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**ARCHAEOLOGICAL
INVESTIGATION ALONG
THE WESTON BYPASS,
WESTON,
LINCOLNSHIRE
(WBP 01)**

Work Undertaken For
Lincolnshire County Council

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Report Compiled by
Michael Wood BA (Hons) Mlit AIFA

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ARCHAEOLOGICAL PROJECT SERVICES

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Lincolnshire
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Planning &
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1. SUMMARY

An archaeological investigation was undertaken along the route of the Weston Bypass, Weston, Lincolnshire. This investigation included a programme of trial trenching, open area excavation and a subsequent watching brief on further groundworks.

The route of the Bypass curves around the northern edge of Weston in an area of moderate archaeological potential. Late prehistoric and Roman remains have been revealed within the area, preserved under marine silt. In addition, the route passed through areas of 'newland' reclaimed in the late Saxon and early medieval period.

This investigation revealed evidence for settlement and agrarian farming during the Roman, late Saxon and medieval periods.

Artefacts from the 1st to 13th century AD were retrieved including pottery, glass, animal bone, quernstones, briquetage and metalworking slag.

2. INTRODUCTION

2.1 Definition of an Excavation

An archaeological excavation is defined as, *(a programme of controlled, intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features and structures and, as appropriate, retrieves artefacts, ecofacts and other remains within a specified area or site on land, inter-tidal zone or underwater. The records made and objects gathered during the fieldwork are studied and the results of that study published in detail appropriate to the project design)* (IFA 1999).

2.2 Planning Background

A bypass scheme was proposed to divert traffic past the village of Weston, Lincolnshire. On the advice of Lincolnshire County Council (LCC) Archaeology Section a programme of non-intrusive field walking and a desk-based assessment of the archaeological impact of the proposed scheme was undertaken.

The results of these studies indicated a high probability of impacting on preserved Saxo-Norman and medieval archaeology, as well as the potential for buried prehistoric and Roman remains. Consequently, LCC Archaeology Section requested a programme of trial trenching in advance of the bypass scheme.

Trial trenching confirmed the presence of late Saxon and medieval remains near Saint Mary's church, as well as revealing Roman deposits at the western end of the bypass.

Based on these results, LCC Archaeology Section recommended an initial watching brief to be undertaken along the proposed route, followed by small-scale excavation on the areas deemed to be archaeologically sensitive.

The results of the trial trenching, watching brief and area excavations are presented in this document.

2.3 Topography and Geology

Weston is located 5km east of Spalding in the district of South Holland, Lincolnshire. The bypass route passes around the north side of the village, from the A151 east of the Anglian Water plant at NG TF 2808 2444 and rejoining the A151 at the Moulton parish boundary TF 2988 2501.

The development site lies in the South Lincolnshire Fenland at approximately 3m

OD. Local soils are of the Wallsea 2 Association composed of pelo-alluvial gley soils developed on reclaimed marine alluvium (Hodge *et al* 1984).

2.4 Archaeological Setting

From the Neolithic to the Iron Age, Weston was subject to periodic marine flooding making the landscape largely untenable for human habitation. By the later Iron Age, the landscape had dried to the extent that it could be used for limited occupation and industrial purposes (Hayes and Lane 1992). Evidence of possible late Iron Age saltmaking has been found at Weston. Large calcite-gritted briquetage objects were discovered in the early twentieth century (May 1976). In addition, find spots of 2nd-1st century BC briquetage have been recovered from the parish (Lane and Morris 2001).

Episodic marine flooding continued into the Romano-British period. Settlement was only possible along the elevated levees of silted up creeks, raised above the saltmarsh and creek environment. Roman remains have been documented around Weston. Early Roman (1st-2nd century AD) settlement and saltmaking was uncovered during maintenance of Wheatmere drain directly west of the Bypass. Spalding (6km to the west) has produced evidence for extensive agricultural and industrial land use.

Saltmaking was an important industry in late prehistoric and Roman Fenland. Nearby saltmaking sites or salterns have been identified at Wygate Park, Spalding (Hall 2006, Wood 2006). In addition Wygate Park has produced evidence for metalworking, arable production, animal breeding and settlement dating from the late Iron Age to 4th century AD (Wood 2006).

Renewed marine transgression in the early Saxon period flooded Roman sites at Spalding, possibly making land further east at Weston unsuitable for habitation. Reclamation of the Weston environs must have occurred prior to the Norman Conquest as it is recorded within the Domesday Survey of 1086 as 'west' 'tun' from the Old English west farm or village. This place name is probably derived from relation to the nearby village of Moulton (Cameron 1998).

In the Domesday Survey, Weston and Moulton are referred to as one area under the ownership of Ivo Tallboys and Guy of Craon. Twenty-three freemen lived in Weston. However, there were no significant industries or buildings (Morris 1986).

Reclamation of drained marshland and silt 'newland' in the late Saxon and early medieval period greatly increased grazing and arable land around the fens. 'Newland' was formed by accretion of tidal silts particularly around the mouths of rivers. This silt land was then protected from the sea by a series of ditches and banks.

The oldest fen-bank around Weston was 'Alstonesdik', first mentioned in 1200-1240, though probably constructed prior to the Norman Conquest (Hallam 1965). The value of nutrient rich 'newland' can be seen in the Weston Tithes Inquisition of 1287AD when corn, flax and hemp were grown in abundance (*ibid*).

Weston's parish church of St Mary was built sometime between the late 12th and mid 13th centuries, under the control of the Priory of Spalding. Early medieval Weston was dominated by the powerful Priory, which held manorial court for Pinchbeck, Weston and Moulton. In addition the Priory kept detailed records of its tenant farms and villages as well as a ten per cent tithe of all produce. The Priory of Spalding

survey of 1259-60 recorded over 34 acres of 'newland' in the Weston parish reflecting the steady reclamation of land around Fen villages (Hallam 1965).

In 1311 Prior Hatfield of Spalding had Wykeham Chapel built as a private retreat for his country house c.2km north of Weston village centre (Pevsner and Harris 1989) near the route of the bypass.

Weston's fortunes declined during the later medieval period. A clerical survey revealed 3 priests in the village in 1376 and only one in 1526 (Owen 1981). Indeed the Weston area has been described as one of the least important parishes of the Middle Ages (Latham *et al* 1995). Erosion of sea defences and inadequate repair in the 13th century led to stagnation of population and economy of some Fen villages, despite the booming wool trade (Hallam 1965). Sea defences were later organised and funded by the Sewers Commission, however full effects were not felt until the Tudor dynasty.

Despite the corpus of historical data, little archaeological material of the medieval period has been recovered at Weston. However, a recent programme of field walking directly south of the proposed route retrieved findspots of 12th to 19th century in date (Albone 2000).

During the late medieval period many of the Fenland Rivers silted up, restricting trade and exasperating seasonal flooding. In the 16th century Wykemere silted up sufficiently to flood both Weston and Moulton, damaging the villages and ruining farmland (Kirkus 1959).

Fen drainage projects in the 17th century greatly reduced the threat of flooding and allowed greater arable use of reclaimed land. Corn production became a major boon to England's economy during the late 18th and early 19th centuries as war in

Europe inflated grain prices several times over their pre-war value.

In more recent times, wealth from the 1800s corn trade filtered down to Weston with heavy refurbishment of St Mary's church and the construction of a new schoolhouse in 1852 (Pevsner and Harris 1989).

3. AIMS

The aim of the archaeological investigation was to ensure that any archaeological features exposed during the project should be recorded and, if present, to determine their date, function and origin. In particular the character and function of Roman deposits, together with the associated environmental changes at the end of the 4th century were to be examined. The relationship between Saxon and medieval remains near Saint Mary's church and the origins of Weston village were also to be explored.

4. METHODS

An archaeological investigation was undertaken along the proposed route of the Weston Bypass, Weston, Lincolnshire. The investigation incorporated trial trenching, open area excavation and a watching brief monitoring groundworks.

4.1 Trial Trenching

A programme of nineteen trial trenches which measured 15m by 1.6m, were excavated along the proposed route of the Weston Bypass. Topsoil and other overburden was removed by mechanical excavator fitted with a 1.6m toothless ditching bucket under constant archaeological supervision. A 1.2m deep test pit was excavated at the end of each trench to identify whether archaeological

soils or land surfaces were buried beneath marine silts. Trenches were then cleaned by hand and archaeological features sampled.

Each deposit exposed during the evaluation was allocated a unique reference number (context number) with an individual written description. The trench number prefixes context numbers from the evaluation i.e.: Trench 1, context 101.

A photographic record was compiled throughout the project. Sections and plans were drawn at an appropriate scale. Recording of deposits present was undertaken according to standard Archaeological Project Services practice.

The evaluation was undertaken between the 19th January and 3rd July 2001.

4.2 Excavation

Limited area excavation was undertaken by APS along the proposed route of the Weston Bypass. Four phases of excavation took place, targeting areas of high archaeological potential revealed during previous trial trenching. Excavation areas were recorded as WBP1 01, WBP2 01, WBP3 01 and WBP4 01.

Excavations were limited to areas falling within the lines of the roadside ditches. Preservation *in situ* was used as mitigation for areas of the main carriageway. This comprised stabilisation of topsoils upon which the road was constructed.

A mechanical excavator removed topsoil and other overburden from each area using a 1.6m toothless ditching bucket under constant archaeological monitoring. Archaeological deposits were then cleaned by hand and a sample of features excavated.

Each deposit exposed during the evaluation was allocated a unique reference number (context number) with an individual written description.

The excavation phases were undertaken between 21st September 2001 and 24th February 2003.

4.3 Watching Brief

Archaeological monitoring of remaining groundworks was undertaken by APS along the proposed route of the Weston Bypass. Archaeologically significant deposits exposed during groundworks were cleaned by hand and recorded according to standard APS practice. Sections and plans were drawn at an appropriate scale with a photographic record maintained throughout the groundworks.

Each deposit exposed during the evaluation was allocated a unique reference number (context number) with an individual written description.

This watching brief was undertaken between the 5th July and 3rd August 2001.

4.4 Post-excavation

Following excavation, all records were checked and ordered to ensure that they constituted a complete Level II archive and a stratigraphic matrix of all identified deposits was produced. A list of all contexts and interpretations appears as Appendix 2. Context numbers are identified in the text by brackets. An equals sign between context numbers indicates that the contexts once formed a single layer or feature. The term 'intervention' is used to signify one of several excavated sections through the same feature. Phasing was based on the nature of the deposits and recognisable relationships between them.

Artefacts were cleaned and marked before being analysed by appropriate specialists. A full archive of all recovered artefacts is contained within Appendix 3 to 6.

5. RESULTS

Archaeological contexts are described below. The numbers in brackets are the context numbers assigned in the field.

5.1 Phase 1 Pre-Roman Alluvial silt

Pre-Roman 'natural' deposits are present throughout the development site. These deposits are represented by alluvial silts and clays, which are consistent with known geology around Weston (Hodge *et al* 1984).

The most significant pre-Roman deposit was a partially excavated creek [1308] which truncated roddon deposit (1302). This creek was aligned approximately north-south and measured 1.25m wide by 0.25m deep. Creek [1308] was filled by laminated silt deposit (1307) 0.25m thick and truncated by Saxo-Norman (Phase 4B) ditch [1306] (Fig. 5).

Full descriptions of all Phase 1 deposits are catalogued in Appendix 2.

5.2 Unphased Deposits

Undated deposits were present throughout the investigation. Where possible, deposits have been given an earliest or latest possible date by stratigraphic dating. These deposits include ditches, creeks, postholes, hollows, pits, plough furrows and subsoil.

Pre-Roman (Pre-late 3rd century AD)

WBP1 01

Ditch terminal [2112] was aligned north-south directly opposite post-Roman (unphased) terminal [2073] (Fig. 4). This ditch measured 0.23m wide by 0.13m deep terminating to the north. The earliest deposit present in this ditch was light grey orange silt clay (2111) 0.13m thick, which was sealed by topsoil (2100).

Post Roman (Post 4th century AD)

WBP1 01

Ditch [2073] was aligned southeast-northwest 20m south of the northern end of excavation area WBP1 01. This ditch measured 1.35m wide by 0.32m deep, with steep sides and a flat base, which truncated Phase 2C ditch [2025 = 2016 = 2068] (Fig. 4). Ditch [2073] terminated to the southeast opposite unphased ditch terminal [2112]. The earliest deposit in ditch [2073] was dark grey brown silty clay (2072), which measured 0.19m thick and underlay ditch fill (2071). Deposit (2071) was subsequently truncated by modern land drain [2074].

Ditch [2093] was aligned northwest-southeast with steep, irregular sides and a concave base, truncating the upper silts of Phase 2C creek [2099] (Fig. 4). The earliest deposit present within ditch [2093] was mid brown grey silt with occasional shell and charcoal flecks (2095), which measured 0.43m thick and underlay subsoil (2101).

Pre - Saxon (Pre 9th-10th century AD)

WBP3 01

Ditch [3044] was aligned northeast-southwest, located 50m from the west end of excavation area WBP3 01 (Fig. 6). This ditch measured 0.75m wide by 0.18m deep with a concave profile cut into alluvial silts (3010). The earliest deposit present in

ditch [3044] was light grey and orange silty sand (3049), which measured 0.18m thick and was truncated by ditch [3080].

Ditch [3080] recut along the alignment of [3044] (Fig. 6). This ditch measured 0.9m wide by 0.25m deep with a concave profile. The primary fill of this ditch was mid grey sandy silt (3045), which measured 0.26m thick and was truncated by Phase 4A ditch [3046].

Ditch [3068] was aligned east-west and positioned 11m east of Phase 4A ditch [3046] (Fig. 6). This ditch measured 1m wide by 0.27m deep with a steep sided profile and flat base. The only deposit present in ditch [3068] was yellow brown mottled sandy silt, 0.27m thick and truncated by unphased ditch [3080].

Ditch [3080] measured 1.5m wide by 0.4m deep with gently sloping sides and base recutting along [3068] (Fig. 6). The earliest deposit present in ditch [3080] was light grey sandy silt (3064), 0.11m thick and overlain by deposit (3067). This ditch fill was composed of light yellow brown sandy silt, which measured 0.15m thick and was truncated by Phase 4A ditch [3081].

Creek [3001 = 3024] was aligned approximately northwest-southeast within the centre of excavation area WBP3 01 (Fig. 6). This creek measured 3.85m wide by 1.1m deep with gently curving sides and base cut into alluvial silt (3010). The earliest deposits present in this creek were (3069 = 3072) and (3027). Deposit (3027) was composed of dark grey and light brown sandy silt 0.17m thick and overlain by alluvial silt (3026). This deposit was composed of dark grey and creamy sandy silt, 0.06m thick and sealed by topsoil (3043)

Deposit (3069 = 3072) was composed of greyish blue silt 0.07m thick, which

underlay alluvial silt (3036 = 3052). This reddish brown silt measured 0.3m thick and underlay mid greyish brown silt (3050). Deposit (3050) measured 0.7m thick and was overlain by Phase 4A silt (3051) and truncated by unphased ditch [3079 = 3029].

Ditch [3003] was aligned northeast-southwest at the western edge of excavation area WBP3 01 (Fig. 6). This ditch measured 0.74m wide by 0.51m deep with a concave profile cut into alluvial silt (3010). The earliest deposit present in this ditch was dark grey clayey silt (3008) 0.05m thick and underlying ditch fill (3007). This deposit was composed of dark grey sandy silt, which measured 0.13m thick and was sealed by mid grey sandy silt (3006). Ditch fill (3006) measured 0.1m thick and underlay mid grey sandy silt (3005). This deposit measured 0.19m thick and was truncated by Phase 4B ditch [3002].

Ditch [3079 = 3029] was aligned north-south 40m from the east end of excavation area WBP3 01 (Fig. 6). This ditch measured 0.45m wide by 0.35m deep with a v-shaped profile cut into unphased creek deposit (3050). The earliest deposit within ditch [3079 = 3029] was grey brown silt (3028) 0.35m thick, sealed by Phase 4B creek deposit (3017).

Ditch [3020 = 3023] was aligned northeast-southwest and positioned 43m west of the eastern end of WBP3 01 (Fig. 6). This ditch measured 0.46m wide by 0.12m deep with a concave profile cut into pre-Roman alluvial silt (3010). The primary fill of this ditch was cream silty sand (3022) 0.02m thick, which underlay mid grey silt (3021 = 3025). This deposit measured 0.1m thick and was truncated by Phase 4A creek [3001 = 3024].

Post Saxon (post 11th century)

Trench 13

Linear ditch [1304] was aligned north-south within Trench 13 and truncated the upper fill of Phase 4B ditch [1306] (Fig. 5). This ditch measured 0.28m wide by 0.13m deep, with concave sides and base. The earliest deposit in this ditch was dark orange brown slightly clayey silt (1303), which measured 0.12m thick and was truncated by plough furrows [1309] and [1310].

Both furrows were aligned approximately north south within the trench, measured 0.3m wide by 0.2m deep and appeared to be partially filled with subsoil (1301).

Trench 16

Ditch [1610] was aligned northeast-southwest and positioned 6.5m west of the eastern end of Trench 16 (Fig. 6). This ditch measured 2.47m wide by 0.06m deep with gently sloping sides truncating Phase 4A ditch [1601]. Ditch [1610] was filled with dark silt (1611) 0.06m deep, which was sealed by topsoil (1602).

Undated

Subsoil was present though out the investigation and recorded in Trenches 1, 4, 6, 7, 11, 13, 14, 15 as well as excavation areas WBP3 01 and WBP4 01. Subsoil was typically composed of brown grey silty sand approximately 0.1 to 0.35m thick. Full descriptions of all subsoil are contained within Appendix 2.

Trench 1

Ditch [109] was aligned east-west and positioned at the northern end of Trench 1 (Fig. 3). This ditch had moderately steep-sides and a flat base, which truncated unphased subsoil (102). The earliest deposit within this ditch was mid-grey sandy silt with occasional charcoal flecks

and animal bone (108). This primary deposit measured 0.15m and underlay dark grey brown clay silt (107). Deposit (107) was 0.27m thick and sealed by reddish brown silty sand with occasional organic inclusions (106). This ditch fill measured 0.28m thick and was overlain by mid-grey fine silty clay (105). Deposit (105) measured 0.15m thick and was sealed by topsoil (101).

Trench 2

Ditch [208] was aligned north-south along the length of Trench 2 (Fig. 3). This ditch had steep-sides and a concave base cut into alluvial silt (202). The earliest deposit present in ditch [208] was light brown grey clay silt (207), which measured 0.12m thick and underlay mid-grey brown mottled clay silt (206). This deposit measured 0.3m thick and was overlain by mottled yellow brown clay silt (205), which measured 0.1m thick. Ditch fill (205) underlay brown organic clay silt (204), which measured 0.2m thick and was sealed by subsoil (201).

Trench 15

Linear ditch [1508] was aligned northwest-southeast, truncated alluvial silt (1516) and was positioned at the western end of Trench 15 (Fig. 6). This ditch measured 0.24m wide by 0.02m deep with a concave profile. The earliest deposit present in this ditch was light greyish brown silt (1507), 0.02m thick and sealed by subsoil (1515).

Posthole [1510] was located 3.7m from the eastern end of Trench 15 (Fig. 6). This rounded posthole measured 0.22m diameter and 0.2m deep with fairly steep sides cut into alluvial silt (1516). This posthole was filled with dark grey silt (1509), 0.2m thick and sealed by subsoil (1515).

Trench 18

Ditch [1809] was aligned northwest-southeast, with concave sides and base and truncated undated alluvial silt (1803) (Fig. 7). This ditch measured 1.3m wide by 0.25m deep. The earliest deposit within this ditch was yellow brown sandy silt (1811), which measured 0.3m thick. This deposit was overlain by grey brown sandy silt (1810), 0.1m thick, which was truncated by linear [1801].

Ditch [1801] was aligned northeast-southwest with gently curving sides (Fig. 7). This ditch measured 0.85m wide by 0.15m deep. This ditch was filled by grey brown sandy silt 0.15m thick and sealed by topsoil (1802).

WBP1 01

Posthole [2060] was located 31m northeast of the southern end of excavation area WBP1 01 (Fig. 4). This rounded-posthole measured 0.29m in diameter by 0.11m deep, with steep sides cut into alluvial silt. Posthole [2060] was filled with dark grey sandy clay with occasional charcoal flecks (2059) 0.11m thick, which was sealed by topsoil (2100).

WBP2 01

Ditch [2514] was aligned northwest-southeast at the southwest corner of excavation area WBP2 01 (Fig. 5). This ditch measured 0.61m wide by 0.2m deep with concave sides and base cut into alluvial silt. The earliest deposit present in this ditch was light grey silt (2513) 0.3m thick, which was overlain by dark brownish grey silt (2512). This silt measured 0.07m thick and underlay topsoil (2516).

Feature [2503] was located along the northern edge of the excavation area (Fig. 5). This natural hollow measured 4m wide

by 0.23m deep with an irregular profile cut into alluvial silt. The earliest deposit present in this hollow was light grey fine sandy silt (2505) 0.1m thick, which underlay brownish grey silt (2504). This silt measured 0.21m thick and was sealed by topsoil (2516).

WBP3 01

Linear [3033] was aligned northeast southwest 9m west of the eastern end of excavation area WP3 01 (Fig. 6). This ditch measured 1.7m wide by 0.32m deep with a concave profile cut into alluvial silt (3010). The primary fill of this ditch was mid brownish grey fine sandy silt (3032), which was 0.32m thick and sealed by topsoil (3043).

Feature [3037] was aligned north south 48m west of the eastern end of the excavation area (Fig. 6). This probable ditch measured 2.35m wide by 0.7m deep with fairly concave sides and base cut into alluvial silt (3010). The earliest deposit in this linear was greyish brown silt (3042) 0.5m thick. This deposit was overlain by mid brown silt (3030), which measured 0.2m thick and was truncated by ditch [3035].

Linear [3035] was aligned northeast southwest with a concave profile (Fig. 6). This ditch measured 1.10m wide by 0.56m deep with an initial fill of light yellowish brown silt (3040). Primary deposit (3040) measured 0.1m thick and was overlain by mid greyish brown silt (3041) 0.08m thick. This deposit underlay light brown silt (3039) 0.23m thick, which was overlain by light grey silt (3038). Ditch fill (3038) measured 0.15m in thickness and underlay dark silt with frequent charcoal flecks (3034). This silt measured 0.03m in thickness and was overlain by mid greyish brown silt (3031) 0.2m thick and sealed by topsoil (3043).

Curvilinear ditch [3055] was located at the western end of the excavation area, curving gently from northwest to southeast to northeast (Fig. 6). This ditch measured 1.1m wide by 0.25m deep with a concave profile. The primary fill of this ditch was brown silty fine sand (3054) 0.1m thick and overlain by mid grey sandy silt (3053). Deposit (3053) measured 0.16m thick and was sealed by topsoil (3043).

WBP4 01

Ditch [3500] was aligned southwest northeast 3.35m west of the eastern end of excavation area WBP4 01 (Fig. 7). This ditch measured 1.00m wide by 0.30m deep, with a concave profile cut into alluvial silt (3518) and terminated at the northeast end. The earliest deposits present within this ditch were greyish brown fine silts with frequent shell and moderate charcoal (3501) and (3515). Deposit (3501) measured 0.3m thick and underlay ditch fill (3509). Deposit (3515) measured 0.15m thick and was overlain by greyish brown fine silt with occasional charcoal and marine shell (3516). This deposit measured 0.09m thick and was also overlain by ditch fill (3509).

Deposit (3509) was composed of brownish grey clay 0.07m thick underlying mid brown silty fine sand (3508). This fine sand measured 0.52m and was sealed by topsoil (3519).

Feature [3504] was located 1.5m east of [3500] (Fig. 7). This probable pit was sub-rounded in plan with a fairly irregular profile cut into alluvial silt (3518), and measured 0.8m long by 0.47m wide by 0.06m deep. Sandy silt 0.06m thick, with occasional charcoal, shell and bone (3505) backfilled this pit.

An irregular hollow [3512] was located 21m southwest of ditch [3500] (Fig. 7). This hollow measured 3.06m long by

2.24m wide by 0.12m deep with an irregular profile cut into alluvial silt (3518). Hollow [3512] was filled with an initial deposit of greyish brown silt (3511) 0.05m thick. This deposit was overlain by mid grey silt (3510), which measured 0.01m thick and was sealed by topsoil (3519).

Linear [3514] was aligned northeast-southwest 1.3m west of hollow [3512]. This linear measured 3.2m wide by 0.14m deep, however, this feature was not fully excavated. The earliest deposit in this linear was brownish grey silt ditch fill (3517) 0.14m thick and truncated by furrow [3502].

Furrow [3502] was aligned northwest-southeast across the excavation area and truncated linear [3514] (Fig. 7). This furrow measured 1.25m wide by 0.08m deep and was filled with brown silt (3503). This furrow fill was sealed by subsoil (3513), which was present along the southern margin of the excavation area.

5.3 Phase 2 Roman Deposits

Phase 2 encompassed the Roman period from 1st to 4th century AD. This was sub-phased below as 2A, 2b and 2C. A full list of all Roman deposits is contained within Appendix 2.

2A Early Roman 1st-2nd century

Early Roman deposits were restricted to ditch [2159] and silt spread (318) in Trench 3 (Fig. 4).

Spread (318) was composed of yellow grey silt 0.05m thick. This spread sealed a layer of laminated pre-Roman silt (319) and was sealed by mid Roman layer (313) (Fig. 8, Plate 1). A single sherd of 2nd century Central Gaulish Samian pottery was recovered from this deposit (Appendix 3).

Ditch [2159] was aligned north-south 25m north of the southern end of excavation area WBP1 01 (Figs. 4 & 8). This ditch had slightly stepped steep-sides and a flat base which truncated pre-Roman silts (2168). The earliest deposit present in ditch [2159] was dark brown clay silt (2167), 0.07m thick and overlain by ditch fill (2166). This deposit was composed of mid-brown grey silty sand, 0.17m thick and underlay mid-brown laminated silt sand (2165).

Ditch fill (2165) measured 0.03m thick and was sealed by laminated silty sand (2164) 0.05m thick. This laminated silt was overlain by mid-brown grey sandy clay (2163), 0.26m thick. Deposit (2163) underlay mid-blue sandy clay (2173), which measured 0.02m thick and was truncated by Phase 2B ditch [2153].

2B Mid-Roman 2nd-3rd century

Mid Roman deposits were present in Trench 3 and excavation area WBP1 01 (Fig. 4).

Trench 3

The earliest mid-Roman deposit in Trench 3 was a layer of dark clay silt (313). This layer overlay early Roman spread (318) to a depth of 0.11m and was truncated by channel [323] (Fig. 8, Plate 1). Deposit (313) contained frequent charcoal flecks and forty-six sherds of late 2nd-early 3rd century pottery including Central Gaulish Samian, Nene Valley greywares and an amphora fragment (Appendix 3).

Channel [323] was aligned northwest southeast with steep sides and a flat base (Figs. 4 & 8, Plate 1). This channel measured 3.18m wide by 1.02m deep and was cut into layer (313) and pre-Roman silts (327). The initial deposit within channel [323] was mid-grey silt (317) with occasional charcoal flecks 0.11m thick and

underlying dark grey silt (307). Deposit (317) contained five sherds of mid-2nd to early 3rd century pottery including Nene Valley greywares and Bourne industry vessels (Appendix 3).

Deposit (307) measured 0.12m thick and contained flecks of fired clay, charcoal and 53 sherds of 3rd century Nene Valley and Bourne industry vessels (Appendix 3). This deposit was sealed by grey brown silt (315) measuring 0.36m thick and containing charcoal and fired clay flecks.

Channel fill (315) contained fifty sherds of mid to late-2nd century vessels including coarsewares and finewares of the Nene Valley and Bourne industries (Appendix 3). Deposit (315) was overlain by alluvial deposit (316) and ashy spread (312).

Alluvial deposit (316) measured 0.08m thick, contained a single sherd of 2nd century amphora (Appendix 3) and was overlain by occupation layer (310).

Ashy spread (312) measured 0.08m thick with frequent charcoal and fired clay flecks. Twenty-two sherds of 3rd century pottery were recovered from this spread including Nene Valley and Bourne industry coarsewares, finewares and a sherd of imported amphora (Appendix 3). This spread underlay channel fill (302).

Deposit (302) was composed of grey-brown silt with occasional charcoal and fired clay flecks 0.3m thick. This channel fill contained fifty sherds of 3rd century pottery including Nene Valley, Bourne type vessels and a residual sherd of Central Gaulish Samian (Appendix 3). Occupation layer (310) sealed this deposit.

Alluvial deposit (314) located east of channel [323] measures 0.08m thick, overlies pre-Roman silt (326) and was sealed by occupation layer (310). This deposit contained thirteen sherds of 2nd to

early 3rd century pottery including fragments of an amphora (Appendix 3).

Occupation layer (310) formed after channel [323] had silted up and measured 0.15m thick. This layer was composed of grey clay silt with occasional charcoal and fired clay flecks. In addition thirty-five sherds of 3rd century Nene Valley and Bourne type vessels were recovered (Appendix 3). This layer was overlain by alluvial silt (311).

Deposit (311) was composed of yellow brown silt 0.16m thick and contained five sherds of mid-2nd to early-3rd century Nene Valley and Bourne type vessels (Appendix 3). This alluvial silt underlay laminated silt (320), which measured 0.09m thick and was sealed by Phase 2C spread (308).

WBP1 01 West Dyke

Creek [2024] was aligned east-west within the western dyke of excavation area WBP1 01, measuring 3m wide by 0.5m deep (Fig. 4 & 8, Plate 2). Moderately steep-sided creek [2024] truncated pre-Roman silts and was filled with a succession of alluvial deposits. The earliest creek deposit revealed was mid-grey sandy clay (2033 = 2052), 0.12m thick and containing two sherds dating from at the least 2nd century AD (Appendix 3). This deposit was overlain by alluvial fill (2031 = 2051).

Creek fill (2031 = 2051) was composed of mid-brown clay measuring 0.33m thick and containing four sherds of late 2nd to 3rd century pottery including Nene Valley wares (Appendix 3). Deposit (2031 = 2051) was overlain by final creek fill (2029 = 2050).

Deposit (2029 = 2050) was composed of light brown clay silt 0.05m thick and truncated by modern drain [2032].

Just south of creek [2024], linear [2123] was aligned northeast-southwest with moderately steep-sides and a flat base (Figs. 4 & 8). This ditch measured at least 2.6m wide by 0.99m deep and truncated pre-Roman silts. The earliest deposit revealed in [2123] was light grey silt (2129) 0.23m thick and overlain by organic clay (2128). This organic deposit (2128) measured 0.23m thick and contained eleven sherds of 3rd century Nene Valley and Bourne type pottery. Ditch fill (2128) was overlain by light grey silt (2127) measuring 0.44m thick and contained a single sherd of mid-2nd to early 3rd century pottery. This deposit was sealed by orange brown silt (2126), which measured 0.64m thick and underlay topsoil (2100).

Directly northwest of creek [2024] was a curving ditch excavated in three interventions [2007], [2013] and [2015] (Fig. 4). This ditch measured 0.78m wide by 0.29m at maximum extent and curved from northwest to southeast to northeast. Ditch [2007], [2013] and [2015] had slightly stepped steep sides, a v-shaped base and truncated pre-Roman silts (2008).

Intervention [2015] at the northwest end of the ditch contained three fills. Primary deposit (2014) forming the initial ditch fill was composed of mid grey-brown silt 0.15m thick and overlain by 0.04m thick yellow brown silt (2038). Deposit (2038) was sealed by post-Roman (Phase 3) alluvium (2037).

At the southeast curve of the ditch was located intervention [2013]. This was filled by grey brown clay silt (2012) 0.2m thick and sealed by topsoil (2036). Two sherds of abraded Roman pottery were recovered from this deposit (Appendix 3).

Intervention [2007] was cut at the northeast end of the curving ditch. Primary fill (2006) forms the initial deposit within

ditch [2007]. This deposit was composed of yellow brown silt 0.12m thick and overlain by domestic dump (2005). Deposit (2005) was composed of yellow silt with occasional charcoal, fired clay flecks and twenty-two sherds of mid to late-2nd century pottery (Appendix 3). This deposit was truncated by ditch [2023] 1m north of intervention [2007].

Ditch [2021] (Figs. 4 & 8) was aligned north-south with gently curving sides and base which truncated natural silt (2008). This ditch measured 0.29m wide by 0.2m deep and was filled with a dump of occupation material (2020). Deposit (2020) was composed of dark silt with occasional charcoal and shell flecks. In addition thirty-three sherds of late-2nd to early-3rd century pottery was recovered, including examples from the Nene Valley, Bourne type and amphora (Appendix 3). This occupation debris was truncated by ditch [2023].

Concave-sided ditch [2023] was aligned north south, measuring 0.3m wide by 0.19m deep (Figs. 4 & 8). This ditch was filled by silty clay (2223) 0.19m thick and sealed by topsoil (2036). Although no dating was retrieved from this deposit, the relationship with (2020) was unclear in the field and some of the 2nd-3rd century pottery was probably derived from (2223).

Approximately 2m north of linear [2023] was a north-south aligned ditch [2131] (Fig. 4). This steep-sided flat-based ditch, measured 0.39m wide by 0.16m deep and truncated pre-Roman silts. Grey brown clay silt (2130) formed the only deposit within ditch [2131], measured 0.13m thick and was truncated by Phase 2C pit [2122 = 2084].

Linear feature [2092] was located approximately 6m north of ditch [2131] (Figs. 4 & 8). This probable ditch measured 4m wide by 0.8m deep with gently sloping sides cut into natural silts.

The earliest deposit within [2092] was grey clay silt (2086) measuring 0.18m thick and containing occasional charcoal, shell flecks and a sherd of mid-2nd to 3rd century Bourne type pottery (Appendix 3). This deposit underlay a discrete dump of waste (2078) which measured 0.2m thick and contained occasional charcoal, shell flecks and three sherds of 2nd century pottery (Appendix 3).

Dump deposit (2078) underlay possible marine flood (2034), which was composed of light brown silt 0.25m thick. Three sherds of 2nd-3rd century pottery were retrieved from this deposit, which was sealed by mid grey silt (2027). Deposit (2027) measured 0.07m thick, contained a sherd of 2nd-3rd century pottery (Appendix 3) and was overlain by ditch fill (2140). This deposit was composed of light brown silt 0.08m thick and sealed by mid grey silt with frequent charcoal and shell fragments (2141). Ditch fill (2141) measured 0.21m thick and contained four sherds of late 2nd-mid 3rd century Nene Valley and Bourne type vessels. This deposit was truncated by recut [2022].

Ditch [2022] recut along the alignment of [2092] with gently curving sides and base (Figs. 4 & 8). This ditch measured 0.95m wide by 0.33m deep with a single fill composed of grey clay silt (2018) with occasional charcoal flecks. Deposit (2018) measured 0.5m thick and contained thirty-six sherds of early to mid-3rd century pottery. Pottery recovered included Nene Valley greywares, Bourne type, Mancetter mortaria and imported amphora and samian (Appendix 3).

Ditch [2098] was located approximately 8m from the northern end of excavation area WBP1 01 (Fig. 4). This ditch was aligned east-west, and measured 0.6m wide by 0.1m deep with moderately steep sides and a concave base which truncated pre-Roman silt (2109). Ditch [2098] was

filled by mid-grey brown silty clay (2097) which measured 0.1m thick and contained 2 sherds of mid-2nd to early 3rd century pottery (Appendix 3). This deposit was subsequently truncated by Phase 2C creek [2099].

Ditch [2114] was located at the southern end of WBP1 01 (Figs. 4 & 8, Plate 3). This ditch was aligned northwest-southeast with concave sides and base and measured 2.2m wide by 0.78m deep. The earliest deposit within ditch [2114] was mid grey blue clay silt (2116), which measured 0.03m thick and underlay mid-reddish brown silt (2117). This deposit measured 0.22m thick, contained frequent cockleshells and was sealed by dump (2115). Ditch fill (2115) was composed of shell and charcoal rich silt 0.03m thick which contained a single sherd of mid-2nd to 3rd century pottery (Appendix 3).

This dump deposit underlay mid-grey clay silt (2118) 0.09m thick with occasional charcoal, fired clay flecks and a sherd of late 2nd to 3rd century pottery (Appendix 3). Deposit (2118) was sealed by light grey brown silt (2119) with charcoal flecks a sherd of mid-2nd to 3rd century pottery and overlain by ditch fill (2120). Deposit (2120) was composed of light brown grey silt with occasional charcoal flecks 0.24m thick and overlain by topsoil (2100).

WBP1 01 East Dyke

Channel [2158] was aligned northeast-southwest with gently curving sides which truncated pre-Roman silts at the southern end of the site (Fig. 4). This channel measured 3.4m wide by 0.45m deep and was filled with a sequence of alluvial deposits. The earliest deposit present was a dump of domestic waste and silt (2147) 0.19m thick. This dump, contained flecks of charcoal, fired clay, shell and six sherds of 2nd - 3rd century pottery produced in Bourne (Appendix 3). Dump (2147) was

sealed with dark silt (2146). This silt was 0.18m thick and contained ash, charcoal, fired clay and sixteen sherds of 2nd century pottery (Appendix 3).

Deposit (2146) was overlain by alluvial silt (2145), which measured 0.11m thick and contained 2 sherds of mid-2nd to early 3rd century Nene Valley ware pottery. This silt was sealed by alluvial silt (2191) probably formed in the post-Roman period (Phase 3).

Ditch [2153] was aligned north-south, and was located 18m north of channel [2158] (Fig. 4). This ditch measured 0.49m wide by 0.59m deep with concave sides and base which truncated pre-Roman silts. Primary silt (2218) formed the initial deposit in [2153]. This silt measured 0.12m thick and underlay light grey silt (2217) 0.12m thick. Silt (2216) contained two sherds of late 2nd to 3rd century Nene Valley ware pottery and was truncated by ditch [2215].

Linear ditch [2215] was aligned north-south with a concave profile, and recut ditch [2153] (Fig. 4). This recut measured 0.4m wide by 0.58m deep with a primary fill of dark grey silt (2217) 0.11m thick. Primary deposit (2217) was overlain by dark grey silt with occasional charcoal flecks (2214) 0.2m thick. This silt was sealed by light brown silt (2213), which measured 0.11m thick and underlay compact grey silt (2212). Deposit (2212) measured 0.19m thick and was truncated by Phase 2C ditch [2152].

Ditch terminal [2137] was located 2m north of ditch [2153] (Fig. 4). This ditch was aligned east-west with slightly irregular sides and a concave base and terminated at the eastern end. Ditch [2137] measured 0.15m wide by 0.4m deep with a primary fill of brown clay silt with frequent charcoal flecks (2138). This primary fill measured 0.06m and contained

seven sherds of mid-2nd to early 3rd century Nene Valley and Bourne type vessels (Appendix 3). Deposit (2138) was sealed by alluvial deposit (2142), which measured 0.24m thick and underlay topsoil.

Creek [2024] continued into the East Dyke area and was located 3.3m north of ditch [2159] (Fig. 4). This creek was truncated by ditch [2150], which was aligned northwest-southeast with a concave, slightly stepped profile. This ditch measured 1.6m wide by 0.68m deep with a primary fill composed of brown silt with occasional charcoal flecks (2156). This deposit measured 0.13m thick and underlay dark silt with frequent charcoal, shell and fired clay (2151). Deposit (2151) measured 0.26m thick, contained nine sherds of 3rd century pottery (Appendix 3) and was overlain by dark clay silt (2179). This ditch fill measured 0.3m thick and was truncated by recut [2182].

Ditch [2182] was recut along the alignment of [2150] with a concave profile (Figs. 4 & 8). This ditch measured 1.12m wide by 0.29m deep. The initial deposit within ditch [2182] was a slump of silt and domestic debris (2181) down the northeast edge possibly representing a collapsed bank. This slump measured 0.1m thick and contained a single sherd of mid-2nd to 3rd century pottery (Appendix 3). Slump (2181) was overlain by brown clay silt with occasional iron panning (2184) 0.29m thick. This deposit was sealed by topsoil (2185).

Linear [2174] aligned east-west was located 5m north of ditch [2182] (Fig. 4). This probable creek measured 5m wide by 1.2m deep cut into pre-Roman silts. The only deposit present in linear [2174] was brown silt clay (2149), which measured 0.34m thick and contained twenty-three sherds of early to mid-3rd century pottery including Nene Valley and Bourne type

vessels (Appendix 3). This deposit was truncated by Phase 2C ditch [2133].

2C Late Roman Late 3rd-4th century

Late Roman deposits were present in Trench 3 and excavation area WBP1 01 (Fig. 4).

Trench 3

The earliest late Roman deposit in Trench 3 was a spread of silt and occupation debris (308 = 309) 0.11m thick which overlay Phase 2B alluvial silt (320). This spread contained charcoal, daub and thirty-eight sherds of late 3rd to 4th century pottery including coarsewares, finewares and an amphora fragment (Appendix 3). Occupation spread (308 = 309), was truncated by ditch [305] which was aligned northwest-southeast (Figs. 4 & 8, Plate 1).

Ditch [305] measured 0.35m wide by 0.22m deep with concave sides and base (Figs. 4 & 8, Plate 1). Primary fill (303) formed the initial deposit within [305], composed of light grey clay silt with occasional charcoal. This deposit measured 0.22m thick and contained twenty-four sherds of early to mid-4th century pottery (Appendix 3). Deposit (303) underlay a layer of mid grey silt with occasional charcoal and daub (304) representing a possible occupation spread. This spread measured 0.13m thick and contained seventy sherds of early to mid 4th century pottery (Appendix 3).

Alluvial deposit (306) sealed this occupation spread, to a depth of 0.18m thick. This deposit contained occasional daub, charcoal flecks and ten sherds of early to mid 4th century pottery (Appendix

3), sealed under post-Roman alluvium (322).

WBP1 01 West Dyke

Ditch [2003] was aligned north-south within the southern end of excavation area WBP1 01 (Figs. 4 & 8). This ditch measured 1.8m wide by 0.8m deep with concave sides and base which truncated pre-Roman silts (2008). The earliest deposit present in ditch [2003] was laminated grey orange silty clay (2009).

This primary deposit measured 0.29m thick and underlay mid grey sandy clay (2002). This deposit measured 0.2m thick and contained ten sherds of late 3rd century (Appendix 3). Ditch fill (2002) was overlain by mid brown silty clay (2001), which measured 0.27m thick and contained residual sherds of 1st to 2nd century pottery. Deposit (2001) underlay pale grey silt clay (2011), 0.07m thick and sealed by topsoil.

Sub-square Pit [2084 = 2122] which truncated ditch [2131], measured 1.55m wide by 3m long by 0.58m deep (Fig. 4). This pit had near vertical sides and a slightly concave base. The earliest deposit present in pit [2084 = 2122] was a backfill of domestic waste (2083 = 2121) 0.61m thick containing seventeen sherds of late 3rd to 4th century pottery (Appendix 3). This deposit was sealed by a spread of dark yellow brown sandy silt (2082) 0.14m thick, which contained seventy-nine sherds of 4th century pottery (Appendix 3). Spread (2082) underlay topsoil (2100).

Northeast-southwest aligned ditch [2068 = 2016 = 2025] was located 10.6m north of ditch [2003] (Fig. 4 & 8). This ditch was excavated in three interventions and measured 2.3m wide by 0.9m deep at greatest extent, with moderately steep sides which truncated pre-Roman silts (2008). Intervention [2016] at the eastern

end of the ditch was subsequently re-excavated and re-numbered as [2025].

The earliest deposit in intervention [2025] was waterlogged grey clay (2046) 0.1m thick. This organic deposit was overlain by waterlogged yellow sandy clay (2043) 0.06m thick, which was sealed by dark grey silt with frequent charcoal and organic flecking (2096). This deposit measured 0.19m thick and contained fifteen residually derived sherds of late 2nd to early 3rd century pottery (Appendix 3). Ditch fill (2096) was overlain by grey sandy silt with occasional gravel (2042), which measured 0.21m thick. This deposit underlay dark grey silty clay (2041), which measured 0.09m thick and contained eleven sherds of late 3rd century pottery including Nene Valley and Bourne type vessels (Appendix 3).

Ditch fill (2041) was overlain by brown grey sandy silt with occasional gravel and shell (2035) 0.15m thick. This deposit was sealed by mid brown silt with charcoal flecks and iron panning (2026). Deposit (2026) measured 0.37m thick and contained twenty-six sherds of 4th century pottery (Appendix 3). Ditch fill (2026) was truncated by unphased ditch [2073].

Intervention [2068] was located 1m southwest of [2025] (Figs. 4 & 8). The earliest deposit present in intervention [2068] was grey silty clay with occasional iron panning (2091) 0.22m thick. This deposit contained two sherds of mid-2nd to 3rd century pottery (Appendix 3) and was sealed by light brown silt with occasional iron panning (2090). This silt measured 0.13m thick and contained two sherds of mid-2nd to 3rd century pottery (Appendix 3). Deposit (2090) was overlain by dark grey silt (2069) 0.26m thick, which was truncated by ditch [2065].

Steep sided-ditch [2065] was aligned southeast-northwest truncating ditch [2025

= 2016 = 2068] (Figs. 4 & 8). This ditch measured 0.55m wide by 0.38m deep and contained a primary fill of yellow silt (2088). Deposit (2088) measured 0.04m thick and contained a single sherd of 3rd century pottery (Appendix 3). Ditch fill (2088) was overlain by blue grey silty clay (2087) 0.11m thick, which was sealed in turn by mid brown silt (2079). This silt measured 0.09m thick, contained two sherds of 3rd century pottery (Appendix 3) and was overlain by yellow silt (2067). Deposit (2067) measured 0.08m thick and underlay brown grey silt (2066). This silt was 0.14m thick, contained eight sherds of 3rd century pottery (Appendix 3) and was sealed by topsoil (2028).

Ditch [2039] was aligned northeast-southwest approximately 6m north of ditch [2065] (Fig. 4). This ditch measured 0.8m wide by 0.44m deep with fairly straight sides, a round base and truncated pre-Roman silts (2008). The earliest deposit present within ditch [2039] was light grey brown silt (2040) 0.44m thick and sealed by spread (2056). This spread was composed of mid-brown silt with occasional charcoal flecks and underlay topsoil (2036).

Creek [2099] was aligned northwest-southeast and truncated ditch [2098] (Fig. 4). This creek measured 8.9m wide by 0.8m deep and was filled with a sequence of alluvial deposits. The earliest deposits present in creek [2099] were, mid-brown silty sand (2108) and mid-grey brown silt (2064).

Alluvial deposit (2108) measured 0.1m thick with occasional shell flecks and four sherds of mid-2nd to 3rd century pottery (Appendix 3). Deposit (2108) was sealed by brown sandy silt with rare charcoal flecks (2107), which measured 0.06m thick and underlay deposits (2054) and (2053).

Alluvial deposit (2064) measured 0.13m thick with occasional charcoal flecks and twenty-six sherds of abraded late 3rd century pottery (Appendix 3). This deposit underlay alluvial silts (2053) and (2055).

Creek fill (2054) was composed of grey brown clay silt with occasional charcoal, shell and eleven sherds of abraded mid-2nd to 3rd century pottery (Appendix 3). This deposit was 0.13m thick and underlay alluvial deposit (2105).

Alluvial deposit (2053) was composed of mid-grey brown silt with occasional charcoal flecks and thirty-two sherds of 3rd century pottery (Appendix 3). This deposit measured 0.15m thick and was sealed by alluvial deposit (2105).

Creek fill (2055) was composed of mid-grey brown sandy silt with occasional charcoal, measured 0.12m thick and underlay alluvial deposit (2049). This deposit contained a large assemblage of small abraded potsherds (124) dating from the late 3rd to 4th century (Appendix 3) and underlay alluvial silt (2049).

Deposit (2105) measured 0.08m thick and was composed of mid-grey brown sandy silt with occasional charcoal flecks. This deposit was overlain by creek deposit (2106). Alluvial deposit (2049) was composed of dark grey brown silt sand with frequent charcoal and fired clay flecks. This deposit measured 0.26m thick, contained nine sherds of 3rd century pottery (Appendix 3) and was also sealed by creek deposit (2106).

Creek deposit (2106) was composed of mid-brown grey silt, which measured 0.08m thick and underlay mid-grey clay silt with occasional charcoal (2047). This deposit measured 0.04m and contained fifty-eight sherds of 4th century pottery including Nene Valley finewares and Mancetter mortaria (Appendix 3). Deposit

(2047) was overlain by reddish brown clay silt (2104), which measured 0.15m thick.

Creek fill (2104) underlay light grey brown sandy silt (2103), which measured 0.29m thick and was sealed by alluvial silt (2102). This silt measured 0.08m thick, was composed of light grey clay silt and truncated by unphased ditch [2093].

WBP1 01 East Dyke

Ditch [2208] was aligned east-west 3.25m north of Phase 2B channel [2158] (Fig. 4). This ditch measured 2.5m wide by 1m deep with a concave profile cut into pre-Roman silts. The earliest deposit present in ditch [2208] was mid-grey mixed sandy silt (2202) forming a major slump along the southern edge. This slump measured 0.4m thick, contained ten sherds of late 2nd to 3rd century pottery (Appendix 3) and represented either edge erosion or a collapsed bank. Deposit (2202) was overlain by a slump of mid-grey brown silt clay (2201) also along the southern edge.

Slump (2001) measured 0.08m thick, contained three sherds of 3rd century pottery (Appendix 3) and was sealed by mid grey mixed sandy silt (2205). This deposit measured 0.22m thick and contained a single burnt sherd of mid-2nd to 3rd century pottery (Appendix 3). Ditch fill (2205) was overlain by mid-grey clay silt with occasional charcoal flecks (2204), which measured 0.3m thick and contained twelve sherds of late 3rd to 4th century pottery (Appendix 3). This deposit was overlain by mid brown silty clay (2200), which measured 0.12m thick and truncated by probable ditch [2199].

Large linear [2199] was aligned east-west and truncated ditch [2208] (Fig. 4). This probable ditch measured 4.8m wide by 1.02m deep with a concave profile. The earliest deposit present in ditch [2199] was grey brown silty clay (2198), which

measured 0.78m thick. This large deposit was overlain by mid brown silt (2197) 0.16m thick, which was sealed by topsoil.

Ditch [2152] was aligned north south-with concave sides and base truncating ditch [2153] (Fig. 4). This ditch measured 1.14m wide by 0.28m deep. The only deposit present in ditch [2152] was mid grey silty clay (2211), which measured 0.28m thick and contained three sherds of mid-3rd to 4th century pottery (Appendix 3).

Ditch [2125] was aligned north-south, located 2.6m north of Phase 2B ditch [2150] (Figs. 4 & 8). This ditch measured 0.8m wide by 0.22m deep with steep sides and a flat base which truncated pre-Roman silts. The earliest deposits present in ditch [2125] were mid brown clay silt (2196) and grey brown silt (2136). Deposit (2196) measured 0.22m thick, contained four sherds of mid-2nd to 3rd century pottery (Appendix 3) and was truncated by pit [2195] along the southwest edge.

Ditch fill (2136) measured 0.05m thick and underlay mid-grey sandy silt with occasional charcoal flecks (2132). This deposit measured 0.15m thick and contained seven sherds of 3rd century pottery (Appendix 3). Dark grey sandy silt (2124) overlay deposit (2132). This ditch fill contained frequent charcoal flecks and nineteen sherds of late 3rd to 4th century pottery (Appendix 3).

Steep-sided rectangular pit [2195] had a slightly uneven base and truncated ditch [2125] (Figs. 4 & 8, Plate 4). This pit measured 1m wide by 1.16m long by 0.15m deep. The earliest deposit present within this pit was a dump of mid-grey brown silt with occasional charcoal and daub flecks (2194). This dump measured 0.13m thick and contained nine sherds of Nene Valley and Bourne type 3rd century pottery (Appendix 3). Deposit (2194) was overlain by pit fill (2193), composed of

mid grey brown fine silt with occasional charcoal flecks. This pit fill contained eight sherds of 3rd century pottery (Appendix 3) and was sealed by topsoil.

Ditch [2161] was aligned north-south, located 1m north of ditch [2125] (Fig. 4). This ditch measured 0.82m wide by 0.26m deep with a concave profile cut into pre-Roman silts (2190). The earliest deposit present in ditch [2161] was mid-brown grey compact silt (2189), which measured 0.18m thick and contained two sherds of 3rd century pottery (Appendix 3). This deposit underlay yellow brown silty sand (2188) 0.2m thick, which was sealed by ditch fill (2187). Deposit (2187) was composed of mid-greyish brown clay silt with rare organic flecks, contained eight sherds of 3rd century pottery (Appendix 3) and was overlain by ditch fill (2162). This deposit was composed of mid-brown grey compacted silt with occasional daub flecks 0.08m thick and truncated by large linear [2133].

Probable creek [2133] was aligned east west with shallow sides truncating ditch [2161] (Figs. 4 & 8). This probable creek measured 5.6m wide by 0.8m deep. The earliest deposit present in [2133] was dark organic silt (2160), which measured 0.15m thick and was overlain by deposit (2157). This deposit was composed of pale brown silt 0.14m thick and sealed by grey brown silty clay (2139). Deposit (2139) was composed of grey brown silty clay 0.37m thick and contained thirty-four residual sherds of 2nd century pottery (Appendix 3). This deposit was overlain by grey silty clay (2135) 0.45m thick, which contained fourteen sherds of 3rd and 4th century pottery (Appendix 3) and sealed by alluvial layer (2134).

Layer (2134) sealed deposit (2135) and extended beyond the edges of this linear. This layer measured 0.22m thick, contained seventeen sherds of late 3rd to 4th

century pottery (Appendix 3) and underlay post-Roman alluvial silt (2210).

5.4 Phase 3 Post-Roman Alluvial silt

Post-Roman deposits were revealed over much of the development site composed of alluvial silts and saltmarsh clays similar to those formed in the pre-Roman phase. These deposits probably formed between the 5th and 9th centuries AD, prior to 'newland' reclamation in the late Saxon period. Full descriptions of all post-Roman deposits are catalogued in Appendix 2.

5.5 Phase 4 Saxon Deposits

Saxon remains were present within Trenches 13, 16 and excavation areas WBP2 01 and WBP3 01, spanning the 9th to 11th centuries (Figs. 5 & 6). These deposits have been sub-phased as 4A (Late Saxon 9th to 10th century) and 4B (Saxo-Norman 10th to 11th century). A full list of all Saxon deposits is contained within Appendix 2.

