Lower Northbrook Farm, Titnore Lane, Worthing
An Archaeological Evaluation Report

(TQ 510440 104013)

Planning Ref: WB/05/0503/FULL

By

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Project No. 2171

December 2005

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Archaeology South-East

Archaeology South-East is a division of the University College London Field Archaeology Unit one of the largest groupings of academic archaeologists in the country. Consequently, Archaeology South-East has access to the conservation, computing and environmental backup of the college, as well as a range of other archaeological services.

The Field Archaeology Unit and South Eastern Archaeological Services (which became Archaeology South-East in 1996) were established in 1974 and 1991 respectively. Although field projects have been conducted world-wide, the Field Archaeology Unit retains a special interest in south-east England with the majority of our contract and consultancy work concentrated in Sussex, Kent, Greater London and Essex.

Based in the local community, the Field Archaeology Unit sees an important part of its work as explaining the results to the broader public. Public lectures, open days, training courses and liaison with local archaeological societies are aspects of its community-based approach.

Drawing on experience of the countryside and towns of the south east of England the Unit can give advice and carry out surveys at an early stage in the planning process. By working closely with developers and planning authorities it is possible to incorporate archaeological work into developments with little inconvenience.

Archaeology South-East, as part of the Field Archaeology Unit, is a registered organisation with the Institute of Field Archaeologists and, as such, is required to meet IFA standards.

Abstract

Archaeology South-East (ASE), a division of University College London Field Archaeology Unit (UCLFAU), were commissioned by Marshall Clark, on behalf of their clients Chandlers Garage Holdings Limited, to undertake two archaeological evaluations at Lower Northbrook Farm, Titnore Lane, Worthing, West Sussex (NGR TQ 510440 104013). The work was carried out between 24th October and 3rd November 2005.

The archaeological evaluations consisted of 22 1.8m by 30m trenches. The trenches were positioned using a Global Positioning System and DGPS Total Station.

The geo-archaeological investigation consisted of 7 test pits monitored by Chris Pine of Development Archaeological Services.

Archaeological features were recorded across the site dating from the Neolithic, Bronze Age, Romano British, medieval and post-medieval periods. In the central west of the site a group of probable Neolithic pits were recorded, one of which contained a fragment of polished stone axe. Late Bronze Age (LBA) features were recorded surrounding several potential LBA structures/roundhouses in the south centre and south east of the site. A near complete LBA bowl was also recovered from a ditch in the central east of the site. Features of a Romano British date were recorded in the south east and included a partially truncated roman pot and two ditches. Only two features, a ditch in the north west and a pit in the central east, of a medieval date were recorded. A single post-medieval pit was recorded in the north.

The modern ground surface varied from 13.16m OD in the north west to 10.24 in the south. The height of the underlying natural brickearth varied from 12.30m OD in the north west to 9.83m OD in the south west.

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1 INTRODUCTION

Archaeology South-East (ASE), a division of University College London Field Archaeology Unit (UCLFAU), were commissioned by Marshall Clark, on behalf of their clients Chandlers Garage Holdings Limited, to undertake two archaeological evaluations at Lower Northbrook Farm, Titnore Lane, Worthing, West Sussex (NGR TQ 510440 104013) (**Fig 1**). The evaluations were located in neighbouring fields and entitled *Land at Lower Northbrook Farm (Trenches 1-13)* and *Additional Land at Northbrook Farm (Trenches 14-22)* (see **Fig 2**). For the purpose of this report the two evaluations have been combined and hereafter referred to as *the site*.

The site covers 2.35 hectares of land and is bounded by Northbrook College to the south, Titnore Lane to the east, Industrial Units to the west and a private road to the north. The modern ground surface varied from 13.16m OD in the north west to 10.24 in the south. The height of the underlying natural brickearth varied from 12.30m OD in the north west to 9.83m OD in the south west.

The fieldwork was undertaken by Jon Sygrave (Field Officer), Mark Tibble (Surveyor) and Liz Chambers, Justin Russell, Alice Thorne and David Yates (Archaeologists) from the 24th October to the 3rd November 2005. The illustrations were produced by Justin Russell (Illustrator) and Mark Tibble (Surveyor) and the project was managed by Darryl Palmer (Senior Project Manager).

1.1 Project History

An application for planning permission (Planning ref. WB/05/0503/FULL) was lodged by Chandlers Garage Holdings Limited ahead of possible development of the western part of the site. Following the application Worthing Borough Council, acting on the advice of the West Sussex County Archaeologist (in his capacity as advisor on archaeological planning matters to the local planning authority) asked the applicant to determine the archaeological impact of the proposals prior to the determination of the planning.

Consequently, John Mills, Archaeologist, West Sussex County Council (WSCC), produced a Scoping Brief for this Stage 1 archaeological work. The brief highlighted the archaeological background of the site, the sites archaeological potential and the broad scope and aims of the investigation. In response to this ASE produced two Written Schemes of Investigation (ASE 2005) for the evaluations with reference to the Brief provided by WSCC, and their *Recommended Standard Archaeological Conditions* (version 2b). All work was carried out in accordance with these documents (unless otherwise specified below), and the relevant *Standards and Guidance* of the Institute of Field Archaeologists.

1.2 Aims and Objectives of the Evaluation

The aims of the evaluations, as stated in the Method Statements, were:

- Whether further archaeological remains extend across the development site from the Northbrook College site to the south.
- Whether deeper deposits of early prehistoric interest survive on site
- The character, date and quality of ancient remains and deposits.
- How they might be affected by the development of the site
- Whether particularly important remains should be preserved *in situ*
- What options should be considered for mitigation

2 IMPACT OF PROPOSED DEVELOPMENT

The impact of the proposed development on *Land at Lower Northbrook Farm* will consist of the landscaping of the site and the construction of car showrooms, a repair garage, an area of parking and the associated new access road and services.

No development is currently planned on *The Additional Land at Lower Northbrook Farm* but the client is seeking a predetermination statement by the LPA so that they will understand the level of archaeological conditions that could be placed on a successful planning application on the site.

3 ARCHAEOLOGICAL BACKGROUND

The archaeological background of the site is detailed in the Scoping Brief (Mills 2005) and is summarised here with due acknowledgement to WSCC.

3.1 Geology and Topography

The site is situated on the coastal plain and the underlying geology is brickearth (British Geological Survey Sheet 333). The geo-archaeological test pitting showed that beneath the brickearth lies c. 1m of gravel deposits overlying clay deposits.

The present ground surface of the site undulates and appears to not have been recently ploughed. The ground surface generally slopes down to the south with a possible channel leading from the north east corner of the site south. From conversation with nearby residents it was learned that the northern section of this area often floods. This is interesting due to the geo-archaeological results (see sections 6.1 and 7.1), which suggest that the site should be well drained and may indicate that the area of made ground recorded in Trench **T21** may extend across the north east corner of the site.

3.2 Palaeolithic

The site's location on brickearth deposits suggested that there could be possible underlying 'raised beach' marine deposits, which are known to exist in the vicinity. These deposits can provide important environmental information pertaining to early human communities.

3.3 Later Prehistoric and Romano British

During the construction of Northbrook College (West Durrington Campus) (1978-87) a multi period occupation site was discovered. Remains of Late Bronze and Iron Age date were identified and significantly, a Romano British building, bath house, ancillary buildings and its associated ditches and pits.

An archaeological evaluation and geophysics survey were undertaken by Archaeology South-East and Stratascan respectively at Northbrook College during 1997 (Barker 1997). These investigations revealed features dating from the Late Bronze Age –Early Iron Age, including possible structural evidence. Several pits and ditches of Romano-British date and a Late Iron Age, Early Roman possible enclosure ditch were also identified. There was also some evidence of buildings with chalk walls and flint floors.

3.4 Anglo-Saxon and medieval

Several saxon and medieval sites exist in the vicinity of the site. An early Saxon cemetery at Highdown Hill to the west of the site may suggest that there was a local encampment of Saxon mercenaries in the area, although no other evidence has been found. The site is also surrounded by late Saxon settlements Goring, Ferring, Durrington,, which carried into and developed in the medieval period. This suggests that the site lay in farmland between these settlements.

3.5 Post-medieval to present

The topography of the site suggests that it has not been ploughed for some time and probably not since the 1940s advent of deep ploughing. It is known that the site has been kept as pasture for at least the last 25 years.

4 ARCHAEOLOGICAL METHODOLOGY

4.1 Archaeological Evaluation (see Fig. 2)

The methodology, as defined in the brief (Stevenson 2005), comprised of investigation by archaeological evaluation trench and geo-archaeological test pits. The evaluation consisted of twenty two 30m by 1.8m trenches, which were excavated across the site under archaeological supervision. The trench locations and methodology had been agreed prior to commencement of the site with John Mills (Assistant County Archaeologist WSCC). Before excavation took place each trench was CAT scanned to check for underlying services. The trenches were then excavated with a 13T tracked machine fitted with a toothless grading bucket

The trenches were accurately located using a Global Positioning System (DGPS) and DGPS Total Station (Leica 1205 R100 Total Station, Leica System 1200 GPS).

Backfilling and compaction of the trenches was undertaken by the machine on completion of the work.

