloet and Hincks (1964-77).

Results

Archaeological information, provided by the excavator, is given in square brackets. A brief summary of the processing method and an estimate of the remaining volume of unprocessed sediment follows (in round brackets) after the sample number.

Context 353 [primary fill of sub-circular, steep-sided, flat-based pit 175 – 1.81 m x 1.53 m x 0.71 m deep]
Sample 8/T (3 kg/3 litres sieved to 300 microns with washover; approximately 7 litres of unprocessed sediment remain)

Waterlogged, light to mid yellowish-brown to mid to dark yellowish-brown (mottled with grey, black and dark brown patches), sticky to soft (working sticky), moderately stony (stones from 2 to 6 mm were common and larger stones of 20 to over 60 mm were present), slightly sandy clay silt. Traces of charcoal were also present.

The washover was fairly small (~100 ml) and mostly composed of sand, with small fragments of unidentified very decayed wood/woody root, small lumps (to 2 mm) of undisaggregated sediment, charcoal (to 2 mm) and finer plant detritus. The last was largely fragments of modern rootlet and other remains of modern origin included numerous earthworm egg capsules. There were also occasional records of waterlogged seeds/fruits from plants of hedgerow, damp and disturbed ground habitats (e.g. blackberry/raspberry – *Rubus fruticosus* L. agg./*R. idaeus* L., orache/goosefoot – *Atriplex/Chenopodium*, spike-rush – *Eleocharis*, sedge – *Carex* and thistle – *Carduus/Cirsium*) and beetle sclerites (including a weevil – Curculionidae – pronotum and a staphylinid elytron); some or all of these were probably also modern contaminants.

The small residue (dry weight 0.90 kg) was mostly stones (to 120 mm), with some sand and a few fragments of unidentified bone (to 8 mm; <1 g) and land snail shell (to 6 mm; <1 g).

Discussion and statement of potential

Although waterlogged plant and invertebrate material was present in the investigated deposit, identifiable remains were rare and most were probably of relatively recent origin – some, i.e. the earthworm egg capsules and some of the finer rootlet, certainly represented modern intrusions. Other components, such as the 'woody' material and charcoal, may have been of ancient origin but were unidentified and of no interpretative value. Organic remains from the sample residue (land snail shell and bone) were also few and unidentified, and hence provided no information regarding the deposit.

There was clearly sufficient material to be submitted for AMS dating but, given the evidence for modern intrusion and bioturbation within the context, radiocarbon dating of individual biological remains would not necessarily return information regarding the date of formation of the deposit and is not recommended.

Recommendations

No further study of the biological remains from this deposit is warranted.

Retention and disposal

The remains recovered from the sediment subsample should be retained as part of the physical archive of the site.

Unless required for purposes other than the study of biological remains, the remaining sediment from the deposit considered here may be discarded.

Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here.

Acknowledgements

The authors are grateful to Doug Young, of Lindsey Archaeological Services, for providing the material and the archaeological information.

References

Dobney, K., Hall, A. R., Kenward, H. K. and Milles, A. (1992). A working classification of sample types for environmental archaeology. *Circaea, the Journal of the Association for Environmental Archaeology* 9 (for 1991), 24-6.

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Kloet, G. A. and Hincks, W. D. (1964-77). *A checklist of British insects, second edition*. London: Royal Entomological Society.

Stace, C. (1997). *New flora of the British Isles: 2nd edition*. Cambridge: Cambridge University Press.

OASIS DATA COLLECTION FORM:

English

Use of Program: _____

APPENDIX 10

OASIS DATA COLLECTION FORM: England

[List of Projects](#) | [Search Projects](#) | [New project](#) | [Change your details](#) | [HER coverage](#) | [Change country](#) | [Log out](#)

[Printable version](#)

OASIS ID: lindseya1-52206

Project details

Project name Bourne-Guthram Water Main

Short description of the project The archaeological excavation was undertaken ahead of the construction of a water main on land to the east of Dyke Village, north of Bourne. Analysis of aerial photographs, fieldwalking, geophysical survey and a desk-based assessment had suggested that the field in which the excavation was located had a high potential for the presence of Iron Age and/or Romano-British remains. In order to lessen the impact of the construction on the archaeological remains the route of the water mains, and therefore the excavation area, skirted the eastern and southern boundaries of the field. The excavation encountered evidence of prehistoric and Romano-British activity at the site. The limited assemblage of worked flint from the site suggests that it was used sporadically from the Mesolithic to Bronze Age, probably for hunting and perhaps grazing of animals later in the period. More intensive use of the site began during the early Roman period, probably in the later 1st century AD, when fencelines and a possible building were erected at the site, probably related to agricultural activity. During the 2nd century the land was reorganised and partitioned into small enclosures or fields, orientated approximately E-W to form a brickwork pattern. The earlier buildings were also replaced, possibly by sill beam constructed buildings. By the late 2nd or early 3rd centuries the small enclosures and buildings had fallen into disuse and been filled in and the area had been partitioned by a series of NE-SW orientated ditches which most likely formed much larger enclosures than the earlier enclosures. No significant remains were encountered which post-dated the 3rd century.

Project dates Start: 06-08-2007 End: 03-09-2007

Previous/future work Yes / No

Any associated project reference codes 2007.109 - Museum accession ID

Any associated project reference codes BGWM 07 - Sitecode

Type of project Recording project

Current Land use Cultivated Land 4 - Character Undetermined

Monument type DITCHES Roman

Monument type PITS Roman

Monument type BOUNDARY DITCHES Roman
 Monument type POST BUILT STRUCTURE Roman
 Significant Finds POTTERY Roman
 Investigation type 'Full excavation'
 Prompt Water Act 1989 and subsequent code of practice

Project location

Country England
 Site location LINCOLNSHIRE SOUTH KESTEVEN BOURNE Bourne-Guthram Water Main
 Postcode PE10
 Study area 2927.00 Square metres
 Site coordinates TF 11060 21889 52.7827964852 -0.353145947975 52 46 58 N 000 21 11 W Line
 Site coordinates TF 11225 21913 52.7829781395 -0.350692190549 52 46 58 N 000 21 02 W Line
 Site coordinates TF 11253 22075 52.7844282225 -0.350222103583 52 47 03 N 000 21 00 W Line
 Height OD / Depth Min: 2.40m Max: 3.05m

Project creators

Name of Organisation LINDSEY ARCHAEOLOGICAL SERVICES
 Project brief originator Local Authority Archaeologist and/or Planning Authority/advisory body
 Project design originator Naomi Field
 Project director/manager Naomi Field
 Project supervisor Gavin Glover
 Type of sponsor/funding body Water Authority/Company
 Name of sponsor/funding body Anglian Water

