

Excavations at Stanground South, Peterborough

Prehistoric, Roman and post-medieval
settlement along the margins of the fens

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Summary

MOLA (formerly Northamptonshire Archaeology), has undertaken archaeological excavation at Stanground South between September 2007 and November 2009 on behalf of Persimmon Homes (East Midlands) Ltd in accordance with a programme of works designed and overseen by CgMs Heritage. The site is situated on the south-eastern outskirts of Peterborough, on glacial tills overlooking along the Fen edge. The works comprised five areas of set piece excavation and a series of strip map and record areas, targeted on areas of archaeological potential identified by previous evaluation works. In total an area of 70ha was subject to archaeological mitigation.

The excavations recorded archaeological remains dating from the Bronze Age to the medieval period. The earliest features comprised four burnt mounds dating to the early Bronze Age, one of which was associated with two superimposed buildings and a small group of up to six cremations. In the middle Bronze Age there was a substantial unenclosed cemetery (urnfield) comprising 78 cremations (as well as a further possible three outlying cremations to the urnfield). In the late Bronze Age/early Iron Age a substantial droveway, up to 65m wide, was constructed leading northwards from the Fen edge to higher ground. A series of post-built roundhouses were later constructed within the confines of the droveway.

In the middle Iron Age the droveway was partitioned to form a series of enclosures, within one of which a settlement was established adjacent to the Fen edge. This included roundhouses and a number of two-post and four-post structures.

In the later Iron Age an enclosed settlement had developed to the north-west. This comprised several roundhouses within a substantial rectangular enclosure, which was open at its southern end. It appears that this began as an unenclosed site, which was later enclosed. Removal of cattle horn for working may have been occurring.

In the Roman period (2nd and late 4th centuries AD) a series of small enclosures were constructed on the eastern side of the later Iron Age enclosed settlement. These contained structures and features apparently associated with rural industry, which may have also exported surplus to market. Industries including the processing of hide, late Roman cheese making (with seven presses recovered), late Roman pottery production and some metalworking.

The economy of the site from the later Bronze Age onwards was focussed on pastoralism, with limited evidence for grain cultivation. During the Roman period this seems to have specialised further towards dairy farming. The environment of the site seems to have undergone little change from the later Bronze Age, being largely open with areas of woodland and wetter areas. Peat growth during the Iron Age resulted in the covering of some of the Bronze Age features.

During the medieval period, large portions of the site were given over to open field cultivation, evidenced by the remains of ridge and furrow cultivation. The area was partitioned in the post-medieval period by the construction of a series of drainage ditches, which form the basis of the current field pattern.

Chapter 1

Introduction

LOCATION, TOPOGRAPHY AND GEOLOGY

by WA Boismier, Steve Critchley and Helen Keeley

Stanground South is a c70ha area of land situated on the south-eastern outskirts of Peterborough (Fig 1.1; centered at NGR TL 2105 9545). It is located immediately to the south of Stanground village and bounded by the A605 and B1095 roads to the east, the B1091 Yaxley to Stanground road to the west, modern housing to the north, and by the River Nene (old course) to the south. In relief the area slopes north to south from c16m aOD to 4m aOD towards the former Fen margin paralleling the course of the river. Land use across the area prior to development was predominately arable farming with some ley pasture. A gas pipeline also crosses the eastern half of the site.

The underlying solid geology of the area has been mapped as mudstones and clays of the middle Jurassic Lower Oxford Clay (Horton 1989; Horton *et al* 1974; Critchley 2006; British Geological Survey 1984). This formation crops out in the south-eastern part of the development area along former Fen margins and comprises stiff dark grey-brown stoneless clay containing *Gryphaea* and *Belemnite* fossils, with some calcareous nodules and iron veining. Upper contact surfaces are extensively weathered or degraded and typically decalcified, eroded or disturbed and post-depositionally altered by burial under Fen peat deposits in waterlogged conditions and disturbance by fluvial and periglacial processes during the Pleistocene.

The Oxford Clay is overlain by a sequence of deposits laid down during the mid to late Pleistocene mostly as glacial lake sediments, till of Anglian Age (MIS 12) and as fluvial terrace gravels of Ipswichian (MIS 5e) Interglacial Age (Horton 1989,19). Glacial lake sediments occur across the mid and northern parts of the development area and comprise brown or grey sandy silts and clays with calcareous inclusions and clasts of quartzite, limestone and other lithologies deposited as ice-rafted material. Occasional horizons of coarser gravels are also present and interbedded with the silt and clay. Glacial till survives in the western part of the area and is a chalky boulder clay lodgement till of the Lowestoff Till Formation (Horton 1989; Maddy 1999). It consists of stiff grey clay with varying proportions of erratic chalk pebbles, flint nodules and pebbles, and clasts of sandstone, quartzite, limestone, ironstone, abraded Jurassic fossils and igneous and metamorphic rocks such as basalts, rhyolites and schists (Critchley 2006). Remnants of the severely eroded second terrace

of the River Nene also survive as thin fluvial sand and gravel deposits along the area's northern boundary. Contact surfaces for the till and lacustrine sandy silts and clays are extensively weathered and disturbed by periglacial processes with features such as ice wedges, cryoturbation involutions and deposits of soliflucted materials present across the development area. These are likely to be of Anglian (MIS 12) and/or final Devensian Cold Stage (MIS 2) in age.

Sediments of the Holocene Flandrian Interglacial (MIS 1) occur in the eastern and south-eastern parts of the development area and comprise a series of clays, peat and silts located within a large fen embayment and filling prehistoric creek-type channels of the River Nene drainage system (Horton 1989). Silts and clays of the Barroway Drove Beds form the basal Holocene stratum and consist of soft blue-grey or grey-brown clays and silts deposited as estuarine and salt-marsh tidal flats during the early Flandrian. Barroway sediments are overlain by horizons of freshwater Nordelph Peat interbedded with alluvial silts and clays that rise and merge together or feather out towards fen margins. The peat horizons are made up of black or dark brown waterlogged woody plant remains composed of branch, twig and root materials with the uppermost horizon in the series comprising a desiccated dark brown rooty peat underlying the subsoil. Layers of brown or grey alluvial silt and clay of varying thickness deposited by flood events separate the individual peat horizons and include sediments underlying the basal Nordelph Peat made up of light grey-brown alluvial clay containing occasional pebbles, root remains and decalcified mollusc shells deposited under freshwater conditions prior to the growth of the peat. Historic flood deposits of brown alluvial silts also occur within the development area adjacent to the north-eastern edge.

Mapped soils vary across the development area and closely correspond to their underlying parent materials (Soil Survey of England and Wales 1983; Hodge *et al* 1984, 12-27). Clayey and silty calcareous and non-calcareous humic alluvial soils of the Downholland 1 Association occur in the eastern and south-eastern parts of the development area within the fen embayment. Also present in this area are the earthy eutro-amorphous peat soils of the Adventurers' 1 Association formed mainly in reed and sedge peat. Permeable slightly stony humose clay loam or sandy silt loam soils of the Ireton Association occur over the till and lacustrine sandy silts and clays with alluvial gley soils of the Midelney Association overlying the thin alluvial clay present in the eastern part of the development area.

