

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

**The prehistoric and post-medieval landscapes
at Cobham Golf Course, Cobham, Kent**

by Simon Davis

edited by Alistair Barclay

CTRL Integrated Site Report Series

2006

©London and Continental Railways

All rights including translation, reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without the prior written permission of London and Continental Railways.

LIST OF CONTENTS

1	INTRODUCTION	1
1.1	PROJECT BACKGROUND	1
1.2	GEOLOGY AND TOPOGRAPHY.....	2
1.3	ARCHAEOLOGICAL AND HISTORICAL BACKGROUND	2
2	AIMS.....	3
2.1	RESEARCH OBJECTIVES.....	3
3	METHODS.....	4
4	RESULTS.....	5
4.1	PHASE SUMMARY	5
4.2	HUNTER–GATHERERS AND EARLY AGRICULTURALISTS	6
4.3	MIDDLE AND LATE BRONZE AGE (1500-700 BC)	9
4.4	POST-MEDIEVAL (AD 1700-AD 1900).....	16
4.5	UNPHASED FEATURES	18
5	GUIDE TO ARCHIVE.....	19
6	CATALOGUE OF ILLUSTRATED FINDS.....	22
7	BIBLIOGRAPHY.....	24

LIST OF FIGURES

- Fig: 1 Location of the Cobham Golf Course archaeological sites within the CTRL route
- Fig: 2 Area of archaeological investigation and location of the detailed figures
- Fig: 3 The Bronze Age activity at Cobham Golf Course
- Fig: 4 Profiles of ring ditch
- Fig: 5 Selected flintwork: 1, Mesolithic blade; 2, piecer; 3, denticulate; 4 and 5, scrapers.
- Fig: 6 Selected later prehistoric pottery: 1, shoulder sherd from 191; 2, Bucket Urn sherd from ditch 197; 3, Bucket Urn sherd from ditch 191; 4, base ditch 133; 5-9, various vessels from pit 137; 10, jar from pit 161.
- Fig: 7 Later Bronze Age fired clay: 1-5, briquetage; 6, cylindrical loomweight, and 7-8, perforated slabs.
- Fig: 8 An 18th century park pale or ha-ha (group 41501)
- Fig: 9 Section through the 18th century park pale or ha-ha
- Fig: 10 Brewers Gate Lodge
- Fig: 11 St Thomas' well

LIST OF PLATES

- Plate 1 The ring ditch under excavation

LIST OF TABLES

- Table 1: Fieldwork events covered by this report
- Table 2: Fieldwork events not integrated in detail in this report
- Table 3: Radiocarbon dates
- Table 4 Digital archives
- Table 5 Artefactual and environmental archive index
- Table 6 Fieldwork and research paper archive

ABSTRACT

The Museum of London Archaeology Service (MoLAS) undertook a watching brief, and more detailed excavation at a number of sites of archaeological interest, on the section of the Channel Tunnel Rail Link (CTRL) between Scalers Hill and the A228, south of Gravesend, Gravesham District, Kent. The principal point of archaeological intervention was at Cobham Golf Course and this site name has been adopted to cover all of this section (Zone 5) of the route.

The several phases of prehistoric activity recorded at Cobham Golf Course will directly contribute to the further understanding of the Bronze Age archaeology of Kent. Residual flintwork and pottery indicate some Mesolithic and Neolithic settlement in the immediate area. However, most of the excavated evidence can be assigned to the Bronze Age (2150-700 cal BC). This activity consists of a ring ditch, perhaps belonging to an early Bronze Age round barrow, land divisions, a track or hollow way, and occupation deposits spanning the mid to late Bronze Age. The precise dating of the putative barrow remains uncertain but sherds of Collar Urn and Food Vessels from the ditch fill together with flintwork indicate that it may have been constructed and used in the early Bronze Age (2150-1600 cal BC), while late Bronze Age material from the upper ditch fill suggest some reuse or concern with appropriating an earlier monument. An east–west aligned ditch (211) of middle Bronze Age date and a late Bronze Age hollow way appear to mark the northern boundary of a late Bronze Age settlement, dating perhaps to the 10th-9th centuries cal BC based on the style of pottery and a single radiocarbon determination. An area of occupation comprising a concentration of pits and postholes was divided by a north-south aligned ditch (133) of contemporaneous date. These features produced typical assemblages of broken pottery, perforated clay slabs, loomweights, worked and burnt flint, and charred plant remains. Animal bone was not preserved at this site and was therefore notably absent from these occupation deposits. The presence of briquetage within these features is less typical and its character is of exceptional interest within the context of the overall CTRL project. Only at Cobham does a high proportion of the briquetage have ‘salt skin’ present, indicating that this was either a site of salt production or was in close proximity to such a site.

A number of post-medieval features dating to the late 18th and early 19th centuries were also recorded. The remains included an 18th-century well located at the western end of the zone, which has since been preserved *in situ*, a series of late 18th-century features associated with the landscaping of the Cobham Park Estate by Humphrey Repton and the brick foundation walls of a late 18th-century gatehouse to the estate.

RÉSUMÉ

Le Museum of London Archaeology Service (MoLAS) entrepris une surveillance archéologique ainsi que des fouilles plus détaillées sur un nombre de sites d'intérêt archéologique, sur la section de la ligne ferroviaire du tunnel sous la Manche (CTRL) entre Scalers Hill et la route A228 au sud de Gravesend, dans le district de Gravesham, dans le Kent. L'endroit principal d'intervention archéologique fut à Cobham Golf Course, dont le nom a été adopté pour désigner cette section (Zone 5) du tracé dans son entier.

Les phases diverses d'occupation de l'âge du Bronze enregistrées à Cobham Golf Course contribueront directement à une plus grande compréhension de l'âge du Bronze dans le Kent. Les preuves d'utilisation rituelle du paysage au début de l'âge du Bronze furent représentées sous la forme d'un fossé pseudo-annulaire (*ring ditch*), qui semble avoir cessé d'être utilisé vers le milieu ou la fin de l'âge du Bronze. Un fossé de délimitation orienté d'est en ouest (211) daté du milieu de l'âge du Bronze marquait la limite septentrionale du site. Ce fossé semble être demeuré un élément du paysage pendant un certain temps compte tenu que les vestiges érodés d'un chemin (165) du milieu de l'âge du Bronze tardif semble l'avoir respecté. Un fossé orienté du nord au sud (133) fut également enregistré sur le site et fut daté de la fin de l'âge du Bronze. Des preuves supplémentaires pour un site d'habitation de la fin de l'âge du Bronze comprenaient une concentration de fosses, de trous de poteaux et de fossés. Du mobilier diagnostique fut mis au jour, y compris des dalles perforées en argile, des fusaïolles et des silex brûlés, suggérant une activité domestique. La découverte d'un ensemble significatif de briquetage, provenant d'un certain nombre d'unités stratigraphiques de l'âge du Bronze, implique que le site fut associé avec la production de sel vers la fin de l'âge du Bronze.

Un certain nombre de structures modernes datant de la fin du XVIIIème siècle et du début du XIXème siècles furent également enregistrées. Les vestiges incluent un puits du XVIIIème siècle situé vers l'extrémité ouest de la zone, qui a été depuis préservé sur place, ainsi qu'une série de structures du XVIIIème siècle, associées avec les aménagements paysagers du parc du domaine de Cobham réalisés par Humphrey Repton. Les fondations en briques des murs d'une maison de gardien au domaine de la fin du XVIIIème siècle furent également retrouvées.

ZUSAMMENFASSUNG

Der »Museum of London Archaeology Service« (MoLAS) führte an mehreren archäologisch interessanten Stätten entlang des Abschnitts zwischen Scalers Hill und der A228 südlich von Gravesend im Kreis Gravesham, Kent, am Channel Tunnel Rail Link (CTRL) eine Baustellenbeobachtung und vertiefende Grabung durch. Die archäologische Untersuchung konzentrierte sich auf den Golfplatz von Cobham, nach dem der gesamte Routenabschnitt (Zone 5) benannt wurde.

Auf dem Golfplatz von Cobham waren unterschiedliche Phasen bronzezeitlicher Besiedlung zu erkennen, die unmittelbar zum besseren Verständnis der Bronzezeit in Kent beitragen. Es gab Hinweise auf eine kultische Landschaftsnutzung in der frühen Bronzezeit in Form eines großen, an einer Seite offenen Kreisgrabens, der offenbar in der mittleren bis späten Bronzezeit aufgegeben wurde. Ein in Ost-West-Richtung verlaufender Grenzgraben (211) aus der mittleren Bronzezeit markierte die Nordgrenze der Stätte. Der Graben war offenbar über längere Zeit ein wichtiges Landschaftselement – die erodierten Reste eines Hohlwegs aus der Spätphase der mittleren Bronzezeit (165) ließen ihn unberührt. Ein weiterer, in Nord-Süd-Richtung verlaufender Graben (133) datiert in die späte Bronzezeit. Weitere Belege für eine spätbronzezeitliche Besiedlung ergaben sich durch eine Ansammlung von Gruben, Pfostenlöchern und Gräben. Zu den charakteristischen Funden, die auf eine Siedlungstätigkeit hinwiesen, zählten mit Löchern versehene Lehmplatten, Webgewichte und gebrannter Flint. Mehrere spätbronzezeitliche Fundverbände enthielten signifikante Briquetagen, die vermuten lassen, dass an der Stätte in der späten Bronzezeit Salz gewonnen wurde.