Spoil heaps and trench bases were scanned with a metal detector.

Excavation strategy will be in accordance with Annexe A of the standard conditions.

All archaeological features and deposits were recorded using the standard context record sheets used by UCLFAU. Soil colours are recorded using visual inspection and not by reference to the Munsell Colour chart.

Archaeological structures, features and deposits exposed or excavated were planned in relation to the trench and the trench planned onto a copy of the Ordnance Survey map not smaller than 1:2500 scale.

The WSCC Archaeologist was informed of progress on the site and made two visits to the site.

Environmental sampling was carried out in accordance with section 7 of the WSCC standard conditions, and Appendix A of this document.

A full photographic record (black and white and colour slide) of the work was kept as appropriate and will form part of the site archive. All archaeological features were photographed. The archive is presently held at the Archaeology South East office in Ditchling and will be offered to a suitable museum in due course. All finds are the property of the landowner, but will be donated to a suitable museum.

Archaeological deposits were levelled with a theodolite in relation to a known

Ordnance Survey benchmark.

The spoil from the trenches and the surface of the features were scanned with a metal detector.

4.2 Geo-Archaeological Test Pitting (see Fig. 2)

The Geo-Archaeological monitoring was carried out primarily to confirm the presence/absence of marine deposits at the site. Marine deposits, if present, may contain important Palaeo-environmental information and enable preliminary stratigraphic correlation to be made with other sites of Pleistocene age within the West Sussex Lower coastal plain. Specifically stratigraphic correlation with local site at Yeoman Road Durrington and Roundstone Lane Angmering, and Northbrook College might be anticipated.

Site altitude lies between c. +10.00-+13.00m OD. Comparison with the previously investigated site at Yeoman Road Durrington, [Pine 1999a and 1999b] suggested that key palaeogeographic marine deposits might be present at depths of between +7.00 to +5.00 metre OD. However the results of survey undertaken at the 'David Lloyd Leisure Centre' site immediately to the east suggest that bedrock comprising of Woolwich & Reading Beds may extend into the study site with no marine sediments being present.

Seven Test Pits were excavated using a c. 14 ton 360^0 tracked excavator fitted with a 2 metre wide toothless 'grading' bucket.

Test Pits were excavated at selected terminals of archaeological evaluation trenches. The locations of test pits 1-7 are shown on Figure 2.

Test pits were excavated in approximately 10cm deep spits. Excavation exposed sections approximately 2.5 metres in length.

Between ground level and c.1.00 metres exposed faces were recorded by descent. Beneath 1.00 metres recording was by examination of exposed faces from the pit side and from examination of arisings.

All faces were observed for intra-pit variation. Field recording was carried out using standard sedimentalogical terminology and colour was recorded using Munsell Colour Chart.

After recording trenches were immediately back-filled in 0.50 metre spits that were bucket compressed.

Ground levels at each test pit location were levelled relative to Ordnance Datum with survey heights supplied by ASE.

5 STRATIGRAPHIC RESULTS

5.1 Stratigraphic Results (see Figs 3 to 7)

The stratigraphic report is presented by trench. All of the trenches measured 1.8m wide by 30m long. Only recovered finds that have been used to date features are discussed in this section, for a detailed discussion see (**The Finds, Section 5.3**). Unless otherwise stated, the top c. 0.1m of the underlying natural brickearth surface was machined in order to more clearly establish the presence of archaeological features. It is this level that is given as the surface of the underlying natural/upper level of archaeological features, unless otherwise specified.

The topsoil across the site was recorded as a loose, mid greyish brown clayey silt, the subsoil as a mid brown clayey silt and the underlying brickearth as a firm mid orangey brown silty clay. In all the trenches the topsoil was expressed as [#/001], the subsoil as [#/002] and the underlying natural as [#/003].

Trenches 13, 19 and 21 have not been illustrated as they contained no archaeological features. Section drawings of the more important features, as well as a representative sample of the others, are shown by their respective trenches.

Evaluation on Land at Lower Northbrook Farm (Trenches 1-13, Figs 3-5)

T1 was aligned north south. The modern ground surface was recorded at 11.17m OD in the north and 10.56m OD in the south. The trench contained a single undated posthole [1/004] that was filled with a loose mid brownish grey clayey silt [1/005]. Unstratified finds [+] dating to the Late Bronze Age (LBA), medieval and post-medieval periods were recovered from the topsoil [1/001]. The underlying natural brickearth was encountered at 10.62m OD in the north and 10.13m OD in the south.

T2 was aligned north west to south east. The modern ground surface was recorded at 10.56m OD in the south and 11.16m OD in the north. The trench was heavily disturbed by plant activity. In the north of the trench a series of possible small pits or postholes [2/004, 006 & 008] were recorded filled respectively by [2/005, 007 & 009] all described as loose, mid greyish brown clayey silts. It is possible that these 'features' were further root disturbance, although fill [2/009] did contain LBA pottery. The underlying natural brickearth was encountered at 10.08m OD in the south and 10.48m OD in the north.

T3 was aligned south west to north east. The modern ground surface was recorded at 10.57m OD in the south and 10.42m OD in the north. The trench contained a single north south V-shaped ditch [3/004] in the east of the trench.

The ditch contained primary fill [3/008] and secondary fill [3/005], which contained LBA pottery. Both fills were described as loose to firm mid yellowish brown clayey silts, the distinction being an increased frequency of charcoal flecks in fill [3/008]. The underlying natural brickearth was encountered at 9.83m OD in the south and 9.92m OD in the north.

T4 was aligned south east to north west. The modern ground surface was recorded at 10.24m OD in the south and 10.55m OD in the north. The trench contained a confusing array of archaeological and natural features. The features that were clear after the initial machining were two adjacent east west ditches in the north of the trench [4/004 & 006] of which only [4/004] was excavated and recorded as being filled by [004/005], a loose mid greyish brown clayey silt, which contained LBA pottery. Patches of discolouration and concentrations of finds [4/007, 008 & 009] along the trench were attributed context numbers and later understood to probably represent a single mixed archaeological layer. [004/009] recorded as a concentration of FCF and [004/007 & 008] recorded as concentrations of FCF and LBA pottery within a loose to compact, mid orangey brown clayey silt. These contexts probably represent an additional sub soil layer, rich in finds and were re-graded with the machine in order to check for clearer features beneath. Once re-graded the trench revealed possible undated small pits [4/012 & 016] filled by [4/013 & 017] respectively, both described as loose to compact greyish brown clayey silts. Once the trench was re-graded a further layer [4/022] was recorded which sealed the underlying brickearth and was cut by [4/012 & 016] and possible features [4/011, 014 & 015], it was described as a compact, mottled light grey to mid brownish grey clayey silt. Archaeological deposits in the trench were encountered at 9.91m OD in the south and 10.13m OD in the north and the underlying brickearth was encountered at c. 9.40m OD.

T5 was aligned south west to north east. The modern ground surface was recorded at 11.20m OD in the south and 10.81m OD in the north. The trench contained four undated small pits [5/007, 009, 011 & 013] filled by [5/006, 008, 010 and 012] all loose mid greyish brown clayey silts. A curvilinear gulley [5/005] was recorded in the west of the trench filled by a loose mid greyish brown clayey silt [5/004] containing FCF and charcoal. The underlying natural brickearth was encountered at 10.71m OD in the south and 10.48m OD in the north.

T6 was aligned south east to north west. The modern ground surface was recorded at 10.73m OD in the south and 10.86m OD in the north. The trench contained a series of pits [6/004, 006, 008, 010, 012 & 014], which were filled by [6/005, 007, 009, 011, 013 & 015] all described as loose, mid brown clayey silts. No pottery was recovered from the pits but a broken Neolithic polished axe head was recovered from fill [6/005] and a probable Neolithic flake was recovered from [6/007]. The other fills also contained worked flint but it was not diagnostic of any particular period. The underlying natural brickearth was encountered at 10.20m OD in the south and 10.41m OD in the north.

T7 was aligned south west to north east. The modern ground surface was

recorded at 10.68m OD in the south and 10.82m OD in the north. The trench contained a series of postholes and pits in its eastern extent, which suggest that this was the site of a structure or possible roundhouse. Pits [7/009 & 022] were filled by [7/018 & 023] respectively, and described as compact light brown clayey silts, fill [7/018] contained LBA pottery. Postholes [7/004, 005, 006, 007, 008, 010, 011, 012, 024, 026, 028 & 030] were filled by [7/013, 014, 015, 016, 017, 019, 020, 021, 025, 027, 029 & 031] all described as loose mid brown clayey silts. Five of the postholes [7/015, 016, 017, 019 & 020] contained LBA pottery. Posthole [7/005], filled by [7/014], contained an assemblage of struck flint that may be the result of a single knapping episode (see section **5.3.7**). The underlying natural brickearth was encountered at 9.98m OD in the south and 10.82m OD in the north.

T8 was aligned south east to north west. The modern ground surface was recorded at 11.28m OD in the south and 11.89m OD in the north. The trench contained two possible gulleys [8/006 & 010], which were filled by [8/007 & 8/011] both described as loose mid brownish grey clayey silts, fill [8/006] contained Roman pottery. A pit [8/004] and a posthole [8/008] were filled by [8/005 and 8/009] described as mid brownish grey clayey silts. Several unstratified sherds of pottery were recovered dating from the LBA, IA, Roman and post-Roman periods and a polished Neolithic axe flake. The underlying natural brickearth was encountered at 10.62m OD in the south and 11.43m OD in the north.

