

**Channel Tunnel Rail Link
London and Continental Railways
Oxford Wessex Archaeology Joint Venture**

**The Late Mesolithic and Early Neolithic Landscape at
Sandway Road, Lenham, Kent**

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CTRL Integrated Site Report Series

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ABSTRACT

As part of the scheme of archaeological mitigation undertaken prior to construction of the Channel Tunnel Rail Link (CTRL), Rail Link Engineering (RLE), acting on behalf Union Railways (South) Limited (subsequently London and Continental Railways), commissioned Wessex Archaeology and Oxford Archaeology (formerly the Oxford Archaeological Unit) to carry-out a programme of fieldwork on land adjacent to Sandway Road, between the villages of Sandway and Harrietsham, Kent (OS NGR TQ 87975 51642). The works included an evaluation, a 'strip-map-sample' excavation and a watching brief.

There is slight evidence that the site was at least visited in the early Mesolithic. However, the earliest substantial phase of activity belongs to the late Mesolithic (*c* 6500-4000 BC) and comprised a significant concentration of burnt and worked flint. Microliths, microburins and other tools were recovered with large amounts of knapping waste, mostly from a shallow hollow and two areas of palaeosol. This is interpreted as evidence for a short-term hunting camp, which was perhaps re-visited on a number of occasions. Bioturbation had re-distributed artefacts vertically but little lateral movement had taken place, allowing some reconstruction of activity zones.

Pottery from the site spanned the Neolithic period (*c* 4000-2300 BC). A large pit contained small amounts of middle Neolithic Peterborough ware pottery, but most of the fragmentary and abraded assemblage either came from tree-throws holes and natural hollows or was residual in later features. The circumstances under which the pottery was deposited remain unknown, but the assemblage as a whole indicates activity over a long time-scale and at a low-intensity. Neolithic flint was limited in occurrence and was also mostly residual or intrusive. Its distribution did not correspond with the Neolithic pottery.

There is slight evidence for arable farming in the early Bronze Age and a charred wheat grain was radiocarbon dated to 1960-1690 cal BC. The development of land-division in the middle Bronze Age (1600-1150 cal BC) is demonstrated by two closely spaced ditch alignments that probably represent successive variations on a single boundary. The larger of these contained a group of Deverel-Rimbury style vessels, amongst which were parts of two globular urns. Several undated ditches recorded in a watching brief may also belong to this phase. Up to 0.5 m of colluvium sealed the site and the early formation of this layer may be attributed directly to mobilisation of hill slope soils by Bronze Age farming activity.

Two parallel late medieval or early post-medieval ditches may also have been land-boundaries. Several tree-throw holes/hollows discovered during the Watching Brief remain undated, as do the majority of such features within the main excavation area.

RÉSUMÉ

Wessex Archaeology et Oxford Archaeology (anciennement Oxford Archaeological Unit) furent chargés d'entreprendre un programme d'opérations archéologiques sur un terrain adjacent à Sandway Road, entre les villages de Sandway et de Harrietsham, dans le Kent (coordonnées géographiques NGR TQ 87975 51642). Les opérations comprirent un diagnostic, une fouille et une surveillance archéologique. Ces travaux furent menés dans le cadre d'un programme de grande envergure entrepris en avance de la construction de la ligne ferroviaire du tunnel sous la Manche (Channel Tunnel Rail Link -CTRL).

Des indices suggèrent que le site fut au moins visité au cours du début du mésolithique. Cependant, la première phase d'activité significative appartient à la fin du mésolithique (environ 6500-4000 AV. J.C.) et comprenait une concentration importante de silex taillés et brûlés. Des microlithes, des microburins et d'autres outils furent retrouvés accompagnés de quantités abondantes de déchets de taille, provenant essentiellement d'une dépression peu profonde et de deux zones de sols anciens. Cette activité a été interprétée comme les vestiges d'un camp de chasse de courte durée, qui fut peut-être visité à plusieurs reprises. Des perturbations par la végétation ont entraîné une redistribution verticale des artefacts mais peu de déplacements latéraux ont eu lieu, permettant dans une certaine mesure des reconstructions des zones d'activités.

La céramique du site s'échelonne sur la période du néolithique (environs 4000-2300 AV. J.C.). Une large fosse contenait une petite quantité de céramique du milieu du néolithique de type Peterborough, mais la majorité de cet assemblage fragmentaire et abrasé provenait soit de cavités d'arbres déracinés, de dépressions naturelles ou bien se trouvait de manière résiduelle dans des faits d'époque plus tardive. Les circonstances qui ont menées au dépôt de ces céramiques demeurent inconnues, mais l'assemblage dans son entier suggère une activité qui s'échelonne à travers une longue période et d'intensité réduite. Peu de silex taillés néolithiques fut découvert et était presque entièrement de nature résiduelle. La distribution de ces derniers ne correspondaient pas avec celle de la céramique de la même période.

Des traces limitées de culture du Bronze ancien furent observées et une graine de blé carbonisé fut datée par radiocarbone à 1960-1690 AV. J.C. Le développement de la division du paysage vers le milieu de l'âge du Bronze (1600-1150 AV. J.C.) est démontré par deux alignements de fossés à close proximité l'un de l'autre, et qui représentaient probablement des variations successives d'une même délimitation. Le plus large de ces derniers contenait un groupe de vases de style Deverel-Rimbury, parmi lesquels se trouvaient deux urnes globulaires. Plusieurs fossés de date incertaine, enregistrés lors d'une surveillance archéologique, appartenaient peut-être également à cette phase. Jusqu'à 0.5 m de colluvion

recouvrait le site. La formation d'origine de cette couche peut être attribuée directement à la mobilisation des sols de versant de collines par l'activité agricole de l'âge du Bronze.

Deux fossés parallèles d'époques médiévale et moderne précoce représentaient peut-être également des délimitations de terrain. Nombre de cavités d'arbres déracinés ou de dépressions, découvertes au cours de la surveillance archéologique, restent de date incertaine, de même que la majorité des faits de même nature contenues dans l'aire de fouille principale.

ZUSAMMENFASSUNG

Im Rahmen des Projekts der archäologischen Erfassung im Vorfeld des Baus der Bahnstrecke durch den Kanaltunnel (Channel Tunnel Rail Link) beauftragte Rail Link Engineering (RLE) im Namen von Union Railways (South) Limited (nachfolgend London and Continental Railways) Wessex Archaeology und Oxford Archaeology (vormals Oxford Archaeological Unit) mit Geländearbeiten auf einem Landstück neben der Sandway Road zwischen Sandway und Harrietsham in Kent (OS NGR TQ 87975 51642). Es wurde eine Evaluierung, eine Notgrabung nach der »Strip, Map and Sample«-Methode und eine Baustellenbeobachtung durchgeführt.

Einzelne Hinweise zeigten, dass die Stätte in frühmesolithischer Zeit zumindest besucht wurde. Die früheste nennenswerte Aktivität fand jedoch im späten Mesolithikum (ca. 6500-4000 v. Chr.) statt, belegt durch eine signifikante Konzentration von Feuersteinen, die Brand- und Bearbeitungsspuren aufwiesen. Neben großen Mengen an Steinbearbeitungsrückständen wurden Kerbreste, Mikrolithe und andere Werkzeuge geborgen, hauptsächlich aus einer flachen Mulde und zwei Bereichen mit fossilen Böden. Die Funde werden als Hinweis auf ein kurzzeitig genutztes Jagdlager gedeutet, das eventuell mehrfach aufgesucht wurde. Durch Bioturbation wurden Artefakte vertikal verschoben, allerdings fand kaum eine Lateralbewegung statt, so dass die Aktivitätszonen einigermaßen rekonstruiert werden konnten.