Außerdem waren etliche nachmittelalterliche Strukturen aus dem späten 18. und frühen 19. Jh. zu verzeichnen, etwa ein Brunnen aus dem 18. Jh. am Westrand des Gebiets, der seitdem in situ konserviert wurde, eine Reihe von Merkmalen aus dem späten 18. Jh., die mit der Gestaltung des Cobham Park Estate durch Humphrey Repton in Verbindung standen, und die aus dem späten 18. Jh. stammenden Ziegelfundamente eines Pförtnerhauses am Rand des Geländes.

ABSTRACTO

El Museum of London Archaeology Service (MoLAS) realizó un seguimiento de obra y excavación en detalle en varios yacimientos de interés arqueológico en la sección del Channel Tunnel Rail Link (CTRL) entre Scalers Hill y la A228, al sur de Gravesend, distrito de Gravesham en Kent. El principal punto de intervención arqueológica fue en el Campo de Golf de Cobham y se ha adoptado este nombre para cubrir todo este tramo (Zona 50) de la ruta.

Varias fases de la Edad del Bronce documentadas en el Campo de Golf de Cobham contribuirán directamente al futuro conocimiento de la Edad del Bronce en Kent. Una zanja anular evidencia uso ritual del paisaje en la Edad del Bronce Inicial y parece haber caído en desuso en el Bronce Medio y Tardío. Una zanja limítrofe alineada este-oeste, datada en la edad del Bronce Medio (211), marcaba el límite norte del yacimiento. Esta zanja parece haber permanecido como estructura en el paisaje durante algún tiempo ya que los restos erosionados de un paso del Bronce Final (165) indican que la respetaron. Una zanja alineada norte-sur (133) también se documentó en el yacimiento, datando del Bronce Final. Entre las evidencias de asentamiento en el Bronce Final se incluían una concentración de hoyos, agujeros de poste y zanjas. Se hallaron materiales-tipo entre los que se incluían losas de arcilla perforadas, pesas de telar y sílex quemado, sugiriendo una actividad doméstica.

Una concentración representativa de briquetage se halló en varios contextos del Bronce Final indicando que el yacimiento estaba asociado a la producción de sal a finales de la Edad del Bronce.

También se registraron varias estructuras post-medievales datadas hacia finales del siglo XVIII y principios del XIX. Entre los hallazgos se incluían un pozo del siglo XVIII situado al oeste de la zona y conservado in situ desde entonces, varias estructuras de finales del siglo XVIII asociadas a los diseños de Humphrey Repton en la propiedad de Cobham Park y muros de ladrillo fundacionales de la entrada a la propiedad de finales del siglo XVIII.

ACKNOWLEDGEMENTS

The investigations at Northumberland Bottom and other sites in CTRL Area 330 (Zone 3) were undertaken principally by staff from the Museum of London Archaeology Service (MoLAS). 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.

Management of the fieldwork and post-excavation assessment was undertaken by Niall Roycroft and Gordon Malcolm. Andrew Westman supervised the excavations. Other members of the 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: Emily Edwards (early prehistoric pottery), Elaine Morris (later prehistoric pottery), Jane Corcoran (geoarchaeology), Jennifer Kitch (faunal remains), Jackie Keily (ceramic and stone small finds), Rebecca Devaney (flint), Ruth Shaffrey (worked stone), Anne Davis (botanical remains) and Kate Brady (documentary sources). Sophie Lamb produced the figures with support from Joseph Severn and Mark Burch. The abstract was translated by Mercedes Planas (Spanish), Gerlinde Krug (German) and Valerie Diez (French).

Julian Hill undertook preliminary editorial work on this report. The editor was Alistair Barclay (early prehistoric team leader).

The author is also grateful to those who contributed to the CTRL post-excavation project: Leigh Allen (finds manager), Niall Donald (data manager), Rob Goller and Anne Stewardson (senior illustrators) and Elizabeth Stafford (environmental manager). The project senior editor was Julie Gardiner. Gordon Malcolm managed the MoLAS report programme and the OWA senior project managers were Stuart Foreman and Valerie Diez.

Thanks are also extended to Helen Glass, Steve Haynes, Jay Carver and Mark Turner from RLE, to John Williams, Lis Dyson and Simon Mason of Kent County Council, and to Peter Kendall and Dominique de Moulins of English Heritage.

1 INTRODUCTION

1.1 Project Background

The sites included within this report were identified 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 Limited (LCR) 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 Museum of London Archaeology Service (MoLAS) was commissioned by Union Railways (South) Limited (URS), a subsidiary of LCR, to undertake investigations and a watching brief on construction activities between Scalers Hill, south of Gravesend, to Cobham Golf Course, west of Rochester. This stretch of the route, termed Contract Area 330, Archaeological Zone 5, lies between CTRL chainage 44+300 and 49+800 and covers a length of 4.5 km (Fig. 1). For the purposes of this report, Zone 5 is given the principal site name Cobham Golf Course.

Archaeological works comprised five small areas of excavation straddling the line of Watling Street, spaced at wide intervals along a 1 km length of the road (ARC WS 98), a small area excavated on the site of a gate lodge at Brewers Gate, Cobham Park (ARC BG 98); a large area 320 m x 35 m was excavated at Cobham Golf Course (ARC CGC 98) (Table 1, Fig. 2). The archaeological excavations were followed by a watching brief on construction works (ARC 330 98) between December 1998 and May 2000. The largest part of these construction works consisted of the construction of a ‘cut-and-cover’ tunnel through Scalers Hill, and the excavation of deep cuttings through the eastern, wooded area. The area between Cobham Golf Course and Knight’s Place Farm consisted of alternating cuttings and embankments, which allowed for the deeper deposits near to the valley floors to be preserved *in situ*.

Table 1: Fieldwork events covered by this report

Event name	Event code	Type	Contractor	Dates
Cobham Golf Course	ARC CGC 98	Excavation	MoLAS	1998
Brewer’s Gate	ARC BG 98	Excavation	MoLAS	1998
Watling Street	ARC WS 98	Excavation	MoLAS	1998
Area 330 Watching Brief	ARC 330 98 (indexed as ARC 330 98D in datasets)	Watching brief during construction works	MoLAS	1998 to 2000

1.2 Geology and Topography

The solid geology of this stretch of the CTRL route consists of the Upper Chalk of the North Downs overlaid locally by the silty sands and sandy clays of the Woolwich, Blackheath and/or Thanet Beds. Where exposed, the chalk is riddled with solution features and sealed by a clay and flint Head deposit. The western area incorporates fossiliferous, Oldhaven beds, deposits of lignite and raised beaches of rounded gravels. Scalers Hill incorporates a Site of Special Scientific Interest (URS 2001).

The topography consists of undulating land on the northern dip-slope of the North Downs (Fig. 1). The highest points are Scalers Hill to the extreme west, at 112 m OD, and Knight's Place Farm, above 100 m OD, to the east. These two points are separated by two parts of a broad, dry valley. From the high point near to Knight's Place Farm the ground gradually dips to the south-east to a minimum height of 55 m OD, approaching the River Medway, and it is crossed by a narrow, steep-sided dry valley running eastwards, at a minimum height of 45 m OD. In general, land-use corresponds with the type of topography and soil cover with pasture and fields in the dry valleys on soils derived from the eroded Thanet Beds, and coppiced or mature woodland covering the areas of higher ground that are capped with the Oldhaven, Thanet Beds and Glacial Head. Watling Street, and its successors, the A2 and M2 run through Zone 5 (Cobham Golf Course).

1.3 Archaeological and Historical Background

A preliminary desktop assessment, conducted for Union Railways Limited (URL) between 1990 and 1994 (URS 1994, vol 1, 107-13), identified several sites in Zone 5 as having possible archaeological interest. The desktop assessment was supplemented by an archaeological evaluation at Cobham Golf Course in 1995 (URS 1997) and a limited geophysical prospection (URS 1996, vol 2, plans 2.1-2). A magnetometer survey at Cobham Golf Course (ARC CGC 97) identified a small area in the east of the site as causing weak magnetic activity, with possible archaeological significance. On the basis of this information archaeological evaluation of selected sites was undertaken in 1997-8 (URL 1997). From west to east the archaeological evaluations were: ARC SCC 98, ARC CGC 97, ARC CPK 97, ARC KPF 98, ARC KCS 98 and ARC GWE 98. Prehistoric (URS, 1997), Roman and medieval or post-medieval objects and features were recorded.