4A Late Saxon 9th to 10th century

Late Saxon deposits were present in Trench 13 and excavation area WBP3 01 (Figs. 5 & 6).

Trench 16

Ditch [1601] was aligned northeast-southwest and positioned 2.8m from the west end of Trench 16 (Fig. 6 & 9, Plate 5). This ditch measured 2.7m wide by 0.5m deep with a concave profile and truncated alluvial silts (1609). The earliest deposit in ditch [1601] was dark greyish brown silt (1607) 0.03m thick. This primary fill was overlain by grey brown silt (1606) 0.04m thick, which underlay dark silt (1608). This deposit measured 0.35m thick and was overlain by grey silt (1605). Deposit (1605) measured 0.28m thick and contained a sherd of late 9th to

mid 10th century Lincoln shelly ware jar (Appendix 4).

Ditch fill (1605) was overlain by brown silt with occasional fired clay flecks (1604). This deposit measured 0.23m thick and underlay mid-grey brown silt (1603). Deposit (1603), which measured 0.24m thick, was sealed by topsoil (1602).

WBP3 01

Ditch [3046] was aligned northeast-southwest and was located 50m from the west end of excavation area WBP3 01 (Figs. 6 & 9, Plate 7). This ditch measured 2.77m wide by 0.78m deep with a concave profile and truncated ditch [3044]. The earliest deposit present in ditch [3046] was light brown silt (3048), which measured 0.33m thick and contained a sherd of locally made 10th century pottery (Appendix 4). This deposit was overlain by grey brown silt (3047) 0.52m thick, which underlay topsoil (3043).

Ditch [3081] was aligned east-west and recut unphased ditch [3080] (Figs. 6 & 9). This ditch measured 1m wide by 0.15m deep with a concave profile. The initial fill of ditch [3081] was light yellow brown mottled sandy silt (3063), which measured 0.16m thick. This deposit contained 10 sherds of 10th century southern and northern Maxey ware pottery (Appendix 4).

Ditch [3082] recut along the alignment of linear [3081] and truncated deposit (3063). This ditch measured 0.55m wide by 0.2m deep with a gently curving profile (Figs. 6 & 9). The earliest deposit present in ditch [3082] was greyish brown fine sandy silt (3062), which measured 0.1m thick. Deposit (3062) was overlain by mid-greyish brown sandy silt 0.12m thick and contained 9 sherds of 10th century Lincoln and St. Neots wares (Appendix 4). This deposit was truncated by ditch [3083],

which measured 0.9m wide by 0.5m deep with a concave profile.

The earliest deposit present in ditch [3083] was a deliberate dump of mid grey clayey silt (3060) 0.1m thick, which contained 79 sherds of 10th century pottery including a near complete Wolds or East Anglian jar (Appendix 4). This deposit was overlain by ashy silt (3059) 0.1m thick, which contained 11 sherds of 10th century pottery (Appendix 4). Deposit (3059) was sealed by light brown fine sandy silt, 0.03m thick, which underlay ditch fill (3057). This deposit was composed of yellowish brown silt 0.21m thick and underlay mid greyish brown sandy silt (3056). Ditch fill (3056) measured 0.12m thick and was sealed by topsoil (3043).

Creek [3001 = 3024] located within the centre of excavation area WBP3 01 contained a sequence of late Saxon deposits sealing unphased creek fill (3050) (Fig. 6). The earliest Phase 4A deposit was laminated light brown grey silt (3051), 0.2m thick and containing a sherd of 10th century pottery (Appendix 4). This deposit was overlain by dark grey silt (3019) 0.02m thick, which contained a sherd of 10th century jar (Appendix 4) and underlay deposit (3018). Creek fill (3018) was composed of mid-brownish grey silt, 0.12m thick and sealed by Phase 4B alluvial deposit (3017).

4B Saxo-Norman 10th-11th century

Saxo-Norman deposits were present in Trench 13 and excavation areas WBP2 01 and WBP3 01 (Figs. 5 & 6).

Trench 13

Ditch [1306] was aligned east-west and located at the eastern end of the trench (Fig. 5). This concave profiled ditch measured 0.66m wide by 0.32m deep and terminated at its western end, truncating

unphased creek [1308]. The earliest deposit present in ditch [1306] was dark grey silt (1313) 0.04m thick, which contained 5 sherds of 11th century pottery (Appendix 4). This deposit underlay grey brown slightly clayey silt (1305), 0.15m thick. Domestic waste including 22 sherds of late 10th to mid 11th century pottery was recovered including Early Stamford and Thetford wares (Appendix 4). Deposit (1305) was truncated by unphased ditch [1304].

WBP2 01

Creek [2502] was aligned north-south within the western end of excavation area WBP2 01 (Figs. 5 & 9, Plate 6). This creek measured 7.9m wide by 1.3m deep with gently sloping sides cut into alluvial silt. The earliest deposit revealed within this creek was orange grey sandy silt (2515), 0.22m thick. This alluvial silt contained 9 sherds of 10th to early 11th century pottery (Appendix 4) and underlay pale brown and mid grey silt (2508). This creek deposit measured 0.22m thick and was overlain by dark grey mottled sandy silt (2511). Deposit (2511) measured 0.14m thick and contained 13 sherds of 10th century pottery (Appendix 4). This deposit was overlain by dark grey mottling sandy silt (2507), 0.18m thick and contained 55 sherds of mid 10th century pottery including Lincoln and Early Stamford wares (Appendix 4).

Creek fill (2507) was overlain by brownish orange mixed sandy silt (2510), which measured 0.16m thick and contained four sherds of 10th to early 11th century jars (Appendix 4). This deposit underlay light bluish grey fine sandy silt (2509), 0.19m thick and was sealed by a layer of pale brown grey mottled silt (2506). This alluvial layer measured 0.24m thick and contained twenty sherds of 10th to early 11th century pottery (Appendix 4). Layer (2506) was sealed by topsoil (2516).

WBP3 01

Ditch [3002] was aligned northeast southwest with a concave profile and truncated unphased ditch [3003] at the eastern end of excavation are WBP3 01 (Fig. 6). This ditch measured 1.55m wide by 0.57m deep. The earliest deposit present in ditch [3002] was mid grey sandy silt (3004), 0.54m thick, which contained two sherds of 11th century Stamford ware jars (Appendix 4). This deposit was truncated by unphased post-Saxon ditch [3004].

Ditch [3011] was aligned northwest-southeast and located 25m from the east end of excavation area WBP3 01 (Fig. 6). This ditch measured 0.46m wide by 0.15m deep with a concave profile truncating unphased creek [3001 = 3024]. The earliest deposit within this ditch was mid grey sandy silt (3012), 0.15m thick and contained twelve sherds of 10th to early 11th century pottery (Appendix 4). This deposit was sealed by topsoil (3043).

5.6 Phase 5 Medieval Deposits

Phase 5 included material from the early (11th to 12th century AD) and mid-medieval period (12th to 13th century AD). These distinct periods are sub-phased below as 5A and 5B. A full list of all medieval deposits is contained within Appendix 2.

5A Early Medieval 11th-12th century

Early medieval deposits were present in Trench 15, Trench 17 and within excavation area WBP3 01 (Fig. 6).

Trench 15

Ditch [1506] was aligned northwest-southeast and truncated alluvial silts (1516) within Trench 15 (Fig. 6). This ditch measured 3.16m wide by 0.14m deep

and was filled with grey-brown silt (1505). Deposit (1505) was 0.14m thick and sealed by subsoil (1515). Ditch fill (1505) contained eight sherds of early to mid 12th century pottery, mostly representing Stamford ware jars and pitchers (Appendix 4).

A linear ditch aligned northwest southeast within Trench 15 was excavated in three interventions [1502], [1512] and [1514]. This concave-sided ditch, measured 0.4m wide by 0.5m deep at its maximum extent cut into alluvial silts (1516) (Figs. 6 & 10). Each intervention was filled by grey brown silt recorded as (1501), (1511) and (1513), 0.5m thick at maximum extent and sealed by subsoil (1515). These deposits contained three sherds of mid 11th to mid 12th century medieval vessels probably made in Stamford or St Neots (Appendix 4).

Trench 17

Ditch [1705] was aligned northeast-southwest within Trench 17 which truncated alluvial silts (1703). This ditch measured 3m wide by 0.38m deep with gently sloping sides and a flat base (Figs. 6 & 10). Ditch [1705] was filled with mid-grey brown clay silt (1701) 0.38m thick and sealed by topsoil (1702). Ditch fill (1701) contained five sherds of 12th century vessels including Stamford ware jars or pitchers (Appendix 4).

WBP3 01

Concave-sided Ditch [3078] was aligned northeast-southwest within excavation area WBP3 01 (Figs 6 & 10, Plate 8). This ditch measured 3.55m wide by 1.05m deep cut into natural silts (3015). Primary fill (3077) formed the initial deposit within ditch [3078]. This deposit was composed of dark organic silt 0.3m thick and contained three sherds of late 11th to 12th century jars (Appendix 4).

Primary fill (3077) was overlain by dark grey clay silt (3076) 0.2m thick, which was sealed in turn by a slump of dark clay silt (3075). Slump (3075) measured 0.2m thick and contained a late 11th to 12th century sherd from a Stamford ware jar or pitcher (Appendix 4). Slump (3075) underlay mid-grey clay silt (3074), which measured 0.35m thick and contained three sherds of late 11th to 12th century Stamford and Thetford ware jars or bowls (Appendix 4). Deposit (3074) was sealed by mid-brown silt (3073), which measured 0.5m thick and underlay topsoil (3043).

5B Mid-Medieval 12th-13th century

Mid-medieval deposits were present in Trench 15 and along the east dyke of excavation area WBP4 01 (Fig. 7).

Trench 15

Ditch [1504] was aligned northwest-southeast within Trench 15, with concave sides which truncated natural silt (1516). This ditch measured 0.4m wide by 0.16m deep and was filled with dark silt (1503) (Fig. 7). Deposit (1503) measured 0.16m thick and contained a single sherd of an early-mid 12th century jar (Appendix 4).

WBP4 01

Ditch [3507] was aligned east-west and truncated natural silts within excavation area WBP4 01 (Figs. 7 & 10, Plate 9). This ditch measured 3.86m wide by 0.43m deep with gently sloping sides and filled with grey brown silt (3506). Ditch fill (3506) measured 0.43m thick and contained thirteen sherds of late 12th to mid-13th century jars and bowls including St Neots, Stanion/Lynedon and Thetford wares (Appendix 4).

5.7 Phase 6 Post-Medieval and Modern

Recent deposits were present throughout the development site. These included topsoil, ploughsoil and land drains.

Topsoil was typically composed of brown grey silt approximately 0.2-0.5m thick and recorded in every area with the exception of Trenches 1 and 2. Ploughsoil was recorded in areas of recent agricultural work (Trenches 1 and 3) and was typically composed of dark brown grey silty sand approximately 0.2-0.5m thick. Modern land drains were present in Trench 13 and excavation area WBP2 01 (Fig. 5). Full descriptions of all modern deposits are catalogued within Appendix 2.

6. DISCUSSION

Weston's land use, economy and settlement were all subject to environmental pressure from Roman to Post-medieval times. Resource strategies depended on making best use of a landscape often seasonally untenable. Similar archaeology at Spalding (Wood 2006) revealed an ergonomic approach to the fenland environs. The diverse creek and marsh habitat could support numerous industries and economies within a flexible society.

Weston's archaeology can be split into two main areas, Roman deposits to the southwest of the village, with Saxon and medieval deposits near St Mary's church. This spatial and historical division of deposits — at Weston — reflects the environmental conditions in each phase.

The earliest archaeology at Weston dates from the early Roman period, when the environs were probably still subject to seasonal marine flooding. These earliest deposits are located on or near to partially silted up creeks, suggesting these features were still active in some form. Briquetage has been recovered from Trench 3 and

excavation area WBP3 01 (Appendix 5). These fragments date from 3rd and 4th century deposits, after the accepted period of Roman salting (Lane *pers. Comm.*). It is unlikely these fragments represent *in situ* salt making, and probably derive from redeposited material. The Briquetage fragments recovered are mostly container pieces, which are generally better made than salt making supports and may have more secondary uses.

Environmental evidence suggests that this area of Weston was largely open, dry land by the middle Roman (2nd-3rd) period, with cereal crops grown nearby. However, marine and wild species were still being utilised as part of the general diet.

Roman pottery recovered from Weston breaks down into typical table and cookwares. The majority of tablewares are from the well-defined Nene Valley kilns, with coarse cookwares identified as south Lincolnshire shell tempered pottery, probably from around Bourne. The presence of such large volumes of Nene Valley tablewares and occasional imported finewares suggests Roman Weston was of a moderately high status (Appendix 3). This is similar to deposits at Wygate Park, Spalding some 6km to the southwest, where the 2nd to 3rd centuries were marked by high volumes of Nene Valley pottery (Wood 2006).

Roman deposits from the 2nd to 4th century illustrate a sheep based economy with potential local crop production. Again this mirrors 2nd and 3rd century field systems at Wygate Park. At Wygate a similar change to pastoral and possibly cereal production during the middle and later Roman period, replacing the previous salt-based economy (*ibid*). Whilst there is no direct evidence for salting within this investigation, the preference for a pastoral and potential cereal-based economy post 2nd century AD

appears uniform across the Spalding and Weston areas.

Cereal production illustrates both the fertility of the fenland silts and that both Spalding and Weston were potentially producing a grain surplus for trade. There is little evidence however for grain storage at Weston, suggesting transportation of the threshed crop to a nearby granary or direct to market. Moderately high status ceramics may indicate wealth generated from this pastoral and agrarian society.

A hiatus in archaeological deposits between the mid 4th and 10th centuries confirms the abandonment of this area, following sea level rises in the late Roman period. Carbon dated deposits from Wygate Park suggest Spalding was largely flooded after the 5th century AD (Wood 2006), and Weston probably suffered a similar fate.

Weston village was founded sometime prior to the 11th century Domesday survey. All of the Saxon and medieval remains from this investigation are located directly north and northeast of Saint Mary's church, close to the historic village core. Deposits dating from the 9th and 10th century illustrate a gradual reclamation of 'newland' just north of the village centre.

Late Saxon archaeology at Weston was largely centred on creek systems, reflecting a similar environment to that found in the early Roman period. Several of the late Saxon ditches at Weston exhibit signs of multiple recuts. This suggests episodes of frequent flooding and enforced ditch cleaning. In addition, many of the late Saxon ditch fills contain fragments of salt-water mollusc, indicating marine proximity to a marine food source.

By contrast, medieval ditches at Weston lack evidence for recuts and ditch fills tended to be secondary silting events. This

would suggest infilling by gradual erosion of the feature sides and surrounding ground surface, rather than periodic flooding. Medieval ditches were large, open features, probably relating to drainage and field division around the northwest side of Weston. By this time sea banks had been constructed such as 'Alstonesdik', protecting the valuable silts. Decreasing sea levels, improved drainage and sea defences made the fenland highly productive both for arable and pastoral farming.

The medieval period saw an expansion in Weston with the construction of Saint Mary's church in the late 12th or early 13th century. Increased arable production particularly hemp, flax, corn and oilseed rape and a ready market at nearby Spalding encouraged population growth through the early medieval period. Rougher areas of land would still have been useable for grazing animals. Sheep and cattle were probably kept on the margins of Weston, where the lush meadowland compensated for land unusable for cereal production.

Ceramic evidence from the Saxon and medieval deposits shows the majority of pottery as having been made in Lincolnshire or nearby East Anglia. Locally made Stamford wares feature prominently from the 10th century, replacing an early reliance on Lincoln made wares (Appendix 4).

Lack of evidence for later medieval remains may be related to historical accounts of Weston's decline. During the late 13th century poor maintenance of sea defences encouraged silting up of river systems and periodically flooded farmland (Hallam 1965). This reduced crop yields and slowed river travel to markets at the same time.

Environmental evidence suggests late Saxon and medieval features were periodically inundated with fresh water with the hardier barley crop replacing wheat as the staple grain product (Appendix 7). This may confirm the suggestion that Weston suffered fresh-water flooding in the post-Roman period, which may have led to economic decline and shrinkage of the arable field systems.

The 13th and early 14th centuries were marked by plague, crop blight and rural depopulation. Extreme weather conditions led to a series of cold, wet years with torrential rain and hail ruining crops and flooding communities. The increasingly wet seasons led to famine in 1315, when a Cistercian monk at Louth remarked "such a flood of water and rain that the fruits of the earth were entirely destroyed" (Platts 1985). Decreasing crop yields coincided with falling stock levels as the cold, damp climate caused increased animal sickness. Evidence for this can be shown by the Abbot of Crowland's accounts for nearby Lantoft, which illustrate a sharp rise in the number of animal salves and ointments bought in the 1290s (*ibid*).

One of the major causes of stock death during the late 13th and early 14th centuries was liver flukes, parasites carried by freshwater snails. Whilst fenland meadows were accustomed to periodic flooding, this was typically brackish water and the salinity prevented a great deal of animal illnesses. Prolonged freshwater flooding around the end of the 13th century created new problems for pastoral farming, with an expanding freshwater snail population, increasing incidence of liver flukes. In addition livestock living in freshwater conditions are more prone to infections such as foot rot.

With crop and pastoral farming failing, meadowland flooding and increased taxation in the 14th century, many farmers

were left destitute. Weston's lack of substantial medieval remains at this time may indicate abandonment of farmland and a shrinking village community.

Weston's population can be seen to decrease in number and importance through the later medieval period, with the steady decline in clerical support for the community (Owen 1981). A continual decrease in the number of village priests would suggest a dwindling congregation centred on a fading arable and pastoral community.

Fenland economies recovered in the later 14th century however this is not reflected at Weston. Given the proximity to St. Mary's church and the village core, lack of later medieval evidence suggests some form of abandonment of the field systems. It is possible the focus of Weston's agricultural community moved away from the church and exploited land to the south, which remains largely unexplored.

7. CONCLUSIONS

An archaeological investigation was undertaken along the route of the Weston Bypass, Weston, Lincolnshire. This investigation included a programme of trial trenching, open area excavation and archaeological monitoring of groundworks.

This investigation revealed evidence for settlement based on pastoral and potential agrarian economy during the Roman, late Saxon and medieval periods. Roman deposits were located towards the southwest of the bypass, with late Saxon and medieval remains positioned directly north of St Mary's church.

Roman deposits suggest a mixed pastoral and cereal-based economy of 2nd to 4th century field systems fitted around

partially silted up creek systems. These deposits were sealed by alluvial silt in the later 4th or 5th century.

Late Saxon and medieval deposits were located just north of St Mary's church. These appear to form field boundaries for arable and pastoral farming. Creek systems were partially silted up in the late Saxon period and completely sealed by the 12th century. Environmental evidence suggests post-Roman ditches would have been seasonally flooded. Artefactual evidence diminishes in the 13th and 14th centuries and may suggest abandonment of these field systems in the later medieval period.

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9. PERSONNEL

Project Coordinator: Dale Trimble

Site Supervisors: Dale Trimble, Mark Dymond, Jim Snee and Fiona Walker

Site Assistants: Denise Buckley, Dave Bower, Matt Bradley, Rachael Hall, Bob Hamilton, Barry Martin, Vicky Mellor, Mary Nugent and Sue Unsworth

Photographic reproduction: Sue Unsworth

Finds Processing: Denise Buckley

Finds Analysis: Tom Lane, Jennifer Kitch, Barbara Precious, James Rackham, Gary Taylor &

Jane Young

Environmental Analysis: Gemma Martin & James Rackham

Original Illustration: David Hopkins

CAD Illustration: Michael Wood

Post-excavation Analyst: Michael Wood

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11. ABBREVIATIONS

APS Archaeological Project Services

IFA Institute of Field Archaeologists

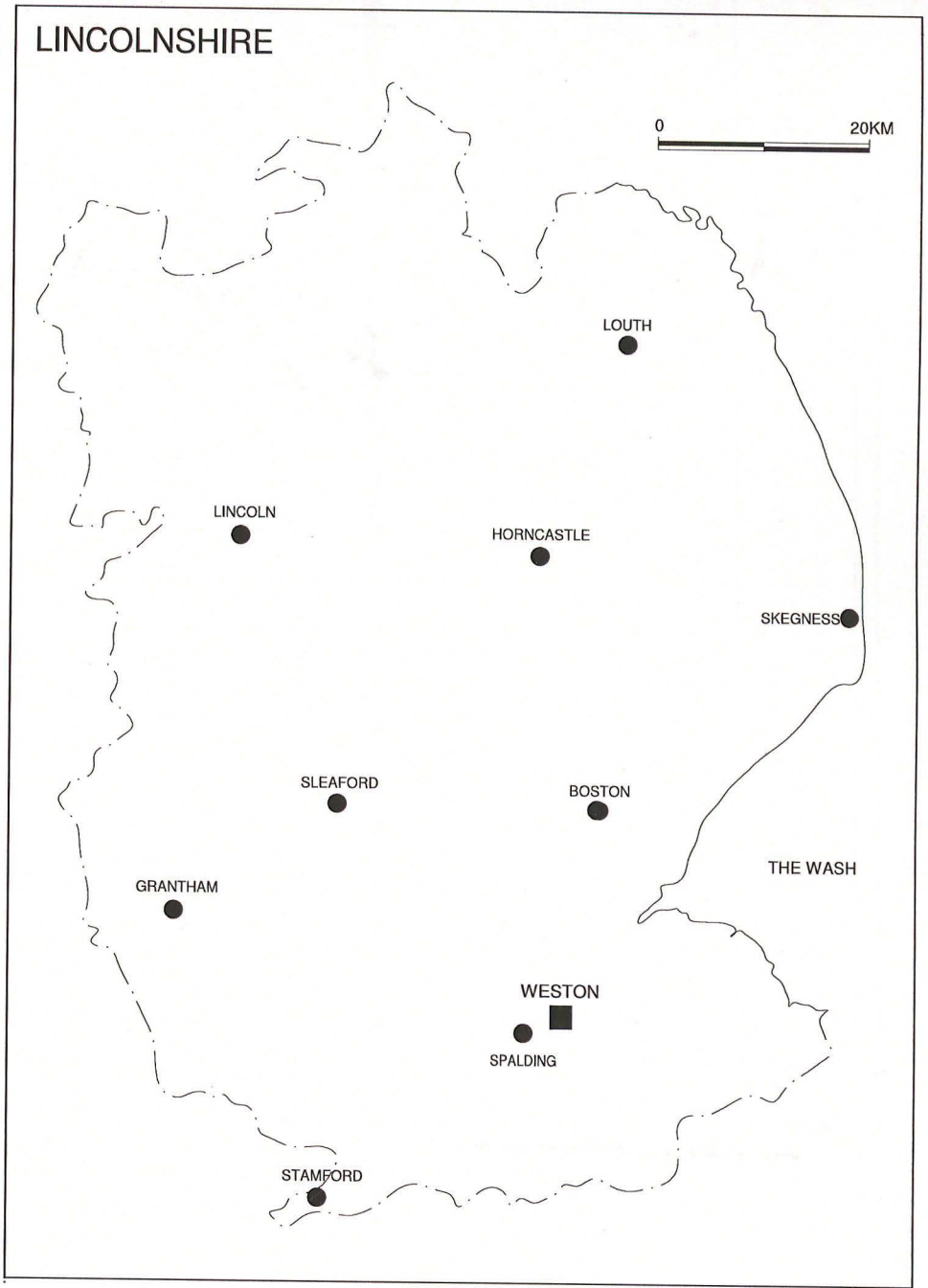


Figure 1 - General location map

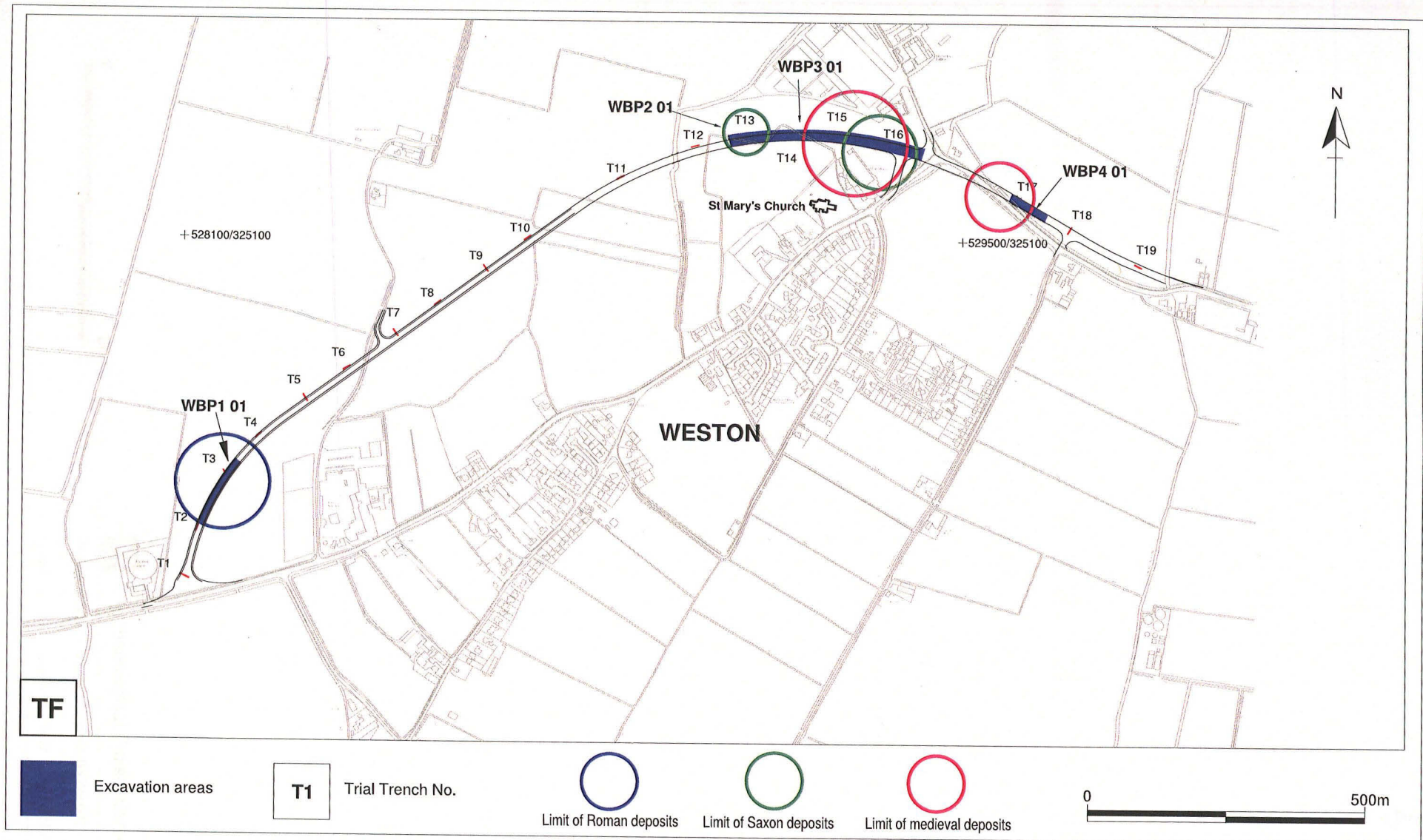
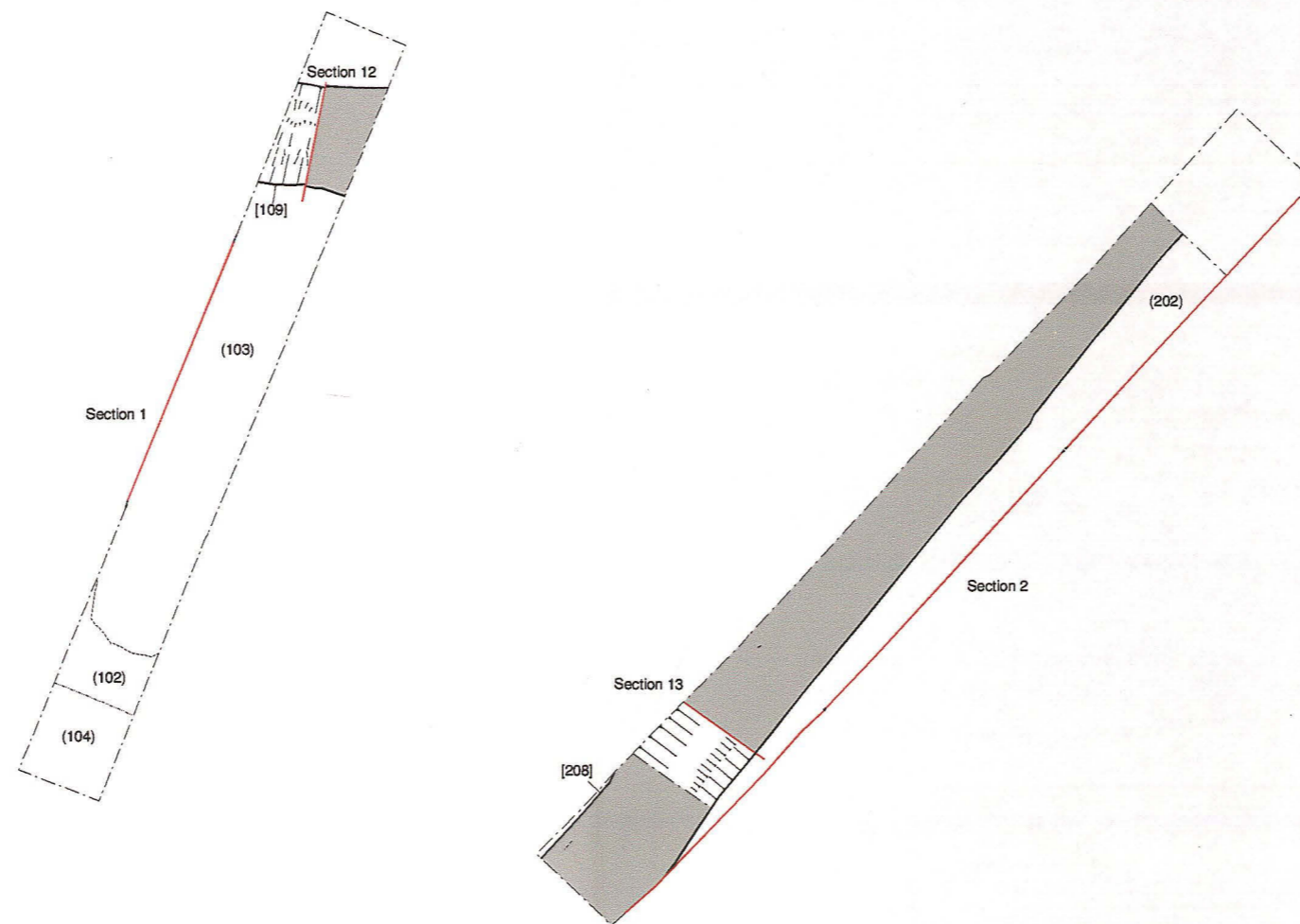


Figure 2 Route of bypass and location of excavation areas and trial trenches



Unphased

0 5m


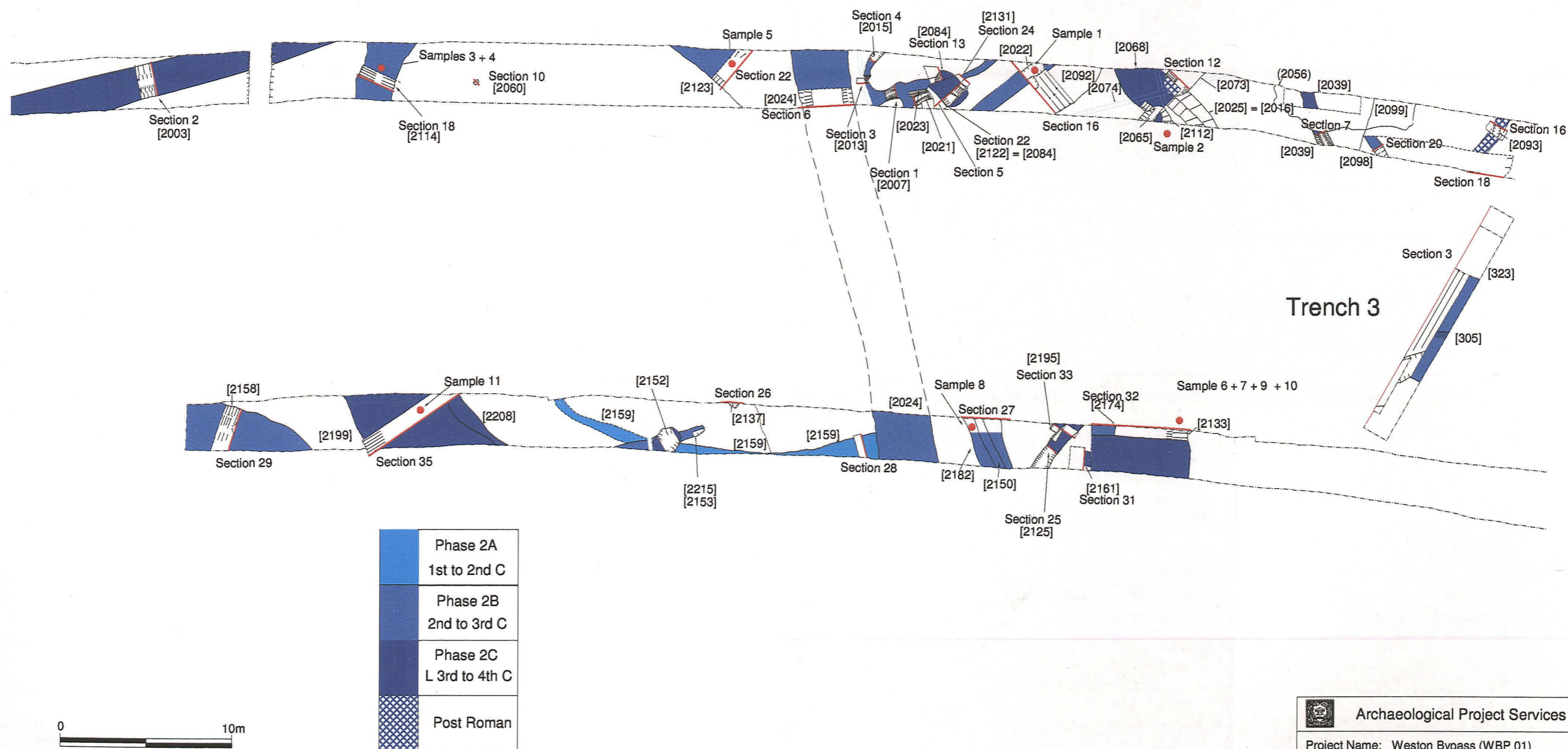
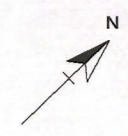
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Figure 3 Trenches 1 and 2.




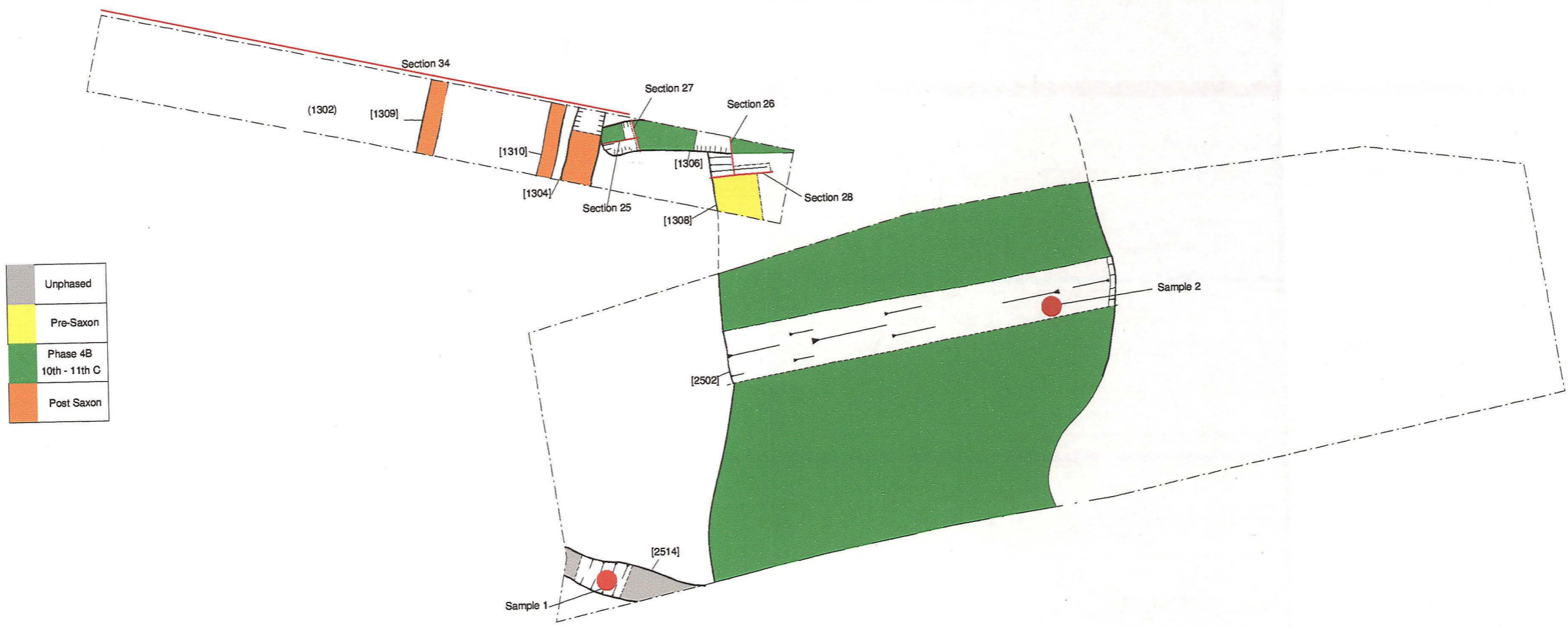
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Figure 4 WBP1 01 and Trench 3.



Grey	Unphased
Yellow	Pre-Saxon
Green	Phase 4B 10th - 11th C
Orange	Post Saxon




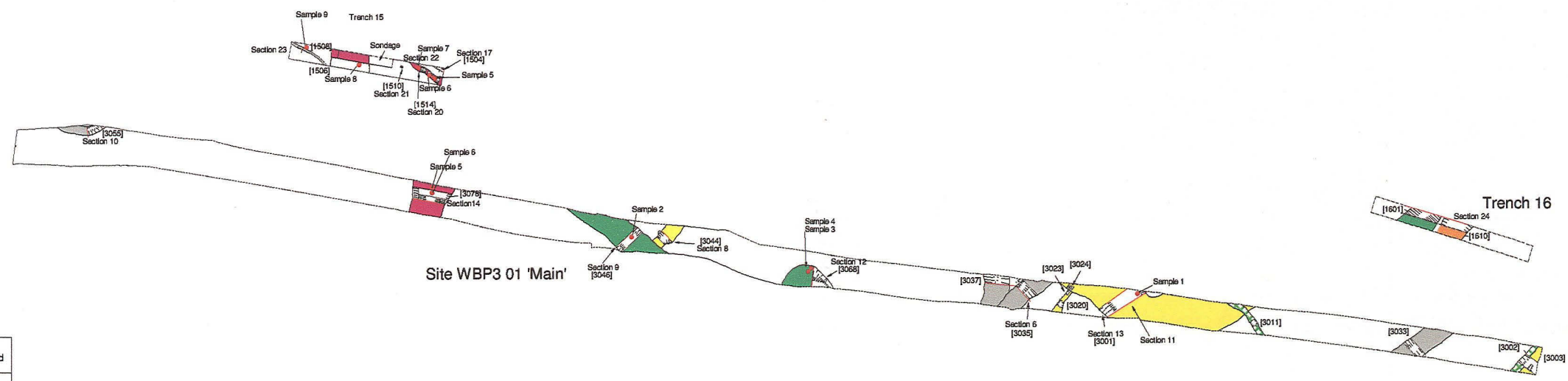
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Figure 5 Trench 13 and Excavation area WBP2 01

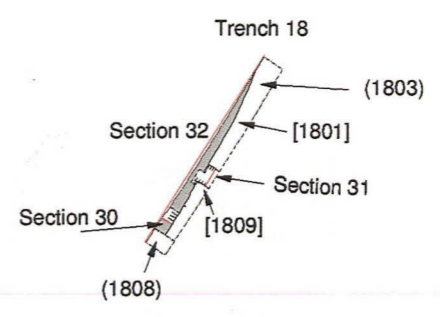
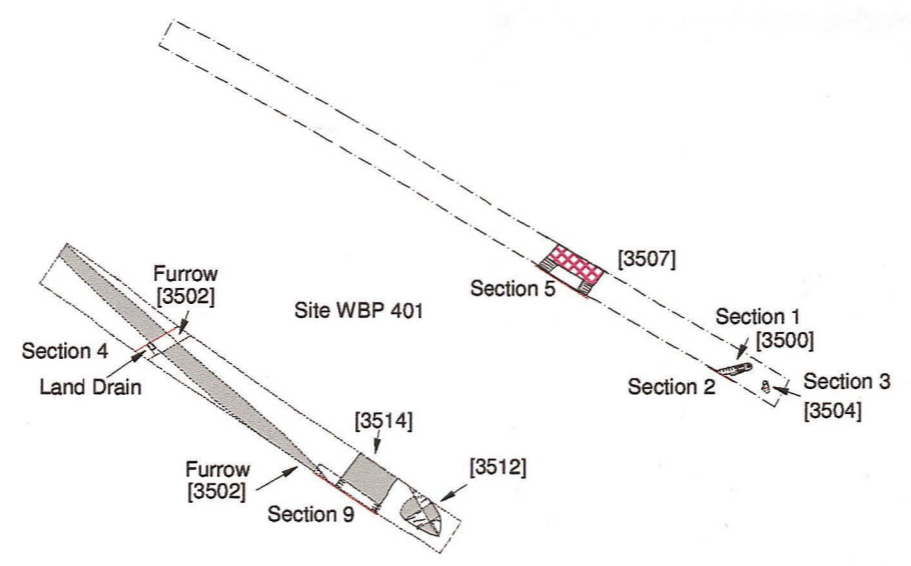
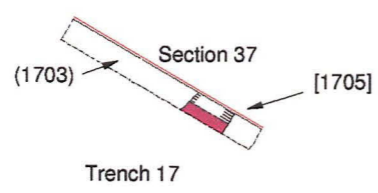


[Grey box]	Unphased
[Yellow box]	Pre-Saxon
[Green box]	Phase 4A 9th - 10th C
[Green checkered box]	Phase 4B 10th - 11th C
[Orange box]	Post Saxon
[Red box]	Phase 5A 11th - 12th C
[Red checkered box]	Phase 5B 12th - 13th C



	Archaeological Project Services	
Project Name: Weston Bypass (WBP 01)		
Scale: 1:500	Drawn by: MW	Report No: 145/06

Figure 6 Trenches 15, 16 and excavation area WBP3 01



Unphased
Phase 5A 11th - 12th C
Phase 5B 12th - 13th C




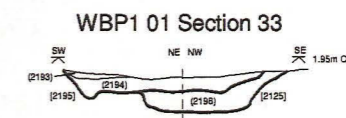
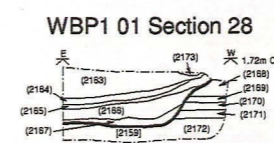
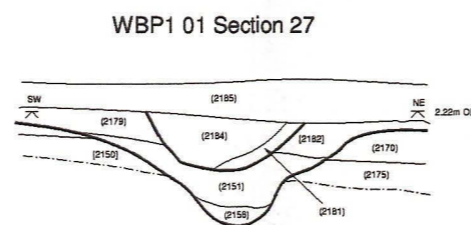
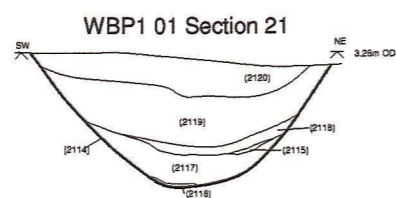
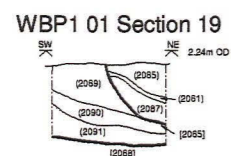
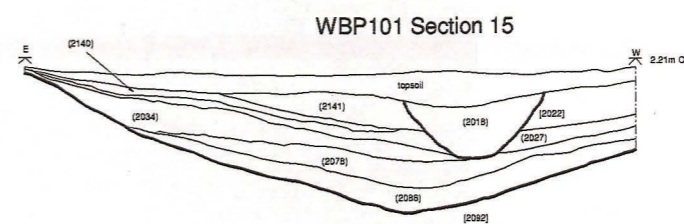
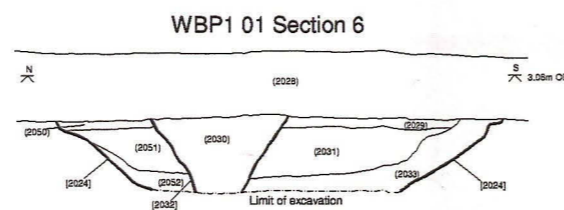
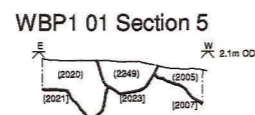
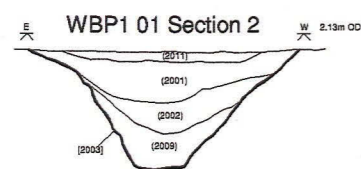
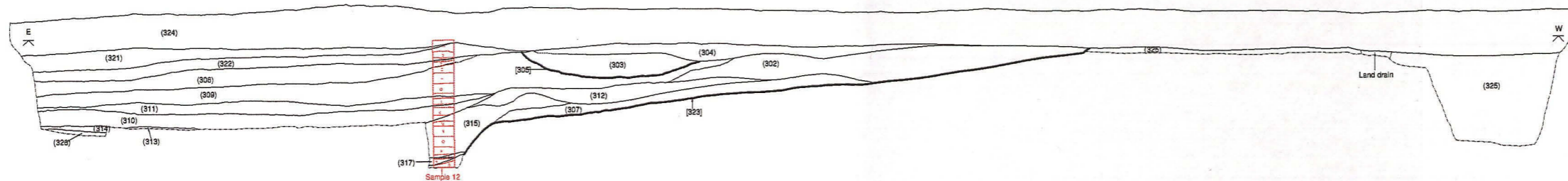
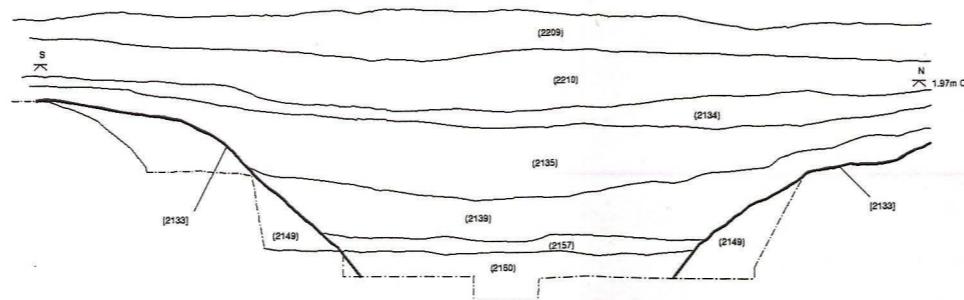
 Archaeological Project Services		
Project Name: Weston Bypass (WBP 01)		
Scale: 1:500	Drawn by: MW	Report No: 145/06

Figure 7 Trenches 17, 18 and excavation area WBP4 01

WBP 01 Trench 3 Section 3



WBP 01 Section 32




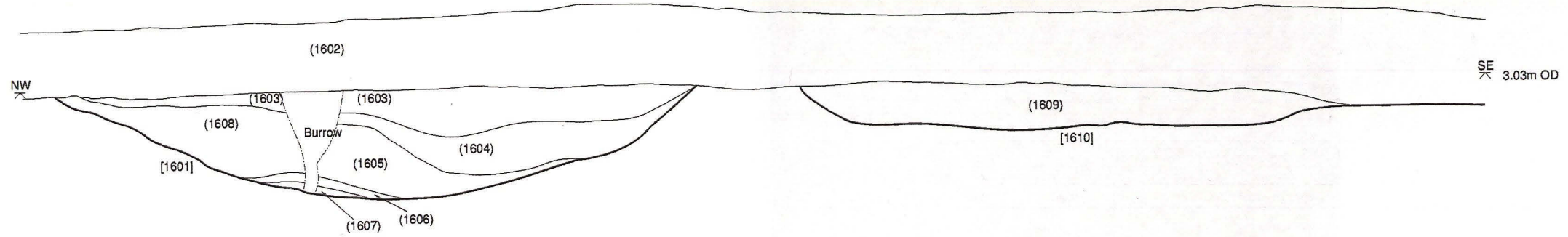
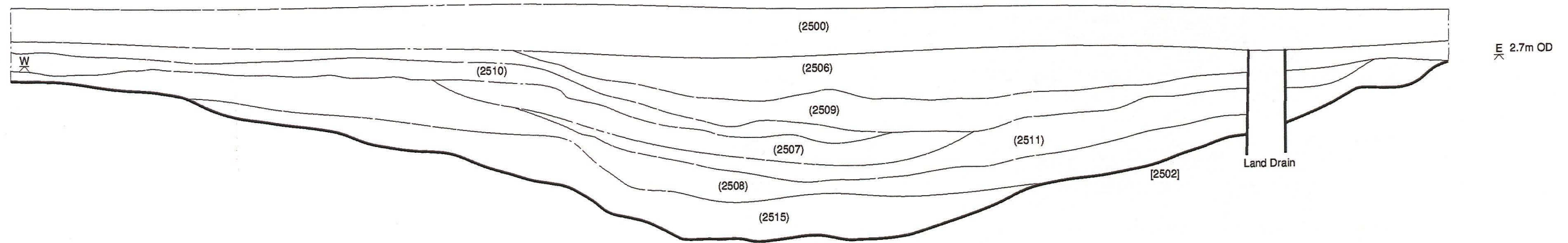
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Project Name: Weston Bypass (WBP 01)		
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Figure 8 Roman sections

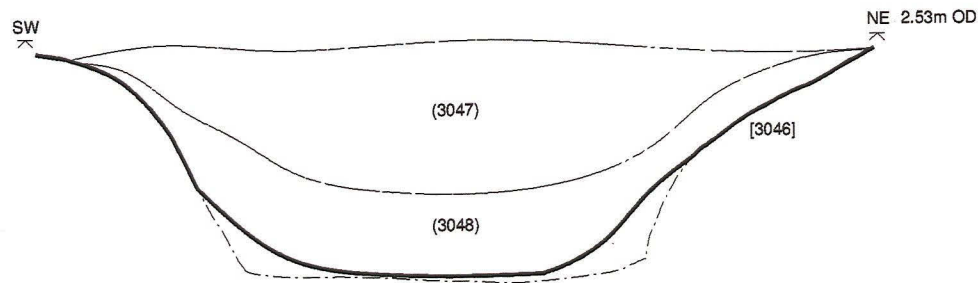
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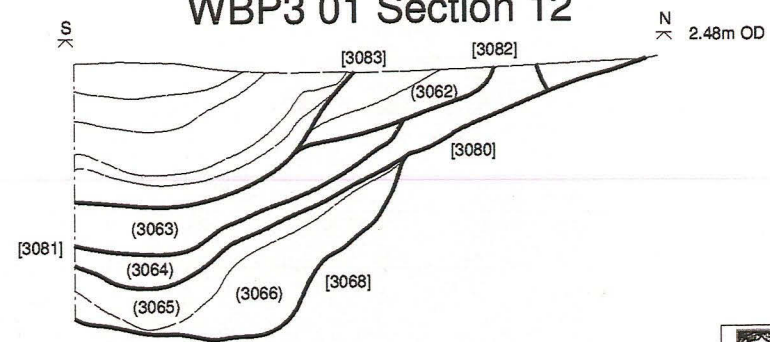
WBP2 01 Section 3



WBP3 01 Section 9



WBP3 01 Section 12




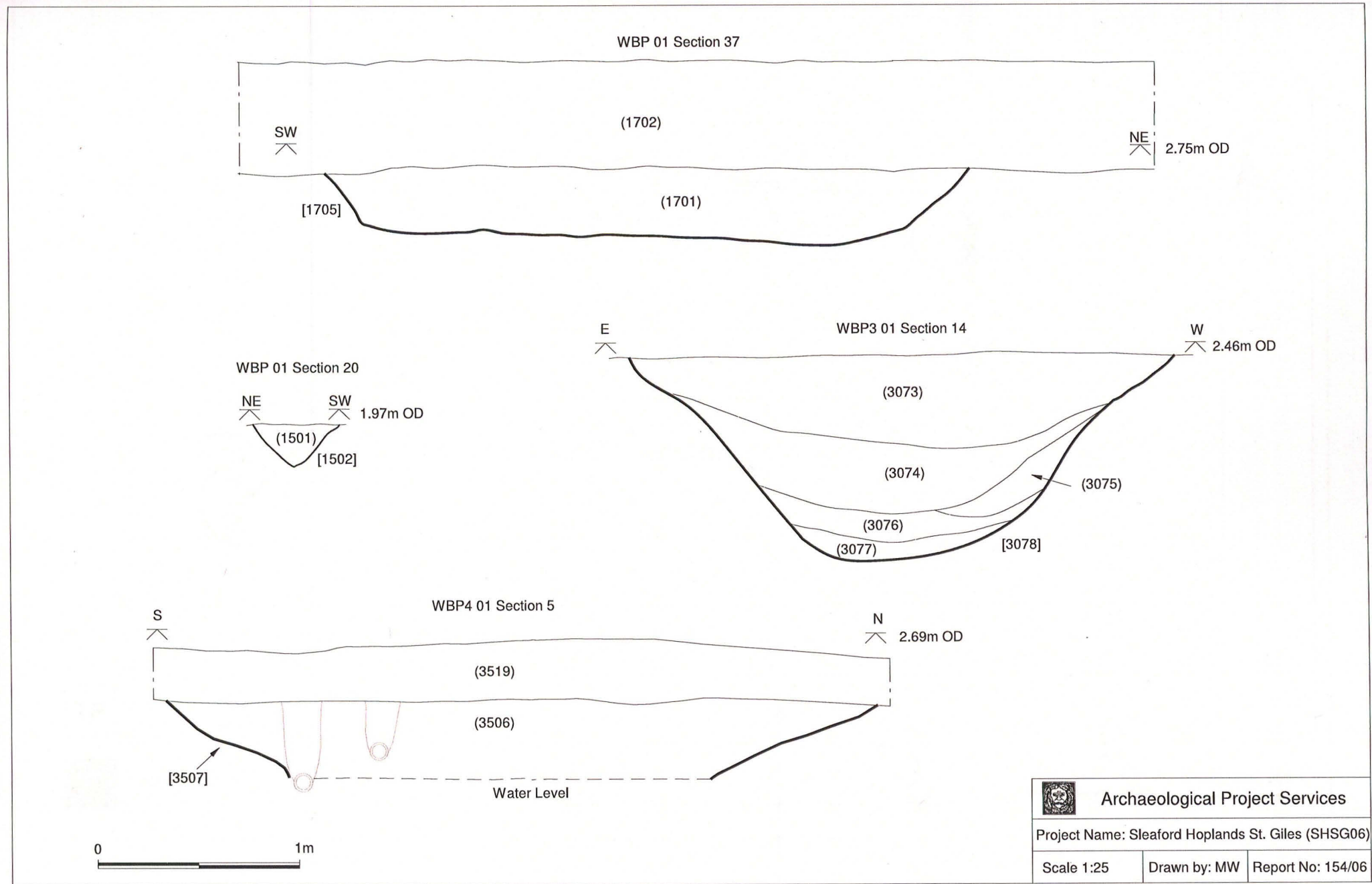
 Archaeological Project Services		
Project Name: Weston Bypass (WBP01)		
Scale: 1:25	Drawn by: MW	Report No: 145/06

