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## ABSTRACT

This research project sets out to discover whether archaeological evidence dating between 2500 BC – 1500 BC from supposed funerary contexts in Kent, Flanders and north-eastern Transmanche France is sufficient to make valid comparisons between social and cultural structures on either side of the short-sea Channel region.

Evidence from the beginning of the period primarily comes in the form of the widespread Beaker phenomenon. Chapter 5 shows that this class of data is abundant in Kent but quite sparse in the Continental zones - most probably because it has not survived well. This problem also affects the human depositional evidence catalogued in Chapter 6, particularly in Flanders but also in north-eastern Transmanche France. This constricts comparative analysis, however the abundant data from Kent means that general trends are still discernible. The quality and volume of data relating to the distribution, location, morphology and use of circular monuments in all three zones is far better – as demonstrated in Chapter 7 - mostly due to extensive aerial surveying over several decades.

When the datasets are taken as a whole, it becomes possible to successfully apply various forms of comparative analyses. Most remarkably, this has revealed that some monuments apparently have encoded within them a sophisticated and potentially symbolically charged geometric shape. This, along with other less contentious evidence, demonstrates a level of conformity that strongly suggests a stratum of cultural homogeneity existed throughout the Transmanche region during the period 2500 BC – 1500 BC. The fact that such changes as are apparent seem to have developed simultaneously in each of the zones adds additional weight to the theory that contact throughout the Transmanche region was endemic. Even so, it may not have been continuous; there may actually have been times of relative isolation – the data is simply too coarse to eliminate such a possibility.

## SAMENVATTING

De doelstelling van dit onderzoeksproject is om na te gaan of er voldoende archeologische indicaties van veronderstelde funeraire contexten in Kent, Vlaanderen en Noordoost-Frankrijk, gedateerd tussen 2500-1500 v.Chr., zijn om vergelijkingen tussen de socio-culturele structuren aan beide zijden van de Kanaal-Transmache-regio aan te tonen.

In de beginperiode wordt het bewijs hoofdzakelijk geleverd in de vorm van het wijdverspreide Bekerfenomeen. Hoofdstuk 5 toont aan dat deze dataset voldoende gedocumenteerd is in Kent, maar eerder schaars in de continentale regio's, waarschijnlijk aan slechte archeologische bewaringsomstandigheden te wijten. Dit probleem stelt zich eveneens, vooral in Vlaanderen en Noordoost Transmanche Frankrijk, voor de gekende menselijke funeraire bijzettingen, opgesomd uit hoofdstuk 6. Deze beperkingen belemmeren een vergelijkende analyse, al hoewel de rijke dataset uit Kent het toch mogelijk maakt om enkele algemene tendensen te onderscheiden. In hoofdstuk 7 wordt aangetoond dat de kwaliteit en het volume van informatie met betrekking tot de verspreiding, de locatie, de morfologie en het gebruik van circulaire monumenten veel beter is in alle drie de regio's. Dit is het gevolg van de intensieve luchtfotografische prospecties gedurende de laatste decennia.

Door een combinatie van de verscheidene bestanden is het mogelijk om verschillende soorten van vergelijkende analyse succesvol toe te passen. Een opmerkelijk resultaat is de ontdekking dat sommige monumenten blijkbaar een gesofisticeerde en een mogelijk symbolisch geladen geometrische vorm in zich dragen. Dit gegeven, gecombineerd met andere overtuigende informatie, toont een zeker niveau van overeenkomst aan, waaruit duidelijk kan afgeleid worden dat er een vorm van culturele homogeniteit bestond in het Transmanche gebied tussen 2500 – 1500 v.Chr. Het feit dat veranderingen, dewelke kunnen gedetecteerd worden, zich simultaan voordeden in elke zone, ondersteunt de theorie dat contact in de Transmanche regio endemisch was. Dit was waarschijnlijk geen permanent gegeven; periodes van een zekere vorm isolatie zullen zich waarschijnlijk ook voorgedaan hebben. De informatie is nog niet zo uitgebouwd om een dergelijke mogelijkheid uit te sluiten.

## RESUMÉE

Le but de ce projet de recherche est de vérifier s'il y a assez d'information archéologique sur les contextes funéraires supposés à Kent, la Flandre et le Nord-est de la France entre 2500 – 1500 av. J.-C. à fin de faire des comparaisons valides entre des structures socioculturelles au deux côtés de la région Transmanche.

Au début de cette période l'information vient principalement de la culture campaniforme, qui est très étendue. Le chapitre 5 prouve que cette information est très abondant à Kent, mais moins connue dans les régions continentales ; probablement à cause des problèmes de conservation. Le même problème se pose dans le chapitre 6 pour sur les dépositions humaines, spécifiquement en Flandre mais aussi dans le Transmanche Nord-est de la France. Ces problèmes limitent l'analyse comparative, mais grâce à l'information abondante de Kent des tendances générales sont à constater. La qualité et la volume de l'information sur la distribution, la localisation, la morphologie et l'usage des monuments circulaires dans les trois régions est d'un niveau supérieur, comme nous prouvons dans le chapitre 7. Les décades de vols de photographie aérienne sont responsables pour cet amas d'information.

Quand les différents sources de l'information sont combinés, c'est possible d'appliquer des différents méthodes d'analyses comparatives. Un résultat remarquable est la constatation que quelques monuments sont encodés e dedans d'une forme géométrique sophistiquée et probablement chargée symboliquement. Cette constatation et d'autre information moins discutable révèlent un niveau de conformité que explicitement suggère qu'il existait une strate d'homogénéité culturelle dans la région Transmanche pendant la période 2500-1500 av.J.-C. Le fait, que les changements que nous attestons, se produisent simultanément dans chaque région, supporte la théorie que les contacts dans la région Transmanche étaient endémiques. Mais ces contacts n'étaient possiblement pas continus ; des périodes d'isolation relative sont pas à exclure. L'information disponible ne c'est pas assez encore développée pour éliminer cette possibilité.

**SECTION ONE**

**RESEARCH DESIGN,  
THEORY AND METHODOLOGY**

# CHAPTER 1

## ORIGINS OF THE RESEARCH

### 1.1 INTRODUCTION

#### 1.1.1 Expanding Horizons

It is generally accepted that contact across the western English Channel – clearly evidenced in Wessex and the far north-west of France (Coles and Taylor 1971) – was firmly established by the latter part of the first half of the second millennium BC. Even if the exact nature of the relationship continues to be debated (Needham 2000), there is broad agreement that the people living in these distinct geographical areas, separated by between 60 and 110 miles of open sea, shared aspects of their material culture and elements of their nascent socio-economic and ritual structures. Conversely, a lack of similar evidence in the extreme eastern part of southern England – especially the Kent peninsula – was once taken to indicate that the region was populated during the late third and early second millennia BC by rather lacklustre and insular folk (Champion 1982; Clarke 1970).

The situation was little different across the water, in the Nord/Pas-de-Calais, Picardy and the Flanders region of Belgium. Seemingly, here too, a significant data vacuum confronted anyone trying to interpret late Neolithic and Early Bronze Age societies (Talon and Bourgeois, *pers comm*); but as Kristiansen (1998, 38) points out: “...*the intellectual history of the past few hundred years has taught us that history is shaped by the conditions and interests of our own time*”; and so it would seem, because a change in research strategies coupled with the rise of developer-funded rescue archaeology, primarily from the early 1990s onwards, has led to a welter of discoveries that are throwing new light on this topic.

Consequently, archaeologists in all three countries are now boldly postulating the theory that contact, synchronal to that seen further west, was flourishing across the Straits of Dover – the narrowest stretch of the English Channel and, at 17 miles wide, the only place where the coastlines are in sight of each other (Perkins 1999; Clark 2004a; Van De Noort 2006). The extent and quality of the evidence supporting this assertion is unclear. Whilst significant Beaker use is now beyond question in east Kent, it is not entirely matched on the near continent and

therefore cannot be regarded in the same way as the evidence which supports a Netherlands/Rhine/Eastern English conduit through which this particular phenomenon reached Britain (Harrison 1974; Lanting and Waals 1972). It is also more fragmented and intangible than that found in Wessex and Amorica.

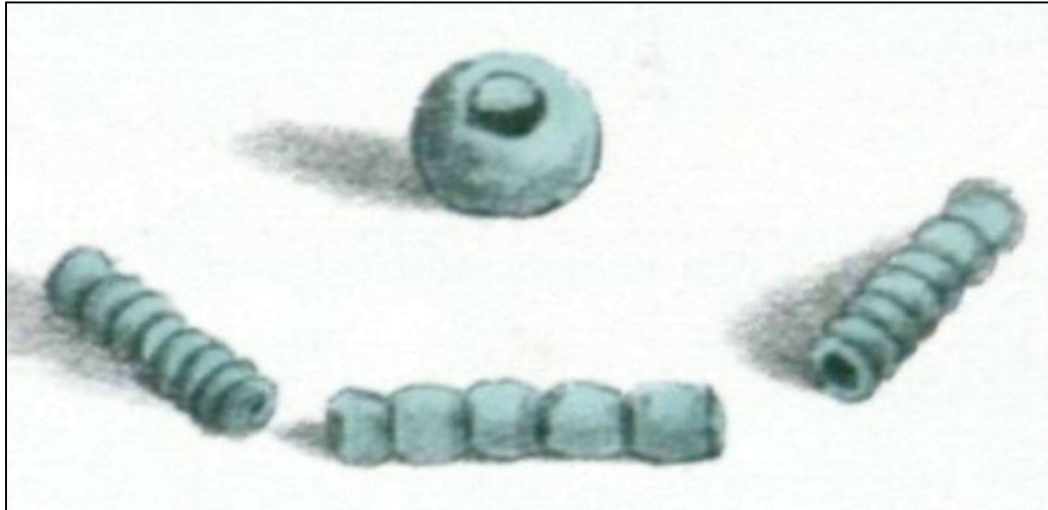


Fig 1.1: The three oblate faience beads and another - marked as fig. 6 in the original plate published in *Archaeologia Cantiana* - discovered in a barrow grave at Ringwould (Woodruff 1874).