A survey of Second World War standing structures in Zone 5, associated with the Ashenbrook Army Camp (which is itself located to the west at Northumberland Bottom in Zones 3 and 4) was also made (ARC AWC 98). This site is not included in this report.

Table 2: Fieldwork events not integrated in detail in this report

Event name	Event code	Contractor	Dates	Type
Cobham Golf Course	ARC CGC 97	OAU	1997	Evaluation
Cobham Park	ARC CPK 97	MoLAS	1997	Evaluation
Knights Place Farm	ARC KPF 98	MoLAS	1998	Evaluation
Knights Place Construction Site	ARC KCS 98	MoLAS	1998	Evaluation
Great Wood	ARC GWE 98	MoLAS	1998	Evaluation
Scalers Hill to Cobham	ARC SCC 98	MoLAS	1998	Evaluation
Ashenbank Wood Army Camp	ARC AWC 98	MoLAS	1998	Standing building survey

2 AIMS

2.1 Research Objectives

The aim of this report is to present a synthetic account of the archaeological sites within the Cobham Golf Course (Zone 5) at an interpretative level that can be assimilated into complementary studies. This report is supported by the fieldwork and research archive which is available as a web-based digital archive (ADS 2006). In support of the CTRL Project Monograph (Booth *et al.* 2007), the Cobham Golf Course 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).

Analysis of the stratigraphic archive and finds assemblages for the Cobham Golf Course sites has resulted in the development of a series of updated research aims, (URS 2001, 32), it is intended that this report will:

- further interpret the spatial organisation of the landscape in terms of settlement location in relation to fields, pasture, woodland, enclosed areas and ways of moving between these.
- contribute towards research topics regarding the nature of the organisation of settlements.
- contribute towards what is currently known about the socio-economic landscape of later prehistoric period (2000–100 BC).
- contribute towards the interpretation of the ritual and ceremonial use of the landscape in the area.

3 METHODS

The fieldwork consisted of fieldwalking, geophysical prospection, archaeological trial trench evaluations, metal detector survey, bulk excavation, archaeological excavation and recording, watching brief monitoring and standing building survey. The methods of investigation were set out in a series of Written Schemes of Investigation, prepared by RLE, detailing the scope and methods of fieldwork and agreed with English Heritage and Kent County Council (KCC) on behalf of the local authority.

Topsoil, and where appropriate subsoil, were removed by tracked 360 machine excavators using toothless buckets. After clearance of overlying soil all exposed features were partly or wholly excavated by hand and plotted using a pen-computer or planned on pre-printed gridded permatrace and related to the site grid. Individual contexts were recorded on pro-forma context sheets. Sections were drawn on pre-printed, gridded sheets of draughting film and the section positions accurately plotted using a total station.

A photographic record was kept of individual archaeological features and sections, appropriate groups of features and structures. Finds were bagged and retained and environmental samples, both bulk and column, were taken where necessary from features and deposits.

An assessment report (URS 2001) was produced by MoLAS in accordance with the specification produced by RLE (URS 2000). All method statements followed national guidelines and were agreed in consultation with English Heritage and KCC. Post-excavation analysis and the production of the report was carried out by MoLAS on behalf of Oxford Wessex Archaeology Joint Venture (OWAJV) in response to the updated project design for archaeological analysis and publication (URS 2003a). The specialist work and reporting was carried out in accordance with method statements prepared by OWAJV (URS 2003b). All project design documents are available as part of the digital archive.

4 RESULTS

4.1 Phase summary

During assessment and further analysis of the fieldwork (URS 2001), several phases of activity have been identified at the sites covered by this report. As a result of intense modern agricultural techniques and the construction of the Cobham Golf Course itself, a high level of horizontal truncation was observed and virtually no inter-cutting archaeological features were recorded during the fieldwork. As a result, the dating of all features relied almost entirely on the chronological framework established by the pottery assemblages. Where relevant this information was supported by other diagnostic artefacts such as the flint assemblage, and to a lesser extent fired clay objects (weights and plaques). A limited programme of radiocarbon dating was undertaken (see results in Table 3).

- Mesolithic (9000 BC - 4000 BC) and early–middle Neolithic (4000–3000 BC): a possible Mesolithic blade was recovered from the topsoil near Great Wood towards the east of the watching brief investigation area ARC 330 98D. Four sherds of early or middle Neolithic pottery were recovered as residual finds from the upper fill of the Bronze Age ring ditch (group 41502) and a further three sherds from a middle Bronze Age ditch (group 41503).
- Early Bronze Age (c 2,000–1500 BC): probably represented by a penannular ring ditch (group 41502) of a putative barrow, although the dating of this monument is uncertain. Pottery and flintwork dating to the early Bronze Age was recovered from the fills of the ring ditch.
- Middle Bronze Age (c 1500 –1100 BC): a middle Bronze Age boundary ditch (group 41503) defined by a number of smaller sub-circular cut features, was also recorded at CGC 98. It contained sherds of middle Bronze Age Deverel-Rimbury pottery, worked flint and charred plant remains. A single pit was thought to belong to this phase.
- Late Bronze Age (c 1100–700 BC): numerous scattered pits, postholes and ditches, and a hollow way at CGC 98 (groups 41506 and 41507), containing pottery, struck flint, and materials connected with weaving, cooking and the production of salt, defined the northern edge of a settlement. The features appear to respect the boundary created by the middle Bronze Age ditch (group 41503) to the north. Numerous sherds of Late Bronze Age pottery and contemporaneous flintwork were recovered from the upper fills of the ring ditch suggesting that the barrow had been a focus for subsequent activity.
- Post-medieval and modern (16th to 20th centuries): no archaeological evidence dating to the periods between the late Bronze Age and the post-medieval was recorded at CGC 98. At the extreme western end of the Cobham Golf Course Zone (ARC 330 98) evidence for

activity in the 18th century was represented by St Thomas' Well. The well is adjacent to the southern side of Old Watling Street and is believed (due to its proximity to the road) to be medieval in origin. A series of ha-has or park pales were recorded to the east of the well (ARC WS 98). The features are associated with the landscaping of Cobham Park by Henry Repton in the late 18th century. The remains of a gatehouse and entrance to Cobham Park from Watling Street (ARC BG 98) were also recorded. Watling Street continued in existence, with successive improvements being made from early in the 19th century. Evidence to support these improvements was represented by the recovery of a 19th-century boundary stone (ARC WS 98). The stone was set up in 1808 to demarcate responsibility for maintaining the Dover Road between the adjacent parishes of Cobham and Shorne. This stone, recently damaged, was recovered during the works and conserved.

Table 3: Radiocarbon dates

Feature	context	sample	context details	Material	result no.	δC^{13}	result BP	cal
ring ditch 61	229	21	dump in ring ditch	<i>Corylus/Alnus</i> charcoal	NZA-20963	-26.25	914±30	AD 1030-1210
pit 137	136	-	deliberate deposit	PRN 1022	NZA-21143	-25.64	2741±30	980-820 BC
ditch 197	196	-	primary fill	PRN 1094	NZA-23006	-28.7	3191±40	1530-1390 BC

4.2 Hunter–Gatherers and early Agriculturalists

4.2.1 Mesolithic (6500–4000 BC), Earlier Neolithic (4000–3000 BC) and early Bronze Age (2400–1500 BC).

A small assemblage of redeposited worked flint was recovered during the fieldwork. Two blades and two blade-like removal flakes were recovered from colluvial deposits (group 41515). The only other material in this context (3002) is a flake from an opposed platform core which, combined with the blade material suggests a Mesolithic or early Neolithic date. The remainder of the assemblage from undated, unstratified and modern contexts also includes one chip, seven pieces of irregular waste and one rejuvenation flake suggesting the presence of knapping. A blade from an opposed platform core (Fig. 5:1) is of particular note and is likely to be Mesolithic or early Neolithic. Although this piece came from unstratified topsoil (context 3001 – see Fig. 2 for location), it is indicative of early prehistoric activity in the vicinity. Two abraded sherds of early or middle Neolithic flint-tempered pottery were found as residual items in the uppermost fills of the early Bronze Age ring ditch and provide some further evidence for early to middle Neolithic activity nearby.

The Cobham Golf Course 'Round Barrow'

The first significant phase of activity dates to early Bronze Age and is represented by the remains of a putative round barrow. The only surviving remains was a single penannular ring ditch (group 41502) at ARC CGC 98 (Figs 3-4 and Pl. 1). The barrow had been truncated by 19th-century agricultural activity and landscaping associated with construction of Cobham Golf Course. The ditch (230) was penannular with a 2 m wide south facing causeway, approximately 22 m in diameter, and survived in places to a depth of at least 0.60 m. It had generally steep sides leading to a broadly U-shaped profile; in places its profile was irregular. With the exception of section 1, the ditch had two fills (Fig. 4).

