Channel Tunnel Rail Link

London and Continental Railways

Oxford Wessex Archaeology Joint Venture

The Prehistoric Landscape at Tutt Hill, Westwell, Kent

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ABSTRACT

As part of an extensive programme of archaeological investigation carried out in advance of the construction of the Channel Tunnel Rail Link (CTRL), Oxford Archaeology (formerly Oxford Archaeological Unit) was commissioned to undertake a watching brief between Westwell Leacon and Tutt Hill in Kent. In the course of the watching brief, a concentration of archaeological features was exposed at Tutt Hill, Westwell, and subjected to detailed excavation. The excavation was carried out between March and August 1999, under the project management of Rail Link Engineering (RLE) on behalf of Union Railways (South) Limited (URS) (a subsidiary of London and Continental Railways).

The small number of features recorded ranged in date from middle Neolithic through to the Saxo-Norman period. These demonstrate a sequence of activity of great length, with a possible hiatus of activity in the early Iron Age and for most of the late Roman and Saxon period.

The earliest activity identified was in the form of pits that belong to ephemeral and temporary occupation in the early and middle Neolithic, followed by a probable period of woodland clearance resulting in the deposition of a layer of colluvium. Four ring ditches, that almost certainly belonged to round barrows, were constructed in the late Neolithic to early Bronze Age (Beaker) period.

During the middle and late Bronze Age the barrows became a focus for secondary burial (cremated remains) and other ritual offerings- some of which can be interpreted as 'closing' deposits, and part of the landscape was divided and reorganised with the laying out of a field system.

After an hiatus in occupation of about 200 years, the site was a focus for industrial activity during the middle to late Iron Age. A furnace and pits containing metalworking debris and crucible fragments were clustered in the far north-west of the site and a single pit deposit indicates either small-scale occupation or hints at associated settlement nearby.

In the late Iron Age to early Roman period a single cremation burial, again in the vicinity of the ring ditches, suggests a reuse of the site for funerary activity and is an indicator that the barrow mounds were still extant. The last activity on a substantial scale took place during the late Iron Age, probably between 50 BC and AD 1, but the site was revisited at least once for the deposition of a cremation burial during the early Roman period.

A pit dated to the early medieval period, represents ancillary activity almost certainly related to the early phases of the manorial complex at Parsonage Farm, to the south-east.

RÉSUMÉ

L'Oxford Archaeology fut chargé d'entreprendre une surveillance archéologique entre Westwell Leacon et Tutt Hill, dans le Kent, dans le cadre d'un programme de recherches archéologiques préventives de grande envergure, exécuté en avance de la construction de la ligne ferroviaire du Tunnel sous la Manche (Channel Tunnel Rail Link -CTRL-). Au cours de la surveillance archéologique, une concentration de structures archéologiques fut exposée, près de Tutt Hill, à Westwell, et firent l'objet de fouilles approfondies. Les fouilles furent menées entre mars et août 1999, sous la direction du maître d'oeuvre, Rail Link Engineering, pour le compte de Union Railways (South) Limited (une filiale de London and Continental Railways).

Les datations du petit nombre de structures enregistrées s'étalaient depuis le milieu du néolithique jusqu'à la période anglo-saxonne. Cet éventail démontre une séquence d'activité de longue durée, avec peut-être un hiatus vers le début de l'âge du Fer et pour la plupart de l'époque romaine tardive et de la période saxonne.

Les traces d'activité les plus précoces furent identifiées sous la forme de fosses appartenant à une occupation éphémère et temporaire du site au début et au milieu de l'époque néolithique, à laquelle succéda probablement une période de défrichement de la forêt, ayant pour conséquence le dépôt d'un couche de colluvion. Quatre fossés pseudo-annulaires, qui appartenaient vraisemblablement à des tumulus, furent construits vers la fin de la période néolithique ou vers le début de l'âge du Bronze (campaniforme).

Au cours de l'âge du Bronze moyen et tardif, les tumulus devinrent le foyer de sépultures secondaires (incinérations) et d'autres offrandes rituelles, dont certaines peuvent être interprétées comme dépôts terminaux. Le paysage fut alors en partie divisé et réorganisé par l'établissement d'un système agraire.

A la suite d'un hiatus d'occupation d'environ 200 ans, le site fut un foyer d'activités industrielles au cours de l'âge du Fer moyen et tardif. Un fourneau et des fosses, contenant des débris de travail du fer et des fragments de creuset, étaient concentrés dans le coin nord-ouest le plus éloigné. Un seul remplissage de fosse semble indiquer ou bien une occupation à petite échelle ou alors un site d'habitation à proximité.

Une seule sépulture à incinération datée de la fin de l'âge du Fer ou de la période romaine, qui se trouve également dans les environs des fossés pseudo-annulaires, suggère une réutilisation du site à des fins funéraires et indique que les tertres des tumulus existaient encore. L'activité la plus tardive à une échelle significative survint vers la fin de l'âge du Fer, probablement entre 50 avant JC et l'an 1 de notre ère, bien que le site fut visité de nouveau ,au moins une fois, à l'occasion du dépôt d'une sépulture à incinération vers le début de la période romaine.

Une fosse, datée du début de la période médiévale, représente une activité auxiliaire très probablement associée avec les phases précoces du complexe seigneurial de Parsonage Farm, situé au sud-est.

ZUSAMMENFASSUNG

Im Rahmen umfangreicher archäologischer Untersuchungen im Vorfeld des Baus der Bahnstrecke durch den Kanaltunnel (Channel Tunnel Rail Link, CTRL) wurde Oxford Archaeology (vormals Oxford Archaeological Unit) mit der Baustellenbeobachtung im Bereich zwischen Westwell Leacon und Tutt Hill in Kent beauftragt. Im Verlauf der Baustellenbeobachtung wurden mehrere archäologische Strukturen in Tutt Hill, Westwell, aufgespürt und einer detaillierten Grabung unterzogen. Die Grabung fand zwischen März und August 1999 unter der Projektleitung von Rail Link Engineering (RLE) im Auftrag von Union Railways (South) Limited (einer Tochtergesellschaft von London and Continental Railways) statt.

Die wenigen verzeichneten Strukturen reichen vom Mittelneolithikum bis in die angelsächsisch-normannische Periode. Sie weisen auf eine sehr lange Phase menschlicher Aktivitäten hin, mit einer möglichen Unterbrechung in der frühen Eisenzeit und während des größten Teils der spätrömischen und angelsächsischen Periode.

Die ältesten identifizierten Spuren sind durch Gruben belegt, die mit einer kurzlebigen, temporären Besiedlung im Früh- und Mittelneolithikum in Verbindung standen, vermutlich gefolgt von einer Phase der Waldabholzung, die eine kolluviale Ablagerung zur Folge hatte. Vier Ringgräben, die mit ziemlicher Sicherheit um Rundhügelgräber angelegt waren, stammen aus der Zeit zwischen Spätneolithikum und früher Bronzezeit (Becherkultur).

Während der mittleren und späten Bronzezeit wurden die Grabhügel dann für Sekundärbestattungen (Leichenbrände) und kultische Beigaben genutzt, von denen ein Teil als abschließende Deponierungen gedeutet werden können. Ein Teil der Landschaft wurde unterteilt und durch Flursysteme umstrukturiert.

Nach einer Besiedlungspause von etwa 200 Jahren wurde die Stätte in der mittleren bis späten Eisenzeit zu einem Schwerpunkt handwerklicher Produktion. An ihrem Nordwestrand traten ein Schmelzofen sowie Gruben mit Abfällen aus der Metallbearbeitung und Fragmenten von Schmelztiegeln zutage. Ein Fund aus einer Abfallgrube wies zudem auf eine kleinräumige Ansiedlung oder eine nicht weit entfernte Siedlungsgruppe hin.

Ein Brandgrab aus der Periode der späten Eisenzeit und frührömischen Zeit, das in der Nähe der Ringgräben zu finden war, lässt vermuten, dass der Ort erneut für Begräbnisse genutzt wurde und die Grabhügel weiter existent waren. Die letzten größeren Aktivitäten sind in der späten Eisenzeit anzusiedeln, vermutlich zwischen 50 v. Chr. und 1 n. Chr., allerdings

wurde die Stätte in der frührömischen Periode zumindest einmal zur Deponierung eines Leichenbrands benutzt.

Eine Grube aus dem frühen Mittelalter verweist auf weitere Aktivitäten, die mit ziemlicher Sicherheit mit der Frühphase von Parsonage Farm, einem im Südosten gelegenen Herrschaftsgut, in Verbindung standen.