Die gefundene Tonware erstreckte sich über das gesamte Neolithikum (ca. 4000-2300 v. Chr.). Eine große Grube enthielt geringe Mengen an »Peterborough ware« aus dem Mittelneolithikum. Der Großteil des fragmentarischen und abgeschürften Fundensembles stammte jedoch entweder aus Baumwürfen und natürlichen Mulden oder aus späteren Merkmalen. Die Umstände der Keramikdeponierung sind nicht bekannt, allerdings lässt der Komplex als Ganzes auf eine lang anhaltende, jedoch wenig intensive Nutzung schließen. Neolithischer Feuerstein trat nur sehr begrenzt auf und stand meist ebenso mit späteren Befunden oder mit Verschleppung in Zusammenhang. Seine Verbreitung deckte sich nicht mit der der neolithischen Tonware.

Für die frühe Bronzezeit gab es vereinzelte Hinweise auf Ackerbau, darunter ein verkohltes Weizenkorn, das mittels Radiokarbonmethode auf 1960-1690 cal BC datiert wurde. Die Landaufteilung in der mittleren Bronzezeit (1600-1150 cal BC) lässt sich an zwei dicht beieinander liegenden Gräben demonstrieren, die wahrscheinlich aufeinander folgende Versionen derselben Grenzlinie darstellen. Der größere der beiden enthielt eine Gruppe von Gefäßen im Deverel-Rimbury-Stil, darunter Teile von zwei Kugelurnen. Mehrere undatierte Gräben, die bei der Baustellenbeobachtung auffielen, könnten in dieselbe Zeit fallen. Die Stätte war von einer bis zu einem halben Meter dicken Kolluviumsschicht bedeckt. Die anfängliche Bildung dieser Schicht wurde möglicherweise durch die Mobilisierung von Hangböden infolge landwirtschaftlicher Aktivitäten in der Bronzezeit ausgelöst.

Zwei parallel verlaufende Gräben aus dem Spätmittelalter oder dem frühen Nachmittelalter könnten ebenfalls als Landbegrenzung gedient haben. Mehrere durch Baumwürfe entstandene und bei der Baustellenbeobachtung entdeckte Mulden sind ebenso wie die meisten Merkmale dieser Gattung im Hauptgrabungsareal bislang undatiert.

RESUMEN

Como parte de un esquema de atenuación arqueológica realizada con anterioridad a la construcción del Channel Tunnel Rail Link (CTRL), Rail Link Engineering (RLE), en nombre de Union Railways (South) Limited (posteriormente London and Continental Railways) comisionó a Wessex Archaeology y Oxford Archaeology (antes Oxford Archaeological Unit) para elaborar un programa de trabajo en el terreno adyacente a Sandway Road, entre las poblaciones de Sandway y Harrietsham en Kent (OS NGR TQ 87975 51642). Los trabajos incluían una evaluación, un muestreo tras la remoción del suelo vegetal y un seguimiento de obra.

Existe una ligera evidencia de que el yacimiento fuera por lo menos visitado a inicios del Mesolítico. Sin embargo, la fase de actividad más temprana corresponde al final del Mesolítico (*circa* 6500-4000 a.C.) e incluía una concentración significativa de sílex trabajado y quemado. Se encontraron microlitos, microburiles y otras herramientas junto a grandes cantidades de residuos de talla, mayormente procedente de un hoyo poco profundo y dos áreas de paleosuelo. Esto se ha interpretado como evidencia de un campamento de caza de corta duración visitado quizás en ocasiones. La bio-turbación re-distribuyó los artefactos verticalmente pero hubo poco movimiento lateral, permitiendo la reconstrucción de las zonas de actividad.

La cerámica del yacimiento cubre el período Neolítico (*circa* 4000-2300 a.C.). Un hoyo grande contenía pequeñas cantidades de cerámica Peterborough del Neolítico Medio, pero la mayor parte del conjunto de fragmentos erosionados procedía de agujeros de árbol y hoyos

naturales o aparecían como residuales en estructuras tardías. Las circunstancias de deposición de estas cerámicas son desconocidas pero, en general, el conjunto indica una actividad de larga duración y de intensidad leve. En esta ocasión, el sílex neolítico era limitado y era mayormente residual o intruso. Su distribución no correspondía con la de la cerámica Neolítica.

Existe una ligera evidencia de agricultura a inicios de la Edad del Bronce y un grano de trigo carbonizado fue datado por Radiocarbono en cal. 1960-1690 BC. El desarrollo de la división de tierras a mitad de la Edad del Bronce (cal. 1600-1150 BC) se demuestra en dos alineaciones cercanas de zanjas que probablemente representen variaciones sucesivas de un mismo límite. La más larga de ellas contenía un grupo de recipientes de estilo Deverel-Rimbury entre los que había fragmentos de dos urnas globulares. Varias zanjas localizadas en el seguimiento de obra pudieron corresponder también a esta fase. Hasta 5m de coluvio selló el yacimiento y la formación inicial de esta capa podría atribuirse directamente al movimiento de tierra de la pendiente por la actividad agrícola en la Edad del Bronce.

Dos zanjas paralelas medievales o post-medievales podrían haber sido también limítrofes. Al igual que la mayoría de estas estructuras en el área de excavación, varios agujeros de árboles descubiertos durante el seguimiento de obra permanecen sin datar.

ACKNOWLEDGEMENTS

The investigations at Sandway Road were undertaken principally by staff of Wessex Archaeology (WA). The overall management framework during the post-excavation phase was provided by the Oxford Wessex Archaeology Joint Venture (OWA). The work was supervised by an archaeological team from Rail Link Engineering (RLE), on behalf of the Employer, London and Continental Railways.

The author would like to thank all those who participated in the archaeological fieldwork at Sandway Road. Management of the fieldwork and post-excavation assessment was undertaken by Andrew Crockett, and Dave Godden supervised the fieldwork. Richard McPhail and Mike Allen conducted preliminary field examinations and interpretations of sediments, and John Lewis provided advice on recovery of the Mesolithic worked flint assemblage. The full field team and specialist contributors to the assessment report are credited in the main project acknowledgements in the digital archive (ADS 2006).

This report integrates data and interpretations from specialist reports prepared by Emily Edwards (early prehistoric pottery), John Giorgi (charred plant remains), Phil Harding (worked flint), Grace P Jones (later prehistoric pottery), Peter Northover (metalwork), Ruth Shaffrey (worked stone). Flint and middle Bronze Age pottery were drawn by Liz James, and the Neolithic pottery by Lucy Martin. Other figures were produced by Rob Goller and Anne Stewardson. The abstract was translated by Mercedes Planas (Spanish), Gerlinde Krug (German) and Valerie Diez (French).

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1 INTRODUCTION

1.1 Project Background

The site at Sandway Road, Lenham, Kent (NGR TQ 87975 51642, Fig. 1) was discovered and excavated as part of an extensive programme of archaeological investigation carried out in advance of the construction of the Channel Tunnel Rail Link (CTRL). CTRL was built by London & Continental Railways in association with Railtrack Group plc. The project was authorised by Parliament with the passage of the CTRL Act, 1996. The high-speed line runs for 109 km (68 miles) between St Pancras station in London and the Channel Tunnel and was built in two sections. Section 1 lies entirely within Kent and runs from Fawkham Junction (Gravesham) to Folkestone. The work was project managed by Rail Link Engineering (RLE).

