# NORFOLK ARCHAEOLOGICAL UNIT

Report No. 881

# An Archaeological Watching Brief at the Southern Development Area, Gorleston, Norfolk

39347 YAR

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Location:	Southern Development area, Gorleston, Norfolk
District:	Great Yarmouth
Grid Ref:	TG 5195 0201
HER No.:	39347 YAR
Date of fieldwork:	27th May to 13th August 2003

### Summary

An archaeological watching brief was carried out to observe the topsoil strip over an extensive area of ground to the south of the James Paget Hospital in Gorleston. Apart from a small number of post-medieval or modern field drains and a single undated pit, no features of archaeological interest were observed during the work. A number of post-medieval and modern metal artefacts were recovered using a metal detector.

## 1.0 Introduction

(Figs 1 and 2)

This archaeological watching brief was a component of a multi-staged programme of archaeological work concerning the generation of the South Gorleston Development Area.

The work was commissioned by Martin Davidson of Persimmon Homes (Anglia) on behalf of a consortium of developers consisting of Persimmon Homes, Bovis Homes Ltd and Wilson Connolly Anglia.

The site was divided into three main development areas, A, B and C, one each for the three construction companies on site. Area A (Bovis) was located on the western side of the site; Area B (Wilson Connolly Homes) situated to the south-east and area C (Persimmon) to the north-east. A central spinal road linked all these areas.

The site was located to the south-west of the town of Gorleston, immediately south of the James Paget Hospital and to the west of the A12 trunk road. The size of the area under consideration was *c*. 13.79ha and comprised a large field of overgrown land, previously under cultivation. An area directly to the south-east of the hospital helicopter landing pad was left undeveloped due to the presence of the flightpath.

This archaeological watching brief was undertaken in accordance with a Brief issued by Norfolk Landscape Archaeology (NLA Ref: EJR 20/12/01).

The site archive is currently held by the Norfolk Museums and Archaeology Service, following the relevant policy on archiving standards.

## 2.0 Geology and Topography

The site lies approximately 1km inland from the North Sea coast at a height of *c*.16m OD. The location is situated on well drained level ground with a slight gradient sloping down to the south-west. The underlying geology is Pleistocene (Anglian) glaciofluvial deposits and aeolian drift. Although these conditions are generally characterised by deep loamy soils, the topsoil and subsoil deposits here were relatively thin at an average depth of no more than 0.40m. The underlying natural is a fine and compact sand with occasional patches of fine to medium glaciofluvial flint gravels and pebbles.

## 3.0 Archaeological and Historical Background

The area under examination has been the subject of archaeological study for a number of years due to its potential for land development. A desk-based study combined with geophysical survey, fieldwalking and metal-detecting was carried out by the Cambridge Archaeological Unit between December 1997 and March 1998 (Gibson 1998; Palmer 1998; White 1998) which located areas worked flint scatters, specifically in the western half of the survey area.

This work was followed by archaeological evaluation (Hutcheson 1998; Trimble 1999) and excavation (Timms and Ashwin 1999) by the NAU. This work was undertaken in an area to the south of the present site, where roads and drainage were to be laid in connection with the South Gorleston Innovation Centre. The excavations revealed predominately natural features but also a small group of pits which contained material dating to the Early Bronze Age. Post-holes and linear features of indeterminate provenance were also recorded. A later watching brief located several linear features of post-medieval date interpreted as the remains of land drainage and a ridge and furrow field system (Birks 2001).

The Norfolk Historic Environment Record (HER) lists a number of entries in the vicinity of the site. The most relevant entry (HER 11788) encompasses the area of the current watching brief, specifically a meandering linear mark across the site running from south-east to north-west (seen on aerial photographs). This HER record also includes several finds of archaeological interest, most of which however, have been found further to the south outside the present survey area. To the immediate west of the survey area are possible Bronze Age round barrows and a ring ditch (HER 11787).

On Faden's map of 1797 the development area is shown as open undivided land, possibly suggesting use as a common. An unsigned map of 1837 marks a property within the survey area as 'Shrubland Cottage'. This name may reflect the type of ground cover found in the immediate vicinity.

## 4.0 Methodology

(Fig. 2)

The objective of this watching brief was to record any archaeological evidence revealed during the topsoil stripping of spinal and access roads and associated groundworks across the site in preparation for large housing development.