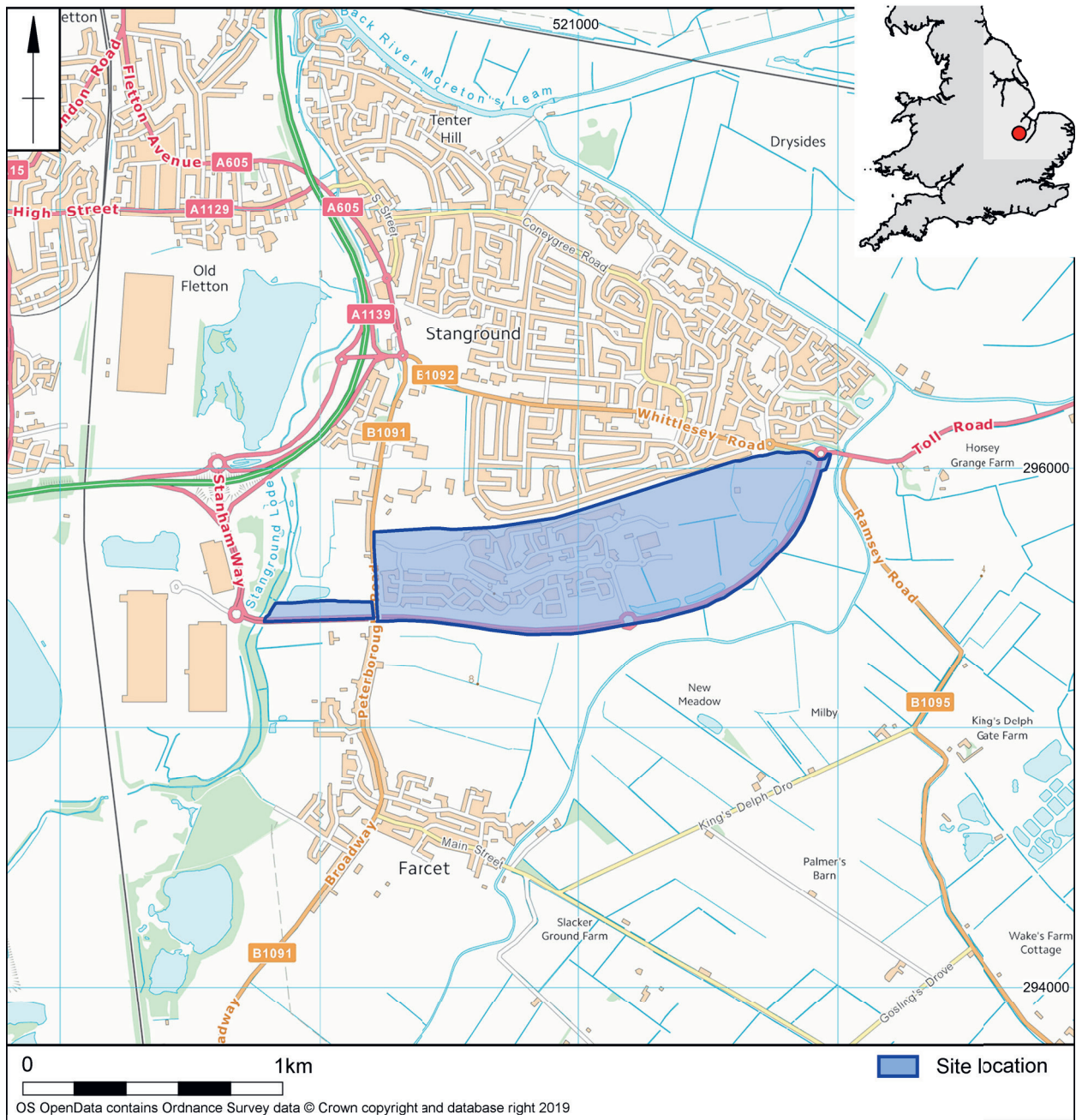


Figure 1.1. Site location

PLANNING BACKGROUND

by WA Boismier and Rebecca Casa-Hatton

As early as 2002 the area of Stanground South was one of a number of sites identified in the draft Local Plan as locations for new urban extensions to the City of Peterborough (Peterborough City Council 2002, 2005). Outline and full applications to develop the land were submitted by Persimmon Homes (East Midlands) and Hallam Land Management in 2003 and subsequently approved in 2005 by Peterborough City Council (03/00842/OUT; 10/00560/FUL). These proposals included 1525 dwellings, a primary school,

commercial and community centres, playing fields and sports pavilion, green spaces, roads and the Stanground Bypass.

Prior to determination, the local planning authority required that a programme of archaeological field evaluation be undertaken by the applicants to determine the extent and significance of any archaeological remains found within the development area, and to guide planning decisions and subsequent post-determination mitigation strategies. Evaluation works comprised a number of different investigative techniques (described below) and identified a range

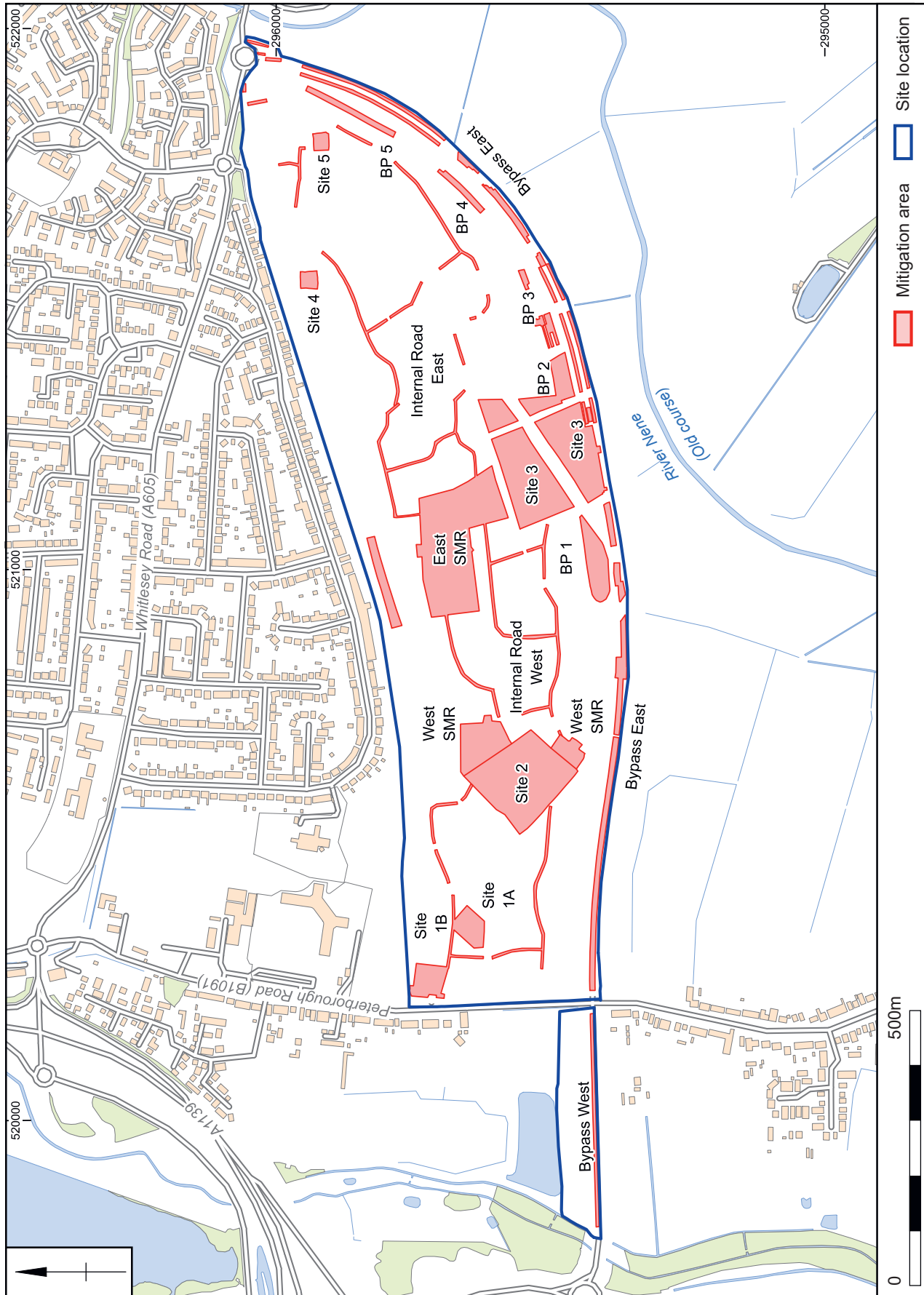


Figure 1.2. Areas of archaeological excavation

of substantive and important archaeological remains within the application area that would require further investigation and recording prior to development. This was secured by a condition attached to both the outline and full planning consents requiring that a scheme of archaeological work was secured by the applicant and agreed in writing with the local planning authority. Agreed mitigation works comprised a number of excavation, strip map and record (SMR), and watching brief areas distributed across the development area (Fig 1.2). An area of extant ridge and furrow earthworks was also surveyed as part of these works. Monitoring of the archaeological works was undertaken by Peterborough City Council's Archaeological Service (PCCAS) and Persimmon Homes (East Midlands) archaeological consultants, RPS (formerly CgMs Heritage).

INVESTIGATION STRATEGIES

by *WA Boismier, Ed Taylor and Yvonne Wolfram Murray*

Archaeological field evaluation and mitigation strategies were designed to meet the requirements of Peterborough City Council Archaeological Service (PCCAS) and specifications written by the developer's archaeological consultants during the different stages of works (JSAC 2005; CgMs 2007).

Desk-based assessment

A desk-based assessment (JSAC 1999) was undertaken to collate all available information on the historical and archaeological background of the development area. A number of different primary and secondary information sources were consulted by the study, including the Cambridgeshire Historic Environment Record based at County Hall, Cambridge, the Peterborough Historic Environment Record maintained by Peterborough City Council and the Fenland Historic Environment Record. Evidence for archaeological remains within the development area held by these sources comprised aerial photographs of undated cropmark enclosures, ridge and furrow earthworks and one or two artefact findspot locations of Roman pottery and other materials as well as the results of the geophysical survey and fieldwalking evaluation stages discussed below. Fenland records also documented that no significant archaeological remains appeared to occur within the eastern third of the development area that was fieldwalked by the Fenland Survey (Hall 1992).

The study also demonstrated that the development area was located in an area long favoured for settlement, agriculture and industrial activity along the Fen edge and rich in archaeological remains. In particular, evidence for the Roman period in the vicinity was widespread, as attested by the number of known sites within a 0.7km radius of the development area. These included pottery findspots, coins, burials and pottery

kilns. This evidence was further reinforced by the recovery of four 3rd century pottery kilns on the site of the Park Farm housing development, excavated in 1965. Later investigation of the same site during the Fenland Survey identified two further kilns encompassed by the remains of a rectilinear timber building, which were excavated during a watching brief in 1989 (JSAC 1999). More recently, archaeological excavations undertaken as part of the Anglian Water Whittlesey Reinforcement Main Scheme (Kenney 2005) identified Iron Age activity in the form of two round houses and associated features, and Roman ditch systems to the immediate south of the development area.