Project archives

Physical Archive recipient LCNCC
 Physical Contents 'Animal Bones', 'Ceramics', 'Environmental', 'Worked stone/lithics'
 Digital Archive recipient Lindsey Archaeological Services
 Digital Contents 'none'

Digital Media available 'Images raster / digital photography', 'Spreadsheets', 'Text'

Paper Archive recipient LCNCC

Paper Contents 'none'

Paper Media available 'Context sheet', 'Correspondence', 'Drawing', 'Matrices', 'Photograph', 'Plan', 'Report', 'Section'

Entered by Gavin Glover (gavin@linarch.co.uk)

Entered on 2 December 2008

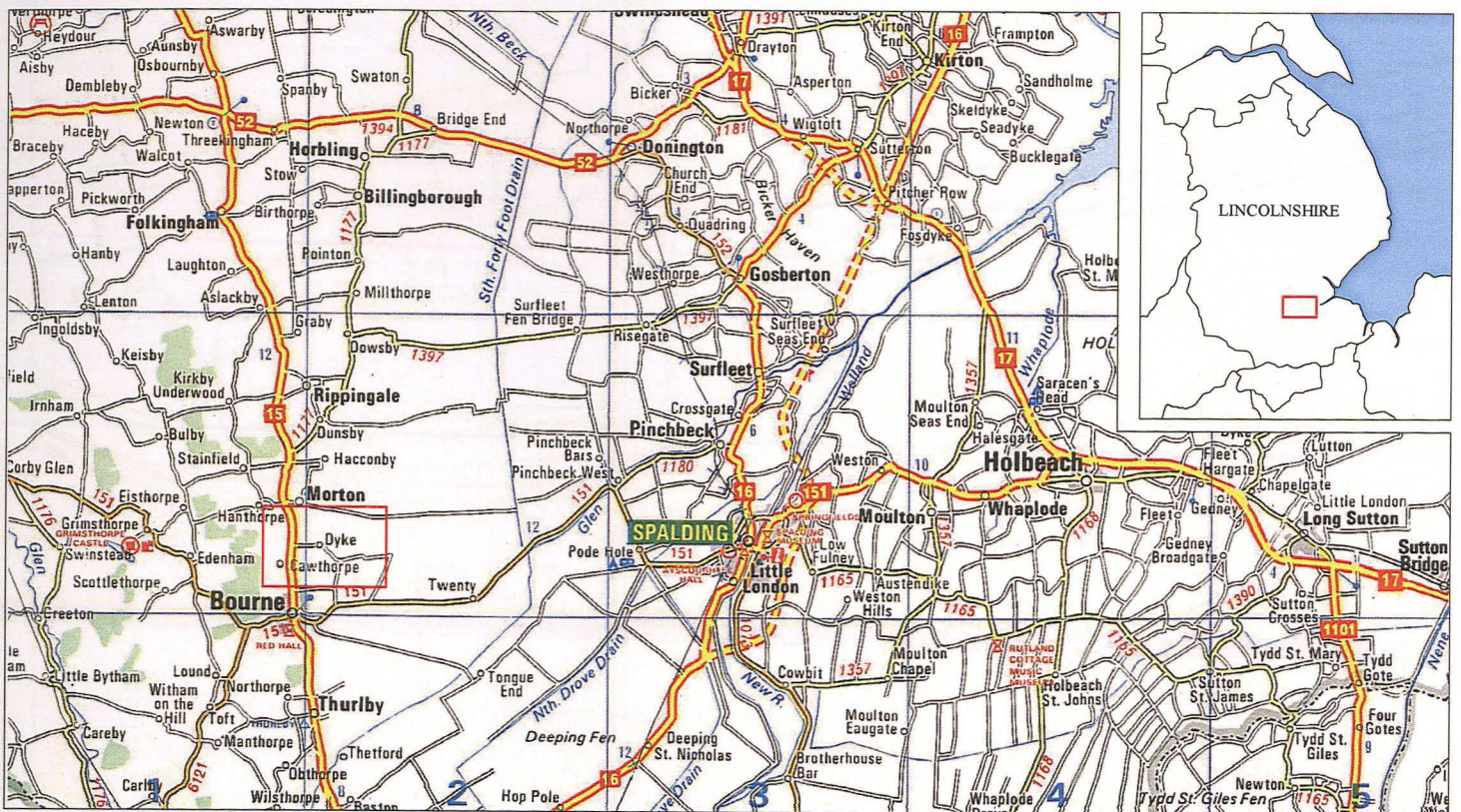
OASIS:

Please e-mail English Heritage for OASIS help and advice

© ADS 1996-2006 Created by Jo Gilham and Jen Mitcham, email Last modified Friday 3 February 2006

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THE FIGURES



Scale 1:25000.