ABSTRACTO

Como parte de un extenso programa de investigación arqueológica previo a la construcción del Channel Tunnel Rail Link (CTRL), Oxford Archaeology (antes Oxford Archaeological Unit) fue el encargado de realizar el seguimiento de obra entre Westwell Leacon y Tutt Hill en Kent. Durante el seguimiento de obra se localizó una concentración de estructuras arqueológicas, al que prosiguió una excavación en detalle. Dicha excavación se desarrolló entre los meses de Marzo y Agosto de 1999, bajo la dirección de Rail Link Engineering (RLE) para Union Railways (South) Limited (parte de London and Continental Railways Limited).

El escaso número de estructuras documentadas fechaban de la mitad del Neolítico al período Sajón-Normando. Éstas demuestran una secuencia de actividad de largo período, con posibles hiatos de ocupación en la Edad del Hierro y en casi todo el período Tardo romano y Sajón.

Las primeras muestras de ocupación aparecen en forma de hoyos, perteneciendo a una ocupación efímera y temporal de principios y mediados del Neolítico, seguidas por un posible período de deforestación reflejado en la deposición de un estrato coluvial. Cuatro zanjas circulares, que casi seguro corresponden a túmulos circulares, fueron construidas en el período de finales del Neolítico y principios del período (campaniforme) de la Edad del Bronce.

Durante la mitad y final de la Edad del Bronce, los túmulos se utilizaron como enterramientos secundarios (restos de cremación) y otras ofrendas rituales- algunas de las cuales se pueden interpretar como depósitos “de sellado”, y parte del paisaje se dividió y reorganizó con el establecimiento de un sistema de campos.

Después de un hiato de ocupación de unos 200 años, el yacimiento fue un foco de actividad industrial durante la mitad y final de la Edad del Hierro. Un horno y hoyos agrupados en el noroeste del yacimiento conteniendo restos de metal y fragmentos de crisol y un hoyo aislado indican una ocupación de pequeña escala o muestras de una asociación con un asentamiento cercano.

A finales de la Edad del Hierro y principios de período romano, un enterramiento de cremación aislado, cerca también de las zanjas circulares, sugiere una reutilización del

yacimiento en actividades funerarias e indica que los túmulos seguían presentes. La última ocupación a gran escala tuvo lugar a finales de la Edad del Hierro, probablemente entre los años 50 a.C. y 1 d.C., pero el yacimiento fue visitado al menos una vez para depositar un enterramiento de cremación a inicios del período romano.

Un hoyo al sureste, con datación de comienzos del período medieval, representa una actividad auxiliar vinculada lo más probable a fases iniciales del complejo señorial de Parsonage Farm.

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The investigations at Tutt Hill were undertaken principally by staff from Oxford Archaeology (OA), with support and overall management framework during the post-excavation phase 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 whose efforts contributed to the success of the excavation: The fieldwork was supervised by Paul Murray, and managed by Stuart Foreman. Chris Hayden prepared the post-excavation assessment report. The full field team and specialist contributors to the assessment report are credited in the main project acknowledgements in the digital archive (ADS 2006).

The following specialists contributed to this report: Philippa Bradley (lithics), Emily Edwards (early prehistoric pottery), John Giorgi (charred plant remains), Lynn Keys (metal working debris), Elaine Morris and Sue Nelson (later prehistoric pottery) and Annsofie Witkin (human remains). The illustrations were prepared by Anne Stewardson and Laura Kirby. The abstract was translated by Mercedes Planas (Spanish), Gerlinde Krug (German) and Valerie Diez (French).

The report was edited by Alistair Barclay (early prehistric period team leader). Julie Gardiner was the project senior editor.

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1 INTRODUCTION

1.1 Project Background

The site at Tutt Hill, Westwell, Kent (OS NGR TQ 9752 4660) 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) (Table 1). CTRL was built by London & Continental Railways Limited 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).

Oxford Archaeology (formerly Oxford Archaeological Unit) was commissioned to monitor all earthworks within CTRL Project Area 430, which extended for 14.5 km from East of Lenham Heath to Ashford (Fig. 1). The work was project managed by Rail Link Engineering (RLE) on behalf of Union Railways (South) Limited (URS) (subsequently CTRL UK Limited). The site originally formed part of the general watching brief maintained in CTRL Project Area 430. However, following the discovery of extensive significant remains part of this area was subsequently designated as a targeted watching brief.

Table 1: Fieldwork Events

Fieldwork Event Name	Type	Fieldwork Event Code	Contractor	Dates of Fieldwork
Tutt Hill	Watching Brief Significant Discovery Individual	ARC 430 83+800-84+900 99	OA	12/03/1999-27/08/1999
Tutt Hill	Evaluation	ARC 430/99/84+320	OA	8/3/1999- 18/3/1999
Tutt Hill	Evaluation	ARC TUT 98	MoLAS	1998
Tutt Hill	Geophysical survey	ARC THL 95	A. Bartlett & Associates	27/11/1995 - 4/12/1995
Tutt Hill	Geophysical survey	ARC THG 99	Geophysical surveys of Bradford	1999

The total area investigated in which archaeological features were visible was *c* 1.7 ha. The adjacent sections of the CTRL trace were stripped under variable watching brief conditions, but with a high degree of confidence that significant concentrations of prehistoric features would have been identified if present. The targeted watching brief and excavation of the site were undertaken over a period of five months, from March 1999 to August 1999 (Table 1).

1.2 Geology and Topography

The Tutt Hill site falls within the Wealden Greensand landscape zone (Fig.1). The site lies on the Folkestone Beds, bordered to the east by Gault clays and is overlain by sandy silt soils. It is situated in the Great Stour river valley, *c*.3.5 km north-west of Ashford, and near to the top of a gently sloping hill, between *c.* 85 and 75 m OD (Fig. 1). The river Stour is approximately 1 km west of the site and there is a north-west - south-east flowing stream a short distance to the north-east. The site was under pasture before the CTRL works started.

To the south of Tutt Hill is Beechbrook Wood where the remains of an ancient coppice woodland survive. Further remains of ancient woodland in the vicinity include Ripple Wood, Balls Wood, Lodge Wood and Godinton Park to the south. The cultivation of chestnut coppicing was, historically, a widespread way of utilising the poor acidic soils of the area.

1.3 Archaeological and Historical Background

Prehistoric trackways

Despite the difficulties of establishing the antiquity of trackways in general, and consequently those that might have traversed Kent in the prehistoric period, it is almost certain that many such routeways existed. The Pilgrim's way trackway (or its precursors), which follows the line of the North Downs escarpment, is likely to have been a route utilised at this time, as the positioning of Neolithic long barrows, Bronze Age round barrows and Iron Age Hill forts close to it strongly suggests (Fig. 1). The site of Tutt Hill is situated just under 2 km to the south-west of its present path.

The area in the Neolithic

A group of three long barrows (Julliberrie's Grave, Elmsted and Boughton Aluph) are located within the Stour Valley (Fig. 1 and Ashbee 2004, 11). The closest to Tutt Hill is Boughton Aluph situated c. 7.5 km to the west of the excavated site, between the Stour River and the Pilgrim's Way. Elmsted is also close to the Pilgrim's Way, while Juliberrie's Grave is further along the course of the Stour (Ashbee 2004, 11). This long barrow group indicates significant ritual activity in the area during the Neolithic. Other contemporary monuments, such as causewayed enclosures have a more coastal distribution (Oswald *et al*. 2001, Fig. 1.1). Occupation sites of Neolithic date have been identified mainly on the north and east coasts of Kent, although a site is known close to the Elmsted long barrow. The discovery of Neolithic artefacts (eg stone axeheads) across much of Kent may indicate that the extent of contemporaneous settlement could be more widespread. This assumption is largely supported by the results of excavations along the CTRL route. Similarly, the recent discovery of a number of causewayed enclosures (Oswald *et al*. 2001, 152-3) and a probable henge at

Ringlemere (Parfitt and Needham 2005) suggest that other communal monuments could be present (eg. cursuses and henges).

The area in the Bronze Age

Early Bronze Age round barrows are concentrated mainly on the chalk downland to the east of the Tutt Hill site, slightly set back from, but still aligned along the River Stour. The Greensand belt on which the Tutt Hill site is located has comparatively few barrow sites, but some have been found, demonstrating that the area was not completely avoided. Many of the sites on the chalk have been located by aerial photography, where ring ditches are seen more clearly than on the Greensand (Field 1998). Non-funerary evidence is rare and is limited to a few pit deposits (mostly Beaker associated but sometimes urn or Food Vessel), artefact scatters and, more rarely, occupation deposits (eg Eyhorne Street and White Horse Stone Hayden 2006a-b).