Field Evaluation

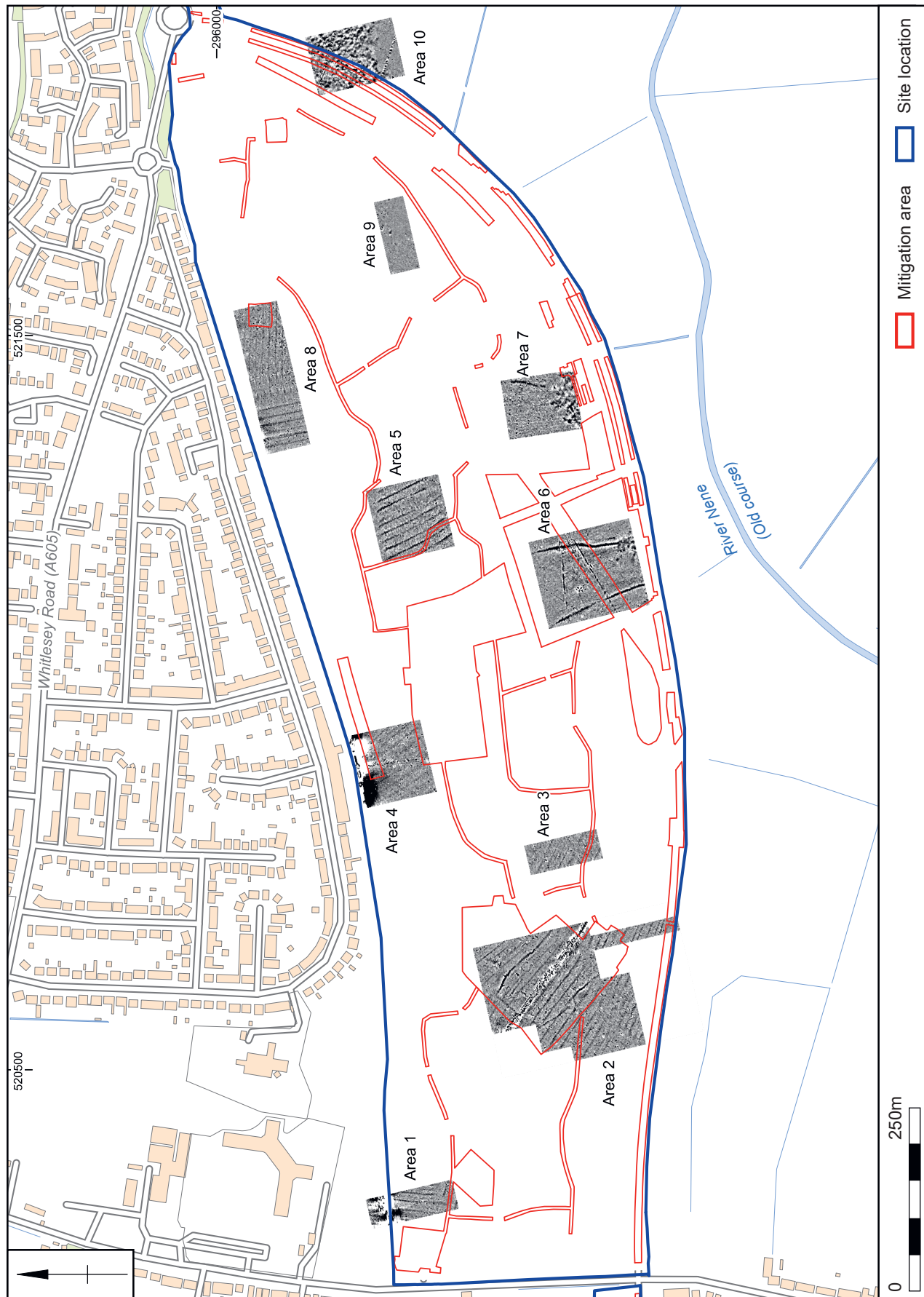
Archaeological field evaluation was undertaken in three stages to provide more detailed information regarding the character, extent and date of any archaeological remains occurring within the development area. Non-intrusive geophysical and fieldwalking surveys were employed in the initial stages of work and later followed by two phases of trial trenching. The results from each stage of work were used to guide PCCAS planning decisions and to determine the nature and extent of subsequent stages of archaeological work across the site.

Stage 1: Geophysical survey

A geophysical survey was carried out to compliment the results of the desk-based study in order to identify any surviving buried archaeological remains that may have occurred within the development area. Approximately 95ha of land, including the Bypass West road corridor, were subject to magnetometer survey in 2002 by Geophysical Surveys of Bradford with 10 areas examined (Fig 1.3; GSB 2002). Survey areas were intended to examine cropmark features identified on aerial photographs and to provide coverage of the overall area potentially affected by the development. Anomalies detected by the survey included a large three-sided ditched feature interpreted as a possible funerary enclosure with a series of internal ditch, pit and circular features. Elsewhere a parallel pair of north-south aligned linear features with internal ditch and pit features and a possible east-west aligned row of pits, areas of ridge and furrow as well as some tenuous pit-like anomalies were identified within the development area.

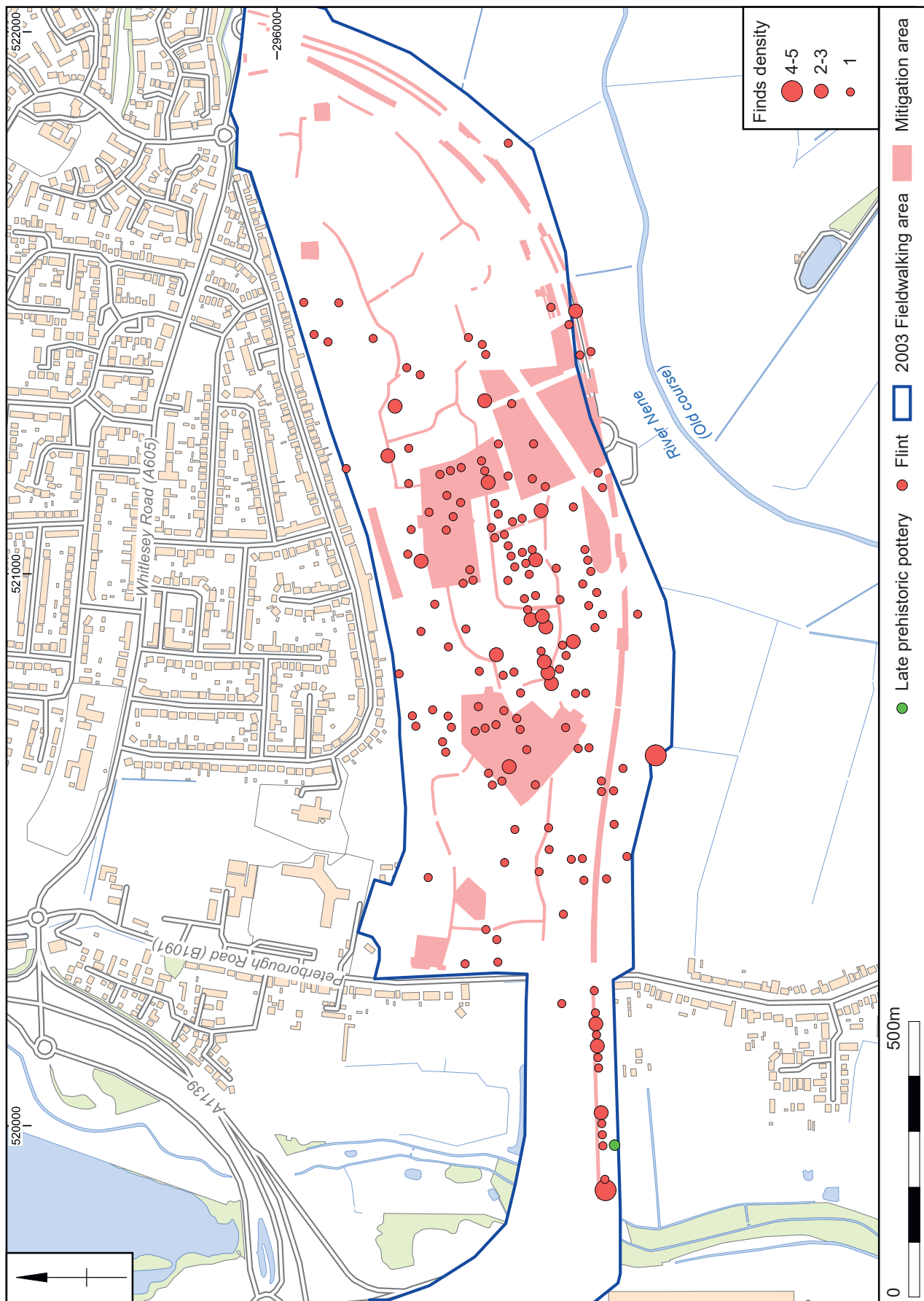
Stage 2: Field artefact collection

A fieldwalking surface collection survey was undertaken across the larger 95ha development area with only those fields under pasture or scrub not walked due to little or no surface visibility (Upson-Smith 2003). Transects 20m apart and subdivided into 20m 'stints'



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Figure 1.3. Geophysical results within the site (GSB 2002)



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Figure 1.4. Fieldwalking: late prehistoric pottery and flint distribution

were set out across the development area and finds collected off the surface and plotted at a scale of 1:2500 to identify meaningful concentrations of materials. A total of 41 flint pieces out of 346 recovered contained a datable late Neolithic/early Bronze Age element (Fig 1.4). A single undiagnostic prehistoric pottery sherd was found to the west of the site (Fig 1.4). There were also 70 Roman pottery and 13 Roman brick and tile artefacts recovered (Fig 1.5). Medieval and post-medieval artefacts were also found.