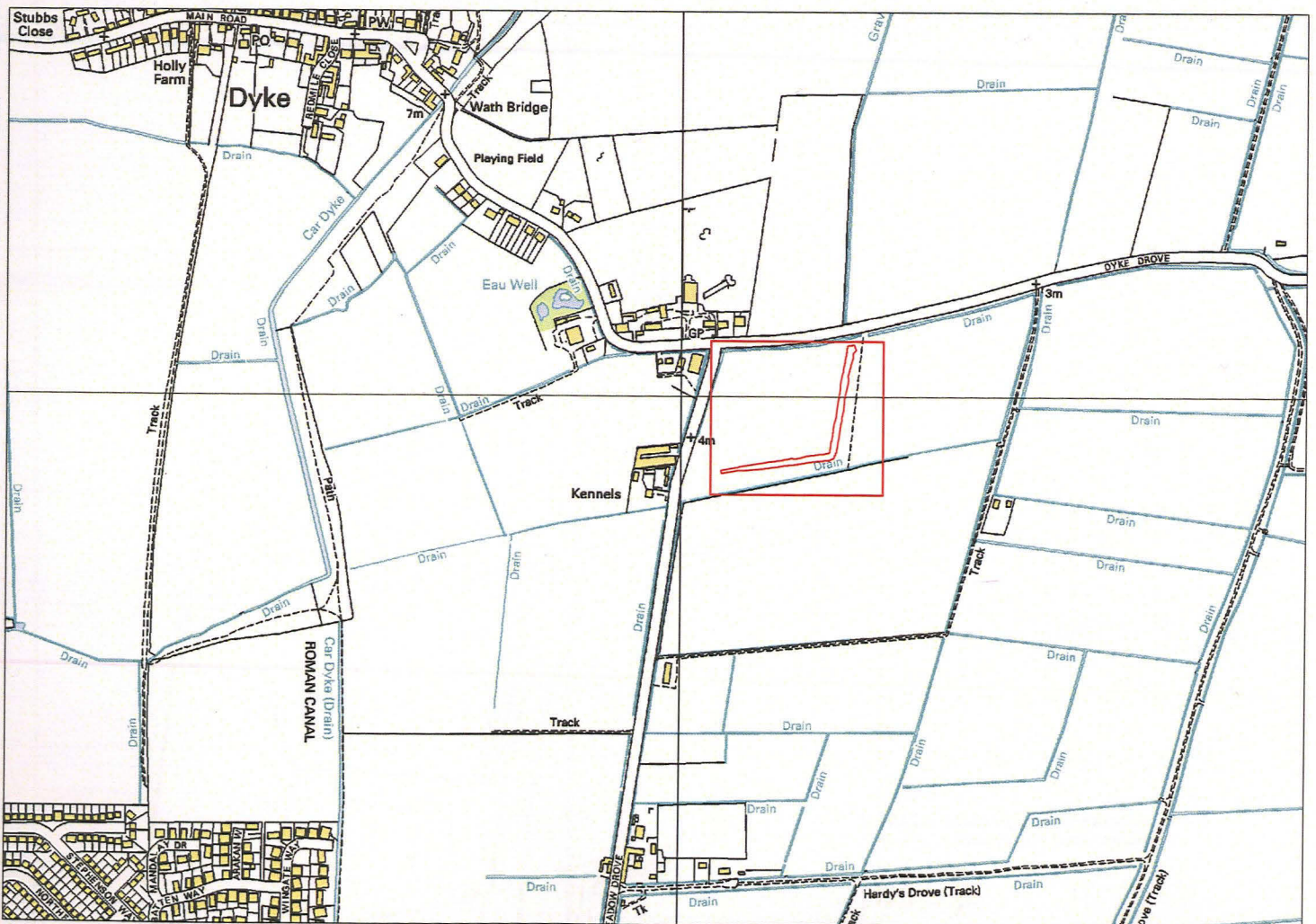


Fig.1 Site Location. Inset above based on the 1:10,000 Ordnance Survey map. Crown Copyright, reproduced with the permission of the Controller of HMSO. LAS Licence no. AL 10002165. Scale 1:10000

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	PROJECT TYPE: Excavation	ACC. NO: 2007.109	DATE: 26/10/08		
		SCALE: Various			

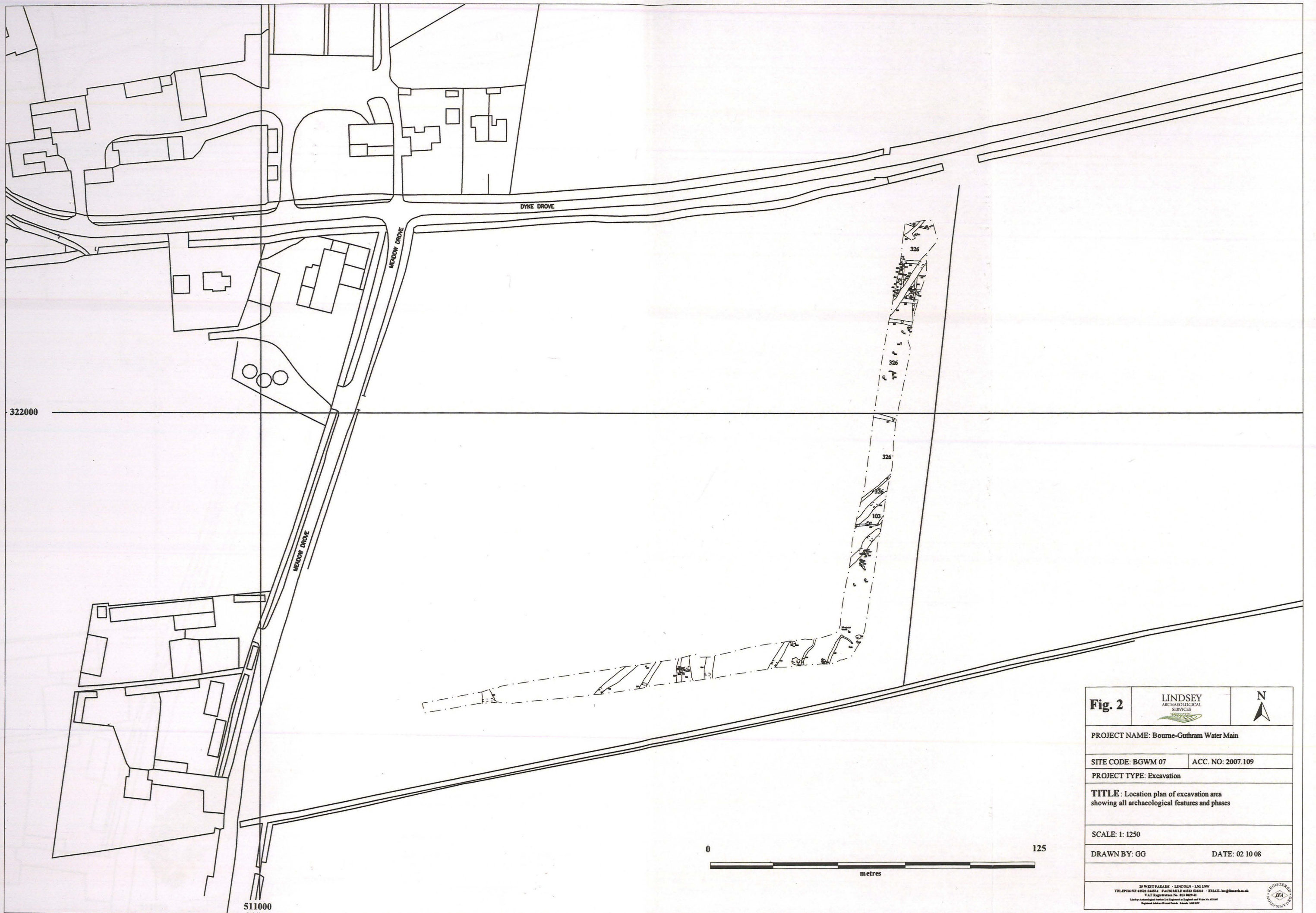


Fig. 2



PROJECT NAME: Bourne-Guthram Water Main	
SITE CODE: BGWM 07	ACC. NO: 2007.109
PROJECT TYPE: Excavation	
TITLE: Location plan of excavation area showing all archaeological features and phases	
SCALE: 1: 1250	
DRAWN BY: GG	DATE: 02 10 08
<small>25 WEST PARADE - LINCOLN - LN6 5NW TELEPHONE 01522 544854 - FACSIMILE 01522 622111 - EMAIL lin@linarch.co.uk V.A.T. Registration No. 812 5827 61 Lindsey Archaeological Services Ltd Registered in England and Wales No. 40282 Registered Address 25 West Parade, Lincoln LN6 5NW</small>	



