Wessex Archaeology

A46 Newark to Widmerpool Improvements Archaeological Works at Farndon Fields (A46 FAR05).

Fieldwork Report

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Balfour Beatty Civil Engineering Limited

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Archaeological Works at Farndon Fields (A46 FAR05)

Fieldwork Report

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Contents

Table List

Figure List

Summary

Wessex Archaeology was commissioned by Balfour Beatty Civil Engineering Limited to undertake archaeological mitigation associated with a geotechnical survey of a section of the proposed A46 Newark to Widmerpool Improvements, Nottinghamshire in advance of the Preferred Route Announcement, to provide adequate information for the Environmental Statement. Works comprised hand-excavation of ten targeted trial pits in advance of the machine-excavation of seven geotechnical pits and three geotechnical bore-holes, followed by subsequent watching brief during machining/ drilling. A further archaeological watching brief was maintained by the Designer's Archaeologist during the investigation of an additional 11 selected geotechnical trial pits within the same section of the preferred route. The main phase of archaeological excavation was undertaken between the 8th and 19th August 2005, with the targeted geotechnical pit excavation watching brief completed on 20th September 2005.

Previous fieldwork on the Site, comprising several episodes of fieldwalking, an auger survey, trial pitting and a geophysical survey, has identified two main concentrations and various background scatters of Late Upper Palaeolithic flint tools and debitage (*c.* 13,000-11,900 BP), probably related to the Creswellian tradition. Worked flint dating from the later Neolithic and Bronze Age was also recorded, although no apparent concentrations or clustering of this later material was evident.

The topsoil, which comprised dark greyish brown clay loam, was generally 0.3-0.35m thick across the Site. Subsoil was encountered in all of the trial pits and varied in thickness between 0.20m and 0.90m and was quite variable in colour and texture, largely mirroring the results of the earlier test pit and auger survey. The subsoil was sampled at two trial pits, and identified as the modern soil B horizon at these locations, one being of a Brown Earth, the other an alluvial soil: that in Tp753 having been formed in the top of fine grained alluvium. The archaeological investigations recovered a small number of finds, the majority of which was recovered from the topsoil, with only three pieces of worked flint recovered from the upper 50mm of the underlying subsoil in two of the trial pits. Only a very small assemblage of worked flint, comprising 18 pieces, was recovered overall, along with four small abraded sherds of Romano-British pottery and a single sherd of later medieval glazed ware pottery. The remainder of the finds assemblage was of late post-medieval or modern date. None of the worked flint recovered was of Late Upper Palaeolithic date.

The archaeological investigations retrieved both bulk disturbed and two undisturbed soil and sediment samples (monoliths) from trial pits (see above). The plant macrofossil and sediment assessment indicates that any artefacts or ecofacts recovered from the upper 0.20m of these subsoil deposits are likely to have been bioturbated and moved through the profile and hence are unlikely to be strictly *in situ*. Most of the site was found to have a sequence of the modern Brown Earth soil profile directly over the Holme Pierrepont fluvial sand and gravel. In one case only (Tp753) a layer of fine grained alluvium sealed the fluvial sands and gravels and in turn had the modern alluvial soil formed in its upper surface to 0.46m depth. The British Geological Survey maps the alluvium associated with the adjacent River Devon as Holocene in date. Without independent dating it is not certain if the alluvium actually post-dates any Late Upper Palaeolithic artefacts previously recovered from the Site as no artefacts which date to this period have been found in a stratified sequence containing alluvium.

Therefore, the results of this archaeological investigation cannot confirm the presence of Late Upper Palaeolithic artefacts within the preferred route corridor, and has demonstrated that subsoil deposits at the locations sampled are not remnant buried soil horizons and no landsurfaces or deposits broadly contemporaneous with Late Upper Palaeolithic artefacts previously recovered can be identified. The topsoil has been substantially reworked by ploughing and the subsoil by bioturbation and any artefacts within it are therefore not *in situ*. The original source of the artefacts found here previously was most likely the top of the gravel terrace or a landsurface formed on it, but if the latter once existed it has been entirely subsumed into the modern soil by pedogenesis and ploughing: no buried soil horizons have been found in this investigation.

Examination of the distribution of Late Upper Palaeolithic artefacts previously recovered within the area, in relation to the preferred route for the A46 Newark to Widmerpool Improvement Scheme demonstrates clearly that while the route does impact on both concentrations, these are peripheral to the route and the densest parts are avoided, which may in part explain the results of this investigation. Given the presence of a well-developed soil profile, with bioturbation and ploughing documented across the site, any remaining artefacts are likely to be scattered in the ploughed topsoil (Ap horizon) and to a lesser extent subsoil. In addition the assemblage may already be severely depleted through the succession of archaeological interventions that have already occurred at the Site.

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The project was managed for Wessex Archaeology by Andy Crockett and directed by Chris Moore. The fieldwork was directed by Vaughan Birbeck, assisted by Andy Baines, Laura Cassie, Pete Fairclough, Eoin Fitzsimons, Naomi Hall and Ion Powell. The watching brief was completed by Andy Baines and Pete Fairclough. Specialist reports were compiled by Rachael Seager Smith (finds), Dr Matt Leivers (worked flint) and Dr Michael J. Allen, Dr Catherine Chisham, Dr Chris Stevens and Sarah F. Wyles (palaeo-environmental and geoarchaeology). This report was compiled by Vaughan Birbeck and Andy Crockett. The illustrations were prepared by Rob Goller and Linda Coleman.

Balfour Beatty Civil Engineering Limited

A46 Newark to Widmerpool Improvements
Archaeological Works at Farndon Fields (A46 FAR05)

Fieldwork Report

1 INTRODUCTION

1.1 Project Background

1.1.1 Wessex Archaeology was commissioned by Balfour Beatty Civil Engineering Limited (BBCEL) to undertake archaeological archaeological mitigation associated with a geotechnical survey of a section of the proposed A46 Newark to Widmerpool Improvements, Nottinghamshire in advance of the Preferred Route Announcement, to provide adequate information for the Environmental Statement.

1.1.2 BBCEL have been appointed by the Highways Agency as the Main Contractor for the Scheme. The proposed road improvements comprise the upgrading of the A46 trunk road to dual carriageway standard between Newark and Widmerpool, Nottinghamshire. The scope of the archaeological mitigation was defined in a Specification, prepared by the Designer's Archaeologist in consultation with the Highways Agency, English Heritage and Nottinghamshire County Council (Scott Wilson 2005, doc. ref. no. D105795/5/034).

1.1.3 The works included archaeological excavation in advance of, and archaeological watching brief during the machine-excavation of, seven geotechnical trial pits and three boreholes at **Farndon Fields**, between Hawton Lane and Farndon roundabout (ch. 28+100 to 29+300), and hereafter referred to as the Site (**Figure 1**). An archaeological watching brief was maintained by the Designer's Archaeologist during the investigation of an additional 11 selected geotechnical trial pits within the same section of the preferred route. The main phase of archaeological excavation was undertaken between the 8th and 19th August 2005, with the watching brief completed on 20th September 2005.

1.2 The Site

1.2.1 The Site is centred on Ordnance Survey (OS) national grid reference (NGR) 477911 351855, and is situated immediately to the east of the A46 Trunk Road (formerly the Fosse Way Roman road) and Farndon village. The preferred route in this location passes across predominantly open countryside between Hawton Lane and Farndon roundabout.

1.2.2 The soil type recorded to the north of Hawton Lane typically comprises dark greyish brown, stoneless, non-calcareous heavy clay loam or clay topsoils over greyish and ochreous, stoneless, non-calcareous, slowly permeable clayey subsoils. Locally subsoils are silty and peaty (*Agricultural Land Classification and the Soil Resource – Baseline Report (Draft)* Highways Agency Working Paper D105795/5/013)

1.2.3 The underlying drift geology is mapped as Holme Pierrepont terrace deposits, sealed by more recent alluvium probably associated with the River Trent and/ or its tributary the River Devon (British Geological Survey 1972). The Site is within the floodplain of the River Trent, at a height of between 11.50m and 13.00m above Ordnance Datum (Newlyn).

2 ARCHAEOLOGICAL BACKGROUND

2.1.1 Previous archaeological investigations at Farndon Fields, comprising several episodes of fieldwalking, an auger survey, trial pitting and a geophysical survey, has identified two concentrations of Late Upper Palaeolithic (*c.* 13,000-11,900 BP) flint tools and debitage, probably related to the Creswellian tradition (TPAU 2004). Worked flint dating from the Later Neolithic and Bronze Age was also recorded, although no apparent concentrations or clustering of the later material was evident (Wessex Archaeology 1995).

2.1.2 The Late Upper Palaeolithic artefacts are identifiable by their white surface cortication/ patination and the distinctive technological and morphological characteristics of the debitage and tool forms. Diagnostic pieces include blade-cores with facetted platforms, blades with *en eperon* butts, long end-scrapers and backed and truncated blades of trapezoid form. These artefacts have largely been recovered from the topsoil although a small number were recovered from the upper 150mm of the underlying subsoil (0.40-0.55m below ground) in a single test pit, along with modern materials (Wessex Archaeology 1995, 31).