The Brief required that the development would be monitored during incidences of below ground disturbance, including the excavation of foundation trenches, service trenches, drains and soakaways, pipe and cable trenches.

Spoil, exposed surfaces and features were scanned with a metal detector. All metaldetected and hand-collected finds were retained for inspection, other than those which were obviously modern.

All archaeological features and deposits were recorded using NAU *pro forma* sheets. Where required, trench locations, plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.

Due to the lack of suitable deposits, no environmental samples were taken.

Site conditions were variable and included heavy rainfall, causing mud, also high temperatures, which caused the fine topsoil and natural sand to create dust clouds. Due to the plethora of heavy machinery and soil dumper vehicles on the site, recently stripped areas were often tracked over almost immediately.

The initial phases included stripping the topsoil from the route of a main spinal road through the development area, as well as from the routes of several access roads serving the proposed housing areas. The main spinal road across the site was 6m in width whereas the access roads branching off from this were approximately 4.5m in width. The length of the spinal road was approximately 440m, thus the stripped area concerning this road came to approximately 2640 sq.m. The combined lengths of all access roads totalled approximately 1180m and the area stripped from these roads equalled approximately 5310 sq.m.

The stripping was carried out mainly using 360° tracked machines fitted with 1.8m wide ditching buckets which resulted in a reasonably level and clean surface. On several occasions when the tracked machines were unavailable, the stripping was done with a JCB-type excavator using a toothed bucket which did not leave a level surface.

The machines equipped with ditching buckets made one main strip of the route to the depth required. The depth of topsoil/subsoil stripped from the routes was on average 0.35m to 0.45m which often meant that the natural sand was exposed. The spoil from the stripping was usually piled next to the stripped area before being moved to a general spoil heap elsewhere on the site. The stripped surface was immediately scanned with a metal detector while observing the surface for any exposed features. The soil from the road routes was also scanned after removal.

The other main groundworks observed during the watching brief were the excavation of sewer pipe trenches across the site. The depth of the trenches for the pipes were on average 2m and were excavated straight down through the natural sand. This left the sides of the trench exposed to be observed for any features in the thin section of the subsoil. Once the machines had excavated a length of trench, approximately 7m to 10m, the pipe would be laid and connected.

In various areas along the route of the pipe larger holes would be excavated for the placement of concrete structures to allow access into the pipeline. These holes, dug into the natural, showed no more than the section of subsoil that the pipe trenches had exposed.

The footing trenches for the housing in the south-west corner of the site were initially started while the road stripping was continuing and these were machine excavated from the surface to an average depth of 0.85m, well into the natural sand. In the same area, certain house and garage plots, on average 12m x 12m, were first levelled by mechanical excavator to an average depth of between 0.25m to 0.30m before the footings were dug. This provided the opportunity to observe areas other than the road routes being stripped of topsoil. The spoil from the footings was initially placed adjacent to the footings trenches and then removed to a stockpile area elsewhere on-site. This spoil was metal-detected soon after the excavation process was finished.

The house footings after excavation were almost immediately filled with concrete to a depth of approximately 0.50m due to the presence of sand at the base of the trenches. This method left the subsoil and topsoil exposed in the upper parts of the footing to observe in section. The observation of the excavation of footing trenches for nine house plots was made over a period of fifteen days. The construction procedure for the footings was to excavate them, half fill them with concrete and the following day begin to lay wall foundations.

In addition to the pipe trenches excavated around the site, a single narrow trench was machined out from north to south in the western half of the site. This was to prevent unauthorised vehicular access to the main part of the site. The trench passed through the area noted in a previous site report as having a high incidence of worked flint (Gibson 1998).

### 5.0 Results

(Figs 3, 4, 5 and 6)

#### Introduction

The route of the main spinal road led from the entrance to the site in a north-easterly direction in a series of subtle zigzags. The route to the main compound in the centre of the site was already roughly marked out for machine access. The strip for this stage of work was accomplished over a period of approximately five weeks as the machines were in constant use elsewhere on-site. The procedure was to strip a length of road, which varied in length from 10m to 20m, before excavating a trench for sewer pipes along the centre line of the stripped area.

There were seven proposed junctions branching off the spinal route for access roads into housing areas. These access roads were stripped in part in conjunction with the main route in that when a junction was reached the stripping of the main route would transfer to the access road for a short way using the same method of construction. This was to facilitate the excavation of the sewer system where pipes would be joined at junctions.