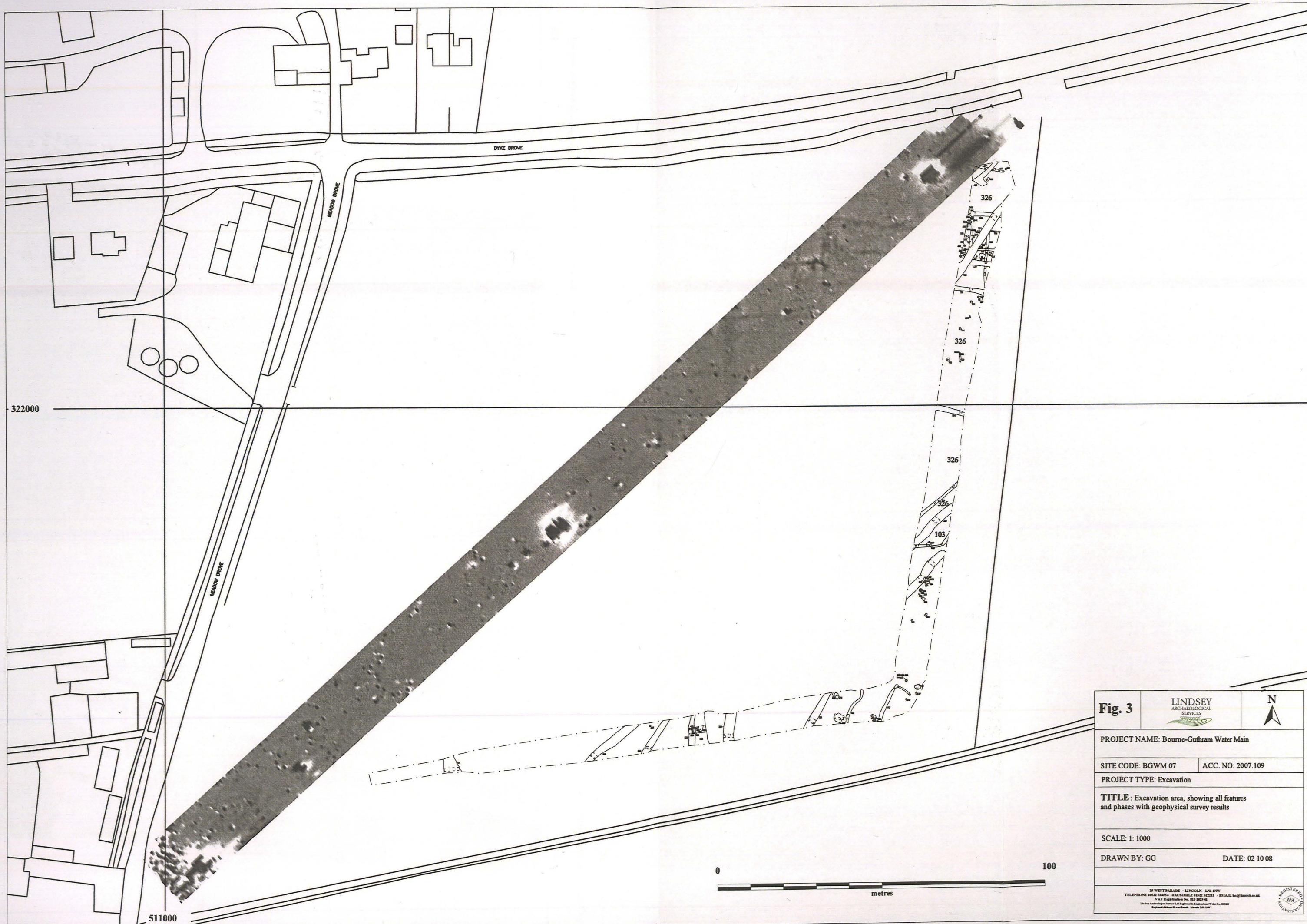


Fig. 3			
	PROJECT NAME: Bourne-Guthram Water Main		
SITE CODE: BGWM 07		ACC. NO: 2007.109	
PROJECT TYPE: Excavation			
TITLE: Excavation area, showing all features and phases with geophysical survey results			
SCALE: 1: 1000			
DRAWN BY: GG		DATE: 02 10 08	
<small> 35 WEST PARADE - LINCOLN - LN1 1NW TELEPHONE 01522 548881 FAX 01522 548882 EMAIL lin@lindsays.com VAT Registered No. 212 282 48 Lindsey Archaeological Services Ltd Registered in England and Wales No. 402882 Registered Address: 35 West Parade, Lincoln LN1 1NW </small>			



322000

511000

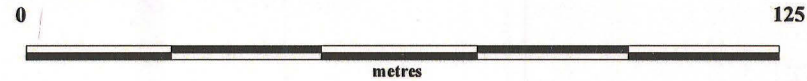


Fig.4 Plan of excavation area, showing all features and phases with rectified 1977 aerial photograph

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	PROJECT TYPE: Excavation	ACC. NO: 2007.109	DATE: 02/10/2008		
		SCALE: 1:1250			