T9 was aligned south west to north east. The modern ground surface was recorded at 10.88m OD in the south and 11.38m OD in the north. The trench contained small pits [9/008, 012, 014 & 016] and gulley [010] filled respectively by [9/009, 013, 015 & 017] and [011] all described as loose mid brown clayey silts. The only dating evidence recovered from the pits was a sherd of LBA pottery from fill [9/009] and a sherd of possible Romano British (RB) pottery from fill [9/013]. In the north east of the trench two parallel north south ditches [9/004 & 006] were recorded filled by [9/005 & 007] both described as loose mid brown clayey silts. Roman ceramic building material (CBM) was recovered from fill [9/005]. The underlying natural brickearth was encountered at 10.40m OD in the south and 10.88m OD in the north.

T10 was aligned south east to north west. The modern ground surface was recorded at 9.91m OD in the south and 10.96m OD in the north. The trench contained two undated parallel ditches [10/004 & 006] in its northern extent. Ditch 10/004 was filled by [10/005] a light yellowish brown clayey silt and Ditch [10/006] by [10/007] a loose to firm light orangey brown clayey silt. The underlying natural brickearth was encountered at 9.91m OD in the south and 10.96m OD in the north.

T11 was aligned south east to north west. The modern ground surface was recorded at 11.76m OD in the south and 12.41m OD in the north. The trench contained a group of four undated postholes [11/005, 007, 009 & 011] filled respectively by [11/004, 006, 008 & 010] all described as loose dark reddish brown clayey silts. Other postholes/small pits [11/013, 015, 018 & 023] were

recorded all filled with a similar loose dark reddish brown clayey silt [11/012, 014, 016 & 022] respectively. Two meeting east west butt ended ditches/gulleys [11/020 & 021] were recorded and [11/020] excavated. The gulley was narrow straight sided and deep and contained a loose to firm dark reddish brown clayey silt [11/019], from which medieval pottery was recovered. Unexcavated possible gulley [11/024] was also recorded in the south of the trench. The underlying natural brickearth was encountered at 11.35m OD in the south and 11.92m OD in the north.

T12 was aligned south west to north east. The modern ground surface was recorded at 11.80m OD in the south and 11.52m OD in the north. The trench contained two possible pits [12/004 & 006] and possible gulley [12/008] filled respectively by [12/005 & 007] and [12/009] all described as loose to firm mid greyish brown clayey silts. LBA pottery was recovered from fills [12/005 & 009] and fill [12/005] contained occasional charcoal flecks. The underlying natural brickearth was encountered at 11.27m OD in the south and 10.75m OD in the north.

T13 was aligned south west to north east. The modern ground surface was recorded at 12.82m OD in the south and 13.16m OD in the north. The trench contained no archaeological features but unstratified RB pottery was recovered. Initially it was thought that a large ditch crossed the trench north south but this appeared to be an area that had been boggy ground. Modern made ground was also recorded in the trench, possibly associated with the boggy ground mentioned above. The underlying natural brickearth was encountered at 12.30m OD in the south and 12.22m OD in the north.

Evaluation on Additional Land at Lower Northbrook Farm (Trenches 14-22, Figs 5-7)

T14 was aligned south west to north east. The modern ground surface was recorded at 10.42m OD in the south and 10.40m OD in the north. The trench contained a V shaped ditch [14/004] at its eastern extent, which was filled with a series of deposits [14/005, 006 & 007]. Primary fill [14/007] was recorded as a compact, dark brown clayey silt, which contained LBA pottery. Secondary fill [14/006] was recorded as a compact, light grey brown clayey silt. Secondary fill [14/005] was recorded as a loose to compact, mid grey brown clayey silt, which contained LBA pottery. Beneath the subsoil layer in the middle to west section of the trench were several layered deposits covering a number of archaeological features. The first of these layers [14/008] was described as a loose mid greyish brown clayey silt, which contained LBA and early Roman pottery. Layer [14/008] sealed layer [14/009], recorded as a loose to compact dark brown clayey silt, which contained a good assemblage of early Roman pottery and was sampled <2>. Layer [14/009] formed the secondary fill of north south ditch [14/012], sealing primary fill [14/010] described as a compact, yellowish brown clayey silt. Layer [14/009] also sealed north south V shaped ditch [14/013]. Ditch [14/013] was filled by

primary fill [14/015] a compact mid brown clayey silt, which contained Roman pottery and [14/014] a compact, mid yellowish brown clayey silt. [14/009] also sealed layer [14/011] described as a compact, yellowish brown clayey silt, which contained Roman pottery. A posthole [14/016] was recorded in the east of the trench, which was filled by [14/017] a loose mid brown clayey silt that contained LBA pottery. Archaeological deposits were encountered at 10.13m OD in the south and 10.06m OD in the north and the underlying brickearth was recorded at 10.06m OD in the north and c. 9.55m OD in the south.

T15 was aligned south east to north west. The modern ground surface was recorded at 10.53m OD in the south and 10.77m OD in the north. The trench contained two possible curvilinear gulleys [15/005 & 013] that may form a possible eaves gulley. The gulleys were both filled with mid greyish brown clayey silts [15/006 & 15/014] respectively, both fills contained LBA pottery. Three undated postholes [15/011, 020 & 022] were recorded and were filled by [15/012, 021 & 023] respectively, which were described as loose mid grey brown clayey silts. A possible east west gulley [15/015] was recorded filled by mid brownish grey clayey silt [15/016], which contained LBA/IA pottery. The fragmentary upper half of an inverted and truncated early Roman jar was recovered from probable feature [15/025], which appeared to be cut into feature [15/019], which contained LBA pottery. Surface finds of Roman pottery were recorded from unexcavated features [15/017 & 018]. The underlying natural brickearth was encountered at 10.13m OD in the south and 10.44m OD in the north.

T16 was aligned south west to north east. The modern ground surface was recorded at 10.80m OD in the south and 10.77m OD in the north. The trench contained a series of pits and postholes, of which two [16/006 & 008] were excavated. Pit [16/006] was filled with a loose grey brown clayey silt [16/007] and pit [16/008] was filled with a loose mid brown clayey silt [16/009]. A probable curvilinear gulley [16/004] was recorded in the west of the trench filled by [16/005] a mid greyish brown clayey silt, which contained LBA pottery. Other potential features [16/010, 011, 012 & 013] in the trench were recorded in plan and surface finds gathered. LBA pottery was recovered from potential features [16/010, 011 & 013] and RB pottery was recovered from feature [16/012]. The underlying natural brickearth was encountered at 10.28m OD in the south and 10.12m OD in the north.

T17 was aligned south west to north east. The modern ground surface was recorded at 10.36m OD in the south and 10.85m OD in the north. Pit [17/006], was recorded in the west of the trench and filled by primary fill [17/005] a loose mid brownish grey clayey silt and secondary fill [17/004] which was described as a soft dark grey ashy fill with very frequent FCF, which was sampled <5>. In the centre of the trench layer [17/015] was recorded as a loose to compact dark brownish grey clayey silt. Layer [17/015] sealed two north south ditches [17/017 & 019] and north south undated gulley [17/021]. Ditch [17/017] was filled by a loose to compact mid orangey brown clayey silt [17/016], which contained a semi-complete LBA bowl at its base,

badly cracked from weight of the soil, but with a surviving rim and shoulder profile with an associated burnt patch, which was sampled <8>, within the fill. Ditch [17/019] was filled by a loose to compact mid orangey brown clayey silt [17/018], which contained sherds of LBA pottery and gulley [17/021] was filled with a similar loose to compact mid orangey brown clayey silt [17/020]. Small pit/posthole [17/008] was recorded to the east of the ditches filled by loose mid brownish grey clayey silt [17/007], which contained prehistoric pottery, moderate levels of charcoal and burnt clay, and was sampled <6>. Two undated butt ending gulleys [17/012 & 014] were recorded in the east of the trench close to posthole [17/010] and were filled by [17/011, 013 & 009] respectively, all described as loose mid greyish brown clayey silts. The underlying natural brickearth was encountered at 10.02m OD in the south and 10.47m OD in the north.

T18 was aligned south east to north west. The modern ground surface was recorded at 10.93m OD in the south and 10.94m OD in the north. The trench contained numerous features. Pit [18/020] was filled by [18/021], described as a loose dark greyish brown clayey silt. Pit [18/026] was filled by loose to compact light brown clayey silt [18/024], which contained Roman pottery and was truncated by a modern land drain. Pit [18/029] was filled by [18/023] a loose light greyish brown clayey silt. Postholes [18/016 & 018] were filled by [18/017 & 019] respectively, and posthole [18/010] contained fill [18/009], a loose mid brown clayey silt, and post pipe [18/011], a loose mid greyish brown clayey silt. Sherds of LBA pottery were recovered from the surface of unexcavated feature [18/025]. Undated curvilinear gulleys [18/004 & 012] were filled by [18/005 & 013] respectively, described as loose dark greyish brown clayey silts. Undated butt ending gulleys [18/006 & 014] were filled by [18/007 & 015] respectively, and described as loose dark greyish brown clayey silts. The underlying natural brickearth was encountered at 10.46m OD in the
south and 10.70m OD in the north.