Whilst no equivalent of the so-called Wessex Culture, with its rich and exotically furnished burials, has yet been incontrovertibly acknowledged in Kent or its near-continent neighbourhoods, Champion (2004) has recently argued for the existence of a distinct regional group of wealthy Early Bronze Age burials in east Kent. His hypothesis is based on the discovery of various prestige items, including a collection of 217 jet beads and a copper bracelet from Monkton-Mount Pleasant, Thanet (Sheridan and Davis 2009), a jet pendant from Chalk Hill (Shand 2002) and faience beads from Ringwould (Woodruff 1874) (Fig 1.1).

In total he lists ten distinct depositions of exotic or precious artefacts, not including the Ringlemere cup. This is a small number in comparison to the volume of similar material catalogued for Wessex (Annable and Simpson 1964). However, Champion maintains that the social and cultural mechanisms being demonstrated are the same and that this is simply a matter of scale: *“These people had access to the same exotic materials as are seen in greater abundance in better known regions such as Wessex and shared many of the same practices associated with the deposition of objects in the grave,”* (2004, 55). It has also been suggested that the Dover Bronze Age boat, the Ringlemere gold cup and, to a lesser extent, the Langdon Bay bronzes (Muckelroy 1981; Clark 2004b;



Needham 2006) coupled with excavations in the Canche valley (Desfossés 2000) and in Nord/Pas-de-Calais prior to construction of the Channel Tunnel and its infrastructure (Bostyn *et al.* 2000a) provide good cause to hypothesize that by around 1500 BC eastern Transmanche relations were at an advanced stage, quite possibly reaching similar levels of complexity and sophistication to those seen further west. These discoveries mostly date to the middle of the second millennium BC, but they are taken to imply that links had been in place to some extent for generations - perhaps spanning hundreds of years.

Leaving aside arguments as to whether the Dover boat was sea-going or not, by the time it was built, the construction technology had been in use for at least three or four hundred years (Wright 2004). More profoundly, the Ringlemere cup has been compared to similar vessels found elsewhere in southern England and north-western Europe, leading to the suggestion that a common set of rituals was being enacted on both sides of the English Channel (Needham 2006). Other tantalising indications of short-sea contact come from excavations of Neolithic and Bronze Age settlements close to the modern town of Étapes, Pas-de-Calais, on the eastern side of the Canche estuary. British Early Bronze Age pottery has been found – along, it is suggested, with evidence for round houses whose closest counterparts are in southern England, not France (Desfossés 2000, 183-185).

Finally, it is postulated that the morphology of round barrows and ring ditches on either side of the Dover Straits, and their placement in the landscape, is evidence of common mortuary rites (Bourgeois and Talon 2009; Hammond *et al.* 2009). The rationale is clear, such technically advanced and symbolically potent material remains are unlikely to be the product of an incipient inter-regional culture. Nor are they considered to be the result of occasional seaborne (mis) adventures (Clark *pers comm*; Needham 2006; Helms 1988; Van De Noort 2006). So if, as envisaged, Transmanche cultural cohesion existed by 1500 BC, then it must have had relatively deep temporal roots. In which case, its trajectory up to that point in time, if not its emergence<sup>1</sup>, may be detectable in the archaeological record.

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<sup>1</sup> As defined by GOLDSTEIN, J. (1999) Emergence as a Construct: History and Issues. *Emergence: Complexity and Organisation*, 1:1, 49-72.

## 1.2 AIMS AND OBJECTIVES

### 1.2.1 Research questions

This study is intended to test the notion of cultural cohesion expressed at the end of the last Section, within the limits of a clearly defined range of data. Funerary remains have been chosen because they represent the most complete, prolific and varied archaeological dataset to have survived from the period. Only material dated earlier than 1500 BC and later than the generally accepted metal using horizon of circa 2500 BC will be used. This has been extracted from the output of archaeological investigations into the treatment of the dead on either side of the Dover Strait – specifically, and in modern terms, the littoral areas of Kent (Zone 1), east and west Flanders (Zone 2) and Nord/Pas-de-Calais and Picardie to the Somme valley (Zone 3) (Fig 1.2).

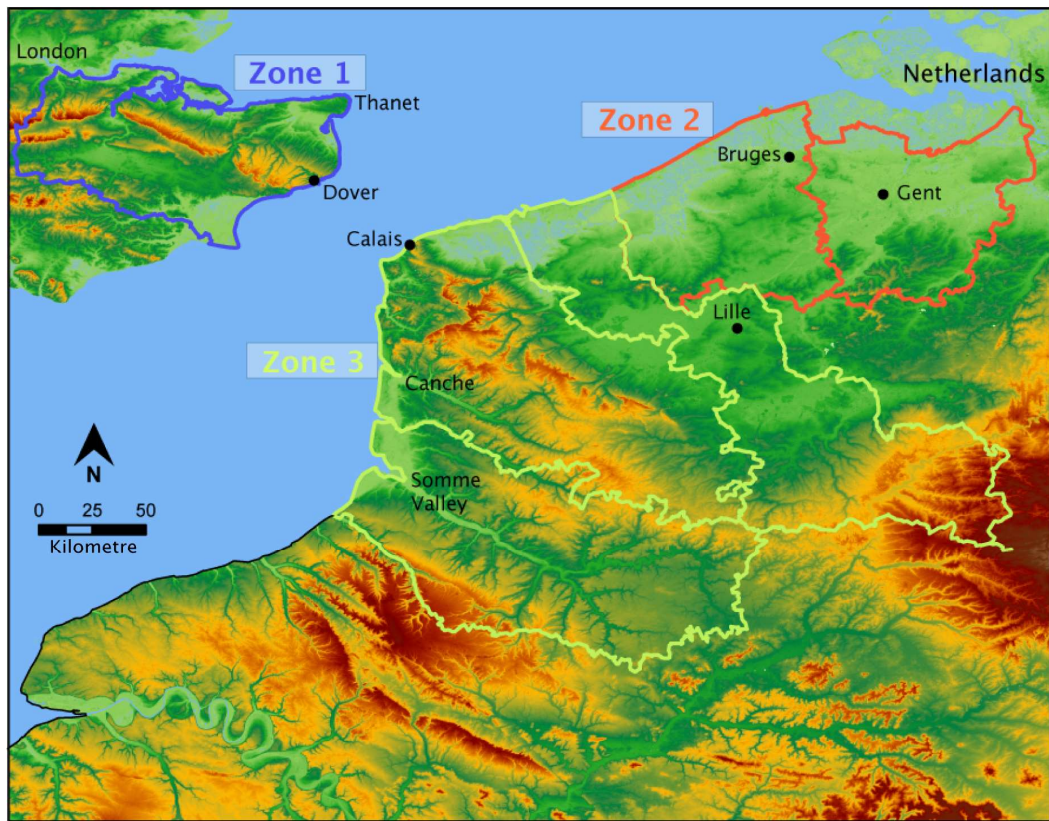


Fig 1.2: A relief map of the English Channel region created by the author using NASA's Shuttle Radar Topography Mission (SRTM) data, showing the areas under investigation. The individual study zones of Kent (1), Flanders (2) and the Nord/Pas-de-Calais (3), are colour coded.

Whilst it is accepted that such political constructs are meaningless in the context of the Early Bronze Age, the rationale behind this choice of boundary is simple; these areas lay either side of the narrowest stretch of the English Channel, and unlike the Netherlands and north-western France, or Wessex and the Thames

Valley, they remain comparatively under-researched, particularly in respect to Needham’s postulated “Networks of Contact, Exchange and Meaning...” (2006a).

So, the questions to be addressed by this scheme of research are:

- 1 Can the funerary rites for the period 2500-1500 BC, as portrayed in the available archaeological record, be resolved in sufficient detail for meaningful comparisons to be made between the littoral areas of Kent and those of the Flanders region of Belgium and north-eastern France?
- 2 If so, can such comparisons be used to determine the existence or otherwise during that period of shared social/cultural structures on either side of the defined maritime divide?

The objective is not to definitively prove or disprove that contact was taking place – although such an outcome is not explicitly excluded - but to test what the available data is capable of determining with regard to the possibility of short-sea channel, or Transmanche, contact during the late third and early second millennia BC.

### 1.3 NATURE OF THE EVIDENCE

#### 1.3.1 Complementary data sources

The data falls into two specific categories:

- 1 The output from aerial (and other non-intrusive) surveys;
- 2 That extracted from excavation reports.

There are advantages and disadvantages that accrue from the use of both sources and these are summarized in Table 1.1:

Type of Evidence	Aerial Photography	Excavation
<b>Dating</b>	Interpreted, indirectly	Potential for absolute and relative dating. Phasing evidence also possible.
<b>Morphology</b>	Overall shape and size is usually discernible, within the limits of the available technology. Ditch numbers, diameters etc, and some internal features may also be visible.	Dependent on preservation, but in general a more detailed analysis is possible, especially if modern stratigraphic techniques are employed.
<b>Function / use</b>	Limited analysis possible, i.e., relationship to other barrow/ring ditches, position in landscape etc.	Changes through time are often discernible. Artefact recovery and the detection/excavation of associated human depositions are informative – but the problem of poor preservation and consequent loss of evidence remains.
<b>Location</b>	Accuracy is usually within known and manageable limits.	Mostly accurate – dependent on surveying/ recording methods.
<b>Context</b>	Provides broader landscape coverage.	Site specific.

Table 1.1: A ‘cost-benefit’ analysis of the two major data sources, (after Jones 2006).