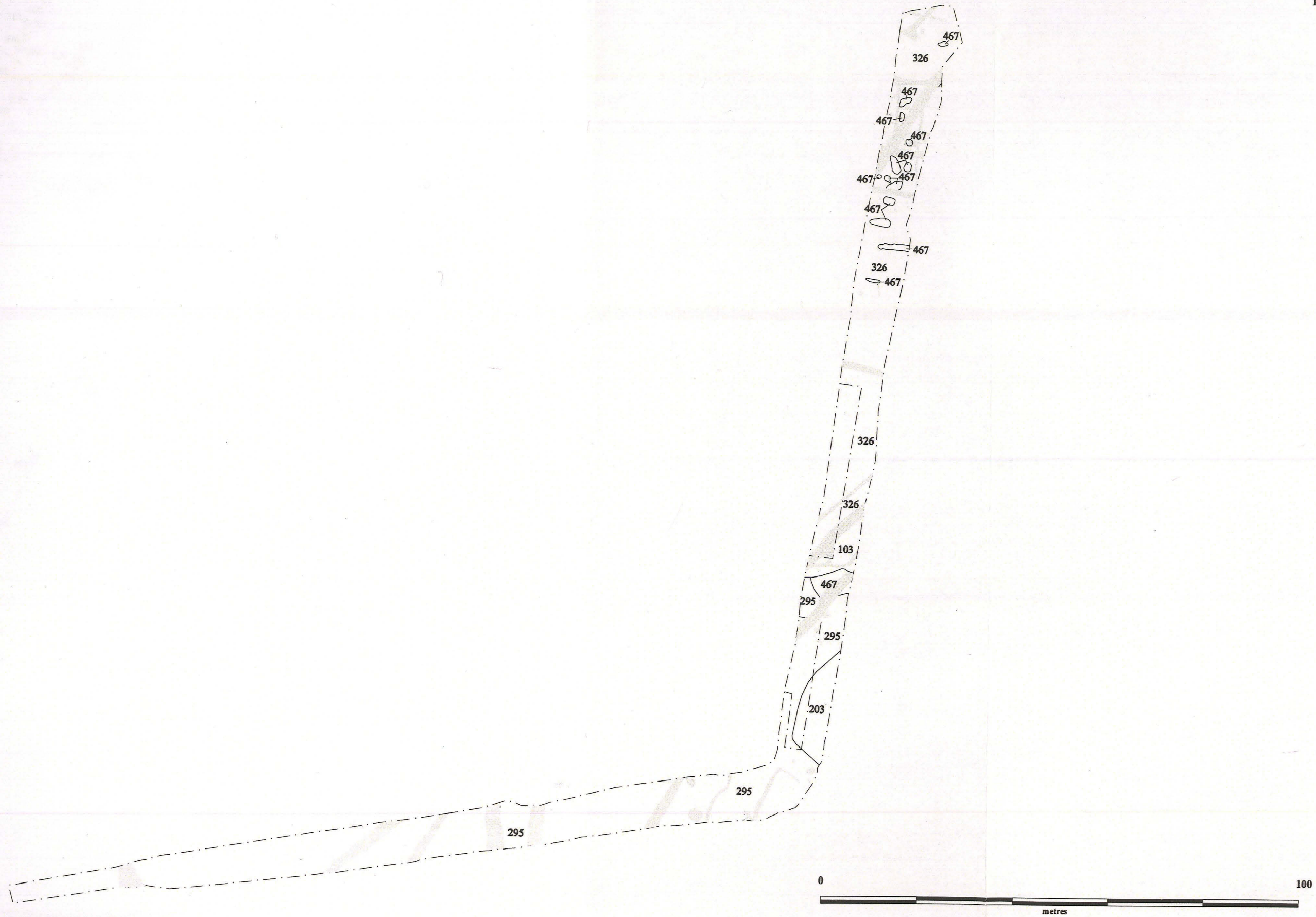


Fig.5 Phase 1

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	PROJECT TYPE: Excavation	ACC. NO: 2007.109 SCALE: 1: 800	DATE: 02/10/2008



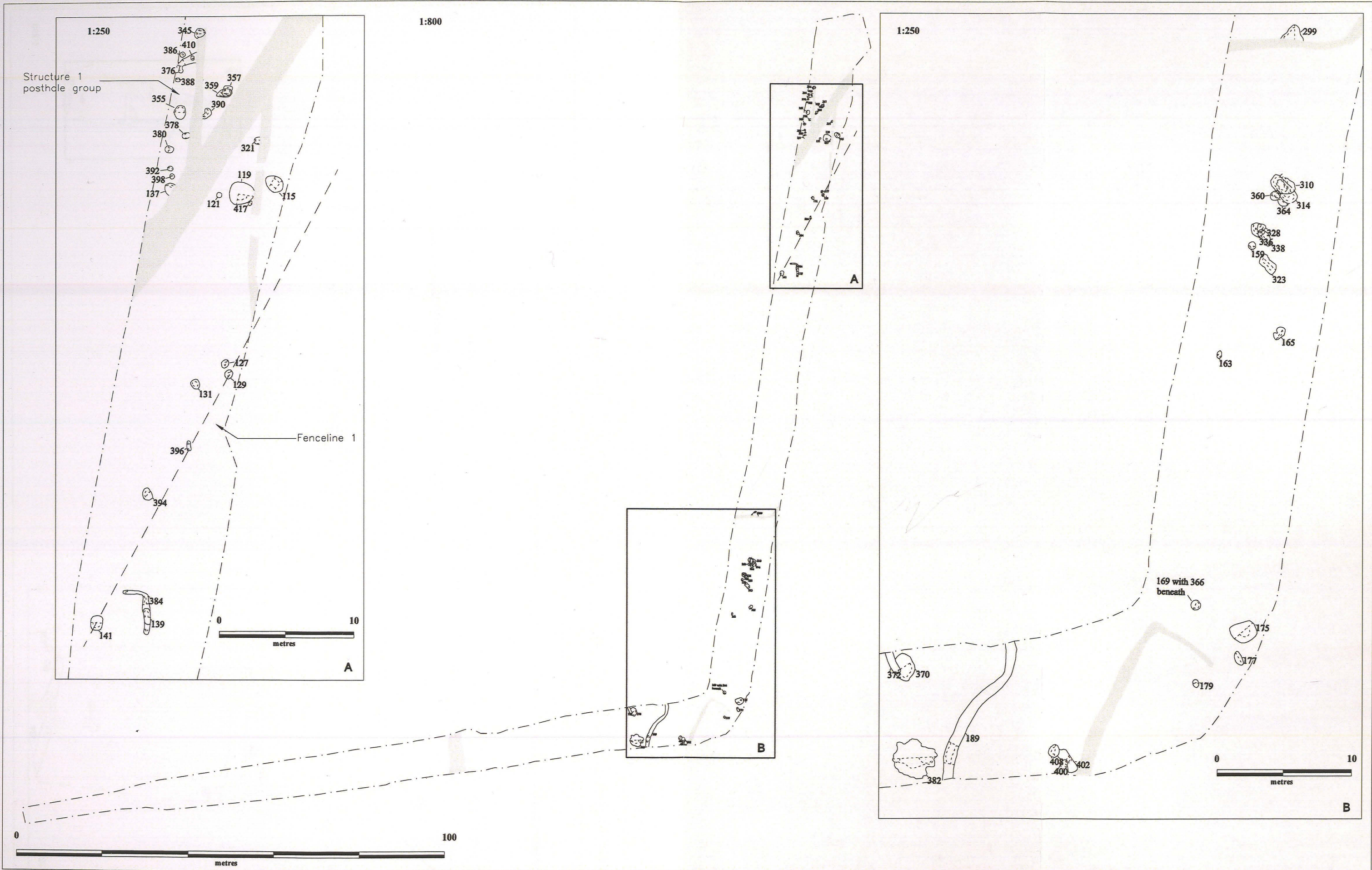


Fig.6 Plan of Phase 2 features showing alignment of possible fencelines and structure

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	PROJECT TYPE: Excavation	ACC. NO: 2007.109	DATE: 02/10/2008
		SCALE: 1: 800 & 1:250	