Figure 9 Saxon sections




 Archaeological Project Services		
Project Name: Sleaford Hoplands St. Giles (SHSG06)		
Scale 1:25	Drawn by: MW	Report No: 154/06

Figure 10 medieval sections

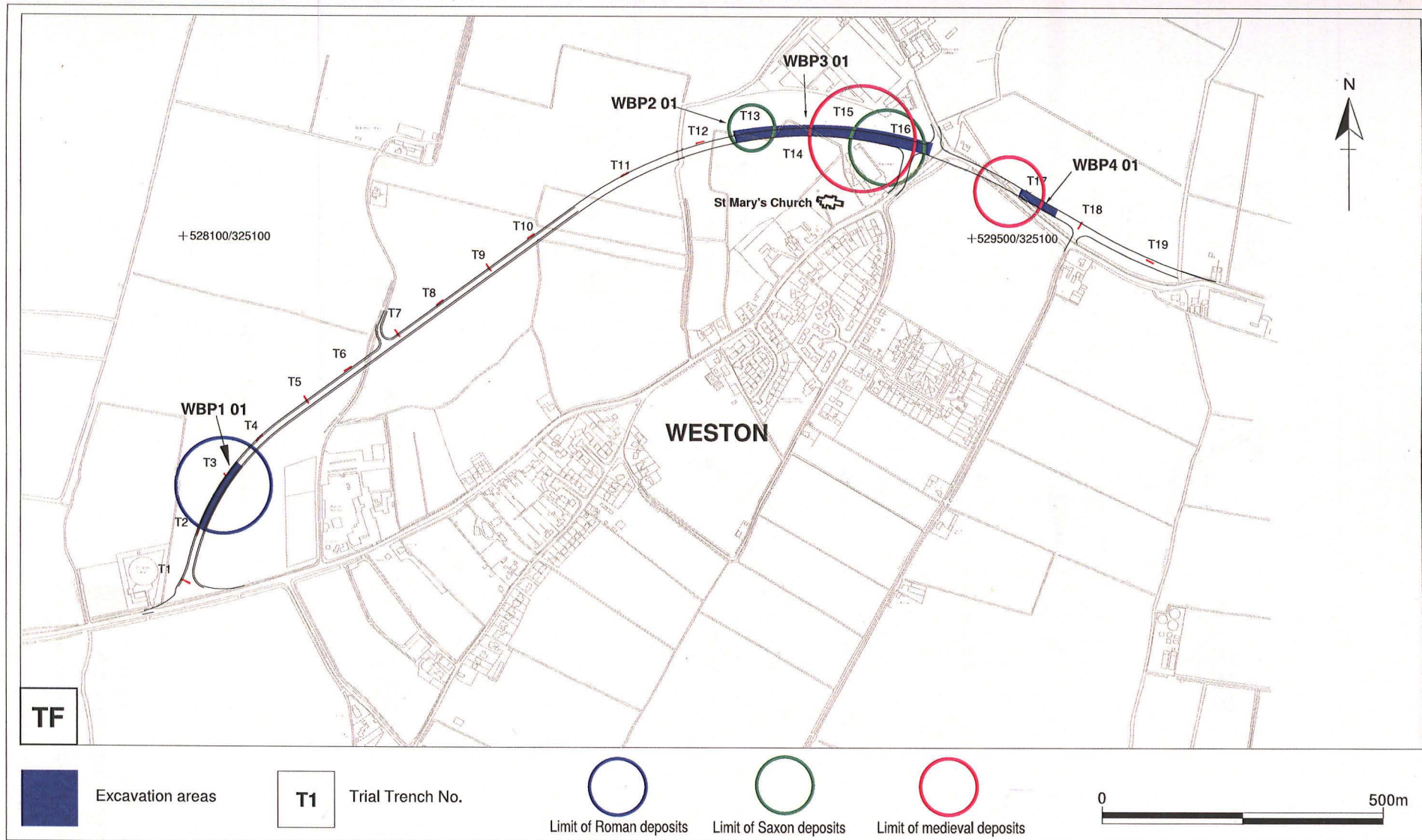
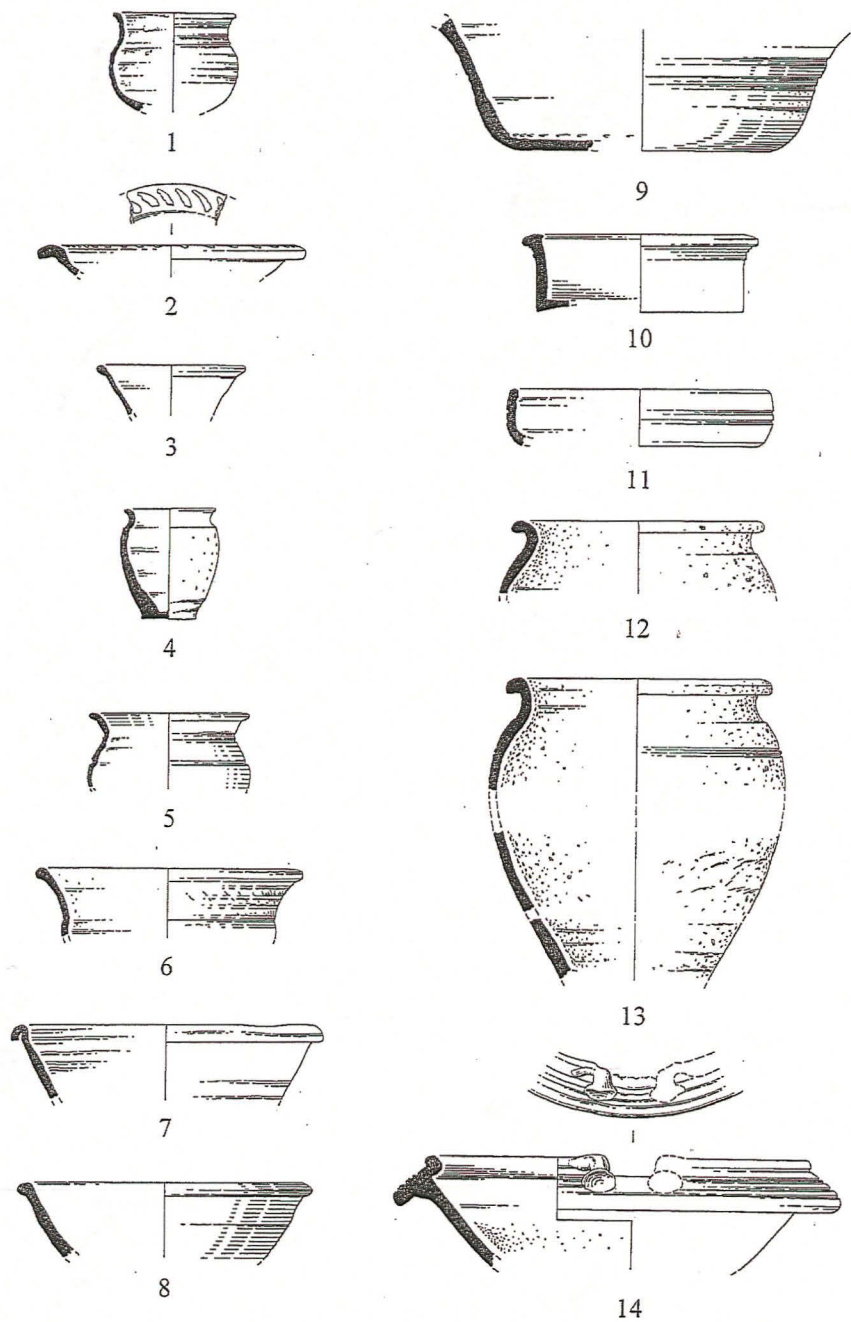


Figure 11 Route of bypass with occupation areas highlighted.



Archaeological Project Services

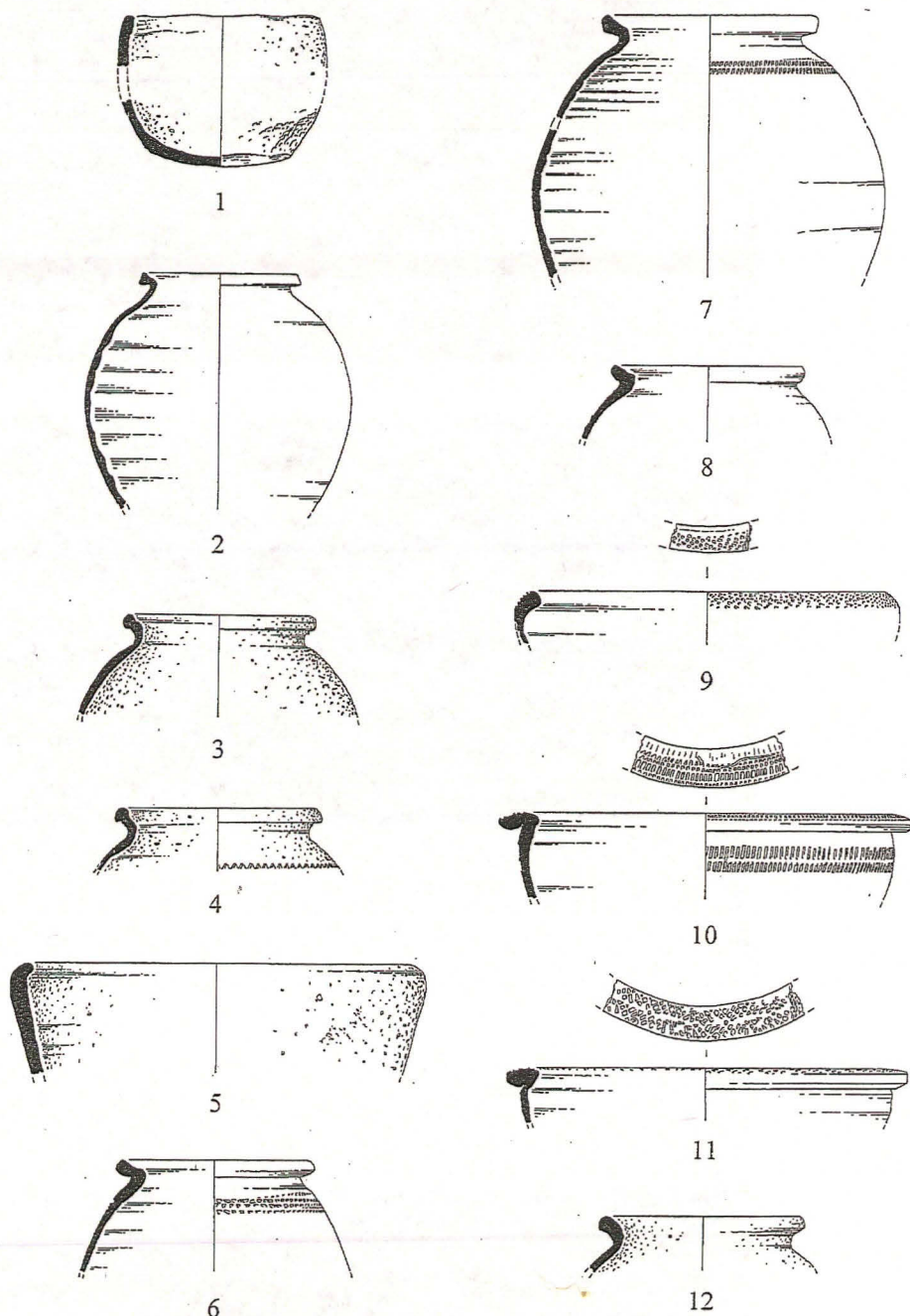
Project Name: Weston Bypass (WBP 01)

Scale 1:5

Drawn by: MW

Report No: 145/06

Figure 12 Roman pottery




 Archaeological Project Services		
Project Name: Weston Bypass (WBP01)		
Scale 1:5	Drawn by: MW	Report No: 145/06

Figure 13 Saxon and medieval pottery.



Plate 1 Roman creek [323]
viewed from the southwest



Plate 2 Mid-Roman creek
[2024] viewed from the west



Plate 3 Mid-Roman ditch
[2114] viewed from the
southeast



Plate 4 Late Roman pit [2195] and ditch [2125] viewed from the southeast



Plate 5 Late Saxon ditch [1601] viewed from the southwest



Plate 6 Saxo-Norman creek [2502] viewed from the west



Plate 7 Late Saxon
ditch [3046] viewed
from the southeast

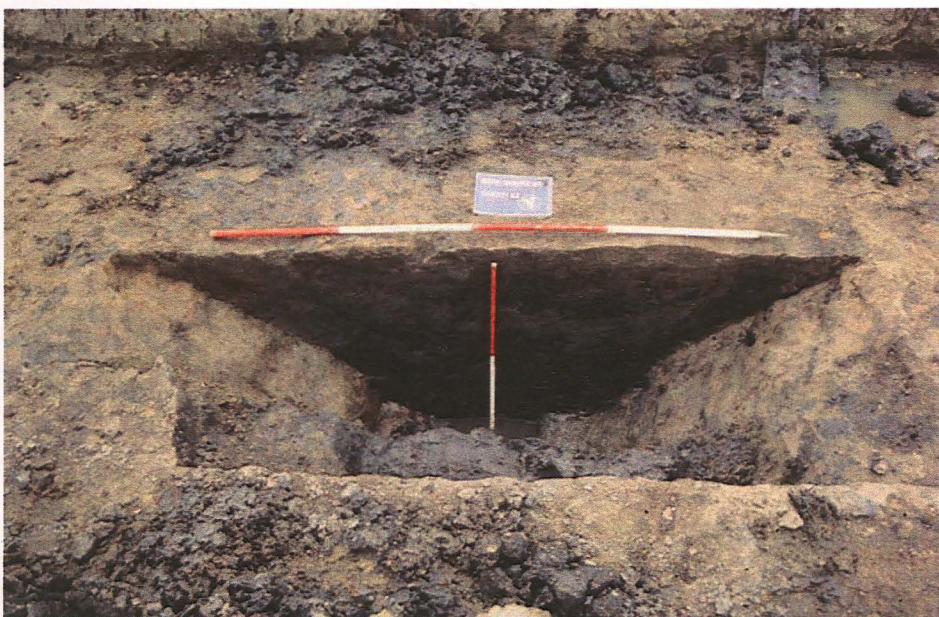


Plate 8 Early medieval
ditch [3078] viewed
from the north

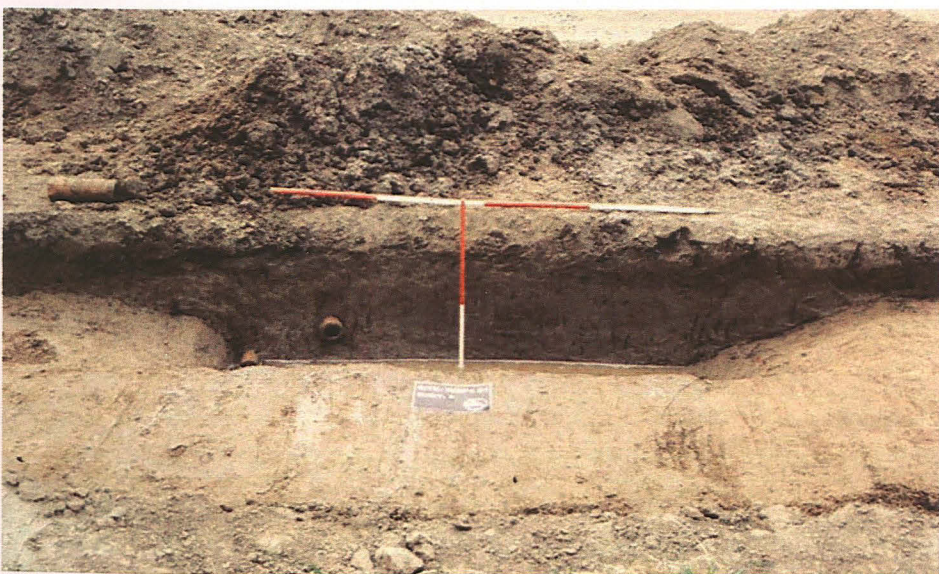


Plate 9 Mid-medieval
ditch [3507] viewed
from the east

Appendix 1

WESTON BYPASS
SPECIFICATION FOR
ARCHAEOLOGICAL EXCAVATION

PREPARED FOR
LINCOLNSHIRE COUNTY COUNCIL
HIGHWAYS DEPARTMENT

BY
ARCHAEOLOGICAL PROJECT SERVICES
Institute of Field Archaeologists'
Registered Archaeological Organisation No. 21

JULY 2001

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1 SUMMARY

- 1.1 *This document comprises a specification for the archaeological field recording and post-excavation assessment and reporting of archaeological remains revealed during construction of the Weston bypass, Lincolnshire.*
- 1.2 *Fieldwalking undertaken as part of a desk based assessment of the archaeological impact of the proposed bypass recovered Saxo-Norman and Medieval pottery at the east end of the route, close to the medieval church. Cropmarks possibly representing a droveway and associated enclosures have been identified on aerial photographs taken of areas near to the west end of the route. These cropmarks do not appear to relate to existing field boundaries and may date to the Romano-British period.*
- 1.3 *A recent archaeological evaluation of the route of the bypass comprising a programme of trial trenching, identified archaeological remains at the west and east ends of the proposed road.*
- 1.4 *At the west end of the bypass route, adjacent to Baytree Nursery, substantial quantities of Roman pottery, animal bone and a piece of possible roof tile were recovered from the upper fills of an extinct palaeochannel. Towards the east end of the route, north and west of St. Mary's church, quantities of Saxo-Norman and a few pieces of medieval pottery were recovered from buried ditches and gullies. A ditch containing sherds of Saxo-Norman pottery was also identified southeast of the church, immediately east of the point where the bypass rejoins and crosses the A151 which forms the main road through the village.*
- 1.5 *On completion of the fieldwork an assessment report will be prepared detailing the findings of the investigation. The report will consist of a text describing the nature of the archaeological deposits located and will be supported by illustrations and photographs.*

2 INTRODUCTION

- 2.1 This document comprises a specification for the archaeological watching brief, excavation and post-excavation assessment and reporting of archaeological remains on land along the route of the Weston bypass, South Holland District, Lincolnshire between National Grid References TF 28082444 to TF29892501
- 2.2 The document contains the following parts:
 - 2.2.1 Overview
 - 2.2.2 The archaeological and natural setting
 - 2.2.3 Stages of work and methodologies to be used
 - 2.2.4 List of specialists
 - 2.2.5 Programme of works and staffing structure of the project

3 SITE LOCATION

- 3.1 The proposed bypass route passes immediately to the north of the village of Weston. The village is situated on the A151 Spalding to Holbeach road at a distance of approximately 5km to the east of Spalding in the parish of Weston and in the administrative district of South Holland.

4 PLANNING BACKGROUND

- 4.1 On the advice of the LCC archaeology section a programme of non-intrusive field walking and a desk based assessment of the archaeological impact of the proposed bypass was undertaken.
- 4.2 The results of the desk based assessment indicated that archaeological remains of Saxo-Norman and medieval date may be buried towards the east end of the route, in the area to the north and west of St. Mary's church. The possibility of buried archaeological remains being present in what is essentially an alluviated landscape was emphasised. Consequently the Lincolnshire County Council Archaeology Section requested that a programme of trial trenching should be undertaken in advance of the construction of the bypass.
- 4.3 The evaluation was undertaken shortly before construction of the bypass commenced but did identify previously unrecognised Roman deposits at the west end of the route and *in-situ* remains of Saxo-Norman date in close proximity to the parish church of St. Mary, supporting the conclusions of the desk based assessment.
- 4.4 Proposals to preserve these archaeological deposits *in-situ* have been submitted to the Lincolnshire County Council Archaeology Section by the LCC Highways and Planning Directorate. However, a watching brief is required during all phases of topsoil stripping, roadside ditch excavation and other groundworks associated with construction of the bypass.
- 4.5 Further archaeological excavation is also required in advance of the digging of roadside ditches in areas determined to be archaeologically sensitive from the results of the archaeological evaluation.

5 SOILS AND TOPOGRAPHY

- 5.1 The area is low-lying at approximately 3m OD. Local soils are the Wallasea 2 Association peelo-alluvial gley soils developed on reclaimed marine alluvium (Hodge *et al.* 1984, 338).

6 ARCHAEOLOGICAL OVERVIEW

- 6.1 Earlier prehistoric land surfaces in the vicinity of the proposed development are probably deeply buried by alluvium but Late Iron Age/Early Roman deposits have been recovered buried beneath up to 1.0m of silt just east of Spalding at the junction of Holbeach Road and the A16, beneath a Macdonalds restaurant and a petrol station, approximately 3km west of the bypass route.
- 6.2 In the Cowbit area, around 8km southeast of Weston, spreads of briquetage and charcoal associated with Iron Age pottery have been recorded indicating that salt making was possible on the silt fens by this period.
- 6.2 Fieldwork undertaken as part of the Fenland Survey (Hayes and Lane, 1992) and by Hallam (Hallam, 1970) have shown that during the Roman period widespread and intensive settlement of the Fens was possible, perhaps due to a fall in sea levels. Numerous settlements and salterns of this period have been identified around the Wash and these appear to be associated with extensive field systems and enclosures identified and plotted from aerial photographs. However, east of Spalding in the Weston area, few Roman settlements and cropmarks have been identified and it is thought that later sedimentation may have covered sites of this period. Cropmarks presumed to be of Romano-British date have been plotted over the southern part of Weston parish.

- 6.3 A desk based assessment of the archaeological impact of the proposed bypass was undertaken in 1999 (Trimble, 2000) comprising collation of existing archaeological information, relevant documentary sources and a programme of fieldwalking along the route of the road. A reference to Weston in the Domesday Book of 1086AD shows that the village was in existence by this date and indicates that the settlement is likely to have origins in the late Saxon period at least.
- 6.4 As part of the desktop assessment quantities of Saxo-Norman pottery were recovered from fields lying to the north and west of St. Mary's church at the east end of the village, indicating high potential for disturbance of archaeological remains of this period during construction of the bypass.
- 6.5 A group of cropmarks have been identified and plotted to the west and to the north of the west end of the bypass route as part of a desk top assessment of a proposed development off High Street, Weston (Albone, 2000) The cropmarks appear as two separate clusters, the closest lying within 150m of the route of the bypass and the second group some 300m to the west adjacent to Cross Gate drain. The major element of the former group is two southwest to northeast aligned, sinuous, closely spaced, parallel ditches of a type usually interpreted as droveways and thought to date to the Romano-British period. A ditched enclosure appears to be attached to the south side of the droveway. A possible droveway and enclosure were also identified in the second group located further to the west. Although there is no firm dating evidence for these cropmarks, they do not appear to be related in any way to elements of the contemporary landscape and it seems most likely that they date to the Romano-British period.
- 6.6 Recent evaluation of the route of the bypass by Archaeological Project Services has identified archaeological remains of Roman date close to the west end of the proposed road and Saxo-Norman remains close to the historic core of the village as defined by the parish church of St. Mary.
- 6.7 At the request of the LCC archaeology section additional trenches were excavated to define the extent of archaeological deposits present on the site. However, within the time scale of the original evaluation it was not possible to excavate and record the remains identified within these trenches in any detail.
- 6.8 Close to the west end of the bypass well preserved Roman deposits were recorded within the upper fills of an extinct palaeochannel. No finds or environmental reports are yet available but these are likely to be primary deposits dumped into the channel from a nearby settlement. Substantial quantities of pottery, animal bone, fired clay and daub were recovered and it was possible to visually identify charred cereals within the primary layers of these deposits on site. Silt and clay layers midway and at the top of the stratigraphic sequence may represent flood events or possibly increased sedimentation in the channel through ploughing of areas adjacent to the channel.
- 6.9 No archaeological remains were identified beneath silts within the 1.2m test pits excavated at the end of each evaluation trench unlike at the Macdonalds site investigated in 1997 by APS (Miller, 2000) where Late Iron Age/Early Roman deposits were discovered beneath up to 1m of later silt. However, it is of interest that at both the Macdonalds and Weston sites, archaeological deposits lie at around 2.5 - 2.6m O.D, suggesting localised silting closer to Spalding, perhaps associated with the Welland.
- 6.10 Pottery of Saxo-Norman type was recovered from archaeological features in Trenches 13 and 15 and 17, between Pinfold Lane to just east of the point where the bypass route rejoins the High
-

Road through the village. From a single ditch section excavated in Trench 13, a number of fragments of animal bone were recovered, all unabraded and in good condition. This quantity of artefacts strongly suggests that Trench 13 lies close to a settlement focus. Pottery of similar date was recovered from features in Trench 15, although Trench 14 was devoid of archaeological deposits. The additional trenching undertaken to define the extent of deposits recorded archaeological features west of Trench 13 and west and east of Trench 15

- 6.11 Pottery of medieval date was recovered from a ditch containing brick and animal in Trench 16

7 AIMS AND OBJECTIVES

- 7.1 The aim of the work will be to provide a suitable level of recording and post-excavation analysis in mitigation of the destruction of the archaeological remains.
- 7.2 The objectives of the work will be to:
- 7.2.1 Establish the type of activities represented by the archaeological deposits discovered along the route of the bypass.
 - 7.2.2 Determine the likely extent of archaeological deposits within the areas of the bypass route allocated for further investigation.
 - 7.2.3 Determine the spatial arrangement of the archaeological features present within the two sites to be excavated.
 - 7.2.4 Determine the extent to which the surrounding archaeological features extend into the area of investigation
 - 7.2.5 Establish the way in which the archaeological features identified fit into the pattern of occupation and land-use in the surrounding landscape.
 - 7.2.6 Determine the date and function of the archaeological features present on the site.

8 LIAISON WITH THE ARCHAEOLOGICAL CURATOR

- 8.1 The proposed scheme of works will be agreed with the archaeological curator to ensure that it fulfils their requirements.
- 8.2 The archaeological curator will be informed of the discovery of any unexpected remains of archaeological importance or of any changed circumstances, as set out in the *Lincolnshire Archaeological Handbook* (1998), section 18, *Contingencies*:
'In all cases it is the responsibility of the archaeological curator to inform all interested parties of any new or unexpected circumstances which arise during the project. No decisions should be made as to an appropriate alteration to the project without the agreement of the planning archaeologist and the developer. This is particularly important where archaeological and / or financial implications are concerned.'

9 EXCAVATION

- 9.1 General considerations
-

- 9.1.1 All work will be undertaken following all relevant statutory Health and Safety requirements.
- 9.1.2 The work will be undertaken according to the relevant codes of practise issued by the Institute of Field Archaeologists (IFA), under the management of a Member of the institute (MIFA). Archaeological Project Services is IFA registered organisation no. 21.
- 9.1.3 Any and all artefacts found during the investigation and thought to be 'treasure', as defined by the Treasure Act 1996, will be removed from site to a secure store and promptly reported to the appropriate coroner's office.
- 9.1.4 Any deep open sections will be marked by hazard tape attached to road irons or similar poles.

9.2 Methodology

- 9.2.1 A mitigation strategy to preserve archaeological remains along the route of the bypass has been agreed between the LCC Highways Directorate and the LCC Archaeology Section. Essentially this entails raising the vertical alignment of the road to avoid disturbance of buried archaeological remains.
- 9.2.2 Further archaeological investigation within the lines of the roadside where destruction of buried remains is unavoidable will be necessary. A continuous watching brief will also be maintained during all topsoil stripping and other groundworks.
- 9.2.3 Between chainage points 100 - 225, 1290 to 1650 and 1800 to 1900, stripping of topsoil will be undertaken under archaeological supervision and to the level required to define archaeological remains. These three areas will be referred to as Site 1 (100 - 225), Site 2 (1290 - 1650) and Site 3 (1800 - 1900) within the following parts of this document.
- 9.2.4 Revealed archaeological remains will be examined to an appropriate level. This will involve:
 - 9.2.2.1 Half-sectioning of all discrete features.
 - 9.2.2.2 Excavation of sections across all linear features.
 - 9.2.2.3 Investigation of relationships at the intersection of linear features and examination of the butt-ends of linear features.
 - 9.2.2.4 Recovery of environmental samples from examined features and excavated sections. The sampling strategy will be undertaken in consultation with an environmental specialist.
- 9.2.2 Manual cleaning and excavation will be undertaken in the exposed areas.
- 9.2.3 The archaeological features encountered will be recorded on Archaeological Project Services pro-forma context record sheets. The system used is the single context method by which individual archaeological units of stratigraphy are assigned a unique record number and are individually described and drawn.

- 9.2.4 Plans of features will be drawn at a scale of 1:20 and sections at a scale of 1:10. Should individual features merit it, they will be drawn at a larger scale.
- 9.2.5 Throughout the duration of the investigation a photographic record consisting of black and white prints (reproduced as contact sheets) and colour slides will be compiled. The photographic record will consist of:
- 9.2.5.1 the site before the commencement of field operations.
- 9.2.5.2 the site during work to show specific stages of work, and the layout of the archaeology within individual trenches.
- 9.2.5.3 individual features and, where appropriate, their sections.
- 9.2.5.4 groups of features where their relationship is important.
- 9.2.5.5 the site on completion of field work
- 9.2.6 Should human remains be encountered, they will be left *in situ* with excavation being limited to the identification and recording of such remains. If removal of the remains is necessary the appropriate Home Office licences will be obtained and the local environmental health department informed. If relevant, the coroner and the police will be notified.
- 9.2.7 Finds collected during the fieldwork will be bagged and labelled according to the individual deposit from which they were recovered ready for later washing and analysis.
- 9.2.8 The precise location of the site recording grid and features will be established by an EDM survey.
- 9.3 Specific considerations for Site 1
- 9.3.1 The palaeochannel recorded in Trench 3 is largely sealed by later clays and silts. It may be necessary to excavate apparently 'natural' deposits to identify underlying Roman remains.
- 9.3.1 The evaluation has shown that the palaeochannel deposits have high potential for the recovery of stratified ceramics, faunal remains, palaeoeconomic and possibly environmental indicators.
- 9.3.2 Charred cereals were frequent within the earliest Romano-British layers contained within the palaeochannel and bulk samples containing these deposits will be retrieved and sampled. Charred plant remains have high potential for providing information on the economic status of ancient communities.
- 9.3.2 Samples for the study of foraminifera will be taken from the fills of the palaeochannel. Study of these organisms has the potential to provide evidence of phases of marine flooding which may have occurred during the lifetime of the settlement and of current velocity and salinity.
- 9.4 Specific considerations for Site 2
-

- 9.4.1 Site 2 is likely to provide important information regarding the early origins of the village of Weston. Nucleation of settlement from previously small scale and dispersed communities appears to have been completed by the late Saxon period elsewhere in the Fens. The reasons for these changes in the settlement pattern in the Fens are poorly understood but may have resulted from a combination of social and economic influences and environmental change, both either short or long term.
- 9.4.2 The chronology of this shift in settlement location and organisation is far from clear and the recovery of a stratigraphic sequence related to dateable cultural material from the investigation of Site 2 may be of special significance.
- 9.4.3 The primary fills of a ditch in Trench 13 from the evaluation proved to be particularly rich in faunal remains and pottery. It will be important to retrieve bulk samples from the richer contexts such as these as they are most likely to yield palaeoenvironmental and palaeoeconomic information.
- 9.5 Specific consideration for Site 3
 - 9.5.1 It is likely that the ditch recorded in Trench 17 was located at the edge of the Saxon settlement. However, any deep features in this area may contain deposits which preserve environmental remains which relate more directly to the agricultural regime of the period. Field ditches for example may contain pollen rich deposits which could provide information on arable crops or the presence of meadow or grassland.

10 WATCHING BRIEF

- 10.1 General considerations
 - 10.1.1 General considerations are identical to those outlined in 9.1 for the excavation.
- 10.2 Methodology
 - 10.2.1 An archaeological watching brief will be maintained during all phases of topsoil stripping and groundworks associated with construction of the bypass.
 - 10.2.2 Outside those areas allocated for further archaeological investigation roadside ditches will be excavated in a single phase without requirement for initial stripping under archaeological supervision. However, any features revealed within the sides the ditches will be recorded in section.
- 10.4 Archaeological Recording
 - 10.4.1 Archaeological recording will follow standardised APS procedures as outlined in section 9.2 for areas subject to excavation
- 10.5 Liaison with archaeological curator
 - 10.5.1 Should unexpected archaeological remains be uncovered which require recording beyond that possible as part of the watching brief the archaeology section of LCC and the client will be informed.

11 ENVIRONMENTAL ASSESSMENT

- 11.1 During the investigation specialist advice will be obtained from an environmental archaeologist. The specialist will visit the site and will prepare a report detailing the nature of the environmental material present on the site and its potential for additional analysis.

12 POST-EXCAVATION AND REPORT

12.1 Stage 1

12.1.1 On completion of site operations, the records and schedules produced during the trial trenching will be checked and ordered to ensure that they form a uniform sequence constituting a level II archive. A stratigraphic matrix of the archaeological deposits and features present on the site will be prepared. All photographic material will be catalogued: the colour slides will be labelled and mounted on appropriate hangers and the black and white contact prints will be labelled, in both cases the labelling will refer to schedules identifying the subject/s photographed.

12.1.2 All finds recovered during the trial trenching will be washed, marked, bagged and labelled according to the individual deposit from which they were recovered. Any finds requiring specialist treatment and conservation will be sent to the Conservation Laboratory at the City and County Museum, Lincoln.

12.2 Stage 2

12.2.3 Detailed examination of the stratigraphic matrix to enable the determination of the various phases of activity on the site.

12.2.4 Finds will be sent to specialists for identification and dating.

12.2.5 Environmental material will be assessed by the relevant specialist.

12.3 Stage 3

12.3.1 On completion of stage 2, a report detailing the findings of the evaluation will be prepared. This will consist of:

12.3.1.1 A non-technical summary of the findings of the investigation.

12.3.1.2 A description of the archaeological setting of the site.

12.3.1.3 Description of the topography and geology of the evaluation area.

12.3.1.4 Description of the methodologies used during the evaluation and discussion of their effectiveness in the light of the findings of the investigation

12.3.1.5 A text describing the findings of the evaluation.

12.3.1.6 Plans of the areas showing the archaeological features exposed. If a sequence of archaeological deposits is encountered, separate plans for each phase will be produced.

12.3.1.7 Sections of the trenches and archaeological features.

- 12.3.1.8 Interpretation of the archaeological features exposed and their context within the surrounding landscape.
- 12.3.1.9 Specialist reports on the finds and environmental remains from the site.
- 12.3.1.10 Appropriate photographs of the site and specific archaeological features or groups of features.
- 12.3.1.11 A consideration of the significance of the remains found, in local, regional, national and international terms, using recognised evaluation criteria.
- 12.3.1.12 An assessment of the potential for further analysis of the ecofactual and artefactual remains.

13 **ARCHIVE**

- 13.3 The documentation, finds, photographs and other records and materials generated during the evaluation will be sorted and ordered into the format acceptable to the City and County Museum, Lincoln. This sorting will be undertaken according to the document titled *Conditions for the Acceptance of Project Archives* for long term storage and curation.

14 **REPORT DEPOSITION**

- 14.1 Copies of the excavation report will be sent to: the Client, the Lincolnshire County Council Archaeological Officer; South Holland District Council Planning Department; and to the County Council Archaeological Sites and Monuments Record.

15 **PUBLICATION**

- 15.1 A report of the findings of the evaluation will be published in Heritage Lincolnshire's annual report and an article of appropriate content will be submitted for inclusion in the journal *Lincolnshire History and Archaeology*. Notes or articles describing the results of the investigation will also be submitted for publication in the appropriate national journals: *Medieval Archaeology* and *Journal of the Medieval Settlement Research Group* for medieval and later remains and *Britannia* for discoveries of Roman date.

16 **CURATORIAL MONITORING**

- 16.1 Curatorial responsibility for the archaeological work undertaken on the site lies with the Lincolnshire County Council Archaeological Officer.

17 **VARIATIONS TO THE PROPOSED SCHEME OF WORKS**

- 17.1 Variations to the scheme of works will only be made following written confirmation from the archaeological curator.
- 17.2 Should the archaeological curator require any additional investigation beyond the scope of the specification of works, then the cost and duration of those supplementary examinations will be negotiated between the client and the contractor.

18 **SPECIALISTS TO BE USED DURING THE PROJECT**

18.1 The following organisations/persons will, in principal and if necessary, be used as subcontractors to provide the relevant specialist work and reports in respect of any objects or material recovered during the investigation that require their expert knowledge and input. Engagement of any particular specialist subcontractor is also dependent on their availability and ability to meet programming requirements.

<u>Task</u>	<u>Body to be undertaking the work</u>
Conservation	Conservation Laboratory, City and County Museum, Lincoln.
Pottery Analysis	Prehistoric: Dr D Knight, Trent and Peak Archaeological Trust Roman: B Precious, independent specialist Anglo-Saxon: J Young, independent specialist Medieval and later: H Healey, independent archaeologist with G Taylor, APS
Other Artefacts	J Cowgill, independent specialist
Human Remains Analysis	R Gowland, independent specialist
Animal Remains Analysis	Environmental Archaeology Consultancy
Environmental Analysis	Environmental Archaeology Consultancy
Radiocarbon dating	Beta Analytic Inc., Florida, USA
Dendrochronology dating	University of Sheffield Dendrochronology Laboratory

19 **PROGRAMME OF WORKS AND STAFFING LEVELS**

19.1 A detailed estimate of staffing levels will be possible once the ditch sections within the three archaeologically sensitive areas have been stripped of topsoil. The programme of works for the watching brief is totally dependent on the schedule of the onsite contractors.

20 **INSURANCES**

20.1 Archaeological Project Services, as part of the Heritage Trust of Lincolnshire, maintains Employers Liability insurance to £10,000,000. Additionally, the company maintains Public and Products Liability insurances, each with indemnity of £5,000,000. Copies of insurance documentation can be supplied on request.

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Specification: Version 2, 17/07/01

Appendix 2 Context Summary

Site Code	Area	Context No	Context Type	Fill of	Same as	Interpretation	Description	Thickness/Depth	Phase
WBP 01	Trench 13	1300	Deposit			Layer topsoil	Friable dark grey brown slightly clayey silt topsoil	0.25m thick	Phase 6
WBP 01	Trench 13	1301	Layer			subsoil	Mid grey brown sandy clayey silt subsoil	0.25m thick	unphased
WBP 01	Trench 13	1302	Deposit			Layer	Mottled orange brown silt	> 1.0m thick	Phase 1
WBP 01	Trench 13	1303	Deposit	1304		Ditch Fill (Primary)	Firm dark orange brown slightly clayey silt	0.12m	unphased
WBP 01	Trench 13	1304	Cut			Ditch Cut	Linear ditch	0.28m wide x 0.13m deep	unphased
WBP 01	Trench 13	1305	Deposit	1306		Ditch Fill (Latest)	Firm mixed grey brown slightly clayey silt	0.15m thick	Phase 4B
WBP 01	Trench 13	1306	Cut			Ditch Cut	Linear flat based ditch cut shallows at terminal	0.32m deep x 0.66m wide	Phase 4B
WBP 01	Trench 13	1307	Deposit	1308		Palaeochannel fill	Laminated brown and grey clayey silt	0.14m thick	Phase 1
WBP 01	Trench 13	1308	Cut			Palaeochannel Cut	Linear partially revealed cut. Could be same as ditch 2502 recorded in WB2 01	Max depth 0.27m max width 1.25m	Phase 1
WBP 01	Trench 13	1309	Cut			Plough Furrow	Narrow linear plough furrow cut	NA	unphased
WBP 01	Trench 13	1310	Cut			Plough Furrow	Narrow linear plough furrow cu	NA	unphased
WBP 01	Trench 13	1311	Cut			Land drain	Land drain	NA	Phase 6
WBP 01	Trench 13	1312	Finds			Finds	Number for finds retrieved during machining of Trench 13	NA	Unphased
WBP 01	Trench 13	1313	Deposit	1306		Ditch Fill (Primary)	Light & dark grey silt	30-40mm	Phase 4B
WBP 01	Trench 13	1314	Deposit			Layer	Pale yellow silt natural layer with occasional clay patches	0.11m thick	Phase 1
WBP 01	Trench 13	1315	Deposit			Layer	Laminated clay and silt natural	80mm thick	Phase 1
WBP 01	Trench 13	1316	Deposit			Layer	Yellow natural silt	80mm thick	Phase 1
WBP 01	Trench 15	1500	Deposit			Topsoil	Loose light brown silt topsoil	70mm thick	Phase 6
WBP 01	Trench 15	1501	Deposit	1502		Ditch fill	Loose light yellowish brown subsoil	0.21m thick	Phase 5A
WBP 01	Trench 15	1502	Cut			Ditch\Gully Cut	Linear ditch/gully	0.4m wide x 0.5m deep	Phase 5A
WBP 01	Trench 15	1503	Deposit	1504		Ditch\Gully Fill (Primary)	Loose light brown and black silt	0.15m thick	Phase 5B
WBP 01	Trench 15	1504	Cut			Ditch\Gully Cut	Linear ditch\gully	0.4m wide x 0.16m deep	Phase 5B

Appendix 2 Context Summary

WBP 01	Trench 15	1505	Deposit	1506		Ditch fill	Loose greyish brown silt. Recorded as ditch fill but probably just part of subsoil	0.14m thick	Phase 5A
WBP 01	Trench 15	1506	Cut			Ditch	linear ditch aligned nw/se	3.16m wide x 0.14m deep	Phase 5A
WBP 01	Trench 15	1507	Deposit	1508		Ditch\Gully Fill (Primary)	Loose light greyish brown silt	20mm thick	Unphased
WBP 01	Trench 15	1508	Cut			Ditch\Gully Cut	Linear gully? Truncated ditch?	20mm deep	Unphased
WBP 01	Trench 15	1509	Deposit	1510		Post Hole Fill	Loose dark grey silt	0.11m thick	Unphased
WBP 01	Trench 15	1510	Cut			Post Hole Cut	Rectangular post hole cut	0.11m deep	Unphased
WBP 01	Trench 15	1511	Deposit	1512		Ditch\Gully Fill (Primary)	Linear gully? Truncated ditch? Cut	0.10m thick	Phase 5A
WBP 01	Trench 15	1512	Cut			Ditch\Gully Cut	Linear slightly sinuous cut of gully/truncated ditch	0.10m deep	Phase 5A
WBP 01	Trench 15	1513	Deposit	1514	1501	Ditch\Gully Fill (Primary)	Loose light yellowish brown silt	Not recorded	Phase 5A
WBP 01	Trench 15	1514	Cut		1502	Ditch\Gully Cut	See 1502	See 1501	Phase 5A
WBP 01	Trench 15	1515	Layer			Subsoil	Loose yellowish brown silt	0.35m	unphased
WBP 01	Trench 15	1516	Deposit			Layer	Loose brownish yellow silt	Not recorded	Phase 3
WBP 01	Trench 15	1517	Finds			Finds	Finds recovered during machining of Trench 15	NA	Phase 6
WBP 01	Trench 16	1601	Cut			Ditch Cut	Linear ditch cut	2.7m wide x 0.5m deep	Phase 4A
WBP 01	Trench 16	1602	Deposit			Topsoil	Loose light grey brown silt	0.3m thick	Phase 6
WBP 01	Trench 16	1603	Deposit	1601		Ditch Fill (Latest)	Firm mid grey brown silt	0.24m thick	Phase 4A
WBP 01	Trench 16	1604	Deposit	1601		Ditch Fill (Secondary)	Firm light grey brown, dark grey brown and of white mottled silt. Probably dumped. Contains occ charcoal flecks and brick frags	0.23m thick	Phase 4A
WBP 01	Trench 16	1605	Deposit	1601		Ditch Fill (Secondary)	Firm/Soft light grey with off white and grey brown mottling silt	0.28m thick	Phase 4A
WBP 01	Trench 16	1606	Deposit	1601		Ditch Fill (Secondary)	Soft orange grey brown silt. Probably dumped	40mm thick	Phase 4A
WBP 01	Trench 16	1607	Deposit	1601		Ditch Fill (Primary)	Soft dark greyish brown silt	30mm thick	Phase 4A
WBP 01	Trench 16	1608	Deposit	1601		Ditch Fill (Secondary)	Firm banded black, grey brown and off white silt	0.35m thick	Phase 4A

Appendix 2 Context Summary

WBP 01	Trench 16	1609	Deposit			Layer	Soft light yellow brown silt	NA	Phase 3
WBP 01	Trench 16	1610	Cut			Ditch Cut	Linear ditch cut. Very shallow	60mm deep	Unphased
WBP 01	Trench 16	1611	Deposit	1610		Ditch Fill (Primary)	Firm mid grey patch brown and black silt	60mm deep	Unphased
WBP 01	Trench 17	1700	Finds			Finds	Finds from machining	NA	Phase 3
WBP 01	Trench 17	1701	Deposit	1705		Ditch Fill (Primary)	Moderately compact mottled mid brown and mid greyish brown clayey silt	0.38m thick	Phase 5A
WBP 01	Trench 17	1702	Deposit			Layer	Firm mid brown clayey silt topsoil	0.48m thick	Phase 3
WBP 01	Trench 17	1703	Deposit			Layer	Moderately compacted light reddish brown clayey silt	0.5m thick	Phase 3
WBP 01	Trench 17	1704	Deposit			Layer	Soft mid brownish grey silty clay	0.15m thick	Phase 3
WBP 01	Trench 17	1705	Cut			Ditch Cut	Linear Ditch Cut	3.00m wide x 0.38m deep	Phase 5A
WBP 01	Trench 1	100	Finds			Finds retrieved during machining			Unphased
WBP 01	Trench 1	101	layer			ploughsoil	Friable dark brown grey silty sand	0.43m	Phase 6
WBP 01	Trench 1	102	Layer			Subsoil	Moderate light brown grey silty sand	0.12m	unphased
WBP 01	Trench 1	103	Layer			Tidal silting event- post roman?	Soft laminated grey brown clay silt.	0.76m	Phase 3
WBP 01	Trench 1	104	Layer			marine silt	Moderately soft mid grey brown laminated silt clay	0.18m	Phase 3
WBP 01	Trench 1	105	Deposit	109		Ditch fill (tertiary)	Friable mid grey fine silty clay.	0.15m	unphased
WBP 01	Trench 1	106	Deposit	109		Ditch fill (secondary)	Friable mid reddish brown silty sand with occasional organic inclusions.	0.28m	unphased
WBP 01	Trench 1	107	Deposit	109		Ditch fill (secondary) mostly derived from eroded feature sides:	Friable dark grey brown clay silt	0.27m	unphased
WBP 01	Trench 3	300	finds	0	0		Unstrat finds from machining		Unphased
WBP 01	Trench 1	108	Deposit	109	0	Ditch fill (primary)	Soft mid grey sandy silt with occasional charcoal flecks and animal bone.	0.15m	unphased
WBP 01	Trench 1	109	Cut	0	0	Ditch possible boundary or drainage. Cuts subsoil so likely post roman	Linear aligned north south with moderately steep sides and a flat base.	1.7m wide x 0.66m	unphased
WBP 01	Trench 2	200	Layer	0	0	Topsoil	Firm dark reddish brown clay silt with occasional pebbles	0.3m	Phase 6
WBP 01	Trench 2	201	Layer	0	0	Alluvial silt, likely post rom	Firm light mottled brown grey silty clay	0.3m	Phase 3
WBP 01	Trench 2	202	Layer	0	0	Alluvial layer	Firm mid reddish brown silty clay	0.2m	Phase 3
WBP 01	Trench 2	203	Layer	0	0	Alluvial layer	Firm mid yellow brown silty clay	0.35m	Phase 3

Appendix 2 Context Summary

WBP 01	Trench 2	204	Deposit	208	0	Ditch fill (tertiary)	Firm mid reddish brown clay silt occasional modern root disturbance.	0.2m	Unphased
WBP 01	Trench 2	205	Deposit	208	0	Ditch fill (secondary)	Firm light mottled yellow brown clay silt.	0.1m	Unphased
WBP 01	Trench 2	206	Deposit	208	0	Ditch fill (secondary)	Firm mid grey brown mottled clay silt	0.3m	Unphased
WBP 01	Trench 2	207	Deposit	208	0	Ditch fill (primary)	Soft light brown grey clay silt	0.12m	Unphased
WBP 01	Trench 2	208	Cut	0	0	Ditch possible boundary or drainage. Predates subsoil.	Linear aligned north south with steep sides and a concave base.	1.34m w x 0.59m d	Unphased
WBP 01	Trench 3	301	finds	0	0		Unstrat finds from over (302)		Unphased
WBP 01	Trench 3	302	Deposit	323	0	channel fill (secondary)	Soft dark grey brown fine silty sand with occasional charcoal, daub and iron panning.	0.3m	Phase 2B
WBP 01	Trench 3	303	Deposit	305	0	Ditch fill (primary)	Friable light grey clay silt with occasional charcoal.	0.22m	Phase 2C
WBP 01	Trench 3	304	Layer	0	0	Possible occupation spread.	Friable mid grey sandy silt with occasional charcoal and daub	0.13m	Phase 2C
WBP 01	Trench 3	305	Cut	0	0	Ditch probably minor boundary/drainage late roman	Linear aligned northwest southeast with concave sides and base.	0.35m w x 0.22m d	Phase 2C
WBP 01	Trench 3	306	Deposit	0	0	Alluvial deposit of silted up creek (still open in rom period)	Firm brown grey silty clay with occasional daub and charcoal.	0.18m	Phase 2C
WBP 01	Trench 3	307	Deposit	323	0	Alluvial deposit in channel [323]	Soft dark grey silt with occasional charcoal, daub and pebbles.	0.12m	Phase 2B
WBP 01	Trench 3	308	Layer	0	309	Spread of silt and occupation debris	Friable grey silt clay with occasional charcoal and daub	0.11m	Phase 2C
WBP 01	Trench 3	309	Deposit	0	308	Spread of silt and occupation debris	Friable mid grey silt with occasional daub and charcoal	0.1m	Phase 2C
WBP 01	Trench 3	310	Layer	0	0	Possible occupation spread	Firm grey brown clay silt with occasional charcoal and daub flecks.	0.15m	Phase 2B
WBP 01	Trench 3	311	Layer	0	0	Alluvial silt	Friable light yellow brown sandy silt.	0.16m	Phase 2B
WBP 01	Trench 3	312	Deposit	0	0	spread of waste material	Friable mid grey brown ashy silt with occasional charcoal and daub.	0.08m	Phase 2B
WBP 01	Trench 3	313	Deposit	0	0	Alluvial layer predating [323]	Friable dark grey clay silt with rare charcoal flecks	0.11m	Phase 2B
WBP 01	Trench 3	314	Layer	0	0	Alluvial layer	Friable light mid grey clay silt	0.08m	Phase 2B
WBP 01	Trench 3	315	Deposit	323	0	channel fill (secondary)	Friable mid grey brown silt with occasional daub and charcoal	0.36m	Phase 2B