The distribution of these artefacts identified a widely scattered concentration of worked flints in the central part of the survey area (Fig 1.4). A notable concentration of Roman pottery and tile fragments were found in the south-eastern extent of the site over a c100m² area and this comprised 30 Roman sherds and 12 brick and tile which may have denoted the location of part of a settlement here (Fig 1.5). A much smaller scatter of Roman pottery was recorded in part of the north-western extent of the site over a c500m by 200m area (Upson-Smith 2003). It was thought the medieval and post-medieval pottery distribution represented manure scatters. At the western extent there was also a concentration of post-medieval material which was presumably dumping of night soil from the city.

Stage 3: Trial trenching

An initial phase of trial trenching was undertaken by Northamptonshire Archaeology along the route of the proposed Bypass East road running east to north-east across the development area from the B1091 Peterborough Road (Taylor and Maull 2003). Eighteen trenches were set out to provide an even coverage of the route. Each trench measured 2m in width with 17 of the trenches measuring 50m in length and another 25m in length which had been reduced due to the presence of overhead power cables (Fig 1.6). Only three archaeological features were found in the trenches opened along the route and comprised an undated field boundary or enclosure ditch, a recut curvilinear feature of possible Roman date and a gully dated stratigraphically to between the Bronze Age and Roman periods. Areas of fen embayment situated in the eastern and southeastern parts of the development area were also identified by this phase of trial trenching.

A further phase of trial trenching was carried out between September and December 2005 comprising the excavation of a total of 257 trenches measuring 2m wide and between 20m and 50m in length across the development area (Fig 1.7; Taylor and Aaronson 2006). Two principal areas of occupation were identified by the work including an enclosed Iron Age/Roman settlement containing at least three roundhouses previously interpreted as a possible funerary enclosure by the geophysical survey, a small Bronze Age cremation

cemetery and a complex of early Iron Age land and field boundaries including a possible droveway running towards the Fen edge. An alignment of oak posts associated with the droveway was radiocarbon dated to the early Iron Age with other ditches containing middle Iron Age pottery suggesting that a small area of settlement may overlie the earlier field enclosures. Other more dispersed archaeological features included cremation and inhumation burials, ditches, gullies and pits of various sizes. These were interpreted as the remains of field systems with ditch enclosed fields, droveways, watering holes, ephemeral settlement and isolated clusters of funerary remains. Evidence of medieval and post-medieval ridge and furrow was recorded throughout the proposed development area.

The areas of fen embayment identified during the 2003 trial trench evaluation (Taylor and Maull 2003) were also further investigated during the second stage of trial trenching (Taylor and Aaronson 2006). Peat deposits were found to be slightly to the south of the proposed Fen edge as suggested by Hall (1992, fig 7) with peat horizons along fen margins thin and largely humified, presumably through the drainage of the area. Elsewhere the peat deposits were more substantial with evidence of silting episodes during their formation. No archaeological features were seen to cut the peat but they were overlain by it in places suggesting the abandonment of these features with the encroachment of the Fen edge.

Mitigation Works

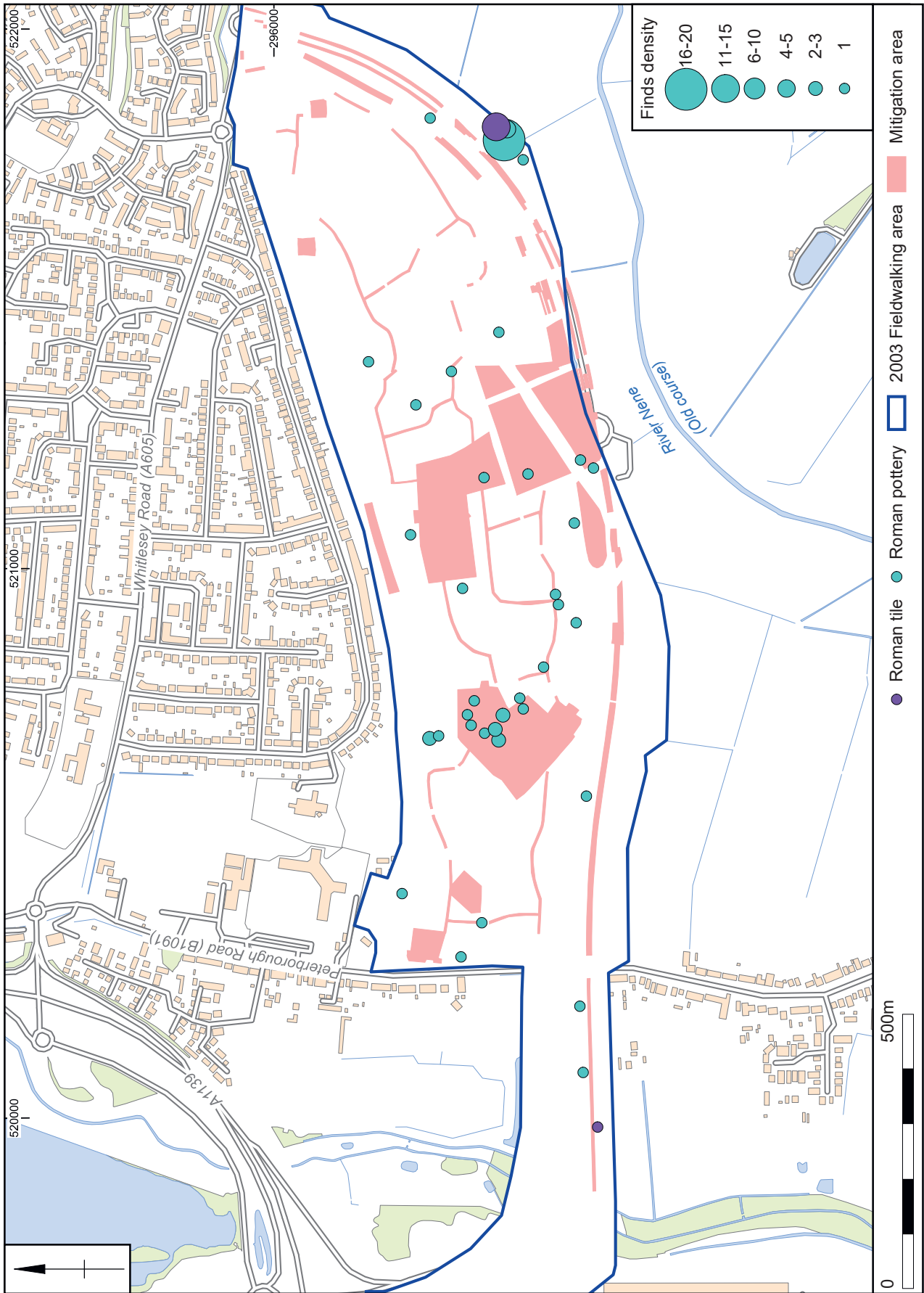
The archaeological mitigation works were undertaken in several phases between September 2007 and November 2009. A consistent excavation and recording methodology was applied in each mitigation phase to all archaeological works.

Open area excavation

The location and extent of the excavation areas closely mirrored the results of the field evaluation and comprised five sites spread across the development area (Fig 1.8). A total area of 6.2ha was subjected to open area excavation in the five sites (Sites 1-5) to investigate and preserve by record the archaeological sites, features and funerary remains identified by the geophysical survey and/or trial trenching (Table 1.1)