### 1.3.2 Aerial Surveys

This research draws heavily on aerial survey data, so it is imperative that certain general issues be considered in relation to this evidence. Firstly, it is not always clear what criteria were used in determining whether certain crop marks are, in fact, late Neolithic or Bronze Age round barrows or ring ditches. Confidence is high in regard to the Kent data because the Royal Commission made its criteria explicit when reporting on its survey (Edis *et al*, 1989, and Edis & Horne 1989, para 3.2.12), and this subsequently served as a model for later air survey research in the county and elsewhere. Additionally, many excavations have taken place in Kent, particularly in Thanet, on monuments that were first identified from aerial photographs. When this has happened the designation has invariably proved accurate<sup>2</sup>. In Flanders, all the data comes from a single long-term research project run by a team from *Universiteit Gent*. The interpretations made by their lead analyst have been tested by excavation or auguring on at least 45 occasions and proved correct each time (Bourgeois, *pers comm*). Similarly, in north-eastern France, especially the Somme Valley, excavations have always supported earlier interpretations (Toron, *pers comm*). It seems reasonable therefore to accept the data as presented.

This is not to say that the aerial survey material is without problems. In particular, the sources are varied – covering different geological areas, carried out in different ways, at different times and for different reasons. As this is a comparative study, it is essential that methods be devised to minimize, or account for such differences. Issues of potential bias are also of concern and will be addressed at various points within this account.

### 1.3.3 Excavations

In relation to the excavated evidence, it is clear that differences exist across the study area. This is partly a consequence of varied archaeological traditions – such as the impact of antiquarianism and amateur societies on British archaeology - and partly a function of environmental factors and human agency; geology, hydrology, topography and land use. There are, for example, very few artefacts of

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<sup>2</sup> In fact, anecdotal evidence suggests that air surveys often understate the number of third and second millennia barrows or ring ditches located in a given area (Moody *pers comm*).

any kind that have survived for around 4000 years in the corrosive sandy soils of Flanders; intensive agriculture and urbanisation have also taken their tolls. Consequently, archaeological sites dating from the late third and early second millennia BC are less common and are generally less well preserved in north-eastern France and western Belgium than those of south-eastern England. To some extent this is offset by the fact that there has been a marked increase in archaeological activity in all three regions over recent decades, coupled with a greater understanding and attention to landscape settings, context, site formation and post depositional dynamics. Therefore, greater weight is put on interventions<sup>3</sup> such as those carried out preceding construction of the Channel Tunnel, its rail-links in Kent and the Nord/Pas-de-Calais regions, and in many other developer-funded investigations - particularly in the Isle of Thanet<sup>4</sup>.

A difficulty that arises though, is that so many of these investigations have only been written up to ‘grey’<sup>5</sup> report stage and still await publication. In other cases, monographs, books, journal articles, collected works, syntheses, conference papers, unpublished dissertations and theses, etc<sup>6</sup> - have provided invaluable information. This is particularly relevant to the French and Belgium data where gaining access to grey reports proved to be especially problematic; although the task was made easier by the assistance of colleagues at the *Universiteit Gent*, *L’université de Lille 3* and *L’institut National de Recherches Archéologiques Préventives (INRAP)* who located some of the more obscure reports and also generously shared their own unpublished research materials. Despite this, significant differentials remain, particularly in relation to the quantity and variety that is available, with Kent providing a greater volume and a more complete dataset than the other two study zones. A primary task, therefore, has been to establish where data equanimity exists and conversely where direct comparison is not achievable. The strategy for addressing this is explained in Chapter 3, ‘Methodology’.

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<sup>3</sup> Essentially those that have taken place since the inception in Britain of the PPG16 planning regulation in 1992.

<sup>4</sup> It should also be noted that the results of a number of earlier archaeological investigations are also utilised – but only when accuracy is beyond reasonable doubt.

<sup>5</sup> This is the colloquial term for an interim, evaluation or developer report.

<sup>6</sup> All are listed in the attached bibliography and appendices.

## 1.4 CHRONOLOGY

### 1.4.1 Comments on dating conventions

It is important from the outset to acknowledge that this research has been conducted within three modern culturally and politically distinct national boundaries – each with its own set of archaeological customs and practices. Nowhere is this more evident than in conventions relating to chronology. It is therefore necessary, for clarity and consistency, to establish the standards employed within this thesis.

In general, when referring to absolute dates, French and Belgian archaeological reports favour the use of years BP whilst in Britain cal BC tends to be the more commonly used expression. This thesis will use both years BP and cal BC in accordance with the scheme established by Higham (2002). Where BC is used on its own this indicates solar years in the Gregorian calendar, which are not necessarily supported by radiometric analysis. Periodisation nomenclatures and their respective calendrical upper and lower dates present a more complex problem, as explained below in Section 1.4.2.

### 1.4.2 A general framework

This exposition on chronology does not deal with radiometric dating evidence. Details of that can be found in Chapter 4. What follows is best described as a general framework within which the research has been conducted.

A thousand years period is under examination, beginning around the middle of the third millennium BC, and broadly consisting of the eras traditionally referred to in Britain as the late Neolithic and Early Bronze Age. Together these are bounded by distinct technological, social and cultural changes, primarily heralded by:

- 1 The appearance of metal artefacts (Warmenbol 2004; Bradley 2007, 146);
- 2 Developments in ceramics, especially the proliferation of novel and precocious Beaker pottery vessels<sup>7</sup> (Mercer 1977; Blanchet 1984, 75-100);
- 3 Distinct changes to funerary rites and associated monumentality (Brun *et al.* 2005, 107-109; Bourgeois and Cherrette 2005, 48; Garwood 2008).

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<sup>7</sup> At least in Britain, Ireland, the Netherlands and south-western France.

It draws to a protracted end, no later than 1500 BC, and is ultimately distinguishable because:

- 1 Beaker use fades away (Needham 2005b);
- 2 Cremation, long present as a lesser rite, eventually takes over from inhumation as the dominant archaeologically attestable method for disposing of the dead (Garwood 2008, 41);
- 3 Evidence for settled communities increasingly appears in the archaeological record from this time onwards (Yates 2007, 107-133);
- 4 Change in land management - evident as field systems (Yates 2007, 107-133).

This is a rather broad-brush approach and it hides considerable variability and complexity, but the above points will be covered in greater detail as necessary. This abridgment is intended to provide a general framework for the following chronological summations and the consequent concordance.

### 1.4.3 National chronologies

#### A. Britain

In the UK the most widely used Bronze Age chronology is that established by Needham (1996). He begins in 2500 cal BC and ends in 750 cal BC, dividing this time span into seven periods according to ‘cultural packages’ that are, in turn, linked to radiocarbon dates. Those relevant to this study are periods 1-4, as summarized in Table 1.1. Needham includes periods 1-2 in his Bronze Age definitions but incongruously refers to them as the ‘Metal Using Neolithic’. Periods 3-4 he calls the Early Bronze Age. A clue to this obfuscation may be found in the fact that periods 2-3 coincide with the main Beaker using era – long established as problematic.

Needham	Cal BC	Main cultural associations
1	2500-2300	Incipient Beaker use/Copper (mostly from Irish contexts)/Continuity of Neolithic monumental traditions
2	2300-2050	Beaker expansion/Irish Food Vessels/ Bronze metal workings found in grave deposits/Lunulae
3	2050-1700	Late Beaker/Collared and Cordoned Urns/ Food Vessels/Wessex rich burials/Bronze hoards
4	1700-1500	Collared and Cordoned urns/Deverel Rimbury/ bronze hoards/inhumation rite declines in favour of cremations

Table 1.2: A summary of the first four of Needham’s Bronze Age chronological periods (1996).

More recently Needham has expanded and refined his British Beaker chronology (2005b) but this does not significantly alter his previous work (see Chapter 5,

Section 5.2.4 and Fig. 5.4). It should also be noted that an increasing number of copper artefact finds in mainland Britain, dating from 2500 cal BC – 2200/2100 cal BC and mostly from burial contexts, has resulted in a growing recognition of a British Chalcolithic, or copper using, age (Roberts 2008). If this becomes generally accepted, then by inference, the start of the Bronze Age would date to the middle of Needham’s original Period 2. The end of the Early Bronze Age in Britain is marked, as seen in the archaeological record, by the arrival of settled communities and agricultural intensification (Yates 2007) and begins at around 1500 BC.

## B. France

The most recent nationally applied chronology for this era was established by Voruz (1996) using radiocarbon dates from eastern France, Switzerland and southern Germany. Under his scheme the French Bronze Age begins close to 2300 cal BC, slightly earlier than the previously accepted start date. The period prior to this he considers to be the Neolithic proper. An earlier chronology, based on metal typology (Hyatt 1956) has the Neolithic ending at around 2100 BC, to be followed by a 300-year long Chalcolithic before the Bronze Ancien begins in 1800 BC. This is sub-divided into three phases until the Bronze Moyen gets underway at around 1500 BC (Table 1.3).

Voruz	Cal BC	Hyatt	BC
Neolithic	-2300	Neolithic	-2100
Br Ancien 1 & 2	2300-1850/1600	Chalcolithic	2100-1800
Br Moyen B1	1700-1600	Br Ancien I, II, III	1800-1500
Br Moyen B2	1600-1500	Br Moyen I, II, III	1500-1200

Table 1.3: A comparison of the Vortuz and Hyatt chronologies.

Voruz’s Bronze Ancien is also divided according to typological distinctions, primarily the fading away of the ‘*Groupe des urnes à décorés plastiques*’ and the intensification in the use of bronze metal objects. He has difficulty, however, in establishing a precise transition to the Bronze Moyen due to a lack of radiocarbon dates for the period 1850-1600 BC and some typological discrepancies. However, in north-eastern France the appearance of the ‘*Groupe d’Éramecourt*’, typified by inverted urn cremations placed within small stone cists, is taken as an indicator of this shift, and is dated to around 1700 cal BC - although caution is expressed due to the small size of the available sample (Toron 2005, 19). Despite not being sure when the Bronze Moyen starts, Voruz is able to divide it into two periods: B1 and



2, which together last until 1500 cal BC and are distinguished by developments in axes, primarily the appearance of the *Tréboul* style. Bronze Moyen C begins after 1500 cal BC and lasts for about 100 years. It is notable for the apparent influence of southern British Deverel Rimbury pottery on local French styles.