The site was located immediately adjacent to Sandway Road, *c* 1 km south-west of Lenham, and between the villages of Harrietsham and Sandway. The larger towns of Maidstone and Ashford lie *c* 12 km and 14 km to the west and east respectively.

Two Mesolithic flint scatters had previously been discovered *c* 0.1 km and *c* 0.3 km west of the site, in advance of the building of the M20 motorway (URL 1994, A71 and figure OELK/900 – 1804/3035: reference numbers 1371 and 1372 and a further 10 sites are known from the immediate area - see Figure 2). A geophysical survey of land around Sandway village prior to construction of the CTRL identified anomalies adjacent to Sandway Road (URS 1996, 17, figure 54) and an evaluation confirmed that prehistoric archaeological remains were present (URS 1999b). A ‘strip-map-sample’ excavation of these remains (later designated Area C) was undertaken between April 4th and May 28th 1999 and, after this was completed, a targeted watching brief was maintained on two adjacent trenches to the south-east (designated Areas A and B). The total area investigated (excluding evaluation trenching beyond Areas A-C) was *c* 0.9 ha.

Table 1: Fieldwork Events

Fieldwork Event Name	Type	Fieldwork Event Code	Contractor	Dates of Fieldwork
Sandway Geophysical Survey	Geophysical Survey	ARC SND95	GSB	1995
Sandway Road Evaluation	Evaluation trenching	ARC SWR98	WA	6/6/99-13/6/99
Sandway Road Excavation	Area excavation	ARC SWR99	WA	04/04/99 – 28/05/99
Sandway Road TWB	Targeted watching Brief	ARC 420/99	OA	22/7/99-14/12/99

1.2 Geology, topography and hydrology

The site lay on Folkestone Beds (Fig. 2), which comprise part of the Cretaceous Lower Greensand series. In Kent, these strata dip gently from south to north, outcropping in a narrow east-west aligned band along the northern arm of the Wealden anticline, where they form the distinctive topographic bench of the Lower Greensand escarpment. Folkestone Beds are typically friable quartz-sands, sometimes inter-bedded with seams of pebbles or clay, or with thin sheets of indurated glauconitic and calcareous sandstone known colloquially as Ragstone (Geological Survey of Great Britain (England and Wales) 1976; Gallois 1992, 34, 47). At Sandway Road the surface exposure of Folkestone Beds had weathered to freely draining, highly mobile sands. Gault Clay outcrops immediately north of the site, and beyond this, the steep chalk slopes of the North Downs rise approximately 1.8 km away. Much of the site lay beneath a variable thickness of comparatively recent mid-brown sandy colluvium, the result of soil mobilisation caused by land-clearance and farming since at least the Bronze Age.

Excavations occupied a transect across the north-western side of a low, rounded Greensand promontory. Areas A and B lay on gently sloping land, descending from a maximum elevation of *c* 110 m OD (Fig. 1). The south-eastern part of Area C was similarly sloping, although, prior to its removal during site-stripping, a cross-slope hedge forming a slight banked lynchet bisected the area. The central part of Area C occupied a more-or-less level terrace at *c* 102 m OD and at the north-western end of the site ground-levels dropped abruptly to *c* 98 m OD, into the valley-edge of a small stream (Fig. 1). This stream forms part of the headwaters of the Len, a major westward flowing tributary of the River Medway. Land east of Sandway village drains into the upper catchment of the eastward-flowing River Stour.

2 AIMS

The aim of this report is to present synthesised data at an interpretative level that can be assimilated into complementary studies. This synthetic report is supported by the fieldwork and research archive which is available as a web-based digital archive. In support of the CTRL Project Monograph (Booth *et al.* 2007), the Sandway Road report integrates key assemblages and stratigraphic data into a site sequence secured on key dating evidence from artefact groups and radiocarbon dates. The report includes a discursive narrative describing the sequence of activity and reasoning evidence (URS 2003, 15-16).

The primary fieldwork aims of the project were set out in a Written Scheme of Investigation (URS 1998 and 1999a), prepared by the RLE Project Manager and agreed prior to excavation by Kent County Council (KCC) on behalf of the local planning authority. A

number of additional updated research aims were defined after assessment of the fieldwork results (URS 2003). These focused on the identification of the following:

- the span of human activity and any referential continuity between the late Mesolithic and early Neolithic phases;
- site function and specific activity zones;
- the nature and range of food resources, including domestic cultivars;
- provenance of raw material resources;
- bioturbation and its impact on the site's stratigraphic sequence.

3 METHODS

The edges of archaeological and natural features were often poorly defined in the weathered sandy substrate, and boundaries between soil deposits were also typically gradual or diffuse. Most features whatever their origin contained broadly similar fills, usually grey-brown silty sand with occasional brecciated flint gravel clasts. Some also contained flecks or small accumulations of charcoal although most of this was very fragmentary and few features contained stratified charred remains. The fill of a large hollow (558) was noticeably darker than other deposits reflecting its origins in a more humic depositional environment, most probably a forest brown earth (M Allen pers.comm.). The development and alteration of soils across the site is discussed below (see Section 4- *Landscape Development*).

The site was stripped, excavated and recorded in accordance with the Written Scheme of Investigation (URS 1998). Most discrete features were half- or quadrant-excavated in accordance with common excavation practice, and ditches were sampled by a number of segments excavated along their length. Those areas of the site where Mesolithic flint was concentrated were investigated in accordance with a subsidiary method statement (URS 1999c). Here, a local grid was established, based on URS construction grid and subsequently amended to the Ordnance Survey National Grid. Squares of 0.5 m (0.25 m²) and vertical collection-spits of 0.1 m were employed (Fig. 4-5), but increased resolution was achieved during excavation of the southern part of hollow 558 by reducing the grid-squares to 0.25 m (0.0625 m²) and vertical intervals to 50 mm. Soil from all gridded collection units was dry-sieved through a 4 mm mesh. Material from hollow 558 was then also wet-sieved at 2 mm, and a 25% sub-sample of this residue was re-sieved to recover all microdebitage larger than 1 mm. A limited programme of refitting analysis was undertaken on the flint recovered from the bulk-excavated northern half of hollow 558, from four adjacent grid-excavated squares

from the same feature, from tree-throw hole 568, and the 21 collection units from layers 550 and 569 which yielded the largest artefact groups (Fig. 4).

During the Assessment (URS 2001a) three samples (see Fig. 5) of charred material from the grid-excavated fill of hollow 558 were submitted to the Rafter Radiocarbon Laboratory (New Zealand) for AMS dating (Table 2) (Allen 2006).

Table 2: AMS dating results from hollow 558

Lab Number	Feature/ Context/	Material	Determination	Delta 13 ‰	Calibrated date
NZA-11934	558 / 375051	Charred hazelnut shell	9318 ± 50 BP	-24.6	8740-8330 BC
NZA-11935	558 / 375051	Unidentified charred seed	6920 ± 45 BP	-23.8	5900-5710 BC
NZA-11936	558 / 345031	Charred Cereal grain (possibly <i>Triticum sp.</i>)	3523 ± 45 BP	-24.6	1960-1690 BC

The spread of these dates across almost seven millennia confirms that soils within hollow 558 had suffered post-depositional mixing. The early Mesolithic hazelnut shell (NZA-11934) could be redeposited, but if *in situ* might confirm the early accumulation of the soil filling the hollow. The middle date (NZA-11935) was obtained from an unidentified charred seed originally considered to be a cereal grain (URS 2001a), and probably derived from camp fires associated with the period of Mesolithic habitation. The latest determination (NZA-11936) was obtained from charred grain, and is almost certainly intrusive. The sample from which this item was selected lay close to middle Bronze Age ditch 555. In reassessing these results, it was decided not to undertake any further dating.