T19 was aligned south east to north west. The modern ground surface was recorded at 10.84m OD in the south and 11.52m OD in the north. The trench contained no archaeological features. The underlying natural brickearth was encountered at 10.52m OD in the south and 11.17m OD in the north.

T20 was aligned south west to north east. The modern ground surface was recorded at 11.09m OD in the south and 10.62m OD in the north. The trench contained undated pit [20/004] filled by [20/005] a compact mid orangey grey clayey silt and north east to south west possible undated ditch [20/007] filled by [20/008] a compact mid orangey grey clayey silt. The underlying natural brickearth was encountered at 10.47m OD in the south and 10.15m OD in the north.

T21 was aligned south east to north west. The modern ground surface was recorded at 10.73m OD in the south and 10.76m OD in the north. The trench contained no archaeological features. Modern made ground was recorded in the trench throughout to a maximum depth of 400mm. The underlying natural

brickearth was encountered at 10.06m OD in the south and 10.25m OD in the north.

T22 was aligned south west to north east. The modern ground surface was recorded at 11.81m OD in the south and 11.55m OD in the north. The trench contained possible ditch [22/004] and possible ditches/pits [22/005 & 006]. These features could not be excavated due to flooding but post-Roman pottery was recovered from the surface of feature [22/004] and LBA pottery from the surface of [22/006]. The underlying natural brickearth was encountered at 11.40m OD in the south and 11.08m OD in the north.

5.2 Geo-archaeological Results by Chris Pine (see Fig.2)

Recording conditions for all test pits: Oblique strong sunlight with heavy showers. For interpretation of the Test Pit Logs please see section **6.1**.

Test Pit 1

Ground Level at + 11.27m OD. **Depths Below Ground Level In metres**	**Stratigraphic Description**
0.00-0.15	10YR 4/4 dark yellowish brown silt. Matrix is moderately firm and compact with discrete pockets that are loose and friable. Matrix supports infrequent sub angular flint clasts to 2cm. max. diameter. The unit is weakly rooted [Topsoil] Diffuse horizontal contact
0.15-0.95-	10YR 5/4 yellowish brown silt to clay silt. The unit is firm and compact becoming very dense firm and compact towards the base of the unit. No visible structure. The matrix supports rare sub angular flint clasts to a maximum 3cms. diameter. At the base of the unit there is a 'sub unit' with pronounced manganese flecking and staining. [Brickearth silts] Diffuse predominantly horizontal contact.
0.95-1.50/1.80	10YR 6/4 light yellowish brown clay silt to weak sandy silt. The matrix is moderately dense firm and compact firm and compact. The matrix supports frequent sub angular flint clasts to 15cms diameter with larger >8cms diameter clasts having > 70% cortex cover. [Solifluction gravels] Diffuse horizontal contact
1.80-2.10	As above though with increase in flint clast concentration becoming clast supported [flint gravels] in pockets.

	Diffuse horizontal contact
2.10-2.80	10YR 6/4 to 10YR 5/6 yellowish brown clay silt with matrix supporting sub angular flint gravels to 4cm max. diameter. Matrix moderately firm and compact. No visible structure. Diffuse horizontal contact
2.80-3. 20	10YR 5/4 yellowish brown silt weak sandy silt with clay silt partings. Matrix supports sparse / infrequent sub angular flint clasts to 3cm diameter. [+8.70m OD] Moderately sharp horizontal contact
3.20-3.80	10YR 5/4 yellowish brown becoming 5YR 6/6 reddish yellow becoming 5YR 6/3 light reddish brown, silty clay-to-clay silt at 3.50m. Matrix is very dense firm and compact. At 3.50 metres fissured clay silt is mottled light grey with 5YR 6/4 light reddish brown patches. [Woolwich and Reading Beds]

Test Pit 2

Ground Level at + 11.64 m OD. **Depths Below Ground Level In metres**	**Stratigraphic Description**
0.00-0.15	10YR 4/4 dark yellowish brown silt. The matrix is moderately firm and compact. Matrix supports infrequent sub angular flint clasts to 2cm. max. diameter with sparse flint clasts to 4cm diameter The unit is weakly rooted throughout the unit. [Topsoil] Diffuse horizontal contact
0.15-0.95-	10YR 5/4 yellowish brown silt to clay silt. The unit is firm and compact and becoming slightly more dense firm and compact towards the base of the unit. There is no visible structure. The matrix supports rare sub angular flint clasts to a maximum 4cms. Diameter. [Brickearth silts] Diffuse undulating contact.
0.95-1.20/1.90	10YR 6/4 light yellowish brown clay silt to weak sandy silt. The matrix is moderately dense firm and compact firm and compact. The matrix supports frequent sub angular flint clasts to 15cms diameter with larger >10cms diameter clasts having > 60% cortex cover. [Solifluction gravels] Diffuse horizontal contact
1.90-2.50	As above though with increase in flint clast concentration becoming

	clast supported [flint gravels] in pockets. Diffuse horizontal contact
2.50-2.80	10YR 6/4 to 10YR 5/6 yellowish brown clay silt with matrix supporting sub angular flint gravels to 4cm max. diameter. Matrix moderately firm and compact. No visible structure. [+9.54m OD] Diffuse horizontal contact
2.80-3.50	10YR 5/4 yellowish brown becoming 5YR 6/3 light reddish brown, silty clay-to-clay silt at 3.10m. Matrix is very dense firm and compact. [Woolwich and Reading Beds]

Test Pit 3

Ground Level at + 10.92 m OD. **Depths Below Ground Level In metres**	**Stratigraphic Description**
0.00-0.10	10YR 4/2 dark greyish brown silt. Matrix is moderately firm and compact. Matrix supports infrequent sub angular flint clasts to 2cm. max. diameter. And angular brick [modern] fragment. The unit is weakly rooted throughout the unit. [Topsoil] Diffuse horizontal contact
0.10-0.0.80-	10YR 5/4 yellowish brown silt to clay silt. The unit is firm to very dense firm and compact .No visible structure. The matrix supports rare sub angular flint clasts to a maximum 3 to 4cms. diameter. At the base of the unit there is weak 10YR 3/1 black flecking [charcoal flecks] [Brickearth silts] Diffuse undulating contact.
0.80-2.30	10YR 6/4 light yellowish brown to 10YR 6/6 brownish yellow clay silt. The matrix is moderately dense firm and compact firm and compact and supports frequent sub angular flint clasts to 10cms diameter with larger >6cms diameter clasts having > 60% cortex cover. [Solifluction gravels] [+9.54m OD] Diffuse horizontal contact
2.30-3.50	10YR 5/4 yellowish brown becoming 5YR 6/6 reddish yellow becoming 5YR 6/3 light reddish brown, silty clay-to-clay silt at 3.50m. Matrix is very dense firm and compact. At 3.50 metres fissured clay silt is mottled light grey with 5YR 6/4 light reddish brown patches. [Woolwich and Reading Beds]

Test Pit 4

Ground Level at + 10.64 m OD. **Depths Below Ground Level Metres**	**Stratigraphic Description**
0.00-0.10	10YR 4/4 dark yellowish brown to 10YR 5/3 brown silt. Matrix is dense firm and compact. Matrix supports sparse sub angular flint clasts to 3cm. max. diameter and sparse ash / clinker fragments [modern]. The unit is weakly rooted throughout. [Desiccated topsoil] Dense firm and compact nature due to proximity of adjacent tree-line Diffuse horizontal contact
0.10-1.40-	10YR 5/6 yellowish brown silt to clay silt. The unit is firm and compact. No visible structure. The matrix supports rare sub angular flint clasts to a maximum 2cms diameter with a single sub angular flint clast with 10cms diameter seen in north facing section. [Brickearth silts] Diffuse horizontal contact.
1.40-1.95	10YR 6/4 light yellowish brown sandy silt. The matrix is moderately dense firm and compact firm and compact. The matrix supports frequent sub angular flint clasts to 15cms diameter with larger >10cms diameter clasts having > 70% cortex cover. There are discrete pockets of clast-supported gravel seen in all section faces. [Solifluction gravels] [+8.69m OD] Diffuse horizontal contact
1.95-3.20	10YR 5/4 yellowish brown becoming 5YR 6/6 reddish yellow. Matrix is very dense firm and compact. At 3.00-3.10 metres fissured clay silt is mottled light grey with 5YR 6/4 light reddish brown patches. [Woolwich and Reading Beds]

Test Pit 5

Ground Level at + 12.40m OD. **Depths Below Ground Level**	**Stratigraphic Description**