### C. Belgium

Traditionally the Bronze Age chronology of Belgium has been considered, by omission, as synonymous with that of the Netherlands. Its fundamental framework originates from work carried out in the 1960s and 1970s, when three major cultural phases were defined (De Laet 1982, 411-482):

2100-1800 BC **Bronze Ancien/Early Bronze Age (EBA)**. Generally identified with the Unetice culture. More particularly in the Netherlands this period began with the appearance of Barbed Wire Beakers and went on to see the start of the so-called Hilversum culture.

1800-1300 BC **Bronze Moyen/Middle Bronze Age (MBA)**. The time of the Tumulus culture, typified by burials within round barrows - distinguished in the Netherlands by the Elp culture, notable for poor quality earthenware pottery and longhouses with byres, shared by human and animal alike.

1300-750 BC **Bronze Final/Late Bronze Age (LBA)**. Mostly identified with the Urnfield culture with its distinctive cremation rites.

Lanting and Mook (1977) correlated aspects of the distinguishing material culture, primarily those from funerary contexts, with radiocarbon dates to provide an absolute chronology for the Netherlands. Within this, Barbed wire Beakers mark the transition from final Neolithic to the Bronze Ancien (EBA), whilst the Bronze Moyen (MBA) is divided at the junction between Hilversum and Drakenstein ceramics and changes in burial traditions. This chronology was later refined when more radiocarbon dates became available (Lanting and Van Der Plicht 2002).

Lanting & Mook (1977)	Cal BC	Lanting & Plicht (2002)	Cal BC
Bronze Ancien	1950-1700	Bronze Ancien A1	2150-1775
Bronze Moyen-1	1700-1550	Bronze Ancien A2	1775-1575
Bronze Moyen-2	1550-1250	Bronze Ancien B	1575-1475

Table 1.4: A comparison of the Lanting and Mook and Lanting and Plicht chronologies.

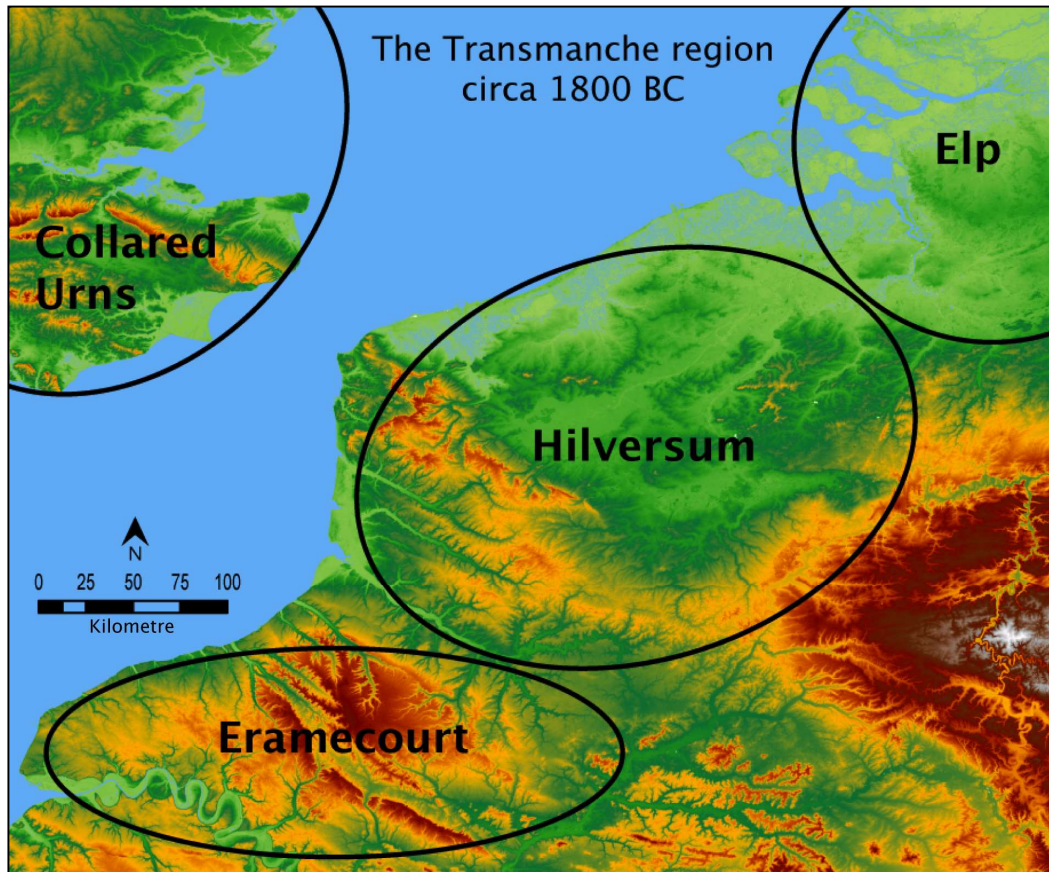


Fig 1.3: A simplified map showing the approximate distribution of primary ceramic types from circa 1800 BC onwards. Map created by the author (after Fokkens 2005; Bourgeois and Talon 2009).

More recently it has been suggested by Warembol (2004) that a Belgian chronology can be established now that radiocarbon dating sequences are available (Bourgeois *et al.* 1996). However, these have mostly been extracted from charcoaled wood found at the bottom of round barrow ditches, so once again caution is advised. Bourgeois, nevertheless, tentatively places the Belgian, or more specifically the Flanders', Early Bronze Age at 2000-1800 cal BC and the Middle Bronze Age 'A' to 1800-1500 cal BC (Bourgeois and Talon 2009, 40-41), closely corresponding with Needham's Periods 3 and 4.

#### 1.4.4 Chronological concordance

It can be seen from Table 1.5 that, despite the differences in terminology, there is broad agreement across the national boundaries as to when each of the major changes took place. Within the Transmanche region the transition from the late Neolithic – or, as some would say, the Chalcolithic - to the Early Bronze Age occurs just prior to 2000 BC and comes to an end by 1500 BC, with a cultural and material shift being apparent around 1700 BC.

BC	Needham UK	Veruz France	Bourgeois Belgium	Lanting & Plicht Netherlands
2500	P1 Metal using Neolithic	Neolithic	Neolithic	Neolithic
2400	Chalcolithic	Bronze Ancien A1	EBA	Bronze Ancien A1
2300				
2000	P3 EBA (II)	Bronze Ancien A2	MBA A	Bronze Ancien A2
1900	P4 EBA (III)	Br Moyen 1		Br Ancien B
1800		Br Moyen 2		
1700				
1600				
1500				

Table 1.5: A concordance of the various chronological schemes compiled and graphically illustrated by the author.

Therefore, for the purposes of this research the following simplified Transmanche periodisation is proposed:

Period	Starts BC	Ends BC
Metal using Neolithic	2500	2000
Early Bronze Age	2000	1700
Early/Middle Bronze Age	1700	1500

Table 1.6: A simplified Transmanche periodisation table proposed by the author for use in this scheme of research.

## CHAPTER 2 THEORIES AND MODELS

### 2.1 APPROACHING THE DATA

#### 2.1.1 The need for theory

Without the benefit of verifiable and unambiguous historical records, archaeological evidence and material culture has to be interpreted by recourse to theoretical deduction or modelling<sup>8</sup>. However, in the prevailing post-processual environment differing schools of thought abound – none of which can truly be said to have ascendancy, only different degrees of ascendancy. The result is that approaches constantly vary, depending not just on the nature of the evidence under scrutiny but also on the aim(s) of the research and the standpoint of those carrying out the work. Consequently, the integrity of any archaeological investigation can only be verifiable if the theoretical approach is explicit.

In order for that to be so in this case, it is necessary to review the options; but it would be profligate and impose an unnecessary burden on the reader if a description and critique were to be provided for every strand of philosophical thought and experimentation that has permeated archaeological theory. Therefore, this Chapter is intended to serve as an appraisal of the chosen methodological strategy – elaborations upon which will take place in context.

#### 2.1.2 Benefits of a mixed approach

The aerial survey results and excavation reports accessed as part of this research have generated a significant quantity of material apparently relating to late third and early second millennia BC funerary practices. These two major categories have provided very different types of data. Even so, an empirical approach such as that advocated by the processual school of thought, would quite possibly suffice if this research were solely intended to analyze and compare data. Stoertz (1997) provides an example of a study that is, in essence, conducted in this way. It consists of a comprehensive and detailed catalogue of crop and soil marks on the Yorkshire Wolds, as recorded by aerial survey. These are analyzed and

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<sup>8</sup> Occasionally aided by ethnographic analogy.

categorised according to their apparent forms and possible functions but no attempt is made to give more meaningful interpretations to the many observed phenomena. This same approach was applied even more distinctly in Edis & Horne's (1989) analysis of Kent crop and soil marks. Others though, such as Ampe *et al* (1996b), Woodward (1996), Brück (2000), Garwood (2003), have attempted to use similar, but rather more defined and concise, datasets to go further in their investigations of Bronze Age funerary activities; seeking to provide possible explanations for factors such as the choices of location, morphology, inter/intra-monument relationships, density levels, trajectory of use and reuse, etc.

This study aims to do likewise in order to test for the existence of shared social structures/sharing communities across the defined Transmanche research area. The data derives from the surviving detritus of treatments meted out to the dead - a complex, enigmatic and uniquely human behavioural pattern. For this reason, the esoteric human mind cannot be ignored. A mixed-method research design, as outlined below, is appropriate in such circumstances:

### **A. Quantitative**

When practitioners of the 'New' archaeology adopted the quantitative method they did so under the influence of the structural functionalist approach to data analysis (see Kantner 2008 for an historical perspective on quantitative methods as applied to regional studies in archaeology, and Appendix A). The use of this sociological concept in archaeology was extensively critiqued and its weaknesses exposed more than a decade ago, most potently by Hodder (1994) and Shanks and Tilley (1994). One of the primary concern was that structural functionalism makes no attempt to understand or explain beliefs or ritual activity.