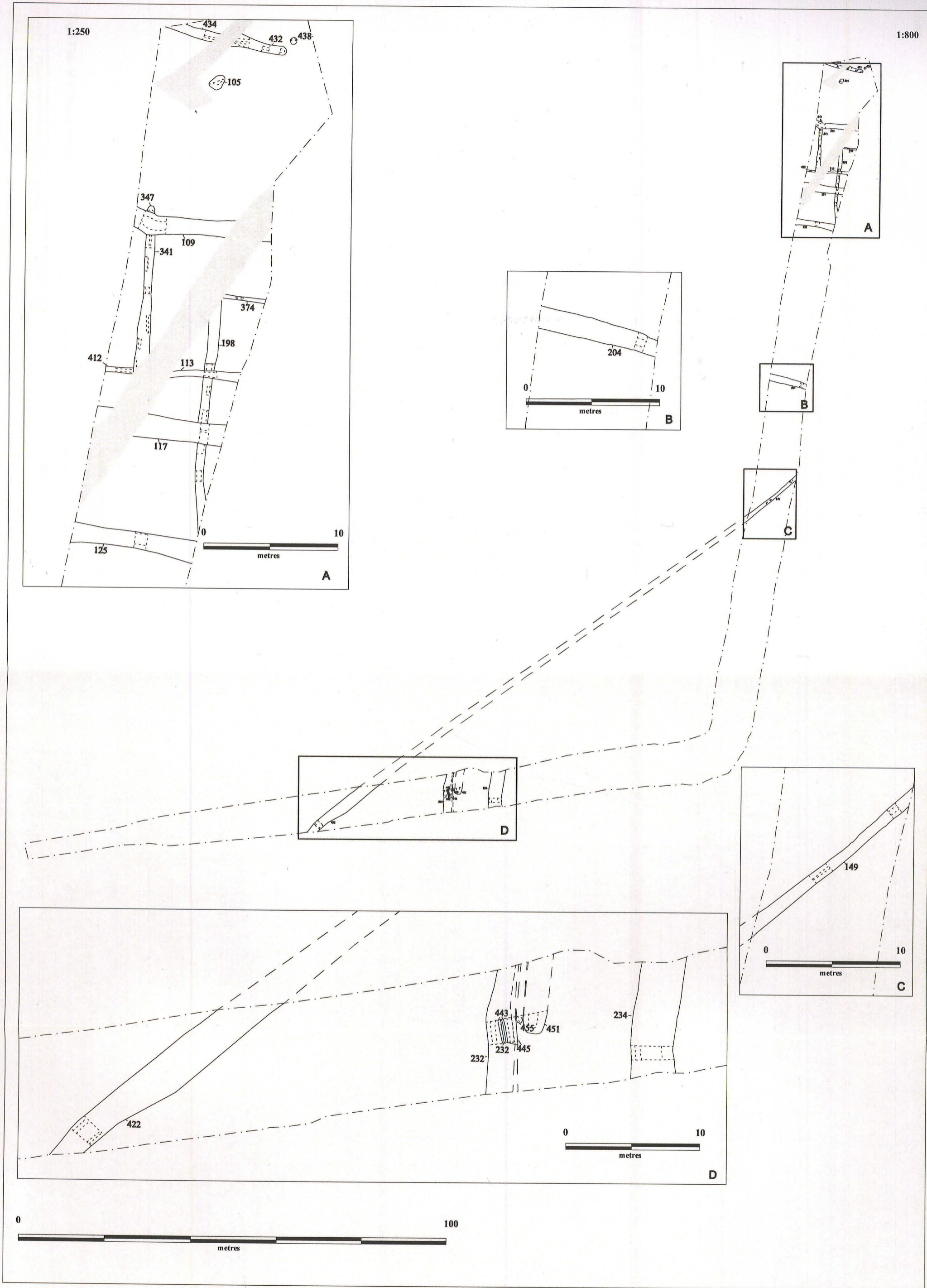


Fig.7 Plan of Phase 3 features

	PROJECT NAME: Bourne-Guthram Water Main	SITE CODE: BGWM 07	PREPARED BY: GG		
	PROJECT TYPE: Excavation	ACC. NO: 2007.109	DATE: 02/10/2008		
		SCALE: 1: 800 & 1:250			