2.1.3 A geophysical survey of the area from which the prehistoric worked flint had been recovered encountered surface iron debris, a dense network of field drains and signals characteristic of ploughing. Two elliptical features, possibly representing ring ditches, were also located (GeoQuest Associates 1994).

2.1.4 The Site lies immediately to the east of the Fosse Way (now the A46), the major Roman road between Exeter and Lincoln; approximately 2.8km to the south-west of the Site along the Fosse Way was the Romano-British small town of *Ad Pontem*.

2.1.5 Newark was the scene of sustained conflict during the English Civil War, and the line of the outer earthworks of the besieging Parliamentary forces is believed to be located in the vicinity of the investigated area.

3 RESEARCH DESIGN

3.1 Project Aims

3.1.1 The principal aim of the trial pit survey and watching brief was to mitigate the impact of geotechnicalal investigations on significant archaeological remains identified by previous investigations. The trial pit survey aimed (within the scope of the specified trial pit sizes and locations) to provide sufficient information to allow an assessment of the importance of any archaeological evidence and the likely impact of the road improvements on them, and to allow the development of an appropriate mitigation strategy.

3.2 Trial Pit Objectives

3.2.1 A specific objective of the trial pitting was to test the extent to which the archaeological resource can address research priorities identified in the archaeological research framework for the scheme (Knight 2004).

3.2.2 The general trial pit objectives identified in the Specification (Scott Wilson 2005) were:

- *to mitigate adverse impacts on the Late Upper Palaeolithic worked flint scatter from a geotechnical investigation required to develop the proposed A46 Newark to Widmerpool scheme,*
- *to recover the Late Upper Palaeolithic worked flint assemblage from the topsoil and (if present) upper subsoil through a programme of archaeological investigation,*
- *to identify the presence/absence, nature, extent, date and depth of any undisturbed Late Upper Palaeolithic artefact scatters within the upper subsoil(s) existing beneath the topsoil;*
- *to contribute to the site wide analysis of the spatial distribution of Late Upper Palaeolithic artefacts,*
- *to contribute to the analysis of Late Upper Palaeolithic environmental conditions;*
- *to determine the relationship between the Holocene alluvial deposits and any finds from the subsoils,*
- *to help inform any subsequent mitigation strategy required for the Late Upper Palaeolithic site in connection with the proposed A46 Newark to Widmerpool scheme; and*
- *to record the presence/absence of any other periods' archaeological horizons, deposits and features that may be present.*

3.3 Watching Brief Objectives

3.3.1 The general geotechnical trial pit watching brief objectives identified in the Specification (*ibid.*) were:

- *to provide further information on the presence/absence, depth, stratigraphy, nature, date and extent of archaeological deposits along proposed A46 Newark to Widmerpool scheme route,*

- *to provide further information on the relative levels of undisturbed geology, modern disturbance, overburden deposits and potential archaeological horizons along the scheme route; and*
- *to mitigate against any adverse impacts on significant archaeological remains that may arise during the geotechnical investigations.*

4 METHODOLOGY

4.1 Introduction

4.1.1 This section sets out the general methodology that was applied to the excavation and recording of trial pits in the field, and post-fieldwork including archive preparation.

4.1.2 The work complied with the standards and guidelines as set out in Appendix 1 of the Specification, and in particular with the following:

- *English Heritage, Management of Archaeological Projects (2nd ed. 1991); and*
- *Institute of Field Archaeologists, Standard and Guidance for Archaeological Field Evaluation (revised Sept. 1999).*

4.2 Setting out

4.2.1 Trial pits were excavated in the locations proposed by the Designer's Archaeologist in consultation with the Employer's Archaeologist, Nottinghamshire County Council and English Heritage. The location of one trial pit (Trial Pit 751) was adjusted in the field to avoid damage to an existing farm track.

4.2.2 All trial pits were set-out on the ground by GPS relative to the project grid, to an accuracy of ±100mm, prior to the commencement of work. Each trial pit location was scanned using a proprietary cable avoidance tool (CAT).

4.2.3 A photographic record of each trial pit location was made prior to excavation.

4.3 Excavation and recording

4.3.1 All records were assigned the site name and code: **Farndon Trial Pits 2005 - A46 FAR05**

4.3.2 All archaeological investigations and remains were recorded in plan using electronic survey equipment. A full written, drawn and photographic record was made of each trial pit, including a representative section of each trial pit at an appropriate scale (1:20). Other plans, sections and elevations of archaeological features and deposits were drawn as necessary at an appropriate scale (normally 1:10 or 1:20). Drawings were made in pencil on permanent drafting film. Written records were compiled using *pro forma* record sheets, in accordance with the Wessex Archaeology recording system

4.3.3 A spot height for all principal features and levels was calculated in metres relative to Ordnance Datum, correct to two decimal places. Plans, sections and elevations were annotated with spot heights as appropriate.

4.3.4 Photographs were taken as necessary to produce a photographic record consisting of monochrome prints and colour transparencies using 35mm format. Digital images were also taken to support report preparation but will not replace archive standard materials. General site photographs were taken to record the progress of the investigations, including shots suitable for use in publicity material.

4.3.5 Each trial pit measured 3m by 1m, and was aligned either north to south or east to west. The central metre square of each trial pit was widened to 1.4m (0.2m to either side) to mitigate

the possible collapse of material during subsequent machine excavation of the associated geotechnical pit.

4.3.6 The location for each archaeological trial pit and adjacent soil storage area was cleared of vegetation, with topsoil then hand-excavated in 0.1m spits to expose the subsoil. All topsoil was passed through a 10mm mesh on-site (**Figure 4**; **Plates 1** and **2**), to facilitate the recovery of artefacts, and in particular worked flint.

4.3.7 To allow spatial differentiation for artefact quantities recovered from topsoil, each 3m long trial pit was subdivided into three separate 1m lengths, and each 0.1m spit therein allocated unique context numbers related to the designated trial pit number (see Trial Pit 749 example below). In addition, to facilitate comparative artefact density volumetric analysis, the 0.2 wide additional strips to either side of the central 1m long section were also considered separately for recording purposes

Trial Pit 749 (e.g.)	749031 – 749040	
749001 – 749010	749011 – 749020	749021 – 749030
	749041 – 749050	

4.3.8 Once the exposed subsoil surface had been cleaned and recorded, two 0.5m by 0.5m sondages within each trial pit were hand-excavated in 0.05m spits into the subsoil, to a maximum depth of 0.2m. Context numbering for the two subsoil sondages comprised (using the Trial Pit 749 example) 749051-060 and 749061-070, whilst sample numbers were drawn from 749101-200 and object numbers from 749201-500. Any further recording that required reference numbering was drawn from the sequence 749501-749999

4.3.9 The subsoil sondages were positioned in such a way as to be located beneath one of the quadrants for the overlying topsoil 1m squares. All subsoil contexts were 100% sampled and taken off-site where they were wet sieved through 10mm and 5mm mesh sieves. There was also provision made for the wet sieving of the resultant residue through a 1mm mesh should micro-debitage have been present within the 5mm fraction, though in the absence of micro-debitage this procedure was not considered necessary.

4.4 Environmental sampling strategy

Introduction

4.4.1 The environmental sampling strategy followed the *Centre for Archaeology Guidelines: Environmental Archaeology* (English Heritage 2002) and the recommendations contained in *Environmental Archaeology and Archaeological Evaluations* (Association for Environmental Archaeology 1995).

Bulk disturbed samples

4.4.2 The topsoil was not sampled. Provision was made for bulk environmental sampling for plant macrofossils if archaeological features and deposits were encountered. Such sampling would generally comprise a minimum 30 litre sample, though feature size may dictate sample size

for small features. In the event, the only bulk environmental samples comprised six approximately 10 litre samples of the suspected possible buried soil horizon and other subsoil encountered within a subsoil sondage in Trial Pit 753 (which proved to be alluvium, see below). Processing of environmental samples included recovery of any potential artefactual component, to the same specification as artefact wet-sieving, to minimise any potential recovery bias.

Sediment samples

4.4.3 Provision was originally made for three *in situ* monoliths. However, sediment samples were only taken at two locations to examine subsoil horizons exposed, in order to assess the potential for relict soil horizons associated with the Late Upper Palaeolithic lithic material: no suitable deposits were identified during fieldwork to warrant taking a third monolith. Although initially stated that to ensure a complete sequence through the subsoil was obtained, these samples were to be recovered during the subsequent excavation of the geotechnical pit at chosen trial pit locations, the monolith from Trial Pit 753 was taken during hand-excavation.

OSL dating samples

4.4.4 Although provision was made for OSL sampling, in the absence of suitably diagnostic artefacts associated with any deposits recorded, no such sampling was considered necessary.

4.5 Watching Brief

4.5.1 Upon completion of the archaeological excavation works, the subsequent geotechnical excavation of the seven hand dug trial pit locations was monitored, in order to record the full subsoil profile down to the level of the underlying river terrace gravel or other local geology. The monitoring archaeologist annotated and extended copies of the original section drawings from the hand excavation and recording stage.

4.5.2 As noted above, of the two trial pits selected for monolith sampling, Trial Pit 755 was also sampled at this stage. The archaeological monitoring and recording of trial pits not selected for hand excavation was undertaken by the Designer's Archaeologist and will be reported under separate cover.