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WBP 01	Trench 3	316	Deposit	323	0	channel fill (final silting) probably after abandonment	Mid yellow brown sandy silt	0.08m	Phase 2B
WBP 01	Trench 3	317	Deposit	323	0	channel fill (primary)	Soft mid grey clay silt with occasional charcoal flecks	0.11m	Phase 2B
WBP 01	Trench 3	318	Layer	0	0	Spread cut by [323]	Friable yellow grey silty sand	0.05m	Phase 2A
WBP 01	Trench 3	319	Layer	0	0	Alluvial creek deposit	Firm orange brown silty sand	0.06m	Phase 1
WBP 01	Trench 3	320	Layer	0	0	Marine silt postdating channel [323]	Friable grey yellow laminated silty sand with occasional charcoal	0.09m	Phase 2B
WBP 01	Trench 3	321	Layer	0	0	Alluvial deposit postdating [323]	Friable yellow brown sandy silt	0.08m	Phase 3
WBP 01	Trench 3	322	Layer	0	0	Alluvial deposit postdating [323]	Firm light grey clay silt	0.09m	Phase 3
WBP 01	Trench 3	323	Cut	0	0	Channel identified in the field , but appears manmade in section/deposits. (Roman 3rd C)	Linear aligned northwest southeast with steep sides and a flat base.	3.18m w x 1.02m d	Phase 2B
WBP 01	Trench 3	324	Layer	0	0	Ploughsoil	Friable mid brown yellow silty sand	0.37m	Phase 6
WBP 01	Trench 3	325	Deposit	0	0	Alluvial deposit forming edge of roddon.	Firm yellow brown laminated sandy silt.	0.83m	Phase 3
WBP 01	Trench 3	326	Deposit	0	0	Possible creek fill	Soft dark grey sandy silt with occasional charcoal flecks	0.03m	Phase 1
WBP 01	Trench 3	327	Deposit	0	0	Alluvial probable creek deposit	Compacted yellow brown clay silt	0.05m	Phase 1
WBP 01	Trench 4	400	Layer	0	0	Topsoil	Firm dark brown grey silty clay	0.16m	Phase 6
WBP 01	Trench 4	401	Layer	0	0	Subsoil	Firm light brown grey silty clay	0.16m	unphased
WBP 01	Trench 4	402	Layer	0	0	Alluvial deposit	Firm reddish brown grey silty clay	0.24m	Phase 3
WBP 01	Trench 4	403	Layer	0	0	Alluvial deposit	Firm mid yellow brown grey silty clay	0.48	Phase 3
WBP 01	Trench 5	500	Layer	0	0	Topsoil	Firm dark reddish brown clay silt with occasional pebbles	0.25m	Phase 6
WBP 01	Trench 5	501	Layer	0	0	Alluvial deposit	Firm brownish grey silty clay	0.5m	Phase 3
WBP 01	Trench 5	502	Layer	0	0	Alluvial deposit	Firm reddish brown silty clay	0.19m	Phase 3
WBP 01	Trench 6	600	Layer	0	0	Topsoil	Firm mid reddish brown clay silt with occasional pebbles	0.35m	Phase 6
WBP 01	Trench 6	601	Layer	0	0	Subsoil	Firm mottled brown grey silty clay with occasional root disturbance	0.24m	unphased
WBP 01	Trench 6	602	Layer	0	0	Marine silt	Firm light grey brown silty clay with occasional shell	0.27m	Phase 3
WBP 01	Trench 6	603	Layer	0	0	Alluvial deposit	Firm light brown grey silty clay	0.09m	Phase 3
WBP 01	Trench 6	604	Layer	0	0	Alluvial deposit	Firm light reddish brown silty clay	0.2m	Phase 3
WBP 01	Trench 6	605	Layer	0	0	Buried saltmarsh clays	Firm dark blue grey clay	0.1m	Phase 3
WBP 01	Trench 6	606	Layer	0	0	Saltmarsh clay	Firm reddish brown clay	0.35m	Phase 3

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WBP 01	Trench 7	700	Layer	0	0	Topsoil	Firm mid reddish brown clay silt with occasional pebbles	0.4m	Phase 6
WBP 01	Trench 7	701	Layer	0	0	Subsoil	Firm light yellow brown silt	0.16m	unphased
WBP 01	Trench 7	702	Layer	0	0	Alluvial deposit	Firm light pink brown silt with occasional iron panning	0.14m	Phase 3
WBP 01	Trench 7	703	Layer	0	0	Alluvial deposit	Firm light pinkish brown silt with frequent iron panning	0.01m	Phase 3
WBP 01	Trench 7	704	Layer	0	0	Alluvial deposit	Firm mid pink brown silt	0.17m	Phase 3
WBP 01	Trench 7	705	Layer	0	0	Salt marsh clay	Firm dark yellow brown clay	0.24m	Phase 3
WBP 01	Trench 8	800	Layer	0	0	Topsoil	Firm dark grey brown silt sand	0.3m	Phase 6
WBP 01	Trench 8	801	Layer	0	0	Alluvial deposit	Firm light yellow brown silt	0.2m	Phase 3
WBP 01	Trench 8	802	Layer	0	0	Alluvial deposit	Firm light pinkish brown silt	0.7m	Phase 3
WBP 01	Trench 8	803	Layer	0	0	Alluvial deposit	Firm dark yellow grey clay	0.08m	Phase 3
WBP 01	Trench 9	900	Layer	0	0	Topsoil	Firm mid reddish brown clay silt	0.4m	Phase 6
WBP 01	Trench 9	901	Layer	0	0	Alluvial deposit	Firm light yellow brown silt	0.14m	Phase 3
WBP 01	Trench 9	902	Layer	0	0	Alluvial deposit	Firm light pinkish brown silt	0.3m	Phase 3
WBP 01	Trench 9	903	Layer	0	0	Salt marsh clay	Firm dark yellow brown clay	0.5m	Phase 3
WBP 01	Trench 10	1000	Layer	0	0	Topsoil	Loose mid brown silt	0.4m	Phase 6
WBP 01	Trench 10	1001	Layer	0	0	Alluvial deposit	Loose light yellow brown silt	0.15m	Phase 3
WBP 01	Trench 10	1002	Layer	0	0	Alluvial deposit	Loose grey brown clay silt	0.1m	Phase 3
WBP 01	Trench 10	1003	Layer	0	0	Alluvial deposit	Loose mid grey sandy silt with frequent charcoal flecks	0.1m	Phase 3
WBP 01	Trench 10	1004	Layer	0	0	Marine silt	Loose mid grey brown laminated silty clay with occasional iron panning.	0.44m	Phase 3
WBP 01	Trench 11	1100	Layer	0	0	Topsoil	Loose mid grey brown silt	0.16m	Phase 6
WBP 01	Trench 11	1101	Layer	0	0	subsoil	Loose grey brown clay silt	0.11m	unphased
WBP 01	Trench 11	1102	Layer	0	0	Alluvial deposit	Loose light grey brown silt with occasional iron panning	0.15m	Phase 3
WBP 01	Trench 11	1103	Layer	0	0	marine silt	Firm dark brown laminated clay silt	0.26m	Phase 3
WBP 01	Trench 12	1200	Layer	0	0	Topsoil	Loose mid brown silt	0.26m	Phase 6
WBP 01	Trench 12	1201	Layer	0	0	Alluvial deposit	Loose light yellow brown silt with occasional iron panning	0.31m	Phase 3
WBP 01	Trench 12	1202	Layer	0	0	Alluvial deposit	Loose light grey brown silt	0.18m	Phase 3
WBP 01	Trench 12	1203	Layer	0	0	Salt march clay	Firm brown grey clay with frequent iron panning	0.21m	Phase 3
WBP 01	Trench 12	1204	Layer	0	0	Alluvial deposit	Firm mid brown grey clay silt with frequent iron panning	0.25m	Phase 3

Appendix 2 Context Summary

WBP 01	Trench 14	1400	Layer	0	0	Topsoil	Loose light brown silt	0.25m	Phase 6
WBP 01	Trench 14	1401	Layer	0	0	Subsoil	Loose dark grey brown silt with occasional iron panning	0.26m	unphased
WBP 01	Trench 14	1402	Layer	0	0	Marine silt	Loose yellow laminated silt	0.62m	Phase 1
WBP 01	Trench 18	1800	Deposit	1801		Ditch fill (primary)	Soft mid grey brown sandy silt	0.15m	Unphased
WBP 01	Trench 18	1801	Cut	0		Ditch probably drainage or minor boundary	Linear aligned southwest northeast with concave gently sloping sides and base.	0.85m w x 0.15m d	Unphased
WBP 01	Trench 18	1802	Layer	0	0	Topsoil	Loose mid grey sandy silt with occasional charcoal flecks	0.29m	Phase 6
WBP 01	Trench 18	1803	Layer	0	0	Alluvial deposit	No description	0.18m	Unphased
WBP 01	Trench 18	1804	Layer	0	0	Alluvial silt	No description	0.18m	Unphased
WBP 01	Trench 18	1805	Layer	0	0	Alluvial deposit	Soft orangey cream silty sand	0.14m	Unphased
WBP 01	Trench 18	1806	Layer	0	0	Marine silt	Friable yellow laminated silty sand	0.14m	Unphased
WBP 01	Trench 18	1807	Layer	0	0	Alluvial deposit	Soft grey orange silty clay	0.21m	Unphased
WBP 01	Trench 18	1808	Layer	0	0	Alluvial silt	Soft orange grey silt	0.24m	Unphased
WBP 01	Trench 18	1809	Cut	0		Ditch probable minor drain or boundary	Linear aligned southeast northwest with concave sides and base	1.3m w x 0.25m d	Unphased
WBP 01	Trench 18	1810	Deposit	1809	0	Ditch fill (secondary)	Soft mid grey brown sandy silt	0.1m	Unphased
WBP 01	Trench 18	1811	Deposit	1809		Ditch fill (primary)	Soft light yellow brown sandy silt	0.3m	Unphased
WBP 01	Trench 19	1900	Layer	0	0		Unstrat finds from machining		Unphased
WBP 01	Trench 19	1901	Layer	0	0	Topsoil	Firm mid grey brown sandy silt	0.25m	Phase 6
WBP 01	Trench 19	1902	Layer	0	0	Alluvial deposit	Soft mid grey brown sandy silt	0.25m	Phase 3
WBP 01	Trench 19	1903	Layer	0	0	Saltmarsh clay	Soft blue grey silty clay	0.14m	Phase 3
WBP 01	Trench 19	1904	Layer	0	0	Alluvial deposit	Soft mid brown clay silt	0.1m	Phase 3
WBP 01	Trench 19	1905	Layer	0	0	Salt marsh clay underlying alluvial dep (1904)	Soft mid brown silt clay	0.3m	Phase 3
WBP 01	Watching brief	1	Layer	0	0	Topsoil	Soft mid brown silt	0.3m	Phase 6
WBP 01	Watching brief	2	Layer	0	0	Topsoil along edge of dyke	Moderately compact mid brown sandy silt	1.3m	Phase 6

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WBP 01	Watching brief	3 Layer	0	0	subsoil within dyke	Friable dark brown grey sandy silt	0.6m	unphased
WBP 01	Watching brief	4 Layer	0	0	alluvial deposit in base of dyke	Friable mid grey yellow brown sandy silt	0.1m	Phase 3
WBP 01	Watching brief	5 Layer	0	6	Topsoil	Friable mid brown sandy silt	0.6m	Phase 6
WBP 01	Watching brief	6 Layer	0	5	Topsoil	Friable grey brown silt sand		Phase 6
WBP 01	Watching brief	7 finds	0	0		Unstrat finds from stripping of dyke.		Phase 6
WBP 301	Main	3000 Finds			NA	Number for US finds recovered from	NA	Unphased
WBP 301	Main	3001 Cut			Creek	creek	1.1m Deep x 3.85m Wide	Unphased
WBP 301	Main	3002 Cut			Ditch	Linear Ditch	0.57m Deep x 1.55m wide	Phase 4B
WBP 301	Main	3003 Cut			Ditch	Linear Ditch	0.51m Deep x 074m wide	Unphased
WBP 301	Main	3004 Deposit	3002		ditch Fill	Soft mid grey sandy silt	0.54m thick	Phase 4B
WBP 301	Main	3005 Deposit	3003		Ditch Fill (Secondary)	Soft mid grey sandy silt	0.19m thick	Unphased
WBP 301	Main	3006 Deposit	3003		Ditch Fill (Secondary)	Soft light to mid grey sandy silt	0.1m thick	Unphased
WBP 301	Main	3007 Deposit	3003		Ditch Fill (Secondary)	Soft mid to dark grey sandy silt	0.13m	Unphased
WBP 301	Main	3008 Deposit	3003		Ditch Fill (Primary)	Soft dark grey clayey silt	50mm	Unphased
WBP 301	Main	3009 Layer			subsoil	Soft mid to dark grey sandy silt extending over ditches 3003 and 3002	80mm	unphased
WBP 301	Main	3010 Deposit			Layer (Natural)	Soft orange & cream, light grey sandy silt	60mm thick	Phase 1
WBP 301	Main	3011 Cut			Ditch	Linear Ditch. In plan appears to cut 3001	0.15m deep x 0.46m wide	Phase 4B
WBP 301	Main	3012 Deposit	3011		ditch fill	Mottled dark grey\cream\mid grey sandy silt	0.15m thick	Phase 4B
WBP 301	Main	3013 Finds			NA	Finds recovered during cleaning over ditch 3001	NA	Unphased
WBP 301	Main	3014 Deposit	3001		Ditch Fill (Latest/Tertiary)	Soft dark brown silt	0.12m thick	Phase 4B
WBP 301	Main	3015 Deposit			Natural	Very soft cream\orange\light grey sandy silt	40mm	Phase 1

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WBP 301	Main	3016	Deposit	3001		Ditch Fill (Secondary)	Soft mid greyish brown & yellowish brown silt	0.2m thick	Phase 4B
WBP 301	Main	3017	Deposit	3001		Ditch Fill (Secondary)	Mid grey clayey silt. Dump of mussel shell and frequent charcoal. Also lumps of burnt silt	0.18m	Phase 4B
WBP 301	Main	3018	Deposit	3001		Ditch Fill (Secondary)	Mid brownish grey silt	0.12m	Phase 4A
WBP 301	Main	3019	Deposit	3001		Ditch Fill	Soft dark grey silt	20mm	Phase 4A
WBP 301	Main	3020	Cut		3023	Ditch Cut	Linear Ditch	0.12m deep x 0.46m deep	Unphased
WBP 301	Main	3021	Deposit	3020		Ditch Fill (Secondary)	Soft mid grey silty sand	0.1m thick	Unphased
WBP 301	Main	3022	Deposit	3020		Ditch Fill (Primary)	Very soft cream silty sand	20mm	Unphased
WBP 301	Main	3023	Cut		3020	Ditch	Linear Ditch	40mm	Unphased
WBP 301	Main	3024	Cut		3001	creek	curvilinear creek	0.24m	Unphased
WBP 301	Main	3025	Deposit	3024	3023	Ditch Fill (Primary)	Soft mid grey silty sand	90mm	Unphased
WBP 301	Main	3026	Deposit	3024		creekFill (Latest)	Soft mottled, mid, dark grey and creamy sandy silt	60mm	Unphased
WBP 301	Main	3027	Deposit	3024		creek Fill (Primary)	Soft dark grey and light brown sandy silt	0.17m thick	Unphased
WBP 301	Main	3028	Deposit	3079		Ditch Fill (Primary)	Soft mid grey and light brown silt	0.2m	Unphased
WBP 301	Main	3029	Cut			See 3079	See 3079	See 3079	Phase 4A
WBP 301	Main	3030	Deposit	3037		Ditch Fill (Secondary)	Soft mid brown silt	0.2m thick	Unphased
WBP 301	Main	3031	Deposit	3035		Ditch Fill (Latest)	Soft mid greyish brown silt	0.2m thick	Unphased
WBP 301	Main	3032	Deposit	3033		Ditch Fill (Primary)	Moderately compact light mid brownish grey fine sandy silt	0.34m thick	Unphased
WBP 301	Main	3033	Cut			Ditch	Linear Ditch	0.32m deep x 1.7m wide	Unphased
WBP 301	Main	3034	Deposit	3035		Ditch Fill (Secondary)	Soft black silt. Frequent charcoal flecks	30mm thick	Unphased
WBP 301	Main	3035	Cut			Ditch	Linear Ditch	1.10m Wide x 0.56m deep	Unphased

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WBP 301	Main	3036	Deposit	3001	3052	see 3052	see 3052	see 3052	Unphased
WBP 301	Main	3037	Cut			Ditch	Linear Ditch	2.35m wide x 0.7m deep	Unphased
WBP 301	Main	3038	Deposit	3035		Ditch Fill (Secondary)	Soft light grey silt	0.15m thick	Unphased
WBP 301	Main	3039	Deposit	3035		Ditch Fill (Secondary)	Soft light brown	0.23m thick	Unphased
WBP 301	Main	3040	Deposit	3035		Ditch Fill (Primary)	Soft light yellowish brown silt	0.10m	Unphased
WBP 301	Main	3041	Deposit	3035		Ditch Fill (Secondary)	Soft mottled mid greyish brown silt	80mm thick	Unphased
WBP 301	Main	3042	Deposit	3037		Ditch Fill (Primary)	Soft greyish brown silt	0.5m thick	Unphased
WBP 301	Main	3043	Deposit			Layer (Tospoil)	Dark brown silt	0.4m thick	Phase 6
WBP 301	Main	3044	Cut			Ditch	Linear Ditch	0.75 wide x 0.18m deep	Unphased
WBP 301	Main	3045	Deposit	3080		Ditch Fill	Soft mid grey sandy silt	0.26m thick	Unphased
WBP 301	Main	3046	Cut			Ditch	Linear Ditch	0.78m deep	Phase 4A
WBP 301	Main	3047	Deposit	3046		Ditch Fill (Latest)	Grey brown silt moderately compacted	0.52m thick	Phase 4A
WBP 301	Main	3048	Deposit	3046		Ditch Fill (Secondary)	Light brown silt with grey patches	0.33m thick	Phase 4A
WBP 301	Main	3049	Deposit	3044		Ditch Fill (Primary)	Very soft light grey and orange silty sand	0.18m thick	Unphased
WBP 301	Main	3050	Deposit	3001		creek Fill (Secondary)	Soft mid greyish brown silt	0.7m thick	Unphased
WBP 301	Main	3051	Deposit	3001		creek Fill (Secondary)	Soft laminated light brown and light grey silt	0.2m thick	Phase 4A
WBP 301	Main	3052	Deposit	3001	3036	creek Fill (Secondary)	Soft mid slightly reddish brown silt	0.3m thick	Unphased
WBP 301	Main	3053	Deposit	3055		Ditch Fill (Latest)	Moderately compacted light mid grey sandy silt	0.16m thick	Unphased
WBP 301	Main	3054	Deposit	3055		Ditch Fill (Primary)	Soft mid greenish brown silty fine sand	0.1m thick	Unphased
WBP 301	Main	3055	Cut			Ditch Cut	Curvy linear ditch/gull? Cut recorded at north limit of excavation	1.1m wide x 0.25m deep	Unphased
WBP 301	Main	3056	Deposit	3083		Ditch Fill (Latest)	Soft mid greyish brown sandy silt	0.12m thick	Phase 4A

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WBP 301	Main	3057	Deposit	3083		Ditch Fill (Secondary)	Firm yellowish brown with greenish hue silt & fine sand	0.21m thick	Phase 4A
WBP 301	Main	3058	Deposit	3083		Ditch Fill (Secondary)	Soft light brown fine sandy silt	0.16m thick	Phase 4A
WBP 301	Main	3059	Deposit	3083		Ditch Fill (Secondary)	Firm 'pinkish' silty clay and ash	30-40mm thick	Phase 4A
WBP 301	Main	3060	Deposit	3083		Ditch Fill (Secondary)	Soft mid grey clayey silt	0.1m thick	Phase 4A
WBP 301	Main	3061	Deposit	3082		Ditch Fill (Secondary)	Firm mid greyish brown sandy silt	0.12m thick	Phase 4A
WBP 301	Main	3062	Deposit	3082		Ditch Fill (Secondary)	Firm light grey & yellowish brown fine sandy silt	0.10m thick	Phase 4A
WBP 301	Main	3063	Deposit	3081		Ditch Fill (primary)	Firm pinky grey and light yellow brown mottled sandy silt	0.16m thick	Phase 4A
WBP 301	Main	3064	Deposit	3080		Ditch Fill (primary)	Firm pinky grey sandy silt	0.11m thick	Unphased
WBP 301	Main	3065	Deposit	3068		Ditch Fill (Secondary)	Firm mid grey with patches of light grey and orange brown sandy silt	0.14m thick	Unphased
WBP 301	Main	3066	Deposit	3068		Ditch Fill (Primary)	Soft mid yellow brown with orange mottling sandy silt	0.27m thick	Unphased
WBP 301	Main	3067	Deposit	3080		Ditch Fill (Secondary)	Firm light yellow brown sandy silt	0.15m thick	Unphased
WBP 301	Main	3068	Cut			Ditch Cut	Curved corner of ditch cut	1.9m wide x 0.91m deep	Phase 4A
WBP 301	Main	3069	Deposit	3001	3072	creek Fill (Primary)	See 3072	70mm thick	Unphased
WBP 301	Main	3070	Finds			NA	Metal detected finds from spoil heap	NA	Unphased
WBP 301	Main	3071	Finds			NA	Metal detected finds from surface of main area	NA	Unphased
WBP 301	Main	3072	Deposit	3001	3069	creek Fill (Primary)	Soft greyish blue silt	NA	Unphased
WBP 301	Main	3073	Deposit	3078		Ditch Fill (Latest)	Firm mid brownish - more grey at base silt	0.50m thick	Phase 5A
WBP 301	Main	3074	Deposit	3078		Ditch Fill (Secondary)	Firm mid grey with slight greenish hue slightly clayey silt	0.35m thick	Phase 5A
WBP 301	Main	3075	Deposit	3078		Ditch Fill (Secondary)	Firm dark blackish grey clayey silt	0.2m thick	Phase 5A
WBP 301	Main	3076	Deposit	3078		Ditch Fill (Secondary)	Soft mid grey with brown bands silty clay and silt	0.3m thick	Phase 5A

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WBP 301	Main	3077	Deposit	3078		Ditch Fill (Primary)	Soft dark blackish grey organic silt	0.2m thick	Phase 5A
WBP 301	Main	3078	Cut			Ditch Cut	Linear Ditch	3.55m wide x 1.05m deep	Phase 5A
WBP 301	Main	3079	Cut			Ditch/Gully	Linear Ditch/Gully recorded in section only	0.45m wide x 0.35m deep	Unphased
WBP1 01	West Dyke	2001	Deposit	2003	0	Ditch fill (secondary)	Loose mid brown silty clay	0.27m	Phase 2C
WBP1 01	West Dyke	2002	Deposit	2003	0	Ditch fill (secondary)	Compact mid grey sandy clay	0.2m	Phase 2C
WBP1 01	West Dyke	2003	Cut	0	0	Ditch probably a field boundary-roman	Linear aligned north south with 45 degree sides and a flat base	1.8m w x 0.8m d	Phase 2C
WBP1 01	Watching brief	2004	finds	0	0		unstrat finds from ch 150-200		Unphased
WBP1 01	West Dyke	2005	Deposit	2007	2012	Ditch fill- dump of domestic waste	Firm yellow brown silt with occasional charcoal, iron panning and partly heated clay.	0.78m	Phase 2B
WBP1 01	West Dyke	2006	Deposit	2007	0	Ditch fill (primary)	Firm yellow brown silt with frequent iron panning	0.12m	Phase 2B
WBP1 01	West Dyke	2007	Cut	0	2013	Ditch curvilinear boundary	Linear aligned northwest southeast with slightly stepped steep sides and a v shape base	0.78m w x 0.29m d	Phase 2B
WBP1 01	West Dyke	2008	Layer	0	0	Underlying alluvial deposit	Friable yellow silt		Phase 1
WBP1 01	West Dyke	2009	Deposit	2003	0	Ditch fill (primary)	Soft laminated grey orange silt clay	0.29m	Phase 2C
WBP1 01	West Dyke	2010	Layer	0	0		Finds retrieval from above (2018)		Phase 2B
WBP1 01	West Dyke	2011	Deposit	2003	0	Ditch fill - final silting in [2003]	Compact pale grey silt clay	0.07m	Phase 2C
WBP1 01	West Dyke	2012	Deposit	2013	2005	Ditch fill (primary)	Firm mid grey brown clay silt	0.2m	Phase 2B
WBP1 01	West Dyke	2013	Cut	0	2007	Ditch curvilinear boundary	Linear aligned east west with steep sides and a rounded base	0.3m w x 0.2m d	Phase 2B
WBP1 01	West Dyke	2014	Deposit	2015	2012	Ditch fill (primary)	Firm mid grey brown silt	0.15m	Phase 2B
WBP1 01	West Dyke	2015	Cut	0	2013	ditch curvilinear boundary	Linear aligned northwest southeast with gently curving sides and a rounded base	0.53m w x 0.15m d	Phase 2B
WBP1 01	West Dyke	2018	Deposit	2022	0	Ditch fill (primary)	Soft mid grey clay silt with frequent charcoal and iron panning	0.5m	Phase 2B
WBP1 01	West Dyke	2016	Cut	0	2025	ditch	Redug and recorded as [2025]		Phase 2C

Appendix 2 Context Summary

WBP1 01	West Dyke	2017	Deposit	2016	2026		redug and recorded as (2026) finds reassigned to this number		Phase 2C
WBP1 01		2019	VOID	0	2141		context voided in field. Finds from (2141) [2092]		Phase 2B
WBP1 01	West Dyke	2020	Deposit	2021	0	ditch fill-dump of occupation material spreads into [2021] [2023]	Firm grey brown silt with occasional charcoal and shell flecks	0.38m	Phase 2B
WBP1 01	West Dyke	2021	Cut	0	0	Narrow drainage ditch	Linear aligned north south with gently curving sides and a rounded base.	0.29m w x 0.2m d	Phase 2B
WBP1 01	West Dyke	2022	Cut	0	0	Ditch - roman boundary? Truncates ditch [2092]	Linear aligned north south with gently curving sides and base.	0.95m w x 0.33m d	Phase 2B
WBP1 01	West Dyke	2023	Cut	0	0	narrow drainage ditch-roman	Linear aligned north south with gently curving sides and base.	0.3m w x 0.19m d	Phase 2B
WBP1 01	West Dyke	2024	Cut	0	0	creek	Linear aligned east west with moderately steep sides. Base not exposed	3m w x 0.5m d	Phase 2B
WBP1 01	West Dyke	2025	Cut	0	0	Ditch - large drainage/boundary	Linear aligned northeast southwest with moderately steep sides. Base not reached	2.3m w x 0.9m d	Phase 2C
WBP1 01	West Dyke	2026	Deposit	2025	0	Ditch fill (final silting event)	Firm mid brown silt with charcoal flecks and iron panning.	0.37m	Phase 2C
WBP1 01	West Dyke	2027	Deposit	2092	0	Ditch fill (secondary silting)	Soft mid grey silt with frequent charcoal and iron panning	0.07m	Phase 2B
WBP1 01	West Dyke	2028	Layer	0	0	Topsoil	Firm mid grey clay silt	0.42m	Phase 6
WBP1 01	West Dyke	2029	Deposit	2024	0	Ditch fill (secondary)	Loose light brown orange clay silt	0.05	Phase 2B
WBP1 01	West Dyke	2030	Deposit	2032	0	Backfill of field drain [2032]	Loose mid grey brown sandy clay	0.52m	Phase 6
WBP1 01	West Dyke	2031	Deposit	2024	2051	Ditch fill (secondary)	Loose mid brown silty clay	0.33m	Phase 2B
WBP1 01	West Dyke	2032	Cut	0	0	Field drain	Linear aligned east west with near vertical sides	0.9m w x 0.52m d	Phase 6
WBP1 01	West Dyke	2033	Deposit	2024	2052	Ditch fill (secondary)	Compact mid grey sandy clay	0.2m d	Phase 2B
WBP1 01	West Dyke	2034	Deposit	2092	0	Ditch fill - possible marine flood into ditch	Soft light brown silt with occasional patches of iron panning	0.25m	Phase 2B
WBP1 01	West Dyke	2035	Deposit	2025	0	Ditch fill - marine flooding?	Firm brown grey sandy silt with occasional gravel and shell	0.15m	Phase 2C
WBP1 01	West Dyke	2036	Layer	0	0	Topsoil	Friable mid grey brown silt	0.4m	Phase 6
WBP1 01	West Dyke	2037	Layer	0	0	post roman alluvial silt	Firm light grey brown silt with frequent iron panning	0.07m	Phase 3

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WBP1 01	West Dyke	2038	Deposit	2015	0	Ditch fill - final silting	Firm mid yellow brown silt with frequent iron panning	0.04m	Phase 2B
WBP1 01	West Dyke	2039	Cut	0	0	Ditch	Linear aligned northeast southwest with fairly straight sides and a round base	0.8m w x 0.44m d	Phase 2C
WBP1 01	West Dyke	2040	Deposit	2039	0	Ditch fill (primary)	Firm light grey brown silt with occasional iron panning.	0.44m	Phase 2C
WBP1 01	West Dyke	2041	Deposit	2025	0	Ditch fill (secondary)	Firm dark grey silty clay	0.09m	Phase 2C
WBP1 01	West Dyke	2042	Deposit	2025	0	Ditch fill (secondary silting)	Firm grey sandy silt with occasional gravel	0.21m	Phase 2C
WBP1 01	West Dyke	2043	Deposit	2025	0	Ditch fill - waterlogged	Firm waterlogged yellow sandy clay	0.06m	Phase 2C
WBP1 01		2044	void	0	0				Unphased
WBP1 01		2045	void	0	0				Unphased
WBP1 01	West Dyke	2046	Deposit	2025	0	Organic deposit within [2025]	Firm waterlogged grey clay	0.1	Phase 2C
WBP1 01	West Dyke	2047	Deposit	2099	0	creek fill	Firm mid grey clay silt with occasional charcoal	0.04m	Phase 2C
WBP1 01	West Dyke	2048	Deposit		0		Artefact retrieval from cleaning (2040) & (2056)		Phase 2C
WBP1 01	West Dyke	2049	Deposit	2099	0	Spread of domestic debris into creek [2099]	Friable dark grey brown silt sand with frequent charcoal and fired clay flecks	0.26m	Phase 2C
WBP1 01	West Dyke	2050		2024	2029	ditch fill (secondary)	Loose light brown clay silt	0.05m	Phase 2B
WBP1 01	West Dyke	2051	Deposit	2024	2031	ditch fill	Loose mid brown grey silt clay	0.33m	Phase 2B
WBP1 01	West Dyke	2052	Deposit	2024	2033	Ditch fill	Compact mid grey sandy clay	0.2m	Phase 2B
WBP1 01	West Dyke	2053	Deposit	2099	0	creek fill	friable mid grey brown silt with occasional charcoal	0.15m	Phase 2C
WBP1 01	West Dyke	2054	Deposit	2099	0	creek fill	Friable mid grey brown clay silt with occasional charcoal, shell and iron panning	0.13m	Phase 2C
WBP1 01	West Dyke	2055	Deposit	2099	0	creek fill	Friable mid grey brown sandy silt with occasional charcoal and iron panning	0.12m	Phase 2C
WBP1 01	West Dyke	2056	Deposit	0	0	Spread sealing (2040) [2039]	Friable mid brown silt with occasional charcoal	0.1m	Phase 2C
WBP1 01		2057	void	0	0				Unphased

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WBP1 01		2058	void	0	0				Unphased
WBP1 01	West Dyke	2059	Deposit	2060	0	Posthole fill	Friable dark grey sandy clay with occasional charcoal flecks	0.11m	Unphased
WBP1 01	West Dyke	2060	Cut	0	0	Posthole	Oval in plan with steep sides and a pointed base.	0.29m w x 0.11m d	Unphased
WBP1 01	West Dyke	2061	Deposit	0	0		artefact retrieval (unstrat)		Phase 2B
WBP1 01		2062	void	0	0				Unphased
WBP1 01		2063	Deposit	0	2053		context void. Finds from (2053) [2099]		Phase 2C
WBP1 01	West Dyke	2064	Deposit	2099	0	creek fill - lower silting	Friable mid grey brown silt with occasional charcoal flecks.	0.13m	Phase 2C
WBP1 01	West Dyke	2065	Cut	0	0	Ditch - drainage runs into upper levels of [2025]	Linear feature aligned southeast northwest with steep sides.	0.55m w x 0.38m d	Phase 2C
WBP1 01	West Dyke	2066	Deposit	2065	0	Ditch fill - final silting	firm brown grey silt with moderate iron panning	0.14m	Phase 2C
WBP1 01	West Dyke	2067	Deposit	2065	0	ditch fill (secondary)	Firm yellow sand with moderate iron panning	0.08m	Phase 2C
WBP1 01	West Dyke	2068	Cut	0	2025	Ditch - boundary/drain	Linear aligned northeast southwest with steep sides	0.45m w x 0.51m d	Phase 2C
WBP1 01	West Dyke	2069	Deposit	2068	0	ditch fill - final silting	Friable dark grey silt with occasional sandy mottles	0.26m	Phase 2C
WBP1 01	West Dyke	2070	Deposit	0	0		finds from cleaning [2073]		Phase 2C
WBP1 01	West Dyke	2071	Deposit	2073	0	Ditch fill - final silting	Firm yellow brown sandy silt	0.13m	Unphased
WBP1 01	West Dyke	2072	Deposit	2073	0	Ditch fill - primary	Firm dark grey brown silty clay	0.19m	Unphased
WBP1 01	West Dyke	2073	Cut	0	0	Ditch - drainage/boundary	Linear aligned southeast northwest with sharply dropping sides and a flat base	1.35m w x 0.32m d	Unphased
WBP1 01	West Dyke	2074	Cut	0	0	Mod field drain	Linear aligned northwest southeast vertical sides and flat base	0.3m w x 0.6m d	Phase 6
WBP1 01	West Dyke	2075	Deposit	2074	0	Backfill of field drain	Friable grey brown silt sand	0.6m	Phase 6
WBP1 01	West Dyke	2078	Deposit	2092	0	ditch fill - probable discrete dump of waste	Soft mid brown grey silt with occasional flecks of charcoal and shell	0.2m	Phase 2B
WBP1 01	West Dyke	2079	Deposit	2065	0	Ditch fill (secondary silting)	Firm mid brown silt	0.09m	Phase 2C

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WBP1 01	West Dyke	2080	Deposit	2081	0	VOID pit fill (primary)	Firm light grey brown silt with occasional fired clay flecks. Not excavated, recorded in plan.		VOID
WBP1 01	West Dyke	2081	Cut	0	0	VOID (not on plan) Pit	Sub square feature Not excavated, recorded in plan.		VOID
WBP1 01	West Dyke	2082	Deposit	0	0	Spread overlying pit [2122]	Firm dark yellow brown sandy silt	0.14m	Phase 2C
WBP1 01	West Dyke	2083	Deposit	2122	2121	Pit fill- backfill	Firm mid grey brown clay silt with distinct fine 'tip lines'. Frequent mollusc fragments	0.61m	Phase 2C
WBP1 01	West Dyke	2084	Cut	0	2122	pit	Same as [2122]		Phase 2C
WBP1 01	West Dyke	2085	Deposit	0	0		Finds from cleaning [2007] [2084]		Phase 2B
WBP1 01	West Dyke	2086	Deposit	2092	0	Ditch fill (primary)	Soft blue grey clay silt with occasional shell fragments and charcoal flecks.	0.18m	Phase 2B
WBP1 01	West Dyke	2087	Deposit	2065	0	Ditch fill - silting event	Firm blue grey silty clay	0.11m	Phase 2C
WBP1 01	West Dyke	2088	Deposit	2065	0	Ditch fill (primary)	Firm yellow silt with occasional iron pan patches	0.04m	Phase 2C
WBP1 01	West Dyke	2089	void	2099	2064	Creek deposit	lense within (2064)		Phase 2C
WBP1 01	West Dyke	2090	Deposit	2068	0	Ditch fill - silting event	Firm light brown silt with occasional iron panning	0.13m	Phase 2C
WBP1 01	West Dyke	2091	Deposit	2068	0	Ditch fill (primary)	Firm grey silty clay with occasional iron panning	0.22m	Phase 2C
WBP1 01	West Dyke	2092	Cut	0	0	Ditch or creek- very broad boundary. Truncated by [2022]	Linear aligned north south with gently sloping sides.	4m + w x 0.8m d	Phase 2B
WBP1 01	West Dyke	2093	Cut	0	0	Ditch, possible drainage.	Linear aligned northwest southeast with steep irregular sides and a concave base.	0.74m w x 0.43m d	Unphased
WBP1 01	West Dyke	2094	finds	0	0		Finds collection from cleaning [2093]		Unphased
WBP1 01	West Dyke	2095	Deposit	2093	0	Ditch fill (primary)	Moderately compact mid brown grey silt with occasional shell and charcoal flecks.	0.43m	Unphased
WBP1 01	West Dyke	2096	Deposit	2025	0	Ditch fill - discrete dump of fire waste	Loose dark grey silt with frequent charcoal and organic flecking.	0.19m	Phase 2C
WBP1 01	West Dyke	2097	Deposit	2098	0	Ditch fill (primary)	Soft mid grey brown silty clay	0.1m	Phase 2B
WBP1 01	West Dyke	2098	Cut	0	0	ditch - heavily truncated by [2099]	Linear aligned east west with moderately steep sides and concave base	0.6m wide x 0.1m d	Phase 2B
WBP1 01	West Dyke	2099	Cut	0	0	Creek channel - open in RB period	Curvilinear aligned northwest southeast	8.9 m w x 0.8m d	Phase 2C

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WBP1 01	West Dyke	2100	Layer	0	0	Topsoil	Soft mid grey brown silty sand with occasional charcoal	0.25m	Phase 6
WBP1 01	West Dyke	2101	Layer	0	0	Subsoil	Soft light brown grey sandy silt	0.13m	unphased
WBP1 01	West Dyke	2102	Deposit	2099	0	Creek deposit - late silting	Firm light grey clay silt	0.08m	Phase 2C
WBP1 01	West Dyke	2103	Deposit	2099	0	Creek deposit	Friable light grey brown sandy silt	0.29m	Phase 2C
WBP1 01	West Dyke	2104	Deposit	2099	0	Creek deposit	Firm reddish brown clay silt	0.15m	Phase 2C
WBP1 01	West Dyke	2105	Deposit	2099	0	Creek deposit	Friable mid grey brown sandy silt with occasional charcoal flecks	0.08m	Phase 2C
WBP1 01	West Dyke	2106	Deposit	2099	0	Creek deposit - dump of waste	Friable mid brown grey silt with occasional flecks of iron panning	0.08m	Phase 2C
WBP1 01	West Dyke	2107	Deposit	2099	0	Creek deposit	Friable greenish brown sandy silt with rare charcoal flecks	0.06m	Phase 2C
WBP1 01	West Dyke	2108	Deposit	2099	0	Creek deposit - silting event	Friable mid brown silty sand with occasional shell frags	0.1m	Phase 2C
WBP1 01	West Dyke	2109	Layer	0	0	Underlying alluvial silt	Friable mid reddish brown clay silt	0.11m	Phase 1
WBP1 01	West Dyke	2110	void	2099	2104		Same deposit as (2104)		Phase 2C
WBP1 01	West Dyke	2111	Deposit	2112	0	Ditch fill	Loose light grey orange silt clay	0.13m	Unphased
WBP1 01	West Dyke	2112	Cut	0	0	Ditch - minor boundary or drain	Linear aligned northeast southwest	0.23m w x 0.13m d	Unphased
WBP1 01	West Dyke	2113	Deposit		0	alluvial deposit cut by [2093]	Friable mid yellow brown laminated silty sand	0.5m	Phase 1
WBP1 01	West Dyke	2114	Cut	0	0	Ditch - large boundary RB	Linear aligned northwest southeast with 45 degree concave sides and a concave base.	0.78m	Phase 2B
WBP1 01	West Dyke	2115	Deposit	2114	0	Ditch fill - dump of domestic waste	Loose mid brown silt with frequent cockle shell fragments and occasional charcoal.	0.03m	Phase 2B
WBP1 01	West Dyke	2116	Deposit	2114	0	ditch fill (primary)	Soft mid grey blue clay silt	0.03m	Phase 2B
WBP1 01	West Dyke	2117	Deposit	2114	0	Ditch fill - secondary silting	Soft mid reddish brown silt and frequent cockle shells.	0.22m	Phase 2B
WBP1 01	West Dyke	2118	Deposit	2114	0	Ditch fill - secondary silting	Soft mid grey clay silt with occasional charcoal and fired clay flecks	0.09m	Phase 2B
WBP1 01	West Dyke	2119	Deposit	2114	0	Ditch fill - secondary silting	Soft light grey brown silt with charcoal flecks and iron panning	0.42m	Phase 2B

Appendix 2 Context Summary

WBP1 01	West Dyke	2120	Deposit	2114	0	Ditch fill - tertiary	Soft light brown grey silt with occasional flecks of charcoal and iron panning	0.24m	Phase 2B
WBP1 01	West Dyke	2121	Deposit	2122	2083	Pit fill - deliberate dump	Firm mid grey brown clay silt with frequent shell and iron panning	0.58m	Phase 2C
WBP1 01	West Dyke	2122	Cut	0	2084	Pit - uncertain original function, used for rubbish disposal in final phase. RB	Sub square pit with steep sides and a concave base.	1.55m w x 3m l x 0.58m d	Phase 2C
WBP1 01	West Dyke	2123	Cut	0	0	Ditch - boundary/drainage RB	Linear aligned northeast southwest with moderately steep sides and a flat base.	2.6m w x 0.99m d	Phase 2B
WBP1 01	East Dyke	2124	Deposit	2125	0	Ditch fill - final silting	Soft dark grey sandy silt with frequent charcoal flecking	0.06m	Phase 2C
WBP1 01	East Dyke	2125	Cut	0	0	Ditch - RB boundary/drain	Linear aligned north south with fairly steep sides and flat base.	0.8m w x 0.22m d	Phase 2C
WBP1 01	West Dyke	2126	Deposit	2123	0	Ditch fill - final silting	Firm orange brown silt	0.64m	Phase 2B
WBP1 01	West Dyke	2127	Deposit	2123	0	Ditch fill - silting event	Firm pale grey silt clay with frequent iron panning	0.44m	Phase 2B
WBP1 01	West Dyke	2128	Deposit	2123	0	Ditch fill - organic deposit	Compact waterlogged grey clay	0.23m d	Phase 2B
WBP1 01	West Dyke	2129	Deposit	2123	0	Ditch fill - not fully excavated	Firm yellow grey silt	0.2m	Phase 2B
WBP1 01	West Dyke	2130	Deposit	2131	0	Ditch fill - primary	Firm mid grey brown clay silt with manganese flecks	0.16m	Phase 2B
WBP1 01	West Dyke	2131	Cut	0	0	Ditch - boundary/drainage RB	Linear aligned north south with steep sides and a flat base.	0.39m w x 0.16m d	Phase 2B
WBP1 01	East Dyke	2132	Deposit	2125	0	Ditch fill - secondary	Soft mid grey sandy silt with occasional charcoal flecks.	0.15m	Phase 2C
WBP1 01	East Dyke	2133	Cut	0	0	Ditch or possible creek channel RB in date	Linear aligned east west with moderately shallow sides.	5.6m w x 0.8m d	Phase 2C
WBP1 01	East Dyke	2134	Layer	0	0	Alluvial layer sealing rom archaeology	Firm grey silty clay	0.22m	Phase 2C
WBP1 01	East Dyke	2135	Deposit	2133	0	Ditch fill - uppermost silting event	Firm grey silty clay	0.45m	Phase 2C
WBP1 01	East Dyke	2136	Deposit	2125	0	Ditch fill - primary	Soft grey brown silt with occasional shell fragments	0.05m	Phase 2C
WBP1 01	East Dyke	2137	Cut	0	0	Ditch - RB boundary	Linear aligned east west with slightly irregular sides and a concave base	0.15m w x 0.4m d	Phase 2B
WBP1 01	East Dyke	2138	Deposit	2137	0	Ditch fill - primary	Soft grey brown clay silt with frequent charcoal flecks	0.06m	Phase 2B
WBP1 01	East Dyke	2139	Deposit	2133	0	Ditch fill - silting event possible creek deposit	Firm grey brown silty clay	0.37m	Phase 2C

Appendix 2 Context Summary

WBP1 01	West Dyke	2140	Deposit	2092	0	Ditch fill - silting event	Soft light brown grey silt	0.08m	Phase 2B
WBP1 01	West Dyke	2141	Deposit	2092	0	Ditch fill - silting event	Soft mid grey silt with frequent charcoal and mollusc shell	0.21m	Phase 2B
WBP1 01	West Dyke	2142	Deposit	2138	0	Alluvial deposit seals [2138]	Soft mid grey clay silt with frequent charcoal flecks	0.24m	Phase 2B
WBP1 01	West Dyke	2143	Deposit	0	0		finds recovery from strip of south area dyke		Phase 2B
WBP1 01	West Dyke	2144	Deposit	0	0		finds recovery from northern area of dyke		Phase 2B
WBP1 01	East Dyke	2145	Deposit	2158	0	Alluvial creek deposit	Friable yellow brown silt sand	0.11m	Phase 2B
WBP1 01	East Dyke	2146	Deposit	2158	0	Channel fill - dump of fire sweepings?	Friable dark grey silt with occasional ash, charcoal and fired clay flecks	0.18m	Phase 2B
WBP1 01	East Dyke	2147	Deposit	2158	0	Channel fill - domestic dump	Friable mid brown grey silt with occasional burnt soil, charcoal and shell flecks.	0.19m	Phase 2B
WBP1 01	East Dyke	2149	Deposit	2174	0	Ditch fill- cut by ditch [2133]	Firm brown silty clay	0.34	Phase 2B
WBP1 01	East Dyke	2150	Cut	0	0	Ditch - RB major boundary or drain	Linear aligned northwest southeast with a concave slightly stepped profile	1.6m w x 0.68m d	Phase 2B
WBP1 01	East Dyke	2151	Deposit	2150	0	Ditch fill - secondary including domestic debris	Firm brown black silt with frequent charcoal, shell, fired clay	0.26m	Phase 2B
WBP1 01	East Dyke	2156	Deposit	2150	0	Ditch fill - primary	Firm brown silt with occasional charcoal flecks	0.13m	Phase 2B
WBP1 01	East Dyke	2148	Deposit	0	0		finds retrieval from cleaning channel [2158]		Phase 2B
WBP1 01	East Dyke	2152	Cut	0	0	Ditch - recuts [2153]	Linear aligned north south with concave sides and base.	0.28m	Phase 2C
WBP1 01	East Dyke	2153	Cut	0	0	Ditch - rb boundary	Linear aligned north south with concave sides and base.	0.59m	Phase 2B
WBP1 01	East Dyke	2154	VOID	0	0				Unphased
WBP1 01	East Dyke	2155	VOID	0	0				Unphased
WBP1 01	East Dyke	2157	Deposit	2133	0	Ditch fill - possible domestic evidence.	Firm pale brown silt	0.14m	Phase 2C
WBP1 01	East Dyke	2158	Cut	0	0	Channel open in roman period.	Linear aligned northeast southwest with gently concave sides	3.4m w x 0.45m d	Phase 2B
WBP1 01	East Dyke	2159	Cut	0	0	Ditch - boundary/drain rb	Linear aligned north south with slightly stepped steep sides and a flat base.	1.16m w x 0.56m d	Phase 2A

Appendix 2 Context Summary

WBP1 01	East Dyke	2160	Deposit	2133	0	Ditch fill - waterlogged primary deposit	Firm black organic silt	0.15m	Phase 2C
WBP1 01	East Dyke	2161	Cut	0	0	Ditch - boundary/drain RB	Linear aligned north south with fairly concave sides and base.	0.82m w x 0.26m d	Phase 2C
WBP1 01	East Dyke	2162	Deposit	2161	0	Ditch fill - silting event	Firm mid brown grey compacted silt with occasional daub flecks.	0.08m	Phase 2C
WBP1 01	East Dyke	2163	Deposit	2159	0	Ditch fill - secondary silting	Soft mid brown grey sandy clay	0.26m	Phase 2A
WBP1 01	East Dyke	2164	Deposit	2159	0	Ditch fill - marine flooding?	Soft laminated silty sand	0.05m	Phase 2A
WBP1 01	East Dyke	2165	Deposit	2159	0	Ditch fill - marine flooding?	Soft mid brown laminated silt sand	0.03m	Phase 2A
WBP1 01	East Dyke	2166	Deposit	2159	0	Ditch fill - marine flooding?	Soft mid brown grey silty sand	0.17m	Phase 2A
WBP1 01	East Dyke	2167	Deposit	2159	0	Ditch fill - primary	Soft dark brown clay silt	0.07m	Phase 2A
WBP1 01	East Dyke	2168	Layer	0	0	Underlying alluvial deposit	Firm mid brown clay silt	0.14m	Phase 1
WBP1 01	East Dyke	2169	Layer	0	0	Underlying marine alluvium	Soft light grey laminated silty sand	0.05m	Phase 1
WBP1 01	East Dyke	2170	Layer	0	0	Underlying alluvial deposit	Firm mid brown clay sand	0.26m	Phase 1
WBP1 01	East Dyke	2171	Layer	0	0	Underlying marine alluvium	Soft light grey laminated silty sand	0.06m	Phase 1
WBP1 01	East Dyke	2172	Layer	0	0	Underlying alluvial deposit	Soft mid brown clay silt	0.12m	Phase 1
WBP1 01	East Dyke	2173	Deposit	2159	0	Ditch fill - secondary silt	Soft mid blue sandy clay	0.02m	Phase 2A
WBP1 01	East Dyke	2174	Cut	0	0	Ditch or possible creek.	Linear aligned east west with gently sloping sides	5m wide x 1.2m d	Phase 2B
WBP1 01	East Dyke	2175	Layer	0	0	natural alluvial deposit	Firm blue grey sandy silt	0.2m	Phase 1
WBP1 01	East Dyke	2176	Layer	0	0	Natural silt	Soft orange brown fine sand	0.15m	Phase 1
WBP1 01		2177	VOID	0	0				Unphased
WBP1 01	East Dyke	2178	VOID	0	2179				Unphased
WBP1 01	East Dyke	2179	Deposit	2150	0	Ditch fill - probably represents site abandonment with peaty soil development overlying ditch.	Firm black brown clay silt	0.3m	Phase 2B
WBP1 01	East Dyke	2180	VOID	0	0				Unphased
WBP1 01	East Dyke	2181	Deposit	2182	0	Ditch fill - initial slump of material down northeast side	Firm brown grey sandy silt with occasional iron panning, charcoal and cbm frags	0.1m	Phase 2B
WBP1 01	East Dyke	2182	Cut	0	0	Ditch - recuts [2150]	Linear aligned northwest southeast with concave profile	1.12m w x 0.29m d	Phase 2B

Appendix 2 Context Summary

WBP1 01	East Dyke	2183	VOID	0	2184				Unphased
WBP1 01	East Dyke	2184	Deposit	2182	0	Ditch fill - main silting event	Loose mid brown clay silt with occasional iron panning	0.29m	Phase 2B
WBP1 01	East Dyke	2185	Layer	0	0	Topsoil	Firm grey brown sandy silt	0.2m	Phase 6
WBP1 01	East Dyke	2186	VOID	0	0				Unphased
WBP1 01	East Dyke	2187	Deposit	2161	0	Ditch fill - silting event	Compact mid greyish brown clay silt with rare organic flecks	0.23m	Phase 2C
WBP1 01	East Dyke	2188	Deposit	2161	0	Ditch fill - silting event	Firm light yellow brown silty sand	0.2m	Phase 2C
WBP1 01	East Dyke	2189	Deposit	2161	0	Ditch fill - primary deposit	Firm mid brown grey compact silt with occasional iron pan nodules	0.18m	Phase 2C
WBP1 01	East Dyke	2190	Layer	0	0	Alluvial silt	Firm mid grey brown silt clay	0.13m	Phase 1
WBP1 01	East Dyke	2191	Layer	0	0	Alluvial silt overlying [2158]	Friable light grey compact silt	0.08m	Phase 3
WBP1 01	East Dyke	2192	Layer	0	0	Alluvial deposit	Friable mid grey brown sandy silt	0.08m	Phase 1
WBP1 01	East Dyke	2193	Deposit	2195	0	pit fill - final silt	Firm mid grey brown fine silt with occasional charcoal flecks	0.03m	Phase 2C
WBP1 01	East Dyke	2194	Deposit	2195	0	Pit fill - backfilled domestic waste.	Firm mid grey brown silt with occasional charcoal and daub	0.13m	Phase 2C
WBP1 01	East Dyke	2195	Cut	0	0	Pit - domestic rubbish	Rectangular steep sided feature with a slightly uneven base.	1m w x 1.16m l x 0.15m d	Phase 2C
WBP1 01	East Dyke	2196	Deposit	2125	0	Ditch fill - rich in domestic waste.	Soft mid brown clay silt	0.17m	Phase 2C
WBP1 01	East Dyke	2197	Deposit	2199	0	Ditch fill - final silting.	Soft mid brown silt	0.16m	Phase 2C
WBP1 01	East Dyke	2198	Deposit	2199	0	Ditch fill - major long term silting	Firm grey brown silty clay	0.78m	Phase 2C
WBP1 01	East Dyke	2199	Cut		0	Ditch - recuts [2208] RB	Linear aligned east-west with concave profile.	4.8m w x 1.02m	Phase 2C
WBP1 01	East Dyke	2200	Deposit	2208	0	Ditch fill - uppermost silting in [2208]	Soft mid brown silty clay	0.12m	Phase 2C
WBP1 01	East Dyke	2201	Deposit	2208	0	Ditch fill , slump along the right hand section side.	Soft mid grey brown silt clay	0.08m	Phase 2C
WBP1 01	East Dyke	2202	Deposit	2208	0	Ditch fill - major edge collapse down right hand section side.	Soft mid grey mixed sandy silt	0.4m	Phase 2C
WBP1 01	East Dyke	2203	VOID	0	2202				Phase 2C
WBP1 01	East Dyke	2204	Deposit	2208	0	Ditch fill - silting event	Soft mid grey clay silt with occasional charcoal flecks.	0.3m	Phase 2C