1:800

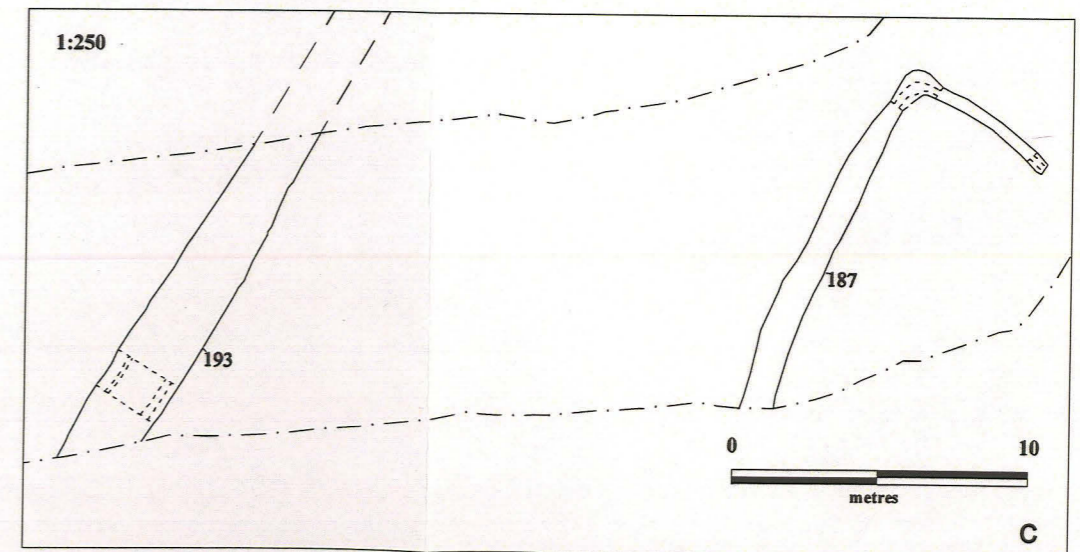
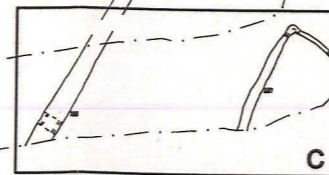
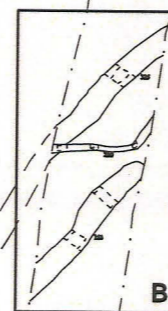
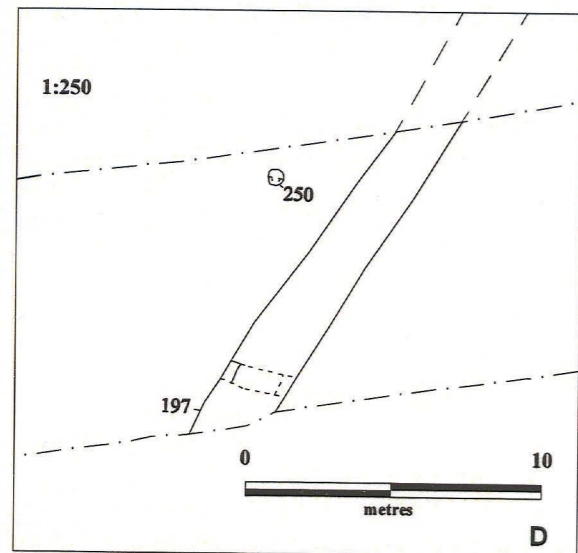
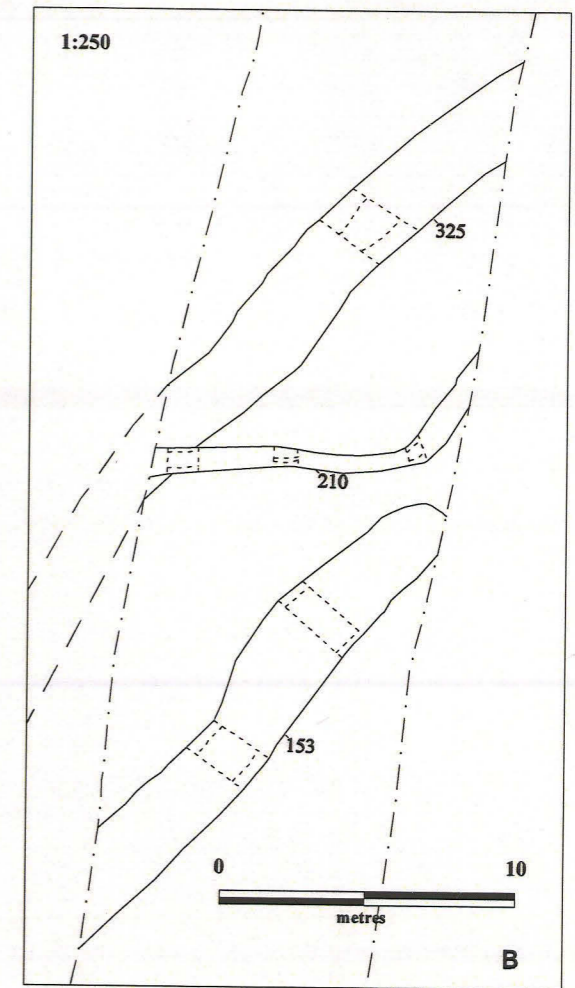
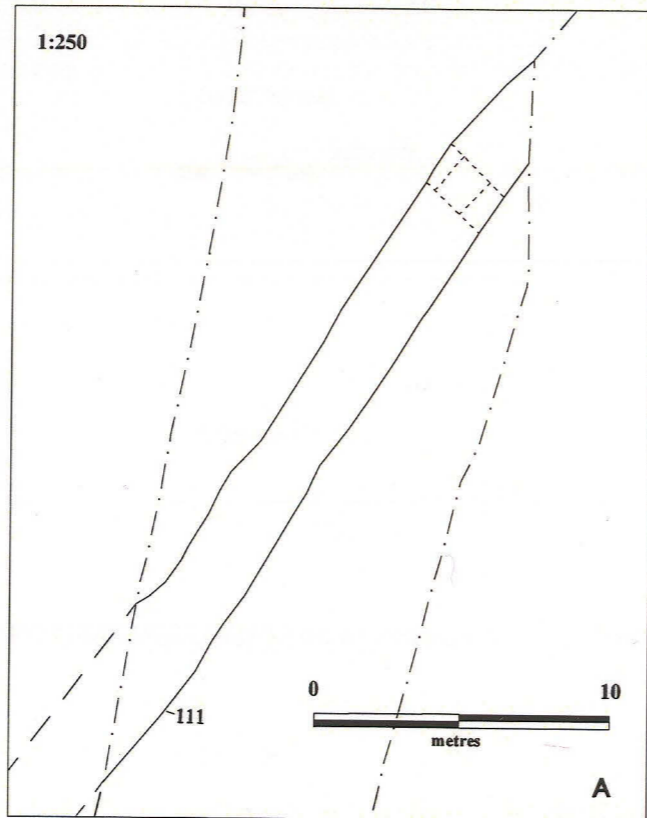
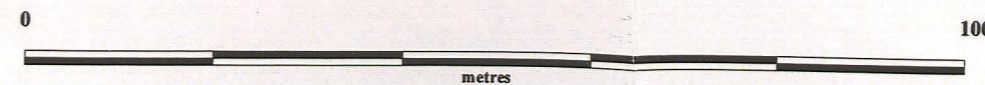


Fig.8 Plan of Phase 4 features .

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	PROJECT TYPE: Excavation	ACC. NO: 2007.109	DATE: 02/10/2008		



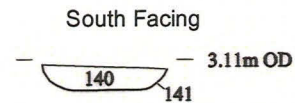
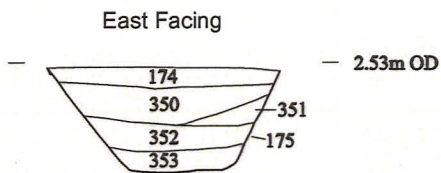
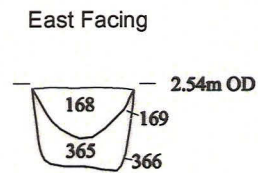
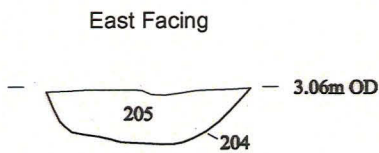
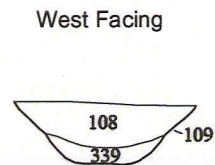
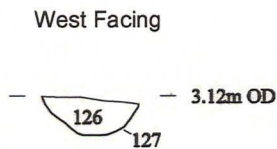
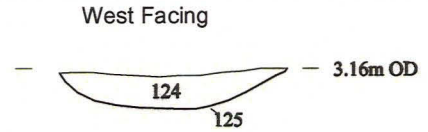
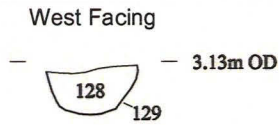
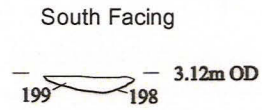
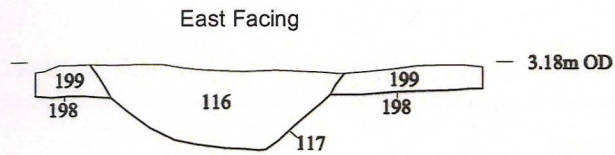
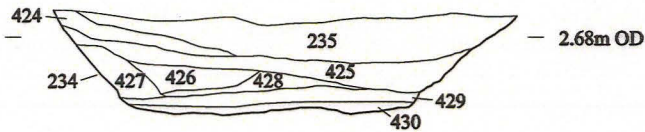