#### Development Area A

The first access road to be stripped ran in a north-westerly direction in Development Area A from the main route for approximately 150m before turning at 90° to the south-west for approximately 60m. The strip revealed no features in the subsoil or natural sand which was exposed along the route. Fragments of brick dust and coal were observed in the interface between the subsoil and the natural and traces of a dark organic material, possibly as a result of manuring, was also seen mixed in with the spoil.

This road crossed part of the area previously field walked (Gibson 1998). Several worked flint fragments were recovered during the stripping, mainly from the south-west and south-east areas of the site.

The second access road to be stripped was in the southern portion of Development Area A which extended to the west from the spinal road for approximately 75m. Halfway along this length spur road ran to the north for 50m. The western end of the access road turned sharply to the south for some 65m to join the southern edge of the site. The route was stripped to an average depth of 0.45m due to a slightly greater depth of topsoil ([1]) in this area. At the base of the stripped subsoil ([2]) post-medieval and modern debris was found including clay tobacco pipe stem fragments, coal dust and bottle glass. A rubbish pit *c*. 0.30m in diameter containing modern bottle glass was located on the north edge of the access road, near the junction with the spinal route. No other features were observed along the strip. Soon after the strip was completed, sewer pipe trenches began to be excavated in stages along the road route.

#### Development Area B

While sewer pipe trenches were being excavated and observed along the access roads, the next access road strip occurred to the south-east of the entrance to the site in Development Area B. This was excavated to an average depth of 0.40m into a sandy subsoil and the underlying natural sand. Patches of natural flint pebbles appeared in the subsoil but no features were observed along the route. This stripping continued for some days, the spoil being heaped in a large mound near the southern edge of the site. Some modern metal artefacts were recovered from the spoil from this area using the metal detector but nothing was found of archaeological interest.

A large area *c*. 50m x 25m (1250 sq.m) was levelled to the west of the access road (described above) using JCB excavators with toothed bucket attachments. This area was almost immediately covered with coarse gravel. No features were discerned during this levelling and no artefacts, other than modern debris, were recovered.

The route of this access road continued round to the north-east to join up with the spinal road. The topsoil/subsoil strip had an average depth of 0.40m and the natural sand was exposed along the length. The main spinal road strip was finished to the north-east of the site with no discernible features, other than animal burrows, within the subsoil. Surfacing of the main road began at the south-west end.

In the south-west area of the site footings were being machine excavated within levelled house plots, in area c. 12 sq.m. In one set of 1.10m deep footings just to the west of the spine road, a portion of a ditch ([3]) was observed in the trench sides running in a roughly north-east to south-west direction. (Fig.3) A section was cleaned and the concave base of the ditch was observed to be 1m below the ground surface.

The ditch cut contained a medium grey sandy silt ([4]) with root material, occasional small flints and fragments of charcoal or coal. No dating evidence was recovered from the fill.

The feature appeared to have been cut from the surface. The ditch was 0.80m wide, 0.31m in depth and could be seen on the surface along a discernible length of 2.7m. The location of this ditch fragment was c. 50m to the north of the site entrance and 75m east of the west boundary of the site.

A pit ([5]) located 3.5m to the north-east of feature [4] was observed in the corner of a footing trench. (Fig.4) This was cut from the surface and was 0.45m deep and 0.65m in width, although the full extent of the pit was not discernible on the surface and the diameter had to be assumed from the existing edge. The fill ([6]) of this feature was a medium grey brown loose sandy silt containing root material, occasional small flint pebbles, coal dust and fragments of bottle glass.

In the centre of the site, and to the south of the main spine road in Development Area B, more house footings were being excavated by machine and filled with concrete the same day. The house plots, similar to those to the west of the site, were on average 12sq.m and consisted of a main horizontal trench with at least three vertical footings adjoining it. The trenches here were machine excavated, 0.50m wide, to an average depth of 1m, which cut approximately 0.20m into the natural sand.

In one of the footing trenches, 10m to the south of the spine road and approximately 110m to the north-east of the site entrance, a linear feature [7] was observed in section running roughly north-east to south-west for a discernible length of 4m. (Fig.5) The feature was on average 0.70m to 0.75m wide and had a depth of fill of 0.35m to 0.38m cut from the surface. The fill (8) was an homogenous dark grey sandy silt containing occasional small flints near the base of the feature but no dating material.