Middle Bronze Age activity is more extensive than the preceding period, as attested by discoveries along the CTRL route. There is considerable evidence for the reorganisation of the landscape (Yates 1999; 2004), for more permanent settlement, and for specialised activities such as salt production near to the coast (eg Cobham - Davis 2006). The setting of later Bronze Age land divisions and settlements close to barrow mounds is a common phenomenon that occurs not just in Kent (Yates 1999).

The area during the Iron Age and early Roman periods

Most of the Iron Age sites that have been found in the area are again, situated on the chalk, to the east of Tutt Hill (Parfitt 2004). On the Greensand ridge most of the known sites are cemeteries, such as Mill Hill, Deal (Parfitt 1995), where numerous Iron Age inhumations and cremations, including a 'warrior' burial were found. Tutt Hill lies in an area of central Kent where no hill forts have yet been discovered. The nearest are Bigberry Camp (Jessup and Cook 1936), situated approximately 20 km to the east and Oldbury (Thompson 1986), approximately 20 km to the west. Evidence for Iron Age activity in Kent is sparse, and evidence for land division and the subsistence economy is also rare (Parfitt 2004, 16).

The area in the early Medieval period

The site lies within the parish of Westwell, and before its division into hundreds, was within Wye Lathe. The modern settlements of Charing and Lenham were both sites of early Anglo-Saxon estate centres that became cathedral towns in the late Saxon period and Ashford was a late Saxon market town (Riddler 2004). Increasing evidence for Wealden iron working in the late Saxon period includes one such site at Mersham, situated approximately 10 km to the south east of Tutt Hill (Riddler 2004).

The immediate vicinity

The area around the site has revealed occasional small pockets of prehistoric activity, all of which were excavated in advance of CTRL construction work. An evaluation (URS 1998) carried out to the north-west of Westwell Lane recovered a small amount of prehistoric pottery, and several shallow linear features. Approximately 0.5 km to the east of the site a scatter of prehistoric flint has been found (URL 1994,). This was near to an area of undated ring and linear cropmarks, and soilmarks indicating the presence of two rectangular enclosures, with three undated possible circular features lying *c*. 0.75 km further east. A watching brief at Westwell Leacon and Leda Cottages, just over 1 km to the north-west of Tutt Hill, revealed four late Iron Age to early Roman pits, including one cremation burial. Further pits of a similar date, and a scatter of Neolithic flint were found 2 km further west at Leacon Lane (URS 2000a). The CTRL targeted watching brief and subsequent detailed excavation at Leda Cottages (Diez 2006) revealed a late pre-Roman Iron Age rectilinear enclosure associated with two four-post structures and several pits. There was also possible evidence for iron smelting activity.

Around 1 km to the south-east of Tutt Hill, at Beechbrook Wood, significant Neolithic and Bronze Age features were discovered over an extensive area, including ring ditches, pits, cremation burials and boundary ditches. The eastern area of the site included a middle Iron Age double-ditched circular enclosure, within which lay posthole structures including one four-poster. Late Iron Age to early Roman features were also identified, including a complex of industrial enclosures, postholes, pits and a field system (Brady 2006).

The Parsonage Farm manorial settlement (excavated in advance of CTRL construction) is situated to the south-east of Tutt Hill (Fig. 1) (Hill 2006). Activity at this site has been divided into three chronological phases, the first two of which spanned the period AD1100 - AD 1250. A timber building and a ditch of late 12th century date were identified. The Pilgrim's Way trackway was almost certainly a well utilised route at this time. The settlement at Westwell was recorded in the Domesday Book as having a mill and a church.

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 freely available as a web-based digital archive.

In support of the CTRL Project Monograph (Booth *et a*l. 2007), the Tutt Hill report integrates key assemblages and stratigraphic data into a site sequence secured on key dating

evidence from artefact groups. The report includes a discursive narrative describing the sequence of activity and reasoning evidence (URS 2003, 15-16).

The research aims that are specific to the Tutt Hill site focus on the interpretation of four ring ditches identified during the targeted watching brief. The aims of the analysis were to investigate the chronology of the monuments, their spatial arrangement, and their location in the landscape (URS 2003 Vol.1 2.14.8, 2.14.10 and 2.14.11). The analysis was also intended to address the relationships between the monuments and other types of evidence, such as settlement and secondary flint scatters, to examine the differences or similarities between different site types (2.14.12 and 2.14.13). Finally, the social and political significance of these monuments was considered, specifically examining whether there is any evidence for communal activities in their vicinity (2.14.7 and 2.14.14).

Other site-specific aims include the examination of differences in cremation rite (URS 2003 Vol. 1 2.15.1), distinctions between ritual and domestic activity (URS 2003 Vol.1 2.14.3 and the causes and consequences of agricultural intensification (URS 2003 Vol.1 2.15.4).

3 METHODS

The site at Tutt Hill was discovered during the scheme-wide watching brief. The main area chosen for excavation (Fig. 2) was stripped by a 360º excavator. A number of features beyond the area of the targeted watching brief, to the north-east and south-west were also excavated and recorded in detail. Features discovered during the two earlier evaluations have also been incorporated into the site analysis. All fieldwork (Table 1), from site stripping to recording and sampling, was conducted by Oxford Archaeological Unit (OAU) in accordance with the Written Scheme of Investigation (URS 1998) prepared by the Project Manager, Rail Link Engineering (RLE).

The MAP2 assessment report was produced by OAU in accordance with the specification produced by RLE (URS 2000b). All method statements follow national guidelines and were agreed in consultation with English Heritage and Kent County Council (KCC) on behalf of the Local Planning Authority.

The post-excavation analysis and report were carried out by Oxford Wessex Archaeology Joint Venture (OWAJV) following the methods set out in the Updated Project Design for archaeological analysis and publication (URS 2003). All project design documents are available in the digital archive (ADS 2006).

The radiocarbon samples were selected as part of a scheme-wide programme of 139 submissions, following the method detailed in the scheme-wide dating report (Allen 2006). OSL samples were taken from the barrow ditches, although it was decided at the assessment stage not to proceed with the proposed dating programme.

4 RESULTS

4.1 Phase Summary

The overall phasing for the Tutt Hill site is shown in Figure 3. Stratigraphic relationships were rare on the site as most features were discrete, therefore the sequenced phases are based almost entirely upon ceramic evidence and radiocarbon dating (see Table 3). In some instances, features have been assigned to phases by spatial relationships alone, however this method was used only when these spatial relationships were sufficiently convincing. The fills of all archaeological features were of a similar nature, mainly sandy silt, and in most cases did not help in phasing the site. For this reason, they are discussed in the narrative only when needed for the understanding of the site sequence. The following phases have been identified:

- Early to middle Neolithic (3650-2800 BC): Activity during this period is principally represented by pottery recovered from two pits and as redeposited material. A further two pits were tentatively attributed to this phase. Stratigraphically, an episode of tree clearance or natural deforestation was followed by the deposition of a colluvial layer across the site. However, early Neolithic artefacts recovered from this layer are likely to be residual and while the date of this layer is therefore ambiguous, it is almost certain that it formed in the late prehistoric period.

- Late Neolithic to early Bronze Age (2500-1500 BC): This was the main phase of activity on the site, represented by four barrow ditches situated in close proximity to each other (of which two are associated with single radiocarbon determinations - see Table 3). The only other evidence for activity during this phase are the eleven sherds of pottery from an early Bronze Age vessel, recovered from a possible pit.

- Middle Bronze Age (1500-1100 BC): Three cremation burials, situated in the area of the barrow ditches (one of which is associated with a radiocarbon determination) were dated to this phase. Three sub-rectangular features of unclear function also belong to this phase.

- Late Bronze Age (1100-700 BC): Activity during this phase was represented by fragmentary ditches, possibly representing part of a field system. However, only one ditch was securely dated, and the others are attributed to this phase only by their spatial associations with the dated ditch segment. One small pit and a possible cremation burial, inserted into the fill of one of the ring ditches, contained late Bronze Age material. A group of three pits, situated in the area of the ring ditches, have also been attributed to this phase.

- Early to Middle Iron Age (700-150 BC): A single small pit, containing fragments of a decorated vessel, and a small section of ditch, have been attributed to this phase.
- Late Iron Age to Early Roman (50 BC-AD 100): A single cremation burial, in the vicinity of the ring ditches, is dated to this phase. Industrial activity in the north-west of the site was represented by pits containing crucible fragments and metalworking debris, and a furnace feature.
- Early medieval (AD 1000-1350): A pit situated in the far north of the site is dated to this phase.