3.1 Phase summary

The overall site phase plan is shown in Figure 3 and selected sections in Figures 5, 16-7. There were few stratigraphic relationships and dating of the site is therefore mainly drawn from analysis of the finds and, to a limited extent, the results of the radiocarbon dating programme. The following phases were recorded:

- Mesolithic (*c.* 8500 - 4000 BC): Flint (burnt and worked) was recovered in small quantities across the whole site but was locally concentrated in hollows and patches of remnant palaeosol. Typologically, this assemblage dates to the Late Mesolithic (*c.* 6500 – 4000 BC). The preponderance of microliths and the scarcity of other tools suggest a short-term hunting camp. However, the two radiocarbon results, NZA-11934-5, indicate activity at the site during the early and late Mesolithic.

- Neolithic (*c* 4000 – 2300 BC): One large pit containing pottery was excavated. Fragmentary and often abraded early- and middle-Neolithic pottery came from a number of other tree-throw holes or hollows, or was residual in later archaeological features. A few sherds of late Neolithic Grooved ware were also found and small amounts of Neolithic flint were noted, primarily in Areas A and B, where its distribution was not clearly related to that of the pottery.
- Early-middle Bronze Age (*c* 2300 – 1150 BC): Slight evidence for agricultural activity is attested by a single radiocarbon date (NZA-11936) on a charred cereal grain, dated to 1960 – 1690 cal BC. Two closely spaced, parallel, but asymmetrically proportioned ditches may mark the creation and maintenance of a middle Bronze Age land-boundary. A possible deliberately placed group of Deverel-Rimbury-style pottery sherds and a fragment of saddle-quern were recovered from the larger of these ditches.
- Late Medieval - Post-Medieval (*c* AD 1100 - present): there were two short parallel ditches of unknown function in the north-western corner of the site.

4 LANDSCAPE DEVELOPMENT

4.1 Hunter-gatherers and early Agriculturalists –The Mesolithic – middle Bronze Age (*c* 8,500 – 1100 cal BC)

Mesolithic

A Late Mesolithic occupation site was defined by substantial amounts of worked flint and associated concentrations of burnt flint (Fig. 6), some of which indicated the probable positions of ‘hearths’ or small fires, and raked hearths (Harding 2006a). These remains were concentrated on the slightly more level ground afforded by the hillside terrace. Few large Mesolithic sites are known from Kent (Reynier 1998, 178) and Sandway Road is one of the few to be investigated under modern excavation conditions. Given the diagnostic characteristics of this material, it may be reasonable to accept the radiocarbon date of 5900 - 5710 cal BC (6920±45 BP, NZA 11935, see Table 2 and Methods section above) as representative of the likely date of the site. Charred hazelnut yielded a date (NZA-11934 8740 - 8330 cal BC) which hints at an early Mesolithic presence on the site (see Table 2) but no diagnostically early Mesolithic artefacts were recorded. Two cores with glossy surface textures may pre-date the main assemblage, however, and other undiagnostic early material could have passed unrecognised. An assemblage of flint attributed to the ‘Horsham’ tradition of the 7th millennium BC was found to the north-west near Harrietsham (Jacobi 1982, 15).

Faunal remains had not survived in the prevailing acidic soils, and insufficient pollen was preserved to allow any reconstruction of the local environment (URL2001a).

Bioturbation had caused vertical displacement of the flint assemblage (see Harding 2006a for a more detailed discussion) and contaminated archaeological deposits with later palaeoenvironmental remains (see Fig.5 and Table 2). Physical truncation of the site was evident from the lack of flake-to-flake or flake-to-core conjoins, and from the moderately well-defined edges and the vertical distribution of the flint concentration. Where recorded in detail, flint was almost always most densely distributed in the uppermost 0.1 m of deposits (Fig. 5).

Within Area C a total of 11,014 pieces of worked and/or burnt flint (including microdebitage) were retrieved (Harding 2006a). Ninety-three percent of this was associated with the principal Mesolithic concentrations (hollow 558, tree-throw hole 574, layers 550 and 569 and features that overlay them (Harding 2006a, Table 1). Three percent of the flint was found during stripping of the colluvium and another four percent was collected during excavation of other archaeological and natural features. Forty-one percent of all the stratified flint was classified as chips, defined as pieces less than 10 mm in size. Far less flint came from the two watching brief areas, and most of this was probably Neolithic. One geometric microlith was almost certainly redeposited.

Hollow 558

The greatest concentration of worked flint lay within sub-circular hollow 558 (Fig. 9-10, 12-3). This feature was 3.5 m across but only 0.3 m deep (Fig. 5). Its nature and origin are unknown, but its formation clearly pre-dated the late Mesolithic, by which time it had become substantially infilled with a dark, humic forest brown earth soil. The hollow was fully investigated but only its southern half was subject to gridded collection (Fig. 4), the northern portion having already been excavated as a single fill. The majority of microliths from the site came from this hollow (including a number of broken pieces), as did over half of all the microburins and quantities of microdebitage (Table 3 and Fig. 9D). This concentration may have been exaggerated by the finer resolution sieving of samples from this feature (see above), but the group remains unmatched elsewhere on the site. It may point to use of the hollow for knapping and tool production, and/or for the disposal of knapping waste, although the high volume of flint from such a confined area precludes firm conclusions, and hollow 558 has been omitted from Fig. 14.

Virtually all samples from the hollow contained fragmentary charcoal, most smaller than 5.6 mm. The few charred seeds and other plant remains included hazelnut shell (*Corylus avellana*), wild cabbage/mustard (*Brassica/Sinapis*), corn spurrey (*Spergula arvensis*) and possibly corn gromwell (cf *Lithospermum arvense*) (Giorgi 2006). Corn spurrey and corn gromwell are common weeds of disturbed or arable land, and their remains are likely to have been intrusive. Trace amounts of charred wheat/barley and a single wheat rachis (*Triticum*

sp.) also suggest intrusion from Bronze Age agriculture: one grain was radiocarbon dated to 1960 – 1690 cal BC (3523±BP, NZA-11936 - see Table 2).

Palaeosol layers 550 (north spread) and 569 (south spread)

Two large patches of mid-brown silty sand (layers 550 and 569) lay to the north and west of hollow 558 (Fig. 2). These layers may be surviving remnants of the original Holocene land-surface, possibly its paler, less humic B-horizon which was truncated by agriculture and much altered by intermixing with the lower levels of later prehistoric colluvium.

Finds within these layers accounted for 18% and 28% of all Area C flint respectively and, whilst representing lower densities of finds than were recorded in hollow 558, the compositions of all three flint sub-concentrations were directly comparable (see Harding 2006a, Table 3 and Fig. 8), and they almost certainly share a common origin.

Tree-throw hole 574

Irregularly sub-oval tree-throw hole 574 also produced a smaller but similarly dense concentration of worked flint. Located some 20 m north-west of hollow 558 (Fig. 3), its formation may have been broadly contemporary with the period of Mesolithic occupation, receiving an increased worked flint component in its infill.

Discussion of the lithic assemblage

Although no evidence for structures or shelters was identified, plotting of the burnt flint at 0.1 kg intervals indicates several discrete nucleated clusters up to *c* 1 m across (Fig. 6). Some of these corresponded directly with variations in the distribution of unburnt flint but where there was no such correlation the burnt flint probably indicates the location of hearths or fires. Surprisingly there was little evidence for burnt soil, ash or charcoal. One explanation is that the burnt flint had sunk into the soft sandy soil, while any ash and charcoal had been removed by truncation.