Two shallow features (247 and 245- interpreted as natural) were recorded within the ditch interior on the truncated surface inside the ring ditch (Fig. 3). No direct evidence for burial or ritual deposition was recovered during the excavation of the ring ditch, although the fragmentary remains of three early Bronze Age urns (43 sherds, 130 g) were recovered from fill 223). A charcoal sample retained from the ring ditch was unsuitable for accurate radiocarbon dating. Secondary fill 242 produced 5 sherds of early Bronze Age pottery, and overlying tertiary fill 223 a further 36 sherds. Worked flint was recovered from the upper (221, 223, 242, and 233) and lower ditch fills (227 and 248). The lower ditch fills produced 26 flints including a small proportion of retouched tools (scrapers and a denticulate), while the upper fills contained a higher proportion of flints (132), most flakes and a similar range of retouched tools (Devaney 2006) (Fig. 5: 2-4).

Nature of the early Bronze Age activity: Discussion

The interpretation of the penannular ring ditch at Cobham Golf Course (ARC CGC 98) is hindered by the degree of horizontal truncation evident at the site and there is little evidence to suggest the character of any earthworks. Several interpretations are possible. The ditch could belong to an embanked enclosure of a type associated with either a henge or a cremation cemetery or, alternatively, the ditch could belong to a round barrow. Currently, henge monuments are poorly understood in Kent and neighbouring Sussex (see Garwood 2003, 56-7; Barber 1997, 84; Parfitt and Needham 2005, 8) and further interpretation of the feature may be enhanced by forthcoming research. For example, recent excavations at Ringlemere Farm near Sandwich in East Kent have recorded evidence suggesting that a possible class I henge monument was re-used as a barrow in the early Bronze Age (Parfitt and Needham 2004), although the excavators state that the evidence for this interpretation is at present inconclusive (Parfitt and Needham 2005). Henge monuments can be relatively clean of artefactual material. Certainly the single entrance and the slight suggestion of an inner earthwork could fit with this interpretation. Close examination of the Cobham ring ditch fills

during excavation showed that a large amount of material had eroded into the ditch from its internal flank (as if from a mound) supporting the suggestion that the feature represents the remains of a barrow. Monolith samples taken from selected deposits within the feature indicate that the lowest unit of fill accumulated soon after the ditch had been constructed and probably derived from trampling during construction of the ditch and from weathering/erosion of the Thanet Beds into which the ditch was cut (Corcoran 2001, 74). The upper fill of the ditch appears to have accumulated more gradually, presumably after vegetation growth had stabilised the feature. A single radiocarbon date was obtained on a charcoal dump recovered from fill 229 (Table 3: NZA-20963). This was expected to be contemporaneous with the Bronze Age flintwork but turned out to be Saxo-Norman indicating either that the material was intrusive or that material in the upper fill had been redeposited.

The evidence that the ditch belongs to a round barrow is equally plausible and strengthened by the finding of a number of Collared Urn and Food Vessel sherds from three vessels within the upper ditch fills. These sherds could derive from disturbed secondary cremation deposits or votive offerings, perhaps placed around the edge of a relatively large central mound or, alternatively, they could derive from activities (feasting) associated with funerary or ritual activity. Equally likely is that they predate the ring ditch and belong to an occupation spread of pottery and flintwork. It is not unusual for barrow ditches to have one or more causeways (see examples from Barrow Hills, Radley, Oxon- Barclay and Halpin 1999) and at a number of examples are known from Kent (Parfitt 2004, fig 1; Parfitt and Needham 2005; Rady 1992, 26).

The penannular form of the ditch would also fit with the interpretation of the site as a cremation enclosure of middle Bronze Age type. Such enclosures are often found in close proximity to settlements of contemporaneous date (Woodward 2000). However, the lack of funerary evidence from the ditch makes this interpretation less certain.

The penannular ring ditch was sited on the valley slope between two headwater tributaries at the head of a substantial southwest–northeast trending dry valley. The location of the monument appears to have been influenced by the nature of the underlying geology. The ring ditch was cut into the lighter soils of the Thanet beds, which give out to chalk bedrock on the higher ground to the west. Similar topographical factors regarding the location of a double-ditched barrow monument were observed at Whitehill Road (Bull 2006). Archaeological excavations at the site recorded a northeast facing double ring ditch approximately 150 m north of a dry valley that was formerly a tributary to the River Darent.

The entranceway to the Cobham barrow was aligned to face south, perhaps to look over the valley in the direction of the North Downs. Its position would also have made it visible, assuming an extant earthwork, from the surrounding lower ground if much of the postulated

woodland had been cleared. This type of siting for a barrow is quite common in the south-east and other areas of Britain (Field 1998, 320; Woodward 2000, 74).

In the absence of good environmental evidence, it can be suggested that the presence of the monument implies that the landscape had been deliberately managed in some way; partially cleared of woodland with areas of grassland pasture and small-scale cultivation plots. Settlement was likely to be of a semi-sedentary nature. Although it is possible that much of the woodland on the hillside was cleared and utilised as a natural resource in the Bronze Age, the environmental evidence from the fills of the ring ditch provided no clear support for this suggestion. Nor was direct evidence for an early Bronze Age agricultural community found during the fieldwork, although Meddens (1996, 331) has pointed out that aspects of a Bronze Age landscape could be masked by overlying clay deposits in the Thames Valley, effectively preserving the ancient landscape. With this in mind, the possibility that such occupational evidence may exist sealed beneath the colluvium within the valley floor at ARC CGC 98 (URS 2001) is not unreasonable.

There is at present no evidence to indicate that the Cobham barrow was part of a more substantial cemetery. On the whole barrows are rare in this part of Kent (Field 1998). Within the immediate area of the north Downs a single extant round barrow occurs just 2 km to the west of the Cobham ring ditch and a dispersed group of five barrows occur 3 km to the north with a further two to the north-east. The general impression is that barrows tended to be scattered across the landscape either at relatively short intervals of 300-500 m or at wider intervals of 1-2 km. Like the Cobham barrow most are sited on high ground so as to overlook valley slopes.

4.3 Middle and late Bronze Age (1500-700 BC)

Middle Bronze Age (1500-1100 BC)

The second significant phase of activity belongs to the middle Bronze Age. Fifteen very shallow and truncated, sub-circular pits and postholes (group 41503) delineated the line of a truncated east-west aligned ditch and possible hedgerow 211 (Fig. 3). The ditch lay approximately 30 m to the north of the barrow and was also parallel with the course of Old Watling Street, which was approximately 35 m to the north (Fig. 3). The ditch contained small quantities of occupation material including pottery, worked and burnt flint and charred plant remains.

A significant quantity of middle Bronze Age pottery (98 sherds, 1.5 kg) was recovered from cut features 191, 195 and 197 within ditch 211 (group 41503). The assemblage was characterised by large thick-walled Deverel-Rimbury style Bucket Urns. A more unusual angled sherd, considered to belong to a middle Bronze Age biconical jar (Fig. 6: 1), was

recovered from ditch 191 (McNee and Morris 2006, 5). Decorative techniques include the application of finger-impressed 'horseshoe' cordons (Fig. 6:2) and more simple horizontal cordons (Fig. 6:3), and the application of a thin, clay slurry to the surface of the vessels (McNee and Morris 2006, 7).

A radiocarbon date was obtained from sooty residue adhering to Pottery sherd PRN 1094, to assist in refining the later prehistoric chronology from the CTRL Section 1 project. The vessel, a jar with a horseshoe shaped cordon (Fig 6: 2) is considered part of the Deverel-Rimbury tradition which is broadly dated to 1500-1150 cal BC spanning some 350 years. Dating evidence for this period in Kent is currently very limited and 'suggests that Kent Deverel-Rimbury pottery belongs to the latter part of the wider Deverel-Rimbury tradition' (Hamilton and Seager Thomas 2005, 26). The result is 3191 ± 40 BP (NZA-23006) dating to 1530-1390 cal BC, which indicates that the sherd falls into the earlier part of the Deverel-Rimbury tradition in Kent, *contra* Hamilton and Seager Thomas (2005, 26). The significance of this in ceramic terms is discussed elsewhere by Morris (in Booth, ed, 2006).

Eighteen pieces of worked flint, mostly flakes, were recovered from the ditch, the majority coming from the eastern end. An end scraper (Fig. 5:5) is likely to predate the ditch, while a denticulate is more likely to be contemporary. Small assemblages of arable weed seeds were recovered from environmental samples within the ditch (Davis 2006). The sample yielded very small amounts of black bindweed (*Fallopia convolvulus*), bedstraw (*Galium* sp.), dock (*Rumex* sp) and clover (*Trifolium* sp). It is possible that the remains were intrusive from later or modern contexts and little can be said about the economy of the site.