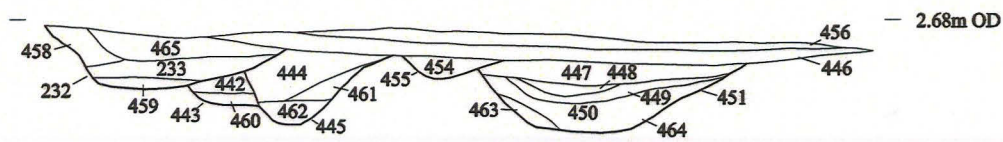
Fig.9 Assorted sections

	PROJECT NAME: Bourne-Guthram Water Main	SITE CODE: BGWM 07	PREPARED BY: GG		
	PROJECT TYPE: Excavation	ACC. NO: 2007.109	DATE: 02/10/2008		
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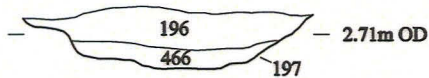
South Facing



South Facing



Southwest Facing



Southwest Facing

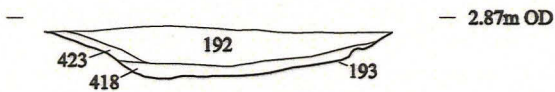


Fig.10 Assorted sections

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	PROJECT TYPE: Excavation	ACC. NO: 2007.109	DATE: 02/10/2008	
		SCALE: 1:50		

THE PLATES



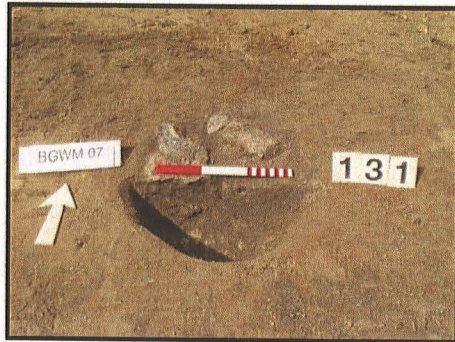
PI 1. General view of north end of excavation, looking north



PI 2. General view of excavation area, looking south



PI 3. Feature 376, looking SW, 0.5m scale



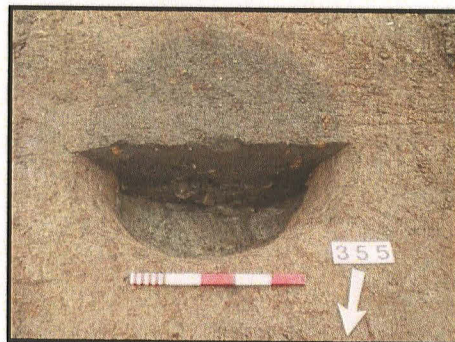
PI 4. Posthole 131, looking North,
0.30m scale



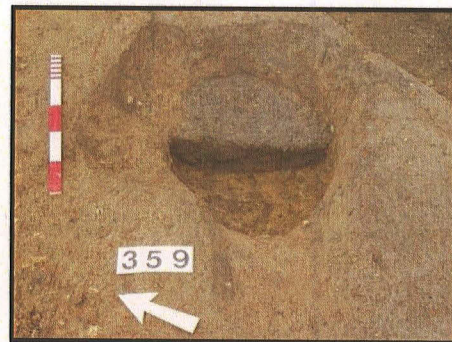
PI 5. Posthole 159, looking North,
0.50m scale



PI 6. Posthole 169, looking West,
0.50m scale



PI 7. Posthole 355, looking South,
0.50m scale



PI 8. Posthole 359, looking NE,
0.50m scale



PI 9. Posthole 368, looking West,
0.50m scale



PI 10. Ditch 374, looking East,
0.30m scale



PI 11. Ditch 109 (foreground) and ditch 341 (background),
looking South, 1m scale



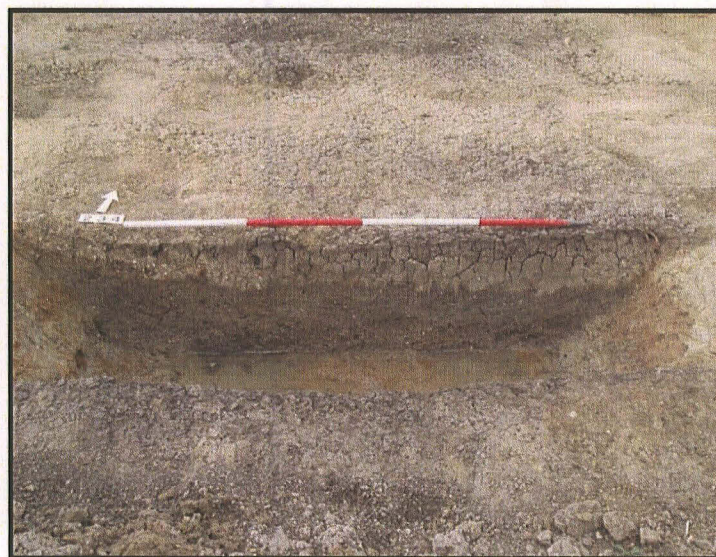
PI 12. Ditch 149, looking NE, 1m scale



PI 13. Ditch 422, looking NE,
2m + 0.30m scales



PI 14. Ditches 232, 443,
445, 451 and 455, looking
North, 2m + 2 x 0.5m scales



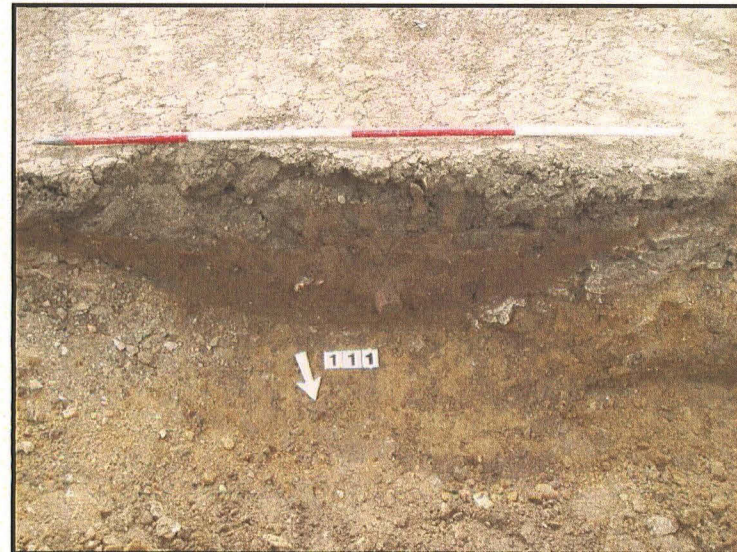
PI 15. Ditch 234, looking North,
2m scale



PI 16. Ditch 197,
looking NE, 2m scale



PI 17. Ditch 153, looking NE, 2m scale



PI 18. Ditch 111, looking SW, 2m scale