Microliths were the most abundant tool type (Fig. 7:7-36), and 223 examples accounted for 67% of all retouched material from Area C (Table 3 and Fig. 8). Others recovered from the colluvium have been excluded from classification and distribution analysis, as they are effectively unstratified. Some 228 microburins were also found (Fig. 9A). These are a by-product of microlith manufacture and provide a clear indication that at least some of the microliths were made on-site. Eleven of the microliths showed evidence of having been broken during manufacture. Figures 9-10 give the distributions of microburins, broken microliths and different classes of microlith within features 550, 558 and 569. There is limited patterning to these distributions, which may indicate some individual foci of manufacture, possibly reflecting episodes of specialised production for specific tasks. In

general, many of the microlith types have similar spatial distributions with the notable exception of type D1 (triangles)(Clark 1934).

Cores have a similar distribution to microburins and microliths (Fig. 9 and 12). The assemblage of cores was dominated by evidence for bladelet manufacture, with 30 out of 38 stratified examples having been used for this purpose. As well as nodular flint, cores were also made on large flakes, naturally thermally fractured fragments and in one case, a heavily battered beach cobble (Fig. 7:1-6). Evidence from some microburins indicates that, in addition to bladelets, small flakes were also being converted to microliths, so the number of cores actually dedicated to microlith production may have been slightly higher than indicated above. Cores had often been abandoned at a stage of working where only minor trimming or rejuvenation would have allowed additional bladelets to be produced, suggesting that only sufficient tools were being prepared to service immediate requirements.

The abundance of microliths contrasts with a relatively sparse and restricted range of other tools, although the examples recovered obviously represent only those that were lost or discarded, and many others would have been removed from site for further use. Tools more commonly associated with 'domestic' activity do not seem to have played a significant role: No axes were present, although a tranchet axe-sharpening flake was found, and of 14 scrapers only nine were spatially associated with the Mesolithic concentration (Fig. 13). Of these only five showed any systematic care or rigour in their manufacture, the remainder bearing only marginal retouch, which may have been accidental or resulted from use. Seven serrated blades and flakes (microdenticulates) (Fig. 7: 45-6), six piercers (Fig. 7: 42-4) and three angle burins (Fig. 7:40-1) comprised the remainder of the formal tools. A possible chisel arrowhead may be of Mesolithic or later Neolithic date.

Most of the worked Mesolithic flint was in mint condition, largely unpatinated and struck from nodular flint. The degree of weathering and staining noted where cortex survived suggests this was obtained from secondary sources such as deposits of Head gravel, and the absence of large hammers or significant debitage from nodule reduction or core manufacture indicates primary core production took place off-site. Bullhead flint was noted, but the actual proportion of this material could not be determined, as only the characteristically stained outer part of nodules can be identified visually. Bullhead flint has a limited provenance at the base of the Thanet Sands and Woolwich and Reading Beds in north Kent, although it is possible that derived nodules may have collected from the North Downs where these beds have been eroded. Bi-zoned and marbled flints were also used, but these cannot presently be closely sourced.

Table 3: A comparison of the Mesolithic worked flint from selected features.
Features 558, 569 and 550

	Hollow 558		Layer 569		Layer 550	
	No	%	No	%	No	%
Total pieces	5,162		3,002		1,963	
Total chips	2,234	43	1,272	42	753	38
Other material	2,928	57	1,730	58	1,210	62
Blades and bladelets	843	29	440	25	361	30
% blades to bladelets		38		42		47
Total cores	24		13		10	
Bladelet cores	13	54	7	54	4	40
Total retouched	159	5	78	4	55	4
Microliths to retouched	115	72	55	70	35	64
% microliths to microburins		45		49		61
Other 'formal' tools	20	12	11	14	8	14

The Mesolithic site and its wider context

The site at Sandway Road is characterised by a series of activity areas, spreads, hearths and utilised pits and hollows and is very similar to other later Mesolithic occupation sites in this respect. Like many other contemporaneous sites from southern England, which tend to be concentrated on sandy soils, plant and animal remains are poorly preserved and there is very little surviving evidence for the natural environment. It is suggested that this site had a short history, although as a place it appears to have been visited in the early Mesolithic, as indicated by possible finds of flintwork (two cores) and the single radiocarbon date on a piece of charred hazelnut shell (8740-8330 cal BC:- see Table 2).

The consistent knapping technology exhibited by the flint indicates the assemblage belongs to a single late Mesolithic industry, and the degree of standardisation seen amongst some of the microlith types also points to deposition within a comparatively restricted span of time (perhaps no more than a few days). However, the site could have been created by several rapid sequential visits to a known hunting camp, perhaps on an occasional or annual basis, and there is some evidence which supports this possibility. Although the number of worked flint pieces found could have been produced by a small group of knappers in a relatively short period of time, the truncation of the site and the density of finds from hollow 558 illustrate that this is the remnant of a once larger and more widespread deposit. By including material from tree-throw hole 574, the area over which this may originally have existed can be extrapolated as at least 45 m by 20 m (900 m²), and other material may remain outside the excavated area. Additionally, the sheer number of microliths, the number and distribution of possible hearths and the extent to which burnt material from some of these appears to have been spread, all suggest more than a single transitory visit.

At Sandway Road the high frequency of microliths and microlith production waste, and the scarcity of other tools is similar to some other excavated late Mesolithic sites in south-east England (see Harding 2006b for a more detailed discussion), in particular Rock Common,

West Sussex (Harding 2000), West Heath, Hampstead (Collins and Lorimer 1989) and Hermitage, High Hurstwood (Jacobi and Tebbutt 1981), all of which are interpreted as 'high level' hunting camps (see Barton 1992). A hunting camp at Sandway Road would have exploited an ecotonal position, offering ready access to a range of ecological and topographic zones and may have been made more attractive by the small stream immediately west of the site. This would have represented a valuable source of water in an otherwise freely-draining landscape. Its position in what was probably a wooded valley remains atypical, however. High level hunting camps usually occupy topographically dominant settings, whereas the landscape of Sandway Road might more normally be expected to attract a low level 'home base' (Harding 2006a and see Fig.2). The presence of other tool types (eg scrapers and microdenticulates), albeit in small numbers, also indicates that other activities were taking place.

Analysis of the flint distributions around the various hearth deposits reveal some details of the activities and organisation of this camp (Fig. 6, 9-10, 12-3). In the north spread (550) three distinct areas associated with flake manufacture were noted, and only one was associated with microliths, while microburins were absent. In the south spread (569) the concentration of flint was more extensive and appeared to cluster in four separate areas. Unlike the north spread there were three areas of microburin manufacture, as well as discrete and overlapping distributions of microliths and flakes. The more significant artefact clusters are shown in Figure 14. Bearing in mind that the site has been truncated, it can be observed that flake manufacture has a more northerly distribution to that of microburin manufacture, while microlith use concentrates more in areas in the south. These patterns seem to hint at different on-site activity zones and, therefore (assuming the hearths to be contemporary or near-contemporary), a degree of spatial organisation.

The scarcity of large Mesolithic sites in Kent has already been noted, but a rather greater body of evidence attests Mesolithic occupation of corresponding landscape zones in Sussex (Jacobi 1978; Ellaby 1987, 58; Holgate 2003) and Surrey (Gardiner 1984; Drewett *et al.* 1988, 11-23). In all probability, a longstanding neglect of the county's prehistoric archaeology (Champion 1980, 223; 1982, 31; Clarke 1982, 25) has allowed similar densities of sites to go unrecognised in Kent.