Further evidence for middle Bronze Age activity at Cobham Golf Course was recorded during the watching brief programme (ARC330 98). Small pit 365, located just outside the excavated area to the south of the hollow way, produced 39 sherds of pottery in fabric F1, which dates to the middle Bronze Age. One of the sherds was noteworthy as it appeared to be overfired or refired. Although a small amount (1 g) of calcined bone was also recovered from this pit, it was too poorly preserved to determine whether it was animal or human (Pipe and Rielly 2001). No significant deposits of charcoal or burning were noted in association with the pit and the feature is unlikely to be a cremation burial.

Despite its proximity to ditch 211, the early Bronze Age ring ditch produced little in the way of dating evidence to suggest that it was still in use in the middle Bronze Age, although it should be noted that the absence of middle Bronze Age pottery from the feature may simply be the result of the later truncation of the monument. In total six sherds of grog-and-flint-tempered fabric (GF1), representing a single vessel of uncertain date, were recovered from the upper fill (221) of the ring ditch. Specialist analysis of the fabric (unique at Cobham) suggests that the pottery may have been manufactured in either the earlier or later Bronze Age although associated fabrics within the same fill (fabric F8) suggest that a late Bronze Age date

is more likely (McNee and Morris 2006, 4). The location of the assemblage within the upper fills of the ditch demonstrates that the pottery was deposited when the ditch was almost entirely silted up, presumably after the feature had fallen into disuse as a focus for ritual-funerary activity. Hand excavation of the upper fills produced 54 pieces of worked flint including a denticulate (Fig. 5.3), suggesting that the ring ditch remained relatively undisturbed throughout the middle and late Bronze Ages. Despite this evidence the burial mound itself is still likely to have been visible in the landscape and as such, still significant or important to a local community in the middle Bronze Age.

Late Bronze Age (1100-700 BC)

Late Bronze Age activity on the site was centred on two clusters of features (pits, postholes and ditches) and a linear spread (165). The features produced a range of occupation debris (Fig. 3: feature groups 41507-8, 41506 and 41509). It is possible that this was just the northern end or limit of a more substantial settlement. No structures were identified, although some postholes were recorded.

A linear feature, 165, defined by a spread of flint, charcoal and gravel pebbles was recorded in the central part of the site (Fig. 3) where it respected the east-west alignment of the middle Bronze Age ditch, 211. The survival of this feature is particularly interesting as it was still in evidence despite the apparent heavy truncation of the area and suggest that it may have originally been part of a much more substantial feature. Spreads and mounds primarily of flint are often associated with settlement activity and may represent accumulations of waste material used in small-scale industrial activities such as cooking, feasting and pottery production. It is also common to find this type of material used as metalling for trackways and causeways. The presence of just two sherds of middle bronze Age pottery compared with 50 sherds of late Bronze Pottery, indicate that this feature possibly belongs with the phase of late Bronze Age occupation.

A north-south aligned ditch 133 (group 41504), which stopped short of the western end of ditch 211, separated two areas of activity (groups 51507-8 from 41506 and 41509) in the centre of the site (Fig. 3). This ditch produced late Bronze Age pottery (see Fig. 6:4), flintwork and charred plant remains including emmer wheat. A small group of circular, oval and irregular pits and postholes (group 41506) lay to the east of ditch 133 and were bounded to the north by the middle Bronze Age ditch 211, which was still open at this time. One of these features, pit 137, produced a significant group of late Bronze Age plain ware vessels (388 sherds) including a number of shouldered jars and bowls (Fig. 6: 5-9). The burnt residue on the outer rim of vessel PRN1022 (Fig. 6:8), a round shouldered jar, has been radiocarbon dated to the 10-9th centuries cal BC (see Table 3: NZA-21143). This feature was also rich in charred plant remains including a variety of cereal and a single horsebean.

Pits 143 and 161 also produced late Bronze Age plain ware vessel groups of similar character (see McNee and Morris 2006).

Later Bronze Age and indeterminate Bronze Age flintwork was recovered from feature groups 41506 and 41509 (pits 145, 147, 153 and 161 and posthole 177), pits 113 and 163 and layer 164. Pit 161, which produced plain ware vessels (see Fig. 6: 10) also contained a small assemblage of Bronze Age flint debitage, including a multi-platform flake core (with two flakes) and a number of knapped flakes that derive from the same nodule as well as fragments of perforated clay slab, briquetage (Fig. 7: 5) and burnt flint. The clay slab fragments (<2> Fig. 7: 8) were manufactured from the same fabric (F1) as some of the late Bronze Age pottery (McNee and Morris 2006). A further unstratified sherd of perforated clay slab in fabric F1 was recovered during the excavation and is likely to have derived from one of these pits or postholes. Pottery, briquetage (Fig. 7: 1-4) and burnt clay were recovered from pits 143 and 179. The daub provides tentative evidence for structures and reinforces the likelihood that there was a domestic settlement in the near vicinity. Posthole 177 produced a fragment of perforated clay slab <1> (Fig. 7.7) (in an exclusively late Bronze Age pottery fabric F7) and fragments from two baked clay cylindrical loomweights <3> and <5> (Fig. 7.6), pottery and a single charred grain of barley. A small group of five sub-circular cut features (group 41509) produced no satisfactory dating material although their close association with group 41506 suggested that they are likely to be of contemporaneous date.

To the west of ditch 133, another small group of sub-circular pits and postholes (group 41507) lay outside the area enclosed by ditches 211 and 133. Sixteen features in total were recorded in this area, ten of which (group 41508) produced no finds or environmental data. These features have been interpreted as late Bronze Age by their association with group 41507. The cut features within this part of the site produced substantially less cultural material. Pit 123 produced 5 fragments of briquetage and 6 pieces of burnt clay or daub. Pit 107 also produced 6 pieces of daub. The most significant feature within this area in terms of finds material was pit 236 which produced 52 sherds of late Bronze age pottery.

A worked fragment (?rubber) of fine-grained laminated sandstone was also recovered from the upper fill of the ring ditch (221), the stone may have been used in food preparation (Keily, et al 2006). Such artefacts can not be closely dated.

The nature of the middle and late Bronze Age activity: discussion

In the middle Bronze Age the landscape at Cobham Golf Course (ARC CGC 98) appears to have been deliberately reorganised with the appearance of an east–west aligned boundary ditch or field system located some 30 m to the north of the barrow (Fig. 3).

While there was no evidence from the pottery assemblages that could be positively linked to a transitional phase of occupation (McNee and Morris 2006, 10; Edwards 2006), the

nature of the reorganisation of the landscape at the site in the middle and late Bronze Age is not without parallel and has been recorded at other sites in the south east of England. It has been recognised that changes in the organisation of the landscape and a shift towards more settled occupation and land division consistently occur at the transition into the middle Bronze Age (Brück 1995, 245). However, there is no simple pattern to the character of this evidence. Land division at this time in southern Britain varies from short lengths of ditch to networks of fields and likewise, settlements vary from clusters of pits and postholes (open settlements) to enclosures with clearly defined buildings. The evidence from Cobham would fit with that of other small-scale open settlements. It is impossible to say how extensive the settlement is because of the restricted area of excavation. Yates has argued that during the middle Bronze Age ditched boundaries or field systems were specifically located to reinforce old boundaries demarcated by monuments such as burial mounds (1999, 158). The siting of the ditches and occupation features at Cobham close to the ring ditch can be explained as a deliberate act of transformation, reinforced by the dumping of occupation debris at the barrow.

Pit 365 and ditch 211 were the only features at the site that could be clearly dated to the middle Bronze Age. Fragments of heavy thick-walled Bucket Urns, some with charred residue, flintworking and charred plant remains indicate that contemporary settlement may have existed close by, perhaps further down the slope towards the valley floor. Alternatively, the character of this occupation could have been small-scale and of a semi-sedentary nature.

Ditch 211 may have been created for a number of reasons. As previously mentioned, finds recovered from this feature were noticeably more abundant where the ditch cut lower ground towards the barrow. It could have been cut for drainage, and may have been maintained, although the finding of occupation material indicates that it was also used to discard occupation rubbish. The numerous shallow irregular cut features that delineate the line of ditch 211 have been taken to suggest that this could also have been a hedge-line. This would agree with the suggestion made by Yates that field boundaries in the middle Bronze Age were likely to have been reinforced by hedges (1999, 165). The ditch would have probably functioned as a boundary feature (as part of a field system), respecting both the barrow as an old boundary marker to the south and the east-west hollow way/spread, and may have been part of a wider network of droveways and tracks. The ditch also appears to mark the northern limit of the later Bronze Age activity recorded at the site suggesting that the boundary created by the ditch was also respected (or re-used) during the late Bronze Age perhaps to separate areas of settlement from fields.

The middle and late Bronze Age ditches appear to enclose two distinct groups of cut features (groups 41506 and 41507) that comprise mostly pits and postholes containing pottery, loomweights, perforated clay slab, and fragments of briquetage. Although the pits and

postholes do not appear to delineate the remains of any obvious structures, the cultural material recovered from these features does suggest that a relatively established late Bronze Age settlement was evident nearby.