Metres	
0.00-0.60	10YR 4/2 dark greyish brown silt. Matrix is loosely compacted. Matrix frequent modern inclusions of brick / tile / ferrous debris. [Modern / Dump layer] Sharp horizontal contact
0.60-1.50-	10YR 5/4 yellowish brown silt to clay silt. Transition from overlying unit is stained 10YR 3/2 very dark greyish brown. The unit is moist and loosely compacted at the upper 50cm becoming more dense firm and compact with depth. The matrix supports rare sub angular flint clasts to a maximum 5cms. [part disturbed Brickearth silts] Diffuse predominantly horizontal contact.
1.50-2.60	10YR 6/4 light yellowish brown sandy silt. The matrix is moderately dense firm and compact. The matrix supports frequent sub angular flint clasts to 10cms diameter with slight presence of sub to well rounded flint clasts up to 6cm diameter with < 20% cortex cover. Rounded flint clasts are seen in association with 10YR 6/3 pale brown coarse sands that are weakly bedded. [Solifluction gravels, possible re-distributed marine derived flint gravels.] [+9.80m OD] Moderately sharp horizontal contact
2.60-3.50	10YR 5/4 yellowish brown becoming 5YR 6/6 reddish yellow becoming 5YR 6/3 light reddish brown, silty clay-to-clay silt at 3.50m. Matrix is very dense firm and compact. At 3.50 metres fissured clay silt is mottled light grey with 5YR 6/4 light reddish brown patches. [Woolwich and Reading Beds]

Test Pit 6

Ground Level at + 10.52 m OD. **Depths Below Ground Level Metres**	**Stratigraphic Description**
0.00-0.14	10YR 5/3 brown silt. Matrix is moderately firm and compact with pockets that are lose and friable. Matrix supports infrequent sub angular flint clasts to 3cm. max. diameter. The unit is weakly rooted throughout the unit. [Topsoil] Diffuse horizontal contact
0.14-1.80	10YR 5/6 yellowish brown clay silt. The unit is very dense firm and compact. No visible structure. At the base of the unit there is a sub unit with weak manganese staining and sparse charcoal flecking.

	[Brickearth silts] Diffuse horizontal contact.
1.80-2.50	10YR 6/4 light yellowish brown to 10YR 6/3 pale brown clay silt to weak sandy silt. The matrix is moderately dense firm and compact firm and compact becoming very dense firm and compact where unit is flint clast supported towards the bas of the unit. The matrix supports frequent sub angular flint clasts to 15cms diameter with larger >5cms diameter clasts having < 70% cortex cover. [Solifluction gravels] [+8.02m OD] Moderately sharp horizontal contact
2.50-3.40	10YR 5/4 yellowish brown becoming 5YR 6/6 reddish yellow to 5YR 6/3 light reddish brown, silty clay-to-clay silt at 3.10m. Matrix is very dense firm and compact. At 3.10 metres fissured clay silt is mottled light grey with 5YR 6/4 light reddish brown patches. [Woolwich and Reading Beds]

Test Pit 7

Ground Level at + 10.86 OD. **Depths Below Ground Level Metres**	**Stratigraphic Description**
0.00-0.20	10YR 5/3 silt. Matrix supports occasional modern brick fragments. The unit is weakly rooted [Topsoil / part disturbed] Moderately sharp horizontal contact
0.20-1.20-	10YR 5/6 yellowish brown silt to clay silt. The unit is moderately dense firm and compact .No visible structure. The matrix supports rare sub angular flint clasts to a maximum 5cms. diameter. [Brickearth silts] Diffuse predominantly horizontal contact.
1.20-2.20	10YR 5/3 brown to 10YR 5/4 yellowish brown silt. The matrix is moderately dense firm and compact. The matrix supports frequent sub angular flint clasts to 8cms diameter that becomes more frequent at depth. In the east facing section there is a discrete pocket of clast supported gravels lying at 1.90-2.20 metre depth seen in association with 10YR 6/8 brownish yellow coarse sands that are weakly laminated. [Solifluction gravels] [+8.66m OD]

	Moderately sharp horizontal contact
2.20-3.50	5YR 6/6 reddish yellow becoming 5YR 6/3 light reddish brown, silty clay-to-clay silt. The matrix is very dense firm and compact throughout. [Woolwich and Reading Beds]

5.3 The Finds

5.3.1 The Prehistoric and Roman pottery by Charlotte Thompson

The prehistoric and Roman pottery assemblage from the evaluation consists of 660 sherds, of which 293 are prehistoric. The condition of the sherds is generally good, although some sherds are substantially abraded. Most of the context groups are small (less than 30 sherds), although there are some exceptions such as context [14/008], [14/009] and [15/000]. The bulk of the pottery comes from trenches 4, 14 and 15.

The prehistoric pottery assemblage is dated to the Late Bronze Age. The fabrics have not been examined under a x20 microscope or characterised at this stage, but all of them are tempered with varying amounts of crushed calcinated flint. Although most of the sherds are plain body sherds, there are some diagnostic and feature sherds such as the base sherd from [4/006] which has crushed calcinated flint on the exterior –flint-gritted bases are usually associated with the Late Bronze Age. There is also a body sherd with a red coating on the exterior surface in context [16/010]: this is a decorative trait that appears in assemblages from the Late Bronze Age onwards. Deep vertical furrows are also present on the exterior of coarseware jar sherds in context [16/010].

Of some note is a residual Late Bronze Age sherd from [14/008] which has the impression of a fern on one surface, which was pressed into the vessel before firing.

The fabric used for a sherd in [17/016] contains sparse ill-sorted crushed calcinated flint and common to very common quantities of fine glauconite inclusions. As flint temper is used throughout the prehistoric period and also in early Roman vessels, research into a parallel for this fabric and its dating implications will be needed. Equally, leached shell-tempered sherds from [15/002] and [15/016] will need some further work to refine the dating.

Of some note is a substantially complete but fragmentary Late Bronze Age fine ware bowl from ditch [17/017]. Although it was originally thought to be holding a cremation, no cremated bone was recovered from this vessel. The bowl is made from a fabric tempered with fine sparse flint inclusions. It has been badly cracked from weight of the soil, so is fragile and fragmentary, however the profile of the short inverted rim and high rounded shoulder survives.

The Roman assemblage is mostly dated to 1st or 2nd century AD, and is largely made up of coarse grey ware sherds, although there are some oxidised vessels present such as the neck and handle stump of an especially abraded flagon from context [14/005] (the body sherds in context [14/008] are likely to be from the same vessel). As the fabrics have not been examined under with a x20 microscope, this is not certain if these are locally produced wares, but the samian sherd in [14/009] was imported from southern Gaul.

A truncated inverted early Roman necked jar was recovered from Trench 15. No cremated bone was recovered from the fill of the vessel, although some possible slag or ironstone fragments were recovered. Due to disturbance the vessel is fragmentary, and it is possibly because of this disturbance that some sherds are markedly more abraded than others. There are also a few abraded Late Bronze Age sherds recovered in and around the soil of this vessel, but it is unlikely that these are anything other than residual.

Context [14/009] contains an assemblage of 57 early Roman sherds, including sherds from five grey ware dishes with plain exterior profiles, two plain-sided bowls, a necked jar similar to kiln product from the Horticultural Research International, Littlehampton site (Laidlaw and Lyne 2002 fig 8 no. 4), and part of a jar with fine incised decoration on the shoulder. There are also some oxidised sherds and a single sherd of la Graufesenque samian Dragendorff form 18 dish, along with a residual Late Bronze Age flint-tempered sherd in the context.

Both the prehistoric and Roman assemblages have good potential for further study as the material contains diagnostic sherds and interesting features such as the two complete (but fragmentary) vessels. This potential can only be increased with the next phase of excavation at this site.

The nine sherds of post-Roman pottery 27 sherds of ceramic building material have not been assessed at this stage.

5.3.2 Post-Roman pottery by Luke Barber

Of the small post-Roman pottery assemblage, only three sherds come from stratified contexts: [11/19] contains a sherd of 14th- to early 15th- century green glazed jug, [16/12] contains a piece of 13th- to early 14th- century coarse sand tempered cooking pot/bowl and [22/4] contains a piece of 19th-century flower pot.

5.3.3 Burnt clay by Charlotte Thompson

The burnt clay assemblage of 53 pieces, all rather abraded. The fabrics have not been characterised at this point, although it is clear that most of them are sandy fabrics, with rare medium to coarse pieces of crushed calcinated flint mixed in.

None of the pieces have wattle impressions, and there are no pieces with piercing that would be immediately indicative of their use as a loomweight.

5.3.4 Metalwork by Charlotte Thompson

The metalwork assemblage is very poor, consisting of only five corroded iron fragments and some possible iron or ironstone fragments. Four of the pieces are likely to be nails, although the large piece from [8/002] is possibly part of a horseshoe.

A metal detector was used to scan the spoil and the surface of archaeological

features with little success. This may be due, in part, to the high number of prehistoric features compared to those of a Roman date.

5.3.5 Worked Stone by Charlotte Thompson

There is a large piece of stone (1514g) from context [14/009] with a central depression, which is likely to be from a quern. A full description of the stone is following

5.3.6 Ceramic Building Material by Samantha Crawt

The evaluation produced a small sample of tile, only 4 pieces weighing 118g, in four different, sand tempered fabrics (samples and description retained with archive). One small piece of Roman tegula was collected from context [19/+] weighing 24g. The remaining three fragments collected can be roughly dated to the later medieval and post medieval periods. Their rough dates are as follows:

Context No.	Date
[14/008]	late medieval
[18/005]	post medieval, C17th ??
[19/+]	Roman tegula
[22/006 or 016]	late medieval–early post medieval

Table 1 The ceramic building material

A further four pieces of ceramic building material were identified during the pottery evaluation. These have been quantified and recorded in Table 1, but have not been assessed at this stage.