Across south-east England, the distribution of known earlier Mesolithic sites clearly suggests a preference for exploitation of land, vegetation cover and resources associated with the Greensand, rather than the Chalk Downs or the central Weald (eg Jacobi 1981, 13; Holgate 2003, 30). Flint collected immediately north of Harrietsham may be attributable to the 7th millennium BC (Jacobi 1982, 15) and, to the east, two oblique points and eight retouched points from CTRL works at Saltwood Tunnel may also be of similar date (Riddler & Trevarthen 2006).

Continued amelioration of climatic conditions in the late Mesolithic resulted in consolidation of mixed deciduous woodland across south-eastern England, and also in considerable changes to the suite of available resources. Rising sea levels isolated the British Isles from mainland Europe at *c* 6300 BC. By comparison with the early Mesolithic, greater numbers of generally smaller and more scattered sites typify the late Mesolithic (although in this context, Spikins (2002, 10) notes that the late Mesolithic lasted almost twice as long as the early phase). These later sites also occur across a considerably wider range of geographical and ecological zones such as the Weald, north Kent and the Chalk Downs (Jacobi 1982, 75; Drewett 1999, 14-15, Scott 2004, 7-9), although on the latter, sites are usually found on superficial clay-with-flints and tertiary capping deposits, rather than on bare chalk, probably reflecting changes in the nature and density of vegetation cover and the presence of spring-lines (J.Gardiner, pers. comm.). Late Mesolithic sites may include longer-term habitation areas and a wealth of functionally specific temporary sites, and probably reflect decreased reliance on hunting of large migratory species, with more exploitation of a greater range of sequential, seasonally available resources within a core-territory (Gardiner 1984; Holgate 2003, 35-36). It is into this geographically, environmentally and functionally diverse pattern that the Sandway Road Mesolithic site must be placed. Other local discoveries of late (or unspecified) Mesolithic flint include the two sites found to the west along the route of the M20 Motorway (URS 1994), a possible working late Mesolithic hollow from Beechbrook Wood, west of Ashford (Brady 2006a), and two unstratified microliths from Eyhorne Street (Hayden 2006a).

Neolithic

Some 139 sherds of Neolithic pottery (505 g), mostly in a fragmentary and abraded condition, and a small quantity of probably Neolithic worked flint were found, mostly in tree-throw holes and hollows or as residual finds from later features (Edwards 2006a; Harding 2006a). A small flake struck from a polished flint axe (ditch 555), a partial leaf-shaped arrowhead and another similarly patinated flake (tree-throw hole 568) were associated with the Mesolithic flint concentration in Area C. The remainder of the Neolithic flint came from the watching brief areas where it was probably all residual, and includes flakes exhibiting characteristic striking-platform edge-abrasion, a flake knife and an end-scraper made on a broad flake. One geometric microlith was almost certainly redeposited. There was no significant spatial correlation between the Mesolithic flint concentration in Area C and features containing Neolithic material, nor was there any significant correspondence of Neolithic flint and pottery, most of which came from Area C. A hammerstone (Fig. 16) was the only find from tree-throw hole 517 and is undatable (Northover and Shaffrey 2006).

Pit 570

Pit 570 was relatively well defined with a shallow, irregularly concave profile (Fig. 16). An Ebbsfleet style rim-sherd (Fig.16.7) of Peterborough ware was found near the base of the feature, and two other fragments of decorated middle Neolithic pottery (Fig.16.8) came from its secondary fill (Edwards 2006a). Although recorded as a pit, in section this feature appears very similar to some tree-throw holes.

Tree-throw holes 511, 521 and 548

Pottery was found in a number of hollows and tree-throw holes (see Fig. 16) (Edwards 2006a), but in only three cases were noteworthy groups discovered. Ten sherds of Peterborough Ware (including Mortlake-style wares) representing at least three separate vessels were found in tree-throw hole 521, and eleven sherds came from tree-throw hole 511. Twenty-seven fragments of early Neolithic pottery were found during excavation of large tree-throw hole 548, although here all but one piece was confined within a narrow, steeply inclined intrusive feature which has been re-interpreted as an obliquely sectioned animal burrow. Whilst relatively small, these groups stand out amongst the Neolithic material, and could indicate instances of deliberate placement for ceremonial purposes. Throughout the Neolithic, burial of cultural materials, sometimes in pits and hollows, has been seen as part of 'a set of actions which brought meaning to a locality over and above the importance of whatever activities generated the material concerned' (Thomas 1999, 72), and which physically and metaphysically transformed and commented upon the significance of a particular place (op. cit. 224). Alternatively, given the size and condition of some of this material, it could just represent the casual discard of occupation material that has accidentally become incorporated into natural features.

A chisel arrowhead, a ground flint axe and a residual sherd of late Neolithic Grooved Ware, possibly from a Durrington Walls or Clacton style vessel (Edwards 2006a) were recovered from the middle Bronze Age ditch 555 (Fig. 16.9). Locally, late Neolithic finds came from hollows and possible ditches at Chilston Sandpit, near Lenham (Holmes and Bennett 2003, 43-44) and late Neolithic pottery from more formal pit deposits was noted at Eythorne Street, (Hayden 2006a). Further east, several late Neolithic and Beaker 'domestic' sites were discovered along the foot of the North Downs during works for the Channel Tunnel Terminal, west of Folkestone (McPherson-Grant 1990 60).

The Neolithic has also remained comparatively poorly understood in Kent and, until recently few sites or standing monuments had been identified (Barber 1997; Ashbee 2004). A distribution map published by Clarke in 1982 shows the nearest Neolithic findspots situated on the North Downs almost 5 km from Sandway Road. No sites bearing pottery were known within c 15 km and only two groups of funerary monuments were indicated: the well-known

Medway megaliths in north Kent, and three earthen long barrows north of Ashford (Clarke 1982, 26, fig 8). More recent work has begun to rectify this poor picture, illustrating more intensive occupation and a monumental landscape more in keeping with the rest of southern central and eastern England. The distribution of funerary long barrows has been expanded by the identification of 12 possible new sites from air photographs (Bewley *et al.* 2004, 72) and causewayed enclosures (a site type previously unknown in Kent) have been excavated at Ramsgate and on the Isle of Sheppey, the former being overlain by a possible middle Neolithic cursus (Dyson *et al.* 2000; Shand 2001. Oswald *et al.*, 2001; Wessex Archaeology 2002; 2005). Two other causewayed enclosures may exist, one at Burham, in the Medway, and the other at Tilmanstone, near Sandwich (Dyson *et al.* 2000), and finds of Peterborough Ware in a possible large ditch on Castle Hill, Folkestone, add to evidence from earlier excavations (Pitt-Rivers 1882, 429; Clarke 1982, 26) to suggest a defended hilltop site (Rady 1990a, 41-42) or a fifth causewayed enclosure (Ashbee 2004, 12). The recognition of these sites adds an important ceremonial aspect to the Neolithic landscape. At White Horse Stone, CTRL works have revealed an early Neolithic post-built longhouse below deep colluvium, and part of a second less well preserved longhouse was also found at the adjacent Pilgrim's Way site (Hayden 2006b). These are significant finds as only a small number of such structures are known from southern Britain (Darvill 1996). The White Horse Stone example dates to the early 4th millennium cal BC, with middle and later Neolithic re-use of the site attested by Peterborough-style and Grooved Wares (Glass 2000, 450-53, Hayden 2006b). Smaller discoveries include isolated pits at Beechbrook Wood (Brady 2006a), Little Stock Farm (Ritchie 2006), Eyhorne Street, (Hayden 2006a) and Saltwood Tunnel, where radiocarbon dates of 3650–3380 cal BC and 3640–3370 cal BC were obtained from features containing plain and decorated round bowl pottery (Riddler & Trevarthen 2006).