5 RESULTS

5.1 Introduction

5.1.1 Descriptions of the deposits recorded during the course of the evaluation and watching brief are presented in **Appendix 1**. The trial pit layout as excavated is shown on **Figure 1**, with representative plans and sections of the trial pits shown on **Figure 2**.

5.2 Stratigraphy

Topsoil

5.2.1 The topsoil (ploughsoil) typically comprised dark greyish brown, relatively stoneless, non-calcareous heavy clay loam, and was generally 0.3-0.35m thick across the Site. The stone content for Trial Pit 751 and Trial Pit 753 was marginally greater than recorded elsewhere, but otherwise no significant variations in the topsoil matrix were observed.

Subsoil

5.2.2 Subsoil, varying in thickness between 0.2m (Trial Pit 753 and Trial Pit 755) and 0.9m (Trial Pit 803), was recorded in all trial pits. For six of the hand excavated trial pits and all three boreholes this comprised either very sandy clay or clayey sand of variable colours, although generally yellowish brown. Field notes record plough-scarring on the surface of the subsoil c.20mm deep and wide, though no detailed record of the depth of such scarring was made. Examination of the *in situ* monoliths from Trial Pits 753 and 755 has identified the subsoil at these locations as a modern soil B horizon.

Alluvium

5.2.3 A variable thickness thin discontinuous band of alluvium was recorded within Trial Pit 753. Laboratory-based examination has confirmed this sediment was a dark greyish brown massive silt loam with a clear boundary to the underlying fluvial sand and gravel.

Gravel

5.2.4 The underlying Holme Pierrepont terrace gravel, comprising pale yellowish brown sands and coarse gravel, was encountered during the watching brief at between 9.9m aOD (Trial Pit 752) and 12.2m aOD (Trial Pit 749). In a number of trial pits, the upper surface of the terrace gravel was capped by a mantle of potentially weathered sand and/or gravel (i.e. Trial Pits 751 – 754 inclusive), with no organic component. It is of note that the location of Trial Pits 52-753 (inc.) correlate with the periphery of alluvium mapped by the British Geological Survey as Holocene in date (**Figure 3**).

5.3 Finds reports

Introduction

5.3.1 Small quantities of artefacts were found in all seven hand-excavated trial pits, and one of the geotechnical pits monitored during the watching brief. With the exception of the metalwork, all the finds were cleaned and quantified (by number and weight of pieces) by material type within each context. This information is summarized in **Table 1**. The finds have been scanned to establish their nature, condition and date range.

Table 1: Finds quantification (number/ weight in grams)

Trial Pit	CBM	Pottery	Glass	Flint	Other materials
749	7/70	19/174	2/8	6/11	2/6g asbestos; 1/ 2g burnt flint; 2/1g clay tobacco pipe; 2/11g stone
751				2/8	1/3g copper alloy wire
752	6/28	1/1	4/8	1/6	
753	5/162	21/121	9/42		1/204g iron
754	13/355	16/71	3/8	6/21	1/1g clay tobacco pipe; 1/7g iron; 1/6g stone
755	18/240	12/51	1/ 2		1/16g stone
803	4/87	4/19		3/16	
Totals	**53/942**	**73/437**	**19/68**	**18/62**	

Flint

5.3.2 Eighteen pieces of worked flint were recovered. The raw material varies in colour and condition, but is likely to derive from the local drift geology. Eight are flakes (five broken); three are broken blades. There is one very small core fragment and a small iron-stained chip which may not be worked.

5.3.3 Pieces with retouch are limited to a piercer on a secondary flake and four pieces with marginal retouch.

5.3.4 Both hard and soft hammer technologies appear to be present, but the sample is too small to be certain. There are no chronologically diagnostic forms: the assemblage could date anywhere between the Mesolithic and Late Neolithic periods, and may contain pieces of various ages.

5.3.5 None of the pieces are Late Upper Palaeolithic in date; the distinctive technological and morphological characteristics of Late Upper Palaeolithic artefacts found in previous archaeological investigations in the vicinity are entirely lacking, as is the white surface cortication

Pottery

5.3.6 Four small abraded sherds of Romano-British coarseware pottery were found in Trial Pit 754 (context 754013), Trial Pit 755 (context 755002) and Trial Pit 803 (contexts 803001 and 803002), while a later medieval glazed ware sherd came from Trial Pit 749 (context 749002). These pieces have been retained, although no further work is recommended.

5.3.7 The remaining pottery sherds were of 19th or early 20th century date, consisting of glazed earthenwares, white and blue and white industrial wares, stoneware jar sherds and flowerpots.

Other

5.3.8 The majority of artefacts were of late post-medieval or modern date. These include asbestos, ceramic building material (numerous small, often featureless pieces of roof tile and modern compressed bricks), a piece of concrete rendering and a breeze block fragment, as well as roofing slate and a small piece of unworked limestone. Glass, from bottles or other vessels, and clay tobacco pipe stem fragments were of similar date. Metalwork recovered comprised an iron nail (Trial Pit 754), part of an agricultural machine (Trial Pit 753) and a rough copper alloy ring made by twisting the ends of a short length of wire (Trial Pit 751), all of relatively recent date.

5.3.9 In accordance with the Method Statement (Wessex Archaeology 2005, para. 4.7), all the undoubtedly modern material has been discarded.

5.4 Environmental reports

Plant macrofossils

5.4.1 Six bulk disturbed samples of generally 10 litres each were taken from Trial Pit 753 through the full sedimentary sequence below topsoil, and were processed for the recovery and assessment of charred plant remains and charcoals.

5.4.2 The bulk samples were processed by standard flotation methods; the flot retained on a 0.5 mm mesh and the residues fractionated into 4 mm, 2 mm, 1mm and 0.5 mm fractions and dried. The coarse fractions (>4 mm) were sorted, weighed and discarded. The flots were scanned under a x10 - x30 stereo-binocular microscope and presence of charred remains quantified (**Table 2**), to record the preservation and nature of the ecofacts observed.

5.4.3 No charred plant remains were present, though charcoal was noted from the flots. The samples were all small with quite high proportions of roots and modern seeds, though diminishing within the lower samples. Similarly, the uppermost three samples of the sedimentary sequence contained several fragments of wood charcoal and *parenchyma*, as well as small fragments of probable grass culms and root fragments. They also contained several fragments of vitrified charcoal as well as possible fragments of coal.

Table 2: Ecofact quantification from Trial Pit 753

Sample				Flot							Residue
Description	Context No.	Sample No.	Size (l)	Size (ml)	Grain	Chaff	Weed seeds unburnt	Weed seeds burnt	Charcoal >5.6mm	Other	Charcoal >5.6mm
Modern soil B horizon formed in alluvium	753051	753101	10	30^{4}	-	-	a	-	B	-	-
	753052	753102	10	4^{2}	-	-	b	-	B	-	-
	753053	753103	10	4^{1}	-	-	c	-	C	-	-
Alluvium	753054	753104	10	2^{2}	-	-	c	-	-	-	-
	753055	753109	8	3^{3}	-	-	-	-	-	-	-
Fluvial sands & gravels	753056	753110	10	2^{2}	-	-	-	-	-	-	-

Key: A** = exceptional, A* = 30+ items, A = 10-30 items, B = 9 - 5 items, C = < 5 items
Flot size is total, but flot in superscript = ml of rooty material. Unburnt seed in lower case to distinguish from charred remains

5.4.4 In general terms the samples were all broadly similar in their composition. While charred monocot stems can be associated with cremations, such remains are also a product of stubble burning. That the quantities of both charred material, coal, roots and modern seeds all decline with depth through the profile suggests that all are derived from modern activities, and have probably been worked down through the profile through ploughing and/ or bioturbation (e.g. worm action, burrowing etc.).

Sediment Descriptions

INTRODUCTION

5.4.5 Monoliths were taken from Trial Pit 753 and Trial Pit 755 (**Figure 2**), approximately 300m apart. Trial Pit 753 is situated within the floodplain of the River Devon, whilst Trial Pit 755 lies just to the west of the modern floodplain. In a broader context, both trial pits are located within the wider floodplain for the River Trent.

5.4.6 The monoliths were cleaned prior to recording and standard descriptions used (following Hodgson 1976), including Munsell colour, texture, structure and nature of boundaries. Soil descriptions are provided below (**Appendix 2**). All depths are in relation to ground surface.

MONOLITH 753120; TRIAL PIT 753

5.4.7 A modern alluvial soil profile was recorded from Trial Pit 753, comprising dark highly humic clay loam topsoil (A horizon) over the B horizon formed in alluvium (context 753051-53); the latter of brown silty clay with coarse, moderately well developed blocky structure. Occasional vertical worm burrows were noted.

5.4.8 A diffuse boundary existed at 0.46m to the underlying dark greyish brown massive silt loam alluvium, which contained *c.* 20% rounded-sub-rounded flint gravel (context 753054-5). This layer had been queried on-site as a possible buried soil but no evidence of this (such as structure or horizonation) was discerned. This layer had formed as fine overbank sediments laid down under flood conditions.