Appendix 2 Context Summary

WBP1 01	East Dyke	2205	Deposit	2208	0	ditch fill - lower silting event	Soft mid grey clay silt	0.22m	Phase 2C
WBP1 01	East Dyke	2206	void	0	0				Unphased
WBP1 01	East Dyke	2207	void	0	0		finds unstrat.		Unphased
WBP1 01	East Dyke	2208	Cut	0	0	ditch - major boundary/drain	Linear aligned east-west with concave profile	2.5m w x 1m d	Phase 2C
WBP1 01	East Dyke	2209	Layer	0	0	Alluvial deposit	Loose pale brown silt	0.28m	Phase 3
WBP1 01	East Dyke	2210	Layer	0	0	Alluvial deposit	Firm pale brown clay silt	0.37m	Phase 3
WBP1 01	East Dyke	2222	finds	0	0		Unstrat finds from east dyke.		Unphased
WBP1 01	East Dyke	2211	Deposit	2152	0	ditch fill - only silting deposit	Compact mid grey silty clay with frequent iron panning	0.29m	Phase 2C
WBP1 01	East Dyke	2212	Deposit	2215	0	Ditch fill - uppermost silting	Compact dark grey clay silt	0.19m	Phase 2B
WBP1 01	East Dyke	2213	Deposit	2215	0	ditch fill - silting event	Soft light brown silty sand	0.11m	Phase 2B
WBP1 01	East Dyke	2214	Deposit	2215	0	Ditch fill - silting	Soft mid grey clay silt with occasional charcoal flecks	0.2m	Phase 2B
WBP1 01	East Dyke	2215	Cut		0	Ditch - recuts [2153] truncated by [2152]	Linear aligned north south with concave profile	0.4m w x 0.58m d	Phase 2B
WBP1 01	East Dyke	2216	Deposit	2153	0	ditch fill - upper silting event within [2153]	Soft light grey silty sand with frequent charcoal flecks.	0.12m	Phase 2B
WBP1 01	East Dyke	2217	Deposit	2215	0	Ditch fill - primary deposit within [2215]	Soft dark grey clay silt	0.11m	Phase 2B
WBP1 01	East Dyke	2218	Deposit	2153	0	Ditch fill - primary	Soft light grey silty sand	0.12m	Phase 2B
WBP1 01	East Dyke	2219	VOID	0	0	Possible pit?	Irregular feature with gently sloping side and flat base.	0.1m	Unphased
WBP1 01	East Dyke	2220	VOID	2219	0	pit fill	Compact mid grey clay silt	0.08m	Unphased
WBP1 01	East Dyke	2221	VOID	2219	0	Pit fill - initial silt	Loose light grey sandy silt	0.02m	Unphased
WBP1 01	East Dyke	2223	Layer	0	0	Topsoil	Soft mid brown grey silt	0.29m	Phase 6
WBP1 01	East Dyke	2224	Layer	0	0	Alluvial deposit	Firm reddish brown clay	0.14m	Phase 3
WBP1 01	East Dyke	2225	Layer	0	0	Alluvial deposit - tidal?	Friable mid brown laminated sand	0.13m	Phase 3
WBP1 01	East Dyke	2226	Layer	0	0	Alluvial deposit - tidal	Soft light brown laminated sand	0.09m	Phase 3
WBP1 01	East Dyke	2227	Layer	0	0	Salt marsh deposit	Mid blue grey clay silt with rare charcoal flecks	0.12m	Phase 3

Appendix 2 Context Summary

WBP1 01	East Dyke	2228	Layer	0	0	Alluvial deposit	Soft mid greyish brown silt	0.14m	Phase 3
WBP1 01	East Dyke	2229	Layer	0	0	Alluvial deposit	Soft light brown fine sand	0.1m	Phase 3
WBP1 01	East Dyke	2230	Layer	0	0	Alluvial deposit	Soft mid grey brown clay silt	0.32m	Phase 3
WBP1 01	East Dyke	2231	Layer	0	0	Alluvial deposit	Soft light brown fine silty sand	0.15m	Phase 3
WBP1 01	East Dyke	2232	Layer	0	0	Alluvial deposit - tidal	Soft, thinly laminated silty sand	0.11m	Phase 3
WBP1 01	East Dyke	2233	Layer	0	0	Alluvial deposit	Friable light grey brown silty sand	0.16m	Phase 3
WBP1 01	East Dyke	2234	Layer	0	0	Alluvial deposit.	Friable light grey brown fine sandy silt	0.18m	Phase 3
WBP1 01	East Dyke	2235	Layer	0	0	Alluvial deposit - tidal	Soft light grey brown laminated sandy silt	0.45m	Phase 3
WBP1 01	East Dyke	2236	Layer	0	0	Alluvial deposit	Friable light grey brown coarse sandy silt	0.3m	Phase 3
WBP1 01	East Dyke	2237	Layer	0	0	Alluvial deposit - tidal	Soft light brown finely laminated silt	0.12m	Phase 3
WBP1 01	East Dyke	2238	Layer	0	0	Alluvial deposit	Soft mid grey brown fine silty sand	0.3m	Phase 3
WBP1 01	East Dyke	2239	Layer	0	0	Alluvial deposit	Friable light brown finely laminated silt	0.25m	Phase 3
WBP1 01	East Dyke	2240	Layer	0	0	Alluvial deposit - tidal	Soft light brown laminated silts	0.28m	Phase 3
WBP1 01	East Dyke	2241	Layer	0		Alluvial deposit - tidal	Soft light brown coarse laminated silt	0.3m	Phase 3
WBP1 01	East Dyke	2242	Layer	0	0	Alluvial deposit	Soft mid brown silt	0.1m	Phase 3
WBP1 01	East Dyke	2243	Layer	0	0	Alluvial deposit	Soft mid yellow silt clay	0.21m	Phase 3
WBP1 01	East Dyke	2244	Layer	0	0	Alluvial deposit, possibly formed during RB period	Soft mid grey sandy silt with occasional charcoal flecks.	0.15m	Phase 3
WBP1 01	East Dyke	2245	Layer	0	0	Alluvial deposit	Soft light brown silt	0.12m	Phase 3
WBP1 01	East Dyke	2246	Layer	0	0	Alluvial deposit	Light grey brown fine sand	0.32m	Phase 3
WBP1 01	East Dyke	2247	Layer	0	0	Alluvial deposit	Friable mid grey brown silt	0.16m	Phase 3
WBP1 01	East Dyke	2248	Layer	0	0	Alluvial deposit	Soft mid brown grey silt	0.12m	Phase 3
WBP1 01	West Dyke	2249	Deposit	2023	0	Ditch fill	Given in PX	0.24m	
WBP2 01	Main	2501	Finds			Finds	Unstrat finds from above 2503	NA	Unphased
WBP2 01	Main	2502	Cut			creek Cut	Linear creek	7.9m wide x 1.3m deep	Phase 4B
WBP2 01	Main	2503	Cut			Probably natural hollow	Natural Hollow?	0.23m	Unphased
WBP2 01	Main	2504	Deposit	2503		Natural hollow fill	Mixed mid grey & brownish grey silt	0.21m max	Unphased
WBP2 01	Main	2505	Deposit	2503		Natural hollow fill	Moderately compacted light grey fine sandy silt	0.10 max	Unphased
WBP2 01	Main	2506	Deposit			Layer	Moderately compacted pale brown/grey mottled silt overlying silted creek 2502	0.24m thick	Phase 4B
WBP2 01	Main	2507	Deposit	2502		creek Fill	Moderately compacted grey with dark grey mottling sandy silt. Frequent bone and pot	0.18m thick	Phase 4B

Appendix 2 Context Summary

WBP2 01	Main	2508	Deposit	2502		creek Fill	Moderately compacted mixed pale brown and mid grey silt	0.22m thick	Phase 4B
WBP2 01	Main	2509	Deposit	2502		creek Fill	Moderately compacted light bluish grey fine sandy silt	0.19m thick	Phase 4B
WBP2 01	Main	2510	Deposit	2502		creek Fill	Firm brownish orange mixed sandy silt	0.16m thick	Phase 4B
WBP2 01	Main	2511	Deposit	2502		creek Fill	Moderately compacted grey with dark grey mottled sandy silt. Freq pot and bone	0.14m thick	Phase 4B
WBP2 01	Main	2512	Deposit	2514		Ditch Fill (Latest)	Soft dark brownish grey silt	70mm	Unphased
WBP2 01	Main	2513	Deposit	2514		Ditch Fill (Primary)	Soft mixed brownish grey and light grey silt	0.30m	Unphased
WBP2 01	Main	2514	Cut			Ditch Cut	Linear Ditch Cut	0.2m deep x 0.61m wide	Unphased
WBP2 01	Main	2515	Deposit	2502		creek Fill	Firm orange, grey sandy silt	0.22m thick	Phase 4B
WBP2 01	Main	2500	finds	0	0		Unstrat finds over [2502]		Unphased
WBP2 01	Main	2516	Layer	0	0	Topsoil	Friable mid brown silt	0.3m	Phase 6
WBP3 01	Main	3081	Cut	0	0	Ditch	Aligned east-west concave profile	1m wide x 0.15m deep	Phase 4A
WBP3 01	Main	3082	Cut	0	0	Ditch	aligned east-west concave profile	0.55m wide x 0.2m deep	Phase 4A
WBP3 01	Main	3083	Cut	0	0	Ditch	aligned east-west concave profile	0.9m wide x 0.5m deep	Phase 4A
WBP3 01	Main	3080	Cut	0	0	Ditch	linear northeast southwest recuts [3044]	0.93m wide x 0.25m deep	unphased
WBP4 01	East Dyke	3500	Cut			Ditch Cut	Linear Ditch Cut	1.00m wide x 0.30m deep	Unphased
WBP4 01	East Dyke	3501	Deposit	3500		Ditch Fill (Primary)	Loose greyish brown silty fine sand with frequent shell and moderate charcoal	Max thickness 0.30m	Unphased
WBP4 01	West Dyke	3502	Cut			Furrow Cut	Probably medieval plough furrow cut	1.25m wide x 80mm deep	unphased
WBP4 01	West Dyke	3503	Deposit	3502		Furrow fill (Primary)	Pale brown silt fill of plough furrow	80mm thick	unphased
WBP4 01	East Dyke	3504	Cut			Pit Cut	Irregular cut possibly of pit	60mm deep	Unphased
WBP4 01	East Dyke	3505	Deposit	3504		Pit fill	Moderately soft slightly sandy silt with occ charcoal and occ shell and bone	60mm thick	Unphased
WBP4 01	East Dyke	3506	Deposit	3507		Ditch Fill (Poss Primary)	Moderately firm mid greyish brown silty sand.	0.43m max thickness	Phase 5B

Appendix 2 Context Summary

WBP4 01	East Dyke	3507	Cut			Ditch Cut	Linear Ditch Cut	0.43m max depth	Phase 5B
WBP4 01	East Dyke	3508	Deposit	3500		Ditch fill	Loose mid brown silty fine sand	0.52m thick	Unphased
WBP4 01	East Dyke	3509	Deposit	3500		Ditch Fill	Soft Brownish Grey clay	70mm max thickness	Unphased
WBP4 01	West Dyke	3510	Deposit	3512		Irregular Hollow fill	Soft mid grey with brownish hue silt; occ snail shells, mineralised lumps	100mm	Unphased
WBP4 01	West Dyke	3511	Deposit	3512		Irregular Hollow fill	Mid greyish brown silt with sand	50mm	Unphased
WBP4 01	West Dyke	3512	Cut			Irregular hollow cut	Irregular shallow oval hollow cut	Max depth 0.12m	Unphased
WBP4 01	West Dyke	3513	Layer			subsoil	Poss subsoil layer	0.30m thick	unphased
WBP4 01	West Dyke	3514	Cut			Ditch Cut	Probable linear but recorded in section only. Poss continuation of 3507	Max depth 0.14m	Unphased
WBP4 01	East Dyke	3515	Deposit	3500		Ditch Fill	Loose greyish brown fine sand with occ charcoal and shells	60mm max thickness	Unphased
WBP4 01	East Dyke	3516	Deposit	3500		Ditch Fill	Loose greyish brown fine sand with occ charcoal and occ shell	90mm max thickness	Unphased
WBP4 01	West Dyke	3517	Deposit	3514		Ditch Fill	Mid brownish grey silt ditch fill	150mm thick	Unphased
WBP4 01	All	3518	Deposit			Layer of Natural	Natural silts	Max 0.30m thick	Phase 1
WBP4 01	All	3519	Layer	0	0	Topsoil	Friable mid brown silt	0.3m	Phase 6

Appendix 3

The Roman pottery from the Weston Bypass, Nr Spalding, Lincolnshire (WBP101) for Mike Wood, APS

B J Precious: Late Iron Age and Roman Pottery Consultant - 19/09/06

The pottery has been recorded according to the Study Group for Roman Pottery (SGRP) guidelines, using codes currently in use at the City of Lincoln Archaeological Unit, and sherd count and weight as measures. The site archive has been collated using Microsoft, excel (wbp101.xls).

Introduction

The total assemblage, comprised of 1706 sherds weighing 21278 grams, was recovered from three main area of the bypass: Trench 3, and the West and East dykes. In addition to the Roman pottery there are 3 sherds of post-Roman wares weighing 14 grams. Excavations within the West dyke produced the largest group (979 sherd, 12707 grams), followed by Trench 3 (437 sherds, 4719 grams), then East dyke (263 sherds, 3476 grams), and lastly unstratified pottery from machining (30 sherds, 390 grams). Each area has been discussed separately in order to isolate any spatial differences.

There is no 1st century or very late Roman pottery from the site. The earliest groups are 2nd century in date, and a small amount of Central Gaulish samian ware of 2nd century date provides external dating for the assemblage.

This assemblage is unusual for the high proportion of pottery manufactured at the Nene Valley kilns, in particular Nene Valley grey ware (NVGW), which occurs in groups from all areas of the site. Dating of the Roman pottery is complex, and mainly relies on the proportions of the individual form types and fabrics of the Nene Valley industries.

Trench 3 (See Tables 1-3, below)

Dating (see Table 1, below).

This area of the site is well stratified with the earliest pottery of 2nd century date conveniently occurring in the earliest levels, context **318** and **313**, and early to mid-4th century in the latest levels, contexts **303**, **304** and **306**. Dates in between range from later 2nd to the early 3rd century (the *flourit* for NVGW) to the 3rd century. Pottery of at least mid to late 3rd

Century date, contexts **308-309**, occurs just below the main group of 4th century wares mentioned above.

In terms of number of sherds pottery of 3rd century date is most common with 182 sherds from 5 contexts. This is followed by that of 2-to 3rd century date comprised of 130 sherds, but from 8 contexts. Slightly lower is the incidence of later 3rd to 4th century wares with 125 sherds from 5 contexts. However, the higher amount of later Roman wares is partly accounted for by the lower sherd/weight ratio that is likely to be the result of redistribution of the material.

Condition (see Table 1, below)

There is a small amount of abrasion and a noticeable amount of burnt pottery. Some of this is due to use as cooking vessels, but a number of sherds are burnt over the broken edge, in particular contexts **302**, **304** and **313**, which is indicative of destruction rather than use.

On the whole, the sherd/weight ratio shows that pottery from contexts of later Roman date is much lower than those of earlier date, which emphasises the probability of re-distribution of the material from the later groups. This is confirmed to some extent by the amount of residual pottery within the late groups.

The largest groups came from contexts **302, 304, 310, 313** and **315**; of these those with the highest sherd/weight ratio are **302, 313** and **314**. Sherd families occur between contexts **313, 314** and **316**.

Table 1: The date range for Trench 3 by sherd count and weight

Context	Sherds	Grams	Date range	Sh/wt	Pub No	Join	Detail
300	6	67	L3-4	11			Unstrat. machine
301	9	149	L2E3	17			Unstrat. over 302
302	50	787	3C	16	P4;P6;P7		
303	24	134	EM4	6			
304	70	608	EM4C	9			
306	10	40	EM4C	4			
307	53	723	3C	14	P3		
308	15	122	L3-4	8			
309	23	156	M3C+	7			
310	34	211	3C	6			
311	5	30	M2-E3	6			
312	22	366	3C	17			
313	46	729	L2-E3	16		314;316	
314	13	326	ML2-E3	25		313;316	
315	50	208	ML2C	4			
316	1	20	2C	20		313;314	
317	5	40	M2-E3	8			
318	1	3	2C	3			
	437	4719	TOTAL	11			

Discussion (see Tables 2 and 3, below)

As mentioned above, it is obvious that the bulk of the assemblage from Trench 3 is derived from various products from the Nene Valley industries, the bulk being Nene Valley grey wares (NVGW). There is a very small amount of the earlier Nene Valley coarser grey (NVGY), and the Nene Valley colour-coated ware accounts for less than 7% of the assemblage. The latter mainly consists of later forms such as folded beakers, together with open forms including plain-rimmed dishes, but also copies of samian forms Dr31 and Dr38. Other scarcer products from the Nene Valley include, Cream and/or Parchment ware (NVCR and PARC), mica-dusted ware (NVMIC), and a single mortarium (MONV).

Imported wares are present, but relatively rare consisting of flakes of Dressel 20 olive oil amphorae from Southern Spain, most from one vessel, wine amphorae from Southern Gaul, and fine, samian ware from Central Gaul. Nevertheless, the presence of these wares is indicative of a site of relatively high status.

Other fine wares consist of fine, grey wares (GFIN) that may be related to Nene Valley products, unsourced fine ware (FINE) and a sherd of Parisian-type fine ware that lacks the typical stamped decoration (PART).

Table 2: The Roman fabrics for Trench 3 by sherd count and weight

Fabric	Code	Sherds	Grams
Cream ware	CR	2	1
Dressel 20	DR20	12	353
Fine ware	FINE	2	1
Gauloise 4	GAU4	1	11
Fine grey ware	GFIN	23	130
Grey ware	GREY	12	78
Fairly fine grey ware	GRFF	3	31
Nene Valley mortaria	MONV	1	54
Nene Valley colour-coat	NVCC	29	196
Nene Valley cream ware	NVCR	5	118
Nene Valley grey colour-coat	NVGCC	8	29
Nene Valley grey ware	NVGW	165	1981
Nene Valley coarser grey	NVGY	3	36
Nene Valley mica-dusted	NVMIC	1	2
Oxidised ware	OX	1	1
Light coloured oxidised ware	OXL	4	1
Parchment ware	PARC	2	65
Parisian-type ware	PART	1	1
Pink ware	PINK	2	4
Central Gaulish samian	SAMCG	4	25
Shell-tempered ware	SHEL	2	2
South Lincs shell-tempered	SLSH	154	1599
	TOTAL	437	4719

Oxidised wares are a small group that includes, Cream ware, miscellaneous and light-coloured oxidised ware (OX and OXL), and fine oxidised ware with a pink fabric (PINK).

Coarse grey wares (GREY and GRFF) that normally form the bulk of Roman assemblages account for only 3% here. These wares are generally produced locally and provide the main source of cooking wares for the inhabitants. In sharp contrast, cooking wares from Trench 3 are provided by the second largest fabric group - South Lincolnshire shell-tempered ware (SLSH). A noticeable proportion of SLSH is from the Bourne kilns.

There is a large range of forms from this area that reflects, to some extent the wide date range of early 2nd to the 4th century. Jars are the most common form in terms of number of sherds, but are limited to a small number of types. These include curve and everted rim vessels, those with wide-mouths, a significant proportion of large jars, and rolled rimmed jar. Curve and rolled rimmed types are in South Lincolnshire, shell-tempered wares.

Table 3: The Roman forms for Trench 3 by sherd count and weight

Form	Code	Sherds	Grams
Undiagnostic		25	56
Samian bowl Dr 31	31?	1	5
Samian bowl Dr 31rouletted	31R	1	12
Samian mould decorated bowl Dr 37	37	1	5
Amphora	A	13	364
Bowl	B	6	207

Bowl or dish	BD	10	120
Bowl as Dr31	B31	5	105
Bowl as Dr31 rouletted	B31R	2	15
Bowl as Dr36	B36	2	65
Bowl as Dr38	B38?	1	47
Everted rim bowl	BEV	2	10
Flanged bowl	BFL	2	10
Rolled rim bowl	BROL	1	1
Rounded rim bowl	BRR	2	108
Triangular rim bowl	BTR	2	19
Wide mouth bowl	BWM	5	121
Dish	D	2	9
Groove rim dish	DGR	4	118
Plain rim dish	DPR	6	51
Triangular rim dish	DTR	1	11
Closed forms	CLSD	110	494
Flagon	F?	1	6
Beaker	BK	31	92
Beaker	BK?	4	1
Barbotine beaker	BKBA	1	1
Curve rim beaker	BKCR	2	111
Everted rim beaker	BKEV	4	17
Folded beaker	BKFO	2	3
Jar or beaker	JBK	15	97
Curve rim jar or beaker	JBKCR	6	15
Jar	J	42	428
Curve rim jar	JCUR	3	39
Everted rim jar	JEV	1	5
Large jar	JL	36	604
Roll rim jar	JROL	1	23
Storage jar	JS	7	161
Wide mouth jar	JWM	5	72
Jar or bowl	JB	29	223
Curve rim jar or bowl	JBCUR	5	45
Large jar or bowl	JBL	32	725
Roll rim jar or bowl	JBROL	1	17
Lid	L	1	6
Castor box	BX?	1	2
Castor box lid	LBX	1	11
Mortaria	M	1	54
Unusual vessel	Z	1	8
	TOTAL	437	4719

Flagons are virtually absent, but beakers are quite well represented including a barbotine decorated example and folded types. Most of these vessels are in fine grey ware (GFIN), Nene Valley colour-coated ware and, to a lesser extent, Nene Valley grey ware.

Bowls and dishes are less well represented in terms of number of sherds but there is a wide range of types. These include a number of samian copies – Dr31, Dr36, and Dr38 – that are principally in Nene Valley grey ware. Other forms include flanged, grooved, triangular and everted-rim types. Flanged and correspondingly roll-rimmed vessels occur in SLSH.

There are single examples of a lid, a castor box and a corresponding lid, a mortarium, and an unusual sherd that may be either a spout or a crude neck.

Four vessels from Trench 3 have been illustrated for both intrinsic and dating purposes: a bowl similar to samian form Dr31 in the rare Nene Valley mica-dusted fabric (Illus.3); an almost complete vessel with a cornice-rim, either a beaker or a miniature pot in Nene Valley Cream ware (Illus. 4); An unusual wide-mouth bowl or possibly a campanulate type that is usually handled (Illus. 6) and a bowl with an unusual rolled over rim that is similar to samian form Dr31 (Illus.7), both in Nene Valley Grey ware.

West Dyke

The Roman pottery is distributed along the length of the West dyke with concentrations in Ditch fills **2065** and **2068**; **2099**; **2114**; **2123**; and pit fill **2122**.

Dating (see Table 4, below)

The dating for the West dyke is almost identical to that of Trench 3, but the proportions differ.

The earliest pottery of late 1st to 2nd century came from context **2001**, but this consists of only 2 sherds of Nene Valley coarser grey (NVGY), hence the broad date range. 2nd century wares comprised of 29 sherds came from four contexts, **2005** (largest group), **2033**, **2078**, and **2144**.

There is a large group of contexts (23 instances) with dates ranging from the mid-2nd to the 3rd century – the *flourit* of Nene Valley Grey ware (NVGW). However, the total number of sherds amounts to 114, with the largest groups derived from **2020** and **2096**. Although there are only 16 instances of 3rd century groups, these amount to 303 sherds. The bulk of this material came from **2010**, followed by **2053**, **2064**, and **2076**.

In contrast, despite there being 9 contexts dating from the later 3rd to the 4th century these groups amount to 510 sherds. The main contexts are: **2017**, **2026**, **2047**, **2055** and **2082**. Some of these groups inevitably contain residual earlier material and this is borne out by the relatively small size of the sherd/weight ration. However, this is not always the case as **2017**, **2026**, and **2082** have fairly high ratios.

Taken together it seems that there is moderate occupation during the 2nd century that increases sharply during the 3rd, and is still substantial during the 4th century.

Table 4: The date range for West dyke by sherds count and weight

Context	Sherds	Grams	Date range	Sh/wt	Drawing No	Join	Area
2001	2	5	L1-2C	2.5			
2002	10	105	L3C	10.5		2026	
2004	6	180	4C	30			W Brief
2005	22	152	ML2	7	P13		
2010	130	2062	ML3C	16	P2;P5;P8;P12		
2012	2	2	RO	1			
2017	180	2836	L3-4C	16	P9		
2018	36	791	EM3	22	P14	2020	
2019	4	55	L2-M3	14			
2020	33	748	L2-E3	23		2018	
2026	26	380	4C	15		2002	
2027	1	2	2-3C	2			
2030	3	66	L2-3/PR	3			
2031	4	12	L2-3C	3			
2033	2	10	2C+	5			
2034	3	14	2-3C	5			
2041	11	352	L3	32			
2047	58	493	4C	8.5			
2048	25	328	4C	13			
2049	9	54	3C+	6			
2053	32	130	M3+	4			
2054	11	120	M2-3C	11			
2055	124	698	L3-4C	6			
2061	1	37	3C	37			
2063	11	44	3C+	4			
2064	26	153	L3+	6			
2066	8	45	3C+	4.5			
2070	12	121	3C+	10			
2076	20	275	3C/POSTRO	13.8			
2078	3	35	2C	12			
2079	2	13	3C+	6.5			
2080	9	97	M2-E3	11	P10		
2082	80	1386	4C	17			
2083	8	36	L3-4	4.5			
2085	7	51	3C	7			
2086	1	28	M2-E3	28			
2088	1	3	3C+	3			
2089	2	6	L2-E3	3			
2090	2	33	M2-3C	16.5			
2091	2	85	M2-3C	42.5			
2096	15	67	L2-E3	4			
2097	2	13	M2-E3	6.5			
2108	5	16	M2-3C	3			
2115	1	1	M2-3C	1			
2118	1	29	L2-3C	29			
2119	1	4	M2-3C	4			
2120	1	100	RO	100			
2121	9	149	3C	16.5	D7		
2127	1	18	M2-E3	18			
2128	11	262	3C	24			

2143	1	1	RO	1
2144	2	4	2C+	2
	979	12707	TOTAL	13

Condition (see Table 4, above)

At least 10 contexts have examples of pottery burnt over the broken edge, many of which also have abraded or very abraded wares. This is perhaps not surprising, as most of this pottery has been deposited in ditch fills suggesting a controlled method of disposing of rubbish, some of which was the result of destruction. The bulk of the assemblage has a low sherd/weight ratio, which might be expected with rubbish disposal. However, Table 6, above shows that here are notable exceptions. There are few sherd joins from this area, **2002** and **2026; 2018** and **2020**.

Discussion (see Tables 5 and 6, below)

The composition of the assemblage from West dyke is very similar to that from Trench 3, but with greater quantities. Nene Valley products form the bulk of the material, but there is a noticeable rise in the amount of Nene Valley colour-coated ware (NVCC) and local coarse grey ware (GREY). This is largely a reflection of the higher amount of later Roman pottery from this area.

Table 5: The Roman fabrics for West dyke 3 by sherd count and weight

Fabric	Code	Sherds	Grams
Cream ware	CR	1	9
Dressel 20	DR20	5	336
Fine micaceous grey ware	FMIC	1	6
Fine grey ware	GFIN	16	174
Grey ware	GREY	58	511
Fairly fine grey ware	GRFF	14	200
Mancetter Hartshill mortaria	MOMH	1	223
Nene Valley mortaria	MONV	4	120
Medieval pottery?	MPOT?	1	6
Nene Valley colour-coat	NVCC	142	1371
Nene Valley colour-coat?	NVCC?	1	6
Nene Valley cream ware	NVCR	9	73
Nene Valley cream ware grey wash	NVCRG?	1	51
Nene Valley grey colour-coat	NVGCC	6	56
Nene Valley grey ware	NVGW	368	3661
Nene Valley grey ware coarse variant	NVGWC	13	123
Nene Valley coarser grey	NVGY	9	64
Oxidised ware	OX	2	13
Light coloured oxidised ware	OXL	4	12
Micaceous oxidised ware	OXMIC	2	5
Oxfordshire colour-coat	OXRC	1	5
Parchment ware	PARC	4	37
Parchment ware?	PARC?	2	16
Parisian-type ware	PART	1	4
Post medieval pottery	PMED	2	8
Red and white slipped ware	RWS	1	3
Central Gaulish samian	SAMCG	4	48
South Lincs shell-tempered	SLSH	303	5528

South Midlands shell-tempered?	SMSH?	2	33
Vesicular ware	VESIC	1	5
	TOTAL	979	12707

Imported wares are scarce and consist of the ubiquitous Dressel 20 amphorae and a few sherds of Central Gaulish samian. Nevertheless, the relatively high amount of Nene Valley colour-coated and other fine wares, including a sherd of Oxfordshire colour-coated ware (OXRC), suggests a site of moderate to high status. South Lincolnshire shell-tempered wares again provide the bulk of the cooking wares.

Table 6: The Roman forms for West dyke 3 by sherd count and weight

Form	Code	Sherds	Grams
Undiagnostic		69	257
Samian bowl Dr 31	31	2	44
Amphora	A	5	336
Open forms	OPEN	3	45
Bowl	B	16	646
Bowl or dish	BD	41	436
Bowl as Dr31	B31	2	19
Bowl as Dr36	B36	14	266
Bowl as Dr38	B38?	1	5
Curve rim bowl	BCUR	1	24
Bead and flanged bowl	BFB	8	90
Flanged bowl	BFL	4	41
Lid seated bowl	BLS	1	20
Triangular rim bowl	BTR	6	75
Wide mouth bowl	BWM	6	129
Wide mouth bowl?	BWM?	6	123
Dish	D	1	3
Groove rim dish	DFL	2	46
Groove rim dish	DGR	1	28
Plain rim dish	DPR	11	300
Plain rim dish straight sided	DPRS	1	21
Closed forms	CLSD	362	2711
Flagon	F	3	22
Flagon?	F?	5	55
Flask	FS	1	9
Flask?	FS?	1	43
Beaker	BK	51	275
Curve rim beaker	BKCR	3	47
Everted rim beaker	BKEV	3	4
Folded beaker	BKFO	21	56
Scale decorated folded beaker	BKFOS	2	12
Curve rim scale decorated folded beaker	BKFOSC	1	12
Hunt beaker	BKHUN	3	18
Jar or beaker	JBK	34	181
Curve rim jar or beaker	JBKCR	10	88
Cup?	C?	1	1
Cooking pot	CP	1	7
Cooking pot?	CP?	1	5
Jar	J	79	1537
Bifurcated rim jar	JBIF	1	15

Curve rim jar	JCUR	30	420
Everted rim jar	JEV	1	9
Lid seated jar	JLS	1	18
Narrow neck jar	JNN	1	44
Roll rim jar	JROL	9	64
Storage jar	JS	18	814
Wide mouth jar	JWM	13	192
Wide mouth jar?	JWM?	1	6
Jar or bowl	JB	36	747
Curve rim jar or bowl	JBCUR	14	162
Large jar or bowl	JBL	63	1826
Castor box lid	LBX	3	10
Mortaria	M	3	110
Hammer head mortaria	MHH	1	223
Wall sided mortaria	MWS	1	10
	TOTAL	979	12707

In common with the fabrics (Table 5, above) the form assemblage from West dyke has the same basic composition as that from Trench 3, but with greater quantities. The presence of certain forms reflect the later bias of this assemblage, including 4th century bead and flanged bowls, and plain-rimmed dishes and later Roman scale decorated beakers, together with an increase in wide-mouth bowls and jars.

Table 7 Illustrations for West dyke by sherd count and weight

Illustration	Order	Context	Fabric	Form	Dec	Dwg no	Sherds	Grams
1		2121	GFIN	BKCR		D7	1	43
2		2010	NVCC	B36	PDL	D12	1	22
5		2010	NVGW	JBKCR		D10	1	25
8		2010	NVGW	B31		D11	1	41
9		2017	NVGW	B	GRAF	D14	8	353
10		2082	NVGW	DFL		D9	2	46
12		2010	SLSH	JCUR		D13	1	51
13		2005	SLSH	JROL		D5	6	11
14		2018	MOMH	MHH		D6	1	223

Nine vessels from the West dyke assemblage have been selected for drawing, almost all are unusual types or fabrics, or emphasize the dating of the group. Illustration 1 is a new beaker type, not seen before in Lincolnshire assemblages; illustration 2 is a fine example of a bowl copying samian form Dr36 but the addition of painted diagonal lines on the rim; Illustration 5 is again a unique beaker form in Nene Valley Grey ware; also in this fabric are Illustrations 8-10: an example of samian form B31, an unusually large bowl base with a burnished and finely grooved lower wall, and a neat flanged dish. There are two examples of Bourne jars in shell-tempered ware (Illustrations 12-13), and a fine example of a hammerhead mortarium from the Mancetter Hartshill kilns (Illustration 14).

East Dyke

This area produced the smallest assemblage of stratified Roman pottery from the site, and the main concentration lies within sections 25, 26, 29 and 35. Contexts **2124, 2134, 2139, 2149,** and **2222** produced the largest amounts.

Dating (see Table 8, below)

The dating for this area mirrors that for the West dyke, but with reduced quantities. Although there are 13 contexts with pottery dating from the mid to late 2nd to the 3rd century the group only comprises 58 sherds. Pottery of 3rd century date came from 8 contexts with a total of 75 sherds, whilst that dating from the later 3rd to the 4th century accounts for 113 sherds from 8 contexts.

Table 8: The date range for East dyke by sherd count and weight

Context	Sherds	Grams	Date range	Sh/wt	Drawing No	Join Area
2124	19	383	L3-4	20		
2134	24	239	L3-4C	12		
2135	14	188	4C	13		
2138	7	37	M2-E3	5		
2139	34	218	L3-4C	6		
2145	2	12	M2/E3	6		
2146	16	265	2C+	17		
2147	6	100	2-3C	17		
2148	2	6	M2-3C	3		
2149	23	386	EM3	17		
2151	9	40	3C	4		
2160	3	109	RO	36		
2181	1	11	M2-3C	11	D8	
2187	8	96	3C+	12		
2189	2	29	3C	14.5		
2193	8	27	3C+	3		
2194	9	52	3C+	6		
2196	5	22	M2-3C	4		
2199	13	204	3C	16		
2201	3	44	3C	15		
2202	10	350	L2-3C	35		
2203	2	95	L2-3C	47.5		
2204	12	102	L3-4	8.5		
2205	1	165	M2-3C	165		
2207	2	30	2-3C	15		
2211	3	33	M3-4C	11		
2216	2	27	L2-3C	13.5		
2222	20	112	L3-4?	6		
2241	2	14	L2-3C	7		E Dyke?
3065	1	80	L3-4	80		E Dyke?
263	3476	TOTAL	13			

Condition (see Table 8, above)

There is a moderate amount of abrasion present on the pottery. Burning is mainly due to use as cooking vessels, but there are at least four examples of burning over the broken edge indicating destruction.

On the whole the sherd/weight ratio is of the moderate to higher range. Low ratios appear mainly in groups of 3rd century date. There are no sherd joins

Discussion (see Tables 9 and 10, below)

Products of the Nene Valley industries are again supplying the bulk of the ceramic assemblage, with Nene Valley Grey wares being the most common. However, there is an increasing amount of Nene Valley colour-coated ware. Although shell-tempered continue to be the main type of cooking ware, there is an increase in coarse grey ware (GREY). These traits were noted in the assemblage as West dyke.

Table 9: The Roman fabrics for East dyke 3 by sherd count and weight

Fabric	Code	Sherds	Grams
Fine grey ware	GFIN	19	69
Grey ware	GREY	23	325
Fairly fine grey ware	GRFF	2	19
Nene Valley mortaria	MONV	1	4
Nene Valley colour-coat	NVCC	33	304
Nene Valley grey colour-coat	NVGCC	6	45
Nene Valley grey ware	NVGW	83	1244
Nene Valley grey ware?	NVGW?	2	5
Nene Valley coarser grey	NVGY	1	165
Central Gaulish samian	SAMCG	2	12
Shell-tempered ware	SHEL	1	7
South Lincs shell-tempered	SLSH	90	1277
	TOTAL	263	3476

The range of forms from East dyke corresponds well with Trench 3, above, but with a lack of the late Roman bead and flanged bowl noted in the assemblage from West dyke. Large jar or bowl forms and storage jars seem to be more common in the East dyke assemblage. A single vessel has been selected for drawing, a grey ware plain-rimmed dish, but with an unusual decoration of two grooves on the body wall (Illustration 11).

Table 10: The Roman forms for East dyke 3 by sherd count and weight

Form	Code	Sherds	Grams
Undiagnostic		56	155
Samian cup Dr33	33	1	7
Samian bowl Curle 11	CU11	1	5
Open forms	OPEN	1	13
Bowl	B	1	80
Bowl or dish	BD	5	68
Bowl as Dr31	B31	1	42
Bowl as Dr36	B36	8	127
Flanged bowl	BFL	1	18
Triangular rim bowl	BTR	1	15
Wide mouth bowl	BWM	3	21
Groove rim dish	DGR	1	20
Plain rim dish	DPR	1	11
Closed forms	CLSD	64	477
Flagon	F	1	4
Beaker	BK	12	33
Everted rim beaker	BKEV	1	3
Folded beaker	BKFO	2	12
Jar or beaker	JBK	4	13
Jar	J	48	984
Jar?	J?	5	13
Curve rim jar	JCUR	11	155
Narrow neck jar	JNN	1	86
Storage jar	JS	6	514
Undercut rim jar	JUR	1	18
Wide mouth jar	JWM	2	18
Jar or bowl	JB	10	139
Curve rim jar or bowl	JBCUR	1	10
Everted rim jar or bowl	JBEV	1	9
Large jar or bowl	JBL	10	393
Castor box lid	BX	1	9
Mortaria	M	1	4
	TOTAL	263	3476

Other Roman pottery

This group consists of unstratified pottery recovered during machining, nevertheless it is clearly of the same date and composition of the previous assemblages.

Discussion (see Tables 11-13, below)

As most of the pottery recovered from these groups consists of one or two sherds the dating is restricted. However there is sufficient diagnostic material to give broad date ranges. There is one instance of later Roman wares (**P13**), and three of 3rd century date (**P2** and **P12**). The remainder being of mid to late 2nd to at least early 3rd century date.

Despite the small size of this group, it is again obvious that Nene Valley products are most common. South Lincolnshire shell-tempered ware is again the most common type of cooking ware. This group also includes a single sherd of imported Central Gaulish samian ware.

All of the forms present here occur in the previous assemblages including less common types, a cornice-rimmed beaker and a mortarium.

Table 11: The date range for unstratified pottery from machining by sherd count and weight

Context	Sherds	Grams	Date range	Sh/wt	Drawing No	Join Area
P1	2	2	M2-E3	1		US/M
P2	1	21	M3+	21		US/M
P3	1	8	2-3C	8		US/M
P4	1	10	2-3C	10		US/M
P5	1	8	L2-3C	8		US/M
P7	1	20	M2-3C	20		US/M
P8	1	66	2-3C	66		US/M
P9	3	36	L2-E3	12		US/M
P10	1	10	2-3C	10		US/M
P11	1	10	ML2-E3	10		US/M
P12	4	24	3C	6		US/M
P13	7	141	L3-4C	20		US/M
P14	1	3	2-3C	3		US/M
P15	1	7	2-3C	7		US/M
P16	1	6	M2-E3	6		US/M
P17	2	4	M2-E3	2		US/M
P18	1	14	ML2C	14		US/M
	30	390	TOTAL	13		

Table 12: The Roman fabrics from machining by sherd count and weight

Fabric	Form	Sherds	Grams
Fine grey ware	GFIN	1	8
Grey ware	GREY	1	7
Nene Valley mortaria	MONV	1	21
Nene Valley colour-coat	NVCC	10	167
Nene Valley cream ware	NVCR	2	13
Nene Valley grey colour-NVGCC		1	2
coat			
Nene Valley grey ware	NVGW	9	58
Nene Valley coarser grey	SAMCG	1	14
South Lincs shell-tempered	SLSH	4	100
	TOTAL	30	390

Table 13: The Roman forms from machining by sherd count and weight

Form	Code	Sherds	Grams
Undiagnostic		1	1
Samian bowl rouletted	Dr3131R	1	14
Bowl or dish	BD	2	26
Bowl as Dr38	B38?	7	141
Curve rim bowl	BCUR	1	7
Flanged bowl	BFL	1	11
Closed forms	CLSD	6	37
Flagon	F?	2	13
Beaker	BK	2	3
Cornice rim beaker	BKCOR	1	10
Jar or beaker	JBK	1	1
Jar	J	1	10
Curve rim jar	JCUR	1	23
Everted rim jar	JEV	1	6
Large jar or bowl	JBL	1	66
Mortaria	M	1	21
	TOTAL	30	390

Summary

This site differs from other excavations in the Spalding area in that there is no Iron Age pottery (see below References). Indeed there is an absence of ceramic evidence for occupation before the 2nd century. It is likely that this area was uninhabitable before this date, and may have been drained during the later 1st to early 2nd century. Equally there is no evidence from this site for very late Roman occupation; the main period being from the mid to late 2nd, 3rd and early to mid 4th centuries.

The assemblage from the Weston Bypass is a valuable addition to the previous excavations in the environs of Spalding, in particular for the understanding of the various products of the Nene Valley Industries that form such a high proportion of the assemblage. This is perhaps not surprising, as the Fenlands are the main market for these wares. Both river and road transport were used to deliver the products.

Dating of the Roman pottery from Weston is complex and relies on the relative ratios of Nene Valley grey ware (NVGW) to other Nene Valley products, in particular Nene Valley colour-coated ware (NVCC) but also Nene Valley Grey (NVGY).

NVGY, a coarser grey ware lacking the white core of NVGW, is a precursor of NVGW and occurs in groups of later 1st to early to mid 2nd century groups; whereas NVGW occurs for the first time in the first quarter of the 2nd century with a *flourit* in the mid to late 2nd to the early 3rd century. NVCC, on the other hand occurs from the early to mid- and later 2nd century only as beaker forms, with the main period of production from the 3rd to the 4th century.

The dating of these wares has hitherto largely relied on the evidence from the kiln sites. However, there is an increasing body of stratified material that will help to elucidate this problem. The extraordinarily high proportion of Nene Valley wares from Weston Bypass and the stratigraphic sequences will be a valuable addition in this respect.

There is a clear definition between the cooking wares that consist of shell-tempered pottery (SLSH), and the main traded ware from the Nene Valley (NVGW) from the Weston assemblages. In all the areas, except in the latest groups, there is a dearth of the common grey wares (GREY), that are found in large quantities on most sites in Lincolnshire, and which generally provide the bulk of cooking or cooking-to-tablewares.

This enables some re-evaluation of the function of the Nene Valley Grey wares (NVGW) that has hitherto been described as oven-to-tableware. There is meagre evidence of burning on the rims or bases of vessels in NVGW that would indicate use as cooking pots, and the fine fabric is not a good thermal conductor being more suited for serving than as cooking ware. It seems more likely that this fine white fabric with a light to medium grey, and relatively thin, wash is more suited to use as serving dishes or tableware.

It is worth noting that there are few contemporary Romano-British colour-coated wares in this area during the mid to late 2nd century, other than imported samian or Central and East Gaulish colour-coated wares. A moderate production centre is known at South Carlton kilns near Lincoln, but none of these wares find their way to sites in south Lincolnshire. It may be that NVGW is the less prestigious equivalent of the imported finewares. This is borne out to some extent in that many of the forms in NVGW are similar to samian types, Dr31 and Dr36, for instance.

This has implications regarding the status of sites with an abundance of NVGW. It is clear that the assemblage from Weston Bypass is the debris from occupation of moderate to high status, given the small presence of imported amphorae and samian ware, together with a low amount of Nene Valley colour-coated ware. The reclassification of NVGW to tableware status, albeit of a lesser order, suggests that the occupants were of relatively high status.

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- | | |
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Appendix 4

Archive Report on the Post-Roman Pottery from Archaeological Investigations at Weston, Lincolnshire (WBP01, WBP 1 01, WBP 2 01, WBP 3 01 and WBP 4 01).

Jane Young
Lindsey Archaeological Services

Introduction

Three hundred and sixty-nine sherds of pottery representing about two hundred and seven vessels were recovered from the investigations. The material ranges in date from the Middle Saxon to the early modern period. The pottery was examined both visually and using a x20 magnification, then recorded on an Access database using locally and nationally agreed codenames.

Condition

The pottery recovered was in variable condition with most sherds showing some small degree of abrasion. A high proportion of the coarse ware vessels have soot residues, although on many vessels this continues across broken edges suggesting that at least some of the soot is post-depositional. Sherd size is on average medium to large (12 to 60 grams) and at least thirty vessels are represented by more than one sherd. Seven vessels have cross-joining sherds with other deposits, mainly within the same feature.

Overall Chronology and Source

A range of twenty-one different, identifiable pottery ware types were found on the site together with two unidentifiable vessels and three fragments of fired clay. The type and general date range for these fabrics are shown in Table 1. A limited range of vessel types was recovered, mainly examples of various types of jars and bowls.

Table 1: Pottery codenames and date range with total quantities by sherd and vessel count

codename	full name	earliest date	latest date	sherds	vessels
BOUA	Bourne-type Fabrics A, B and C	1150	1400	1	1
CREA	Creamware	1770	1830	1	1
EMHM	Early Medieval Handmade ware	1100	1250	9	9
EST	Early Stamford ware	870	1010	112	74
FIRE CLAY	fired clay	0	0	3	3
GRE	Glazed Red Earthenware	1500	1650	1	1
GRIM	Grimston ware	1200	1550	1	1
LFS	Lincolnshire Fine-shelled ware	970	1200	6	2
LKT	Lincoln kiln-type shelly ware	850	1000	40	30
LSH	Lincoln shelly ware	850	1000	48	31
LSX	Non-local late Saxon fabrics	870	1080	80	6
MAX	Northern Maxey-type ware	680	870	7	1
MISC	Unidentified types	400	1900	4	2
RMAX	Southern Maxey-type ware	650	950	3	2

SLSHCW	South Lincolnshire Shell-tempered	1170	1500	3	3
SLSO	South Lincolnshire Shell & Oolite	1000	1230	1	1
SLSQ	South Lincs Shell and Quartz	1200	1500	1	1
SNEOT	St Neots-type ware	870	1200	10	8
ST	Stamford Ware	970	1200	23	21
STANLY	Stanion/Lyveden ware	1150	1250	1	1
THETT	Thetford-type fabrics	1000	1150	11	5
TOY	Toynton Medieval Ware	1250	1450	2	2
TPW	Transfer printed ware	1770	1900	1	1

Almost all of the material dates to the Late Saxon or Saxo-Norman periods (see Table 2), although a small number of sherds are present that are of earlier and later date.

Table 2: Vessel counts by chronological period

ceramic period	wbp 01	wbp 1 01	wbp 2 01	wbp 3 01	wbp 4 01	Total vessels
Middle Saxon (7 th to mid 9 th)				3		3
Late Saxon (late 9 th to mid 11 th)	18		69	54		141
Saxo-Norman (late 9 th to 12 th)	19		1	10	7	37
Early medieval (12 th to early 13 th)	4			3	2	9
Early medieval to medieval (12 th to 15 th)	2	1				3
Medieval (13 th to 15 th)	2	3			1	6
Post-medieval (16 th to 18 th)		1				1
Early modern (18 th to 20 th)		2				2
Unknown	1		1	3		5
Total vessels	46	7	71	73	10	207

It can be seen in Table 2 that most of the Late Saxon vessels were recovered from sites WBP 2 and WBP 3. Middle Saxon sherds were found on site WBP 3 only, whilst post-conquest vessels came from every site except WBP 2. A suggested date for the deposition of each context is given in the site dating archive.

The Pottery

Almost all of the pottery recovered was made within Lincolnshire, with only a small number of vessels being imported from East Anglia and other neighbouring counties. Precise dating is hampered by the lack of long stratified ceramic sequences in the area and the fact that none of the work on the important Stamford Castle site is yet in print. More detailed work on stratified sequences both within Stamford itself and at other urban centres, shows that dates given for some Stamford ware types in Kilmurry's volume on Stamford ware (Kilmurry 1980), are now known to be inaccurate.

Middle Saxon Pottery

Only three middle Saxon sherds, all Maxey-type fabrics, were recovered from the archaeological interventions. Two of the vessels are in Southern Maxey-type ware (RMAX) possibly manufactured in Northamptonshire. This is the usual Maxey-type fabric to be found

south of the River Witham. The other vessel is in Northern Maxey-type ware (MAX) fabric U, from an as yet unidentified source in northern Lincolnshire.

Late Saxon Pottery (late 9th to early 11th)

A large group of at least one hundred and fifty-five vessels can be identified as belonging to the period between the late 9th and early 11th centuries. The majority of these vessels were made in the two large urban centres of Lincoln and Stamford where wheel-thrown pottery was produced from at least the late 9th century.

Sixty-one vessels are of Lincoln manufacture (LSH and LKT), all are shell-tempered and probably date to the 10th century. Most of these vessels are competently manufactured suggesting that they predate the late 10th century when potting standards at the Silver Street kiln in Lincoln deteriorated (Miles 1989). A rim from a shallow bowl or dish (context 2507) is the only diagnostic sherd and can be dated to between the early/mid and mid 10th century. Almost all the sherds recovered are from small or medium-sized jars with only five identifiable bowls present.

Seventy-four vessels are classified as Early Stamford ware (EST) in Fabrics A and D. Of these only two vessels are glazed, the rest are unglazed utilitarian jars and bowls predominately in Fabric A. Ten vessels have roller-stamping, six diamond shaped and four rectangular. These vessels have a long life and are known to have been in use from the late 9th to mid 11th centuries. None of the earliest Stamford ware fabrics (E, F and H) are present on the site suggesting that occupation does not start until after the early 10th century.

Six jars in greyware fabrics (LSX) are all from unknown sources. They are all thin-walled and well thrown, similar in manufacture to the Stamford ware jars. Four of the jars have a fabric similar to that of two of the Lincoln produced greywares (LSLS and SNLS), however the vessels do not fit into the known types and it is possible that they represent a different industry. A substantial part of a small jar was recovered from context 3060; this jar has a fabric consistent with a source in the Lincolnshire Wolds or East Anglia (Pers comm. A Vince). The sixth vessel is visually similar to Stamford ware but has a coarser fabric. Similar vessels were found at Flaxengate, Lincoln (Adams Gilmour 1988, 126) and it is probable that these fabrics are variants made within Stamford itself.

Saxo-Norman (late 9th to 12th)

Several pottery industries span the pre and post-conquest periods (e.g. St. Neots, Thetford and some of the Stamford ware fabrics). It is much more difficult to be precise about the dating of many of the vessels of these industries.

Twenty-one vessels in Stamford ware (Fabrics A, A/G, A/B and B) belong to the 11th and 12th centuries. The majority of these are unglazed jars, however at least eleven vessels are glazed jars or pitchers intended for use on the table. Only one vessel, a glazed collared pitcher in Fabric B is chronologically diagnostic. These pitchers appear to post-date the conquest and have probably died out by the mid-12th century when they are replaced by the jug form.

Eight vessels all jars are in shell-tempered St. Neots ware. All are wheel-thrown and have no decoration. Although there are no chronological features to help with dating, three of these vessels are securely stratified in 10th century deposits. Four of the five Thetford-type vessels

are likely to be of pre-conquest date, whilst the fifth, a large storage container or bowl is a Grimston-type and is probably post-conquest in date. Two vessels are in Lincoln shire Fine-shelled ware and these cannot be dated closer than the period between the late 10th and late 12th centuries.

Early Medieval and later pottery

A small early medieval to medieval assemblage was recovered from the site (18 vessels) together with a few post-medieval and early modern vessels of 16th to 19th century date. The early medieval vessels span the period between the late 11th and mid 13th century and include early medieval handmade-types as well as unspecific shell and oolitic-tempered vessels. The medieval pottery includes Bourne, Grimston and Stanion/Lyveden wares as well as undefined local types.

Summary and Recommendations

This is a small but important assemblage of post-Roman pottery. The ceramic material suggests that although there is evidence for occupation in the area over a long period of time the main peak of activity on this site is during the 10th and early 11th centuries. Precise dating is difficult as well dated sequences for Stamford, Thetford and St. Neots wares in the area do not exist. It is reasonable to expect a pattern of change of use from the shell-tempered Lincoln wares to the more local unglazed Stamford coarsewares sometime in the mid to late 10th century, although this cannot be proved.

Statements about the status or function of the site are difficult to make due to the limited size and mixed nature of the assemblage. Evidence for use is limited to soot residues on both jars and bowls and although these constitute a large proportion of the vessels found, not every vessel can be assumed to have been used as a cooking vessel. Many vessels may have just been used to warm liquid or already prepared food. The small number of glazed Stamford ware vessels are most likely to have been used for serving or for table use. The presence of a few large Thetford-type vessels provides evidence for the containment of liquids and these may have been traded for their contents rather than function. There is no ceramic evidence for industrial activity and this is perhaps significant given the prevalence of Stamford ware crucibles on 10th and 11th century industrial sites.

The assemblage should be kept for future study, especially as part of any characterisation of the fabrics for a regional type series.

Appendix 5

THE FIRED CLAY, BRIQUETAGE AND GLASS

by Rachael Hall, Tom Lane and Gary Taylor

Fired Clay by Gary Taylor

A total of 277 fragments of fired clay weighing 3984g were recovered from 48 separate contexts.

Provenance

The material was recovered from Roman channel fills (302, 307, 315, 2053, 2054, 2066, 2088, 2118, 2146, and 2147), ditch fills (303, 2005, 2017, 2018, 2020, 2128, 2135, 2139, 2149, 2151, and 2196), pit fills (2121, 2194) occupation spreads (304, 308=309, 310, 312, and 2082) and alluvial layers (314, 2506). Other artefacts were retrieved from late Saxon and medieval creek fills (2507, 2510, and 2515), ditch fills (1604, 1605, 1701, 3014, 3017, 3053, 3073 and 3074) and general finds retrieval (1700, 2010, 2070, 2085 and 3000).

Range

The range of material is detailed in the table.

Table 1: fired clay

Context	Description	No.	Wt (g)	Context Date
302	Fired clay	16	87	
303	Fired clay, wattle impression	4	15	
304	Fired clay	2	9	
307	Fired clay, some with surfaces	18	127	
308	Fired clay	6	52	
309	Fired clay	4	11	
310	Fired clay	2	21	
312	Fired clay	3	25	
314	Fired clay	3	56	
315	Fired clay	3	11	
1604	Fired clay	26	85	
1605	Fired clay, some very thick and brick-like, with adjoining surfaces	10	581	
1700	Fired clay	1	15	
1701	Fired clay	2	12	
2005	Fired clay	3	11	
2010	Fired clay, some surfaces	10	156	
2017	Fired clay, some surfaces	22	198	
2018	Fired clay, smooth surface	2	16	
2020	Fired clay, some surfaces	5	65	
2053	Fired clay	2	3	
2054	Fired clay	1	6	
2066	Fired clay	2	6	
2070	Fired clay	3	10	
2082	Fired clay	2	43	
2085	Fired clay	2	21	
2088	Fired clay	2	12	
2118	Fired clay	3	6	
2121	Fired clay	2	36	
2128	Fired clay, wattle impression	2	7	
2135	Fired clay	1	3	

Context	Description	No.	Wt (g)	Context Date
2139	Fired clay	4	8	
2146	Fired clay	13	28	
2147	Fired clay	3	1	
2149	Fired clay	4	12	
2151	Fired clay	5	5	
2194	Fired clay	6	8	
2196	Fired clay	3	3	
2199	Fired clay	1	4	
2506	Fired clay	4	63	
2507	Fired clay	4	128	
2510	Fired clay	2	51	
2515	Fired clay	2	40	
3000	Handmade brick	1	74	Post-medieval
3014	Fired clay, 2 surfaces at right angles – firebar?	1	20	
	Fired clay	1	7	
3017	Fired clay, some surfaces, some very thick	38	1488	
3053	Fired clay	1	12	
3073	Fired clay	3	28	
3074	Fired clay, some surfaces	17	298	

Condition

All the material is in good condition and presents no long-term storage problems. Archive storage of the collection is by material class.