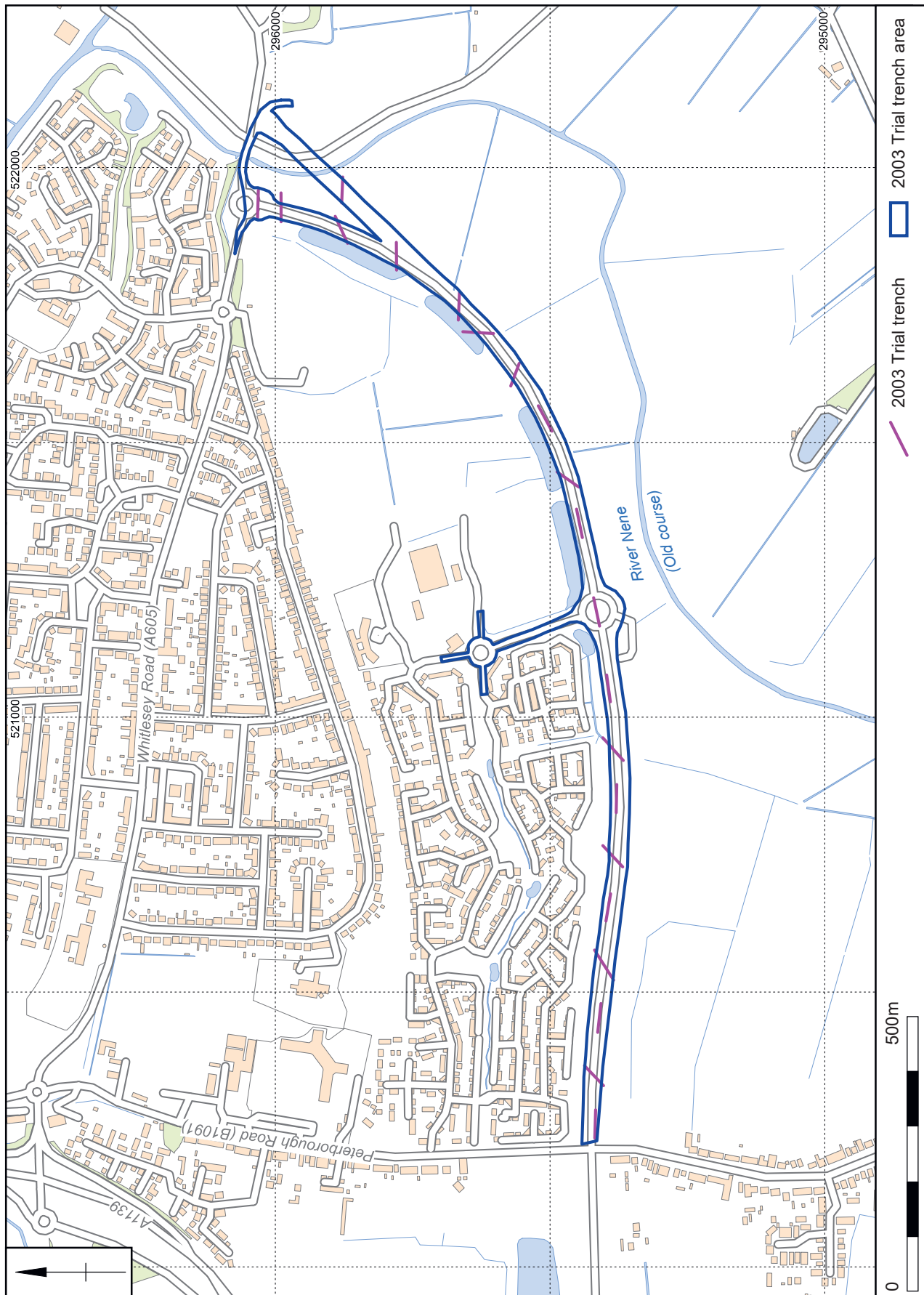
Site 1: Western ditches and enclosures

Site 1 comprised a total of 0.5 hectares subdivided into two separate areas, A and B, that were targeted on field system and enclosure ditches identified in the evaluation stage of work (Fig 1.8). These enclosures and ditches were part of a north-east to south-west aligned field system which is likely to have included



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Figure 1.5. Fieldwalking: Roman pottery and tile distribution



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Figure 1.6. Trial trenching along the route of the proposed Bypass East road

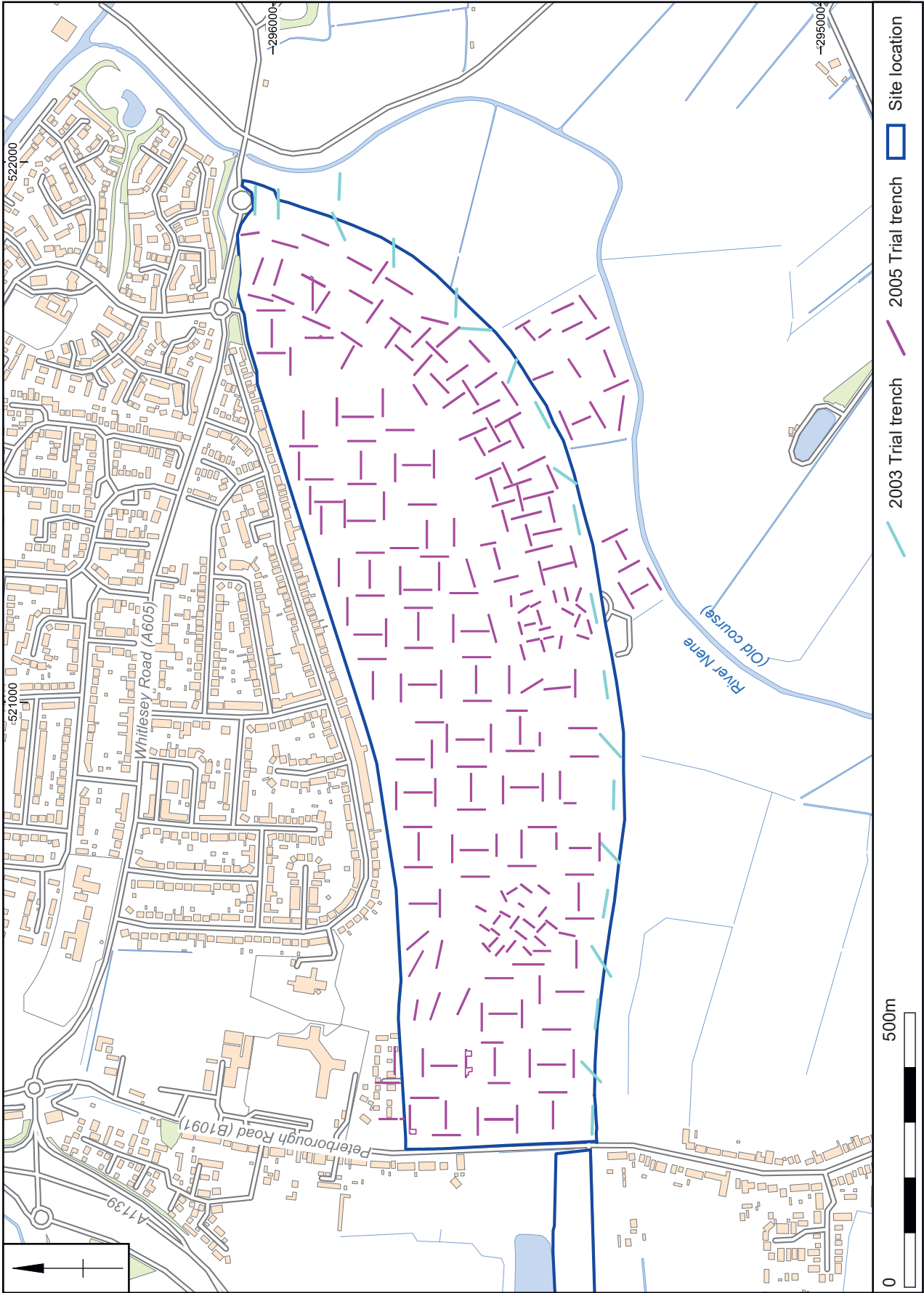


Figure 1.7. Trial trenching across the development area

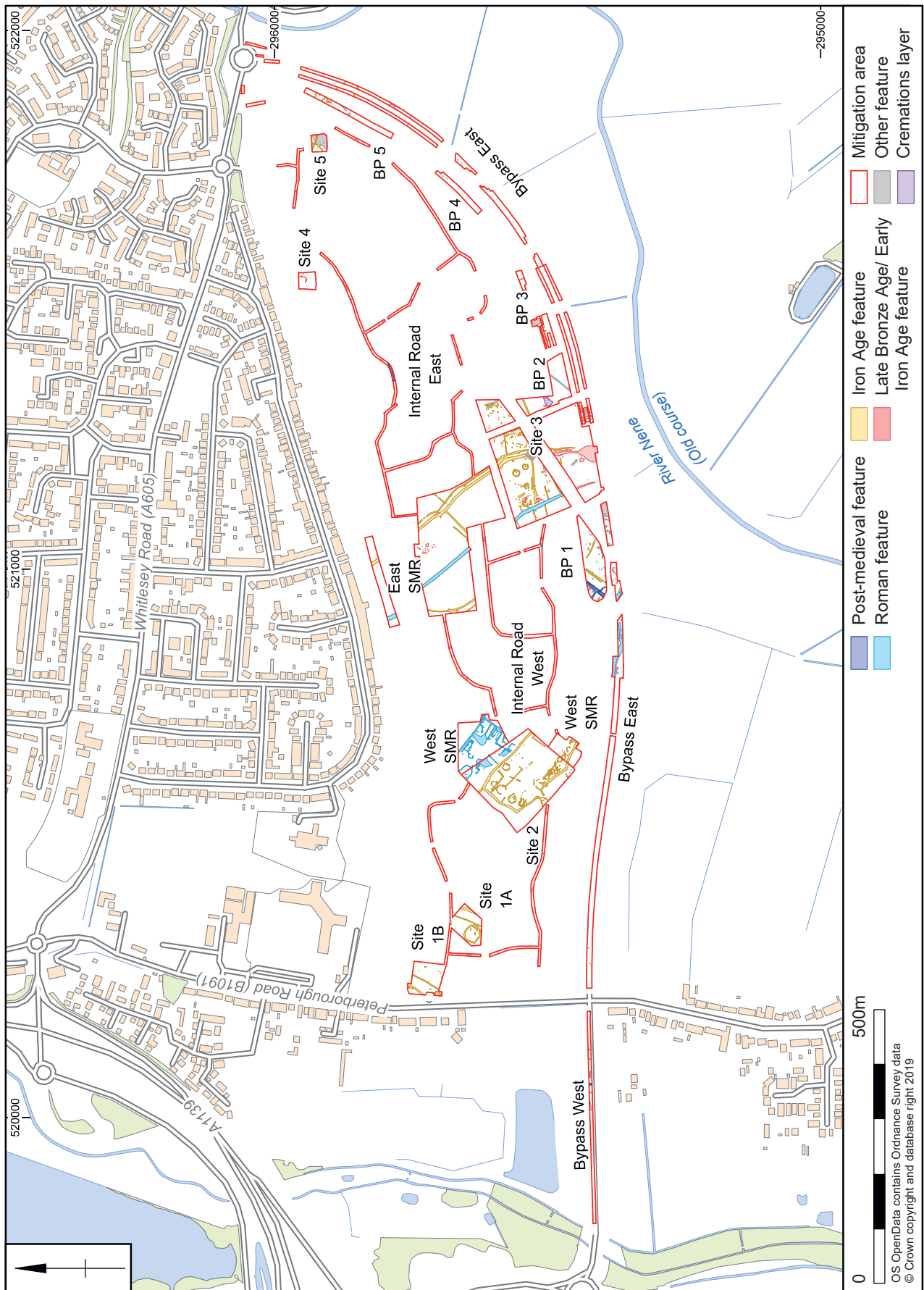


Figure 1.8. Areas of archaeological excavation.