Table 2 below provides quantities and percentages of pottery per phase across the site. The radiocarbon dates are given in Table 3.

Table 2: General quantification of pottery by phase

Phase	Count	Weight (g)	Count %	Weight %
Unphased	1	1	< 0.1 %	< 0.1 %
Early to middle Neolithic	20	54	0.9 %	0.5 %
Late Neolithic-early Bronze Age	7	41	0.3 %	0.4 %
Middle Bronze Age	409	5896	17.4 %	53.3 %
Late middle Bronze Age to Late Bronze Age	453	1691	19.3 %	15.3 %
Late Bronze Age	242	102	10.3 %	0.9 %
Late Bronze Age to early Iron Age	3	6	0.1 %	0.05 %
Early to early middle Iron Age	1184	2934	50.3 %	26.5 %
Middle to late Iron Age	32	331	1.36 %	3 %
Late Iron Age to early Roman	3	6	0.1 %	0.05 %
Total	2353	11061		

*Table 3: Summary of radiocarbon samples and results**

Feature	context	context details	material	Lab. no.	delta C13‰	result BP	cal
cremation burial 98	99 <21>	pyre debris	*Aluns/Corylus*	NZA-20102	-25.92	3094±40	1440-1210 BC
ring ditch 89	74 <19>	charcoal dump	*Prunus*	NZA-21140	-24.8	3383±30	1750-1530 BC
ring ditch 156	164 <44>	charcoal in primary fill	*Fraxinus excelsior*	NZA-21141	-24.31	3789±35	2340-2040 BC
pit 35	36 <6>	charcoal (from industrial furnace)	*Maloideae* round wood	NZA-21142	-27.68	960±35	AD 1000-1170

*All radiocarbon results have been calibrated with the atmospheric data presented by Stuiver *et al.* (1998) and performed on OxCal ver 3.9 (Bronk Ramsey 1995; 2001) and are expressed at the 95% confidence level with the end points rounded outwards to 10 years following the form recommended by Mook (1986).

4.2 Early Agriculturalists- (*c.* 4,500 BC - *c.* 2,000 BC)

4.2.1 Early to middle Neolithic (c 3650 BC - c 3000 BC)

The earliest evidence for activity at Tutt Hill is represented by redeposited finds of earlier Neolithic plain bowl pottery and Ebbsfleet ware from one of two charcoal-rich pits (145 and 150) and a charcoal-rich fill (337) of tree-throw hole 338 (Barclay and Edwards 2006). Two other pits (143 and 148), situated nearby (143 and 148), did not contain pottery, but are likely to be contemporary with those mentioned above as they were of a very similar character. It is possible that these sherds are residual and that the tree-throw hole belongs to a later phase. Evidence for a period of forest clearance in Kent during the Neolithic has been provided by pollen sequences showing cleared land in the early Bronze Age (Clarke 1982). Furthermore, evidence of ground erosion deposits containing Neolithic artefacts have been recorded at various sites on the chalk including Pegwell and Brook (Clarke 1982). At the latter site this process was thought to have happened at the end of the late Neolithic (Clarke 1982). A similar sequence of tree clearance or natural tree fall followed by colluviation can be recognised at Tutt Hill, as a layer of colluvium (8103) considered to post-date a series of tree-throw holes was recorded in part of the evaluation, and found to contain two sherds of early Neolithic Plain Bowl pottery. However these two sherds were small and abraded and are most likely to be residual and therefore not contemporary with the deposition of the colluvium. The colluvium at Tutt Hill was probably deposited in the late prehistoric period.

The nature of occupation

The pits and scraps of pottery indicate low-level occupation perhaps of a seasonal nature at the Tutt Hill site during the earlier Neolithic. Similar traces of occupation come from a number of sites in Kent eg. Sandway Road and Eyhorne Street- (Harding and Trevarthen 2006; Hayden 2006b). Small assemblages of Ebbsfleet Ware have been found throughout Kent (Barclay and Edwards 2006). However, it is unclear whether the features at Tutt Hill represent a peripheral surviving part of a larger settlement or a seasonal habitation site, with ephemeral structures that left little or no archaeological trace.

4.2.2 Late Neolithic to early Bronze Age (c 2500 BC to c 1500 BC)

The Barrows

The excavation area (Fig. 3) contained the ring ditches (156, 89, 81 and 90) of four putative barrows. Their ditches ranged in diameter from 15 m to 26 m, and were situated in close proximity to each other. The presence of sherds of Peterborough Ware and Beaker pottery (albeit in small amounts) in the ditch fills (Barclay and Edwards 2006), together with small quantities of worked flint, mostly debitage (Bradley 2001), and the results of the radiocarbon dating programme (see Table 3), in combination support the interpretation of these ring ditches as round barrows. The site had been truncated and no evidence for extant barrow earthworks survived.

Ring ditch 156 was the largest, at 26 m in diameter, and was visible in its entirety within the excavated area (Fig. 3). Like the other barrows in the group its ditch was not a true circle. The ditch had a maximum width of 2 m and an average depth of 0.78 m with moderately sloping sides breaking gradually to a concave base. A single radiocarbon date (2340-2040 cal BC NZA-21141 see Table 3) was obtained on charcoal (*Fraxinus excelsior*) from the primary ditch fill. This deposit could represent the remains of a fire (either a hearth or a pyre) that was deposited either intentionally or accidentally into the freshly cut ditch. The fills show initial episodes of erosional infilling, which contained sherds of Peterborough Ware and Beaker pottery. The Beaker pottery would be broadly contemporaneous with the radiocarbon date. Alternatively, both the Peterborough ware and Beaker pottery, as well as the charcoal could be redeposited occupation material from the land surface. The upper fills, which contained two sherds of middle Bronze Age pottery, typically represent a period of slow gradual silting (Fig. 4). There is some evidence in the lower fills that deposition increased near to the outside edge of the ditch, indicating the probable presence of a small exterior bank. The ring ditch contained three natural features (170, 174 and 209) all of which could be associated with pre-barrow tree clearance. 172 contained a moderate amount of charcoal and signs of burnt

roots, suggesting that the area was cleared of woodland prior to the construction of these possible barrow monuments. Truncation had removed all evidence of earthworks, the original ground surface and any pre-barrow mound deposits. It is likely that any shallow cremation pits and inhumation burials would not have survived this process, and the same point can be made for at least two of the other three barrows.

Ring ditch 90 was the most easterly of the group, with the north-eastern part of the ditch continuing beyond the limit of excavation (Fig. 3). The ditch, 22 m in diameter, had a maximum width of 1.32 m, a depth of 0.54 m and a U-shaped profile. Two fills remained, both deposited by natural silting. A small lithic assemblage (four flakes) was recovered from the lower fill. The upper fill contained two sherds of Peterborough ware, two plain bowl sherds, one sherd of Beaker pottery and five worked flints including two blade-like flakes (Barclay and Edwards 2006; Bradley 2001). Deposit 130 filled a shallow hollow in the area enclosed by the ring ditch and consisted of dark organic material from which no finds were recovered.

Just under half of ring ditch 89 was exposed within the excavated area (Fig. 3). Its centre and any surviving central burial deposit would have been outside the area of excavation. The ditch has an estimated diameter of 22 m, survived to a fairly substantial depth of 0.9 m and was 2 m in width, with a weathered U-shaped profile and a flat base. This type of profile has been shown by experimental archaeology to be a typical result of the natural erosion of originally vertical sided ditches cut into sandy soils (Evans and Limbrey 1974). The early fills represent episodes of infilling from the feature sides and surrounding ground surface, but unlike the early fills of ring ditch 156, show no indication of a bank. The primary fill contained one sherd of Peterborough Ware pottery (Barclay and Edwards 2006) and a small amount of charcoal (Challinor 2001). In two parts of the ditch, a dump of charcoal, probably from a hearth or pyre, had been deposited in the centre directly above the primary fill. A sample of this charcoal was radiocarbon dated (NZA-21140 1750-1530 cal BC - see Table 3). The upper fills of the ditch contained more small dumps of charcoal, one sherd of Beaker pottery (Barclay and Edwards 2006) and 10 worked flints (Bradley 2001). The charcoal from the ring ditches was dominated by the species Quercus and Maloideae (Oak and Apple family), of which small branches and twigs had probably been used for tinder (Challinor 2001).