There is a notable increase in the range and scale of late Bronze Age occupation refuse when compared with the limited range of material found in the middle Bronze Age ditch. Unfortunately animal bone was not preserved with the exception of a few small fragments (Pipe and Rielly 2001). As well as pottery and worked flint, clay loomweights, clay plaques and briquetage were recovered from pits and postholes. Clay loomweights provide evidence for weaving and perforated clay plaques of uncertain purpose could indicate either salt making, weaving, metalworking or pottery production (Champion 1980; Adkins and Needham 1985; and Perkins *et al.* 1994).

At Cobham the two perforated slabs were associated with fragments of briquetage and cylindrical loomweights. The fact that the slabs were produced in the same fabrics as some of the pottery (McNee and Morris 2006) may indicate that they were in some way associated with pottery production as suggested by Adkins and Needham (1985, 38) or as supports within clay ovens (Needham and Longley 1980, 411). Ovens could have served as kilns and their use could have been multipurpose. Perkins has suggested that they may have been used in association with bronze melting furnaces (1994, 311 and fig 33). However, as Keily notes (2006), there is little or no evidence (lack of any sooting or signs of heat damage) to indicate that they were used in any high-temperature industrial process.

Bond's detailed spatial analysis of perforated clay slabs, textile making and salt manufacturing equipment at the North Ring and salvage area, Mucking lead him to conclude that there was no direct association between plaques and salt production (1988, 41-4). At a number of sites plaques have been recovered from the same contexts as pottery and briquetage (eg. Hoo St Werburgh, near Rochester - Moore 2002, 263 and 274, fig 4: 3-4) or with clay weaving equipment (mostly loomweights and sometimes spindlewhorls (Petters Sports Field, Egham - O'Connell 1986, 60; Carshalton -Adkins and Needham 1985, 38; Runnymede Bridge - Needham 1978, 152; Monkton Court Farm - (Perkins *et al.* 1994, 311). The evidence, however, is too tenuous at present to be able to say whether or not they may have been associated with any aspect of textile working or manufacture.

A relatively small assemblage (52 pieces) of briquetage was recovered from four late Bronze Age features at Cobham. Briquetage is associated with the manufacture of salt and in many cases the presence of briquetage can be taken to indicate small-scale domestic manufacture (Morris 2006). The assemblage recovered from Cobham is different in that more than 48% of the briquetage material recovered comprised classes of ceramic such as rod and clip fragments that relate directly to salt production rather than simply fragments of container vessels that might suggest merely the use of salt (Morris 2006), the implication being that salt

production was likely to have been undertaken in the near vicinity of the site. No hearths, oven structures or storage pits were recorded during the fieldwork, however the presence of burnt flint and burnt clay and daub within various cut features (from which briquetage fragments were also recovered) implies that a more substantial settlement and possible salt production area (saltern) should not be ruled out.

Generally the pottery recovered from the late Bronze Age features at Cobham reflects a relatively small-scale settlement. The character of the pottery suggests a society producing utilitarian pottery for local consumption reliant on exploiting local clay resources (McNee and Morris 2006). Five examples of the assemblage displayed evidence for sooting on the interior of the vessel and six examples have sooting on the external walls of the vessel confirming their use with an open fire although no direct evidence for hearth or ovens or open fires was recorded at the site. The middle and late Bronze Age wares reflect manufacture for domestic purposes such as cooking and heating, briquetage fragments excluded there is little evidence to imply significant trade and exchange at the site.

4.3.1 Conclusions

A pattern of relatively long-term shifting settlement was evident at Cobham. The evidence for and location of an early Bronze Age barrow at the site implies ritual use of the landscape and suggests that a relatively small-scale settlement may have been situated nearby. It is possible that a small community would have occupied and exploited the fertile land towards the valley floor, although no evidence for an early Bronze Age community was recovered. In the middle Bronze Age there is evidence for both further organisation of a rural landscape in the form of an east–west boundary ditch and at least the beginnings of a semi-permanent settlement. In the late Bronze Age, a more established rural settlement is apparent and the focus of settlement shifted westwards, to higher ground on the valley slope. Comparable settlement patterns have been noted at other later prehistoric sites along the routeway, at West Northumberland Bottom (ARC WNB 98) a gradual shift of settlement towards higher ground is observed extending into the Iron Age (Askew 2006).

With the exception of a group of probable post-medieval features (groups 41511 and 41512) no material post-dating the late Bronze Age settlement was recovered. The Bronze Age settlement appears to have declined and been abandoned, possibly as the settlement shifted to higher ground in the vicinity of Scalers Hill to the south.

4.4 Post-medieval (AD 1700-AD 1900)

The Cobham Estate

The Cobham Estate passed to Crown in 1603 on the attainder of Henry, Lord Cobham. James I granted it to Ludovic Stuart, Duke of Lennox and created him Lord Darnley. Following the Duke's premature death, heavily in debt, in 1672 the Cobham estates passed through a number of owners until acquired by marriage by John Bligh in 1713. He was created Earl of Darnley in 1725. The present Earl is descended from John Bligh.

Under John, 4th Earl of Darnley (1767-1831) the estate was remodelled by the landscape gardener Humphrey Repton (1752-1818). Although Repton's 'red books' survive for some his works (e.g. Abbots Leigh, Somerset, Anthony House, Cornwall and Barton Seagrove, Northants), no equivalent record of his work at Cobham is listed by the National Register of Archives (NRA). Other records pertaining to the Bligh family, Earls of Darnley are lodged at the Medway Archives and Local Studies Centre, Strood (URS, 2001).

The post-medieval landscape within the Cobham Golf Course zone would have been largely similar to the modern day landscape. Frequent patches of ancient and secondary woodland and historic parkland (notably the Cobham Park Estate) still survive.

The archaeological evidence

Generally the area surrounding ARC CGC 98 was subjected to fairly intensive ploughing during the medieval and post-medieval periods. Post-medieval activity at the site was restricted to two small groups of cut features (Fig. 3). Pit group 41511 was located to the west of the main focus of prehistoric activity. No finds or dating evidence was removed from the pits during excavation and the dark loose fills associated with these features suggest that they derived from 19th or 20th century agricultural activity. Further west, group 41512 comprised shallow truncated ditch 301. The V-shaped ditch was aligned north-south and measured 1.20 m wide by 30 m long. No dating was recovered during excavation of the ditch, probably a 19th-century field boundary.

Evidence for activity associated with the late 18th-century development of the Cobham Park Estate was recorded (ARC WS 98). The remains of a park pale or ha-ha (group 41501) were investigated and recorded adjacent to the eastern side of Ashenbank Wood 400 m to the north-west of the Cobham Park Roman Villa (Fig. 2). Excavation revealed two phases of post-medieval landscaping (Figs 8-9), the first phase was represented by a 3 m wide U-shaped ditch (16) and a 3 m wide earthen bank (4) to the south. The second phase was located to the immediate north and comprised a substantial U-shaped ditch (15) approximately 8 m in width and associated with a 10 m wide bank to the south (which

covered the original ditch and bank). The southern flank of the second phase ditch was partially revetted with blocks of chalk (Fig. 9).

The ha-ha would have been constructed to control roaming/grazing animals such as deer within the grounds of Cobham Park Estate, the intention being to create a boundary and restrict access, while at the same time retaining a virtually unspoiled view across the estate. No dating evidence was retained from the ditches, however, it is likely that the features were installed as part of the landscaping works carried out by Humphrey Repton in the 1790s.

Further evidence for post-medieval activity associated with the Cobham Park Estate was recorded along the northern edge of Cobham Park (ARC BG 98) north of the so-called Cobham Park Roman Villa (Fig. 2). The remains comprised the late 18th/early 19th century red brick foundation walls of Brewers Gate, a gate lodge at the north end of the estate (Figs 2 and 10). Brewers Gate was most probably constructed by Humphrey Repton during the redesigning of the estate in the late 18th century.

Surviving records provided information that located the old gatehouse, sited adjacent to the Brewers Gate of the Cobham Estate. The 1641 plan shows that the entrance to the north of the estate (adjacent to the current A2) was gained by a gate, which is illustrated on the plan. The gate was also drawn on the 1749 plan. The 1758 plan was unavailable for consultation. It is presumed that the original gatehouse was constructed at the time of the 1790 alterations to the estate by Repton as both the 1850 and 1851 plans depict a gatehouse on the west side of the path across which the earlier gate spanned. This is borne out by the change in the layout of the gardens and paths between the 1749 plan and the 1850/1 plans. The *c* 1850/1 gatehouse is shown on both plans as bulb shaped with the narrow end projecting west and with the circular, bulbous, element at the east fronting onto the path which exited the estate. Both the 1909 and 1939 editions of the Ordnance survey maps show that the bulb shaped gatehouse had been replaced by a rectangular gatehouse. This replacement gatehouse was demolished in the 1960s (URS, 2001).