The final line of road to be stripped was in the south-east area which was in the vicinity of the linear mark seen in aerial photographs of the site. No trace of the feature could be located on the ground however in the areas designated for road routes.

#### Development Area C

The remainder of the road stripping to the north of the site produced no surface features apart from occasional plough marks running north-west to south-east.

# 6.0 The Finds

(Appendix 2)

# 6.1 Pottery

#### (Appendix 3)

All the fragments of pottery found in the topsoil were from the post-medieval period, with the earliest dated sherds being from the mid 17th century. The pottery was generally common domestic wares with some evidence of imported wares such as Chinese porcelain. The assemblage had no exceptional content and was fairly typical of a collection of wares found in a semi-urban context.

### 6.2 Flint

#### (Appendix 4)

Eighteen pieces of struck or utilised flint were recovered from the site, all from unstratified context. A single fragment of burnt flint was also present, it has been discarded.

Eleven unmodified flakes are present. They vary in shape and form but are predominantly hard hammer struck pieces.

One piece, a large thermal fragment with chalky cortex has been classified as a scraper, it has retouch along two edges. Two retouched flakes and three utilised flakes are also present.

A very heavily abraded cortical piece, has a more battered area around one bluntly pointed end and might possibly have been utilised. It's other end is more rounded and fits quite neatly into the hand.

The flint is undiagnostic and no closely datable pieces are present. It represents activity in the vicinity of the site during the later prehistoric period (probably the later Neolithic period to the Bronze Age).

#### 6.3 Small Finds

#### (Appendix 5)

The site produced two post medieval small finds recovered from surface metal detecting. These include a broken composite knife handle, consisting of an iron scale tang, with two copper alloy sheets, held together by a single rivet at one end (SF1, unstratified). It is probable that additional plates of wood or bone would have made up the handle. A copper alloy suspension ring (SF2) was also collected from unstratified deposits.

#### 6.4 Artefacts of non-archaeological value

#### (Appendix 6)

The site produced eighty-four late post-medieval or modern, unstratified metal detected finds. Although recorded and retained, they were not small found. The assemblage consists of twenty-one copper alloy objects including five buttons, two watch winders, five nails, a doorknob, a mechanical handle, a rivet, a washer, and a door/gate bolt. Two pieces of thin sheet, a small section of rod, and a sheet vessel rim were also recovered.

The Iron material includes forty-two nails, a fragment of heel iron, a washer, a strip fragment and five unidentified pieces.

A slate pencil fragment was recovered, along with twelve pieces of lead.

## 7.0 Conclusions

The features located during the watching brief were mainly observed within the footing trenches of the housing plots in the western half of the site. From the scarce evidence of the contents of these features it appears that most are at least post-medieval in date and some possibly modern.

The ditch section ([3]) observed contained no dating evidence and appears to have been a drainage or boundary ditch. Maps and aerial photographs of the area prior to the development show such a boundary or field division crossing the site in a roughly north-east to south-west direction. The distance of the line of ditch [3] from the position of the new entrance road equates to that of the location of the boundary on previous maps (White 1998; fig.3). Manning's map of Gorleston of 1842 shows no boundary ditch crossing the site area from east to west, although two boundaries lie either side of the site area on a roughly similar line.

The pit [5] to the north of this feature contained a similar fill as well as fragments of late bottle glass and most likely represents a discrete post-medieval or modern rubbish pit.

Linear feature [7] had similar dimensions and fill to that of boundary ditch segment [3] found further to the west and ran in the same direction. Furthermore the location of [7] roughly equates to that of the line of the boundary ditch and may presumed to be the same feature.

No trace of the linear feature shown in the aerial photograph was located within the last road strip. This may have been due to the restricted width of the roadway not picking up either of the two sides of the feature. Alternatively the depth of the strip was not sufficient to reveal any trace of the mark on the ground. The lack of more features on the site may indicate that the ground observed has not previously been the site of occupation to any great degree and has likely seen fairly recent agricultural landuse.

Finds of flint from the site prior to the current watching brief indicate principally a middle to late Bronze Age date (Gibson 1998). The large number of fragments recovered during this previous phase of archaeological work, from essentially one area of the field, may well indicate a concentration of flint production from this period. Conversely, the relatively sparse amount of flints recovered from a wider area of the field during the watching brief reflect a slightly earlier phase of activity, from the late

Neolithic to the early Bronze Age and may just represent discrete flint working activity.