At a regional level, the Neolithic finds from Sandway Road comprise a significant addition to the growing distribution of sites. However, at the same time they are limited in scope and afford few insights into the circumstances in which they were deposited. The activities from which they derived are likely to have been of very low intensity, perhaps representing only very occasional and possibly unrelated visits to the site over many centuries.

Middle Bronze Age

Two parallel ditch alignments 540/555 and 537/507 are interpreted as middle Bronze Age field boundaries (Fig. 3). The smaller ditch 540/555 is not intrinsically dated but the identical alignment and close spatial association shared by the two features suggest they are of the same broad phase, and fulfilled a common function. It is possible that the ditches are not directly contemporaneous, as they could represent sequential manifestations of a single land-

division, alternatively they could demarcate a central bank or driveway. These features are likely to belong to fields, although given the scale of the excavations it is impossible to say how extensive these features were in the immediate landscape. Likewise their actual purpose is unclear. A small number of sections excavated across the two ditches produced only minor traces of charred wheat (*Triticum*) (Giorgi 2006). Barley (*Hordeum*) came from hollow 558 and Ditch 537, although it is not possible to establish whether these derived from nearby settlement, or if agricultural processing was taking place locally. Dating of one charred grain (from hollow 558) to 1960-1690 cal BC (see Table 2) suggests that arable farming was taking place toward the end of the early Bronze Age, but no other early Bronze Age evidence was identified, and it is perhaps significant that the latter end of this determination overlaps with the earliest estimates for development of the Deverel-Rimbury ceramic tradition (cf Needham 1996, 133).

Archaeologically visible settlement sites associated with field-systems first become numerous in Britain during the middle Bronze Age (Needham 1996, 133; Brück 1999, 145; Yates 2001, 74-8), although in the Thames Valley and South-Eastern England these sites remain scarce by comparison with those of the late Bronze Age (Yates, *ibid.*). No direct evidence for a settlement was found at Sandway Road although it is likely that one existed nearby. During the evaluation, however, trenching across ditch 537 revealed a localised group of *c* 70 pieces of Deverel-Rimbury-style pottery and a piece of limestone saddle quern (Fig. 3 and Fig. 17). This material included fragments from a minimum of five, but possibly as many as eleven, separate vessels (Jones 2006a). Bucket- or barrel-shaped coarseware vessels in both flint- and quartzite-tempered fabrics were noted, as were large sherds from a decorated fineware globular jar (Fig. 17.1). A second globular jar was represented only by a single small sherd bearing an applied lug-handle (Fig. 17.2). Deverel-Rimbury pottery (and its associated regional variants) is commonly attributed to the period *c* 1500-1100 BC, although this range indicates its greatest period of use, and its origins may lie as early as *c* 1700 BC (Needham 1996, 133). Middle Bronze Age pottery, and globular vessels in particular, have previously been relatively scarce in Kent, although this is in part because, until comparatively recently, few Kentish middle Bronze Age sites had been published. More recently, sites including Coldharbour Road, Gravesend (Mudd 1994), Shrubsoles Hill, Sheppey (Coles *et al.* 2003), Kemsley Field, Sittingbourne (Mcnee 2002) and several CTRL excavations, such as Tutt Hill (Brady 2006a), Saltwood Tunnel (Riddler & Trevarthen 2006) and at Chapel Mill, Lenham (Jones 2006b), have greatly increased its known distribution. Two corroded fragments of a bronze rod or pin also came from ditch 537 (Northover 2006). Although probably Bronze Age in date, these were otherwise undiagnostic and were unrelated to the pottery concentration.

Dumps or deliberate placements of middle Bronze Age pottery of the kind seen at Sandway Road are recorded elsewhere in Britain (see Brück 1999, 152; 2001), although their identification and interpretation as significant or ritual deposits can inevitably appear subjective. Prehistoric ritual activity is generally accepted as taking place within the sphere of domestic life (Bradley 2006). Compelling evidence from sites such as Trethellan Farm (Cornwall) suggests that material which could otherwise be classed as domestic rubbish or midden played complex roles in the beliefs and rituals that surrounded 'closure' of settlements at the point of their abandonment (Nowakowski 2001; Brück 2001, 151-52). In Kent a similar interpretation has been invoked for excavated material at Kemsley Field, Sittingbourne (Mcnee 2002, pers. comm.), and in another close parallel, Deverel-Rimbury sherds, a piece of saddle quern and small amounts of carbonised grain were concentrated near the terminal of an isolated ditch at Bankside Close, Isleworth (Middlesex). Here, however, one of the interpretations offered was of a 'foundation deposit', commemorating a newly established feature (Hull 1999). Unfortunately the limits of the deposit at Sandway Road were not defined and too little of the ditch fills were excavated to permit any detailed interpretation. It is, however, possible that material was dumped in the ditch perhaps to mark an episode of habitation, and/or perhaps its abandonment. The absence of any direct evidence for domestic occupation is curious given the quality of the recovered material (fine pottery, charred cereal, a saddle quern, bronzework), although it is important to acknowledge the relatively small-scale of the excavated area.

Several otherwise undated ditches were recorded during the watching brief, amongst which was a possible droveway or trackway (ditches 619 and 620). In the absence of any evidence for other periods of prehistoric agriculture, or of datable material from later periods, it is tentatively suggested that these features represent an extension of the middle Bronze Age agricultural landscape.

A colluvial soil sealed prehistoric archaeological remains. Development of this soil was most probably a direct consequence of soil mobilisation caused by vegetation clearance and agriculture starting in the middle Bronze Age. Alluvium or colluvium are, when deposited gradually, often re-worked into the upper part of existing soils by biological and agricultural processes, blurring, then eventually destroying the boundary between old and new soil units (French 2003, 41; Mike Allen pers. comm.). The absence of a clear division between colluvium and the older remnant palaeosol suggests this was the case at Sandway Road. Widespread agricultural clearance may also ultimately have been responsible for partial acidification of the site's former brown earth soils. This alteration would have reduced biological activity within the soil profile (Dimpleby and Bradley 1975), slowing or even halting the downward dislocation of Mesolithic and Neolithic artefacts.

4.2 The medieval and recent Landscape – c AD 1000 to the present day

After the middle Bronze Age, there was then no significant datable evidence of human activity for almost two and a half millennia, but two parallel and shallow ditches (503 and 504) were probably of medieval and/or post-medieval date. These were aligned NW-SE at the north-western end of Area C. The uppermost fill of ditch 503 contained brick or tile fragments and a small group of medieval pottery, one sherd being tentatively being attributed the 12th-13th centuries (URS 2001a, 26). Ditch 504 was shallower and produced no finds, but has been assigned to this phase because of its shared alignment with 503. Neither ditch corresponds with known extant or historic landscape features, and they may have served as boundaries or drainage ditches. A hedged field boundary which had formed a slight lynchet across Area C is likely to have been established in post-medieval times.

4.3 Unphased features

Some archaeological and natural features on all three areas remain unphased (Fig. 3). These contained insufficient diagnostic finds, or produced only artefacts likely to be residual. Some may be artificially created pits or ‘scoops’, but their irregularity, and the absence of reliable finds groups makes this impossible to demonstrate. Several shallow, often highly irregular features were interpreted as burnt tree-stumps during excavation, but again, this cannot be proven, and the interpretation is open to some doubt. Five probable tree-throw holes in Areas A and B were not excavated.

5 GUIDE TO THE ARCHIVE

The following tables detail the various components of the excavation and research archive.