5.4.9 The basal layer (context 753056 – identified as part of 753071 during the subsequent watching brief) in Trial Pit 753 at 0.52m was of 60% gravel in a dark greyish brown clay loam matrix with irregular pockets and lenses of medium sands and is interpreted as the gravel terrace (Holme Pierrepont terrace), comprising pre-Holocene (Devensian age) fluvial sands and gravels.

5.4.10 The sequence is one of alluvium over fluvial sands and gravels. The alluvial soil has developed gradually over time and built up on the floodplain with the addition of fine (overbank) alluvium associated with the River Trent, but no single sustained stasis exists other than the modern topsoil. Fining in the particle size up the profile indicates some decline in energy of water flow/ shift in position of channel related to the Site location.

5.4.11 The upper horizons were noted to be plough scarred in the field, and the B horizon showed evidence of worm activity, no buried soil horizon can be identified.

MONOLITH 755999; TRIAL PIT 755

5.4.12 In contrast to the alluvial sequence in Trial Pit 753, that recovered from Trial Pit 755 was of a modern Brown Earth soil profile over gravels (the uppermost part of which was just seen in the monolith). The soil comprised dark brown highly humic clay loam topsoil (context 755001-4) with a sharp undulating boundary to the underlying horizon, indicating that ploughing had taken place.

5.4.13 The modern soil B horizon (context 755051-4) was of dark brown humic Fe rich clay loam with well-developed medium blocky-prismatic peds and common worm and root activity. The profile is clearly terrestrial in nature, with little or no alluvial input and has been recovered from a slightly higher point in the landscape, removed from the floodplain where this rich soil profile has evolved under wooded conditions. No buried soil horizon was identified in this profile and it is therefore believed that Late Upper Palaeolithic remains elsewhere in the area were derived from the ploughsoil and/ or the top of the subsoil.

Palaeo-environmental summary

5.4.14 Although the plant macrofossil samples have not produced charred plant remains, the results do demonstrate declining quantities of unburnt weed seeds down through the profile, as well as increasing proportion of modern rooty material. The results therefore demonstrate a mechanism (and its effect) by which material (including archaeological remains) may transfer from topsoil into the subsoil.

5.4.15 Assessment of the monolith sample from Trial Pit 753 has concluded that the sedimentary sequence is an alluvial soil developed in alluvium over fluvial sands and gravels. The sequence has not developed rapidly enough to bury a former surface; instead the soil has gradually developed upwards resulting in a well defined alluvium soil profile, likely to be

associated with the River Devon forming the eastern boundary to the Site *c.* 200m to the east. Fining in the particle size up the profile may indicate some decline in energy of water flow and/ or a shift in the position of the channel in relation to the Site location. The lower horizon, whilst more silty than recorded elsewhere, is likely to represent the weathered mantle of the underlying terrace gravel.

5.4.16 The alluvium mapped by the British Geological Survey that is associated with the course of the River Devon is shown as Holocene, which may therefore post-date any Late Upper Palaeolithic activity. In this context, if artefacts of Late Upper Palaeolithic date were recovered from above the alluvium, it is unlikely that they would be *in situ*, or conversely the age of the alluvium would be in question. The sequences described here enable the boundary of the BGS mapped alluvium to be slightly amended, alluvium being present in Trial Pit 753 but not 752, which is currently mapped as being inside the alluvial extent.

5.4.17 At the locations sampled it can be stated with some degree of confidence that any Late Upper Palaeolithic worked flints recovered from the subsoil (Brown Earth B horizon or, in the case of Trial Pit 753, alluvial soil B horizon and alluvium) do not come from a contemporaneous buried surface or soil. Moreover, their stratigraphic location within this deposit is likely to be derived from bioturbation and other pedogenic processes.

6 CONCLUSIONS

6.1.1 The archaeological investigations produced a modest finds assemblage from the topsoil, and to a lesser extent, subsoil. The trial pits in general revealed a very similar soil profile across the Site. The topsoil, which comprised dark greyish brown clay loam, was generally 0.3-0.35m thick across the Site. Subsoil was encountered in all of the trial pits and varied in thickness between 0.20m and 0.90m and was quite variable in colour and texture, largely mirroring the results of the earlier test pit and auger survey (Wessex Archaeology 1995). The sample recovered from Trial Pit 755, which was very similar to the subsoil deposits found in the other five trial pits and three borehole starter pits, was of a modern Brown Earth soil profile over gravels. No stasis event or buried landsurface was apparent in this sequence. The plant macrofossil assessment indicates that any artefacts or ecofacts recovered from the upper 0.20m of these subsoil deposits are likely to have been bioturbated, and hence unlikely to be *in situ*, confirming the results of the earlier test pitting exercise (Wessex Archaeology 1995, 19).

6.1.2 The sediment assessment has concluded that the subsoil samples from Trial Pit 753 only contain alluvium, mapped by the British Geological Association as Holocene in date (British Geological Survey 1972). No absolute dating exists for this alluvium, however, previous assessment of the geoarchaeology of the proposed route suggests that although the precise onset of alluviation in the area is unknown, it is believed to have at least accelerated during the Romano-British period (Howard 2004, Section 3.4: Area 3). No LUP flints have been found associated with observed stratified sequences containing alluvium, although a few surface finds were recovered in fieldwalking in part of the area mapped by BGS as alluvium. Most LUP finds were associated with the Brown Earth soil profile documented for the rest of the Site, directly overlying the fluvial sands and gravels of the Holme Pierrepoint terrace. The upper surface of these fluvial sands and gravels is slightly mixed and iron stained but no stasis horizon can be discerned

6.1.3 The small worked flint assemblage recovered during this project displayed no chronologically diagnostic forms, could date anywhere between the Mesolithic and Late Neolithic periods, and may contain pieces of various ages. Late Neolithic and Bronze Age flintwork has been recovered during the earlier fieldwalking and test pitting exercises and, whilst indicative of activity during these periods within or close to the Site, no features or deposits of this date were located during the course of the project. However, none of the worked flint recovered was of Late Upper Palaeolithic date. Three pieces of worked flint, all small, undiagnostic waste flakes, were recovered from the upper 50mm of the underlying subsoil in two of the trial pits, however, these did not display the distinctive technological and morphological characteristics of Late Upper Palaeolithic artefacts found in previous archaeological investigations and lacked their white surface cortication. Overall, only a very small quantity of worked flint, comprising 18 pieces, was recovered, along with very small assemblages of Romano-British pottery and a single sherd of later medieval glazed ware pottery. The remainder of the finds assemblage was of late post-medieval or modern date.

6.1.4 In the vicinity of the trial pits examined, it is therefore suggested that the presence of undamaged Late Upper Palaeolithic features or deposits remains at least unproven, and would appear unlikely that such remains exist. Previous fieldwalking (TPAU 2004) has identified two concentrations of Late Upper Palaeolithic finds in the area, a densely spaced cluster approximately 30m in diameter to the north-west of Trial Pit 755 and a more diffuse concentration around the north-western side of the route between Trial Pits 753 and 754 (**Figure 3**).

6.1.5 The condition of the Late Upper Palaeolithic finds recovered during earlier work suggest that the assemblage has not been redeposited in antiquity through natural periglacial processes but that the deposits that originally contained them have probably been destroyed by natural or anthropogenic processes, such as recent deep ploughing. As the Site is relatively flat it is thought unlikely that the Late Upper Palaeolithic finds have been moved any great distance horizontally by the ploughing and that their distribution within the topsoil (Brown Earth A horizon) probably reflects their original deposition locations, although somewhat blurred by the ploughing.

6.1.6 The artefacts previously recovered can therefore be seen as the diffuse remains of concentrations probably originally derived from what was once the top of the fluvial gravels (now possibly truncated) or a landsurface which has now been wholly subsumed into the modern Brown Earth soil profile; these concentrations may already be severely depleted through the succession of archaeological interventions undertaken at the Site. An examination of the distribution of Late Upper Palaeolithic artefacts within the area in relation to the preferred route for the A46 Newark to Widmerpool Improvement Scheme, demonstrates clearly that while the route does impact on both clusters, these are peripheral to the route and the densest parts are avoided (**Figure 3**). If there ever was a landsurface associated with the flints, no evidence of it has been found and while the presence of small remnants cannot absolutely be ruled out, any remaining artefacts in the area most likely exist as a diffuse scatter in the modern soil profile.

6.1.7 As during earlier work on this Site, an assemblage of Romano-British, medieval and post-medieval pottery was recovered from the topsoil. The small assemblage of four Romano-British pottery sherds recovered during the trial pitting was heavily abraded and widely distributed, suggesting that these probably represent field manuring rather than any sustained activity. No features or deposits of this date were recorded during the course of the project and it is unlikely that any are present. The single sherd of medieval pottery recovered from the topsoil in a trial pit is also likely to represent a manuring scatter. The relatively large quantities of post-medieval and modern material incorporated into the topsoil are not thought to represent the construction and demolition of structures within the Site itself, but again material derived from manuring and possibly also land drain construction.