The smallest of the four ring ditches (81) was situated between the other three and had a maximum diameter of 15 m (Figs 3-4). The ditch is broken in two places but may have originally been continuous, having originally been constructed out of contiguous ditch segments. The gaps are likely to have been caused by truncation, resulting in the removal of the shallower ditch parts. The surviving part of the ditch was very shallow, only surviving to a maximum depth of 0.16 m. It had a maximum width of 0.3 m and had a steep sided concave

profile. One sherd of Beaker pottery was recovered from this fill, which also contained a few charred plant remains identified as barley and indeterminate cereal (Barclay and Edwards 2006; Giorgi 2006).

Chronology

Evidence for tree clearance, possibly for the construction and visibility of the barrows, can be demonstrated stratigraphically to pre-date the late Bronze Age. This is shown by the truncation of a tree-throw hole by late Bronze Age ditch 190. However, Ebbsfleet Ware from the fill of tree-throw hole 338, and sherds of plain bowl pottery from the colluvium identified in the watching brief (8103), indicate that some land clearance may have taken place in the middle Neolithic. Whether the possible pre-barrow tree-throw holes belong to this phase is uncertain. Likewise it is possible that this initial clearing was maintained for pasture, small-scale cultivation and occupation, prior and subsequent to the construction of the barrow group. Residual finds of Peterborough ware, Beaker, flint and charred plant remains from the barrow ditches indicate the range and type of activity. It is probable that the date of all four barrows overlaps with the currency of Beaker pottery (c. 2450-1700 cal BC). The earliest of the three radiocarbon dates (NZA-21141- 2340-2040 cal BC) is on charcoal recovered from the primary fill of barrow 156 and, at best, provides either an approximate date for the digging of the ditch, or a date for the immediate pre-barrow, Beaker associated, activity. A second date, NZA-21140 (1750-1530 cal BC), on a charcoal dump above the primary fill of ditch 89, indicates that this barrow was probably constructed towards the end of the early Bronze Age.

Although the evidence is slight, it is possible to suggest that all four barrows were probably built during the early Bronze Age (2100-1600 cal BC). There is no clear evidence to indicate the sequence of barrow construction other than the two radiocarbon dates discussed above. The possible similarity of size between barrows 89 and 90 could indicate that they were closely related in time (either built sequentially or as a pair), while the small and somewhat different barrow 81 could post-date barrows 89 and 90, a suggestion backed up by its somewhat squashed outline in plan. At face value the single date obtained for 156 would indicate that this was the earliest, although this result should be treated with caution, as the sample material could easily be redeposited and have no direct association with the construction or use of this monument.

Function and use

Interpretation of these ring ditches is severely hampered by truncation, which could have removed all traces of burial deposit, funerary related activity (eg pyre sites) and earthworks. However, there is little doubt that these ditches belonged to round barrows. The features

enclosed by ring ditches 90 and 156 did not contain any anthropogenic material, and were most likely tree-throw holes. Only pit 170 had a form that could have been a burial pit, but no traces of a burial were found.

Round barrows are often instinctively associated with funerary ritual, but the evidence shows that this was certainly not always their prime function and it is unfortunate that the evidence from Tutt Hill is so lacking. The absence of burial deposits can be the result of truncation and poor preservation (eg acid soils), although there are cases were extant barrow mounds have been excavated where there has been no trace of any burial deposits. Round Barrows without any internal burials have been found frequently in southern England (eg Mill Hill, Deal- Parfitt 1995). At West Heath in Sussex (Drewett et al.1988), a group of turf mounds, also situated on the Folkestone Beds of the Greensand, were excavated in the 1970s. One of these turf mounds (Mound III) was found to have been surrounded by wattle hurdling and ring ditches, probably as part of the construction process. This turf mound, along with six others, contained no burials or burial pits, despite surviving as visible mounds on the surface. However, two mounds on the site were associated with burials. This links the function of those with and those without burials, but indicates that they did not function solely as burial monuments as some have been found never to have covered human burial deposits (eg barrow mound surviving to a height of 1 m was excavated at Iping Common, Sussex - Drewett et al. 1988).

Recent work has explored the hypothesis that barrows and other types of monument may represent the closure and marking of an event that took place on the ground (Woodward 2000). The implications of this interpretation are that various types of events were covered and closed and that sometimes these events were of a funerary nature and sometimes not. It indicates a consistent treatment of the past, removing the physicality of past activities from the realm of the living but keeping the memory of those events visible in the landscape. These events were not always of a ritual or funerary nature and can sometimes include occupation deposits (Woodward 2000). Barrows may also have covered abandoned temporary settlement sites, thus placing that settlement event into the past. The repetition of this monument construction activity thereby would have marked the movement of the group through the landscape. It seems that if this interpretation of the function of barrows is accurate, then specific features and remains of activities were covered and others were not.

Spatial organisation

Fleming (1971) defines six main classifications for the arrangement of barrows in a group, using terms such as nucleated and dispersed. Unfortunately, part of ring ditches 89 and 90 are situated beyond the north-eastern limit of the Tutt Hill excavation, making it impossible to speculate on the organisation of the group as a whole. However, the three smaller ring ditches

(89, 90 and 81) do appear to be clustered together, with ring ditch 156 slightly off-set to the west. The undated ring and linear crop marks identified approximately 0.5 m to the east of the Tutt Hill site, may be part of a large group that includes the Tutt Hill ring ditches. These features were also associated with rectangular and circular soilmarks and a flint scatter. This cluster of barrows at Tutt Hill may indicate the revisiting of places in successive years, perhaps by the same group utilising the same routeway.

The ring ditches in the landscape

As the site sits near to the top of Tutt Hill, and on the southern edge of an escarpment, the siting of a monument group here would have provided a highly visible location for the monuments, particularly from the south. If the ring ditches at Tutt Hill are the remains of barrows, they are likely to have been visible from the route of the Pilgrim's Way at Westwell. The selection of the Folkestone beds, and an elevated valley side position, is typical for the placement of barrow cemeteries on the Greensand, with most of the groups in this landscape comprising small clusters of bowl barrows (Field 1998). It has also been noted by Field (1998) that many of these groups are aligned along small rivers but slightly set back from them, suggesting that the events or settlements associated with the barrows were focused on the river. This type of location pattern is true of the Tutt Hill monument group, being located near to the Stour River.

Ritual and domestic space

The presence of charred plant remains in the primary fill of ring ditches 81 and 90 indicates that cereals (including Barley) were being grown in the vicinity, at around the time the ring ditches were in use, perhaps contemporary with the sherds of Beaker pottery. In this context, it seems likely that the selection of the Tutt Hill site for the placement of the ring ditch monuments was linked to the subsistence economy. The site is on the edge of the chalk near a small river, but slightly set back from it, on the elevated ground of the North Downs escarpment. This land is likely to have been marginal, being situated right on the border of the Folkestone Beds and the Gault clays (Fig. 1), and not ideal for the cultivation of arable crops due to the soil conditions caused by the alkaline nature of the Gault clay geology just to the north-east of the site. The well drained acidic nature of the Folkestone beds to the south-west, further down in the more fertile alluvial valley, would be a suitable area for arable cultivation. It is likely that the site was therefore selected for a combination of reasons concerned with phenomenology and ideology, but also with the economy. Such a selection criteria could be considered widespread in Kent. The majority of the barrow sites of Kent and most (but certainly not all eg Upper Thames Valley) other places in Southern England are situated on the Chalk, and some along the band of Gault clay between the Greensand and

Chalk, notably often on the edges of geological zones that would have given rise to different soil formations and resources. It seems likely that where parts of territories fell on these alkaline zones, those areas were utilised for monument placement to keep the more fertile land for residence-based activities such as cereal cultivation. Although it is likely that a bias in ring ditch identification favours the Chalk due to visibility, the quantity is too large to be explained by this alone.

The choice of location on marginal lands seems to reflect the spatial pattern of the Stour Valley long barrows and the Medway Megaliths, all situated on the periphery of utilised territorial zones. More difficult to verify is the suggestion that this marginal zone had an ideological significance. It is also likely that the boundary areas between territorial zones could have formed communal spaces, used for movement through the landscape and in this way routes were established and evolved.

Agricultural intensification

The process by which cereal remains came to be deposited in the early fills of the ring ditches is unclear. They could have been deposited as processing waste or as a ritual deposit (Giorgi 2006). However, they do indicate that crop processing activities were undertaken in the area. It has often been suggested that large-scale up-take of farming practices as the main form of subsistence, resulted in agricultural intensification, which led in turn to the domestication of ritual, including among other practices, cemeteries moving closer to settlements. It is possible that land previously considered marginal due to small-scale agriculture was likely to have been utilised for activities such as animal grazing and arable cultivation. This may infer that the zones previously used for ideological expression were no longer utilised in this way. In relation to the Tutt Hill site, this could be demonstrated by the later stages of ditch infilling (containing two sherds of middle Bronze Age pottery) and the finds of late Bronze Age pottery sherds from the possible field boundary ditches. This suggests the 'disuse' of the monuments was followed by a new type of land use and the change from the original function of the site from a 'ritual' to a 'domestic' one.