Potential

The collection of fired clay is of limited local potential and significance. There are very few wattle impressions, suggesting that the majority of the fired clay is not from wattle and daub panels/walls. Some of the pieces are very thick and several of these are quite burnt of their surfaces. This may imply that these pieces are from baked clay floors

Briquetage by Tom Lane

Table 2: briquetage

Context	Description	No	Wt (g)	Context date
WBP 01				
302	Briquetage container body sherds.	2	16	
304	Briquetage. Misc sherds with salt colours	3	17	
310	Briquetage container body sherd. Sandy fabric with occ organic inclusions.	1	4	
WBP 1 01				
2026	Possible 'firebar'. End piece with sub-rectangular section 40 x 30mm x 40mm long (to break). Silty clay fabric with occ vegetation voids on external surface.	1	75	
WBP 3 01				
3014	Poss 'firebar' fragment. Two adjoining flat surfaces. Hard fired silty clay with occasional grog.	1	20	
3014	Small misc piece. Poss briquetage	1	8	

3074	Briquetage container body sherds.	1	4	
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The collection of briquetage is of small size strongly suggesting that saltmaking was not occurring on the site but was taking place nearby. The container sherds are typical of Romano-British examples in the Fenland (Lane and Morris 2001). The possible firebar is not dissimilar to the brick BK1 from the 2nd century AD saltern at Morton, in the Fenland 16km to the west (Ibid., 366).

The Glass By Rachael V. Hall

Introduction

Archaeological investigations undertaken during the construction of the Weston Bypass in 2001 identified a total of 39 fragments of glass. All the glass retrieved from the site comes from unstratified topsoil contexts (005) and (006), relating to the Watching Brief phase of investigations. A single fragment of probable Romano-British glass was identified from context (307) during trial trench excavations undertaken at the site.

The glass is listed below as Tables 3 and 4. Table 3 represents a summary of glass retrieved during the Watching Brief phase of works. Table 4 summarises glass identified during the trial trenching excavations undertaken at the site.

Table 3: glass from the watching brief

Context	Description	Frag. No.	Wt (g)	Date
005	Colourless, body fragments of bottle, 19 th -20 th century	2	1	19 th -20 th Century
	Colourless, window glass, 19 th -20 th century	1	1	
	Brown, body fragments of cylindrical bottle, 19-20 th century	2	2	
	Colourless, body fragment of cylindrical bottle with mould seam, 19 th -20 th century	1	7	
006	Dark green, body and base fragment of bottle, 19 th century	1	16	20th century
	Colourless, base fragment of bottle, 19 th -20 th century	1	2	
	Green, body fragment of cylindrical bottle with mould seam, 19 th -20 th century	1	6	
	Brown, body fragment of bottle, 19 th -20 th century	1	1	
	Colourless, body fragment of cylindrical bottle, 19 th -20 th century	1	6	
	Green, body fragment of bottle, 19 th -20 th century	1	2	
	Pale blue, body fragment of bottle, 18 th -19 th century	1	6	
	Brown, body fragment of bottle, 19 th -20 th century	1	6	
	Colourless, body fragment of bottle (square?) with mould seam, 20 th century	1	1	
	Colourless, body fragment of bottle, post-medieval	1	2	
	Dark green, body and base fragment of bottle-shallow push-up, considerable iridescence, post-medieval	1	26	
	Green, body fragment of cylindrical bottle, 20 th century	1	3	
	Colourless, body fragments of bottle glass (?), 20 th century	2	1	
	Green, body fragment of cylindrical bottle	1	6	
	Dark green, body fragment of cylindrical bottle, 19 th century	1	12	
	Colourless, body fragment of bottle (square?), 19 th century	1	10	
	Colourless, moulded rounded rim (jar), 20 th century	2	2	
	Colourless, moulded-ribbed-headlamp (?), 20 th century	1	6	
	Pale blue, base of square bottle-moulded with punt mark obscured by breakage, 20 th century	1	14	
	006	Greenish-yellow, body fragments of bottle, post-medieval	2	
Colourless, fragment of bottle glass with moulded stippled decoration		1	1	
Green, base of moulded cylindrical bottle, 20 th century		1	14	

Context	Description	Frag. No.	Wt (g)	Date
	Colourless, fragment of bottle glass (?), post-medieval	1	5	
	Colourless, fragment of bottle-frosted, 19 th -20 th century	2	2	
	Colourless, window glass-iridescence, post-medieval	1	>1	
	Colourless, fragment of bottle-frosted, 18 th -19 th century	1	3	
	Colourless, fragment of cylindrical bottle, 20 th century	1	2	
	Colourless, fragment of cylindrical bottle with mould seam, 19 th century	1	6	

The glass retrieved during the Watching Brief phase of investigations at Weston is very fragmented, with many of the fragments showing plough damage. The majority of the sherds are too small to further elucidate their form other than that of bottle or window glass. The assemblage is almost entirely represented by fragments dating to the 19th and 20th century, with only a few sherds of an 18th century date.

Table 4: glass from the evaluation

Context	Description	Frag. No.	Wt (g)	Date
307	Colourless, vessel fragment with inclusion of many small air bubbles, 3rd-4th century	1	>1	Later 2nd - 4th Century AD

A single small fragment of vessel glass was identified during trial trench excavations at Weston. The fragment was retrieved from an alluvial fill of channel [323] and is likely to represent a sherd of vessel glass dating to the later Romano-British period.

Potential

The glass assemblage from Weston offers little potential for further analysis with almost all the fragments coming from unstratified topsoil contexts (005) and (006) and only a very small sherd of probable Romano-British glass from channel fill context (307).

The post-medieval glass retrieved from contexts (005) and (006) is not untypical to that expected from a worked plough soil.

Documentation

Details of archaeological sites and discoveries in the area are maintained in the Lincolnshire County Council Sites and Monuments Record.

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Appendix 6

Archaeological Investigation along the Route of the Weston Bypass (WBP 01)

The Animal Bone

By Jennifer Kitch

Introduction

A total of 955 (17103g) re-fitted fragments of animal bone were recovered by hand during the scheme of archaeological works undertaken along the route of the Weston Bypass, Lincolnshire. A further 781 (1143g) fragments of bone were recovered from sieved environmental samples.

The animal remains were recovered from a number of different contexts, predominantly ditches and creek fills, with a number of remains found within pits and layers/spreads. The areas of occupation identified are of two spatially and chronologically distinct sites, because of this clear distinction the assemblage shall be discussed by phase rather than by area, for the purpose of this report.

Methodology

Identification of the bone was undertaken with access to a reference collection and published guides. All animal remains were counted and weighed, and where possible identified to species, element, side and zone (Serjeantson 1996). Also fusion data, butchery marks (Binford 1981), gnawing, burning and pathological changes were noted when present. Ribs and vertebrae were only recorded to species when they were substantially complete and could accurately be identified. Undiagnostic bones were recorded as micro (rodent size), small (rabbit size), medium (sheep/pig size) or large (cattle/horse size). The separation of sheep and goat bones was done using the criteria of Boessneck (1969) and Prummel and Frisch (1986), in addition to the use of the reference material. Where distinctions could not be made, the bone was recorded as sheep/goat.

The condition of the bone was graded using the criteria stipulated by Lyman (1996), Grade 0 being the best preserved bone and Grade 5 indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable.

The quantification of species was carried out using the total fragment count, in which the total number of fragments of bone and teeth was calculated for each taxon. Where fresh breaks were noted, fragments were refitted and counted as one.

Tooth eruption and wear stages were measured using a combination of Halstead (1985), Grant (1982) and Levine (1982), and fusion data was analysed according to Silver (1969). Measurements of adult (fully fused) bones were taken according to the methods of von den Driesch (1976), with asterisked (*) measurements indicating bones that were reconstructed or had slight abrasion of the surface.

Results

Condition

As can be seen from tables 1 and 2 below, the assemblage contains material ranging from condition grade 1 to grade 5 of the Lyman (1996) criteria. The majority of the assemblage occurs within grade 3, which is generalised to a moderate overall condition. There is a

slight decline in the condition of the remains recovered from the sieved assemblage, this is possibly due to the smaller fragments being subject to further abrasion and travelling.

Table 1, Condition of Hand Collected Assemblage, by Phase

Condition	Phase 1 Pre-Roman	Phase 2B Early Roman	Phase 2C Late Roman	Phase 4A Late Saxon	Phase 4B Saxo-Norman	Phase 5A Early Medieval	Phase 6 Post-Medieval & Modern	Unphased	Total
1			1%						0%
2	100%	35%	16%	43%	36%	18%	17%	39%	30%
3		53%	51%	56%	53%	82%	64%	56%	54%
4		12%	32%	1%	10%		17%		15%
5					1%			5%	1%
N=	1	211	311	97	199	39	6	91	955

Table 2, Condition of Sieved Collected Assemblage, by Phase

Condition	Phase 2B Early Roman	Phase 2C Late Roman	Phase 4A Late Saxon	Phase 4B Saxo-Norman	Phase 5A Early Medieval	Phase 5B Mid Medieval	Unphased	Total
1								
2	4%	2%	17%	6%	4%			5%
3	72%	54%	83%	76%	41%	10%	88%	67%
4	24%	44%		18%	55%	90%	12%	28%
5								
N=	310	171	106	109	56	21	8	781

Butchery

A total of 35 fragments of animal bone displayed evidence of butchery. The identified cut marks appear consistent with disarticulation, jointing and meat removal activities.

Bone/ Horn working

A single cattle horncore recovered from unphased creek [3001] displayed cut marks that could be considered consistent with horn removal for working purposes.

Recovered from ditch [2007] within phase 2B, was a spindle whorl shaped from a large mammal femur or humerus proximal epiphysis with a hole drilled through the centre. A partially worked Cetacean (whale) vertebra was recovered from phase 4B creek [2502]. The broken unfused vertebral disc was drilled through, but no additional modification was identified.

Burning

A total of 108 fragments of burnt bone were recovered from the assemblage. The majority of the remains (72%) were recovered from the mid and late Roman Phases,

predominantly from ditch and channel fills. These burnt remains possibly represent hearth sweeping deposits.

Gnawing

A total of 37 fragments displayed evidence of carnivore gnawing. These remains were predominantly (32%) recovered from phase 4B creek [2502]. The presence of the gnawing within the assemblage suggests the remains were left open to scavengers as part or/after the deposition process.

Pathology

Two fragments of bone displayed evidence of pathology. An unfused pig thoracic vertebra recovered from phase 4A ditch [3046] within the sieved assemblage, displayed a misaligned spinous process with a remodelled bone callous on the shaft, suggesting a break in early life.

A large mammal sized lumbar vertebra recovered from the phase 5A ditch [3078] showed evidence of pitting and polishing on the caudal centrum surface, possible evidence of degeneration of the vertebral disc. This could potentially be due to age or activity based pressures such as traction.

Species Representation

Table 3 and 4 below summarise the identified taxa for the hand collected and the sieved assemblages by the phases of activity at the Weston Bypass. The main phases of activity identified by the abundance of animal bone are predominantly within Phases 2B, 2C, 4A and 4B. Sheep/goat remains are the most abundant species identified within the assemblage, 7 fragments were positively identified as sheep, followed by cattle, pig and *equid*. Isolated fragments of cetacean, dog, domestic fowl, goose, mallard, wader bird and crane were also recovered from the assemblage. The sieved assemblage yielded a further small assemblage of micro species, such as fish, frog/toad and rodent remains, these remains are reported separately, see appendix *.

The minimum numbers of individuals (MNI) were calculated for the four main domestic species to remove any bias caused by the presence of partial or complete skeletons within the assemblage. The results are displayed within Table 5.

Table 5, Minimum Number of Individuals (MNI), by phase for the main domestic species

Taxon	Phase 1 Pre-Roman	Phase 2B Early Roman	Phase 2C Late Roman	Phase 4A Late Saxon	Phase 4B Saxo-Norman	Phase 5A Early Medieval	Phase 5B Mid Medieval	Phase 6 Post-Medieval & Modern
<i>Equid</i> (Horse Family)	0	1	1	0	1	1	0	0
Cattle	0	2	2	1	3	1	0	1
Sheep/Goat	0	5	6	2	5	1	0	1
Pig	0	1	1	1	1	1	0	0

As can be seen within table 5, sheep/goat remains the most abundance species within the main phases of activity, with smaller numbers of cattle and isolated examples of pig and *equid* (Horse Family). This suggests the both the Romano-British and the Anglo-Saxon sites were based on a mainly sheep/goat based economy with cattle and pig further supplementing the economy, with little change occurring within this time.

Equid

Equid remains are present within the main phases of the assemblage in small numbers or isolated fragments, suggesting a continual presence of the species on site. Long bone measurements from bones recovered from phase 2B ditch [2174] gave a withers height measurement of 1.32-1.41 hands high, consistent with pony sided animals, common for the period.

The tooth wear of two *equid* maxillae recovered from phase 5A ditch fill [3078] and undated ditch [3001], were from animals aged between 2.5 and 3.5 years old, relatively young individuals. A mandible recovered from 4B phase creek [2502] was from a male animal.

A single metapodial recovered from unphased creek [3001] had been chopped longitudinally. *Equids* would have been present on site as working animals, utilised for riding and traction. It would have not been uncommon for the animals to be processed for skins, bone working materials and meat when they were no longer useful.

Cattle

Cattle are the second most abundant species within the assemblage after sheep/goat. The skeletal elements of cattle represented within the assemblage suggest a high predominance of bones associated with butchery waste, especially within the assemblages for phases 2B and 4A. This may suggest that the meat bearing bones are being used and disposed of, off site.

The tooth wear scores from two mandibles recovered from phase 2B were from animals aged 1-8 Months and Young Adult. A further mandible from an adult animal was recovered from phase 4A. The epiphyseal fusion data from the assemblage suggests that skeletally mature individuals were present within most phases of activity. The aging data is too limited to provide formal age-at-death profiles, and therefore indications of husbandry practices will be extremely tentative. No evidence of neonatal remains has been identified and therefore breeding of cattle may have taken place off site. The presence of young remains within phase 2B may indicate small scale dairying practice as well as meat production. No evidence of old individuals has been identified.

Sheep/Goat

Sheep/Goat was the most abundant species identified within the assemblage, consistently within the two main periods of occupation. A total of 7 fragments were positively identified as sheep. Although no evidence of goat remains were identified within the assemblage, the presence of the goat cannot be ruled out due to number of indistinguishable elements between the two species. The skeletal element representation suggests that the entire carcass was present and utilised on site. Four infant/neonatal lamb bones were identified within the assemblage from phases 2B, 2C and 4B; suggesting sheep/goat breeding was taking place on or near site.

Tooth wear scores from mandibular teeth and the epiphyseal fusion data, suggest that animals of most ages were present within the assemblage, with a very slight predominance within the older age ranges, 3-8+ years, this pattern appears true for all of the phases of activity. This would suggest a mixed economy, where some animals were slaughtered young for meat or as surplus stock with some animal being retained to old age for breeding purposes and the production of wool.

Pig

Pig remains occurred within the assemblage in much smaller number than those of cattle or sheep/goat. The minimum number of individuals suggests that pig remains were present within most phases although in small numbers. The tooth wear age score data and the epiphyseal fusion data indicates the remains are from juvenile and sub-adult remains. No very young remains or adult remains were identified within the assemblage. Pigs breed in relatively large litters and are often slaughtered young for consumption. As there are no very young or adult remains identified within the assemblage, it may be suggested that breeding of pigs was taking place offsite, possibly young animals being traded on to site for consumption.

Dog

A single dog skull was recovered during finds retrieval from phase 4A. No evidence of butchery, gnawing or pathology was noted on the remains.

Lagomorpha

A single metacarpal of a small hare or large rabbit was recovered from the unphased creek [3024].

Cetacean

Two fragments of Cetacean unfused vertebral disc, possibly the same piece although not adjoining, was recovered from phase 4B creek [2502]. The vertebra is from a large animal, possibly a baleen species. Both fragments displayed rough diagonal knife cuts around the external edge of the centrum disc, possibly a result of removing excess sinew. One of the fragments had a hole drilled through the disc, although the purpose of which is uncertain. It is possible that the disc had broken and was therefore no longer suitable for working.

Birds

A small number of bird species have been identified within the assemblage, occurring predominantly as isolated fragments. Domesticated species such as domestic fowl and goose are present within phases 4A and 5A. Several fragments identified as waterfowl species, such as mallard, crane and wader sp. (possibly godwit) were noted within phases 2B, 4A, 5A and unphased deposits. Domestic birds were often retained as a steady source of meat, eggs and feathers. However the presence of creeks and fenland would have provided an additional resource of wetland birds, which would have been occasionally exploited.

Discussion

The assemblage is split into two spatially and chronologically distinct areas; however, there is little variation in the makeup of the animal bone recovered from them. Sheep/goat is predominant throughout all phases of both the Romano-British and the

Anglo-Norman site, with a consistent pattern of cattle, pig and *equids* also within all phases of the assemblage, where sufficient numbers of animal bone occur.

Features from which the majority of the bone was recovered were ditches and creek fills. This would suggest that these features would possibly be more peripheral to any settlement activity than being at the core. The animal bone assemblage certainly does reflect this. The slight predominance of butchery waste may suggest that the animal bone represent discrete dumps of refuse away from the main settlement/utilisation areas.

The sites appear based upon sheep/goat based economies, with evidence of the animals being bred on or near site; some animals were butchered for meat at a prime meat age with some animals being retained to an old age probably for the purpose of breeding and wool production.

Limited aging data within the cattle assemblage, especially for the Romano British phases 2B and 2C, points to prime beef cattle being present within the assemblage. However the sample size is too small to be convincingly conclusive for the sole utilisation of cattle being for meat. There is no evidence for onsite breeding present within the assemblage.

Pig remains within the assemblage are relatively low in all phases of activity. As pigs are often slaughtered young, the preservation of the remains should always be taken into account as younger remains are often fragile and more susceptible to fragmentation and decay. However, the predominance of sheep/goat remains and the presence of neonatal/infant lamb bones indicate that preservational loss should be minimal. The lack of pig remains maybe due to the lack of woodland within the fenland environment, without pannage it would be difficult to maintain large numbers of pigs. Furthermore, it is suggested that increased pig consumption within the Anglo-Saxon period is specific to elite sites, which may suggest fenland settlements were of a lower status (Baker, 2005).

Equids, like pigs, were again only present in small numbers, utilised for traction and riding. The butchery of horse carcasses is not uncommon. The consumption of horseflesh was forbidden by the Christian church by the 8th century (Grant, 1988), this did not however stop the carcass being utilised or the meat being consumed in times of need or as dog food (Albarella and Davis 1994).

The small numbers of wetland birds suggests that the local fen environment was exploited for an additional supply of meat. There is a distinct lack of other wild species, which may suggest that apart from gathering of waterfowl and the possible exploitation of local fish stocks hunting attributes little to the diet economy of the site, as is perceivable by the assemblage size.

Cetacean remains have occurred within a number of fenland and costal assemblages in Lincolnshire as solitary fragments. It is extremely unlikely that these animals were actively hunted, but more likely exploited whilst stranded (Gardiner, 1997, Sabin, Bendry & Riddler 1999) with useful joints and pieces of bone taken away from the stranding sites. Within the Anglo-Saxon and medieval periods, cetacean remains were associated with high status sites and considered a "kings fish". However, exploitation of stranded animals or bone pieces for working would have occurred, especially within the costal and estuarine contexts. The Life of St Godfric from the 12th century, records that it was

custom for the peoples of Spalding to comb the intertidal sands for items cast up by the sea, including carrying away stranded porpoise (Gardiner, 1997).

Preliminary data from the Romano-British site at Spalding Wygate Park, similarly to the Weston Romano-British assemblage suggests a slight predominance of sheep/goat with cattle and small numbers of pigs (Kitch, In Prep).

Animal husbandry and exploitation noted within the Weston Bypass assemblage strongly reflects the patterns identified within the Saxon assemblages analysed within the fenland survey, Anglo-Saxon volume. The patterns indicate a sheep based economies with slight emphasis on meat production, but only small numbers of pigs attributing to the diet and utilisation of the local source of water birds and fish (Baker, 2005). The synthesis also recognised that there was little change in the husbandry practices and exploitation patterns from the Iron Age period to the post-medieval period; this potentially suggests that the fenland environment was ideally suited to this style of subsistence and therefore required little adjustment.

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Table 3, Number of Identified Taxa from the Hand-Collected Assemblage, by Phase

Taxon	Phase 1 Pre-Roman	Phase 2B Early Roman	Phase 2C Late Roman	Phase 4A Late Saxon	Phase 4B Saxo-Norman	Phase 5A Early Medieval	Phase 6 Post-Medieval & Modern	Unphased	Total
<i>Equid (Horse Family)</i>		3	1		3	1		2	10
Cattle		22	24	9	24	1	1	7	88
Sheep/Goat		29	41	13	35	2	2	3	125
Sheep			2	2	2			1	7
Pig		5	4	2	7	1		2	21
<i>Cetacean (Whale Family)</i>					2				2
Dog				1					1
Carnivore			1						1
<i>Lagomorph (Rabbit/Hare)</i>								1	1
Domestic Fowl				1		1			2
Goose				1					1
Goose Size						1			1
Mallard (<i>Anas platyrhynchos</i>)		1							1
Crane (<i>Gruidae Sp.</i>)								1	1
Wader Sp.					1	1			2
Bird		1		1	4				6
Amphibian								5	5
Large Mammal	1	36	73	28	54	3	1	54	250
Medium Mammal		61	89	25	50	3	2	15	245
Unidentified		53	76	14	17	25			185
Total	1	211	311	97	199	39	6	91	955

Table 4, Number of Identified Taxa from the Sieve Collected Assemblage, by Phase

Taxon	Phase 2B Early Roman	Phase 2C Late Roman	Phase 4A Late Saxon	Phase 4B Saxo-Norman	Phase 5A Early Medieval	Phase 5B Mid Medieval	Unphased	Total
<i>Equid (Horse Family)</i>		1						1
Cattle	5		4	2				11
Sheep/Goat	7	6	2	7	1			23
Pig	1		3	2				6
Fowl Size				1	1			2
Bird		2		3				5
Large Mammal		2	8	6	1		1	18
Medium Mammal	24	15	25	12		2		78
Small Mammal					1			1
Unidentified	273	145	64	76	52	19	7	636
Total	310	171	106	109	56	21	8	781

Appendix 7

Environmental Archaeology Report

Introduction

Excavations conducted by Archaeological Project Services along the proposed Weston bypass route, Lincolnshire, investigated evidence for Roman, late Saxon and early-mid medieval activity. During excavations a total of thirty-two environmental bulk-soil samples were taken, twenty two of these from a number of ditches and channel features located within sites WBP 01 and WBP 101, and ten from a number of ditches located within sites WBP 2, 3 and 4. The environmental samples were submitted to the Environmental Archaeology Consultancy for processing and analysis. The results of the analysis of these two groups are reported below in two sections.

Table 1: Weston Bypass, Lincolnshire – WBP 01 and WBP1 01. Environmental samples

Site Code	Area	Sample No.	Context No.	Sample volume in L.	Sample weight Kg.	Feature	Pot Date	Phase
WBP 01	Tr 1	1	108	11.5	13	Primary fill of ditch [109]		6
WBP 01	Tr 2	2	207	11	12.5	Primary fill of ditch [208]		Un-phased
WBP 01	Tr 3	3	303	10	11.25	Primary fill of ditch [305]	Early-mid 4 th C	2C
WBP 01	Tr 3	4	302	10	11.5	Secondary fill of palaeochannel [323]	3 rd C	2B
WBP 01	Tr 15	5	1503	10	11	Primary fill of ditch/gully [1504]	Late 11 th - mid 13 th C	5B
WBP 01	Tr 15	6	1501	10	12	Fill of ditch [1502]	Mid 11 th -mid 12 th C	5A
WBP 01	Tr 15	7	1511	14	15.5	Primary fill of ditch/gully [1512]	10 th -12 th C	5A
WBP 01	Tr 15	8	1505	10	11.25	Fill of ditch [1506]	Early-mid 12 th C	5A
WBP 01	Tr 15	9	1507	2.5	5	Primary fill of ditch/gully [1508]		Un-phased
WBP 01	Tr 3	10	307	30	29	Alluvial deposit in palaeochannel [323]	3 rd C	2C
WBP 01	Tr 3	11	315	30	36	Secondary fill of palaeochannel [323]	Mid-late 2 nd C	2B
WBP1 01	W. Dyke	1	2018	19	18.25	Primary fill of ditch [2022]	Early-mid 3 rd C	2B
WBP1 01	W. Dyke	2	2096	28	26.5	Discrete dump of fire waste in ditch [2025]	Late 2 nd -early 3 rd C	2C
WBP1 01	W. Dyke	3	2115	30	36.5	Dump of domestic waste in ditch [2114]	Mid 2 nd -3 rd C	2B
WBP1 01	W. Dyke	4	2120	6	7	Tertiary fill of ditch [2114]	Roman	2B
WBP1 01	E. Dyke	5	2129	10	14.75	Fill of ditch [2123] (not fully excavated)		2B
WBP1 01	E. Dyke	6	2139	20	21	Fill of ditch [2133] (silting event, possible creek deposit)	2 nd C	2C
WBP1 01	E. Dyke	7	2139	7	8	Fill of ditch [2133] (silting event, possible creek deposit)	2 nd C	2C
WBP1 01	E. Dyke	8	2151	9	10	Secondary fill of ditch [2150], includes domestic debris.	3 rd C	2B
WBP1 01	E. Dyke	9	2157	11	12.5	Fill of ditch [2133], possible domestic evidence		2C
WBP1 01	E. Dyke	10	2160	30	36	Waterlogged primary deposit in ditch [2133]	Roman	2C
WBP1 01	E. Dyke	11	2204	22	25	Silting event in ditch [2208]	Roman	2C

Methods

The soil samples were processed in the following manner. Sample volume and weight was measured prior to processing. The samples were washed in a 'Siraf' tank (Williams 1973) using a flotation sieve with a 0.5mm mesh and an internal wet-sieve of 1mm mesh for the residue. In instances where organic remains were present a sieve with a 0.3mm mesh was used. Both the residues and non-waterlogged flots were dried and the residues subsequently

re-floated to ensure the efficient recovery of charred material. The dry volume of the flots was measured (wet volumes for waterlogged flots) and the volume and weight of the residue recorded. A total of 341 litres of soil was processed in this way.

The flot of each sample was studied under a low power binocular microscope and the presence of environmental finds (i.e. snails, charcoal, carbonised seeds, bones etc) was noted with their abundance and species diversity recorded on the assessment sheet. The flot was then bagged and with the finds from the sorted residue constitute the material archive of the samples. Individual components of the samples have been identified and the results are summarised below by site in Tables 2, 3 and 4.

Results

The majority of the samples have been assigned to the Romano-British phases, but four are dated to the medieval period (phases 5A and 5B), one to the post-medieval period and two are unphased. The post-Roman deposits produced few finds, although a few fragments of copper alloy were recovered from three of the samples from Trench 15, as well as a small quantity of pottery, animal bone and shellfish. The remaining samples are divided between Phases 2B (2-3rd C AD) and 2C (late 3rd-4th C AD) (Table 1). The majority of these were relatively rich in finds, with pottery, fired earth, animal bone and marine shell fairly frequent. Occasional remains of bird (probably chicken), eggshell, and fish bones were also recorded. One or two flakes of hammerstone in two of the samples might suggest smithing somewhere on site but at these densities the hammerstone could have moved down through the soil from much more recent activity.

Archaeobotanical Remains

Methodology

The archaeobotanical remains were examined using a binocular microscope with up to 40x magnification. Aids in the identifications included modern reference material together with reference literature Cappers *et. al.* (2006), whilst cereal grain and chaff identification criteria follow Van der Veen (1992). Nomenclature and taxonomy follows Clapham *et. al.* (1962).

For ease of sorting, the dry flots were poured through a stack of sieves (6.7mm, 2mm and 1mm) and as many of these flots proved to be particularly rich in charred plant remains they were sub-sampled. This was achieved by using a riffle box, with proportions of the combined 1st and 2nd flots analysed and absolute counts taken, followed by the scanning of an equal portion of the flot for additional species. The absolute counts were multiplied accordingly to produce estimations of the individual counts for the charred (and mineralised) grain, chaff and weed seeds in the whole sample. The wet flots were also sub-sampled with proportions of the coarse and fine fractions (>2mm and <2mm respectively) assessed and preserved botanical remains were recorded on an abundance rating. Only the embryo ends of the charred cereals and grasses were scored and charred chaff fragments have all been individually counted. For the half fragments of identifiable legumes, the total was divided by two to give a minimum number of seeds. Any fragments of grain or seed, for all species, were recorded on an abundance rating and are not included in any quantitative analysis. The results of the analyses are presented in Tables 3, 4 and 5.

Ratios of the major crop constituents were also calculated, following Van der Veen (1992:82), in order to characterise the nature of the assemblages (Table 4). In the event three ratios were calculated.

phase	area	sample no.	context	sample vol. l.	feature	resi- due vol. (l)	pot #/g	fired earth/ daub (g)	brick/ tile (g)	mortar (g)	coal (g)	mag. (g)	hamm' scale	slag (g)	marine shell (g)	bone (g)	Other
WBP1 01																	
2B	W.D	3	2115	30	Fill of ditch [2114]	1100	1/1	2							5078	11	Some fired earth/daub reduced, some oxidised. sheep/goat, rodent, small bird, cockle, crustacean
2B	W.D	4	2120	6	Fill of ditch [2114]	90		5								1	Sheep/goat
2B	W.D	1	2018	19	Fill of ditch [2022]	800	19/32	42			<1	<1	1		1	21	Some fired earth/daub oxidised, reduced and with surfaces. Sheep/goat, cattle, vole, mouse, small bird, mussel
2C	W.D	2	2096	28	Fill of ditch [2025]	900	16/68	145			3	1			4	67	1x Fe nail shank?; most of fired earth/daub reduced, some oxidised, some tempered and some with surfaces. Sheep/goat, cattle, mouse, small bird, mussel, cockle, tellen, cf chicken eggshell
2B	E.D	5	2129	10	Fill of ditch [2123]	5									<1	1	Small bird, indet marine shell
2B	E.D	8	2151	9	Fill of ditch [2150]	10	5/5	3				<1			<1	2	1x Fe, 1g. house mouse, mussel
2C	E.D	6	2139	20	Fill of ditch [2133]	400	12/12	17				<1			88	12	Reduced and oxidised fired earth/daub. Sheep/goat, wood mouse, frog/toad, indet bird, periwinkle, mussel, cockle, cf chicken eggshell
2C	E.D	7	2139	7	Fill of ditch [2133]	210	1/<1	84				<1			1	4	Most of fired earth/daub oxidised. Mussel, oyster
2C	E.D	9	2157	11	Fill of ditch [2133]	300		1							240	9	Cattle, fish, oyster, mussel
2C	E.D	10	2160	30	Fill of ditch [2133]	200	2/<1	2				2			3	422	Most of fired earth/daub reduced. Horse, cockle, mussel, tellen, crustacea
2C	E.D	11	2204	22	Fill of ditch [2208]	900	8/1	23							1	6	Most of fired earth/daub reduced. Sheep/goat, mole, field vole, frog/toad, mussel, cockle

#/g = number/weight

Table 3: Weston Bypass, WBP 01 – WBP1 01. Environmental finds from the processed samples

Phase	Sam no.	Cont.	Sam vol. l.	Flot vol. (ml) dry	Flot vol (ml) wet	Char-coal #/<2*	Charr' d grain *	Chaff *	Water -log'd chaff*	Charr' d seed *	Water -log-d seed*	Miner -alised seed*	Insect *	Egg-shell wt g.	Fish wt g.	Snails */#	Comment
WBP01																	
2B	4	302	10	40		3/5	5	3		5	1				<1		Charred wheat, barley, oat, wheat & barley chaff, flax, pulse, vetch/vetchling, medick/trefoil, meadow/creeping/bulbous buttercup, buttercup type, knotgrass, black bindweed, dock, fat hen, goosefoot, orache, goosefoot family, ribwort plantain, field madder?, cleavers, bed straw?, field gromwell, mallow?, daisy family, brome?, grass family, club-rush, sedge, sedge family; uncharred water crowfoot & horned pondweed.
2B	11	315	30	55		5/5	5	5		5		2	2		1	1/1	Charred wheat, barley, oat, wheat & barley chaff, pulse, hazelnut, flax, meadow/creeping/bulbous buttercup, vetch/vetchling, wild radish, melilot/medick/trefoil, small leguminous seed, common chickweed, dock, knotgrass, carrot family, ribwort plantain, cleavers, oak-leaved/red goosefoot, goosefoots, orache, goosefoot family, corn cockle, henbane?, stinking mayweed, daisy family, brome, grass family, club-rush, sedge, sedge family; mineralised field gromwell.
2C	10	307	30	110		5/5	5	5		5		2			1	1/1	Charred wheat, barley, oat, wheat & barley chaff, pulse, vetch/vetchling, medick/trefoil, indet. legumes, small leguminous seed, gorse?, meadow/creeping/bulbous buttercup, buttercup type, dock, knotgrass, chickweed, ribwort plantain?, field madder?, carrot family, mallow?, oak-leaved/red goosefoot, goosefoots, orache, goosefoot family, cleavers, bedstraw, daisy family, crested dog's tail?, brome?, grass family, club-rush, sedge, mineralised field gromwell, spike-rush.
2C	3	303	10	3.5		1/3	3	2		3	1	1			<1		Charred wheat, barley, oat?, wheat & barley chaff, vetch/vetchling/pea, small leguminous seeds, knotgrass, dock, fat hen?, goosefoot family, cleavers, daisy family, brome?, cereal/grass, grass family, club-rush, sedge; mineralised sedge?; uncharred black bindweed, goosefoot family.
5A	6	1501	10	2		2/2	3				2				<1	3/2	Charred barley, vetch/vetchling, indet. legume, goosefoot, goosefoot family, cleavers, elder, grass family; uncharred goosefoot family, chickweed, stinging nettle, sow-thistle, cleavers, horned pondweed.
5A	7	1511	14	2		2/3	3			1	1			<1	<1	2/2	Charred wheat, barley, vetch/vetchling, indet. legume, cleavers, fat hen?, stinking mayweed; uncharred black bindweed, stinging nettle.
5A	8	1505	10	1.5		1/2	2			2	1			<1		2/2	Charred wheat, barley, small leguminous seed, indet. legume, dock, goosefoot, goosefoot family; uncharred dock, cleavers, sow-thistle, stinging nettle.
5B	5	1503	10	6		1/2	4			2		1	1	<1	<1	3/3	Charred wheat, barley, oat, indet. legume, small leguminous seed, dock?, goosefoot, goosefoot family, bedstraw?, plantain?, stinking mayweed?; uncharred birch, dock, knotgrass, chickweed, dead-nettle.
U/P	9	1507	2.5	1		0/1	1				1				<1	1/1	Charred indet. cereal; uncharred birch.
6	1	108	11.5	<1		1/1	1	1		1	2		1				Charred wheat, wheat chaff, orache, uncharred water crowfoot, horned pond weed.
U/P	2	207	11	<1		0/1					2						Uncharred water crowfoot.
WBP 101																	
2B	3	2115	30	3		2/1	2	1		3		1			1	2/3	Charred wheat, barley, wheat chaff, medick/trefoil, small leguminous seeds, oak-leaved/red goosefoot, goosefoots, orache, goosefoot family, chickweed, field madder?, carrot family?, stinking mayweed, crested dog's-tail, brome?, grass family, sedge; mineralised spike-rush.
2B	4	2120	6	1		1/2	2	1		3					<1		Charred wheat, oat?, wheat chaff, vetch/vetchling, medick/trefoil, dock, oak-leaved/red goosefoot, orache, goosefoot family, daisy family, crested dog's-tail, brome?, grass family.

Phase	Sam no.	Cont.	Sam vol. l.	Flot vol. (ml) dry	Flot vol. (ml) wet	Char-coal */<2*	Charr'd grain *	Chaff *	Water-log'd chaff*	Charr'd seed *	Water-log-d seed*	Miner-alised seed*	Insect *	Egg-shell wt g.	Fish wt g.	Snails */#	Comment
2B	1	2018	19	10		5/5	5	3		5					1		Charred wheat, wheat/barley, barley, oat, wheat chaff, flax, buttercup type?, chickweed, pulse, vetch/vetchling, melilot/medick/trefoil, small leguminous seeds, buttercup type, dock, knotgrass, orache, goosefoot family, ribwort plantain, great plantain, cleavers, bedstraw, carrot family, stinking mayweed, daisy family, brome?, club-rush, sedge, sedge family; mineralised field gromwell.
2C	2	2096	28	55		5/5	5	4		5	1	2		<1	2	2/2	Charred wheat, barley, wheat & barley chaff, flax?, indet. fruit stone, pulse, common chickweed?, vetch/vetchling, melilot/medick/trefoil, small leguminous seeds, dock, knotgrass, oak-leaved/red goosefoot, orache, goosefoot family, great plantain, plantain, field madder?, cleavers?, hedge-parsley?, thistle, daisy family, crested dog's-tail?, brome?, grass family, branched bur-reed, club-rush, sedge, sedge family; mineralised field gromwell & spike-rush; uncharred black bindweed.
2B	5	2129	10	10		2/3	1	1		2	5						Charred wheat, wheat & barley chaff, vetch/vetchling, medick/trefoil, daisy family, brome?, grass family, mineralised sedge?; uncharred meadow/creeping/bulbous buttercup, knotgrass, black bindweed, dock, oak-leaved/red goosefoot, goosefoots, shore orache?, orache, goosefoot family, common chickweed, henbane, stinging nettle, dead-nettle, red-rattle, sea mayweed, sow-thistle, thistle, daisy family, bramble, common/grey club-rush, sedge.
2B	8	2151	9	6		3/5	2	3		5	1						Charred wheat, barley, oat, wheat & barley chaff, pulse, vetch/vetchling, melilot/medick/trefoil, dock, knotgrass, black bindweed, common chickweed, orache, fat hen, goosefoot family, cleavers, great plantain, poppy, stinking mayweed, daisy family, field madder?, brome?, grass family, club-rush?, sedge; uncharred water crowfoot, red rattle, horned pondweed, pondweed?
2C	6	2139	20	12.5		2/5	5			5	1	1		<1	1	1/1	Charred wheat, barley, oat, wheat & barley, chaff, pea?, vetch/vetchling, medick/trefoil, cabbage/mustard type?, dock, knotgrass, chickweed, oak-leaved/red goosefoot, orache, goosefoot family, cleavers, stinking mayweed, knapweed, thistle, daisy family, brome?, grass family, spike-rush, club-rush, sedge, sedge family; mineralised field gromwell; uncharred birch, stinging nettle.
2C	7	2139	7	5		2/5	2	5		5	1				1		Charred wheat, barley, oat, wheat chaff, pulse, medick/trefoil, small leguminous seed, buttercup type, dock, orache, goosefoot family, chickweed, cleavers, stinking mayweed, mayweed?, brome?, grass family, spike-rush, club-rush, sedge; uncharred poppy, goosefoot family.
2C	9	2157	11	10		3/4	2	1		2	5						Charred wheat, wheat chaff, vetch/ vetchling, medick/trefoil, small leguminous seeds, dock, goosefoot family, bedstraw, grass family, club-rush; uncharred water crowfoot, buttercup type, chickweed, carrot family, knotgrass, goosefoot family, thistle, daisy family, club-rush, horned pondweed, pondweed, sedge.
2C	10	2160	30	75	35	5/5	4^	5^	2^	3^	5						Charred wheat, barley?, oat, wheat & barley chaff, vetch/vetchling, melilot/medick/trefoil, dock, goosefoot family, cleavers, bedstraw, hedge-parsley?, plantain, daisy family, brome?, grass family, club-rush, sedge family; uncharred wheat chaff, hazelnut, buttercup type, water crowfoot, nightshade?, knotgrass, dock, oak-leaved/red goosefoot, orache, goosefoot family, plantain, upright hedge-parsley?, carrot family, henbane?, dandelion?, thistle, brome?, horned pondweed, spike-rush?, club-rush.
2C	11	2204	22	50	10	3/5	4^	4^	1^	4^	5^						Charred wheat, barley?, oat, wheat & barley chaff, pulse, vetch/vetchling, medick/trefoil, cabbage/mustard type, dock, cleavers, bedstraw, brome?, grass family, club-rush; uncharred water crowfoot, goosefoot family, red rattle, stinging nettle, henbane?, thistle, horned pondweed, sedge.

*=abundance: 1=1-10, 2=11-50, 3=51-150, 4=151-250, 5=250+
 /<2=abundance/abundance
 # =species diversity: 0=0; 1=1-3; 2=4-10; 3=11-25; 4=26-50; 5=>50 species
 ^=estimated

Ratio 1 calculates the ratio of glume wheat chaff to glume wheat grains which in this instance are spelt and emmer wheat (*Triticum spelta* L. and *T. dicoccum* (Schübl.) Schrank. respectively) with the counts of the spikelet bases divided into two and combined with the absolute counts of the glume bases to calculate the overall number of glume bases). Ratio 2 calculates the ratio of free-threshing rachis internodes to free-threshing grains (in this instance barley only as remains of free-threshing wheat chaff were not identified in sufficient quantity to warrant the calculation), and Ratio 3 calculates the ratio of weed seeds to grain.

Summary of the evidence

A series of eleven samples were each taken from sites WBP 01 and WBP 101, which both produced evidence for Phase 2, mid-late Roman activity. In addition site WBP 01 also contained features assigned to Phases 5A, 5B and 6 which correspond to early/mid medieval and post-medieval activity. Two samples from features [208] and [1508] within site WBP 01 remain unphased (samples 2 and 9 respectively) and have been excluded from the analysis.

The majority of the botanical remains recovered from both sites are carbonised and are generally well preserved with fragile seeds and chaff components frequently recorded. The few flots containing preserved organic remains generally yielded high species diversity including remains of preserved cereal chaff, which further suggests instances of good preservation. The compositions of the botanical assemblages from both sites appear to be comparable in terms of the suites of species identified and frequency of particular cereals within the different Phases, including those from the later Phases within WBP 01 compared to those from sites WBP 201 and WBP 301.

There appears to be limited evidence for contamination with small quantities of uncharred seeds and root material noted in several flots, with species identified including: water crowfoot (*Ranunculus* Subgenus *Batrachium* (DC.) A. Gray.), chickweed/stitchwort (*Stellaria* spp.), goosefoot family (Chenopodiaceae), black bindweed (*Polygonum convolvulus* L.), knotgrass (*Polygonum* spp.), nettle (*Urtica* spp.), dead-nettle (*Lamium* spp.), sow-thistle (*Sonchus* sp.), scentless mayweed (*Tripleurospermum maritimum* L.), horned pondweed (*Zannichellia palustris* L.), pondweed (*Potamogeton* sp.) and birch (*Betula* spp.). These have been treated as intrusive material on this occasion and are not in any such quantity as to jeopardise the security of the archaeological remains, but the uncharred material from 2129, 2157, 2160 and 2204 on WBP101 are almost certainly contemporary with the Roman activity and reflect the vegetation in and around the sampled ditches.

WBP 01

Phases 2B and 2C (mid Roman 2nd-3rd C AD and late Roman 3rd-4th C AD)

A total of four samples from Trench 3 were taken from palaeochannel [323] and ditch [305]. The three sampled fills 302, 307 and 315 from channel [323] proved to be extremely rich in charred plant remains with each containing over one hundred charred items per litre (Table 4). Two deposits from channel [323] have been assigned to Phase 2B (deposits 302 and 315) whilst 307 also within channel [323] has been assigned to Phase 2C based on ceramic evidence. Deposit 307 has been identified as an alluvial deposit and is sealed by earlier Phase 2B deposits 302 and 315 and it is likely that this alluvial deposit is also Phase 2B rather than Phase 2C and has been considered as such here. The primary fill of ditch [305] has been identified as Phase 2C.

Indet. awns frags. (mineralised)*				*								
	Context	302	315	307	303	1501	1511	1505	1503	108	1507	207
	Sample No.	4	11	10	3	6	7	8	5	1	9	2
Wild Species												
<i>Ranunculus</i> Section <i>Ranunculus</i>	meadow/creeping/bulbous buttercup	5	12	4								
<i>Ranunculus</i> sp.	buttercup	1		10								
<i>Raphanus</i> sp.	wild radish type (fruit)		P									
<i>Agrostemma githago</i> L.	corn cockle		P									
<i>Stellaria media</i> (L.) Vill.	chickweed		12	12								
<i>Stellaria</i> sp.	chickweed/stitchwort			6								
<i>Chenopodium album</i> L.	fat hen	1			1							
<i>Chenopodium</i> cf. <i>album</i> L.	fat hen?						5					
C. Section <i>Pseudoblitum</i>	glaucous/red goosefoot		P	190								
<i>Chenopodium</i> spp.	goosefoots	2		22				2				
<i>Chenopodium</i> sp.	goosefoot					2			10			
<i>Atriplex</i> sp(p).	oraches	96	132	370						1		
Chenopodiaceae	goosefoot family	60	252	3	4	2		3	8			
cf. <i>Malva</i> sp.	mallow?	5		10								
<i>Melilotus/Medicago/Trifolium</i> spp.	melilot/medick/trefoil	44	844	765								
<i>Vicia/Lathyrus/Pisum</i> spp. (>4mm)	vetch/vetchling/pea	11	8	11.5	1.5							
<i>Vicia/lathyrus</i> spp. (2-4mm)	vetch/vetchling	52	158	138	4	3	1					
<i>Vicia/lathyrus</i> spp. (<2mm)	vetch/vetchling	66.5	58	126								
small indet. leguminous seeds		16		102	8		2	1	3			
Papilionaceae (Leguminosae) indet.	indet. legumes frags		**	**	**	*		*	*			
cf. <i>Ulex europa</i>	gorse?			4								
Umbeliferace	carrot family		P	34								
<i>Polygonum aviculare</i> agg.	knotgrass		12	90								
<i>Polygonum</i> cf. <i>aviculare</i> agg.	knotgrass?	41		2								
<i>Polygonum convolvulus</i> L.	black bindweed	1										
<i>Polygonum</i> sp(p).	knotgrasses				3							
<i>Rumex</i> sp(p).	dock	83	76	522	2			1				
cf. <i>Rumex</i> sp.	dock?								2			
<i>Lithospermum arvevse</i> L.	corn gromwell	4(m)	60	30								
cf. <i>Hyoscyamus niger</i> L.	henbane?		P									
<i>Plantago lanceolata</i> L.	ribwort plantain	8	P									
<i>Plantago</i> cf. <i>lanceolata</i> L.	ribwort plantain?			6								
<i>Plantago</i> sp.	plantain								1			
<i>Sheradia arvensis</i> L.	field madder	3		6								
<i>Galium aparine</i> L.	cleavers	69	84	75	2		1					
<i>Galium</i> cf. <i>aparine</i> L.	cleavers?			28								
<i>Galium</i> sp.	bedstraw			24								
cf. <i>Galium</i> sp.	bedstraw?	18							2			
<i>Anthemis cotula</i> L.	stinking mayweed		P			1	1					
cf. <i>Anthemis cotula</i> L.	stinking mayweed?								1			
Compositae	daisy family	8	24	38	1							

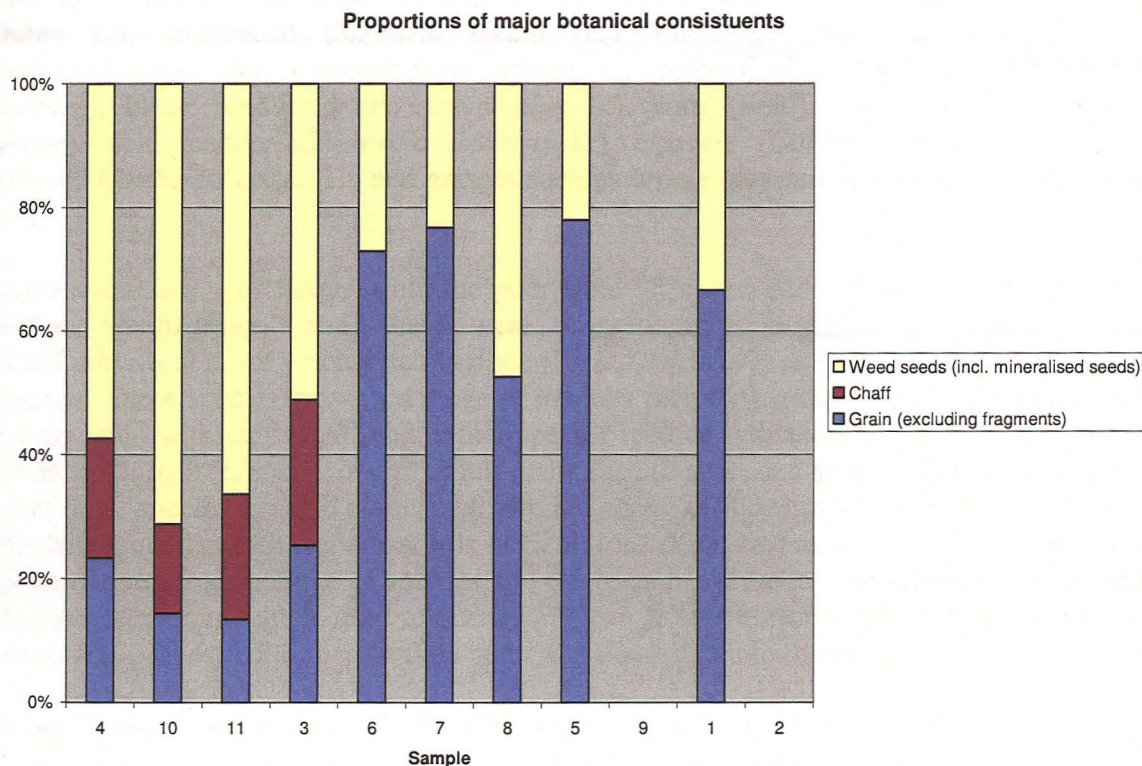
<i>Eleocharis</i> sp.	spike-rush			4 (m)								
	Context	302	315	307	303	1501	1511	1505	1503	108	1507	207
	Sample No.	4	11	10	3	6	7	8	5	1	9	2
<i>Scirpus</i> sp(p).	club-rush	3	24	28	3							
cf. <i>Scirpus</i> spp.	club-rush?	5										
<i>Carex</i> spp.	sedges	16		122								
<i>Carex</i> sp(p).	sedges		52	4(m)								
cf. <i>Carex</i> sp(p).	sedge?				1(1m)							
Cyperaceae	sedge family	9	12									
<i>Festuca/Lolium</i> spp.	fescue/rye-grass		12									
<i>Bromus</i> sp(p).	brome		72									
cf. <i>Bromus</i> sp(p).	brome?	13		70	2							
<i>Cerealial</i> /Gramineae	cereal/grass				4							
Gramineae indet.	grasses	16	76	90	13	1						
small indet. Gramineae		36	196	204								
Indet		125	148	494	8			2	3			
Indet. weed seed frags		****		*****	**							
Other												
<i>Linum usitatissimum</i> L.	cultivated flax		4									
<i>Linum</i> cf. <i>usitatissimum</i> L.	cultivated flax?	1										
<i>Corylus avellana</i> L.	hazelnut shell frags.		4	1								
<i>Sambucus nigra</i> L.	elder					1						
Large 'grass-sized' culm nodes & internode frags.*		+		+								
Total quantified charred items		1426.5	3512	5122.5	114.5	37	43	19	136	3	0	0
Grain (excluding fragments)		333	472	735	29	27	33	10	106	2	0	0
Chaff		275	708	739	27	0	0	0	0	0	0	0
Weed seeds (incl. mineralised seeds)		818.5	2332	3645.5	58.5	10	10	9	30	1	0	0
Barley grain		105	172	235	5	21	23	7	58	0	0	0
Wheat grain		189	118	360	13	0	2	3	16	1	0	0
Oat grains		11	60	33	2	0	0	0	7	0	0	0
Glume wheat grains		64	88	99	3	0	1	0	0	0	0	0
Glume wheat glume bases		220	696	726	23	0	0	0	0	0	0	0
Barley rachis internodes		10	16	17	2	0	0	0	0	0	0	0
Ratio 1: (glume wheat bases:glume wheat grains)		3.44	7.91	7.33	7.67	-	0.00	-	-	-	-	-
Ratio 2: (barley rachis:barley grain - ex. frags.)		0.10	0.09	0.07	0.40	0.00	0.00	0.00	0.00	-	-	-
Ratio 3 (weed:grain - ex. frags.)		2.46	4.94	4.96	2.02	0.37	0.30	0.90	0.28	0.50	-	-
Total quantified items per litre		142.65	117.07	170.75	11.45	3.70	3.07	1.90	13.60	0.26	0.00	0.00

*frequency *=1-10; **=11-50; ***=51-150; ****=151-250; *****=>250; P=present; m=mineralised; ^=estimated counts

The botanical assemblages from channel [323] are characterised by the dominance of weed seeds and chaff compared to cereal grains (Fig. 1). The ratios of weed seeds to cereal grains suggest that assemblages are likely to be derived from crop processing residues rather than cleaned grain (ranging between 2.46:1 and 4.96:1), although this must be tempered with the fact that the assemblages are abundant in fragmented grain and weeds seeds, which were not included in the calculations.

The cereal assemblages from channel [323] comprise of wheat, barley and oat in each of the flots (Fig. 2). Wheat is the dominant cultigen in deposits 302 and 307 whilst barley dominates deposit 315, and oat forms a consistent but minor component in each of the assemblages.