5.3.7 The Worked Flint by Chris Butler

Introduction

A small assemblage of 142 pieces of worked flint weighing 3.655kg was recovered during the evaluation excavations at Lower Northbrook Farm (Table 1). In addition there were 789 pieces of un-worked fire-fractured flint weighing 27.160kg.

The assessment comprised a visual inspection of each bag, counting the number of pieces of each type of worked flint present, noting details of the range and variety of pieces, general condition, and the potential for further detailed analysis. A hand written archive of the assemblage was produced at this stage. Those pieces of flint that were obviously not worked were discarded during the assessment, but the fire-fractured flint was retained.

The Assemblage

The raw material comprised a typical range of nodular and pebble flint that is found on Coastal Plain sites, all of which can be derived from local sources.

Most pieces are abraded or have edge-damage, suggesting that they are probably residual, however the flintwork in some contexts appears fresh and un-abraded, for example [7/014].

Prehistoric Flintwork	
Hard hammer-struck flakes	90
Soft hammer-struck flakes	7
Soft hammer-struck bladelet	1
Chips	2
Fragments	16
Shattered pieces	14
Chunks	2
Single platform flake core	1
Multiple platform flake core	1
Core fragments	2
End scraper	1
Utilised blade	1
Denticulated flake	1
Polished axe fragments	2
Hammerstone	1
Total	*142*

Table 2 The worked flint

Just over 12% of the flintwork forms a distinctly different group within the assemblage. The flakes in this group are both hard- and soft-hammer struck, with some having evidence of platform preparation. Most of the soft hammer-struck flakes appear to have been struck with a soft stone hammer. The raw material used for this group comprises either a black flint or an orange-green stained flint.

Also forming part of this group are two fragments of polished Neolithic flint axes. The first fragment is the butt end of a thick-butted (Type A) axe in an orange stained flint, with unusually some cortex (also polished) still present at the butt end [6/005]. The second is a flake from a different polished axe [8/002]. A utilised blade was also found; this has one lateral edge partly utilised (both abrasion and polish being present), with the opposite edge being naturally abrupt, and also having a small retouched notch [18/024].

Although one or two of these pieces may be Mesolithic, it is likely that the majority of he debitage, the polished axe fragments and the utilised blade are all Early Neolithic in date.

The remainder of the assemblage comprises hard hammer-struck flakes, fragments and shattered pieces; typical bi-products of the flintworking technologies employed in later prehistory. These pieces have limited evidence of any knapping strategy, and are frequently broken or have hinge fractures. There appears to have been little selection of better quality raw material amongst this later group of flintwork, with the majority of pieces derived from pebble flint. Two of the flakes have been fire-fractured, and one has a small

area of retouch.

The cores and core fragments (one is fire-fractured) together with the scraper [17/018], denticulated flake [9/015], and hammerstone [14/007] are all undiagnostic, but are probably associated with this later prehistoric debitage.

The majority of the assemblage is distributed in small numbers across many contexts, and is therefore probably largely residual. However, given the presence of Later Bronze Age pottery in many of these features, there is no reason why this later prehistoric assemblage should not also be Later Bronze Age in date.

Context 014 in Trench T7 produced a group of material comprising some 20 hard hammer-struck flakes, a chip, four fragments and six shattered pieces, together with a residual bladelet. The majority of this material appears fresh and un-abraded, and may have come from the same nodule of pebble flint. It is therefore likely that this may represent the discarded debitage from a single knapping episode.

5.4 **The Environmental Samples** by Lucy Allott

Environmental samples were extracted from 8 contexts. The sample and sub-sample sizes are given in table 3 below. These samples have been subjected to tank flotation and the preliminary results of the analysis are presented below.

Sample No.	Context No.	Sample Size (litres)	Sub-Sample Size
1	12/005	20	20
2	14/009	40	40
3	6/011	40	40
4	4/005	30	30
5	17/004	40	40
6	17/007	10	10
7	18/007	40	40
8	17/016	4	4

Table 3 The environmental samples

One hundred percent of samples were processed using tank flotation. The residue and light fraction (flot) were captured on 500micron and 250micron meshes respectively. The flot has been further analysed to assist in establishing the archaeological and environmental importance of this site. Preliminary identifications have been given for the cereals but the seeds remain unidentified at this stage. The residues have been sorted and quantified and these results are also considered below.

The flots contained a diversity of cereal grains, charred and uncharred seeds, charcoal, flint flakes and small quantities of hammerscale. Preservation of cereals varied from very good to poor. In several samples the cereals were sufficiently damaged through fragmentation or abrasion to preclude identification. Some of the abrasion may be a result of milling. On the whole

the morphology of the cereals and seeds was very clear.

Sample	Context	Total Weight of Flot (grams)	Charred Cereals	Charcoal >4mm	Charred Seeds	Un-charred Seeds	Uncharred Wood %	Lithics	Hammerscale
1	12/005	8	0	2	1 frag (type 1)	0	95	2	N
2	14/009	20	13 (barley and bread wheat)	1	11 (types 1, 2 & 3)	0	90	0	N
3	6/011	50	2 Very Damaged	0	3 (type 1)	0	95	2	N
4	4/005	22	1 fragment		1 frag (type 1)	0	90		Y
5	17/004	12	2 (wheat) 1 unknown	9	1 (type 4)	0	85	2	Y
6	17/007	20	~100 (oats, barley and wheat)	3	0	0	70	0	N
7	18/007	6	1 (wheat)	0	0	5 (types 5, 6 & 7)	90	0	N
8	17/016	6	~50 (oats, barley and wheat)	0	0	0	5	0	N

Table 4 The results of flot analysis

Sample	Context	Lithics	Pottery	Bone	Burnt Bone	B. Clay	Charcoal	Industrial Debris	Fire Cracked Flint
1	12/005						Y		
2	14/009	Y	Y	Y		Y	Y	Y	Y 116g
3	6/011	Y	Y				Y	Y	
4	4/005	Y	Y				Y	Y	
5	17/004	Y	Y				Y		
6	17/007		Y				Y & grains		
7	18/007	Y	Y				Y	Y	
8	17/016	Y	Y			Y			Y 20g

Table 5 The residue quantification

Cereals were recovered in seven of the eight samples taken. Samples 2, 6, and 8 contained relatively large amounts of charred cereal. Samples 6 and 8 were particularly rich because these samples consisted of only 10 and 4 litres respectively. Sample 6, from context [17/007] (a possible post hole or small

pit) contained ~ 100 well preserved oat, barley and wheat grains. Sample 8 was taken from a small area of burning associated with a Bronze Age pot (initially believed to be a cremation). No bone was recorded in the flot or residue from this sample. This small sample contained ~ 50 cereal grains including oats, barley and bread wheat. A detailed analysis of these cereals will reveal more about the farming and about the association of the grain with this vessel. Cereals in sample 2 were not as well preserved and showed signs of abrasion.

Seven seed types were recovered from these eight samples, four well preserved charred seeds and three un-charred seeds. Samples 1 and 4 contained very little botanical material. These samples both contained fragments of a single seed type. Intact examples of this seed were recovered in samples 2 and 3 and will be identifiable with reference to comparative material. Sample 7 contained three seed types. Type 6 is distorted and may not be identifiable, however Types 5 and 7 are well preserved. Type 5, in sample 7, is represented by three seeds which were intact within the fruit, making them readily identifiable. Unfortunately none of the seeds in sample 7 are charred and therefore their presence will be interpreted with caution.

Very little charcoal was recovered in the flots, however, charcoal was retained in the residues. This may suggest some mineralization had occurred, which is common in clay rich sediments or that the charcoal has been percolated by sediment and may provide evidence for fluctuations in the water table after deposition.

The small number of samples taken has shown that this site does contain localised concentrations of cereals. A cross section of periods including Neolithic, Roman, Bronze Age and Iron Age are represented at this site and detailed analysis of the archaeobotanical remains, the cereals in particular, should provide evidence for any changes in the farming practices.

The flots do contain large quantities of uncharred rootlets, however, the influence of these appears minimal because the contexts were distinct. Further work should include a full analysis of the cereals, seed identification and charcoal analysis. Little emphasis will be placed on the interpretation of non-charred botanicals.

6 DISCUSSION

The Discussion is presented by the main periods represented on the site and draws on all relevant stratigraphic, finds and sample data. Only features dated to specific periods are discussed. Trenches **T5**, **T10**, and **T20** contained no dated features. Trenches **T13**, **T19** and **T21** contained no features. All of the trenches contained some un-stratified finds from the top/sub soils.

6.1 Early Prehistoric Deposits by Chris Pine

Upper 'topsoil unit at each test pit location does not exceed c. 10-15cms in depth at any location. The topsoil appears moderately well developed though the lack of a well-developed sub 'B' horizon tends to suggest the survey area has not been subjected to deep cultivation that would be consistent with modern ploughing. It is considered that lack of deeper ploughing should have preserved any archaeological horizons that may be present at depths between c. c. 0.50 to 1.00 metres below ground level within the site area.