Relationship to settlement

Two scatters of worked flint (19 and 20), covering areas 100 m by 40 m and 40 m by 40 m respectively, were found to the south-east of the targeted watching brief area (Fig. 2). The flint assemblages were recovered from the ploughsoil and the stripped surface. They exhibited signs of heavy abrasion and damage, but their distinct concentrations suggest that they had not moved far from their original place of deposition. The flint scatters consisted of 106 pieces of worked flint in total, and was dominated by debitage, with flakes, cores and rejuvenation flakes (Bradley 2001). This included a group of large cores and flakes. No

small chips or flakes were found, but this may reflect post-depositional disturbance or be a result of the collection methods employed. Retouched forms were also recovered from the scatter. These included scrapers, a scraper or knife, a piercer and two retouched flakes. The scrapers were neatly retouched and included a possible 'thumbnail' scraper of Beaker date. The material seems likely to have been of mixed date and probably includes Neolithic to early Bronze Age flintwork. The dominance of debitage in the assemblage indicates that flint was actually worked here. This activity is likely to have been connected with occupation, but the lack of evidence for substantial structures suggests that this may have been of a temporary nature. Two undated postholes (23 and 28) were located just to the south-east of the flint scatters (Fig. 2), however it is not known whether these were contemporary with the flint scatters. Despite the wide date range attributed to the flint scatters, it is possible that they represent a seasonal camp broadly contemporary with the construction and use of the ring ditches. It is also possible that the site was a focal point for communal gatherings at, or visits to the ring ditch monuments from nearby communities.

4.2.3 Middle Bronze Age (1500-1100 BC)

During the middle Bronze Age several features, including two cremation burials (301 and 98), were situated in the vicinity of the ring ditches (Fig. 4). Deposit 301 was placed 15 m beyond ring ditch 81, and between ring ditches 89 and 156. Deposit 98 was placed 8 m beyond ring ditch 90 and on or close to the probable central axial line through the pair of ring ditches 89 and 90. The placing of these two deposits relative to the ring ditches was probably deliberate and indicates a degree of continuity in the sequential development of the cemetery into the middle Bronze Age. A similar argument can be made for the placing of deposits 53 and 46.

Cremation Burials

Cremation burial 301 consisted of a cut, roughly circular in plan, with almost vertical sides breaking to a flat base, almost certainly truncated substantially by later ploughing. The cut (301) survived to a depth of 0.35 m, with a diameter of 0.6 m. Within this cut was an inverted middle Bronze Age Bucket Urn (300) made from a grog and flint-tempered fabric and with a potters `signature` made from impressed twisted cord just below the rim (Fig. 5) (Morris 2006). The pot contained a significant quantity of willow/poplar (*Salicaceae*) charcoal (Challinor 2001) and a small amount of cremated human bone (7 g) among which a fragment of long bone shaft was identifiable.. The back fill of the cut (298) contained a large amount of charcoal and some tiny fragments of cremated bone, probably a mixture of the material excavated from the cut and pyre debris. This cremation burial was situated approximately 12 m to the west of ring ditch 89 and 22 m to the east of ring ditch 156.

Cremation burial 98 (Fig. 4) consisted of a circular vertical sided cut with a concave base, measuring 0.7 m in diameter and 0.18 m in depth, although it is likely that horizontal truncation by later ploughing has reduced these measurements. The single fill (99) contained 7 g of cremated human bone with identifiable fragments of skull vault and long bone shaft (Witkin 2006) and eight pieces of heavily calcined flint (Bradley 2001). A radiocarbon date of 1440-1210 cal BC (NZA-20102 see Table 3) was obtained from the pyre debris (*Alnus/Corylus* charcoal). The deposition of middle to late Bronze Age urns containing burnt flint and/or very little human bone is becoming a familiar rite (Allen and Gardiner 2000).

The sub-rectangular features

Three sub-rectangular features (142, 117 and 217) were situated in the area of the ring ditches (Fig. 4) and contained sherds of middle Bronze Age pottery. Features 142 and 117 were located just to the south of ring ditch 90, and were oriented NE-SW. Both had a U-shaped profile and moderately sloping sides breaking sharply to a slightly concave base. The fills of two of these features contained charred plant remains. those in pit 117 were identified as barley or wheat and those in pit 217 were unidentifiable to species (Giorgi 2006). The function of these features is not clear. They may have been simply rectangular shaped pits, or possibly grave cuts, although no human remains were recovered from their fills. Their location so close to the ring ditches may have been deliberate and could indicate that their function was to receive ritual offerings.

Attitudes to the past: reuse

It is likely that this place, and the monuments that it contained, may still have been visible in the middle Bronze Age. It is also likely that it continued to be a place of special significance for reasons discussed above. Due to heavy ploughing it is difficult to ascertain whether the ditches were entirely filled, or whether any mounds were visible by the middle Bronze Age. Two sherds of middle Bronze age pottery were recovered from the upper fill of ring ditch 156, which had survived to a greater depth than the other three, suggesting that this ditch had not completely silted up by the time the pottery sherds collected in the top of the ditch. This also suggests that the features represented by the ring ditches, being either mounds or circular ditches enclosing a sacred space, would still have been visible. The fact that the ditches had been left to silt up and that no early Bronze Age material was found in the vicinity suggests that there had been an hiatus in the use of the site at this time, perhaps when the site was not recognised as sacred or special. The location of the cremation burials indicates a re-use of the site during the middle Bronze Age. These burials may have been placed here deliberately as an acknowledgement of the inhabitant's ancestors. Gosden and Lock (1998) outline the difference between genealogical history and mythical history, the former is seen as ritual and

is expressed in relation to known ancestors and events, the latter is the continuation of a tradition or the recognition of a sacred place, whose origins are unknown. It is quite common for earlier monuments (Neolithic as well as early Bronze Age) to be appropriated for burial during the later bronze Age.

The period of disuse demonstrated by the silting up of the ditches at Tutt Hill throughout the early Bronze Age suggests that the people who placed cremation burials nearby in the middle Bronze Age may have associated the ring ditches with recognised but unknown or appropriated ancestors.

Agricultural intensification

It is possible that this desire to reconnect with ancestral sites was prompted by a period of economic or social instability caused by the continuation of significant agricultural intensification that seems to have taken place in southern Britain at around this time (Yates 1999; Brück 1995, 245). Yates has argued that during the later Bronze Age ditched boundaries and field systems were deliberately located to reinforce old boundaries demarcated by round barrows and other monuments (1999, 158). The siting of the ditches and occupation features at Tutt Hill close to a group of barrows can therefore be seen as a deliberate act of transformation, reinforced by the placing of further offerings of cremated remains and domestic waste. A similar argument has been made for the ring ditch and boundary ditches at Cobham (see Davis 2006). Population pressure and a strain on resources may well have necessitated a reconnection with the past, perhaps to appease the ancestors and gain their blessings for the changes being instigated. Interestingly the evidence points to a hiatus in Kent in the early Iron Age. Champion has suggested that this perhaps indicates a "return to the norm" after a period of instability in the middle to late Bronze Age where the landscape was altered leaving the more visible remains of field systems (Champion forthcoming).

A short section of ditch (153) oriented NE-SW and situated in the south-east of the watching brief area (Fig. 2) contained four sherds (110 g) of middle Bronze Age pottery (Fig.9:1). It had moderately sloping sides and a flat base and was probably a boundary ditch, although the absence of related ditches makes it difficult to ascertain a precise function. However, it is tempting to conclude that this ditch represents an early phase of land division, relating to the start of the aforementioned period of agricultural intensification.

4.2.4 Late Middle Bronze Age to Late Bronze Age (1200-700 BC)

The presence of a cremation burial (46) just to the south of ring ditch 90, and a small pit cut into the fill of ring ditch 89 (53) (Fig. 3 and 6) suggest that this site was still considered special in the late middle to late Bronze Age.

Cremation burial 46 contained a large quantity of cremated human remains (1288 g), which included fragments of skull vault, vertebrae, rib and long bone shaft from an adult male. The remains of several vessels of both Bucket urn and bowl form, including sherds of a decorated urn or jar and a possible unusual globular urn, were also recovered (Morris 2006) (Fig. 7). The pit cut was roughly oval in plan, with steep sides and a concave base. It measured 1.2 m in length, 0.83 m in width and 0.23 m in depth.