A good example of this can be found in a comparative study of the Bronze Age chiefdoms of Denmark, the Incan Empire, and the Moche society of South America (DeMarrais *et al.* 1996). The authors emphasize the material aspects of society such as the environment, economy and technology, whilst disregarding the intangible social meanings of ritual and symbolism. They avoid the need to explain belief systems, even though they admit that an exploration of such matters would: "*inform archaeologists about unequal access to symbols of status or*

*authority, the efforts of one social segment to promote its ideology over others, and the effects of these strategic activities on the dynamics of social power*” (DeMarrais et al. 1996, 16). Instead, they simply accepted that belief systems, ritual and symbolism existed in these societies and then moved on to concentrate on dominant patterns of material distribution.

They had to do this because the quantitative method deals in generalities and cannot be used to explore unique or unusual occurrences in archaeology; but that does not invalidate it as a research method. Indeed, Shennan comments: *“It is unfortunate that the emergence of ‘post-processual’ archaeology in the 1980s has led to a reaction against the use of quantitative methods.”* Its value is in measuring and evaluating large recurrent datasets enabling widely applicable trends and broad patterns to be identified (Shennan 1997, 5-20). This makes it ideal for processing the raw output from aerial photographic surveys and quantifiable elements from within categorised excavation groups and, as such, is used by this research for topographic, spatial and statistical analysis.

## **B. Qualitative**

The prevarication demonstrated by DeMarrais *et al.* (1996) would be inappropriate for this research because exploring aspects of belief and ritual is fundamental to the stated aims. Qualitative research is meaning-based, and therefore concerned with contextualized human behaviour. It will be applied to the analyses of representative samples from burial depositions, funerary monumentality and associated rites. An appreciation of agency theory (Kristiansen 1998, 42-43; Hodder and Hutson 2003; Dobres and Robb 2000) and phenomenology (Tilley 2004b; Brück 2005) will help to inform the interpretation of the data, owing to their emphasis on the creative and productive powers of the individual.

Another theoretical strand that seems to offer the promise of accessing qualitative insights has its origins in the philosophy of hermeneutics. Hodder (2003, 195-205) has reconstituted this concept for modern archaeology and, in so doing, added the precursory word ‘critical’. It is applied through a process of inter-related questions and answers; best envisaged as an ever-decreasing spiral. Similarities and

differences in data are progressively tested against theoretical models in order to achieve an understanding and thereby reconstruct a coherent narrative: Why did some late third and early second millennia crouched burials contain Beaker pots and others not? Are all circular monuments the same throughout the Transmanche study area? Why did cremation burials become increasingly more prevalent? Why are some circular monuments apparently devoid of human depositions? And so on...

The answers to such question will unavoidably be presented in the context of a present day mindset. However, this does not devalue them. Hodder states that: *“As the fit becomes tighter and as our understanding begins to fit more and more cases, our interpretations gain ground,”* (Hodder and Hutson 2003, 199). The danger in this approach is of creating self-fulfilling prophecies by constructing questions that influence their own outcomes. One way of guarding against this is to seek alternative views from sources outside of archaeology, which in this case might include funeral directors, sailors and farmers.

These and similar approaches are constantly under attack for being relativistic and unempirical - criticisms, which for the most part are indisputable. Nevertheless, they potentially offer ways to access how past peoples perceived and understood their world. In the context of this study such an approach may help to reveal coherent, perhaps even novel, social structures; exchange networks and convergent ritual activities. Achieving this requires an appreciation of the following concepts and how they can be applied to material culture (identified here, but explored further later in this chapter):

1. The relationship between function and symbolic meaning (Kristiansen 1998, 42-43; Hodder and Hutson 2003)
2. The mechanics of, and reasons for, trade and exchange;
3. The varied motives for travel.

### **2.1.3 Symbiotic viewpoints**

Individually, the quantitative and qualitative approaches provide distinct perspectives. By combining them for this study they become complementary, with each building on the strengths of the other. In the context of this study, both

methods are comparative in nature, seeking to establish points of similitude or disjuncture between the three geographically defined study zones. Dialectic discourse is entrained: the qualitative research puts the emphasis on understanding, context, introspection and theory construction, which in turn provides the foundations for quantitative measuring, scaling and generalizations. It is anticipated that this symbiotic approach will provide a clearer picture, than might otherwise be possible, of the relationships, patterns and even inconsistencies or anomalies contained within the various research datasets.

## **2.2 THEORETICAL MODELS AND THE TRANSMANCHE QUESTION**

### **2.2.1 Clark's 'People of La Manche'**

In his exposition of the 'People of La Manche' Clark (2004a) postulates the existence of an early Middle Bronze Age culture that straddled the English Channel – possibly with a major centre near modern day Étapes in the mouth of the valley of France's river Canche. He states: "*We seem to have evidence of a community with similar expressions in terms of funerary and domestic architecture, ceramics and metal artefacts, lying on both sides of the English Channel...*" (2004a, 7). In an appropriate demonstration of *entente cordiale* he agrees with French scholars who assert that this culture originated in southern Britain and implanted itself in enclaves or colonies on the Continental side of the Channel (Clark 2004a, 7).

Evidence from French excavations (Desfosses 2000), further prompts him to suggest that the link survived for hundreds of years and: "*...must have been maintained by regular social and economic intercourse by sea,*" (Clark 2004a, 7). He suggests that at first it was kinship ties that ensured regular contact, but considers economic motives to be a more likely reason for the long-term persistence; facilitating the movement of such things as bronze, tin, perishable consumables, livestock and even travellers (*pers comm*). If Clark's 'People of La Manche' culture did take root and flourish over time it implies that a precocious socio-political structure must have developed in order that they could influence – possibly even control - the passage of goods and people in both directions across a hazardous stretch of open water.

### **2.2.2 Needham's 'Maritory'**



Another viewpoint is provided by Needham (2006). In his preliminary assessment of the Ringlemere gold cup, found close to the eastern coast of Kent - and the 15 other 'precious' associates he identifies - he also sees evidence for a maritime contact network. This time spanning the Channel-Rhine-Frisian geographic zone and beginning during the first half of the second millennium BC – approximately the same time as Clark's people of 'La Manche'. Needham states: "*The hypothesis of a ritual servicing of a maritime exchange network seems to make sense of these extraordinarily unusual and highly crafted objects – the precious cups...*" (2006, 81). He contends that membership was not just dependent on possessing one of these vessels, but on shared experiences, common causes and most importantly on knowing how and when to use the cups' power.

This hypothesis is open to question. The cups' association as a group is difficult to substantiate. Seven are made of gold but they all display distinct physical and stylistic differences. Of the others, two are silver; two are in amber and five in shale. Needham links them on the basis that all were discovered in locations with relatively close proximity to water; and it is true that seven out of the nine British examples were found along the Channel coast. However, this might be a consequence of the area being a contact zone through which prestige items flowed. Of the Continental finds, three were in Brittany. The others were deep inland, although close to the river Rhine. Needham argues that these cups were not traded items, nor were they specially made for the grave (Needham 2006, 81) - despite most having been found in funerary contexts. He primarily bases his designation of them as ritual paraphernalia on the fact that eleven had round bottoms, meaning they had to be held when containing liquids. However, that presupposes they did not have stands made of a material such as wood, which has not survived. It is also possible that they could have been placed in hollowed out surfaces.

Finally, the presence of amber pommel pieces at Ringlemere prompts him to envisage the existence of a loose but exclusive alliance of socially and structurally diverse seafaring communities – akin to Renfrew-style peer polities - which were trading in this novel material and also in certain types of bronze axe. Needham asserts that these communities held dominion over an area he has dubbed a

‘maritory’ – as opposed to a territory (Needham 2009). He concludes by declaring that this postulated alliance constitutes the beginnings of the Channel Bronze Age.

## **2.3 THE MOVEMENT OF PEOPLE, IDEAS AND GOODS**

### **2.3.1 The role of trade and exchange**

To a great extent, both Clark and Needham have taken account of the mounting empirical evidence supporting the conjecture that people – as well as ideas and objects - were moving around north-western Europe during the third and second millennia BC. Previous generations of archaeologists had only been able to infer that such mobility was an embedded cultural component during this period. Now, mainly due to the application of relatively new scientific tests (Merwe 1982, 354), it can be said with much more certainty. However, the fact that archaeology has acquired such methods for confirming a phenomenon - which most scholars already took to be self-evident - is of limited consequence when trying to determine why it was happening.

In general, answers have been sought to this question from within the areas of human interaction defined as ‘trade and exchange’. However, this needs to be clarified: Bradley (2003) emphasizes the problems associated with the use of generic nomenclatures in archaeology. It is important therefore to appreciate that in this context such terminology must not be taken to imply that the driving forces are exclusively economic in character: as in the pursuit of raw materials or the distribution of manufactured goods. Such prosaic reasons undoubtedly provide part of the answer but only in respect of the practical and secular. Indeed, Helms (1988, 266) points out that these labels can lead to a ‘glossing over’ of the full range of motives for long-distance travel. That being the case, it is advisable to review the pragmatic before moving on to consider more esoteric and ideological motives.

#### **A. Mechanisms of trade**

Orser offers this view (1996, 191): *“In the course of human history individuals and social groups discovered that they wanted exotic material objects for which they themselves did not possess the knowledge, raw materials or perhaps even skills to make themselves. In order to obtain these desired items, people learned*

*that they would have to make contact with those who had these items and attempt to acquire them”.*

Generally, the mechanics are divided into either down-the-line or direct long distance trade. The most straightforward is the latter. In this case, exchange transactions of a reciprocal nature do not necessarily have to take place: if the product is a raw material, it may simply be acquired from source. Strictly speaking this does not constitute trade so much as prospecting. Nevertheless, it could still require people to travel significant distances; for instance, in pursuit of amber from the west coast of Jutland, Kimmeridge shale from Dorset or tin from Cornwall. This type of distribution is detectable in the archaeological record because products made from these materials are found in locations far from their source without any signs of fall-off<sup>9</sup> on route.