St Thomas's Well dates to the 18th or 19th century. It was recorded at the extreme western end of Zone 5, within the watching brief area (ARC 330 98) (Fig. 2). The well is adjacent to the western end of Old Watling Street (Fig. 11), the medieval route that passed through Ashenbank Wood and down the eastern side of Scalers Hill. The road was approximately 3.5 m wide and had developed into a deep hollow way in the area of Cobham Golf Course. The well comprised a circular shaft, built and capped with brickwork. The probable remains of the iron hand pump had been thrown down the shaft. The well was sealed in sand and preserved in the mitigation earthworks of the CTRL.

The Shorne/Cobham Boundary stone was erected 1808 and situated to the west of Brewers Road, this was represented by a reworked architectural fragment of oolitic limestone. The stone had been recently damaged, but has since been reconstructed (URS, 2001). A single

architectural fragment of a windowsill with stooling for jamb was also recovered from the fill of the Ashenbank Wood pond (ARC 330 98). The sill derives from the corner of the sill (rather than the head) of a rectilinear window. The stooling (or adapter) for the jamb reveals that it had a simple hollow-chamfered moulding. The sill weathered significantly *in situ* which reveals that the building that it derived from was old when demolished/refurbished. The glazing was supported on iron bars of square section. The astragal (or upright) was set diagonally in the sill as is normal Elizabethan/Jacobean practice. The dressing was cut with a pitcher chisel.

4.5 Unphased features

A number of features (group 41515) within the watching brief area (Arc 330 98) produced no dating evidence and remain unphased. The majority of these features comprise small discreet sub-circular cuts of no discernable function, probably caused by 19th-century agricultural activity.

5 GUIDE TO ARCHIVE

The following tables include detail of the archive components.

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 7 below details all available digital data for the Cobham Golf Course group of sites. 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 archive versions of report text (.rtf) and image pages (.tiff). Databases are available as text files (.csv). The digitised site plan is available as an Arcview shapefile (.shp) and in drawing exchange format (.dxf).

Table 4 Digital archives

Description	Filename root	Principal authors and organisation
Integrated site report		
Integrated site report	CGC_ISR	Davis S (MoLAS)
Integrated site report figures	CGC_ISR	Davis S (MoLAS)
Site research database		
Site database	CGC	Davis S (MoLAS)
CAD/ GIS drawings		
CAD drawing	CGC_CAD	
ESRI ArcMAP GIS project	CGC_GIS	
GIS limit of excavation shapefile	CGC_GIS	
GIS feature plan	CGC_GIS	
Specialist research reports		
Ceramics (early prehistoric)	CER_EPR_CGC	Edwards E (OWA JV)
Ceramics (later prehistoric)	CER_LPR_CGC	McNee B and Morris EL (Southampton)
Lithics	FLI_CGC	Devaney R (OWA JV)
Small finds	SFS_CGC	Keily J (MoLSS), Morris EL (Southampton Univ), Samuel M and Shaffrey R (OWA JV)
Faunal remains	ENV_Fauna_CGC	Kitch J (OWA JV)
Geoarchaeology	ENV_Geoarch_CGC	Corcoran J (MoLAS)
Charred plant remains	ENV_Charredplants_CGC	Davies A (MoLSS)
Radiocarbon dating	DAT_CGC	Allen MJ (OWA JV) and Davis S (MoLAS)
Specialist datasets		
Ceramics (early prehistoric)	CER_EPR_CGC	Edwards E (OWA JV)
Ceramics (later prehistoric)	CER_LPR_CGC	McNee B and Morris EL (Southampton)
Ceramics (post-Roman)	CER_MED_CGC	Mephram L (OWA JV)
Lithics	FLI_CGC	Devaney R (OWA JV)
Small finds	SFS_CGC	Keily J (MoLSS)
Small finds	SFS_CGC	Shaffrey R (OWA JV)
Charred plant remains	ENV_Charredplants_CGC	Davies A (MoLSS)
Ceramics (early prehistoric)	CER_EPR_CGC	Edwards E (OWA JV)
Post-excavation assessment		
Post-excavation Assessment	CGC_PXA	MoLAS

Table 5 Artefactual and environmental archive index

Item	Site code	Number Of Items or boxes or other	No of Fragments or litres or weight
Lithics (boxes)	ARC CGC 98	3 size 1	226
	ARC 330 98 (Zone 5)	1 size 1	5
Burnt flint (boxes)	ARC 330 98 (Zone 5)	See lithics	35g
	ARC CGC 98	3 size 1	7111g
Pottery (boxes)	ARC CGC 98	5 size 1	836
	ARC 330 98 (Zone 5)	1 size 1	
	ARC BG 98	1 standard	
Small finds	ARC 330 98 (Zone 5)	See ARC 330 98, Zone 4	9
Fired clay (boxes)	ARC CGC 98	1 size 1	1225g
Animal Bone (boxes)	ARC CGC 98	1 size 1	13g
	ARC 330 98 (Zone 5)	See ARC 330 98, Zone 3	3
Flora	ARC CGC 98	1 box size 1	
	ARC 330 98 (Zone 5)	See ARC 330 98, Zone 4	
Flots	ARC CGC 98	1 box size 1	
	ARC 330 98 (Zone 5)	See ARC 330 98, Zone 4	
Misc.	ARC CGC 98	1 box size 1	
Soil Samples (10 lit. buckets)	ARC 330 98 (Zone 5)	6	
	ARC CGC 98	26	
Soil Samples (no. of contexts)	ARC CGC 98	10	
	ARC 330 98 (Zone 5)	3	
	ARC WS 98	No finds or environmental remains were recovered/retained	

Table 6 Fieldwork and research paper archive

Record Group	Site Code	Contents
Contexts records	ARC CGC 98	212
	ARC 330 98	84
	ARC BG 98	11
	ARC WS 98	70
A1 plans	ARC CGC 98	1
A4 plans	ARC CGC 98	48
	ARC 330 98	8
	ARC BG 98	1
	ARC WS 98	11
A4 sections	ARC CGC 98	4
	ARC 330 98	6
	ARC WS 98	15
Films (B/W) S=slide; PR=print	ARC CGC 98	1PR
	ARC 330 98	316 IMAGES
	ARC WS 98	1PR
Films (Colour) S=slide; PR=print	ARC CGC 98	1S, 3PR
	ARC 330 98	316 S
	ARC BG 98	1PR
	ARC WS 98	1S, 3PR

*Key to archive box sizes*Cardboard boxes

Size 1 = Bulk box	391mm x 238mm x 210mm	0.020m ³
Size 2 = Bulk box	391mm x 238mm x 100mm	0.009m ³
Size 3 = Bulk box	386mm x 108mm x 100mm	0.004m ³
Size 4 = Bulk box	213mm x 102mm x 80mm	0.002m ³

Plastic boxes

Size 8= Medium	260mm x 184mm x 108mm	0.005m ³
----------------	-----------------------	---------------------

6 CATALOGUE OF ILLUSTRATED FINDS

Cobham Golf Course

Fig: 5: Selected later prehistoric flint

1. AH-1660; retouched blade; early Mesolithic long blade, small proximal break with later retouch, direct retouch on whole of left edge, some damage; context 3001, unstratified.
2. AH-1825; piercer; direct retouch to distal left and right, some cortex on flake, minimal damage; context 223, ring ditch 224.
3. AH-1996; denticulate. Made on a cortical blank, crescent shape, continuous direct retouch; context 221, ring ditch 222.
4. AH-1998; end and side scraper; made on a cortical blank, direct retouch to distal end and distal sides; context 221, ring ditch 222.
5. AH-1991; end and side scraper. Made on trimming flake with cortical platform, direct retouch to distal end and distal sides, usewear on scraping edge; context 198, ditch 199 (cut within ditch 211).

Fig: 6: Middle Bronze Age and late Bronze Age pottery

2. PRNs 1094 and 1095; R1; Middle Bronze Age jar, with applied 'horseshoe' shaped cordon, decorated with fingertip impressions. Fabric F5; context 196, ditch 197.
3. PRN 1068; decorated body sherd with applied cordon and fingertip impressions. Fabric F5; context 190, ditch 191.
4. PRN 1009; B2; splayed, flat bottomed base. Fabric F3; context 132, ditch 133.
5. PRN 1018; B1; flat bottomed base. Fabric F1; context 136, pit 137.
6. PRN 1013; R3; rounded rim from a round shouldered jar. Fabric F3; context 136, pit 137.
7. PRN 1015; R4; fabric F1; context 136, pit 137.
8. PRN 1022; R5; slightly flared rounded rim from a jar. Fabric F3; context 136, pit 137.
9. PRNs 1027 and 1028; R8; upright rounded rim from a carinated fine bowl. Fabric F3; context 136, pit 137.
10. PRN 1049; R9; carinated shouldered coarse jar. Fabric F1; context 160, pit 161.