Pit 53 was cut into the upper fill of ring ditch 89 (Fig. 6). It contained some charcoal and a jar or urn sherd, but no trace of cremated human remains. The pit was again, roughly oval in shape, with steep, concave sides and a concave base. The similarity to pit 46 in form and date suggests that this may have also been a cremation burial. Morris has dated the sherds from both these features to a transitional phase (c. 1200-1000 BC) of the mid-late Bronze Age..

Pit 14, just north west of the ring ditch area (Fig. 2 and 8), recorded during the evaluation, contained a deposit of charcoal, a blade-like flake (Bradley 2001), 83 sherds (650 g) of transitional Mid-Late Bronze Age pottery and 51 sherds (253 g) of late Bronze Age pottery (Morris 2006).

Pit 106 was situated in the small space between ring ditches 90 and 81 (Fig. 6), and contained one sherd of middle Bronze Age pottery (4 g) and one of possible late Bronze Age date (4 g). It was one of a cluster of three features with similar size, form and fills, the other two of which (133 and 135) could not be dated (Fig. 3). The function of these features is not clear as the sherds of pottery are plain body sherds and their forms are not identifiable. However, one of the sherds is made from the same fabric as a middle Bronze Age cooking vessel sherd from the late Bronze Age boundary ditch discussed below.

Analysis of the ceramic assemblage has suggested that the middle and late middle Bronze Age to early late Bronze Age vessels may have been contemporary or very close in date of manufacture. Therefore the placement of cremation burials in the vicinity of the ring ditch monuments (and in the case of 53, inserted into the ditch), may have been associated with the transitional period between the middle and late Bronze Age, rather than a tradition repeated over generations.

The field system

During the late Bronze Age a system of ditches was dug to the south of the ring ditches (Fig. 3 and 6). Ditch 190 was L-shaped, extended for a distance of 30 m, was oriented NE-SW,

and had a maximum surviving width of 0.95 m, and a depth of 0.51 m. The ditch had moderately sloping sides and a flat base. The uppermost surviving fill contained 43 sherds (80 g) of late Bronze Age pottery and a redeposited middle Bronze Age cooking vessel., indicating domestic activity in the area. Ditch 201 was of a similar shape and length but was aligned NW-SE. Ditch 76 was an L-shaped fragment with a similar form, situated approximately 50 m to the north-east of ditch 190, and forms a smaller, mirror image of ditches 190 and 201. Another small section of undated ditch (345) is also probably related to these. Ditches 190 and 201 truncated tree-throw holes (252 and 260 respectively), indicating that the substantial tree clearance in this area pre-dates the late Bronze Age.

The layout of this field system indicates a change in land use for the site. The domestic nature of the land use at this time is further demonstrated by the fact that the sherds recovered from the field boundary ditch came from a cooking vessel (Morris 2006). It seems that the construction of these ditches may have taken place after or around the last phase of silting up of the ring ditches, demonstrated by the two sherds of middle Bronze Age pottery in the upper fills of ditch 156.

This evidence suggests a significant change in land use during the later 2nd millennium BC. The cremation burials, dated to the mid to late Bronze Age, give a date at which the site was still a focus for ideological expression, while the field boundaries represent the expansion of the economic landscape as a result of agricultural intensification. These cremations may have been closing deposits, placed in recognition of this change, which evidence elsewhere has shown involved significant changes in many facets of society, not just in the expression of ideology. Analysis of the pottery assemblage has suggested that at the end of this phase (around 900 BC) there begins a period of about 300 years, when there may have been a hiatus of activity on the site. After this, the nature of activity is somewhat different. Perhaps the site was avoided due to superstition related to the previous ritual activity, until a time when it was either considered safe to use the area or when the original function of the site was forgotten. A change in pottery manufacture also took place at this time, with evidence for a change of source for the clay (Morris 2006). This probably demonstrates that after the hiatus, pottery was still made locally, but that a new clay source was exploited. This may suggest a discontinuity of habitation, and therefore a loss of knowledge of sources in the immediate area. A hiatus on the site of course does not necessarily mean a hiatus of activity in the wider area. However, when combined with the change in clay source, this apparent gap in activity does seem to reflect a more widespread change. It is very likely that this change is connected with the intensification of agricultural activity and a major reorganisation of the landscape.

Early to middle Iron Age (700-400 BC)

Two pits and a gully belonging to the early Iron Age phase were excavated in the watching brief area (Fig. 2). During this phase activity was sparse, with only one pit and a small gully dug on the site. Notably the focus of activity had started to shift to the north-west of the ring ditch area. Gully 11115 was situated roughly in the centre of the site and contained two sherds of early Iron Age pottery. Pit 5, was of unknown shape, due to heavy machine truncation. Its base was flat, and the diameter approximately 0.5 m. The remains of the pit contained 158 sherds (nearly 3000 g) of early and early middle Iron Age pottery, including fragments of an early Iron Age tripartite bowl (an extremely rare find in Kent) and a variety of fragmented jar forms, broken at the neck (Fig. 9:2-4). A minimum of 12 and a maximum of 20 vessels are represented. The absence of finger-tip impressed shouldered jars, is likely to be chronologically significant. If these jars had been included in the assemblage, then the pit could have been dated to the decorated phase of the late Bronze Age. However, the tripartite bowl, in association with the simple plain jars, suggests that this pit, and by fabric association, gully 11115, is best dated to within the end of the early Iron Age through to the early middle Iron Age (Morris 2006).

The recovery of a single sherd of early Iron Age pottery means that the pit is by no means securely dated, and may in fact belong to the same phase as pit 5 and gully 11115, discussed above.

Mid to Late Iron Age (300 BC to AD 43)

Mid to late Iron Age pottery was deposited in a single pit (33) at the northern end of the site, away from the ring ditches (Fig. 2). Pit 33 contained 32 sherds (331 g) of a mid to late Iron Age globular bowl (Fig. 9:5), highly burnished, and decorated with a tooled La Tene style curvilinear design (Morris 2006) as well as a small quantity of daub.

Feature 336, consisted of two pits, the sides of which were vitrified and almost certainly functioned as two shaft furnaces for iron smelting, cut into the fill of a larger pit. The whole feature had been subjected to considerable heat. The fill of this furnace contained 27 sherds of late Iron Age pottery. Two further pits, 37 and 39, have been assigned to this phase. Pit 39 contained a large quantity of run slag, related to smelting or smithing activity, indicating that it too, was dug in connection with metalworking.

4.3 Towns and their rural landscapes: The Late Iron Age to Early Roman landscape

4.3.1 Late Iron Age to Early Roman (100 BC to AD 100)

The evidence for later Iron Age to early Roman activity is demonstrated by the deposition of a single cremation burial in the area of the ring ditches (Fig. 6). The deposition of a cremation burial (70) in the late Iron Age to early Roman period may indicate renewed ritual use of the barrow cemetery (Fig. 6) and may be a good indicator that the barrow mounds were still visible at this time. One possibility is that this act of deposition represents a renewed interest in an ancestral or mythical past at a time when this land was returned to its earlier marginal status. Again, change can be seen to instigate ideological expression. The local downscaling of agricultural practice and/or shift in land use may have caused a desire for a link with the past, continuing the trend of social and economic change being marked by ritual.

Reuse of earlier sites in the Romano-British period has been demonstrated by evidence from the Julliberrie's Grave Long Barrow, also in the Stour Valley, where a hearth, rubbish dump, eight coins and a hoard were recorded (Jessup 1939). At Mill Hill, Deal (Parfitt 1995), 12 Iron Age and Romano-British burials (inhumations and cremations) were associated with a round barrow of which only the ring ditch remained.

There is no later Roman or early/middle Saxon evidence of any kind from the site. This might suggest that the barrows ceased to be prominent landscape features at some point during this extended period. Prehistoric barrows, in Kent and elsewhere, were frequently used as estate boundary markers in the late Saxon period. Perhaps as a consequence of their renewed significance as landmarks, barrows sometimes attracted early Anglo-Saxon burials (eg Saltwood Tunnel, Riddler & Trevarthen 2006). There is no evidence that this was the case at Tutt Hill, although the barrows do lie on a hilltop on marginal land, midway between the villages of Hothfield and Westwell, just 340 m to the north of the present parish boundary. Allowing for some boundary movement since the late Saxon or early medieval period, it is not impossible that the barrows were once used as a landmark for this parish boundary.