The site has been analysed and published as part of the Channel Tunnel Rail Link Section 1 Post-excavation Project. This Integrated Site Report is one of 20 publication level site reports available to download from the Archaeology Data Service website: <http://ads.ahds.ac.uk/catalogue/projArch/ctrl/index.cfm>. These present synthesised data from key site sequences at an interpretative level that can be assimilated into complementary studies. The ADS site also includes five schemewide specialist reports, which provide synthetic overviews of the specialist data from CTRL Section 1 in its regional context. Underpinning the site reports and overviews, is a comprehensive archive of individual specialist reports and databases, which are also available to download. The CTRL reports and data can be accessed through the 'Project Archives' section of the ADS website.

Hard copy publication of the CTRL Section 1 results comprises a single volume synthetic overview of the excavated results in their regional context, which includes a complete site gazetteer and guide to the digital archive (Booth et al 2007).

Table 4 below details all available digital data for the Sandway Road site. The Post-excavation assessment report is included in the digital archive, but assessment databases have only been included for categories of material which were not subsequently subject to full analysis. All reports and accompanying figures are presented as downloadable, print-ready Adobe Acrobat files (.pdf). ADS also maintain higher resolution archive versions of report image pages (.tiff). The report text and databases are available as text files (.rtf and .csv respectively). The digitised site plan is available as an Arcview shapefile (.shp) and in drawing exchange format (.dxf).

Table 4: Digital archive

Description	Filename root	Principal authors and organisation
Integrated site report		
Integrated site report	SWR_ISR	Trevarthen M (OWA JV)
Integrated site report figures	SWR_ISR	Trevarthen M (OWA JV)
Site research database		
Site database	SWR	Trevarthen M (OWA JV)
CAD/ GIS drawings		
CAD drawing	SWR_CAD	
ESRI ArcMAP GIS project	SWR_GIS	
GIS limit of excavation shapefile	SWR_GIS	
GIS feature plan	SWR_GIS	
Specialist research reports		
Ceramics (early prehistoric)	CER_EPR_SWR	Edwards E (OWA JV)
Ceramics (later prehistoric)	CER_LPR_SWR	Jones GP (OWA JV)
Lithics	FLI_SWR	Harding P (OWA JV)
Small finds	SFS_SWR	Northover P (Oxford Univ) and Shaffrey R (OWA JV)
Charred plant remains	ENV_Charredplants_SWR	Giorgi J (MoLSS)
Radiocarbon dating	DAT_SWR	Allen MJ (OWA JV), Trevarthen M (OWA JV), Stevens CJ, Macphail RI (UCL), and Crockett AD (OWA JV)
Specialist datasets		
Ceramics (early prehistoric)	CER_EPR_SWR	Edwards E (OWA JV)
Ceramics (later prehistoric)	CER_LPR_SWR	Jones GP (OWA JV)
Lithics	FLI_SWR	Harding P (OWA JV)
Small finds (stone)	SFS_SWR	Shaffrey R (OWA JV)
Charred plant remains	ENV_Charredplants_SWR	Giorgi J (MoLSS)
Post-excavation assessment		
Post-excavation Assessment	SWR_PXA	OWA JV

Table 5: Paper and finds archive quantities

Item	Number of Items	Quantity
Contexts records	5	-
A3 plans and sections	1	-
A4 plans and sections	18	-
Films (monochrome) S=slide; PR=print	4	-
Films (colour) S=slide; PR=print	4S; 2PR	-
Pottery	100	725g
CBM	12	75g
Worked Flint	65	-
Burnt flint	6	37g
Stone	2	3350
Glass	1	2g
Soil Samples	3	c. 45 litres

7 CATALOGUE OF ILLUSTRATED FINDS

Figure 7

Mesolithic flint: 1-6, cores; 7-36, microliths (types after Clark 1934- 7-9= type A, 10-3= B, 14= C1, 15-24= D1, 25-34= D2, 35-6= D3); 37-9, scrapers; 40-1, burins; 42-4, piecers; 45-6, microdenticulates; 47, retouched flake; 48-9, truncated flake and blade.

Figure 16

Pottery

16.1. Early Neolithic rim , 1 sherd (11 g). Context 128, feature 548. Fabric: AF3. Form: rolled over. ST: ext; SM, int; SM. Firing: ext; G, core; G, int; G. Rim Diameter: 470-500 mm. Th: 5.5 mm.

16.2. Early Neolithic rim, 1 sherd (34 g). Context 128, feature 548. Fabric: AF2. Form: rolled over. ST: ext; SM, int; SM. Firing: ext; G, core; G, int; G. Decoration: faded fluting; int; faded fluting. Rim Diameter: 470-500 mm. Th: 8 mm.

16.3. Early Neolithic rim, 1 sherd (12 g). Context 357701 (evaluation), topsoil. Fabric: AF2. Form: simple, pointed. ST: ext; SM, int; SM. Firing: ext; G, core; G, int; G. Th: 9 mm.

16.4. Early Neolithic rim, 1 sherd. (13 g). Context 129, feature 548. Fabric: AF3. Form: simple, pointed. ST: ext; SM, int; SM. Firing: ext; G, core; G, int; G. Th: 5 mm.

16.5. Ebbsfleet style Peterborough Ware, 1 rim sherd (32 g). Context 357706 (evaluation), Feature 521. Fabric: F2. Form: pointed rim, slightly inverted, thickened externally and internally. Firing: ext; YBR, core; YBR, int; YBR. Surface Treatment: ext; SM, Bu, int; SM, BU. Decoration: twisted cord herringbone on the rim top, below the rim and internally. Finger pits at the beginning of the cavetto zone. Rim Diam: 300 mm. Th: 7.5 mm.

16.6. Mortlake style Peterborough Ware, 1 rim sherd (12 g). Context 357706 (evaluation), Feature 521. Fabric: F2. Form: thickened plain rim with flattened profile. Firing: ext; G, core; G, int; G. ST: ext; SM, int; SM. Decoration: rows of fingernails on the rim with finger dimples below. Th: 9 mm.

16.7. Ebbsfleet style Peterborough Ware, 1 rim sherd (8 g). Context 135, Feature 570. Fabric: F2. Form: pointed, inverted rim. Firing: ext; G, core; G, int; G. Decoration: ext; impressed whipped cord maggots arranged in a herringbone pattern. Th: 5 mm.

16.8. 1 Peterborough Ware body sherd (11 g), possibly Ebbsfleet style. Context 135, feature 570. Fabric: F2. Firing: ext; G, core; G, int; G. Dec: ext; impressed twisted cord maggots. Th: 7 mm. Possibly part of same vessel as P1. some charred residue was noted on the inside face.

16.9. One Durrington Walls style Grooved Ware body sherd, 1 sherd (17g). Context 153, feature 555. Fabric: NAT3. ST: ext; SM, int; SM. Firing: ext; RBR, core; RBR, int; RBR. Th: 8 mm.

Worked stone

SF2. 117. Context 3, feature 517. Shaped like a slightly flat sphere and is made from a medium grained ferruginous sandstone.

Figure 17

Pottery

17.1. Globular jar with burnished surfaces and three bands of decoration. Form: R1. Fabric: F1. PRN 1010, context 357704 (evaluation), feature 537.

17.2. Perforated applied lug from globular jar. Form: H1. Fabric: Z2. PRN 1009, context 357704(evaluation), feature 537.

Worked stone

Saddle quern, context 357704(evaluation), feature 537. It has been roughly shaped and is worn longitudinally along the grinding surface. It is made from a crystalline limestone of a type found within the Cretaceous Lower Greensand Beds, which outcrop in a broad band running NE-SW across Kent.

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