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8 APPENDICES

Appendix 1: Catalogue of trial pit descriptions

Bore-hole 426		**NGR:** 477838 351783
Dimensions: 0.60m x 0.60m		**Ground Level:** 12.10m aOD
Context No.	**Description**	**Depth**
426001	Present Turfline	0-0.02m
426002	Dark greyish brown silty clay loam topsoil.	0.02-0.10m
426003	Limestone rubble in a greyish brown silty clay loam matrix. Possible former trackway. Surface at 12.00m aOD.	0.10-0.30m
426004	Mid greyish brown sandy loam subsoil. Surface at 11.80m aOD	0.30-0.45m
426005	Mid yellowish brown silty sand subsoil with common small pebble inclusions. Surface at 11.65m aOD.	0.45-0.50m
426006	Pale yellowish brown sands and gravels. Natural terrace gravel deposits Surface at 11.60m aOD.	0.50-1.20m+

Bore-hole 427		**NGR:** 478114 352362
Dimensions: 0.80m x 0.75m		**Ground Level:** 11.96m aOD
Context No.	**Description**	**Depth**
Topsoil		
427001	Mid greyish brown silty clay loam topsoil. – First spit	0-0.10m
427002	Second topsoil spit	0.10-0.20m
427003	Third topsoil spit	0.20-0.30m
427004	Fourth topsoil spit	0.30-0.35m
Subsoil		
427005	Mid yellowish brown sandy clay subsoil with sparse small pebble inclusions. First spit. Surface at 11.61m aOD.	0.35-0.40m
427006	Second subsoil spit	0.40-0.45m

Bore-hole 448		**NGR:** 478097 352178
Dimensions: 0.60m x 0.60m		**Ground Level:** 11.93m aOD
Context No.	**Description**	**Depth**
Topsoil		
448001	Mid greyish brown silty clay loam topsoil. – First spit	0-0.10m
448002	Second topsoil spit	0.10-0.20m
448003	Third topsoil spit	0.20-0.30m
448004	Fourth topsoil spit	0.30-0.35m
Subsoil		
448005	Mid-dark yellowish brown sandy clay subsoil with sparse small pebble inclusions. First spit. Surface at 11.58m aOD.	0.35-0.40m
448006	Second subsoil spit	0.40-0.45m

Trial Pit 749		**NGR:** 477606 351513
Dimensions: 3.0m x 1.4m (max)		**Ground Level:** 12.82m aOD
Context No.	**Description**	**Depth**
Topsoil		
749001	Dark greyish brown silty loam topsoil with sparse charcoal inclusions. First topsoil spit in western quadrant.	0-0.10m
749002	Second topsoil spit in western quadrant.	0.10-0.20m
749003	Third topsoil spit in western quadrant.	0.20-0.29m
749011	First topsoil spit in central quadrant.	0-0.10m
749012	Second topsoil spit in central quadrant.	0.10-0.20m
749013	Third topsoil spit in central quadrant.	0.20-0.30m
749021	First topsoil spit in eastern quadrant.	0-0.10m
749022	Second topsoil spit in eastern quadrant.	0.10-0.20m
749023	Third topsoil spit in eastern quadrant.	0.20-0.31m
749031	First topsoil spit in northern quadrant.	0-0.10m
749032	Second topsoil spit in northern quadrant.	0.10-0.20m
749033	Third topsoil spit in northern quadrant.	0.20-0.30m
749041	First topsoil spit in southern quadrant.	0-0.10m
749042	Second topsoil spit in southern quadrant.	0.10-0.20m
749043	Third topsoil spit in southern quadrant.	0.20-0.30m
Subsoil		
749051	Mid-light brown slightly clayey sand subsoil with sparse small pebble and charcoal inclusions. First subsoil spit in western subsoil sondage. Surface at 12.53m aOD.	0.29-0.34m
749052	Second subsoil spit in western subsoil sondage.	0.34-0.39m
749053	Third subsoil spit in western subsoil sondage.	0.39-0.44m
749054	Fourth subsoil spit in western subsoil sondage.	0.44-0.49m
749061	First subsoil spit in eastern subsoil sondage.	0.31-0.36m
749062	Second subsoil spit in eastern subsoil sondage.	0.36-0.41m
749063	Third subsoil spit in eastern subsoil sondage.	0.41-0.46m
749064	Fourth subsoil spit in eastern subsoil sondage.	0.46-0.51m
Machine Excavation		
749071	Machine excavated subsoil. Mid-light brown slightly clayey sand with sparse small pebble and charcoal inclusions.	0.51-0.70m
749072	Pale yellowish brown sands and gravels. Natural substrata. Surface at 12.12m aOD.	0.70-3.30m+

Trial Pit 751		**NGR:** 477856 351763
Dimensions: 3.0m x 1.4m (max)		**Ground Level:** 12.04m aOD
Context No.	**Description**	**Depth**
Topsoil		
751001	Mid greyish brown silty clay loam topsoil with common small pebble and sparse charcoal inclusions. First topsoil spit in western quadrant.	0-0 10m
751002	Second topsoil spit in western quadrant.	0.10-0.20m
751003	Third topsoil spit in western quadrant.	0.20-0.32m
751011	First topsoil spit in central quadrant.	0-0.10m
751012	Second topsoil spit in central quadrant.	0.10-0.20m
751013	Third topsoil spit in central quadrant.	0.20-0.30m
751021	First topsoil spit in eastern quadrant.	0-0.10m
751022	Second topsoil spit in eastern quadrant.	0.10-0.20m
751023	Third topsoil spit in eastern quadrant.	0.20-0.30m
751031	First topsoil spit in northern quadrant.	0-0.10m
751032	Second topsoil spit in northern quadrant.	0.10-0.20m
751033	Third topsoil spit in northern quadrant.	0.20-0.30m
751041	First topsoil spit in southern quadrant.	0-0.10m
751042	Second topsoil spit in southern quadrant.	0.10-0.20m
751043	Third topsoil spit in southern quadrant.	0.20-0.30m
Subsoil		
751051	Mid-dark yellowish brown silty sand subsoil with common small pebble inclusions First subsoil spit in western subsoil sondage. Surface at 11 72m aOD.	0 32-0 37m
751052	Second subsoil spit in western subsoil sondage.	0.37-0.42m
751053	Third subsoil spit in western subsoil sondage.	0.42-0.47m
751054	Fourth subsoil spit in western subsoil sondage.	0.47-0.52m
751061	First subsoil spit in eastern subsoil sondage.	0.30-0.35m
751062	Second subsoil spit in eastern subsoil sondage.	0.35-0.40m
751063	Third subsoil spit in eastern subsoil sondage.	0.40-0.45m
751064	Fourth subsoil spit in eastern subsoil sondage.	0.45-0.50m
Machine Excavation		
751071	Machine excavated subsoil	0.50-0.90m
751072	Greyish brown sand subsoil. Surface at 11.14m aOD.	0.90-1.20m
751073	Pale yellowish brown sands and gravels Natural substrata Surface at 10 84m aOD.	1 20-3 60m+

Trial Pit 752		**NGR:** 477911 351855
Dimensions: 3.0m x 1.4m (max)		**Ground Level:** 11.78m aOD
Context No.	**Description**	**Depth**
Topsoil		
752001	Dark greyish brown silty clay loam topsoil with sparse small pebble inclusions. First topsoil spit in southern quadrant.	0-0 10m
752002	Second topsoil spit in southern quadrant.	0.10-0.20m
752003	Third topsoil spit in southern quadrant.	0.20-0.30m
752004	Fourth topsoil spit in southern quadrant.	0.30-0.36m
752011	First topsoil spit in central quadrant.	0-0.10m
752012	Second topsoil spit in central quadrant.	0.10-0.20m
752013	Third topsoil spit in central quadrant.	0.20-0.30m
752014	Fourth topsoil spit in central quadrant.	0.30-0.36m
752021	First topsoil spit in northern quadrant.	0-0.10m
752022	Second topsoil spit in northern quadrant.	0.10-0.20m
752023	Third topsoil spit in northern quadrant.	0.20-0.30m
752024	Fourth topsoil spit in northern quadrant.	0.30-0.36m
752031	First topsoil spit in eastern quadrant.	0-0.10m
752032	Second topsoil spit in eastern quadrant.	0.10-0.20m
752033	Third topsoil spit in eastern quadrant.	0.20-0.30m
752034	Fourth topsoil spit in eastern quadrant.	0.30-0.36m
752041	First topsoil spit in western quadrant.	0-0.10m
752042	Second topsoil spit in western quadrant.	0.10-0.20m
752043	Third topsoil spit in western quadrant.	0.20-0.30m
752044	Fourth topsoil spit in western quadrant.	0.30-0.36m
Subsoil		
752051	Mid-dark yellowish brown sandy loam subsoil First spit in northern subsoil sondage. Surface at 11.42m aOD.	0 36-0 41m
752052	Second spit in northern subsoil sondage.	0.41-0.46m
752053	Third spit in northern subsoil sondage.	0.46-0.51m
752054	Fourth spit in northern subsoil sondage.	0.51-0.56m
752061	First spit in southern subsoil sondage.	0.36-0.41m
752062	Second spit in southern subsoil sondage.	0.41-0.46m
752063	Third spit in southern subsoil sondage.	0.46-0.51m
752064	Fourth spit in southern subsoil sondage.	0.51-0.56m
Machine Excavation		
752071	Mid-dark yellowish brown sandy loam subsoil.	0.36-1.10m
752072	Mid yellowish brown sand. Surface at 10.68m aOD.	1.10-1.80m
752073	Bluish grey coarse sands and gravels Natural substrata Surface at 9 98m aOD.	1 80-2.40m+