4.4 The medieval and recent Landscape - c AD 1000 to the modern day

4.4.1 Medieval (AD 1000-1700)

Pit 35 contained 18 pottery sherds (28 g) including crucible fragments (Keys 2006), and 26 fragments of copper alloy objects. These included fragments of two small rectangular rivet plates, into which small holes have been punched, a fragment of sheet copper, a short rectangular sectioned rod, and a domed rivet or nail head. In the assessment, the pottery recovered from this pit was described as late Iron Age or Saxon in date. To clarify this

uncertainty a radiocarbon date of cal AD1000-1170 (NZA - 21142; see Table 3) was obtained on *maloideae* charcoal from a dump of burnt material in this pit. This feature suggests industrial activity, probably connected to the early phases of activity at the Parsonage Farm manorial settlement to the south east.

Other evidence for activity during this phase came from a localised scatter of medieval pottery situated to the north west of the site.

4.5 Unphased features

Curvilinear gully and miscellaneous ditches

In the far west of the site (Fig. 3), a small group of features was identified, none of which contained any ceramic dating evidence. Gully 236 had been severely truncated, and may have once existed as a complete ring ditch, similar in size to ring ditch 81 or as a ring gully for a roundhouse. However, the lack of datable material from the fill, and the isolated nature of the feature means that its dating is uncertain. Just to the south, a short section of ditch (286) was oriented ENE-WSW. It had a U-shaped profile and may have been part of a field boundary. It was on a slightly different alignment to the late Bronze Age ditches, so cannot be reliably associated with these features. An even shorter section of ditch was found just to the north-west of 286, on a NNW-SSE alignment. The ditch had a V-shaped profile. It is not known whether these ditch segments originally connected.

Undated Cremation Burials

Several cremation burials remain undated (Fig. 3). Although they are most similar in form to the middle Bronze Age cremation burials, this is not reason enough to assign them to that phase. Spatial analysis has not helped in assigning these features to phases as they are fairly isolated, and apart from being in the general vicinity of the ring ditches, have no relationship with the other cremation burials.

Cremation burial 44 was located just to the east of ring ditch 81 (Fig. 2). The fill contained 282 g of cremated human bone fragments, including one cranial vault fragment. Included among the pyre debris were four small fragments of animal bone. These, along with turquoise staining on the cranial fragment suggest the inclusion of pyre goods in the cremation.

Possible cremation burial 269 was situated approximately 20 m south west of ring ditch 90 (Fig. 3). It was very irregular in form, and contained only 5 g of cremated human bone.

Pits

Two undated sub-rectangular pits (114 and 126) with steep sides and flat bases were situated very close to the ring ditches, and were very similar to middle Bronze Age sub-rectangular pits 117, 142 and 217, but slightly smaller. A group of three pits (342, 348 and 350) was found to the south of ring ditch 90, near ditch 76. Another two (358 and 366) were situated further south still. Pit 259 was very deep (1.45 m) and situated just to the north of curvilinear gully 236, but it is not known whether it is related to the gully or not. Pit 207, situated near the centre of the site showed evidence of burning *in situ*, but contained no dateable material.

5 GUIDE TO THE ARCHIVE

The following tables include details of the archive components (Tables 4 and 5).

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 Tutt Hill 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	TUT_ISR	Brady K (OWA JV)
Integrated site report figures	TUT_ISR	Brady K (OWA JV)
Site research database		
Site database	TUT	Brady K (OWA JV)
CAD/ GIS drawings		
CAD drawing	TUT_CAD	Bradley M and Brady K (OWA JV)
ESRI ArcMAP GIS project	TUT_GIS	Bradley M and Brady K (OWA JV)
GIS limit of excavation shapefile	TUT_GIS	Bradley M and Brady K (OWA JV)
GIS feature plan	TUT_GIS	Bradley M and Brady K (OWA JV)
Specialist research reports		
Ceramics (early prehistoric)	CER_EPR_TUT	Edwards E (OWA JV)
Ceramics (later prehistoric)	CER_LPR_TUT	Morris EL (Southampton)
Ceramics (late Iron Age and Roman)	CER_ROM_TLG	Brown L (OWA JV)
Small finds	SFS_TUT	Keys L (Freelance)
Charred plant remains	ENV_Charredplants_TUT	Giorgi J (MoLSS)
Human remains	HUM_TUT	Witkin A (OWA JV)
Radiocarbon dating	DAT_TUT	Allen MJ (OWA JV) and Brady K (OWA JV)
Specialist datasets		
Ceramics (early prehistoric)	CER_EPR_TUT	Edwards E (OWA JV)
Ceramics (later prehistoric)	CER_LPR_TUT	Morris EL (Southampton)
Ceramics (late Iron Age and Roman)	CER_ROM_TLG	Brown L (OWA JV)
Small finds	SFS_TUT	Keys L (Freelance)
Charred plant remains	ENV_Charredplants_TUT	Giorgi J (MoLSS)
Human remains	HUM_TUT	Witkin A (OWA JV)
Post-excavation assessment		
Post-excavation Assessment	TUT_PXA	OWA JV

Table 5: Archive index table

Item	Number of items or boxes or other	Number of fragments /litres
Context records	363	-
A1 plans	13	-
A4 plans	37	-
A4 sections	120	-
Films (monochrome)	-	-
Films (colour)	-	-
Flint	4 size 3	1036
Pottery	2 size 1 5 size 2	1507
Fired Clay	See Misc	511
CBM	See Misc	4
Metalwork	1 size 4	27
Slag	1 size 3	3145 g
Animal Bone	See Misc.	1
Human bone	1 size 2	14
Misc	1 size 3	-
Soil samples (bulk)	-	2.075*

* flot size

Key to box sizes
Cardboard boxes

Size 1 = Bulk box	391mm x 238mm x 210mm	0.02 m^3
Size 2 = Half box	391mm x 238mm x 100mm	0.01 m^3
Size 3 = Quarter box	386mm x 108mm x 100mm	0.004 m^3
Size 4 = Eighth box	213 mm x 102 mm x 80 mm	0.002 m

Plastic boxes
Standard box: 460mm x 180mmx130mm
Tub: 310mm x 310mm x 160mm

6 CATALOGUE OF ILLUSTRATED FINDS

Figure 5

1 Bucket urn; R1, B1; GF1; fingertip impressed rim; single horizontal row of pre-firing perforations 24mm below rim at intervals of 24-36mm; pinched and fingertip impressed cordon at widest point of girth, 135mm below rim; two rows of possible twisted cord marks above cordon; PRNs 1000-1004, 1053 & 1054, context 300, cremation pit 301

Figure 7

1. Decorated sherd; GF1; finger-smeared cordon at widest point of girth; may be same vessel as PRN 1033 (Fig. 00, 5 above); PRN 1030, context 47, cremation pit 46
2. Bucket urn; R1; GF1; neutral profile; fingertip impressed rim; PRN 1033, context 49, cremation pit 46
3. Slightly round-profile bowl with upright rim and flat base; R2, B1; G2; burnished on both surfaces; abraded on interior but not on base interior; PRNs 1147, 1148 & 1149, context 47 and 1150, context 50, cremation pit 46

Figure 8

1 . Small bowl or cup; R4; G1; burnished on both surfaces; PRNs 1120-1122, context 13, pit 14
2 . Base; B2; FG1; wiped on exterior; PRN 1118, context 13, pit 14
3. Neutral-profile jar/urn; R1; GF1; PRN 1119, context 13, pit 14
4. Restricted or slightly necked, neutral vessel; R7; GF3; finger-nail impressions on rim; wiped on exterior; burnt residue on interior; PRNs1144-1145, context 16, pit 14
5. Neutral-profile jar/urn; R1; GF2; fingertip impressions on rim interior bevel; pre-firing perforation below rim; wiped exterior; unusual conditions possibly due to refired /reburnt vessel or unusual original fabric; PRNs 1123-1129, 1131-2, context 13, PRN 1142, context 15, & PRN 1143, context 16, pit 14

Figure 9

1. Decorated body sherds; F5; horizontal and diagonal, parallel incised lines on upper shoulder of globular urn; burnished on both surfaces; PRN 1042, context 152, ditch 153
2. Tripartite bowl; R10; QF1; burnished on both surfaces; parallel incised lines forming cordon on neck; PRNs 1008, context 8 and 1010 & 1014, context 7, pit 5
3. Slightly Round-shouldered jar/bowl; R11; FQ2; burnt residue on interior of rim; PRN 1075, context 7, pit 5
4. Slack-profile jar; R6; QF1; PRNs 1092-1094, context 9, pit 5
5. Decorated bowl; B2; Q1; burnished on both surfaces; flared base with shallow recess; curvilinear tooled lines and impressed dimple on body of vessel; PRNs 1005-1007, context 34, pit 33

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