Table 1.1. Mitigation works

Site 1:	0.76 hectares split into two parts (A and B) centred on field system and enclosure ditches identified in the evaluation.
Site 2:	2.0 hectares centred on Iron Age/Roman settlement identified by geophysical survey and confirmed by trial trenching.
Site 3:	3.5 hectares encompassing the settlement remains and droveway identified in the geophysical survey, confirmed by trial trenching and the area of Bronze Age cremations identified by trial trenching.
Site 4:	0.1 hectares centred on possible ring ditch identified by trial trenching.
Site 5:	0.1 hectares centred on the location of human remains identified by trial trenching.
	In addition to the open area excavations, various parts of the site were designated for strip, map and record (SMR) (Fig 2). These evolved during the course of the project and in their final form comprised:
East SMR:	an area of 3.24ha to the north of Site 3 examining the continuation of the droveway and associated features
West SMR:	An area of approximately 0.8ha around the periphery of Site 2
Bypass East:	a 10m wide strip along the 2km route of the bypass east of the B1091. Where the route of the bypass ran across deep peat and alluvial deposits, the 10m strip was substituted for two parallel trenches, 4m wide and 2m deep.
Bypass West:	A 5m wide strip along the 440m route of the bypass west of the B1091.
Balancing Ponds (BP1-BP5):	The entirety of the footprints of the balancing ponds to the north of the bypass adjacent to Site 3, were stripped. Other areas of balancing pond to the north of the bypass were subject to a 10m-wide strip along their centre lines.
Internal Road East and West:	A 4m wide strip along the lines of the internal road network, undertaken in two phases, East and West.
Additional Works:	A watching brief was maintained on balancing ponds to the south of the bypass. Two evaluation trenches were also excavated within the footprint of the contractor's compound.

two similarly aligned, undated ditches revealed in the road corridor excavation to the west of Site 1A. The broad boundary ditch in Site 1A may also have been the dominant landscape feature in the area upon which the field system was established.

Site 1A was c68.38m long and c58.65m wide, comprising an area of 4,010.89m² (0.76ha). The principal archaeological feature within this area was a 20m by 22m D-shaped Iron Age enclosure with an earlier phase of activity indicated by internal gully arcs and later phases by a thin pottery deposit and the partial recutting of one part of the enclosure ditch in the Roman period. Two internal postholes were also recorded for this enclosure. Other features of Iron Age date found within the excavation area to the east of the enclosure included a broad boundary ditch, aligned north-east to south-west, and a less substantial ditch running parallel to it c15m to the west. Traces of medieval to post-medieval ridge and furrow were also present across the area

During the topsoil stripping for Site 1B the north-west and south-west corners and north-western boundary of the excavation area were extended to expose a number of archaeological features and to clarify stratigraphic relationships. The final excavation area measured an average length of c60.06m and a width of c60.93m

with an overall area of 36,59.67m² (0.36ha). The major archaeological feature in this area was a rectilinear Iron Age enclosure measuring at least 60m by 22m and aligned north-east to south-west with a funneled entrance defined by two gully spurs. Internal features comprised a semi-circular gully arc and a small number of postholes dating to the Iron Age. An incomplete disarticulated human cranium was also recovered from one of the entrance gullies. Elsewhere a small number of isolated pits and postholes were scattered across the remaining excavation area.

Site 2: Iron Age and Roman settlement area

Site 2 comprised 2.0 hectares centered on the Iron Age and Roman settlement area identified in the evaluation stage by geophysical survey and trial trenching (Fig 1.8). The excavation area was later extended to 2.8 hectares by the two West SMR areas placed adjacent to its north-eastern and south-eastern boundaries (detailed below).

The principal archaeological feature within Site 2 was a 155m by 70m three-sided rectilinear Iron Age enclosure ditch with an outward-turned funnel shaped entrance in its south-west side and trackway ditches leading to it. Internal features for this enclosure were quite extensive and comprised internal sub-enclosures, a series of circular-subcircular roundhouse gully arcs,

posthole structures and other structurally-related gully features. They were largely situated adjacent to the enclosure ditch on all three sides as well as isolated postholes, variable sized pits and a quantity of pottery and other artefactual and ecofactual materials including a neonate burial from inside one of the roundhouses. Multiple phases of Iron Age activity were indicated by intercutting gully arcs and the recutting of the enclosure ditch on more than one occasion with the latest ditch recut on the north-eastern side dating to the Roman period with pottery from the 2nd to 4th centuries AD. The enclosure ditch and settlement features recorded for this excavation area are collectively referred to as the enclosed settlement within this report.

Roman archaeological features were present in the north-eastern part of Site 2 and only occurred outside of the Iron Age enclosure. Recorded features included shallow enclosure gullies and ditches, pits, postholes, midden spreads and shallow depressions with 2nd to 4th century pottery, coins and other artefacts as well as animal bone assemblages largely dominated by cattle remains.

Medieval to post-medieval ridge and furrow was also present across the excavation area and had truncated or removed parts of a number of features dating from both the Iron Age and Roman periods.

Site 3: Droveaway, settlement remains and urnfield area

The excavation area for Site 3 comprised a total of 3.5 hectares targeted on the droveaway and settlement remains identified in the evaluation stage by geophysical survey and trial trenching, and the area of the Bronze Age cremation cemetery found during the 2005 trial trenching (Fig 1.8). This excavation area was dissected roughly in half by a 25m wide easement for the gas pipeline crossing the development which was left unexcavated, and further subdivided by a north-northwest to south-south-east aligned drainage ditch separating the eastern part of the area from the remaining parts of the site. The southern boundary of the excavation was also extended in one area to further expose a large archaeological feature and later by the addition of strip, map and record areas (BP 2, parts of Bypass East) adjacent to the southern edge of the eastern half of the site (detailed below). The droveaway and associated features were further investigated by the East SMR area placed some c15m to the north of Site 3 (see below). Control baulks were also left standing in the southern part of the excavation area to record stratigraphic relationships and for palaeoenvironmental sampling.

The droveaway was the dominant archaeological feature within Site 3 and comprised two parallel ditches, the eastern and the western ditches, aligned roughly

north-west to south-east, separated by just over 90m. Towards the southern end the ditches turned to the south and the droveaway narrowed to 65m wide where both ditches petered out and ended at the Fen edge with a thin c20m wide silty clay outwash deposit present at the end of the eastern ditch. Pottery and other finds indicate that the droveaway was likely to have originated in the late Bronze Age-early Iron Age and included a posthole alignment adjacent to the southern end of the eastern ditch comprising 45 postholes containing some poorly preserved wood radiocarbon dated (Taylor and Aaronson 2006, 30) to the early Iron Age from 790-420 cal BC within 95% confidence (Beta-213495) (Table 3.19; Fig 2.1). The southern end of the droveaway appears to have been abandoned to the encroaching fen by the late Iron Age as peat started to form over the lower part of the site, effectively foreshortening the southern end of the droveaway. Later by the middle-late Iron Age the eastern side of the droveaway had been added to by the cutting of a second parallel ditch between 2.5m and 5.0m to the east of the droveaway ditch. The western ditch of the droveaway was also recut at this time with the ditch shifted slightly to the east, or inside, of the droveaway and later recut during the Roman period where it appeared to have gone out of use by the 3rd or 4th century AD.

Archaeological features associated with the droveaway included a series of internal and external 0.60m to 3.50m wide ditches dug at right or near-right angles to the droveaway ditches and forming small enclosures with possible pastoral or some other specialist function such as the ditch on the eastern side of the droveaway enclosing most of the two-post structures recorded for the excavation area. Other associated features comprised a posthole roundhouse radiocarbon dated to the middle Bronze Age between 1380-1160 cal BC (Beta 420683; Table 3.19), another post-built roundhouse dated to the late Bronze-early Iron Age and a series of middle-late Iron Age circular-subcircular roundhouse gully arcs, posthole structures and other structurally-related gully and posthole features such as two- and four-post structures, as well as isolated postholes and various sized pits including a possible well and a partially cobbled natural hollow. More than one phase of Iron Age activity was indicated by intercutting ditches and gully arcs and the cutting of the hollow by later enclosure and droveaway ditches containing Iron Age pottery. A quantity of Bronze and Iron Age pottery and other artefactual and ecofactual materials including a crouched inhumation burial (B86) were recovered from the various settlement features associated with the droveaway in this part of Site 3. One post-built roundhouse in the settlement area was also radiocarbon dated to the middle Iron Age between 400-230 cal BC within 95% confidence (Beta-420684) (Table 3.19; Fig 2.1). These features are collectively referred to as the Fen edge settlement throughout this report.