Trial Pit 753		**NGR:** 478006 351995
Dimensions: 3.0m x 1.4m (max)		**Ground Level:** 11.15m aOD
Context No.	**Description**	**Depth**
Topsoil		
753001	Very dark greyish brown clay loam topsoil with sparse charcoal inclusions First topsoil spit in western quadrant.	0-0 10m
753002	Second topsoil spit in western quadrant.	0.10-0.20m
753003	Third topsoil spit in western quadrant.	0.20-0.30m
753011	First topsoil spit in central quadrant.	0-0.10m
753012	Second topsoil spit in central quadrant.	0.10-0.20m
753013	Third topsoil spit in central quadrant.	0.20-0.29m
753021	First topsoil spit in eastern quadrant.	0-0.10m
753022	Second topsoil spit in eastern quadrant.	0.10-0.20m
753023	Third topsoil spit in eastern quadrant.	0.20-0.28m
753031	First topsoil spit in northern quadrant.	0-0.10m
753032	Second topsoil spit in northern quadrant.	0.10-0.20m
753033	Third topsoil spit in northern quadrant.	0.20-0.29m
753041	First topsoil spit in southern quadrant.	0-0.10m
753042	Second topsoil spit in southern quadrant.	0.10-0.20m
753043	Third topsoil spit in southern quadrant.	0.20-0.29m
Subsoil		
753051	Mid yellowish brown silty clay, Diffuse horizon with underlying deposit 753055 in western subsoil sondage Possible alluvial deposit. First spit in western subsoil sondage. Surface at 10.85m aOD.	0 30-0 35m
753052	Second spit in western subsoil sondage.	0.35-0.40m
753053	Third spit in western subsoil sondage.	0.40-0.45m
753054	Fourth spit in western subsoil sondage *Subsequently identified as the upper surface of alluvium 753055 during laboratory-based recording.*	0 45-0 52m
753061	First spit in eastern subsoil sondage.	0.29-0.34m
753062	Second spit in eastern subsoil sondage.	0.34-0.39m
753063	Third spit in eastern subsoil sondage.	0.39-0.44m
753064	Fourth spit in eastern subsoil sondage.	0.44-0.49m
Possible Buried Soil		
753055	Mid-light greyish brown sandy silty loam with common gravel inclusions. Possible buried soil deposit in western subsoil sondage First spit. Surface at 10 63m aOD *Subsequently identified as fine-grained alluvium during laboratory-based recording.*	0 52-0 57m
753056	Second spit of possible buried soil deposit in western subsoil sondage. *Subsequently identified as the upper surface of fluvial terrace gravel 753071.*	0 57-0 62m
Machine Excavation		
753071	Pale grey silty sand with abundant gravel inclusions. Surface at 10 53m aOD. *Due to constraints associated with accessing the section face during watching brief it was not possible to differentiate between the thin alluvial deposit 753054/5 and the underlying upper surface of the fluvial terrace gravel – hence the watching brief records one single deposit as 753071.*	0 45-0 90m
753072	Mid yellowish brown coarse sands and gravels Natural substrata. Surface at 10.25m aOD.	0 90-1.40m+

Trial Pit 754		**NGR:** 478078 352193
Dimensions: 3.0m x 1.4m (max)		**Ground Level:** 11.90m aOD
Context No.	**Description**	**Depth**
Topsoil		
754001	Mid greyish brown silty clay loam topsoil with sparse-moderate small pebble inclusions. First topsoil spit in northern quadrant.	0-0.10m
754002	Second topsoil spit in northern quadrant.	0.10-0.20m
754003	Third topsoil spit in northern quadrant.	0.20-0.28m
754011	First topsoil spit in central quadrant.	0-0.10m
754012	Second topsoil spit in central quadrant.	0.10-0.20m
754013	Third topsoil spit in central quadrant.	0.20-0.29m
754021	First topsoil spit in southern quadrant.	0-0.10m
754022	Second topsoil spit in southern quadrant.	0.10-0.20m
754023	Third topsoil spit in southern quadrant.	0.20-0.30m
754031	First topsoil spit in eastern quadrant.	0-0.10m
754032	Second topsoil spit in eastern quadrant.	0.10-0.20m
754033	Third topsoil spit in eastern quadrant.	0.20-0.29m
754041	First topsoil spit in western quadrant.	0-0.10m
754042	Second topsoil spit in western quadrant.	0.10-0.20m
754043	Third topsoil spit in western quadrant.	0.20-0.29m
Subsoil		
754051	Mid reddish brown clayey silt subsoil with moderate small pebble inclusions First spit in northern subsoil sondage. Surface at 11.62m aOD.	0.28-0.33m
754052	Second spit in northern subsoil sondage.	0.33-0.38m
754053	Third spit in northern subsoil sondage.	0.38-0.43m
754054	Fourth spit in northern subsoil sondage.	0.43-0.48m
754061	First spit in southern subsoil sondage.	0.30-0.35m
754062	Second spit in southern subsoil sondage.	0.35-0.40m
754063	Third spit in southern subsoil sondage.	0.40-0.45m
754064	Fourth spit in southern subsoil sondage.	0.45-0.50m
Machine Excavation		
754071	Mid reddish brown clayey silt subsoil.	0.29-0.75m
754072	Yellowish brown coarse angular gravels. Surface at 11.15m aOD.	0.75-1.0m
754073	Orange brown coarse sands and gravels Natural substrata Surface at 10.90m aOD.	1.0-2.0m+

Trial Pit 755		**NGR:** 478118 352267
Dimensions: 3.0m x 1.4m (max)		**Ground Level:** 11.98m aOD
Context No.	**Description**	**Depth**
Topsoil		
755001	Mid greyish brown silty clay loam topsoil with sparse small pebble and sparse charcoal inclusions. First topsoil spit in western quadrant.	0-0.10m
755002	Second topsoil spit in western quadrant.	0.10-0.20m
755003	Third topsoil spit in western quadrant.	0.20m-0.30m
755004	Fourth topsoil spit in western quadrant.	0.30-0.35m
755011	First topsoil spit in central quadrant.	0-0.10m
755012	Second topsoil spit in central quadrant.	0.10-0.20m
755013	Third topsoil spit in central quadrant.	0.20m-0.30m
755014	Fourth topsoil spit in central quadrant.	0.30-0.35m
755021	First topsoil spit in eastern quadrant.	0-0.10m
755022	Second topsoil spit in eastern quadrant.	0.10-0.20m
755023	Third topsoil spit in eastern quadrant.	0.20m-0.30m
755024	Fourth topsoil spit in eastern quadrant.	0.30-0.34m
755031	First topsoil spit in northern quadrant.	0-0.10m
755032	Second topsoil spit in northern quadrant.	0.10-0.20m
755033	Third topsoil spit in northern quadrant.	0.20m-0.30m
755034	Fourth topsoil spit in northern quadrant.	0.30-0.35m
755041	First topsoil spit in southern quadrant.	0-0.10m
755042	Second topsoil spit in southern quadrant.	0.10-0.20m
755043	Third topsoil spit in southern quadrant.	0.20m-0.30m
755044	Fourth topsoil spit in southern quadrant.	0.30-0.35m
Subsoil		
755051	Mid reddish brown silty sand subsoil with common small pebble and sparse charcoal inclusions First spit in western subsoil sondage. Surface at 11.63m aOD.	0.35-0.40m
755052	Second spit in western subsoil sondage.	0.40-0.45m
755053	Third spit in western subsoil sondage.	0.45-0.50m
755054	Fourth spit in western subsoil sondage.	0.50-0.55m
755061	First spit in eastern subsoil sondage.	0.34-0.39m
755062	Second spit in eastern subsoil sondage.	0.39-0.44m
755063	Third spit in eastern subsoil sondage.	0.44-0.49m
755064	Fourth spit in eastern subsoil sondage.	0.49-0.54m
Machine Excavation		
755071	Mid reddish brown silty sand subsoil.	0.35-0.55m
755072	Orange brown coarse sands and gravels. Natural substrata. Surface at 11.43m aOD	0.55-1.05m+