Fig. 1. Proportions of grain, chaff & weed seeds in the samples from WBP01 (samples 4, 10, 11 and 3 are Roman; 6, 7, 8, 5, 9, 1 and 2 are medieval, post-medieval or unphased)



The state of preservation of the wheat grains prevented positive identification to species in most instances but glume wheats have been cautiously identified including probable spelt wheat (*Triticum cf. spelta* L.) and emmer wheat (*Triticum cf. dicoccum* (Schrank.) Schübl.). In addition, small numbers of grains sharing similar morphological characteristics to bread wheat (*Triticum aestivum* sl.) have also been identified, the presence of which is also supported by the recovery of free-threshing wheat rachis' which appear to be that of a free-threshing hexaploid wheat such as bread wheat (*T. aestivum*). Other identifications include hulled barley and lateral (or 'twisted') barley grains indicative of six-rowed hulled barley (*Hordeum vulgare* L.). There is also potential evidence for two-rowed barley (*Hordeum distichon* L.) as well as a lax-eared variety based on the recovery of a small number of diagnostic rachis'. Oat is consistently present but it has not been possible to determine whether the remains are wild or cultivated varieties due to the absence of any accompanying characteristic chaff.

The chaff assemblages also include traces of awns and cereal/grass primary rachis nodes, but the assemblages are dominated by chaff of a glume wheat species with spelt and traces of possible emmer recorded. The rachis' of free-threshing hexaploid wheat are present in small numbers from deposits 307 and 315 but could not be identified further. The ratios of barley grains to rachis suggest the assemblages are derived from the later stages of processing barley, and the greater frequency of glume bases to glume wheat grains implies that these remains are probably fine sieve residues.

Other remains of economic value include a small number of flax seeds (*Linum usitatissimum* L.) and several fragments of hazelnut shell. The deposits from the channel are the only ones from Site WBP 01 to contain flax and hazel.

The weed assemblages from the channel deposits contain a wide range of species, many of which are commonly identified as arable weeds, most notably corn cockle (*Agrostemma githago* L.), chickweed (*Stellaria media* (L.) Vill.), goosefoots including fat hen (Chenopodiaceae and *Chenopodium album* L. respectively), knotgrass (*Polygonum aviculare*), black bindweed (*P. convolvulus* L.), corn (field) gromwell (*Lithospermum arvense*), field madder (*Sherardia arvensis* L.), cleavers (*Galium aparine* L.), stinking mayweed (*Anthemis cotula* L.) and grasses such as brome (*Bromus* spp.) and also oat (*Avena* spp.).

Legumes are also very frequent but the poor state of preservation of the remains prevented positive identification and they were consequently assigned to vetch/vetchling (*Vicia/Lathyrus* spp.) or vetch/vetchling/pea (*Vicia/Lathyrus/Pisum* spp.) based on the size of the seeds. These species grow in a range of habitats including grassy areas and some species are associated with cultivated land. Other species include indicators of damp or wet ground such as spike-rush (*Eleocharis* spp.), club-rush (*Scirpus* spp.) and sedges (*Carex* spp.). It may be that these species are also associated with the cereal residues, which would imply that the fields had some damp or wet areas. It is difficult to confirm this as the botanical assemblages may be derived from a range of sources and the remains of rushes and sedges could be from water, perhaps from a ditch, used to quench a fire or from material used for bedding, flooring or structural purposes which were then burnt and discarded into the channel.

The late Roman primary fill of ditch [305] (sample 3) has a relatively low density of charred plant remains (11.45 items per litre) but comparable cereal, chaff and weed seed assemblages to those from the mid Roman deposits within channel [323] (Fig. 1). Traces of possible spelt and emmer wheat, hulled barley and oat, as well as chaff of both a glume wheat species and barley are present in small quantities (Table 4). The suite of weed species is not particularly habitat specific and broadly denotes areas of waste or disturbed ground including cultivated ground and/or grassy habitats. The botanical assemblage is too small to determine if it derived directly from crop processing residues or domestic waste and there is little in the way of corresponding domestic evidence from the sample residue.

Phases 5A and 5B (early medieval 11th-12th C AD, mid-medieval 12th-13th C AD)

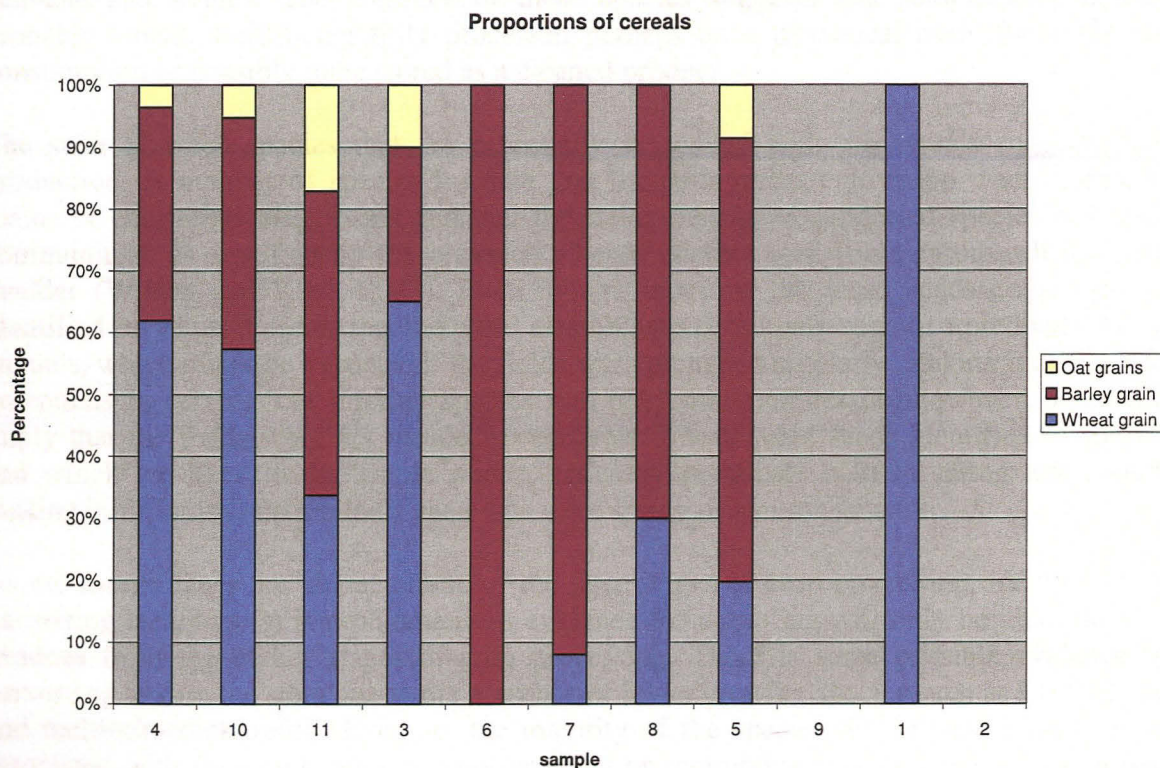
The four phased samples from Trench 15 are all later than those from Trench 3 and the botanical assemblages are also distinctly different from those from the previous Trench. The densities of charred remains are low, ranging from 1.90 – 13.60 items per litre, and contrary to the assemblages from the previous Trench, they are characterised by a dominance of cereal grain (at least 50% of the botanical assemblages) with no chaff, and small numbers of weed seeds (Fig. 1). Furthermore, barley is the dominant cereal rather than wheat (Fig. 2). The

absence of cereal chaff, particularly barley chaff, and the greater frequency of cereal grains to weed seeds provisionally points to small concentrations of cleaned grain, particularly in deposit 1503, which is the primary fill of ditch/gully [1504]. However, the lack of these more fragile cereal components may be a product of taphonomic and post-depositional processes rather than an true reflection of the original composition of the assemblages. Taking these considerations into account together with the low densities of remains, the assemblages provide tenuous support for interpretations in relation to arable husbandry regimes and crop processing activities.

Phase 6 (post-medieval and modern)

A single sample from Trench 1 from the primary fill of ditch [109] is the only sampled deposit associated with Phase 6. The deposit is sparse in terms of charred plant remains (0.26 items per litre) with two cereal grains, (one wheat and one unidentifiable grain), no chaff and a single orache seed. The botanical evidence provides no economic or environmental information and the remains are likely to be derived from background material kicking around the site.

Fig. 2. Proportion of the different cereal types in the samples from WBP01



Discussion of Site WBP 01

Phases 2B and 2C

The botanical evidence from Trench 3 suggests that domestic waste was discarded into channel [323] over a period of time during the mid Roman period and it is likely that an associated settlement was situated in close proximity to the feature given the high density of remains. The domestic waste is potentially derived from a range of activities associated with food preparation and crop processing activities, due to the presence of cereal waste and other plant remains of economic value including hazelnut and flax, together with the concentrations of pottery sherds and fired earth. Unfortunately it is not possible to determine if flax was used for food or collected for other purposes such as linseed oil or for fibre. The deposits also

yielded frequent remains of charred legumes. The recovery of charred remains of legumes, particularly ones of economic value such as peas or beans, tend to be rare occurrences due to the methods of processing not requiring a heating episode, unlike hulled cereals such as glume wheats and hulled barley which are heated to aid in the removal of the husks, and are therefore less likely to be exposed to fire and potentially preserved through carbonisation. Legumes used for fodder require no processing and are even less likely to be preserved by charring. In the light of this it may be that the leguminous seeds recovered from these assemblages are associated with the crop as arable weeds or perhaps accidentally charred during food preparation.

Each of the three fills of channel [323] contains crop-processing residues from the later stages of processing wheat, mainly glume wheats. There is also possible evidence for semi-processed barley, although the barley and oats may have been contaminants of the wheat crop that were subsequently sieved out. The weed assemblages contain an abundance of species that are either similar in size to the prime grain such as brome, corn gromwell, vetch/vetchlings, black bindweed and cleavers which would be picked out by hand from the fully processed product. There is also an abundance of species that are generally associated with fine sieve residues such as chickweed, goosefoots/oraches, knotgrass, docks, plantains, henbane and sedges. The presence of these species suggests that semi-cleaned cereals, probably wheat, were being fully processed perhaps on a piecemeal basis for immediate consumption or possibly to be stored as a cleaned product.

The suite of weed species that are potentially associated with the cereals suggests local production. A number of species indicate that the soils under cultivation were calcareous loams or calcareous clay loams and that the fields may have supported species rich plant communities, as signified by the presence of corn cockle, corn (field) gromwell and field madder (Wilson and King, 2003). Even though many of the weed seeds could only be identified to genus, it seems that the weed assemblages potentially contain a predominance of annuals, which might be expected if the fields were ploughed regularly, making it difficult for perennials to persist. The inferred species rich plant communities do, however, potentially imply that the fields were not weeded extensively. Those weed seeds identified to species, and which are likely to be arable weeds, generally germinate both in spring and autumn making it difficult to determine if the crops were spring or autumn sown.

As the assemblages are characteristic of the later stages of crop processing, identifying the harvesting technique(s) is problematic as evidence for uprooting will only be identifiable in residues from the earlier stages of crop processing. There is some possible evidence for harvesting low on the stem due to the presence of lower growing species such as field madder and melilot/medick/trefoil. Even so, the majority of the species that are most likely to be associated with the crops, are quite tall growing or scrambling species (such as the grasses including brome and oat, goosefoots, oraches, and scrambling cleavers and knotgrasses), which would suggest harvesting higher on the stem. Either way, the straw would have been a valuable resource and likely to be used for structural purposes, bedding or fodder.

The botanical assemblage from the single deposit (303) associated with Phase 2C appears to be similar in composition to those from Phase 2B. The low density of charred remains suggests that activity, which is domestic in nature, does seem to have been taking place within the locality of ditch [305] during this phase.

Phase 5a and 5B

The densities of charred remains and other finds from Trench 15 indicates some domestic activity during Phases 5A and 5B, the assemblages showing largely cleaned grain.

Conclusions for Site WBP 01

Despite the small sample group and lower densities of remains from Trenches 1 and 15, broad trends in the botanical assemblages can be identified. The botanical evidence from Trenches 3 and 15 appears to show a change in crop preference from the mid-late Roman periods to the mid-late medieval periods, with a dominance of glume wheats, notably spelt with traces of emmer, during Phase 2 (Trench 3) and a dominance of barley in Phase 5 (Trench 15), with very little evidence for glume wheats aside from a single grain of spelt wheat during this later phase which may well be residual. The cultivation of spelt (and emmer) does not appear to have continued beyond the Roman period and its absence in the later phases is not unexpected. Traces of bread wheat and oat are present in Phases 2 and 5 and they seem to be a consistent, if minor, component in the cereal assemblages throughout the history of the site.

The strongest evidence for domestic occupation is associated with channel [323] in Trench 3, into which domestic waste and crop processing residues were discarded during the mid-late Roman period. Glume wheats, principally spelt wheat, were of important economic value to the inhabitants at this time and it is likely that it was grown locally and consumed on site. There is very limited evidence for similar activities in the late Roman period but this may be due to sample bias since only one sample is definitely associated with Phase 2 C from site WBP 01.

The samples also indicate other dietary elements. The animal bones recovered from the Roman samples include cattle, sheep/goat, pig and hare and fragments of mussel, cockle and scallop (*Chlamys* sp.). The later medieval and post-medieval samples produced little domestic animal bone, but probable chicken eggshell was present with mussel, cockle, winkle and tellen shells.

Evidence for crop processing activities is largely absent from Phases 5A, 5B and particularly Phase 6 (from Trenches 15 and 1 respectively). The grain dominated assemblages, although fairly small, suggest domestic habitation nearby, with barley the most important cereal.

Limited palaeo-environmental evidence was recovered although wood mouse, bank vole, field vole, water vole, house mouse, grass snake and frog or toad were recovered from various samples. The house mouse from an early medieval gully fill suggests the proximity of buildings.

WBP 101

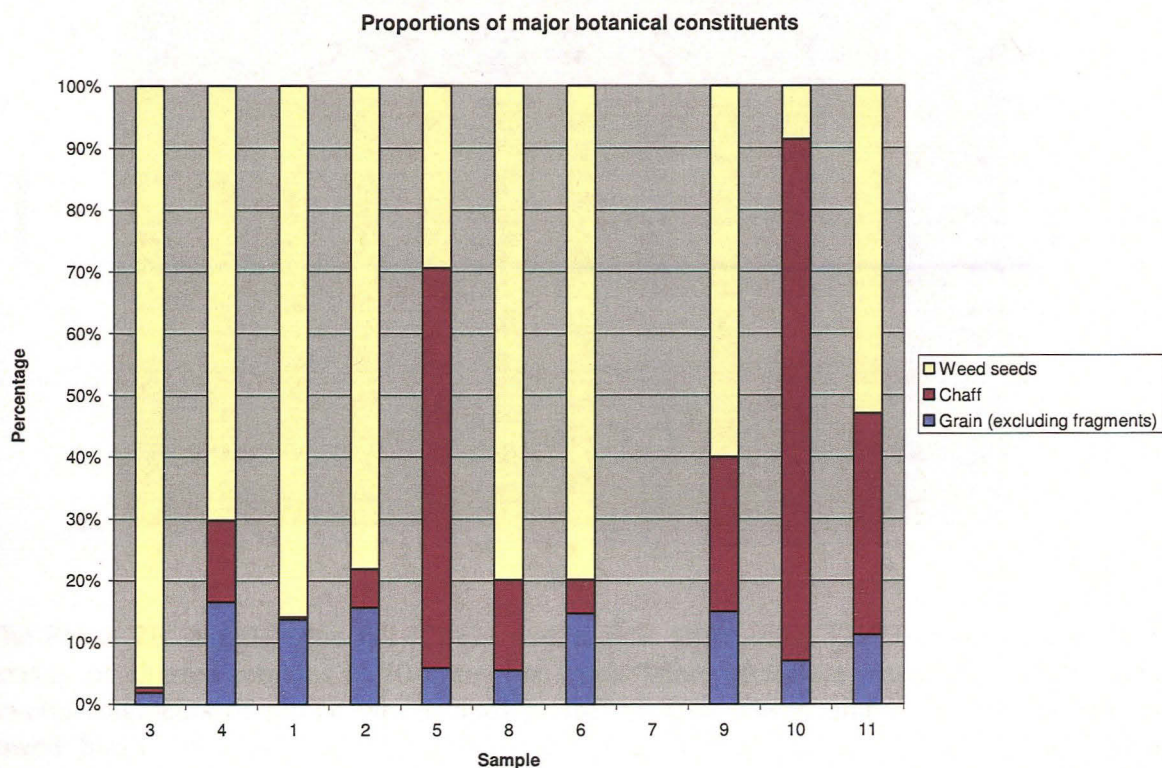
All the sampled contexts from this area have been dated to the mid and mid-late Roman phases.

Phase 2B (mid Roman 2nd-3rd C AD)

A series of five samples were taken from features associated with the mid Roman phase of activity, three from the West Dyke (samples 1, 3 and 4) and two from the East Dyke (sample 5 and 8). One of these included a large dump of cockle shell of all sizes suggesting a dredged sample rather than one raked up and sorted on the sand or mudflats. Pottery, fired earth and a little bone make up the other finds, with a single flake of hammerscale in context 2018.

All of the botanical remains are charred from the West dyke, whilst very degraded vegetative remains and concentrations of more robust seeds were recorded in the samples from the East Dyke. The density of charred remains ranges from 1.70 to 59.66 items per litre from both areas and the composition of the assemblages are very similar in terms of the relative abundance of cereal residues and weed seeds (Fig. 3). Charred cereal grain forms less than 20% of the five botanical assemblages and weed seeds dominate the assemblages from the West Dyke consisting of at least 70% of the charred assemblages. The only exception is the fill of ditch [2123] (sample 5) in the East Dyke, which is dominated by charred cereal chaff (>60% - Fig. 3). The dominant cultigen is wheat with traces of barley and oat present in deposits from the West Dyke (Fig. 4).

Fig. 3. Proportions of grain, chaff & weed seeds in the samples from WBP101 (samples 3, 4, 1, 5 and 8 are Phase 2B; 2, 6, 7, 9, 10 and 11 are Phase 2C)

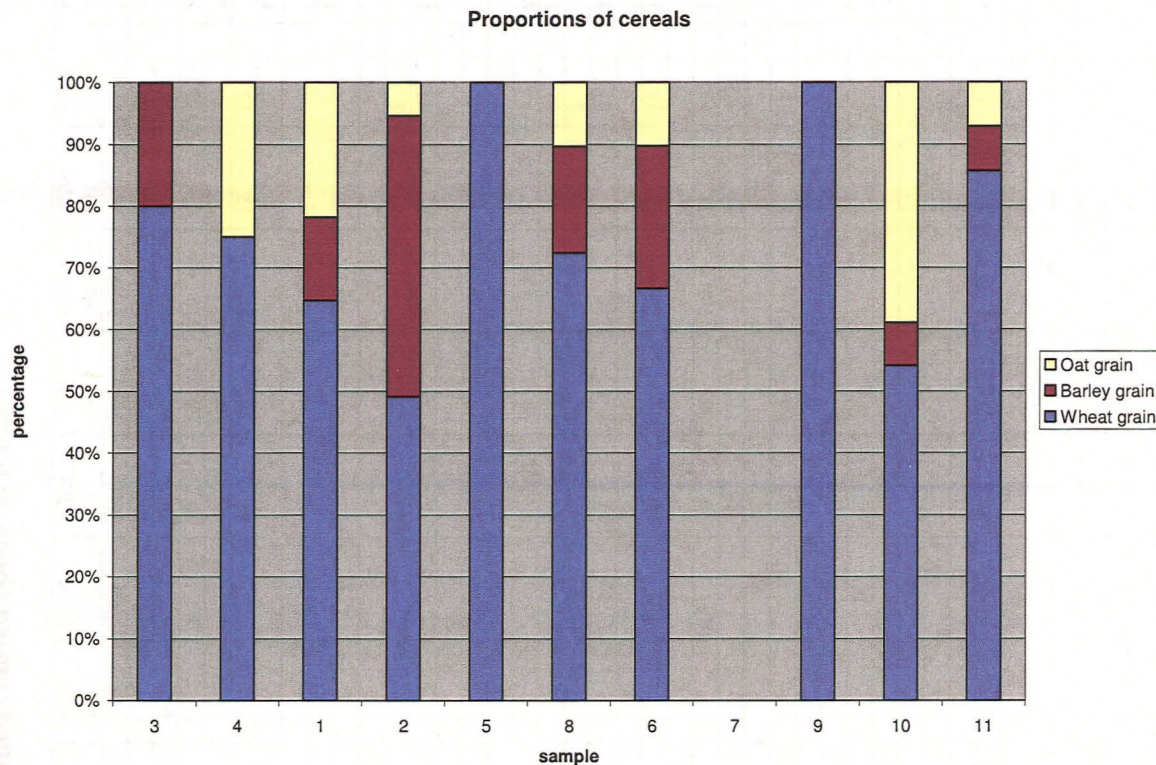


A dump of domestic waste (2115) and the tertiary fill (2120) of ditch [2114] within the West Dyke yielded quite low densities of charred remains (12.30 and 10.08 items per litre respectively). The traces of cereal grain and wheat chaff, with positive identifications including a single possible spelt wheat and one hulled barley grain, indicate that little in the way of crop processing residues are being discarded in to the fills of ditch [2114] and the remains may represent background material that has been incidentally incorporated into the fills. The weed assemblages present a generic weed flora with species of waste and disturbed ground and grassland occurring frequently.

The primary fill of ditch [2022], also located in the West Dyke, yielded the greatest density of material from the Phase 2B deposits (59.66 items per litre). The remains of cereals form a minor component of the botanical assemblage and specific cereal identifications include spelt wheat and six-rowed hulled barley. Wheat dominates the small assemblages and oat is more

abundant than barley (Fig. 4). The weed seed assemblage is comparatively large (973.5 items) and is dominated by small leguminous seeds identified as melilot/medick/trefoil (78%). Other species present again include those previously identified as typical of waste or disturbed ground and/or cultivated ground as well as corn gromwell, probable cleavers (*Galium cf. aparine*), stinking mayweed (*Anthemis cotula*), brome and other grasses which are more commonly associated with arable land. The small numbers of sedge and club-rush suggest damp ground. In addition a single seed of cultivated flax was recovered.

Fig. 4. Proportion of the different cereal types in the samples from WBP101



The Phase 2B sample from fill (2129) within East Dyke ditch [2123] contains the lowest density of charred remains (1.70 items per litre). These include a single spelt wheat grain, several fragments of glume wheat chaff including spelt wheat, and a single rachis of six-rowed barley and the weed assemblage consists of a single seed of brome and small leguminous seeds. The flint is abundant in uncharred seeds but many of the species identified are high seed producers and not particularly habitat specific and the dominant species identified (goosefoots and oraches) are generally associated with areas of disturbed or waste ground as well as cultivated land. In addition, shore orache (*Atriplex littoralis*) and red goosefoot (*Chenopodium rubum*), which have been cautiously identified, are species commonly found near the sea. Other species of disturbed ground that are less well represented include knotgrass, black bindweed, dock and thistles, whilst the presence of species such as meadow/creeping/bulbous buttercup (*Ranunculus* Section *Ranunculus*), red-rattle (*Pedicularis palustris*), club-rushes and sedges denote damp or wet habitats.

The secondary fill of ditch [2150] in the East Dyke contains charred botanical remains only and the density of these in the sample is 68.39 items per litre. The composition of the botanical assemblage is comparable to those from the other samples in this phase, being dominated by weed seeds, particularly small legumes and grasses, with chaff fragments more abundant than grain (Table 5).

Table 5. Weston Bypass, Lincolnshire – WBP1 01. Identified charred botanical remains.

	Site	WBP 101	WBP 101	WBP 101	WBP 101	WBP 101	WBP 101	WBP 101	WBP 101	WBP 101	WBP 101	WBP 101
	Context	2115	2120	2018	2096	2129	2151	2139	2139	2157	2160	2204
	Sample No.	3	4	1	2	5	8	6	7	9	10	11
	Sample vol (L)	30	6	19	28	10	9	20	7	11	30	22
	Flot vol (ml)	3	1	10	55	10	6	12.5	5	10	110	60
Cereals	Common Name				(est)				unquant		(est)	(est)
<i>Triticum spelta</i> L.	spelt wheat			41	96	1	12	25			13	23
<i>Triticum cf. spelta</i>	spelt wheat?	1							P		3	
<i>T. dicoccum</i> (Schubl.) Schrank.	emmer wheat										5	
<i>T. cf. dicoccum</i>	emmer wheat?								P			
<i>T. dicoccum/spelta</i>	emmer/spelt wheat									3		1
<i>T. aestivum</i> sl.	bread-type wheat										3	
<i>T. cf. aestivum</i> sl.	bread wheat?			2				3				5
<i>Triticum</i> sp(p).	wheat	1	4	43	124		9	24	P	2	15	31
cf. <i>Triticum</i> sp(p).	wheat?	2	2							1		
<i>Hordeum/Triticum</i> spp.	barley/wheat			5								
<i>Hordeum vulgare</i>	six-row hulled barley			1				1				
<i>Hordeum</i> sp(p).	hulled barley	1		8	92		5	3	P		5	3
<i>Hordeum</i> sp(p).	barley			9	112			12	P			2
cf. <i>Hordeum</i> sp(p).	barley?							2				
<i>Avena</i> sp(p).	oat			17	8		3	8	P		15	2
cf. <i>Avena</i> sp(p).	oat?		2	12	16				P		13	3
<i>Cerealia</i> indet.	indet. cereals	2	2	17			5	14	P		14	6
Detached coleoptiles											2	
Cereal frags >2mm		9	15	80	308	1	18	63	P	6	34	35
Cereal frags <2mm*				***	*****		**	****			****	****
Chaff												
<i>Triticum spelta</i> glume bases				1	24	1	8	18			426**	17
<i>Triticum cf. spelta</i> glume bases			2						P	3		
<i>T. spelta</i> spikelet					P			1			12	
<i>T. spelta</i> spikelet bases					4						25	
<i>T. spelta</i> rachis					8						43*	
<i>T. dicoccum</i> glume bases											15	2
<i>T. cf. dicoccum</i> glume bases					8		1	6				
<i>T. cf. dicoccum</i> spikelet bases								3				
<i>Triticum</i> sp(p). glume bases		2	5	4	132	8	75		P	4	388**	201
<i>Triticum</i> sp(p). spikelet bases		1	1				1	6	P	1	41	9
<i>Triticum</i> spp. rachis						1					25	4
<i>Triticum</i> sp(p). free-threshing rachis	hexaploid species type								P	1	25	2
<i>Triticum</i> sp(p). free-threshing rachis	hexaploid species type (compact-type?)										10	
<i>Hordeum</i> sp. spikelet					P							

	Context	2115	2120	2018	2096	2129	2151	2139	2139	2157	2160	2204
	Sample No.	3	4	1	2	5	8	6	7	9	10	11
Rachis internodes <i>H. vulgare</i> L.	six-rowed barley				P	1					18*	2
Rachis internodes <i>Hordeum</i> sp.	barley				4		4					4
Rachis internodes indet.							1				6	
Primary rachis node											15	
Indet. awn frags. (mineralised)*									P			
Indet. chaff										1		
Indet. chaff frags					**		*				**	*
Wild Species												
<i>Ranunculus</i> Section <i>Ranunculus</i>	meadow/creeping/bulbous buttercup					*					****	
<i>R. sardous</i> Crantz	hairy buttercup										*	
<i>R. Sect. Batrachium</i> (DC.) A. Gray.	water crowfoot(s)											*
<i>Ranunculus</i> sp.	buttercup								P			
cf. <i>Ranunculus</i> sp.	buttercup?			2								
<i>Thalactrium flavum</i> L.	common meadow rue										*	
<i>Stellaria media</i> (L.) Vill.	chickweed	4				*	2				**	**
<i>Stellaria</i> cf. <i>media</i> (L.) Vill.	chickweed?				12							
<i>Stellaria</i> sp.	chickweed/stitchwort			1				2	P		2	
<i>Chenopodium album</i> L.	fat hen	2					4					
<i>C. Section Pseudoblitum</i>	glaucous/red goosefoot		1			****						
<i>Chenopodium</i> spp.	goosefoots										*****	***
<i>Chenopodium</i> sp.	goosefoot			1				3				
<i>Beta vulgaris</i> L.	beet										**	
cf. <i>Atriplex littoralis</i>	shore orache					****					***	
<i>Atriplex</i> sp(p).	oraches	13	2	3		*****	3	8	P		*****	1**
Chenopodiaceae	goosefoot family	39	4	14	296	*****	18	20	P	1	*****	2*****
<i>Malva</i> sp.	mallow											*****
<i>Melilotus/Medicago/Trifolium</i> spp.	melilot/medick/trefoil	53	13	758	92	1	218	145	P	12	11	160
<i>Onobrychis vicifolia</i> Scop.	sainfoin										**	
cf. <i>Pisum</i> sp.	pea?							1				
<i>Vicia/Lathyrus/Pisum</i> spp. (>4mm)	vetch/vetchling/pea						4		P		*	
<i>Vicia/lathyrus</i> spp. (2-4mm)	vetch/vetchling		2.5	17		1	11.5		P	2.5	3.5	35
<i>Vicia/lathyrus</i> spp. (<2mm)	vetch/vetchling			22.5	52		9	17	P	0.5	4	10
small indet. leguminous seeds									P	2		
<i>Torilis japonica</i> (Houtt.) DC.	upright hedge-parsley										**	
<i>T. nodosa</i> (L.) Gaertn.	knotted hedge-parsley										*	
cf. <i>T. nodosa</i>	knotted hedge-parsley?										1	
cf. <i>Torilis</i> sp.	hedge parsley?				4							
cf. <i>Oenanthe</i> sp.	dropwort?										*	
Umbeliferae	carrot family	3		3							**	
<i>Polygonum aviculare</i> agg.	knotgrass					**		2			*****	
<i>Polygonum</i> cf. <i>aviculare</i> agg.	knotgrass?											2
<i>Polygonum convolvulus</i> L.	black bindweed					**	2				**	
<i>Rumex</i> sp(p).	dock		1	4	24		20	6	P	2	7****	29**

	Context	2115	2120	2018	2096	2129	2151	2139	2139	2157	2160	2204
	Sample No.	3	4	1	2	5	8	6	7	9	10	11
Polygonaceae					52							
<i>Urtica dioica</i> L.	stinging nettle					*						***
<i>Lithospermum arvense</i> L.	corn gromwell			5	40 (m)			2 (m)				
<i>Hyoscyamus niger</i> L.	henbane					*						*
<i>Solanum</i> sp.	nightshade										*	
<i>Pedicularis palustris</i> L.	red-rattle					*					*	**
<i>Lamium</i> sp.	dead-nettle					*						*
<i>P. major</i> L.	great plantain	6			16		2				*****	*****
<i>P. cf. major</i> L.	great plantain?			7								
<i>Plantago lanceolata</i> L.	ribwort plantain	1		3							7*	2
<i>P. cf. lanceolata</i> L.	ribwort plantain?											1
<i>Plantago</i> sp.	plantain			1	12							
<i>Plantago</i> sp.	plantain capsule				4							
<i>Sherardia arvensis</i> L.	field madder						1					
<i>Galium aparine</i> L.	cleavers						2	2	P		7	1
<i>Galium cf. aparine</i> L.	cleavers?			2	28						4	3
<i>cf. Galium</i> sp.	bedstraw?										1	
<i>Anthemis cotula</i> L.	stinking mayweed	4		2			12	16	P		**	10
<i>Tripleurospermum maritimum</i> (L.) Koch	scentless mayweed					*					1	
<i>cf. Matricaria</i> sp.	chamomile?								P			
<i>Carduus/Cirsium</i> spp.	thistles				8	**					2*****	2**
<i>Picris</i> sp.	ox-tongue										**	
<i>cf. Taraxacum</i> sp.	dandelion?										*	
Compositae	daisy family		1	13	16			8	P		1	8
<i>Eleocharis</i> sp.	spike-rush	3 (m)						3			***	*
<i>cf. Eleocharis</i> sp(p).	spike-rush?								P			
<i>Zannichellia palustris</i> L.	horned pondweed										***	
<i>Sparangium erectum</i> L.	branched bur-reed				4							
<i>Scirpus</i> sp(p).	club-rush			4	60	**		6	P	1	*****	2**
<i>cf. Scirpus</i> spp.	club-rush?						1					2
<i>Carex</i> spp.	sedges			18			7		P			***
<i>Carex</i> sp(p).	sedges	2			80	**		4				
Cyperaceae	sedge family			3	8							
<i>Festuca/Lolium</i> spp.	fescue/rye-grass	P						10			2	
<i>Bromus</i> sp(p).	brome			9	8			7			6	13
<i>cf. Bromus</i> sp(p).	brome?		3			1			P		**	
<i>Cerealia</i> /Gramineae	cereal/grass										5	
Gramineae indet.	grasses	46	2	11	128		12	6			2*	7
small indet. Gramineae		23	1	42	328	1	78	116	P	1	39	33
Indet		160	12	27	956	1	85	116		2	2	34
Indet. weed seed frags			**	***			***			*	**	****
Other												
<i>Linum usitatissimum</i> L.	cultivated flax			1								
<i>Linum cf. usitatissimum</i> L.	cultivated flax?				8							

	Context	2115	2120	2018	2096	2129	2151	2139	2139	2157	2160	2204
	Sample No.	3	4	1	2	5	8	6	7	9	10	11
<i>Rubus</i> sp.	bramble					*						
<i>Corylus avellana</i> L.	hazelnut shell frags.										*	
<i>Sambucus nigra</i> L.	elder											*
Large charred 'grass-sized' culm nodes & internode frags.**												
Large uncharred 'grass-sized' culm nodes & internode frags.**		+			+						++++	
Degraded preserved plant vegetative remains**						++++					++++	++++
Moss**												
Total quantified items		369	60.5	1133.5	2864	17	615.5	626	0	40	1244.5	674
Grain (excluding fragments)		7	10	155	448	1	34	92	0	6	88	76
Chaff		3	8	5	180	11	90	34	0	10	1049	241
Weed seeds		359	42.5	973.5	2236	5	491.5	500	0	24	107.5	357
Barley grain		1	0	18	204	0	5	18	0	0	5	5
Wheat grain		4	6	86	220	1	21	52	0	6	39	60
Oat grain		0	2	29	24	0	3	8	0	0	28	5
Glume wheat grains		1	0	41	96	1	12	25	0	3	21	24
Glume wheat glume bases		4	9	5	172	9	86	44	0	9	975	238
Barley rachis internodes		0	0	0	4	1	5	0	0	0	18	6
Ratio 1: (glume bases:glume wheat grains)		4.00	-	0.12	1.79	9.00	7.17	1.76	-	3.00	46.43	9.92
Ratio 2: (barley rachis:barley grain - ex. frags.)		0.00	-	0.00	0.02	-	1.00	0.00	-	-	3.60	1.20
Ratio 3 (weed:grain - ex. frags.)		51.29	4.25	6.28	4.99	5.00	14.46	5.43	-	4.00	1.22	4.70
Total quantified items per litre		12.30	10.08	59.66	102.29	1.70	68.39	31.30	-	3.64	41.48	30.64

*frequency: *=1-10; **=11-50; ***=51-150; ****=151-250; *****=>250;**Abundance: += present, ++ = common, +++ = frequent, ++++ = abundant; P=present; m=mineralised; ^=estimated counts

* in the sample column indicate uncharred seeds on the abundance rating indicated above

Phase 2C (late Roman 3rd-4th C AD)

The six samples from Phase 2C include one from the West Dyke (sample 2) and five from the East Dyke (samples 6, 7, 9, 10 and 11). Two samples, 6 and 7, from the East Dyke are from the same context and only sample 6 was quantified whilst the presence of species was recorded in sample 7. Much of the botanical material is charred with the densities of charred remains ranging from 3.64 to 102.29 items per litre. In addition two samples (10 and 11) contain preserved organic remains as well as charred and provide some ecological information. All the samples produced some pottery, fired earth, animal bone and marine shell and two produced bird eggshell fragments, probably chicken (Table 2).

The single sample from ditch [2025] within the West Dyke proved to be the richest in charred botanical remains from this Phase of activity (containing 102.29 items per litre). Similar to the previous samples within the West Dyke, the remains of cereals form a small proportion of the botanical assemblage with slightly more glume wheat bases to glume wheat grains (1.79:1) and evidence for barley from the later stages of processing (with the ratio of barley rachis to barley grains 0.02:1). The abundance of weed seeds compared to cereal remains suggests that the assemblages are likely to be derived from the later stages of crop processing and may constitute fine sieved residues. Several seeds of possible flax have also been recorded, but are in too small a quantity to establish what, if any, economic role flax may have played in the subsistence strategies of the site. The small concentration of species indicative of damp or wet habitats including branched bur-reed (*Sparganium erectum*), which grows in mud or in shallow water in ponds, ditches and slow-flowing rivers, as well as club-rush and sedges suggests that these habitats were locally available for exploitation.

In terms of deposits sampled from the East dyke, a series of four fills from ditch [2133] were taken, including silting episode 2139 (samples 6 and 7), domestic dump 2157 (sample 9) and the primary fill 2160 (sample 10). The density of charred remains ranges from 3.64 to 41.48 items per litre and interestingly deposit 2157 identified as a domestic dump, contains the lowest density of charred remains (3.64 items per litre). This 'domestic dump' deposit yielded traces of wheat and glume wheat chaff and a single free-threshing wheat rachis, together with a small weed assemblage generally consisting of species associated with waste and disturbed ground. The deposit identified as a silting event (2139) contains a relative abundance of charred botanical remains, which are again dominated by weed seeds. The cereal assemblages contain glume wheats, spelt and possible emmer, and also traces of free-threshing wheat. Hulled (six-rowed) barley and oats are present as minor components of the cereals. The suites of weed species represented within the silting deposit are very similar to those described previously and would also appear to constitute residues from the final stages of crop processing. In addition a single probable pea (*Pisum* sp.) was cautiously identified and may be an accidentally burnt food item.

The primary fill of ditch [2133] contains both charred and waterlogged botanical remains. The composition of the cereal assemblage is similar to that of the previous deposit (2157) with a range of wheat species represented but dominated by spelt-type wheat, together with hulled six-rowed barley and oat. The chaff assemblage is large and includes charred and waterlogged remains and is chiefly composed of glume wheat chaff (notably spelt), although free-threshing rachis of a hexaploid wheat species are not infrequent including a number which appear to be bread/club wheat-type (*Triticum aestivo-compactum*). Barley rachis characteristic of six-rowed barley are present, both charred and uncharred. Charred seeds are not as abundant as uncharred and both assemblages include those species already frequently identified on the site and which are likely to be derived from activities associated with the

later stages of crop processing. In addition the suite of uncharred species further includes those which are commonly associated with damp meadowland such as meadow/creeping/bulbous buttercup, common meadow rue and red-rattle. Dry, stony grassland and arable habitats are also suggested by the presence of sainfoin (*Odnobrychis vicifolia*), upright and knotted hedge-parsley (*Torilis japonica* and *T. nodosa*) and plantains. Goosefoots and oraches are abundant and include probable shore orache, a species, which together with sea beet, is generally associated with salty, sandy or muddy habitats near the sea (Schauer, 1982). Shallow water, slow moving water and muddy habitats are also indicated by the presence of spike-rush type, horned pondweed and club-rush.

A deposit (2204) identified as a silting event in ditch [2208] also includes both charred and uncharred plant remains with similar suites of weed species to those in the waterlogged primary fill of ditch [2133]. The density of charred remains in this sample is 30.64 per litre. The composition of the botanical assemblage is comparable to those from the accompanying Phase 2C samples and with the slightly elevated densities compared to those from Phase 2B, implies that settlement activity was situated in close proximity to the Phase 2C features in the East Dyke.

Discussion of site WBP 101

Phase 2B

There is limited botanical evidence for the disposal of domestic or agricultural waste into West Dyke ditch [2114] during the mid Roman phase of activity. Only the large dump of cockle shell in deposit 2115 indicates specific activity, and probably represents the disposal of a processed catch as a single event. Little in the way of other domestic material is associated with this shell dump.

The high density of charred material is associated with the primary fill of West Dyke ditch [2022] and presents the strongest botanical evidence for domestic activity within the locality, whilst the small cereal assemblage provides only limited evidence for agricultural activities. The large weed assemblage is dominated by small, light leguminous seeds which might be removed in the initial stages of crop processing, such as winnowing, and the absence of other indicators of the earlier stages, such as fragments of straw and large culm nodes or an abundance of chaff, makes it difficult to determine if the remains are likely to be derived from crop processing activities. The recovery of nineteen sherds of pottery and a concentration of fired earth from the sample residue does further confirm the domestic nature of the deposit. It could be that the residues are derived from the rake-out from a hearth, in which grass was possibly used as tinder or burnt after use as litter.

There is very limited botanical evidence for domestic or agricultural activities during this Phase in the East Dyke largely because the sampling is restricted to two fairly poor samples. The suite of species represented in the uncharred seed assemblage from deposit 2129 suggests some disturbance within the vicinity of ditch [2123] during the mid Roman phase, but it remains difficult to identify the nature of any activity. The presence of house mouse in ditch 2150 suggests buildings may have been nearby.

Phase 2C

The density of charred remains in the single late Roman sample within the West Dyke is much greater than that in the samples from the earlier phase although this may have no significance. However the frequency of species such as goosefoots, small vetches/vetchlings and other small leguminous seeds and plantains together with seeds of species which are

similar in size to the prime grain such as corn gromwell, knotgrass, dock and brome from the Phase 2C deposit does provide some evidence for crop processing activities. The smaller seeded weed species would be removed by sieving and those larger seeds persisting in the crop would be manually picked out of the cleaned product. This implies that semi-cleaned grain was fully processed nearby ditch [2025] and the residues may then have been discarded into a fire and redeposited into the ditch.

East Dyke ditch [2133] produced both charred and waterlogged botanical remains. Although deposit (2157) within the ditch was identified as a dump of domestic material, this is not reflected in the charred botanical assemblage although a small concentration of mussel and oyster shell and a cattle bone does indicate some domestic waste in the deposit. The fill identified as a silting episode (deposit 2139) contains a mixed cereal assemblage and an abundance of weed seeds generally associated with the later stages of crop processing. It would appear that material potentially 'knocking around' the site has been incorporated into the ditch via the proposed silting event and demonstrates that a range of cereals appear to have been processed on the site.

The primary fill of ditch [2133] provides further ecological evidence with the presence of aquatic species indicating that the ditch was open with shallow standing or slow moving water in it. Those species commonly associated with damp meadow or grassland may be reflecting the vegetation immediately in and around the ditch whilst dry calcareous grassland or arable land and areas of disturbance are also expressed in the weed assemblage and are likely to be derived from the wider environs. It would appear that the locality is still subject to saline influences given the presence of species such as shore orache and sea beet and the abundance of goosefoots/oraches, which include many species that frequently occur near the sea although some of this material could have come in with cattle dung.

The composition of the botanical assemblage from ditch [2208] within the East Dyke compliment those from ditch [2133] as well as those from ditch [2025] in the West Dyke. This general uniformity in terms of cereals and weed species represented may further support the evidence for local production, since no 'unusual' assemblages have been identified which could potentially signify circumstances such as imported cereals. Furthermore, all of the suites of weed species from both the West Dyke and the East Dyke are similar to those identified in Phase 2B and 2C deposits in site WBP 01 which suggests that the crops were being grown locally at both sites and under similar conditions.

The densities of charred botanical remains provisionally suggest that during the mid Roman phase the ditches uncovered in the West and East Dyke are situated away from any immediate settlement activity, whilst domestic activity seems to be in closer proximity to those ditches associated with the late Roman phase in the East Dyke.

Conclusions for site WBP 101

There is limited evidence for agricultural activities from the mid Roman fills of ditches [2114], [2022] and [2123]. Ditch [2114] in the West Dyke contains a shell dump, but the low densities of charred botanical remains suggest some settlement activity in the area. Similarly, the weed assemblage from fill (2129) within East Dyke ditch [2123] implies some level of disturbance within the vicinity of the ditch during Phase 2B, but the lack of domestic or crop processing residues suggests that the activity may not be domestic or agricultural in nature. Only fill (2018) of ditch [2022] in the West Dyke contains strong evidence for domestic activity taking place nearby the feature although the presence of house mouse and a fairly

large charred plant assemblage with grain and cereal chaff suggests some activity near the East Dyke in this phase.

Whilst taking into consideration the small size of the sample group, the relative increase in the density of botanical remains from deposits associated with the late Roman phase of activity implies that the focus for domestic activity was situated closer to the ditches within the East Dyke in the later phase.

Spelt wheat dominates the cereal assemblages in both Roman phases. Other cereal including bread-type wheat as well as hulled (six-rowed) barley and oats also occur consistently in both phases, whilst traces of emmer wheat appear to be confined to Phase 2C deposits, although this is likely to be an artefact of the sample sizes.

Detecting potential changes in agricultural regimes between Phases 2B and 2C is hampered by the low densities of charred remains in the samples from Phase B, the small sample group, the relatively short time frame and the difficulty in identifying certain weeds to species whilst others can be easily associated with a range of habitats. Even so, the suites of weed species identified in both Phases do appear to be similar which largely suggests a continuation of arable husbandry regimes through both phases.

The other finds from the samples occur at densities too low to monitor changes. Bones of Sheep/goat occur with the greatest frequency (6 samples), while cattle occurs in two samples and horse in one. Pig is absent from these samples. Shellfish occur with the greatest frequency with mussel in eight, cockle in five, oyster and periwinkle in one sample with odd finds of tellen and crustacean shell which may not have been food items. Other food items include chicken eggs and the incidence of small birds (4 samples) suggests that these may have been trapped for food.

Apart from the house mouse already alluded to a few small vertebrate bones were recovered and included mole, field vole, wood mouse and frog or toad, but these give little indication of the local environment. The one group of finds that might give us a clue to the local environment are the snails (Table 6).

The snails occur in relatively low abundance in the samples, being absent from over half of the samples and present only as a few shells in others. The general picture across all the samples, both Roman and medieval, is of an open grassland environment with taxa such as *Vallonia excentrica*, *V. costata*, *Pupilla muscorum*, *Vertigo pygmaea* and *Truncatellina cylindrica*, and a few species of more catholic habit. Occasional brackish water and estuarine taxa occur but it is difficult to establish whether these derive from the marine silts that the site lies on and are therefore redeposited or whether they represent an *in situ* fauna. The burnt shells in ditch fill 2096, a discrete dump of burnt material, indicates that these species were in the material burnt suggesting collection of material from the saltmarshes, perhaps with the club rush suggested by the charred plant remains. There are burnt shells among the grassland taxa also and this group might indicate the burning of animal bedding or floor material. A series of the medieval ditches all produced shells of damp ground or wet ditch taxa and probably represent an *in situ* assemblage. This group has a low diversity and the most numerous species *Anisus leucostoma* is typical of ditches that dry up seasonally (Macan 1977) suggesting, with the absence of other aquatic taxa, that none of these ditches carried water throughout the year.

Table 6. Frequency of gastropod taxa in the samples from WBP01 and WBP101.

Area	WBP 101	WBP 101	WBP 101	WBP 101	WBP01	WBP01	WBP01	WBP01	WBP01	WBP01
Phase	2B	2C	2C	2C	2C	5A	5A	5A	5B	unph
Sample	3	2	6	10	10	6	7	8	5	9
Context	2115	2096	2139	2160	307	1501	1511	1505	1503	1507
Estuarine and brackish										
<i>Hydrobia ventrosa</i>		1		7						
<i>Hydrobia ulvae</i>	3	7*	1	15		1	5	5		3
Open country										
<i>Cecilioides acicula</i>	1						2	1	2	
<i>Vallonia costata</i>	3									
<i>Vallonia excentrica</i>	13	2*			2	10	4	1	15	
<i>Vallonia pulchella</i>						1				
<i>Vallonia sp.</i>	7					8	3		4	
<i>Pupilla muscorum</i>	4	9*		1			1			
<i>Vertigo pygmaea</i>	1	4*				3	1		2	
<i>Vertigo sp.</i>	2						1		2	
<i>Truncatellina cylindrica</i>									2	
Catholic										
<i>Cepeae sp.</i>	1									
<i>Cochlicopa lubriuca</i>									1	
<i>Cochlicopa sp.</i>	1					1			3	
<i>Vitrina sp.</i>	1					2				
<i>Punctum pygmaeum</i>						2			1	
Damp and aquatic										
<i>Carychium sp.</i>	1									
<i>Lymnaea truncatula</i>						8	2	3	12	3
<i>Anisus leucostoma</i>						37	13	1	62	3
<i>Planorbis crista</i>						3	2			

* includes burnt shells

Weston Bypass, Lincolnshire – Sites WBP2, 3 and 4**Introduction**

These sites investigated evidence for Anglo-Saxon, Anglo-Norman and early Medieval activity and the ten samples collected from primary and secondary ditch fills (Table 7) are reported below.

Table 7. Weston Bypass – WBP 201/301/401. The environmental samples studied

Site	Area	Sample No.	Context no.	Sample volume in L.	Sample weight Kg.	Feature	Pot Date	Phase
WBP 201	Main	1	2511	10	10	Secondary fill of ditch [2502]	10 th C	4B
WBP 201	Main	2	2507	11	11	Secondary fill of ditch [2502]	Mid 10 th C	4B
WBP 301	Main	1	3017	28	29	Secondary fill of ditch [3001]	10 th -early 11 th C	4B
WBP 301	Main	2	3048	9	13.5	Secondary fill of ditch [3046]	10 th C	4A
WBP 301	Main	3	3060	10	12	Secondary fill of ditch [3068]	10 th C	4A
WBP 301	Main	4	3063	14	22	Secondary fill of ditch [3068]	8 th -mid 9 th C	4A
WBP 301	Main	5	3075	22	25	Secondary fill of ditch [3078]	Late 11 th -12 th C	5A
WBP 301	Main	6	3077	9	10	Primary fill of ditch [3078]	Late 11 th -12 th C	5A
WBP 401	?	1	3501	26	32	Primary fill of ditch [3500] (midden deposit?)	Undated?	?
WBP 401	?	2	3506	19	21	?Primary fill of ditch [3507]	L12 th -mid 13 th C?	?

Methods

The soil samples were processed in the same manner as for sites WBP01 and WBP101. A total of 158 litres of soil were processed.

The individual components of the samples have been identified and the results are summarised below by site in Tables 8, 9 and 10.

Results

Eight of the ten sampled deposits from the three sites in this area of the bypass have been dated to the Saxon, Saxo-Norman and early medieval periods, the remaining two are unphased although 3506 has produced pottery of late 12-13th century date (Table 7). The samples all derive from ditch fills and the presence of pottery, fired earth, animal bone and marine shell in all except 3501 (Table 8) suggest a domestic origin for most of the archaeological debris. Samples WBP3 5 and 6 both derive from the same ditch section and have a higher than average proportion of fired earth, some with flat surfaces suggesting debris from a possible hearth structure, along with relatively large flots containing abundant charred cereal grain (see below). The sample from ditch fill 3017 includes a small dump of over a kilogramme of mussel shell suggesting disposal of a shellfish catch after processing.

Archaeobotanical Remains

The archaeobotanical remains were examined using the same methods as for WBP01 and WBP101. One sample (sample 5, WBP3) proved to be particularly rich in charred plant remains and was sub-sampled. This was achieved by using a riffle box, whereby 50% of the first and second flots were analysed respectively, with absolute counts taken from each sub-sample and the remaining portions scanned for additional species. The counts for the first and second flots were then doubled and the results combined to produce estimates of the individual counts for the grain, chaff and weed seeds for the entire flot. The results of the analyses are presented in Tables 9 and 10.

The ratios of the major crop constituents were also calculated, following van der Veen (1992, 82), in order to characterise the nature of the assemblages (Table 10). In the event two ratios were calculated. Ratio 2 calculates the ratio of free-threshing rachis internodes to free-threshing grains (in this instance barley as no free-threshing wheat chaff was identified), and Ratio 3 calculates the ratio of weed seeds to grain. Ratio 1, which calculates the ratio of glumes to glume wheat grains, could not be applied as no grains of a glume wheat species, such as emmer or spelt wheat (*Triticum dicoccum* (Schübl.) Schrank. and *T. spelta* L. respectively), or remains of wheat chaff were recovered from any of the samples (Table 10).

Summary of the evidence

Archaeobotanical remains are present in all ten flots and the remains are predominantly preserved by carbonisation with very occasional occurrences of mineralised weed seeds noted in two samples only. In addition, uncharred plant remains are present in all of the samples and comprise of plant vegetative material and weed seeds with species including water crowfoot (*Ranunculus* Subgenus *Batrachium* (DC.) A. Gray.), chickweed (*Stellaria* spp.), fool's parsley (*Aethusa cynapium* L.), black bindweed (*Polygonum convolvulus* L.), knotgrass (*Polygonum* spp.), nettle (*Urtica* spp.), dead-nettle (*Lamium* spp.), goosefoot family (Chenopodiaceae), sow-thistle (*Sonchus* sp.), thistles (*Carduus/Cirsium* spp.), pondweed (*Potamogeton* sp.), elder (*Sambucus nigra* L.) and birch (*Betula* spp.). Since no anaerobic deposits were identified on site and taking into account the species represented in the uncharred seed assemblages, which are prolific seed producers, these remains have been considered as intrusive.

The overall preservation of the charred remains is generally good, as demonstrated by the survival of barley chaff in six of the samples, which is particularly fragile and less likely to survive the charring process than that of wheat chaff. In some instances, however, distortion and abrasion of the remains, attributed to the effects of charring and post-depositional processes has restricted the identification of some of the grain and weed seeds.