The unenclosed Bronze Age urnfield cremation cemetery was situated in the south-eastern corner of Site 3 and was located on slightly raised ground forming a peat-free peninsula along margins of the Fen edge (Fig 1.8). It was first identified in the evaluation stage by trial trenching in 2005 and subsequently fully excavated during the mitigation phase of archaeological work. The cemetery comprised 78 cremation burials and included 23 poorly preserved urns containing burnt bone, a single cist burial with stones placed around the burnt bone, and 54 unurned pit deposits where the burnt bone had been placed directly into the feature. Spatially the urnfield was separated into two burial groups, a Western Group comprising 54 cremations and a smaller Eastern Group comprising 21 cremations. The two groups were also vertically separated by a thin c0.10m thick layer of mid brownish-grey clay into 'lower' and 'upper' deposits. This layer appears to have been derived from one or more short-term flooding events and contained charcoal and fragments of burnt human or animal bone, reworked by the disturbance of cremation deposits in the Eastern Group. Two postholes were also found in the lower deposits and may have represented the locations of former upright posts which functioned as markers for the urnfield cemetery. The cemetery has been dated by four radiocarbon dates to the middle Bronze Age with the lower and upper deposits displaying a degree of overlap in radiocarbon dates and spanning the period 1500-1225 cal BC (Table 3.19; Fig 2.1).

To the north-west of the cemetery area were three outlying pit deposits containing burnt animal bone or unidentifiable burnt bone fragments (Fig 1.8). A quantity of waste flint flakes and blades was recovered from two of these deposits with one of them also containing a small number of pottery sherds with a Bronze Age fabric. The majority of the flint was not heat altered and reasonably fresh in appearance, suggesting that either the pits for the burnt bone deposits had been cut through an earlier flint working activity area or that this material had been deliberately deposited with the burnt remains with the former rather than the latter the preferred interpretation.

During soil stripping operations a burnt mound was exposed in the southern half of Site 3 that had not been identified during the evaluation stage (BM4). It comprised a c447.77m² spread of angular fragments of burnt flint gravel and pebbles, black silty clay and charcoal overlying two pits and two postholes from an earlier phase of activity. Associated features included a sub-rectangular trough pit containing an oak plank adjacent to the east side of the burnt mound, two pits and a short gully to the south of the mound and immediately to the north of the burnt mound, a group

of features that included two hollows, a shallow ditch and small pit, and three postholes. A north-south control baulk was also left standing across the eastern edge of the mound. The mound has been dated to the early Bronze Age with radiocarbon dates of 2120-2090/2040-1915 cal BC (Table 3.19; Fig 2.1).

A number of isolated pits and postholes were also scattered across the different parts of the excavation area for Site 3. These included the two posthole structures on opposite sides of the double ditches on the eastern side of the driveway and may represent the remains of a plank bridge across them. No datable finds were recovered from these features and from most of the scattered pits and postholes recorded for the excavation area.

Site 4: Ring ditch

Site 4 comprised a c0.10 hectare excavation area centered on a possible ring ditch identified in the evaluation stage by trial trenching (Fig 1.8). Features exposed in the stripped excavation area comprised two curvilinear gullies representing the surviving eastern half of a roundhouse and dated to the late Bronze Age to early Iron Age by pottery recovered from their fills. The two gullies were separated by an east-facing entrance with three postholes present inside the entrance and possibly representing the remains of a porch.

Medieval to post-medieval ridge and furrow was also present within Site 4's excavation area and largely responsible for the destruction of the western part of the roundhouse and the truncation of those features surviving in its eastern half.

Site 5: Location of human remains

The excavation area for Site 5 measured 33.26m by 29.26m (973.19m²) and was targeted on the area surrounding the location of the poorly preserved human skeletal remains of a 12-15 year old individual exposed by trial trenching in the 2005 field evaluation (Fig 1.8). Archaeological features recorded for this area included two intersecting late Iron Age ditches with multiple phases of activity indicated by the recutting of both ditches on more than one occasion. The earlier ditch in addition, had also been cut by two groups of intercutting pits, which were in turn truncated by a later recut of the ditch. The partial and poorly preserved human skeletal remains of an additional juvenile inhumation burial were also located in the upper fill of this ditch recut and the adjacent fill of one of the pit groups truncated by it. Pottery dating to the late Iron Age-1st century AD was recovered from both ditches and individual recuts along with a small amount of burnt clay or daub fragments.

Other features found within the excavation area included a small number of postholes of likely Iron Age date and an undated pit overlain by a c0.40m thick deposit of alluvial silty clay. This deposit extended across the entire eastern half of the excavation area and appears to have been derived from one or more overbank flooding episodes associated with the prehistoric channel system of the River Nene recorded to the east of the area.

Strip, map and record (SMR) excavation

East SMR

The East SMR excavation area comprised a total of 3.24 hectares situated some c15m to the north of Site 3 and was designed to examine the continuation of the driveway across the development and any archaeological features found associated with it. This area was in two parts with a 2.94 hectare L-shaped area located immediately adjacent to Site 3 and a much smaller 0.30 hectare rectilinear area placed further north near the boundary of the development (Fig 1.8). The northern boundary of the larger area was also extended in one place to further expose a series of posthole features.

Archaeological features were largely a continuation of those recorded for Site 3 and comprised the parallel driveway ditches, aligned roughly north-west to south-east with late Bronze-early Iron Age, middle-late Iron Age and Roman phases of use. In the northern rectilinear area only the two eastern and western ditches were present, with the smaller outer eastern ditch not extending into the area. A small number of enclosure ditches at right or near right angles to the principal driveway ditches and an entrance in the later outer eastern driveway ditch were also recorded for the larger of the two excavation areas. Near the northern edge of this area a group of postholes representing the remains of three post-built roundhouse structures and a likely fence line was found during soil stripping and dated to the late Bronze Age-early Iron Age by pottery recovered from posthole fills. Other archaeological features for this excavation area included a curving ditch of late Iron Age date adjacent to the western edge of the area, a large pit or well, and some traces of medieval to post-medieval ridge and furrow across its north-western part.

West SMR

The excavation area for the West SMR comprised a total of c0.80 hectares situated around the periphery of Site 2 (Fig 1.8). This area was in two parts with a 0.20 hectare area placed adjacent to the south-

eastern boundary of Site 2 to expose the remaining parts of the Iron Age enclosed settlement and a larger 0.56 hectare area placed along the north-eastern boundary of Site 2 to excavate a Roman enclosure settlement. The north-eastern boundary of the larger area was also extended in one place to expose a series of intercutting features with the south-eastern boundary for the smaller area similarly extended at one point to further reveal a number of archaeological features. Archaeological features extending beyond the south-west corner of this area were not exposed by later soil stripping.

Archaeological features for the smaller south-eastern area were largely a continuation of those recorded for the Iron Age enclosed settlement and comprised a further length of the south-western aligned enclosure ditch, roundhouse gully arcs and other structurally-related gully features, as well as isolated postholes and a few pits. Middle-late Iron Age pottery was recovered from a number of different feature fills with intersecting gully arcs indicating more than one phase of rebuilding or activity within the area.

The principal archaeological feature for the larger north-eastern excavation area was a 100m by 80m three-sided rectilinear Roman enclosure with an L-shaped ditch forming the north-east and south-east sides of the enclosure and the north-east Iron Age enclosure ditch within Site 2 recut to form its south-western boundary. Within the enclosure there were a number of sub-enclosures defined by ditches and gullies situated around its periphery. These sub-enclosures were mostly rectilinear in plan with post-built structures present in at least two of them and two stone-lined tanks or cistern-like industrial features within the confines of another. Other associated archaeological features included numerous pits, isolated postholes, a patchy cobbled surface and a large shallow depression utilized as a midden and infilled with pottery, tile, metal objects and animal bone. The partial remains of a probable adolescent inhumation and a disarticulated and fragmentary skull were also recovered from the ditches of two sub-enclosures. Roman pottery and other finds dating from the 2nd to 4th century AD were recovered from a number of different feature fills with more than one phase of rebuilding or activity indicated by numerous recut and intercutting ditches and gullies and by a large quarry pit cutting one of the sub-enclosures and the larger L-shaped enclosure ditch.

Medieval to post-medieval ridge and furrow was also present within both parts of the West SMR excavation area and had truncated or removed portions of a number of features dating from both the Iron Age and Roman periods in the two areas.

Bypass East

The Bypass East excavation area comprised a total of c2.0 hectares situated within a 10m wide strip set out along the 2km route of the Stanground Bypass east of the B1091 road (Figs 1.8 and 1.9). Where the route of the bypass ran across deep peat and alluvial deposits, the 10m strip was substituted for two parallel trenches, 4m wide and 2m deep. Archaeological features and deposits exposed during soil stripping for the bypass were then sample excavated at varying levels of intensity.