When a dispersal pattern includes fall-off (Orton 1982, 107-134) it is usually taken to imply that down-the-line trade was taking place. It simply means that objects move along a distribution chain, from hand-to-hand or from one ‘dealer’ to the next. In this way Le Grand Presigny flint from central France or jadeite axes from the Swiss Alps ended up all over Europe, without a single person leaving their ‘home’ territory in order for it to be so. This method of distribution is seen as an effective rebuttal of the early twentieth Century ‘pots equals people’ view. At one time it was assumed that whenever an archaeological excavation recovered objects alien to the place of their deposition this was evidence for the movement, or expansion, of the source culture.

This has implications for the enigmatic Beaker pottery vessels, which pervade much of the research period. According to such a view, Beaker pots are found right across north-western Europe because the original ‘Beaker People’ put them there<sup>10</sup>. However, studies of written records of trading civilisations such as the Minoans and the Egyptians make it clear that sophisticated networks can move objects far from the cultures that created them.

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<sup>9</sup> Whereby the frequency of find-spots for a particular type of artefact diminishes in direct proportion to the distance from its source.

<sup>10</sup> This is a concept that is now almost universally rejected.

## **B. Reciprocity, redistribution and market exchange models**

Research into why goods are distributed has revealed that it should not be assumed this is necessarily the result of simple economic transactions. The movement - and indeed the possession - of certain objects can be symbolically laden. Polanyi (1944, 43-45) was one of the first to make a major contribution to the understanding of such symbolism by describing three common modes by which material distribution takes place. He called the first 'reciprocity' and its taxonomy owes much to theoretical models developed through multiple ethnographic studies.

One of the most extensively scrutinized and oft used examples is that of the Kula network of Melanesia (Malinowski 1922). In essence, the inhabitants of a series of small Pacific islands maintained mutually beneficial social relations through ritualized gift exchanges - most often, in this case, in the form of shells.

It was French sociologist Marcel Mauss who originally described this type of reciprocity in a book entitled 'The Gift', which was written in the 1920s and originally published as an "*Essai sur le don. Forme et raison de l'échange dans les sociétés archaïques*" (An essay on the gift: the form and reason of exchange in archaic societies). His main tenet was that gifts are never free – epitomized in the vernacular phrase, "*there's no such thing as a free lunch*". In other words, gift giving imposes an obligation on the recipient – perhaps simply the continuation of an existing friendship or alliance – and, if asymmetrical, places the giver in a superior position until the debt is repaid. The importance of this insight is that it explains one way in which segmented societies lacking a monetary economy become bound together.

Such symbolic gift giving must be seen as distinct from the exchange of mundane commodities such as foodstuffs or raw materials - which may well take place simultaneously (Landa, 1998, 141-172). These symbolic gifts, as in the Kula shell necklaces and bracelets, are often imbued with a far higher prestige value than would seem appropriate for their supposed intrinsic worth - demonstrating the fact that value is an arbitrary concept, as Renfrew points out: "*Even gold is not*

*intrinsically valuable in any absolute sense,*” (1993, 8). This is most relevant when looking at the exchange of ‘primitive valuables’, a phrase first coined by Dalton (1965). He realized that ceremonial exchanges, between non-state societies, used ‘tokens of wealth’ that are, in many cases, only imbued with prestige by the givers and receivers. The exchanges themselves also happen for one of two reasons: either to establish or maintain an alliance, or in a competitive manner, used to settle rivalries.

The second and third of Polanyi’s modes of exchange are ‘redistribution’ and ‘market exchanges’ (Polanyi 1944, 48-53). In both these cases he borrows, to some extent, from the German geographer Walter Christaller’s theory of *central places* - first published in 1933 as *Die zentralen Orte in Süddeutschland* (Central places in Southern Germany). In essence ‘central place’ theory provides a framework for exploring settlement patterns based on the human need for goods and services. Each central place creates a ‘sphere of influence’ on its periphery, within which commodities and people flow back and forth (Zvelebil 2006). Later this concept was expanded and adapted by Immanuel Wallerstein (1974), who dubbed the process ‘core-periphery’ and used it to explain the advance of imperialist capitalism. This has more relevance to the concept of market exchanges but even the redistribution model relies on some form of central organisation, albeit on a smaller scale. Redistribution generally requires the collective storage of resources - which have been entrusted or submitted to a controlling administration – an example of this is the temple and priesthood structure seen in ancient Egypt. This method of economic control is generally accompanied by political control. However, it can also ensure that fishermen get to eat fruit whilst farmers eat fish (Sahlins 1972, 215-218). Redistribution is, therefore, a form of internal exchange.

Market exchanges, on the other hand, are internal only in the sense that they usually occur within single socio-political units. However, this does not have to be the case. In his study of pre-Columbian complex societies, Hirth (1978) defined an entity, which he dubbed ‘the prehistoric gateway community’. These sat at interfaces between different socio-political groups. He said: “*They often occur along economic shear lines where cost factors change and where there are*

*economic discontinuities in the free movement of merchandize. The function of these settlements is to satisfy demand for commodities through trade,”* (1978, 37). Markets established in coastal settlements are a good example, being generally cosmopolitan in nature, attracting seaborne merchants and inland traders.

That places such as this existed can be implied from the Uluburun shipwreck, which was discovered in 1982 in the Mediterranean Sea, off the south Turkish coast. This Phoenician vessel had foundered around 1400 BC. It contained an astonishingly varied cargo, including 350 ‘oxhide’ copper ingots, amphorae filled with tree resin and olives, wooden planking, elephants tusks, bronze tools and weapons, glass and gold. The cargo had been sourced from numerous locations around the eastern Mediterranean, from Egypt to Cyprus leading to an interpretation that the crew were possibly freelance middlemen, making a profit by servicing the laws of supply and demand (Pulak and Bass 1994).

Closer to home Perkins has postulated the existence of a gateway community in the Isle of Thanet from about 2000 BC to 600 BC (Perkins 1999, 187-200). He suggests that the island’s position, especially during the period when the Wantsum channel was free flowing, made it a natural *entrepôt*, allowing the population to control access into and out of south-east England. However, it is difficult to imagine – excepting reasons of security - why a trading hub would be established on an island, when the same influence and control could be wielded with greater ease from a settlement on the mainland side of the Wantsum.

The discovery of the Langdon Bay and Moor Sands bronze hoards do imply that some form of material exchange was taking place across the English Channel during the middle of the second millennium BC. Both are thought to be the remnants of shipwrecks (Parham and Needham 2006; Muckelroy 1981), although this interpretation is not universally accepted. Samson (2006, 371-388) attempts to argue that such events were not accidents, but acts of deliberate deposition – drawing a comparison with bronze hoards found on land. However, she admits that the dataset on which this proposition is based is very small and states that her aim, therefore, is to open up the possibility of an alternative to the wreck scenario in the hope that interpretations of future discoveries will take this into account.

Regardless of the precise depositional circumstances, about 360 individual objects have been recovered from the Langdon Bay site, which lies just off the coast at Dover. It makes up the largest single group of middle Bronze Age metalwork in north-western Europe, the bulk of which are objects of Continental form. The best-supported interpretation is that this was a cargo of scrap en route for Britain. The implications are significant because it suggests the existence of a sophisticated network to source, transport, process, and redistribute metalwork. Interpreting this as a straightforward economic enterprise would be to ignore the findings of Polanyi and Helms who, as previously stated, assert that such sophisticated enterprises are often driven by powerful and complex motives.

### **C. Looking for meaning in processes of exchange**

Exchange is a term that recognizes that along with, and often exclusive from, the economically motivated displacement of material objects as described by Needham (1993) there are often far more complex cognitive forces at work. As Renfrew said: *“In nearly all human societies there are gatherings of people, some from very distant places which are difficult to explain in terms of the basic needs of ‘economic man’...”* (1993, 9). However, identifying and quantifying the social reasons for human interactions presents archaeologists with a formidable challenge. Hodder (1982, 215) cautions: *“There can never be any direct predictive relationship between material culture and social behaviour”*.

In literate societies intent is often plainly spelt out<sup>11</sup>, as in the large-scale movement of the 18<sup>th</sup> Dynasty Egyptian king Akhenaten and his court to a purpose built capital city. Surviving records of the event suggest that this dramatic population shift was due to the king’s desire to establish a new cult centre dedicated to the worship of a single deity, the Aten; and the abolition of the established state religion centred on Thebes (Kemp 1989). Other examples can be found in the wealth of written accounts from ancient Greece and the Roman Empire or the Viking sagas and the Anglo Saxon chronicles.

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<sup>11</sup> Although it is debatable as to how far any documentary evidence can be taken at face value.

A major difficulty then, in the context of north-western Europe during the period 2500 BC – 1500 BC, is that its population was evidently preliterate. Writing, though, is only one symbolic method of encoding meaning. There are many others: see for instance the Kula shell network referred to above or any of the ethnographic examples provided in Hodder's seminal work 'Symbols in Action' (1982). In all such cases meanings are read through direct observation. Archaeologists cannot do that. The data with which they deal is no longer '*in action*' in the sense of its original use. Nevertheless, any residual evidence of past human activity is, in some way, a deliberate construct, as Hodder and Hutson assert, "*all culture is meaningfully constituted,*" (2003, 156). However, Needham points out: "*As always for archaeology, the difficulties reside in having to interpret mechanisms, rather than being able to observe them,*" (2000, 151). This inevitably presents the possibility of multiple readings and underlines the need to establish robust theoretical models.