The evidence of the pottery found, as well as the metalwork detected from the topsoil, indicates predominately post-medieval activity on the site, most of the finds dating from the 18th to 19th centuries. As Faden's 1797 map shows the area as potentially all common land, it is probable that serious cultivation of the ground only began in the early 19th century, the date range of the recovered pottery sherds likely to have been deposited during manuring reflecting this increase of activity. By the time of Manning's map of 1842, several field boundaries are in evidence. Apart from isolated farms the town of Gorleston appears not to have extended further to the south-west than its current position and the current development area will be the first urban expansion in this direction.

#### Acknowledgements

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# Appendix 1: Context Summary

Context	Category	Description	Period
1	Deposit	Topsoil	Post-medieval
2	Deposit	Subsoil	Unknown
3	Cut	Ditch	Post-medieval
4	Deposit	Fill of [3]	
5	Cut	Pit	?Modern
6	Deposit	Fill of [5]	
7	Cut	Ditch-?same as [3]	Post-medieval
8	Deposit	Fill of [7]	

## Appendix 2: Finds by Context

Context	Period	Material	Quantity	Weight (kg)
1	Post-medieval	Pottery	18	0.337
		Copper alloy (SF1 and 2)	23	-
		Iron	50	-
		Lead	12	-
		Slate	1	-
		Flint	20	0.089

## Appendix 3: Pottery

Context	Fabric	Form	Quantity	Weight	Date
				(Kg)	
1	Chinese porcelain	?Bowl	1	0.009	1650 to1900
1	Late slipped redware	Bowl	8	0.193	18th to 19th
					century
1	Ironstone ware	?Bowl	1	0.009	18th to 19th
					century
1	Late post-medieval earthenware	Flowerpot	3	0.054	18th to19th
		-			century
1	Red stoneware	Body	1	0.024	18th to 19th
		-			century
1	English stoneware	Body	2	0.037	17th to 19th
		-			century
1	Pearlware	Plate	1	0.004	1770 to 1900
1	English stoneware?	Body	1	0.005	17th to 19th
	-	-			century

# Appendix 4: Flint

Context	Туре	Quantity
1	Burnt fragment	1
1	Flake	11
1	Retouched flake	2
1	Scraper	1
1	Utilised flake	3
1	Utilised fragment	1

## Appendix 5: Small Finds

Small Find	Context	Quantity	Material	Description	Period/date
1	1	1	Iron/copper alloy	Scale tang	Post-medieval
2	1	1	Copper alloy	Suspension ring	Post-medieval

# Appendix 6: List of objects of non-archaeological value

Context	Quantity	Material	Description	Period
1	5	Copper alloy	Buttons	Post-medieval
1	1	Copper alloy	Rivet	Post-medieval
1	1	Copper alloy	Washer	Post-medieval
1	2	Copper alloy	Watch winders	Post-medieval
1	1	Copper alloy	Bolt/latch	Post-medieval
1	5	Copper alloy	Nails	Post-medieval
1	1	Copper alloy	Knob	Post-medieval
1	1	Copper alloy	Handle	Post-medieval
1	1	Copper alloy	Sheet vessel rim fragment	Post-medieval
1	2	Copper alloy	Sheet-fragment	Post-medieval
1	1	Copper alloy	Rod-fragment	Post-medieval
1	42	Iron	Nails	Post-medieval
1	1	Iron	Heel iron-heel iron	Post-medieval
1	1	Iron	Washer	Post-medieval
1	1	Iron	Strip	Post-medieval
1	5	Iron	Unidentified-fragments	Post-medieval
1	5	Lead	Off cuts	Unknown
1	3	Lead	Sheet-rolled and folded frags	Unknown
1	4	Lead	Waste	Unknown
1	1	Slate	Pencil fragment	Post-medieval



Figure 1. Site location. Scale 1:10,000





Figure 2. Feature location areas. Scale 1:2500



Scale 1:50



Figure 4. Plan and section of pit cut by foundation trench (Feature Area 1).



Scale 1:50



Figure 3. Plan and section of ditch cut by foundation trench. (Foundation Area 1).



Figure 5. Plan and section of ditch cut by foundation trench. (Foundation Area 2).