Trial Pit 803		**NGR:** 477767 351687
Dimensions: 3.0m x 1.4m (max)		**Ground Level:** 12.99m aOD
Context No.	**Description**	**Depth**
Topsoil		
803001	Mid greyish brown sandy clay loam topsoil with sparse small pebble inclusions. First topsoil spit in southern quadrant.	0-0.10m
803002	Second topsoil spit in southern quadrant.	0.10-0.20m
803003	Third topsoil spit in southern quadrant.	0.20-0.30m
803004	Fourth topsoil spit in southern quadrant.	0.30-0.33m
803011	First topsoil spit in central quadrant.	0-0.10m
803012	Second topsoil spit in central quadrant.	0.10-0.20m
803013	Third topsoil spit in central quadrant.	0.20-0.30m
803014	Fourth topsoil spit in central quadrant.	0.30-0.34m
803021	First topsoil spit in northern quadrant.	0-0.10m
803022	Second topsoil spit in northern quadrant.	0.10-0.20m
803023	Third topsoil spit in northern quadrant.	0.20-0.30m
803024	Fourth topsoil spit in northern quadrant.	0.30-0.35m
803031	First topsoil spit in western quadrant.	0-0.10m
803032	Second topsoil spit in western quadrant.	0.10-0.20m
803033	Third topsoil spit in western quadrant.	0.20-0.30m
803034	Fourth topsoil spit in western quadrant.	0.30-0.34m
803041	First topsoil spit in eastern quadrant.	0-0.10m
803042	Second topsoil spit in eastern quadrant.	0.10-0.20m
803043	Third topsoil spit in eastern quadrant.	0.20-0.30m
803044	Fourth topsoil spit in eastern quadrant.	0.30-0.34m
Subsoil		
803051	Mid yellowish brown silty sand subsoil with sparse small pebble inclusions. First spit in southern subsoil sondage. Surface at 12.66m aOD.	0.33-0.38m
803052	Second spit in southern subsoil sondage.	0.38-0.43m
803053	Third spit in southern subsoil sondage.	0.43-0.48m
803054	Fourth spit in southern subsoil sondage.	0.48-0.53m
803061	First spit in northern subsoil sondage.	0.35-0.40m
803062	Second spit in northern subsoil sondage.	0.40-0.45m
803063	Third spit in northern subsoil sondage.	0.45-0.50m
803064	Fourth spit in northern subsoil sondage.	0.50-0.55m
Machine Excavation		
803071	Machine excavation of subsoil.	0.55-1.20m
803072	Pale yellowish brown sands and gravels. Natural substrata. Surface at 11.79m aOD.	1.20-3.50m+

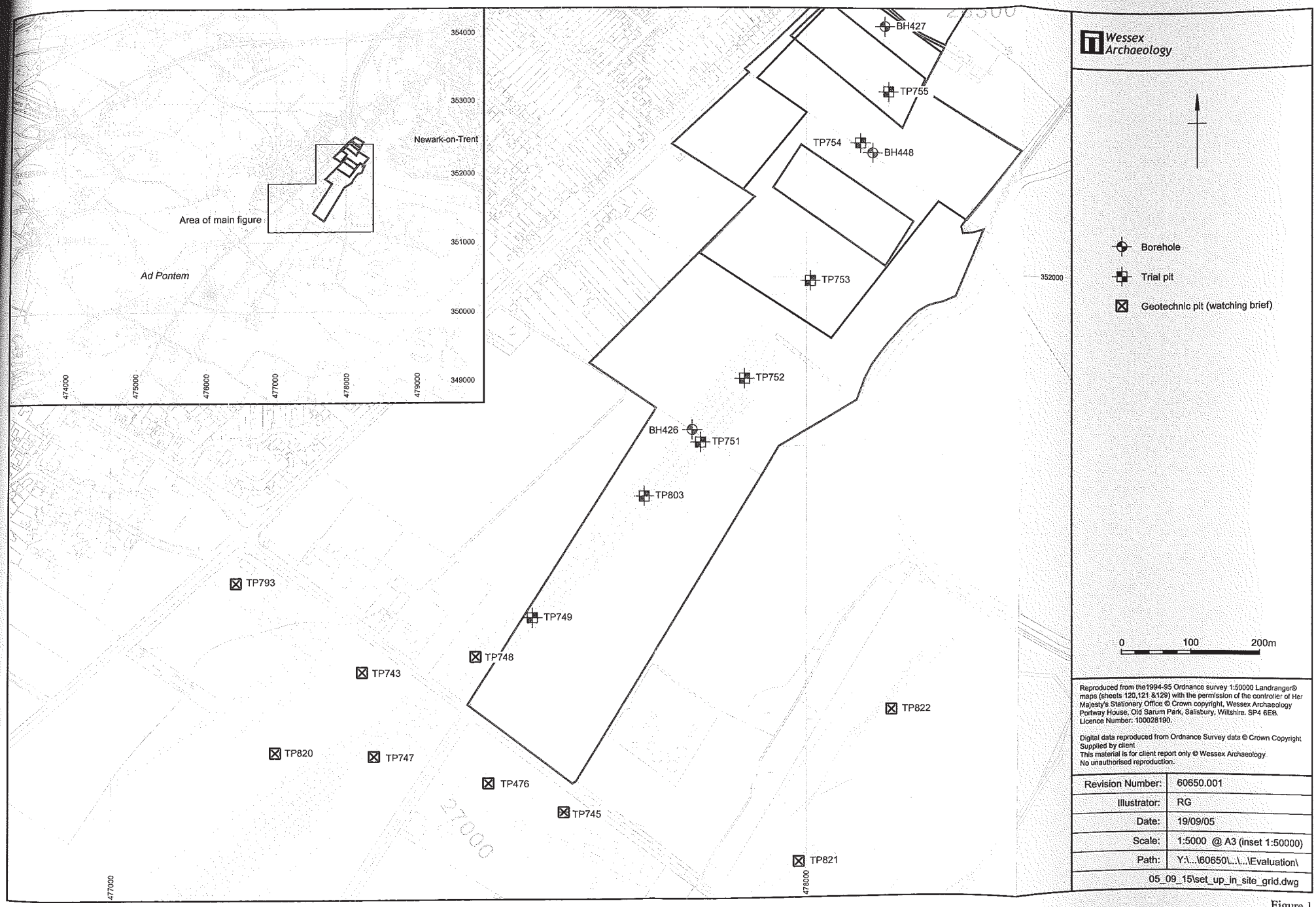
Appendix 2: Monolith soil descriptions

Trial Pit 753; Monolith 753120

Dimensions (m)	Context number and/ or excavators description	Soil Description	Interpretation
0.10-0.29 (0.19+ thick)	Topsoil	10YR 3/1 very dark grey highly humic clay loam with weak granular structure. Common wood charcoal, rare flecks CBM, rare straw to top of unit Clear but slightly mixed boundary.	Modern soil A horizon formed in alluvium
0.29-0.46 (0.17 thick)	753051-53 Subsoil: silty clay, plough scarred	10YR 4/3 brown silty clay with coarse moderately well developed blocky peds. Occasional faint medium Fe mottles 10YR 4/6 dark yellowish brown. 20mm wood charcoal at 330mm, 10mm CBM at 300mm. Occasional vertical voids (worm burrows). Diffuse boundary.	Modern soil B horizon formed in alluvium
0.46-0.52 (0.06 thick)	753054 -55 Alluvium: Bluish brown sandy silt with 20% gravel	10YR 4/2 dark greyish brown massive silt loam, 20% rounded-sub-rounded flint gravel. Rare faint fine Fe mottles 10YR 4/6 dark yellowish brown. No discernible structure. Clear boundary.	Alluvium
0.52-0 60+ (0.08+ thick)	753056 Gravel terrace: 70% gravel in silty sand matrix	10YR 4/2 dark greyish brown clay loam with abundant (60%) rounded-sub-rounded flint gravel and common irregular pockets and lenses of medium sands (7.5YR 4/4 brown and 10YR 5/8 yellowish brown). Common coarse Fe mottles 10YR 4/4 dark yellowish brown.	Fluvial sands and gravels (terrace gravels)