Two burnt mounds were the principle archaeological features found within the Bypass East road corridor. One of these burnt mounds (BM1) was situated adjacent to the south-eastern corner of Site 3 within the southern trench of the parallel 4m wide trenches crossing an area of peat. An additional 175m² area was also excavated in a 7m by 25m trench placed between the two trenches to examine any archaeological features and/or deposits possibly associated with the mound. The mound itself was not fully exposed in the trench and comprised a c46.17m² crescent-shaped spread of angular fragments of burnt flint gravel and mottled yellow-dark brown silty and sandy clay with abundant charcoal inclusions overlying a sub-rectangular pit containing a wooden oak trough. Other associated features included a number of hollows and

pits to the north, east and west of the burnt mound and a later ditch cutting through the mound on its western edge. The second burnt mound (BM2) was located further to the west within the road corridor and consisted of a c17.34m² spread of angular burnt flint fragments, dark grey silty clay, and charcoal inclusions with its northern edge cut and/or eroded by a later shallow palaeochannel. Both of these features were sample excavated utilising opposing diagonal box sections to investigate stratigraphic relationships and the possible presence of archaeological features underneath mound sediments. Features associated with this burnt mound comprised two pits along the southern edge of the mound and a group of features that included, an elongated hollow, three additional pits, including a possible trough pit, and a number of shallow postholes situated to the west and south of the burnt mound. The two mounds appear to date to the early Bronze Age with materials for mound BM1 radiocarbon dated to 1730-1510 cal BC (Table 3.19; Fig 2.1).

Other features found within the stripped road corridor included a small pit cremation at the western end of the bypass containing 9g of unidentifiable burnt bone and a 5m wide Roman ditch aligned north-west to south-east with pottery dating from the Iron Age to the 2nd century AD recovered from its fill. A number of undated pits, gullies and other archaeological



Figure 1.9. Bypass East stripped, looking north-east

features located mainly along the north-eastern part of the bypass were also recorded. Where these undated features were associated with discrete areas of activity of known date they were assumed to be part of that phase during post-excavation. However, a few isolated features within the road corridor could not be assigned to a phase with any degree of confidence and remain undated. Those features which were overlain by peat horizons were likely to be Iron Age or earlier in date.

The palaeochannel adjacent to one of the burnt mounds was at least 75m long, 8m wide and 0.30m deep and appears to have silted up at some time after the 2nd century AD from the small number of abraded 2nd century sherds recovered from its fill.

Bypass West

The excavation area for Bypass West comprised a total of c0.22 hectares within a 5m wide strip set out along the 440m route of the Stanground Bypass west of the B1091 road (Fig 1.8). Archaeological features exposed within the stripped area included two parallel gullies representing a former post-medieval hedge line still surviving as a field boundary to the south of the road corridor. The remaining archaeological remains recorded for Bypass West comprised a small number of undated shallow pits, gullies and other similar types of features. These features within the road corridor could not be assigned to a phase during post-excavation with any degree of accuracy.

Balancing Ponds (BP1-BP5)

The entirety of the footprint areas of two balancing ponds north of the bypass and adjacent to Site 3, were stripped. Other areas of balancing pond to the north of the bypass were subject to a 10m-wide strip along their centre lines. Balancing Pond 3 (BP3), in addition, was subdivided into two separate parts by a north to south aligned drainage ditch partially extending into the balancing pond area. The area between the two parts was left unexcavated.

The excavation for Balancing Pond 1 (BP1) comprised a total of c0.35 hectares situated within a tear-shaped area adjacent to the gas pipeline easement to the west-southwest of Site 3. Archaeological features recorded for this area included a number of gullies and ditches as well as a spread of silty clay containing pottery and other archaeological materials. Pottery dating to the late Iron Age-1st century AD was recovered from the fills of most of these features with only one ditch undated through the absence of pottery from excavated segments. An urned cremation deposit (B5), was also found adjacent to one of the ditches and dated to the Iron Age on the basis of vessel form. Additional features found within

the area included a Roman pit, three post-medieval boundary ditches, an undated four-post structure, and two groups of postholes and pits likely dating to the late Iron Age. A number of undated pits and other features such as tree throws and shallow natural hollows were also recorded across the stripped area during fieldwork. These undated and natural features were not assigned to a particular phase or period.

Balancing Pond 2 (BP2) consisted of a rectangular-shaped area of some c0.27 hectares in extent located immediately alongside the south-east corner of Site 3 (Fig 1.8). The principal and only archaeological feature recorded was an undated ditch segment aligned northeast-southwest extending across the stripped area. No other anthropogenic or natural features were found within the excavation area.

For Balancing Pond 3 (BP3) the excavation area consisted of c0.98 hectares situated within two separate areas along the northern periphery of the bypass. The western part comprised three 5m-10m wide trenches with a total area of 0.1 hectares and the eastern part a larger 0.88 hectare area placed further to the east along the northern margins of the bypass. The north-eastern boundary of the western area was also extended in one place by a further 0.09 hectares to fully expose a burnt mound (BM3) and associated features. Stripping for the eastern area stopped after no further archaeological features were revealed by the strip other than a single ditch. Burnt mound sediments were largely excavated by machine to expose underlying features. Exposed features were then sample excavated at varying levels of intensity.

The burnt mound (BM3) was located in the north-eastern corner of the western part of the balancing pond area. It comprised a c787.93m² oval-shaped spread of angular fragments of burnt flint gravel and dark blue-grey silt which was overlying a number of archaeological features. These features included a trough with decayed wood and associated spoil heap of clay and burnt material, a number of postholes and a hearth to the east of the trough with an associated small pit and three groups of stakeholes. Other features lying underneath mound sediments comprised two superimposed rectangular structures composed of postholes and gullies, and a small cemetery comprising six cremation burials, four of which were overlain by burnt mound material. Two of these burials were associated with small postholes. In addition, two isolated cremations also lay further to the north and south of the burnt mound and a group of stakeholes and a small posthole to the south-west. The mound has been dated to the early Bronze Age on the basis of its similarity in make-up and associated features to the two radiocarbon dated mounds BM 1 and BM4 (see Table 3.19; Fig 2.1).

The only archaeological feature recorded for the eastern part of Balancing Pond 3 was an undated ditch segment aligned roughly north-west to south-east across the area stripped.

Balancing Pond 4 (BP4) consisted of a rectangular-shaped 10m wide trench comprising a total of c0.10 hectares in area located along the northern periphery of the bypass (Fig 1.8). The only archaeological remains occurring within this area consisted of an undated shallow gully extending across the trench and two, similarly undated, small pit-like features. No other features were found within the excavation area for this balancing pond.

The excavation area for Balancing Pond 5 (BP5) comprised a total of c0.18 hectares situated within a 10m wide trench located along the north edge of the bypass route. Archaeological features recorded for this area included a number of gullies, pits and postholes dispersed throughout the north-eastern end of the trench. Pottery dating to the Iron Age was recovered from the fill of one gully spur. No pottery or other dating materials were recovered from the remaining features.

East and West Internal Roads

The area for these strip, map and record excavations comprised a total of c1.32 hectares situated within a 4m wide strip along the lines of the internal road network for the development (Fig 1.8). This strip was undertaken in two phases related to the east and west development stages of the site. The eastern road network comprised c0.69 hectares of the total stripped area and the western part the remaining c0.36 hectares.

Archaeological features dated to the Iron Age-1st century AD by pottery only occurred within the east road corridor and included a group of ditches, gullies and pits. Roman pits and gully features dated by pottery from the 1st to 3rd centuries AD were more widespread and occurred in both in the east and west road network areas. Post-medieval ridge and furrow, an isolated pit and boundary ditches were also present in a number of road corridors. A number of undated pits and other features such as tree throws and shallow natural hollows were also recorded for the stripped corridors in both areas.

Watching brief and other works

Balancing Ponds South of Bypass East

Balancing ponds located north of Bypass East were subject to a watching brief during construction works. This work comprised attendance during earthmoving operations and the rapid recording of features and the recovery of artefacts and other materials prior to their wholesale removal by machinery. Archaeological features recorded for the balancing ponds comprised a small number of undated shallow pits, gullies and other similar types of features. Natural features and other features such as tree throws and shallow irregular hollows were also recorded in stripped areas for individual ponds.

Contractor's Compound

No anthropogenic or natural features were found in the two trenches excavated within the compound area.

Earthwork survey

The ridge and furrow earthworks in the north-west corner of the development area were subject a measured ground survey using differential GPS and photographic recording (see Fig 2.74).

ARCHIVE LOCATION

by Theodora Anastasidou and Tora Hylton

The project archive has been scanned and is a PDF. The written, drawn, photographic and material archives for the Stanground Project will be stored with Peterborough Museums and Art Gallery under the site code PSR07.

SITE PHASING

by WA Boismier

Site phasing has been assessed and is as follows:

Period 1: Early Prehistoric Activity (Mesolithic – early Bronze Age)

Period 2: Bronze and early Iron Age

Period 3: Middle to late Iron Age

Period 4: Roman

Period 5: Medieval to post-medieval