#### **D. Peer polity interaction and the prestige goods model**

One such model is Renfrew's 'peer polity interaction'. This presents cultural change as the consequence of influences exerted by an independent group on a neighbour of equal status. This model has been useful in understanding the movement of certain kinds of ideas. It is also seen as an alternative to the world system model, which advocates processes of diffusion, and relies on the dominance of one party over another. Renfrew defines peer polity interaction as: "*The full range of interchanges taking place - including imitation and emulation, competition, warfare, and the exchange of material goods and of information - between autonomous (self-governing and in that sense politically independent) socio-political units, which are situated beside each other or close to each other within a single geographic region, or in some cases more widely,*" (1996, 114). It is often used to explain: "*the existence in the archaeological record of the rather widespread distribution of a particular feature or trait,*" (Renfrew 1996, 124); a major limitation though, is that it primarily applies to societies that have advanced to more complex hierarchical structures. The reason for this qualification is that the interactions, as defined, are thought to work best when an elite is present to instigate and organize them. A similar mechanism can be found in the prestige goods model (Preucel and Hodder 1996, 103). This proposes that social status is



dependent on controlling access to special categories of goods. Dependency relationships are then created with peripheral elites only able to gain access to prestige items through higher status core elites. This form of social dynamic leads to an intensification of exchange and production and is inherently unstable due to the core elite's inability to maintain a monopoly.

On the other hand, the competitive element of peer polity interaction, whether benign or aggressive, is thought to have a more stable outcome. It can explain how societies move to a condition of '*production beyond subsistence*' (Renfrew 1996, 126). When this is achieved it leads to an increase in population – which in itself can generate a need for migration, albeit over a short distance. More importantly, it also creates opportunities for employing craft and other specialists. In turn, this may generate a need to send out people to source raw materials and also to trade in manufactured goods and surpluses.

#### **E. Invoking ethnographic parallels when peer polity is not enough**

Needham called on peer polity interaction to help explain cultural contact. He did so in his assessment of relations between Amorica and Wessex during the late second and early third millennia BC (Needham 2000). He wanted to see if it could account for the cultural changes that can be seen happening in both these places at that time. The model worked in regards to economic factors but collapsed when it came to belief and ritual: "*The ties...were not sufficient to bring more fundamental belief structures into alignment,*" (Needham 2000, 185). So he turned, instead, to Helms (1993). She describes observing one-sided transactions or '*cosmological acquisitions*' in extant societies, which were aimed at drawing: "*upon the resources of the world beyond real human existence (as determined locally), resources that, in coming from places with more mythical associations, were charged with supernatural powers,*" (Needham 2000, 188). In other words, quests were undertaken to distant places in order to bring back '*spiritually powerful materials*'. These could then be used by elites to influence or control the supernatural world and thereby enhance their own status within society.

Helms also helped to inform Van De Noort's exploration of the '*socio-political significance of long distance exchange*' particularly in relation to sea travel and

cross-channel contact during the second millennium BC (2006, 267-287). In paraphrasing her, he states: *“The importance of geographical distance and travel in obtaining knowledge, both sacred and profane, alongside exotic objects as a means of justifying or reinforcing power over people who did not have such access, has been observed [by Helms] in many societies,”* (Van De Noort 2006, 268). In fact, she (Helms 1988, 67) categorically asserts, in regard to travel outside the ‘home society’, that:

1. Economic motives are insufficient on their own;
2. They can include the political, ideological or intellectual;
3. They contain a high degree of self-realisation or personal benefit.

In Van De Noort’s view, any journey to a distant land that involved crossing wide-open tracts of water must have been mystically charged. Shipwright and seamanship skills would not have been enough to ensure success; ritual acts would also be needed to safeguard both boat and crew. More importantly, the shared experience would have bound the participants together in lasting ways. It would have given the expedition leader(s) *“...socio-political benefit: the long-term support of a select, but closely-knit group of followers for many years after the overseas journey,”* (Van De Noort 2006, 281).

The key point, in this context, is that the acquisition of material goods can be viewed as a metaphor, a tangible symbol of the holder’s ability to manipulate arcane knowledge. This has consequences for archaeologists in the way they approach artefacts, as Bloch (1953, 156) said: *“Do you expect really to know the great merchants of Renaissance Europe, vendors of cloth or spices, monopolists in copper, mercury, or alum, bankers of kings and Emperors, by knowing their merchandize alone?”*

### **2.3.2 An empirical attempt at explaining the esoteric**

Renfrew disparaged the post-processual thinking that Van De Noort’s, and to some extent, Needham’s work epitomizes - where *“each worker is encouraged to invent his or her own meaning to develop some personal reading of the prehistoric text,”* (Renfrew 1993, 8). Instead, he advocated empirical methods for determining esoteric motives based on the hypothetico-deductive model. His cognitive processual archaeology *“seeks to revitalize historical explanation and adopt a modified form of positivism that acknowledges that theory and data*

*mutually interact,*” (Preucel and Hodder 1996, 308). He attempts to demonstrate this in relation to explaining motives for ‘*travel beyond the material*’ by enumerating the diversity of potential social and ideological constructs that promote such activities (Renfrew 1993, 10-11) - basing the list loosely on ethno-archaeological foundations, inasmuch as it represented his own subjective opinion. It includes:

1. Participation in large social gatherings;
2. The pursuit of exotic information for personal aggrandizement;
3. As a pilgrimage to distant holy places;
4. To learn, be trained in, or impart particular skills;
5. To serve as a mercenary or warrior;
6. To find a spouse;
7. To visit relatives or friends;
8. As an emissary or messenger.

To his list it is reasonable to add: an emotional journey, to maintain ties of culture, rites of passage, curiosity or a sense of adventure<sup>12</sup>. Renfrew went on to claim that archaeology’s best opportunity for exploring this list of possibilities comes from ‘*moments frozen in time*’ such as shipwrecks, settlements destroyed by volcanic eruptions or the sudden death and subsequent preservation of individuals such as Ötzi the Iceman (Spindler 1993, 14). However, considerable scientific research over a period of nearly two decades has revealed remarkable detail about Ötzi, but it has been unable to explain why he died or reveal the motive for his killing. This does not entirely undermine Renfrew’s rallying call for the scientific approach when trying to reconstitute the ancient mind, but it does weaken his case.

## **2.4 DEATH AND BURIAL**

### **2.4.1 Dealing with fragmentary evidence**

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<sup>12</sup> A minor digression, but worth consideration at this juncture, is the fact that involuntary movements of people can also take place. This might happen because of environmental disaster, warfare or as a result of coercion. One possibility is a straightforward market in slaves as seen in ancient Greece or the Roman Empire DRESCHER, S. & ENGERMAN, S. (1998) “A Historical Guide to World Slavery”, Oxford: Oxford University Press. Another might be the more sophisticated provision of marriage partners for the purposes of forming or cementing political, economic or strategic alliances, as suggested by BRODIE, N. (1997) New Perspectives on the Bell-Beaker Culture, *Oxford Journal of Archaeology*, 16:3, 297-314. This coercion might also encompass hostage taking, prisoners of war or the ‘theft’ of women and children. Certainly pre-Columbian indigenous civilisations such as the Inka carried out raids for the purpose of hostage and slave taking, KUZNAR, L. (1996) Periphery/Core Relations in the Inca Empire: Carrots and Sticks in the Andean World System, *Journal of World Systems Research*, 2:9, 1-28, whilst slavery in north-western Europe can be traced at least as far back as the Iron Age.

There can be few areas of human activity that have been more extensively studied by archaeologists than those surrounding treatments of the dead, and equally few areas more at risk of misunderstanding or misinterpretation. Contemporary religious, ethical, moral and political considerations can serve to inhibit objectivity; but perhaps of more concern, especially regarding prehistoric periods, is the fragmentary nature of the residual evidence. Parker-Pearson put the problem succinctly when he pointed out that archaeologists do not: “...*dig up funerals, only the deposits resulting from their terminating practices,*” (2003, 49).

Furthermore, material remains dating to the research period can only be thought of as reflecting minority rites. In fact, one estimate suggests that inhumation and cremation burials associated with circular monuments were the preserve of less than one in 44 of the population (Green 1974, 159-164) (also see Section 7.3). Additionally, the number of flat grave burials known to exist within the study zones is so small that they can be considered statistically insignificant. This means that the overwhelming majority of the dead from that era were disposed of in ways that have left no trace. Serious though this is regarding the broader understanding of Bronze Age society, its impact on this study is mitigated by the fact that the negative factors are common to each zone – itself a point of comparison.

#### **2.4.2 Human responses to death**

The data that have been extracted bears ample witness to ritualized forms of dealing with the dead. This is a uniquely human response, as Pettitt (2002) suggests: “*We are all so accustomed to the idea of burying the dead that it takes a moment to realize just how peculiar this behaviour really is.*” It is widely accepted that mortuary practices are constituted from within the social, political and ideological structures of their time (Binford 1971; Barrett 1990; McKinley 1997; Last 1998; Chapman 2000; Gillespie 2001; Charles and Bulkstra 2002; Brück 2004; Woodward *et al.* 2005) and there can be little doubt that each is symbolically charged.

Therefore the surviving material paraphernalia of death has the potential to say much about the living. The difficulty lies in finding effective and reliable methods for interpreting this symbolism. One approach is to draw ethnographic parallels –

whereby the rituals and beliefs of extant cultures are studied in order to help explain evidence of apparently similar modes of behaviour in ancient societies. The trajectory of this technique's use in archaeology has been effectively critiqued by Orme (1974); even so, it is worth emphasising Ucko's view that the aim should be to widen horizons not find direct analogies: "*As far as I am concerned ethnographic parallels can only in very exceptional cases suggest a one-to-one correlation,*" (1969, 262-263).

### **2.4.3 Treatments of the dead**

Treatments meted out to the corpse vary considerably depending not just on cosmological and ideological perspectives but corporeal factors as well, such as social rank or status, geographic locality and even the era in which death occurred; all of which has led Parker-Pearson to assert that: "*there are no universal interpretations of how the corpse is used,*" (2003, 71). Nevertheless, within the diversity that he envisages there is still order, making it possible to at least classify the material evidence under broad headings, as demonstrated by Chesson (2001, 2-3):

- The corpse, its deposition and treatment;
- Material culture, worn, used or carried;
- The built environment;
- Evidence for ceremonies and practices (primary and secondary);
- Epigraphic and artistic representations;
- Results of scientific analysis.