Table 8: Weston Bypass, Lincolnshire – WBP 01, Sites 2, 3 and 4. Finds from the processed samples

Phase	Sample No.	Context No.	Sample vol. in L.	Feature	Residue vol. (l)	Pot #/g	Fired earth/daub (g)	coal (g)	mag. (g)	hamm' scale	slag (g)	marine shell (g)	bone (g)	other
<i>WBP 201</i>														
4B	1	2511	10	Ditch fill	850	2/5	9				+	2	7	Fuel ash slag abundant <2mm, sheep/goat, goose, frog/toad, fish, mussel, cf chicken eggshell
4B	2	2507	11	Ditch fill	2000	6/47	12		<1			3	22	Sheep/goat, pig, frog/toad, cockle, mussel
<i>WBP 301</i>														
4A	2	3048	9	Ditch fill	500	1/<1	3		<1		+	1	261	Cattle, juvenile pig skeleton, field vole, frog/toad, cockle, mussel, tellen
4A	3	3060	10	Ditch fill	50	28/5	3		<1	1	+	2	14	Fuel ash slag present <2mm. Sheep/goat, pig, fish, mussel, cf chicken eggshell
4A	4	3063	14	Ditch fill	400	5/21	2		2	?	+	44	76?	Fuel ash slag in flot, sheep/goat, cattle, rat/water vole, fish, mussel, cockle, cf chicken eggshell
4B	1	3017	28	Ditch fill	3000	10/34	207		<1		+	1300	240	Surfaces on fired earth. Sheep/goat, cattle, horse, chicken, frog/toad, mussel, cockle, periwinkle, cf chicken eggshell & thicker eggshell
5A	5	3075	22	Ditch fill	600	1/5	211	+	1			1	6	Flat & curved surfaces on fired earth. Sheep/goat, chicken, rodent, frog/toad, stickleback, mussel, tellen, cf chicken eggshell
5A	6	3077	9	Ditch fill	300	1/3	155					<1	1	Most of fired earth oxidised. Mole, frog/toad, mussel
<i>WBP 401</i>														
?	1	3501	26	Ditch fill	850				<1			272	4	Fish, mussel, cockle, periwinkle, tellen; spats of mussel and cockle, rough winkle
?	2	3506	19	Ditch fill	20	4/3	1					3	5	Shrew, rodent, frog/toad, cockle, mussel, cf chicken eggshell

#/g = number/weight

+ = present ; ++ = 11-50; +++ = 51-150; ++++ = 151-250; +++++ = >250 items

Table 9: Weston Bypass – WBP2, 3 and 4. Environmental finds from the selected processed samples

Phase	Sam ple no.	Context no.	Sample vol. in l.	Feature	Flot vol. (ml)	Char- coal */<2*	Charr'd grain *	Chaff *	Charr'd seed *	Insect *	Egg- shell wt g.	Fish wt g.	Snails */#	Comment
<i>WBP 201</i>														
4B	1	2511	10	Ditch fill	52.5	5/5	5	1	3		<1	<1	2/2	Wheat, barley, oat, barley chaff, indet. chaff, vetch/ vetchling/pea, vetch/vetchling, meadow/creeping/bulbous buttercup, black bindweed, goosefoot, goosefoot family, stinking mayweed, spike-rush, sedge, sedge family,
4B	2	2507	11	Ditch fill	60	5/5	5	2	5		<1	1	3/2	Wheat?, barley, oat?, barley chaff, indet. chaff, flax?, vetch/vetchling/pea, meadow/ceeping/bulbous buttercup, small leguminous seed, cabbage/mustard type, dock, goosefoot, orache, goosefoot family, self heal, stinking mayweed, grass family, club-rush, sedge, sedge family
<i>WBP 301</i>														
4A	2	3048	9	Ditch fill	6	2/3	3		1			<1	3/3	Barley, vetch/vetchling/pea, goosefoot, club-rush?, sedge, sedge family,
4A	3	3060	10	Ditch fill	20	5/5	3		2		<1	4	1/1	Barley, oat, indet. chaff, hazelnut, vetch/vetchling/pea, goosefoot, family, grass family, club-rush?
4A	4	3063	14	Ditch fill	50.5	5/5	2	1	2		2	1	1/2	Barley, indet. chaff, oat/grass?, vetch/vetchling/pea, hazelnut, cleavers, club-rush?, sedge family
4B	1	3017	28	Ditch fill	15.5	3/4	5		3		1	2	2/2	Wheat?, barley, vetch/vetchling, flax?, small leguminous seed, dock, black bindweed, orache, stinking mayweed, daisy family, club-rush, sedge, sedge family,
5A	5	3075	22	Ditch fill	65	4/5	5	2^	2^		1	1	5/3	Wheat, barley, oat, barley chaff, indet. chaff, cabbage/mustard, vetch/vetchling, small leguminous seed, elder, dock, goosefoot, goosefoot family, cleavers, bedstraw, stinging nettle?, daisy type, brome?, oat/grass, club-rush?, sedge, sedge family; mineralised field gromwell.
5A	6	3077	9	Ditch fill	50	4/5	5	2	2	1		1	1/1	Wheat, barley, oat, rye?, barley, chaff, indet. chaff, vetch/vetchling/pea, vetch/vetchling, cabbage/mustard, dock, goosefoot, goosefoot family, cleavers, grass family, spike-rush?, club-rush?, sedge; <i>Daphnia ephippia</i> .
<i>WBP 401</i>														
?	1	3501	26	Ditch fill	5.5	3/4	2	1	1			<1	3/2	Wheat?, barley, barley chaff, indet. chaff, legume, sedge family.
?	2	3506	19	Ditch fill	3.5	1/2	2		1		?		5/2	Wheat?, barley?, legume.

*=abundance: 1=1-10, 2=11-50, 3=51-150, 4=151-250, 5=250+

/<2=abundance/abundance

*/# =abundance/species diversity: 0=0; 1=1-3; 2=4-10; 3=11-25; 4=26-50; 5=>50 species

^=estimated

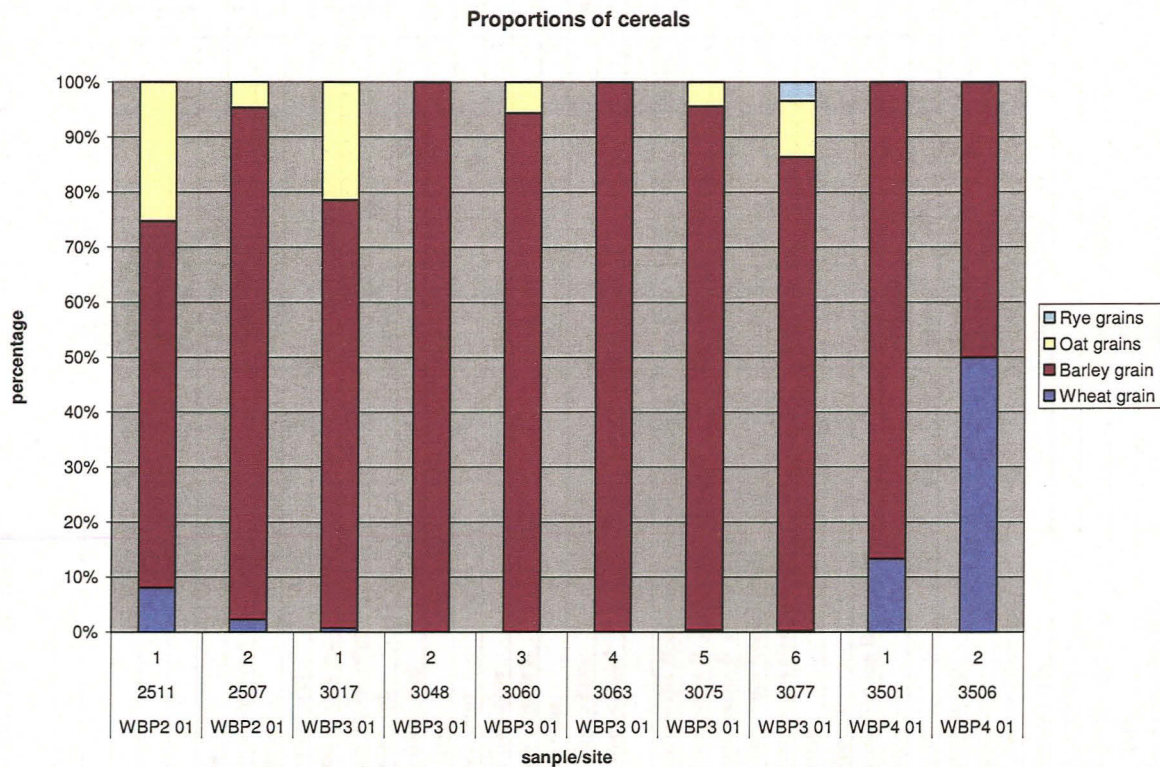
Barley (including six-row hulled barley), wheat (several grains of which are cautiously identified as bread wheat), oat and possible rye are present. Barley is the most frequent cultigen and constitutes 79% of the entire cereal assemblages (see Fig. 5), whereas oat (including those tentatively identified as oat) accounts for 8% and rye(?) and wheat 1% each. The remaining 11% are unidentified grain. The very small quantities of wheat have been recovered from seven of the ten samples, totalling twenty-two grains in all, whereas twenty-eight grains of rye(?) have been recovered from a single sample.

WBP2 01

The two flots from the secondary fills of ditch [2502] dating to the late Saxon period, produced an abundance of charred cereal grain, with frequent weed seeds and some cereal chaff. The densities of the charred plant remains in the samples consist of at least twenty-five items per litre. The cereal grains are predominantly hulled barley (including a small number of six-row hulled grains) with some oat and a very small quantity of wheat that could not be identified to genus. The five pieces of chaff are that of barley. Remains of oat chaff have not been recovered, preventing confirmation as to whether the oat is a wild or domesticated species, but there is a strong possibility that it represents a crop rather than an arable weed since oat is actively cultivated by this time.

There are many more barley grains to rachis fragments, which could imply the residues from the later stages of crop processing, although this may be a preservational bias to do with poor survival due to the effects of charring. The application of the weed:grain ratio supports the inference from the chaff:grain ratio that the assemblage derives from a cleaned crop product. Despite the weed:grain ratio in 2511 appearing to be slightly greater, if the cereal fragments are taken in to consideration then there are certainly more grain than weed seeds.

Fig. 5. Proportion of the different cereal types in the samples from WBP2, 3 and 4



	Context	2511	2507	3017	3048	3060	3063	3075	3077	3501	3506	Total
	Sample No.	1	2	1	2	3	4	5	6	1	2	
<i>Lithospermum arvevse</i> L.	field gromwell							P (m)				0
'cf. <i>Urtica dioica</i> L.	stinging nettle?							2				2
<i>Prunella vulgaris</i> L.	self heal		1									1
<i>Galium aparine</i> L.	cleavers						1	10	6			17
<i>Galium</i> sp.	bedstraw							4				4
<i>Anthemis cotula</i> L.	stinking mayweed	4	16	6				16				42
Compositae	daisy family			2				P				2
cf. <i>Bromus</i> sp(p).	brome?							2				2
<i>Cerealial</i> /Gramineae	cereal/grass							38				38
Gramineae indet.	grasses		1			1			2			4
<i>Eleocharis</i> sp.	spike-rush	2										2
cf. <i>Eleocharis</i> sp(p).	spike-rush?								2			2
<i>Scirpus</i> sp(p).	club-rush		24	15								39
cf. <i>Scirpus</i> spp.	club-rush?		51		2	1	6	2	2			64
<i>Carex</i> spp.	sedges	8	10	3	1			2	4			28
Cyperaceae	sedge family	1	13	4	1		8	P		1		28
Indet		23	38	11	1	4	6		5			88
Indet. weed seed frags			***					*^				0
Other												
<i>Corylus avellana</i> L.	hazelnut shell frags.					3	2					5
<i>Sambucus nigra</i> L.	elder							P			1(m?)	0
cf. <i>Linum usitatissimum</i> L.	flax?		1	1								2
large 'grass-sized' culm nodes & internode frags.*		*	**			**	*	***^	*			
Total quantified items		252.5	523	362.5	72	74	43	1790	1220	42	14	4393
Grain (excluding fragments)		99	176	170	42	36	12	1148	905	15	2	2605
Chaff		2	3	0	0	0	3	22	42	4	0	76
Weed seeds		57.5	217	52.5	9	23	26	120	48	3	3	559
Barley grain		66	162	116	35	34	8	920	724	13	1	2079
Wheat grain		8	4	1	0	0	0	4	2	2	1	22
Oat grains		25	8	32	0	2	0	42	86	0	0	195
Rye grains		0	0	0	0	0	0	0	28	0	0	28
Barley rachis internodes		2	3	0	0	0	0	12	33	2	0	52
Ratio 2: (barley rachis:barley grain - ex. frags.)		0.03	0.02	0.00	0.00	0.00	0.00	0.01	0.05	0.15	0.00	0.26
Ratio 3 (weed:grain - ex. frags.)		0.58	1.23	0.31	0.21	0.64	2.17	0.10	0.05	0.20	1.50	7.00
Total quantified items per litre		25.25	47.55	12.95	8.00	7.40	3.07	81.36	135.56	1.62	0.74	323.49

*frequency *=1-10; **=11-50; ***=51-150; ****=151-250; *****=>250; P=present; m=mineralised; ^=estimated counts

Remains of pulses are particularly frequent in 2507 and could potentially represent a crop, although identifications beyond *Vicia/Lathyrus/Pisum* spp. could not be made due to the poor state of preservation of the remains. In addition a single seed of flax is also present in 2507. The weed seed assemblage of 2507 is greater and more diverse than that of 2511, and is dominated by Cyperaceae, notably seeds cautiously identified as club-rush. Other habitats such as areas of disturbed or waste ground are indicated by the presence of cabbage/mustard type, oraches, goosefoots and docks. Grassland species include meadow/creeping/bulbous buttercup and small leguminous seeds, which include species such as medick/trefoil (*Medicago/Trifolium* spp.).

WBP3 01

A total of six samples were taken from the fills of four ditches, [3001], [3078], [3046], [3068] and [3078]. The four samples from ditches [3001], [3046] and [3068] are less abundant in charred plant remains compared to the two from site WBP2, particularly the fill 3063 of [3068] which only contains three items per litre. The charred plant assemblages are chiefly characterised by the dominance of cereal grain, no chaff and relatively small numbers of weed seeds. This suggests that relatively clean grain, perhaps from the final stages of crop processing, has been deposited into the ditches, notably in ditch [3001]. Conversely, the fill of ditch [3068] contains three fragments of unidentifiable chaff and more weed seeds to grain which is more characteristic of the cleaning residues resulting from the final stages of crop processing, rather than the cleaned product. The cereals recovered include hulled barley, with traces of six-row barley identified on the basis of three lateral (or 'twisted') grains and a small number of possible oat grains that are predominantly confined to ditch [3001]. No identified wheat species is present in the fills of these three ditches although one possible grain of *Triticum* sp. was recovered. The suite of weed species for the three ditch fills are dominated by sedges, including club-rush, with other frequent species including pulses and small leguminous seeds as well as Chenopodiaceae (goosefoots/ oraches).

In addition, several fragments of hazelnut shell from samples 3 and 4 (fills of ditch [3068]) suggest that these were a resource exploited by the inhabitants.

Two flots are of particular archaeobotanical interest; samples 5 and 6 from the secondary and primary fill respectively of ditch [3078], and each yielded over eighty-one charred items per litre (Fig. 6). The principal component in both is charred grain, with small quantities of chaff and weed seeds. The cereal assemblages are dominated by barley, predominantly a hulled variety, of which small amounts are lateral (or 'twisted') grain, which is indicative of six-row barley. Different varieties of barley seem to be expressed in the chaff assemblages with possible dense-eared six-row barley rachis segments recovered, as well as lax-eared rachis segments including six tentatively identified as two-row (*Hordeum* cf. *distichum*) lax-eared rachis segments. Other cereals identified constitute only minor components of the cereal assemblages and include a very small quantity of wheat, which displays similar morphological characteristics to that of bread wheat, as well as oats and grains cautiously identified as rye which were confined to the primary fill (3077) of ditch [3078].

The ratios of barley chaff:grain and weed seeds:grain suggest that the assemblages probably represent cleaned products with the majority of the chaff and weeds having been threshed, sieved or hand picked out during crop processing to produce the cleaned product ready either for storage or consumption. In terms of absolute counts, the secondary fill (3075) of ditch [3078] does contain more weed seeds and a greater species diversity as well as relatively frequent remains of large charred culm nodes, which appear to be of a large grass, and may

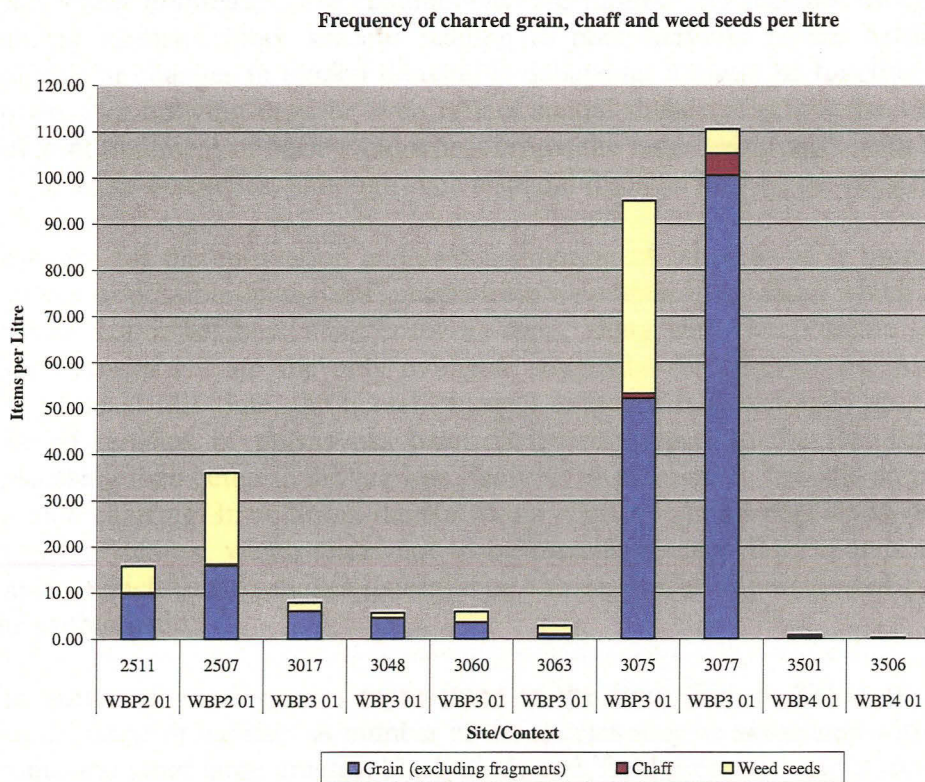
be remains of cereal straw although it is not possible to confirm this. The majority of weed species represented can be found in both areas of waste/disturbed ground and also arable land, such as cleavers, goosefoots, dock, stinking mayweed, ?brome and other grasses, and may have been harvested with the crop(s) and subsequently removed and disposed of during crop processing. Crop processing residues therefore also appear to have been incorporated into the fill, particularly the secondary fill. Taking both the results from the absolute counts and also the ratios into account it appears that residues from the later stages of crop processing and some of the cleaned product, presumably accidentally burnt, have been discarded into ditch [3078].

Grassland or meadowland is suggested by the presence of meadow/creeping/bulbous buttercup and small leguminous seeds (similar to medick/trefoil) and the grasses and small quantities of sedges indicative of damp or wet areas.

WBP4 01

The two samples from ditches [3500] and [3507] (samples 1 and 2 respectively) within WBP4 proved to contain the lowest density of charred plant material of the entire sample group (Fig. 6). Despite the application of Ratios 2 and 3 the quantities of the charred material are not sufficient to provide reliable data. Although the cereal component from ditch [3500] displays similar patterns in the frequencies of barley and wheat to the previous samples, the densities are too low to draw comparisons with the other samples with any confidence. The fill from ditch [3507] has been dated to the early medieval period but it is so sparse in charred plant remains, that it is not possible to characterise the nature of the assemblages.

Fig. 6. Density of grain, chaff and weed seeds in each sample from WBP2, 3 and 4



Discussion

The concentrations of charred grain, chaff and weed seeds (Fig. 6 and 7; Table 11) from the two samples taken from the fills of ditch [2502] (WBP2), which date to the late Saxon period,

are relatively high and the assemblages contain evidence for the later stages of crop processing. This indicates some habitation nearby.

In addition, the two samples from the primary and secondary fills of ditch [3078], WBP3, which date to the Saxo-Norman period, also contain an abundance of charred cereal grain with some chaff and weed seeds, indicating the incorporation of cleaned crop product into the fills. This disposal of an apparently cleaned product, perhaps resultant from an accident since there is also a concentration of fired earth in the two fills and potentially processed in preparation for either storage or consumption, implies habitation in the immediate vicinity. The residues from the other ditches show much lower concentrations but the general pattern is similar in all the WBP3 samples and those of the adjacent Trench 15 (see above) samples and clearly indicates domestic habitations of late Saxon date in this area of the site.

The densities of the charred archaeobotanical material from ditches [3500] and [3507] in WBP4 of possible early medieval date are too low (Fig. 6) to allow much interpretation although they tend to be grain rich perhaps suggesting that they derive from habitation activities in the vicinity.

Across these ten samples barley dominates the cereal assemblages (Fig. 7), with only traces of wheat present across the three sites. Neither is there any wheat present in the cereal chaff assemblage, and as wheat chaff is more likely to survive the charring process than that of barley (see Boardman and Jones, 1990), it confirms its relative absence in the archaeobotanical record. Wheat also occurs only as a trace in the Saxon and early medieval samples from the adjacent Trench 15 assemblages (see above). This indicates a reliance or preference for the cultivation of barley in contrast to the earlier Roman assemblages that are spelt wheat dominated. The assemblages are limited and whether this preference is due to cultural, climatic (poor seasons leading to poor harvests so the hardier barley is used), political or changes in market demand is debatable. It could be functional with barley being grown as a brewing crop or even reflect spatial divisions across the site as a result of the different treatment of barley and wheat crops, the latter being dealt with beyond the limits of the excavated trenches, although such a spatial division may be the least likely explanation.

Evidence for the cultivation and/or consumption of other crops is limited. The recovery of remains of possible 'pea-sized' pulses from a number of the flots, which may be peas (*Pisum sativum* L.) or vetches (*Vicia/Lathyrus* spp.), along with two possible seeds of flax (*Linum usitatissimum* L.) are the only evidence suggestive of other crops. Although pulses were cultivated at this time, the actual physical evidence is notoriously sparse. The scarcity of charred remains of pulses has been attributed in part to the fact that they require less processing than cereals, and are less likely to be exposed to fire and so potentially preserved through charring. In addition, the straw and chaff of cereals appears to be used in preference to that of pulses, which tends not to be recovered, especially if it is used unthreshed for fodder, which further makes determining the economic importance of pulses to a particular site problematic.

The suites of weed species represented in the flots (Fig. 8; Table 10) reflect a relatively diverse range of habitats. A number of the species may be associated with arable land such as brome and other large grasses, black bindweed, field gromwell and stinking mayweed, which also suggest the cultivation of heavy soils. Areas of waste or disturbed ground are also suggested by the presence of dock, goosefoot, oraches, cleavers and nettle, as would be expected in areas of occupation and activity, although these species can be associated with

arable land. Murphy (2005, 260) has suggested that the relative abundance of goosefoots, oraches and indeterminate Chenopodiaceae together with other grassland species recovered from the six Norfolk and Lincolnshire siltland sites he studied (see Murphy in Crowson *et al.* 2005), might indicate incomplete tillage allowing grass swards to persist beneath the crop plants, or alternatively that they may represent residues from hay. Other species of damp or wet habitats, such as members of the sedge family, may perhaps reflect the merging of the arable field boundaries with lower lying poorly drained ground or upper salt marshes, persisting as 'weeds' in the crop and harvested with it (Murphy 2005, 260).

Conversely, species such as club-rush, spike-rush and sedges may have entered the sites, and in turn the archaeobotanical record, as resources selected for domestic purposes. Murphy (2005, 260) points out that taxa such as sea club-rush (*Scirpus maritimus* L.) grows in mud under shallow water in tidal creeks, and has argued that evidence for reeds, rushes and sedges, together with associated dicotyledonous plants suggest that these species were harvested and brought onto sites for use as thatch, litter and flooring materials. On the basis of the material from sites WBP2, WBP3, WBP4 and Trench 15 and the limited extent of the excavations and the archaeology, it is impossible to attribute these assemblages to either incomplete tillage, the extension of arable areas into lower lying or upper salt marshes, or the deliberate gathering of wetland species such as reeds, rushes and sedges for domestic uses. Some could equally derive from cattle dung used as a fuel.

The recent work on siltland sites in eastern England (see Crowson *et al.* 2005) enables the three Weston bypass sites to be examined in context with similar sites on a regional scale. When considering the archaeobotanical evidence from sites WBP2, 3, 4 and Trench 15 in comparison with that from sites studied by Murphy (in Crowson *et al.* 2005) such as West Walton (WNW 42), Rose Hall Farm, Walpole St Andrew (WPA 23) and Hay Green, Terrington St Clement (TSC 17 and TSC 23) in Norfolk and Third Drove, Gosberton (GOS 16), Chopdike Drove, Gosberton (GOS 22) and Mornington House, Gosberton (GOS 37) in Lincolnshire, it becomes clear that there is a preference for the cultivation of barley, namely a six-row hulled lax-eared variety, in contrast to wheat. The minor cereal components from these other siltland sites comprise of oat, wheat and rye, of which oat is the dominant species represented. Those wheat grains that could be identified to genus appear to be bread wheat type, although some spelt (*Triticum spelta* L.) was recovered from Gosberton 16 but were interpreted as residual material from the preceding Roman phases of activity. This is consistent with the findings from the WBP2, 3 and 4 sites. Murphy (2005), also noted greater numbers of grain to chaff from the Lincolnshire sites, whereas those sites in Norfolk had more chaff to grain, which has been suggested to indicate local production in that area. It is not possible to draw such conclusions on the material from WBP2, 3 and 4 but the archaeobotanical assemblages appear to be consistent with those from the three Gosberton sites in Lincolnshire in that barley dominates the cereal assemblages and appears to be a six-row hulled lax-eared variety, with more cereal grains to chaff. Oat is also relatively frequent with only small quantities of rye, which thrives in dryer conditions, and (bread) wheat present.

Cereals such as barley and oat may have been cultivated in preference to wheat because they can tolerate more saline conditions, and would have been grown on areas of land which could have been subject to both marine and fresh water inundations (Murphy 2005). This may be an explanation for the dominance of barley in the cereal assemblages from the sites of WBP2, 3 and 4.

Table 11. Summary of the total number of items of grain, chaff and weed seed in the WBP2, 3 and 4 sites and their density per litre of sediment.

Site	WBP2 01	WBP2 01	WBP3 01	WBP3 01	WBP3 01	WBP3 01	WBP3 01	WBP3 01	WBP4 01	WBP4 01
Context	2511	2507	3017	3048	3060	3063	3075	3077	3501	3506
Sample No.	1	2	1	2	3	4	5	6	1	2
Sample vol (L)	10	11	28	9	10	14	22	9	26	19
Flot vol (ml)	52.5	60	15.5	6	20	50.5	65	50	5.5	3.5
Grain (excluding fragments)	99	176	170	42	36	12	1148	905	15	2
Chaff	2	3	0	0	0	3	22	42	4	0
Weed seeds	57.5	217	52.5	9	23	26	920	48	3	2

Per litre

Site	WBP2 01	WBP2 01	WBP3 01	WBP3 01	WBP3 01	WBP3 01	WBP3 01	WBP3 01	WBP4 01	WBP4 01
Context	2511	2507	3017	3048	3060	3063	3075	3077	3501	3506
Flot vol (ml)	52.5	60	15.5	6	20	50.5	65	50	5.5	3.5
Grain (excluding fragments)	9.90	16.00	6.07	4.67	3.60	0.86	52.18	100.56	0.58	0.11
Chaff	0.20	0.27	0.00	0.00	0.00	0.21	1.00	4.67	0.15	0.00
Weed seeds	5.75	19.73	1.88	1.00	2.30	1.86	41.82	5.33	0.12	0.11

Fig. 7. Proportion of grain, chaff and weed seeds in each sample from WBP2, 3 and 4

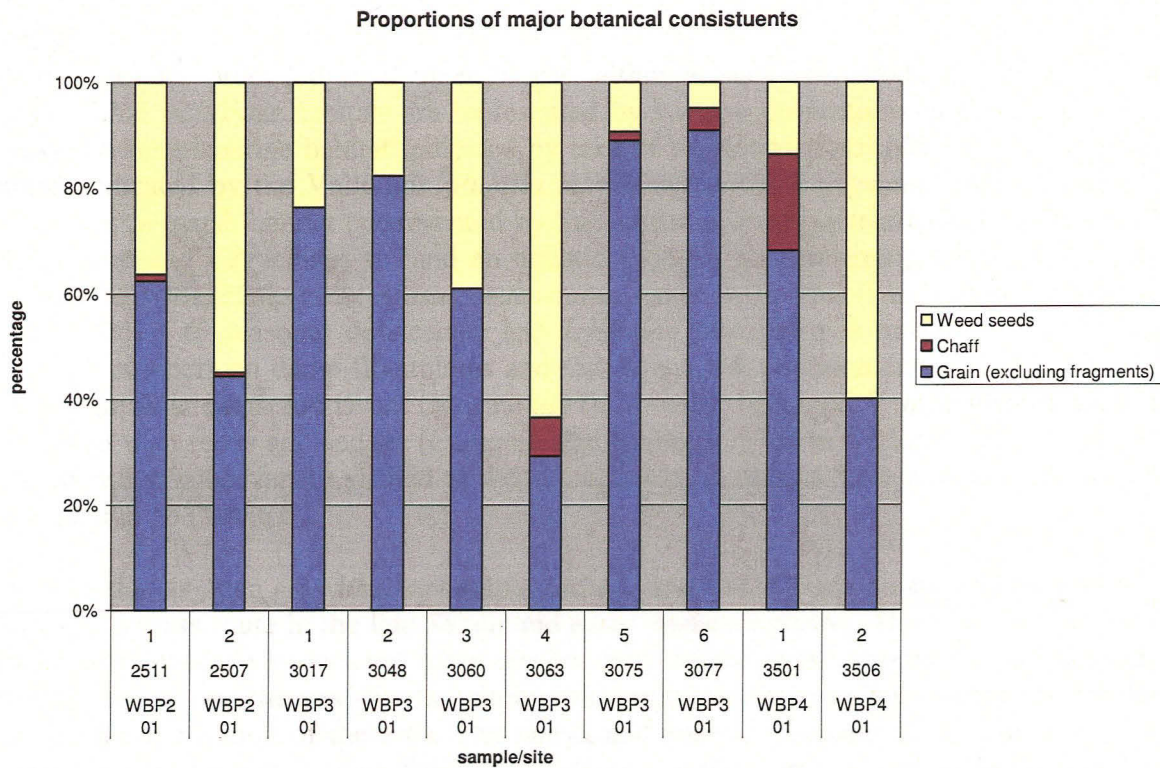
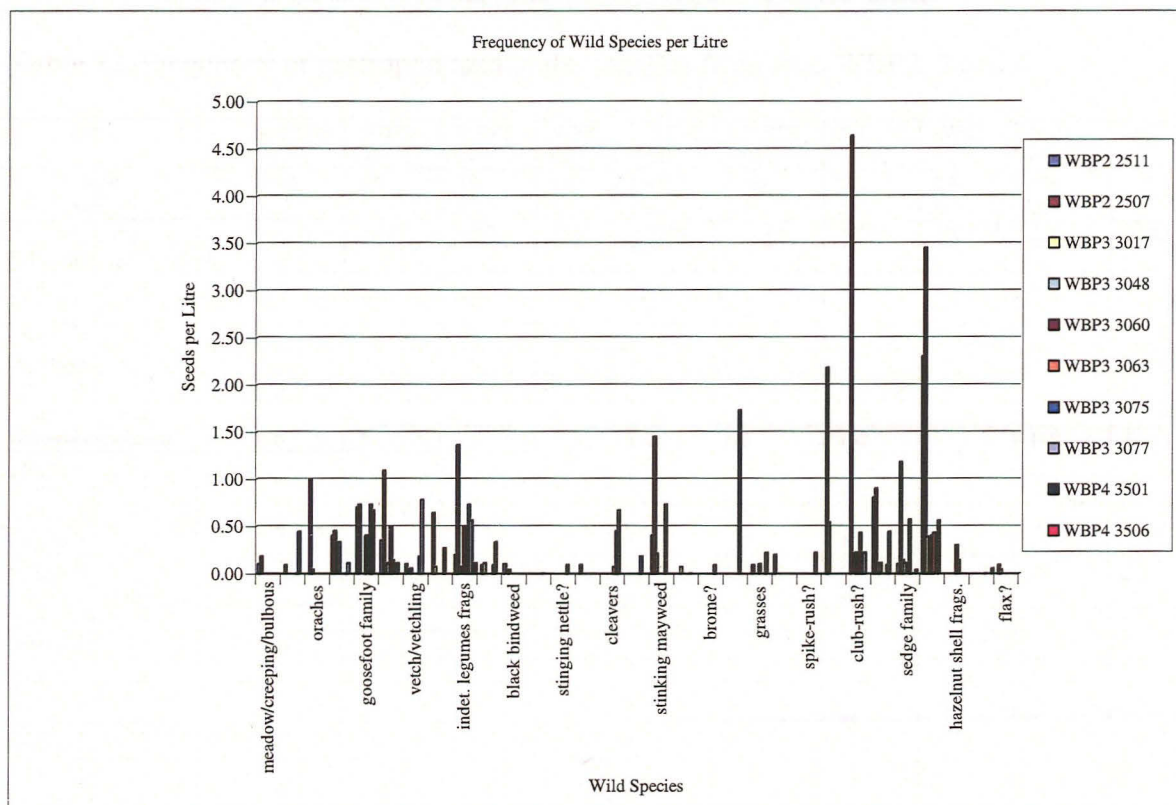


Fig. 8. Frequency of weed taxa per litre in each sample from WBP2, 3 and 4

Snails

All the samples produced snail assemblages, although only two produced abundant snail shells (Table 12). Four habitats are represented by varying proportions in these samples. A brackish water/estuarine habitat indicated by taxa of the genus *Hydrobia*; an open grassland habitat indicated by the Vallonids, *Pupilla muscorum*, *Vertigo pygmaea* and *Truncatellina cylindrica*; a marsh habitat represented by Succinidae, *Vertigo antivertigo*, *V. angustior*, *V. moulinsiana* and *Carychium* sp. and an aquatic group with *Lymnaea peregra*, *Segmentina nitidula*, and the Planorbids. *Anisus leucostoma* tends to be found in marshes and water bodies subject to seasonal dessication and *Lymnaea truncatula* is not a true aquatic and occurs in numbers on damp floodplains and also in marshy environments and at the edge of ditches, small streams and rivers (Macan 1977). *V. antivertigo* and *V. moulinsiana* are both associated with reeds and sedges (Cameron and Redfern 1976) in wetland habitats. There is no evidence whatsoever for shaded or woodland environments in these assemblages or those from Trench 15 (Table 6).

It is clear that an open grassland landscape, perhaps somewhat damp on site WBP4, prevailed along the Bypass route in the late Saxon and early medieval period. There are indications of brackish or estuarine waters but these species may derive from the marine silts deposited upon the site during the post-Roman marine transgression that must have taken place before the Saxon colonisation of the area. The marsh and aquatic elements of the fauna probably derive from the context, ditches, from which all the samples come, although clearly these had a tendency to dry out seasonally and are unlikely to have been permanently water filled. There is no discernible change in the environmental conditions between Phases 4 and 5 that

could not be accounted for by the conditions in or depth of the ditches, or whether the samples came from high or low in the sedimentary sequence in the ditch.

Table 12. Frequency of gastropod taxa in the samples from sites WBP2, 3 and 4.

Area	WBP3 01	WBP3 01	WBP3 01	WBP2 01	WBP2 01	WBP3 01	WBP3 01	WBP3 01	WBP4 01	WBP4 01
Phase	4A	4A	4A	4B	4B	4B	5A	5A	5B	?
Sample	2	3	4	1	2	1	5	6	2	1
Context	3048	3060	3063	2511	2507	3017	3075	3077	3506	3501
Estuarine and brackish										
<i>Hydrobia ventrosa</i>					1		1		1	7
<i>Hydrobia ulvae</i>	4		1		6	13	4		5	24
<i>Hydrobia</i> sp.			1							
Open country										
<i>Cecilioides acicula</i>	3		1	2	21	64			9	36
<i>Vallonia costata</i>										
<i>Vallonia excentrica</i>	6	1	1		6	1	132		169	5
<i>Vallonia pulchella</i>							3		112	6
<i>Vallonia</i> sp.	2			2	8		132		545	37
<i>Pupilla muscorum</i>	3	4	2		1	2	20		17	
<i>Vertigo pygmaea</i>					2	2	9		42	3
<i>Vertigo</i> sp.	2				9	5	7		64	3
<i>Truncatellina cylindrica</i>							21			
<i>Truncatellina</i> sp.							8			
Catholic										
<i>Cepeae</i> sp.									4	
<i>Cochlicopa lubriuca</i>										1
<i>Cochlicopa lubricella</i>							22		9	
<i>Cochlicopa</i> sp.	1					1	30		26	4
<i>Vitrina</i> sp.							11	1	1	
<i>Punctum pygmaeum</i>							8		37	3
Damp and aquatic										
Succinidae	3					6	4	1	7	
<i>Oxyloma pfferei/putris</i>					7					
<i>Vertigo antivertigo</i>				3	6				17	2
<i>Vertigo angustior</i>	2				11	8			116	22
<i>Vertigo cf angustior</i>					17				36	
<i>Vertigo pusilla/angustior</i>									91	
<i>Vertigo lilljeborgi</i>									1	
<i>Vertigo moulinsiana</i>					8	1				
<i>Carychium</i> sp.					4		2		1	3
<i>Lymnaea truncatula</i>	2				17	1	2		161	7
<i>Lymnaea peregra</i>	14	1					260	1	5	
<i>Segmentina nitidula</i>	1									
<i>Anisus leucostoma</i>	57				55	3	30			2
<i>Planorbis planorbis</i>					1		1		3	
<i>Planorbis contortus</i>	1									
<i>Planorbis crista</i>							3			

* includes burnt shells

The Fish Bones from all sites

Alison Locker

A few fish bones were hand collected (Table 13); sturgeon (*Accipenser sturio*) from a single scute from Phase 2C, late Roman. The rest were from phase 4A, Late Saxon; cod (*Gadus morhua*), a supracleithrum from a fish around 100cms total length and large gadid 2 branchiostegals, probably cod.

Table 13. Hand collected fish bones from sites WBP01 and WBP2, 3 and 4

site	WBP01	WBP301	WBP01	WBP301	WBP301
Phase	2C	?	4A	4A	4A
Context	2053	3013	3059	3060	3061
	445	135	116	135	
Sturgeon	3				
Cod				1	
Large Gadid		1	1		1
Indeterminate				3	
Total	3	1	1	4	1

The remaining fish were from sieved samples of Roman, Saxon and Medieval date shown in Tables 14 and 15, ordered by date and site.

The following species were identified; eel (*Anguilla anguilla*), Clupeidae, Sprat (*Sprattus sprattus*), Salmonidae, pike (*Esox lucius*), Cyprinidae, Gadidae, stickleback (*Gasterosteus aculeatus*), c.f. bull-rout (*Myoxocephalus scorpius*), plaice (*Pleuronectes platessa*), flounder (*Platichthys flesus*), plaice/flounder, sole (*Solea solea*) and flatfish. Burnt bone was evident in a number of samples of all dates and from all areas.

Roman

The Roman samples (Table 14) were dominated by flatfishes, primarily plaice and flounder. These were all smallish fish, under 20 cms in length, and consistent with individuals caught along the shoreline and in the case of flounder into freshwater. Eel was present in small numbers. There is no apparent difference in the composition of species from mid and late Roman deposits, or between Trench 4 and the East and West Dyke.

Of 14 samples half contained all or some burnt bone, this was not defined by species although being most numerous flatfish were the most commonly burnt. No stickleback remains were burnt. Flatfish were found in every sample, eel in half and other species in only one or two.

A single fragmentary burnt salmonid vertebra was found in the palaeochannel fill 302, a sprat vertebra in 2018 and bull-rout vertebrae in 2096 and possibly from 2139. Stickleback were few compared to later deposits, found in 2018 and ditch fills 2139 and 2160 as well as 2204, a palaeochannel fill.

Saxon and Saxo-Norman.

Of 6 contexts (Table 15), all ditch fills, four had some evidence of burning. In Late Saxon context 3060 three pike and one eel vertebra were burnt, all other burnt material in this context was indeterminate. Both pike and cyprinid bones (the latter indeterminate to species) in this context are evidence of exclusively freshwater species and were not found in the Roman deposits. In 3063 the burnt small gadid vertebra was closest to rockling. The plaice/flounder bones may belong to a single individual of less than 20 cms length. In 3017 another cyprinid vertebra was identified, at least 4 small pleuronectids (plaice/flounder) were present and a small indeterminate vertebra showed signs of compression sometimes associated with passage through the gut, none from this context were burnt. There was no discernible difference between Late Saxon and Saxo-Norman deposits.

More indeterminate material was found in these 2 phases than in the Roman or Medieval.

Table 14. Fish bones from the washed samples from WBP01 and WBP1 01, Roman phases

site	Trench WBP 01	Trench WBP 01	Trench WBP 01	Trench WBP 01		W Dyke WBP101	W Dyke WBP101	W Dyke WBP101	E Dyke WBP101	E Dyke WBP101	E Dyke WBP101	E Dyke WBP101	E Dyke WBP101	E Dyke WBP101	
phase	2B	2B	2C	2C	2B	2B	2B	2C	2B	2B	2C	2C	2C	2C	
context	302	315	315	303	2018	2115	2120	2096	2129	2151	2139	2139	2160	2204	total
Sample	4	11	10	3	1	3	4	2	5	8	6	7	10	11	
Eel		4	4		4	2		4	1				1		20
Sprat					1										1
Salmonid	1														1
Stickleback					1							1	1	2	5
Bull-rout								4			1				5
Plaice		5						2							7
Flounder		1			1							1			3
Plaice/Flounder	4	44	23	2	21	5	1	74		2	9	2	2	6	195
Sole	2							11							13
Flatfish		6							1						7
Indeterminate	1	1			15	4	3	66		1	4	1	6	12	114
total	8	61	27	2	43	11	4	161	2	3	14	5	10	20	371

phase 2B = Mid Roman C1st - C2nd AD; phase 2C = Late Roman L C3rd - C4th AD

Table 15. Fish bones from the washed samples from WBP2 and 3, Saxon and Saxo-Norman phases; and WBP01 and WBP3, Medieval phases

Site	WBP301	WBP301	WBP301		ditch	ditch		gully	gully fill			ditch	ditch	
Phase	4A	4A	4A	WBP301	WBP201	WBP201		WBP 01	WBP 01	WBP 01	WBP 01	WBP301	WBP301	
Context	3048	3060	3063	3017	2511	2507	total	1501	1511	1505	1503	3075	3077	total
Sample	2	3	4	1	1	2		6	7	8	5	5	9	
Eel		5	3		1	2	11					3		3
Clupeid		1					1							
Sprat			1			1	2							
Pike		4					4						1	1
Cyprinid		1		1			2							
Small gadid				1			1							
Stickleback	1		5			1	7	3	1	1	1	21	76	103
Flounder											1			
Plaice/Flounder		5	7	30	1	3	46	3	1		1	1		6
Indeterminate		101	50	33	3	19	206	4				1		5
Total	1	117	67	64	5	26	280	10	2	1	3	26	77	119

Phase 4A = Late Saxon C9th - C10th AD; Phase 4B = Saxo-Norman C10th - C11th AD.

Phase 5A = Early Medieval C11th - C12th AD; Phase 5B = Mid Medieval C12th - 13th AD

Early and Mid-Medieval.

Five early medieval and one mid medieval deposit produced fish, shown in Table 15. Compared to earlier periods there were few flatfishes, or any fish, apart from stickleback. Burnt material is comparatively scarce with one fin ray in (1501) and a stickleback pectoral spine recovered from ditch fill (3077).

Interestingly no stickleback remains were burnt in the whole assemblage except this one spine. These tiny fish, able to inhabit freshwater through to fully saline conditions, with distinctive and robust spines and other external elements, have been found in many assemblages from sites in this region. The characteristically 'armoured' elements are easy to identify even when fragmentary, and survive well, more so than the internal skeleton which may result in some over representation compared to other fish. The question as to whether they are accidental nettings with other small fish or the stomach contents of other predators such as pike, or living in local ditches as a natural death assemblage, or even derived from the marine sediments on the site, is difficult to address. However in this case the fact that only one stickleback spine was burnt in an assemblage where burnt bone was common, and most contexts were ditch and gully fills, suggests they could be part of a natural death assemblage. Most of the stickleback bones derive from deposits in early medieval ditch 3078 (Table 15) and given the high aquatic element among the snails in this ditch these probably reflect fishes living in the waters of the ditch.

The hand picked bone shows consumption of cod in the late Saxon period, represented by a good sized individual, possibly part of an off shore North Sea catch, though the element identified could be from a stored specimen. The large gadid branchiostegals may also be cod and are part of the gills. The rest of the assemblage was local, inshore and freshwater. Sturgeon, from late Roman deposits, entered local rivers as a non breeding migrant and have been found at other sites of Roman date in London and more locally at Saxon Flixborough (Barrett 2002), easily identified from the distinctive scutes and spines. Small flatfishes are found along the shoreline and in the case of flounder also in freshwater. Similarly small clupeids, such as sprat, enter estuaries and tolerate low salinity. Eel is common throughout all periods and together with plaice and flounder are found in most fish assemblages in the region. Only in post-Roman deposits were true freshwater species found, pike and cyprinid, but these were few. These may reflect a change in fishing practice with the inclusion of freshwater fish in the Saxon and medieval diet.

Conclusion

It is evident from the quantities of pottery, fired earth, marine shell, animal bone and charred cereal remains that all the dated features lie near associated habitation. This is particularly true for WBP3 and Trench 15 which have evidence for the processing of a marine shellfish catch, and rich charred cereal assemblages indicating the burning of cleaned crop products and a little crop processing debris in Phase 5A deposits.

There is a broad range of dietary evidence surviving and clear indications for changes between the Roman period and the Saxon. Spelt wheat is virtually absent, and although bread wheat occurs, barley is the most important cereal crop, possibly for beer as well as food. Whether this change is environmental and indicates the early cultivation of newly colonized marine silts, a situation where barley is more tolerant, or a cultural change is problematic, although the latter may be more likely. A few freshwater fishes in the assemblage suggest the beginnings of a freshwater fishery and gadids appear in the late Saxon deposits including large cod. Among the samples sheep/goat bones occur with the greatest frequency indicating

a numerical dominance of sheep although cattle may still have been the most important dietary source. A significant increase in the occurrence of probable chicken eggshell may be due to poor survival of these remains in the earlier period, but the relative lack of chicken bones among the sampled and hand excavated material suggests that these birds were kept mainly for their eggs rather than their meat. Goose first appears in the Saxon deposits, and although not specifically identified here as domestic it is a characteristic species of Saxon settlements. The sites exploit their local coastal resources by taking mussels and cockles, and particularly small plaice or flounder.

The sites appear to lie within an open grassland environment and although the field and enclosure ditches must have been waterfilled for part of the year it is probable that many dried out in the summer. There is no environmental evidence for frequent marine or freshwater flooding, although elements of the snail assemblage suggest areas of damp grassland in the early medieval period.

General Summary

There are significant differences between the Roman and post-Roman sites. This is particularly true of the dietary evidence (Table 16) where a change from spelt dominated cereal cultivation to barley takes place, bread wheat is probably the only wheat and rye appears. Freshwater fish appear for the first time in the Saxon period, as do geese and gadids. Small birds cease to occur in the samples after the Roman period and chicken eggshell becomes much more common, whilst mussel becomes the most important shellfish collected. These changes clearly reflect mainly cultural patterns but interestingly do not appear to show any great change in the level of exploitation of the local coastal resources.

There may be minor changes in the local environment. The few snail assemblages from the Roman period indicate an open landscape but with few aquatic shells, perhaps indicating fairly dry ditches, whereas in the post-Roman period the ditches are at least seasonally water filled and it is possible that conditions like this, a higher water table, could account for the favouring of barley as the main crop.

There is also a marked change in the charred plant assemblages. The post-Roman assemblages suggest mainly cleaned grain with little chaff and relatively few weed seeds, but the Roman assemblages are chaff rich, relatively grain poor and with abundant weed seeds, the latter perhaps characteristic of the fine sieving waste from the later stages of the crop processing. It seems unlikely that this represents a fundamental difference between the two periods or that different parts of the Roman and Saxon settlements were investigated. It is perhaps more likely that these differences result from the different processing strategies used for glume wheats like spelt and emmer when compared to the free threshing barley and bread wheat of the Saxon and early medieval period. These differences may themselves have been a factor in the choice of barley as the main cereal crop in the post-Roman period.

The weed assemblages from the Roman period suggest that the cereals are probably being cultivated locally, but it is not possible to suggest the same for the Saxon and medieval periods on the basis of the recovered assemblages, since these are largely cleaned grain.

Table 16. Frequency of samples with dietary species from Roman and post-Roman samples

<i>Phase</i>	<i>Roman</i>	<i>Post-Roman</i>
<i>No. samples</i>	15	16
Spelt wheat	13	1
Emmer wheat	5	
Bread wheat	7	4
Wheat	15	10
Hulled barley	12	8
Barley	9	15
Oats	12	7
Rye		1
Vetch/vetchling/pea	7	6
Flax	4	2
Hazelnut	3	2
Blackberry	1	
Elder	1	2
Cattle	5	3
Sheep/goat	8	6
Pig	2	3
Hare	1	
Goose		1
Chicken		1
cf Chicken eggshell	2	9
Small bird	5	
Eel	7	5
Clupeid		1
Sprat	1	2
Salmonid	1	
Pike		2
Cyprinid		2
Small gadid		1
(Stickleback	4	9)
Bullrout	2	
Flounder	3	1
Plaice	2	
Plaice/flounder	13	9
Sole	2	
Flatfish	2	
Fish, indeterminate	11	7
Mussel	9	15
Cockle	6	9
Oyster	2	
Tellen	2	5
Periwinkle	1	2
<i>Chlamys</i> sp.	1	
Hand collected		
Sturgeon	1	
Cod		1
Large Gadid		2

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Alison Locker, Gemma Martin* and James Rackham*

* The Environmental Archaeology Consultancy

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Appendix 8

GLOSSARY

Alluvium	Deposits laid down by water. Marine alluvium is deposited by the sea, and fresh water alluvium is laid down by rivers and in lakes.
Anglo-Saxon	Pertaining to the period when Britain was occupied by peoples from northern Germany, Denmark and adjacent areas. The period dates from approximately AD 450-1066.
Bronze Age	A period characterised by the introduction of bronze into the country for tools, between 2250 and 800 BC.
Context	An archaeological context represents a distinct archaeological event or process. For example, the action of digging a pit creates a context (the cut) as does the process of its subsequent backfill (the fill). Each context encountered during an archaeological investigation is allocated a unique number by the archaeologist and a record sheet detailing the description and interpretation of the context (the context sheet) is created and placed in the site archive. Context numbers are identified within the report text by brackets, e.g. [004].
Croft	A piece of enclosed ground used for tillage or pasture, often an arable field near a house.
Cropmark	A mark that is produced by the effect of underlying archaeological or geological features influencing the growth of a particular crop.
Cut	A cut refers to the physical action of digging a posthole, pit, ditch, foundation trench, etc. Once the fills of these features are removed during an archaeological investigation the original 'cut' is therefore exposed and subsequently recorded.
Domesday Survey	A survey of property ownership in England compiled on the instruction of William I for taxation purposes in 1086 AD.
Fill	Once a feature has been dug it begins to silt up (either slowly or rapidly) or it can be back-filled manually. The soil(s) that become contained by the 'cut' are referred to as its fill(s).
Geophysical Survey	Essentially non-invasive methods of examining below the ground surface by measuring deviations in the physical properties and characteristics of the earth. Techniques include magnetometry and resistivity survey.
Headland	Strip of uncultivated land left between areas of ridge and furrow which was used for turning the plough. These strips provided access and often became lanes or roads.
Iron Age	A period characterised by the introduction of Iron into the country for tools, between 800 BC and AD 50.
Layer	A layer is a term used to describe an accumulation of soil or other material that is not contained within a cut.
Medieval	The Middle Ages, dating from approximately AD 1066-1500.

Natural	Undisturbed deposit(s) of soil or rock which have accumulated without the influence of human activity
Neolithic	The 'New Stone Age' period, part of the prehistoric era, dating from approximately 4500 - 2250 BC.
Old English	The language used by the Saxon (q.v.) occupants of Britain.
Post hole	The hole cut to take a timber post, usually in an upright position. The hole may have been dug larger than the post and contain soil or stones to support the post. Alternatively, the posthole may have been formed through the process of driving the post into the ground.
Post-medieval	The period following the Middle Ages, dating from approximately AD 1500-1800.
Prehistoric	The period of human history prior to the introduction of writing. In Britain the prehistoric period lasts from the first evidence of human occupation about 500,000 BC, until the Roman invasion in the middle of the 1st century AD.
Ridge and Furrow	The remains of arable cultivation consisting of raised rounded strips separated by furrows. It is characteristic of open field agriculture.
Romano-British	Pertaining to the period dating from AD 43-410 when the Romans occupied Britain.
Saxon	Pertaining to the period dating from AD 410-1066 when England was largely settled by tribes from northern Germany
Toft	The site of a house or former house.
Transformed	Soil deposits that have been changed. The agencies of such changes include natural processes, such as fluctuating water tables, worm or root action, and human activities such as gardening or agriculture. This transformation process serves to homogenise soil, erasing evidence of layering or features.

Appendix 9

THE ARCHIVE

The archive consists of:

30	Context record sheets
537	Context records
12	Photographic record sheet
4	Sample record sheets
33	Sample records
9	Section record sheets
5	Plan record sheets
63	Day sheets
32	Level sheets
3	Small find record sheets
209	Sheets of scale drawings
4	Stratigraphic matrices
3	Boxes of finds

All primary records are currently kept at:

Archaeological Project Services
The Old School
Cameron Street
Heckington
Sleaford
Lincolnshire
NG34 9RW

The ultimate destination of the project archive is:

The Collection
Art and Archaeology in Lincolnshire
Danes Terrace
Lincoln
LN2 1LP

Accession Number:	2001.135
OASIS Number.	Archaeol1-35342
Archaeological Project Services Site Code:	WBP 01

The discussion and comments provided in this report are based on the archaeology revealed during the site investigations. Other archaeological finds and features may exist on the development site but away from the areas exposed during the course of this fieldwork. *Archaeological Project Services* cannot confirm that those areas unexposed are free from archaeology nor that any archaeology present there is of a similar character to that revealed during the current investigation.

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