At all test pit locations, with the exception of **TP 5** that is located within a modern 'dump' deposit / area, topsoil contacts onto a relatively clean brick earth silt. This sediment unit is ubiquitous over the Lower West Sussex Coastal Pain and is considered to be a loessic [wind derived] deposit probably of Devensian age.

Brickearth silts are recorded at all test pit locations and have an average thickness of c. 1.00-1.50 metres. Lack of any disturbance within the brickearth strongly suggests that archaeological horizons that may be present within the upper part of this unit are likely to be *in situ* with low to very low potential for post depositional movement of any artefacts that are present.

Within all test pits brickearths are underlain by silt and gravels with gravels being predominantly composed of sub angular flint clasts. There is some variation in clast size and concentration, and clasts are occasional seen in clast-supported pockets. The general characteristics of gravels are consistent with soliflucted sediments with some post depositional sorting of finer sediment fractions [clays / silt and sands] within the gravels being recorded.

It is considered that the gravel 'seam' that underlies brickearth silts may function as a natural 'land drain'. It is suggested that groundwater percolating down through brickearth silts would selectively drain through the natural gravels / silt gravels allowing the site area to drain naturally. The well draining sands that exist outside the southern boundary of the site within the Northbrook College grounds (Pine 2001c) may act as a 'soak away' for water that naturally drains through and away from the study site.

At all test pit locations solifluction gravels contact on to bedrock [Reading Beds] at c. +8.00-+8.50 metres OD. At the David Lloyd Leisure centre site to the east (Pine 2005) test pitting recorded bedrock height at c. +7.50 metres

OD. Comparison of bedrock contact heights suggests a gradual dipping of bedrock surface to the east.

The highest, contact to bedrock is recorded at **TP 5**. Where variable gravels contact bedrock at + 9.80metres OD. At this test pit location solifluction gravels contain occasional sub rounded to well-rounded clasts that are tentatively interpreted as re-worked marine derived gravels. The presence of these 'perched marine gravels' is confusing however a possible explanation is that they have been translocated from a marine sediment source lying some way to the north of the site. They are considered as only 'trace / relocated marine deposits.

6.2 The Neolithic

The evidence from the Neolithic period centres on the group of probable Neolithic pits recorded in **T6**, one of which contained a fragment of polished Neolithic axe and another a probable Neolithic flake. An environmental sample <3> taken from one of the pits contained evidence of charred cereal and seed grains.

Several un-stratified or re-deposited worked flint tools were recorded across the site, notably a fragment of polished stone axe in **T8** and a re-deposited blade from **T18.**

6.3 The Late Bronze Age (LBA)

The majority of dated features on the site are from the Late Bronze Age.

Late Bronze Age features occur across the site in trenches **T2**, **T3**, **T4**, **T7**, **T12**, **T14**, **T15**, **T16**, **T17** and **T22**. However, the focus of activity seems to lie in the south central to south eastern areas of the site around trenches **T7**, **T15** and **T16** which contain evidence of structures/roundhouses. In particular a posthole in trench **T7** contained a debitage flint assemblage, probably from a single knapping episode, which may indicate preservation of *in situ* activity in the vicinity.

Trench **T17** also contained important LBA features such as a substantial north south ditch in which a near complete LBA bowl was recovered and a pit filled with FCF, which although undated is thought to be LBA. A small, 5 litre, sample <8> of burnt material was taken from above the bowl, recovered from the ditch, which revealed over 50 charred cereal grains. Another small, 10 litre, sample was taken from trench **T17** and revealed over 100 charred cereal grains. Such samples could be compared to examine the development of cultivation on the site and help date features.

The evidence of Late Bronze Age occupation on the site should be seen in context with the LBA occupation recorded on the Northbrook College site to the south.

6.4 The Romano British Period

As was discussed in **Section 3.3** a Romano British (RB) Building was recorded just to the south during the Northbrook College excavations. The paucity of RB finds on the site suggests that this was the main focus of activity in the area. Romano British features were recorded in trenches **T8, T9**, **T14**, **T15, T16** and **T18**. Trench **T14** contained the only substantial RB features in the form of two ditches and several layered deposits. Trench **T15** was initially thought to contain a cremation urn, which had been cut into the top of a LBA feature. However, the pot was discovered to be the fragmentary upper half of an inverted and truncated early Roman jar and contained no evidence of cremated remains. The Roman features appear to be concentrated in the south eastern corner of the site.

6.5 The Medieval to Post-Medieval Periods

As was discussed in **Section 3.4** the site is believed to have been situated in farmland during the medieval to post-medieval periods. This is supported by the lack of features of this date on the site. Only one medieval feature and one post-medieval feature were recorded, in trenches **T11** and **T22** respectively. **T11** contained a medieval 'box-cut' ditch and Trench **T22** contained a single late post-medieval feature.

7 RECOMMENDATIONS FOR FURTHER WORK

7.1 Archaeological trenching

The archaeological mitigation strategy for the proposed development is currently under discussion.

7.2 Geo-archaeological Test Pitting

The sedimentary sequences that may be impacted on as a result of the proposed development at the study site are considered to be of moderate palaeogeographic significance.

With the exception of sediments interpreted as re-deposited marine derived gravels in Test 5 no marine derived sediments were recorded. No in situ marine deposits were recoded within the site area.

It is considered that the extensive solifluction gravels that underlie brickearth may act as a natural drainage conduit affording the local site area relatively good drainage.

It is considered that the significance of the recorded sediment sequence at the site has been adequately assessed during this study and no further Geoarchaeological analysis or assessment work is required.

8 REFERENCES

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WORRAL, S, PREISTLY-BELL, G AND GRIFFIN, N 2003 **Archaeological Investigations at North Barn, Littlehampton Road, Worthing, West Sussex** ASE grey report

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9 APPENDICES

9.1 Table of Features

The Table of Features lists each trench, the features it contained and their relevant fills. The topsoil, subsoil and underlying brickearth contexts are not expressed in this table.

Trench No.	Context No.	Description
1	1/004	posthole
	1/005	Fill of 1/004
2	2/004	Small pit/posthole
	2/005	Fill of 2/004
	2/006	Small pit/posthole
	2/007	Fill of 2/006
	2/008	Small pit/posthole
	2/009	Fill of 2/008
3	3/004	V shaped ditch
	3/005	Secondary fill of 3/004
	3/006	Natural feature
	3/007	Natural feature
	3/008	Primary fill of 3/004
4	4/004	ditch
	4/005	Fill of 4/004
	4/006	Unexed ditch
	4/007	Layer deposit
	4/008	Same as 4/007
	4/009	Same as 4/007
	4/010	Natural same as 4/003
	4/011	Unexed feature
	4/012	pit
	4/013	Fill of 4/012
	4/014	Unexed feature
	4/015	Unexed feature
	4/016	pit
	4/017	Fill of 4/016
	4/018	Natural feature
	4/019	Natural feature
	4/020	Natural same as 4/003
	4/021	Natural gravel under 4/003
	4/022	layer
5	5/004	Curvilinear gulley
	5/005	Fill of 5/004
	5/006	Fill of 5/007
	5/007	Small pit
	5/008	Fill of 5/009

	5/009	Small pit
	5/010	Fill of 5/011
	5/011	Small pit
	5/012	Fill of 5/013
	5/013	Small pit
6	6/004	pit
	6/005	Fill of 6/004
	6/006	pit
	6/007	Fill of 6/006
	6/008	pit
	6/009	Fill of 6/008
	6/010	pit
	6/011	Fill of 6/010
	6/012	pit
	6/013	Fill of 6/012
	6/014	pit
	6/015	Fill of 6/014
7	7/004	posthole
	7/005	posthole
	7/006	posthole
	7/007	posthole
	7/008	posthole
	7/009	pit
	7/010	posthole
	7/011	posthole
	7/012	posthole
	7/013	Fill of 7/004
	7/014	Fill of 7/005
	7/015	Fill of 7/006
	7/016	Fill of 7/007
	7/017	Fill of 7/008
	7/018	Fill of 7/009
	7/019	Fill of 7/010
	7/020	Fill of 7/011
	7/021	Fill of 7/012
	7/022	pit
	7/023	Fill of 7/022
	7/024	posthole
	7/025	Fill of 7/024
	7/026	posthole
	7/027	Fill of 7/026
	7/028	posthole
	7/029	Fill of 7/028
	7/030	posthole
	7/031	Fill of 7/030
8	8/004	pit
	8/005	Fill of 8/004