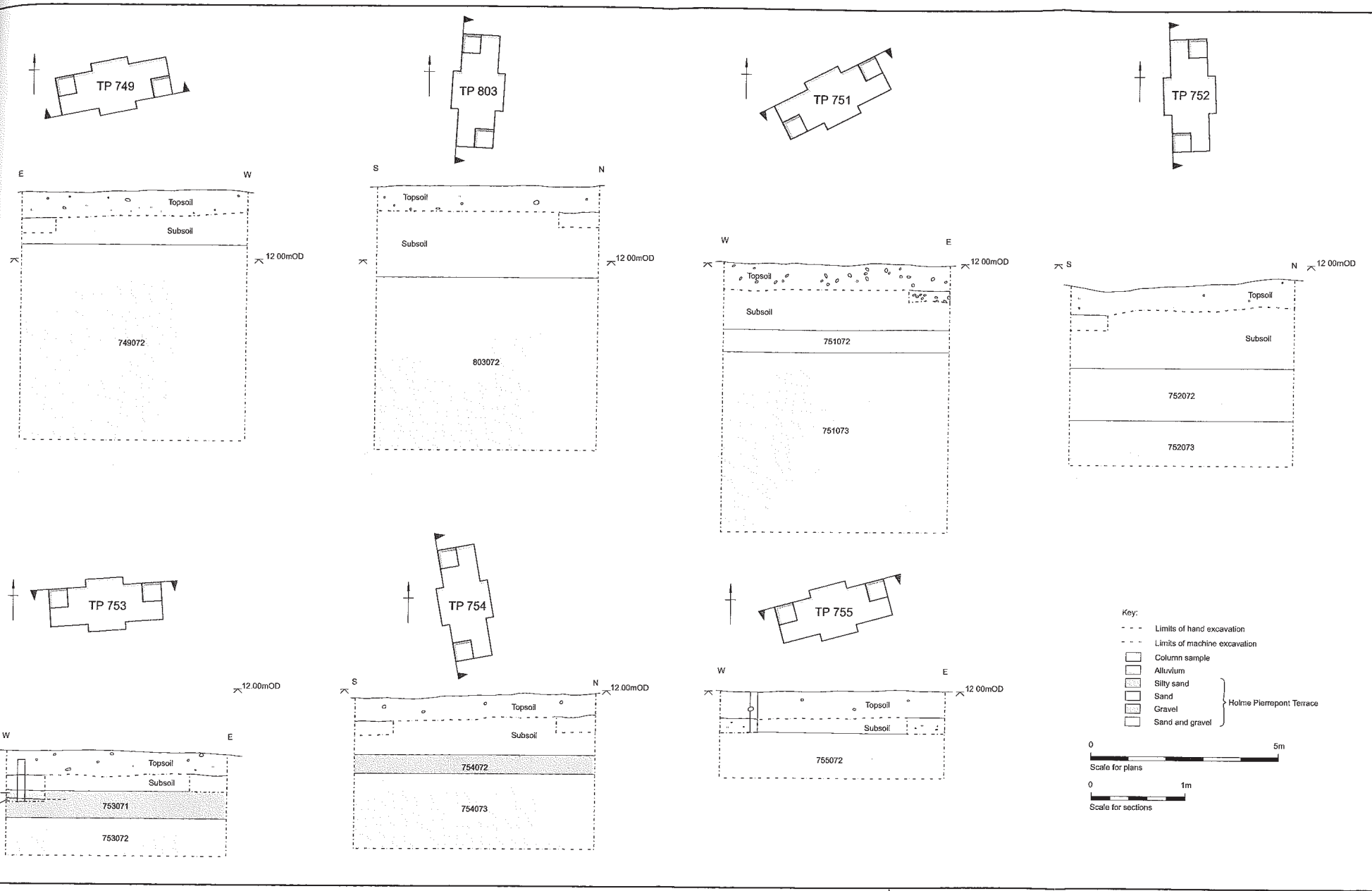
Trial Pit 755; Monolith 755999

Dimensions (m)	Context number and/ or excavators description	Soil Description	Interpretation
0-0.08	-	Empty, packing at top of monolith	
0.08-0.35 (0.27 thick)	755001-4 Topsoil	7.5YR 3/2 dark brown highly humic clay loam. Moderately developed small blocky structure, crumb structure increasing to top. Common fine rootlets, few rounded to sub-rounded stones. Sharp undulating boundary (ploughing likely)	Modern soil Ap horizon Brown Earth
0.35-0.60 (0.25 thick)	755051-4 Subsoil: silty clay	7.5YR 3/4 dark brown humic Fe rich clay loam. Well-developed medium blocky-prismatic peds. Common worm burrows filled with overlying A material, common macropores and fine rootlets. No inclusions visible (but see field description). Clear boundary	Modern soil B horizon Brown Earth
0.60-0.62+ (0.02+ thick)	Gravel terrace: Coarse gravel	As above with common sub-angular to sub-rounded flint gravels	Transition to underlying ?fluvial sands and gravels (terrace gravels)



As dug trial pit and borehole locations

Figure 1



Date:	26/09/05	Revision Number:	60650 001
Scale:	Sections 1:50, plans 1:100 @ A3	Illustrator:	RG
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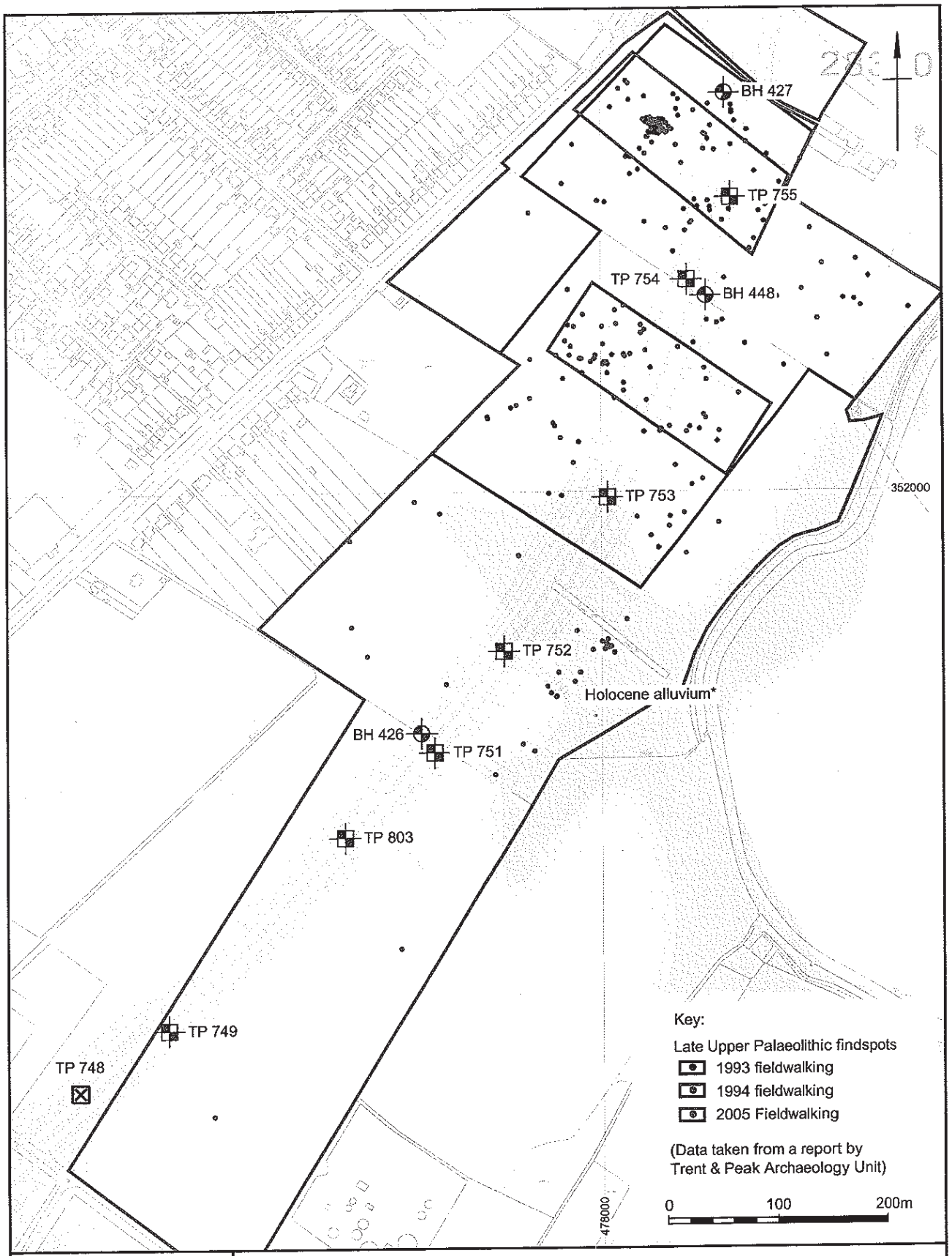
Trial pit plans and sections

Figure 2



* Holocene alluvium mapped by the British Geological Society

Date:	30/09/05	Revision Number:	60650.001
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A46 Farndon Fields investigations in relation to previous results

Figure 3

Plate 1

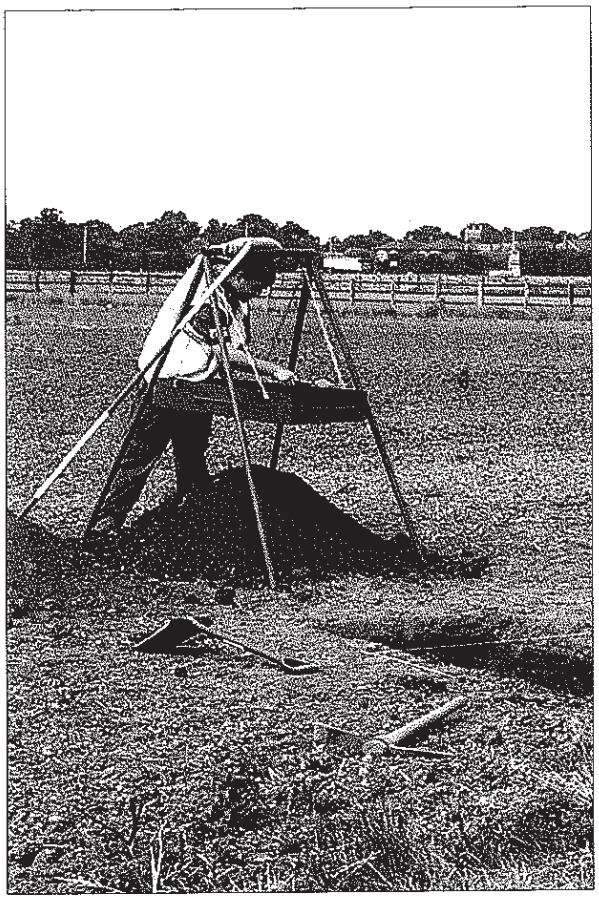

Plate 2

Wessex Archaeology	Date:	20/09/05	Revision Number:	60650 001
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Working shots

Figure 4