Fig: 7: fired clay loomweights, perforated slabs and briquetage

Briquetage

1. BRN2003; support, rod type RD1; fabric V1; white effect to top side of rod and half of core; context 142, pit 143.
2. BRN2004; support, rod type RD2; V1; white effect to top/flat side of rod; context 142, pit 143.
3. BRN2009; container, rim type ?R1; V1; white effect on top of rim; context 142, pit 143.
4. BRN2010; container, rim type ?R2; V1; very abraded, soft sherd; context 142, pit 143.
5. BRN2015; support, clip type CL1; V1; faint white effect to one side of 'clip'; context 160, pit 161.

Loomweights

6. <5>; loom weight; cylindrical with possible central hole, in a medium-hard, powdery fabric that is a uniform orange-brown colour; context 176, posthole 177.

Perforated slabs

7. <1>; perforated clay slab fragment; orange/brown colour; remains of one incomplete hole; fabric the same as pottery fabric F7 (LBA); context 176, posthole 177.
8. <2>; perforated clay slab fragment; uniform orange/brown in colour; both fragments have remains of a thin, rounded edge; fabric the same as pottery fabric F1 (MBA-LBA); context 160, pit 161.

7 BIBLIOGRAPHY

- ADS, 2006 CTRL Digital Archive, Archaeology Data Service
<http://ads.ahds.ac.uk/projArch/CTRL/index>
- Adkins, L, and Needham, S P, 1985 New research on a late Bronze Age enclosure at Queen Mary's Hospital, Carshalton. *Surrey Archaeol Collect* **76**, 11-50
- Allen, M 2006, Radiocarbon dates from Section 1 of the Channel Tunnel Rail Link, Kent, *CTRL scheme-wide specialist report series*, in ADS 2006
- Askew, P, 2006 The Prehistoric, Roman and Medieval Landscape at Northumberland Bottom, Gravesend, Kent. *CTRL integrated site report series*, in ADS 2006
- Barber, M, 1997 Landscape, the Neolithic, and Kent, in Neolithic Landscapes. Neolithic Studies Group Seminar Papers 2. Oxbow mono 86, Oxford, 77-86
- Barclay, A, and Halpin, C, 1999 *Excavations at Barrow Hills, Radley, Oxfordshire, Volume 1: The Neolithic and Bronze Age monument complex*, OAU Thames Valley Landscapes mono 11, Oxford
- Bond, D, 1988 *Excavation at the North Ring, Mucking, Essex: A late Bronze Age Enclosure*, E Anglian Archaeol **43**
- Booth, P (ed) 2006 Ceramics from Section 1 of the Channel Tunnel Rail Link, Kent, *CTRL scheme-wide specialist report series*, in ADS 2006
- Booth, P, Champion, T, Garwood, P, Munby, J, Reynolds A, and Allen, M, 2007 *On Track: The Archaeology of Section 1 of the Channel Tunnel Rail Link in Kent*, Oxford Wessex Archaeology, Oxbow Books
- Bradley, R, and Hall, M, 1992 Fired clay objects in Moore, J, and Jennings, D, *Reading Business Park: A Bronze Age Landscape*, OAU Thames Valley Landscapes: the Kennet Valley, Volume 1. Oxford, 87
- Brück, J, 1995 A place for the dead: the role of human remains in late Bronze Age Britain. *Proc Prehist Soc*, **61**, 245-277
- Bull, R, 2006 The Prehistoric Landscape at Whitehill Road, Longfield and New Barn, Kent. *CTRL integrated site report series*, in ADS 2006
- Champion, T, 1980 Settlement and environment in later Bronze Age Kent, in *Settlement and Society in the British later Bronze Age: part I* (eds J Barrett and R Bradley), BAR Brit Ser **83**(i), 223-246
- Corcoran, J, 2001 Assessment of the Geo-archaeology, in URS 2001
- Davis, A, 2006 Cobham Golf Course, in Giorgi, J, and Stafford, E (eds)
- Devaney, R, 2006 Cobham Golf Course, in Harding, P (ed) 2006
- Dewey, H and Bromehead, C E N, 1915 The Geology of the country around Windsor and Chertsey, *Mem Geol Survey*, London: HMSO

- Edwards, E, 2006 Cobham Golf Course, in Booth, P (ed) 2006
- Field, D, 1998 Round barrows and the harmonious landscape: placing early Bronze Age burial monuments in south-east England. *Oxford J Archaeol* **17**, 309-26
- Garwood, P, 2003 Round barrows and funerary traditions in late Neolithic and Bronze Age Sussex, in *The Archaeology of Sussex to AD2000*. (ed D Rudling) University of Sussex, 47-68
- Giorgi, J and Stafford, E (eds) 2006 Palaeoenvironmental evidence from Section 1 of the Channel Tunnel Rail Link, Kent, *CTRL scheme-wide specialist report series*, in ADS 2006
- Green, C, and Rollo-Smith, S, 1984 The excavation of eighteen round barrows near Shrewton, Wiltshire, *Proc Prehist Soc* **50**, 255-318
- Harding, P (ed) 2006 Prehistoric worked flint from Section 1 of the Channel Tunnel Rail Link, Kent, *CTRL scheme-wide specialist report series*, in ADS 2006
- Healey, E, 1973 Loom-weights, in Philp, B J, 1973 A Bronze Age Site on Hayes Common, in *Excavations in West Kent 1960-1970, The Discovery and excavation of Prehistoric, Roman Saxon and Medieval sites, mainly in the Bromley area and in the Darent Valley* (ed B J Philp), Second Research Report in the Kent Series, Kent Archaeological Rescue Unit, 30-52
- Keily, J, Morris, E and Shaffrey, R, 2006 The ceramic and stone small finds from Cobham Golf Course (ARC CGC 98) *CTRL specialist report series*, in ADS 2006
- McNee, B, and Morris, E, 2006 Cobham Golf Course, in Booth, P (ed) 2006
- Meddens, F, M, 1996 Sites from the Thames estuary wetlands, England, and their Bronze Age use. *Antiquity* **70**, 325-334
- Moore, C, 2002 Late Bronze Age, Romano-British and early/mid Saxon features at Hoo St Werburgh, *Archaeol Cantiana* **122**, 259-92
- Morris, E L, 1994 Production and distribution of pottery and salt in Iron Age Britain: a review, *Proc Prehist Soc* **60**, 371-394
- Needham, S, 1978 *Excavation and Salvage at Runnymede Bridge, 1978: the late Bronze Age Waterfront Site*. British Museum Press, London
- O'Connell, M, 1986 Baked clay objects, in O'Connell, M, with Needham, S P, *Petters Sports Field, Egham: excavation of a late Bronze Age/early Iron Age site*, Res Vol Surrey Archaeol Soc **10**, 60
- Parfitt, K, 2004 A Round Barrow near Hayes Farm, Eythorne, *Archaeol Cantiana* **124**, 397-415
- Parfitt, K, and Needham, S, 2005 Interim report on excavations at Monument No. 1, Ringlemere Farm, Kent, 2004 (Trench 5). Canterbury Archaeological Trust and the British Museum
- Parfitt, K, and Needham, S, 2004 Ringlemere: the nature of the Gold Cup, *Past* **46**

Perkins, D J R, Macpherson-Grant, N, and Healey, E, 1994 Monkton Court Farm Evaluation, 1992, *Archaeol Cantiana* **114**, 237-316

Pipe, A, and Rielly, K, 2001 Assessment of the animal bone, in URS 2001

Rady, J, 1992 Castle Hill, Folkestone, in *Canterbury Archaeology* **16**, 25-8

URL 1994 Assessment of historic and cultural effects, supplementary fieldwork report, surface collection survey, unpubl. report prepared by OAU, in ADS 2006

URL, 1997 Cobham Park Golf Course, Cobham, Kent; An Archaeological Evaluation, unpubl. report prepared by OAU, in ADS 2006

URL 1998 CTRL: Archaeology programme written scheme of investigation, Southern Project: Areas 330-350, unpubl. report prepared by RLE, in ADS 2006

URS, 1999 CTRL Section 1: Archaeological watching brief written scheme of investigation, Project Area 330/ 350, unpubl. report prepared by RLE, in ADS 2006

URS, 2000 CTRL Section 1 archaeology post-excavation assessment instruction, unpubl. report prepared by RLE for Union Railways (South) Limited (URS) in ADS 2006

URS 2001 CTRL Section 1: Project Area 330 (Zone 5) Cobham Golf Course (ARC CGC 98) Post-excavation assessment report, unpubl. report prepared by MoLAS for URS, 2001, in ADS 2006

URS, 2003a CTRL Section 1 updated project design for archaeological analysis and publication Volume 1, unpubl. report prepared by RLE, for URS, in ADS 2006

URS, 2003b CTRL Section 1 updated project design for archaeological analysis and publication Volume 2, Contractor's method statements, unpubl. report prepared by RLE and OWA, for URS, in ADS 2006

Woodward, A, 2000 British Barrows. A matter of life and death. Tempus

Yates, D T, 1999 Bronze Age Field Systems in the Thames Valley, in *Oxford J Archaeol* **18**, 157-170 Blackwell Pub, Oxford