	8/006	gulley
	8/007	Fill of 8/006
	8/008	posthole
	8/009	Fill of 8/008
	8/010	gulley
	8/011	Fill of 8/010
9	9/004	ditch
	9/005	Fill of 9/004
	9/006	ditch
	9/007	Fill of 9/006
	9/008	Small pit
	9/009	Fill of 9/008
	9/010	gulley
	9/011	Fill of 9/010
	9/012	Small pit
	9/013	Fill of 9/012
	9/014	Small pit
	9/015	Fill of 9/014
	9/016	Small pit
	9/017	Fill of 9/016
10	10/004	ditch
	10/005	Fill of 10/004
	10/006	ditch
	10/007	Fill of 10/006
11	11/004	Fill of 11/005
	11/005	posthole
	11/006	Fill of 11/007
	11/007	posthole
	11/008	Fill of 11/009
	11/009	posthole
	11/010	Fill of 11/011
	11/011	posthole
	11/012	Fill of 11/013
	11/013	Posthole/small pit
	11/014	Fill of 11/015
	11/015	Posthole/small pit
	11/016	Fill of 11/018
	11/017	Unexcavated pit/posthole
	11/018	Posthole/small pit
	11/019	Fill of 11/019
	11/020	Butt ending ditch/gulley
	11/021	Unexcavated butt ending Ditch/gulley
	11/022	Fill of 11/023
	11/023	Posthole/small pit
	11/024	Unexcavated gulley
12	12/004	pit
	12/005	Fill of 12/004

	12/006	pit
	12/007	Fill of 12/006
	12/008	gulley
	12/009	Fill of 12/008
13	N/A	
14	14/004	V shaped ditch
	14/005	Secondary fill of 14/004
	14/006	Secondary fill of 14/004
	14/007	Primary fill of 14/004
	14/008	Layer/deposit
	14/009	Layer/deposit
	14/010	Primary fill of 14/012
	14/011	Layer/deposit
	14/012	ditch
	14/013	V shaped ditch
	14/014	Secondary fill of 14/013
	14/015	Primary fill of 14/013
	14/016	posthole
	14/017	Fill of 14/016
15	15/004	Unexcavated feature
	15/005	Curvilinear gulley
	15/006	Fill of 15/005
	15/007	Modern feature – land drain
	15/008	Fill of 15/007
	15/009	Modern feature – land drain
	15/010	Fill of 15/009
	15/011	posthole
	15/012	Fill of 15/011
	15/013	Curvilinear gulley
	15/014	Fill of 15/013
	15/015	gulley
	15/016	Fill of 15/016
	15/017	Unexcavated feature
	15/018	Unexcavated feature
	15/019	Unexed ditch/pit
	15/020	posthole
	15/021	Fill of 15/020
	15/022	posthole
	15/023	Fill of 15/022
	15/024	Same as 15/005
	15/025	pit
16	16/004	Curvilinear gulley
	16/005	Fill of 16/004
	16/006	Pit/posthole
	16/007	Fill of 16/006
	16/008	Pit/posthole
	16/009	Fill of 16/008

	16/010	Unexcavated feature
	16/011	Unexcavated feature
	16/012	Unexcavated feature
	16/013	Unexcavated feature
17	17/004	Secondary fill of 17/006
	17/005	Primary fill of 17/006
	17/006	pit
	17/007	Fill of 17/008
	17/008	Pit posthole
	17/009	Fill of 17/010
	17/010	posthole
	17/011	Fill of 17/012
	17/012	Butt ending gulley
	17/013	Fill of 17/014
	17/014	Butt ending gulley
	17/015	Layer/deposit
	17/016	Fill of 17/017
	17/017	ditch
	17/018	Fill of 17/019
	17/019	ditch
	17/020	Fill of 17/021
	17/021	gulley
18	18/004	curvilinear gulley
	18/005	Fill of 18/004
	18/006	Butt ending gulley
	18/007	Fill of 18/006
	18/008	Same as 18/010
	18/009	Fill of 18/010
	18/010	posthole
	18/011	Fill of 18/010
	18/012	curvilinear gulley
	18/013	Fill of 18/013
	18/014	Butt ending gulley
	18/015	Fill of 18/014
	18/016	posthole
	18/017	Fill of 18/016
	18/018	posthole
	18/019	Fill of 18/018
	18/020	pit
	18/021	Fill of 18/020
	18/022	Number given to area of surface finds, not a feature
	18/023	Fill of 18/029
	18/024	Fill of 18/026
	18/025	Unexcavated ditch/pit
	18/026	pit
	18/027	Modern feature
	18/028	Modern feature

	18/029	pit
19	N/A	
20	20/004	pit
	20/005	Fill of 20/004
	20/006	Natural feature
	20/007	ditch
	20/008	Fill of 20/007
21	N/A	
22	22/004	Unexed possible ditch
	22/005	Unexed possible ditch/pit
	22/006	Unexed possible ditch/pit

9.2 SMR Summary Form

Site Code	LNF05					
Identification Name and Address	Lower Northbrook Farm					
County, District &/or Borough	West Sussex					
OS Grid Refs.	NGR TQ 104 040					
Geology	Brickearth					
Arch. South-East Project Number	2171					
Type of Fieldwork	Eval. ✓	Excav.	Watching Brief	Standing Structure	Survey	Other
Type of Site	Green Field ✓	Shallow Urban	Deep Urban	Other		
Dates of Fieldwork	Eval. 24th October to the 3rd November 2005	Excav.	WB.	Other		
Sponsor/Client	Chandlers Garage Ltd					
Project Manager	Jim Stevenson					
Project Supervisor	Jon Sygrave					
Period Summary	Palaeo.	Meso.	Neo. ✓	BA✓	IA	RB✓
	AS	MED ✓	PM ✓	Other		

100 Word Summary.

Archaeology South-East (ASE), a division of University College London Field Archaeology Unit (UCLFAU), were commissioned by Marshall Clark, on behalf of their clients Chandlers Garage Holdings Limited, to undertake two archaeological evaluations at Lower Northbrook Farm, Titnore Lane, Worthing, West Sussex (NGR TQ 104 040). The work was carried out between 24th October and 3rd November 2005.
The archaeological evaluations consisted of 22 1.8m by 30m trenches. The trenches were positioned using a Global Positioning System and DGPS Total Station.
The geo-archaeological investigation consisted of 7 test pits monitored by Chris Pine of Development Archaeological Services.
Archaeological features were recorded across the site dating from the Neolithic, Bronze Age, Romano British, medieval and post-medieval periods. In the central west of the site a group of probable Neolithic pits were recorded, one of which contained a fragment of polished stone axe. Late Bronze Age (LBA) features were recorded surrounding several potential LBA structures/roundhouses in the south centre and south east of the site. A near complete LBA bowl was also recovered from a ditch in the central east of the site. Features of a Romano British date were recorded in the south east and included a partially truncated roman pot and two ditches. Only two features, a ditch in the north west and a pit in the central east, of a medieval date were recorded. A single post-medieval pit was recorded in the north.
The modern ground surface varied from 13.16m OD in the north west to 10.24 in the south. The height of the underlying natural brickearth varied from 12.30m OD in the north west to 9.83m OD in the south west.

9.3 OASIS DATA COLLECTION FORM

OASIS ID: archaeol6-12369

Project details

Project name	Lower Northbrook Farm
Short description of the project	Two combined archaeological evaluations on Land at and Additional land at Lower Northbrook Farm. The division was due to planning application.
Project dates	Start: 24-10-2005 End: 03-11-2005
Previous/future work	No / Yes
Any associated project reference codes	WB/05/0503/FULL - Planning Application No.
Any associated project reference codes	LNF05 - Sitecode
Type of project	Field evaluation

Site status	None
Monument type	PITTING Neolithic
Monument type	ROUNDHOUSE, POSTHOLES, PITS, DITCHES Late Bronze Age
Monument type	DITCHES, PITS Roman
Monument type	DITCH, PIT Medieval
Monument type	PIT Post Medieval
Significant Finds	POLISHED AXE HEAD FRAGMENTS (2) Neolithic
Methods & techniques	'Environmental Sampling','Sample Trenches','Test Pits'
Development type	Rural commercial
Prompt	Voluntary/self-interest
Prompt	predetermination evaluation
Position in the planning process	Pre-application

Project location

Country	England
Site location	WEST SUSSEX WORTHING WORTHING Lower Northbrook Farm
Postcode	BN12
Study area	2.38 Kilometres
National grid reference	TQ 51044 10401 Point
Height OD	Min: 9.83m Max: 12.30m

Project creators

Name of Organisation	Archaeology South-East
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design	Archaeology South-East

originator	
Project director/manager	Jim Stevenson
Project supervisor	Jon Sygrave
Sponsor or funding body	Chandlers Garage Ltd

Project archives

Physical Archive recipient	Local Museum
Physical Contents	'Ceramics','Environmental','Metal','Worked stone/lithics'
Digital Archive recipient	Local Museum
Digital Contents	'Stratigraphic','Survey'
Digital Media available	'Text'
Paper Archive recipient	Local Museum
Paper Contents	'Ceramics','Environmental','Metal','Stratigraphic','Survey','Worked stone/lithics'
Paper Media available	'Context sheet','Correspondence','Drawing','Map','Notebook - Excavation',' Research',' General Notes','Photograph','Plan','Report','Section','Survey ','Unpublished Text'

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Lower Northbrook Farm Archaeological Evaluation Report
Author(s)/Editor(s)	Jon Sygrave
Date	2006
Issuer or publisher	ASE
Place of issue or publication	ASE

Description	Grey literature Evaluation Report
Entered by	Jon Sygrave (j.sygrave@fau.ac.uk)
Entered on	13 January 2006