Furthermore, the concept of a rite of passage for the dead seems to be commonly applicable. The processes of separation, transition and reincorporation (Van Gennep 1960, 146-165) through death may manifest themselves as novel rituals, created by fertile minds, but an ever-present imperative is the successful transformation of the deceased from living community member to revered ancestor. In between these two states exists a liminal condition, a time of uncertainty. This transitional stage inevitably engenders concern and may be considered a primary factor driving the need to ritualise the processes of death. Others reasons can be broadly categorised as follows:

- **Personal:**

It helps put structure into the grieving process and enables healing to begin. It assists the bereaved in coming to terms with what has happened and provides a means of 'letting go'.

- **Social:**

Ceremonies of this kind are an occasion when kin groups and communities come together. This reinforces social structures, providing a chance to venerate elders and ancestors and to reaffirm beliefs and traditions. It is also an opportunities for the varied sectors of society to intermingle.

- **Political:**

Funerals are emotionally charged and can be a focus for dissent and a time to ferment rebellion. The chosen location and the roles played by particular mourners can be of great political significance - often intricately linked to matters of dominion, inheritance and succession.

- **Religious/ideological:**

Particular rites are designed to encapsulate belief systems. Ideas such as invoking a regenerative cycle or dispatching a 'soul' to its appropriate destination are common among many cultures. Often the intention is to protect the living by ensuring that the deceased's spirit does not inappropriately linger in this world.

If Barratt (1990) is correct then broad categories are of limited value. His investigation of Bronze Age barrows in Wessex led to the conclusion that specific motives behind most mortuary practices are irrecoverable in any absolute sense (1990, 184-186). Nevertheless, he does lay claim to detecting increasing complexity over time and a tendency to move from private ceremony to public performance. Chapman (2000), in his exploration of Neolithic and Bronze Age mortuary practices at Kisköre-Damm, Hungary, concludes that the dead are objectified in order that they can be used to construct distinct personal and group identities and to portray 'cultural resistance'. This is achieved through the imposition of 'micro-traditions', including the association of specific grave goods

with individuals and the spatial ordering of graves, on the global mortuary practices.

#### **2.4.4 Forms of death**

Relatively recently it has also become apparent that along with biological death comes interactional and symbolic deaths, the latter two being socially and culturally constructed. Orcutt (1980, 35-36) defines these in the following ways:

1. **Biological death:** the ‘machine’ stops functioning,
2. **Interactional death:** established behaviour patterns are broken,
3. **Symbolic death:** names, labels, tokens of identity are destroyed.

Each is constituent in the construction of personhood – not a concept that easily lends itself to concise or absolute definitions. Modern western societies tend on the whole to confer absolute value on the ‘individual’, making the term interchangeable with that of ‘person’. In many cultures personhood can be defined as a set of rights and duties bestowed on an individual, meaning that not everyone necessarily achieves full status, for example: slaves, women and children. Additionally, personhood can be granted to a collective such as a social class, clan or even a craft guild. When admitted to one of these an individual becomes subsumed, owing their authority or place within society to this affiliation (Gillespie 2001, 81-85). As a consequence the identities that present themselves in death, whether through depositional arrangements, bodily adornment, material culture or monumentality, may not be those of the individuals but the collective(s) of which they were a part. These identities may also be idealized versions created for the benefit of those who lived on. Or, quite possibly, they may be an amalgam. Such is almost certainly the case in regard to so-called Beaker burials.

### **2.5 THE BEAKER ENIGMA: an example of theories in action**

#### **2.5.1 Different interpretations**

Beaker pottery vessels have been found across most of Western Europe. Literally hundreds of graves containing these distinctive vessels have been excavated in Britain and many more located in Continental Europe. Their duration has been dated circa 2800 BC - 1700 BC, but their significance remains poorly understood. Archaeology’s failure to explain the driving forces behind their widespread distribution demonstrates just how intractable problems of interpretation can be in

prehistory. Several approaches have been invoked to elucidate their prolific use and they are reviewed below.

### **A. The processual perspective**

Clarke (1970) took a lead from culture-historical approach, but also attempted to impose processual strictures on his use of the data. After cataloguing nearly 2000 British Beakers and organising them into 16 different categories he concluded that wave after wave of invaders had swept across the continent and the North Sea, bringing their material and ritual culture with them. This was a view that owed much to the imperialist stance of the early 20<sup>th</sup> century whereby change is caused by one society subsuming or imposing its will on another. The problem with Clarke's hypothesis, apart from his failure to consider acculturation, other forms of transmission or indigenous developments, is that continued investigations of the material Beaker culture did not provide evidence for any such large-scale invasions into Britain.

Others (Burgess and Shennan 1976; Dickson 1978, 108-113) saw matters differently and conjured up the spread of an international, extra-cultural, phenomenon, such as a drinking cult based around hunting or martiality. They envisaged the spread of this cult and its accoutrements, rather than a migration or invasion of 'Beaker Folk'. To a large extent this hypothesis was inspired by the identification of closed artefact associations of grave objects in addition to Beaker pots, primarily: copper knives, tanged and barbed arrowheads and archer's wrist guards (Figs 6.23-6.24), said to constitute a 'cult package or kit'.

This hypothesis was strengthened when organic residue analysis found traces of what may have been beer or a mead-like drink on some Beakers (Donaldson 1977, 197-231). Case (1995, 60) later attempted to debunk this idea of a male-dominated elite, but the compelling imagery lived on and recently gained new traction when a synthesis of residue analysis tests highlighted the presence of alcoholic beverages in some Beakers (Guerra-Doce 2006, 247-259). However, the investigation also found other substances, including copper slag, various foodstuffs and cremation remains on the test Beakers, leading Guerre-Doce to



conclude that even if these pots started out as ritual drinking vessels their use became varied and possibly more secular and mundane over time (2006, 255-256).

Overall, this illustration provides a good example of an empirical approach to the problem; relying, as it does, on scientific methods to produce answers about artefact use, whilst the imposition of meaning is very much a product of structural functionalist thinking. This philosophy asserts that, in societies with no central focus, groups of people performing similar roles become bound together in cliques. Even if true, it does not automatically follow that the Beaker 'package' represent a warrior or hunting cult.

The symbolism ascribed to key diagnostic artefacts is far too insecure: knives and arrows might be thought of as weaponry in the modern-day, but even then this interpretation is dependent on context. To attribute such use and meaning to 4,000-year-old grave goods without further corroboration is imprudent. Another fundamental flaw in the drinking cult hypothesis was pointed out by Case (1995, 55-67). He used a type of middle range theory to demonstrate by experimentation, and the analysis of size and form, that most Beakers are simply not very efficient drinking vessels.

The testing of this hypothesis, though, was not his primary goal - however enjoyable it may have been. Like Clarke, he too was set on creating a typology (Case 1993, 241-268). This time he separated the pots into five geographically distinct British groupings. His contention was that Beakers were mundane everyday objects whose gross variation was a result of regional influences – any further distinctions were the result of human agency: potters asserting their individual identities by adding their own flourishes to the decoration and/or form. Petrological (or thin section) studies of Beaker fabric showed that, in general, these pots were made from locally sourced materials (Case 1995, 64). By comparing vessels recovered from burial and non-burial contexts he also detected variations in quality, which he interpreted as indicating that they were made with an end use in mind – the poorer the quality the more likely they were to have been specifically for funerary use.

## **B. Symbolism and the pursuit of meaning**

Scholars like Brodie have taken a totally different, demonstrably post-processualist, stance (1997, 297-314). He constructed a hypothesis by reference to gender relations, cognition and symbolic meaning. He makes no claim to having solved the Beaker conundrum; he simply presents a plausible, if provocative, scenario whereby pots are identified with women in society - both in terms of their manufacture and as an analogy for the female role in relation to transformation, regeneration and safekeeping. He states: "*Pots are also containers...used to store things – to keep them safe from harm. So a mother is like a pot, but similarly a pot is like a mother. Pots may be produced by women, as are people,*" (Brodie 1997, 302-303).

He suggests that Beakers were made, like most pottery at this time, on a domestic scale and that it was women who were responsible for this work. They were also charged with the manufacture of other domestic products, leading them to become some of the first metalworkers. Consequently, women from within the chalcolithic, or copper using, zone became desirable to men from outside – not for their apparent wifely charms, but for their knowledge. Acquiring a 'trophy wife' of this kind enhanced a man's status within his own social group because it gave him access to an exotic prestige product. The movement of the distinctive Beaker pot as a consequence of these marriage alliances may have been incidental, but it was also symbolically charged - being a tangible link to a woman's origins and therefore entwined with identity and personhood.

The durable nature of these vessels has made them the prime archaeologically visible evidence for Brodie's conjectured process of diffusion. However, the fact that Beakers are found buried along with men, women and children weakens the hypothesis. Ironically, there is also an inherent gender bias in Brodie's interpretation concerning his assumption that, despite possessing powerful knowledge, women were still inferior to men and in positions where they could be exchanged or traded. A more fundamental problem with this approach is the general lack of supporting archaeological evidence, which long before Brodie formulated his proposition had already led to such ideas being dismissed as subjective and unscientific (Johnsen and Olsen 1992, 420).

### **C. An empirical stance**

In stark contrast, Needham completely eschews the inference of meaning in relation to Beakers (2005b, 171-217). His work is dealt with more fully in Chapter 5 on Beakers find in Kent, Northern France and Flanders. However, in essence, he seeks only to construct a chronology of the funerary use of these vessels by means of radiocarbon dating, seriation and closed associations of artefacts.

#### **2.5.2 Learning from the Beaker dilemma**

Despite the myriad theoretical approaches brought to bear on the Beaker problem, not one has so far achieved critical mass. This is not to say they have borne no fruit. Quite the contrary: Burgess and Shennan, Clarke, Case, and Needham primarily used different elements of the processual toolkit for their work and this has allowed them to make significant progress. Brodie chose from the post-processual bag and provided a provocative hypothesis for Beaker dissemination - but was unable to offer any substantive proof. Nevertheless, each in their own way has enhanced understanding and made valuable contributions to the debate. Indeed, the parameters of what they achieved only go to underline the multifaceted and multidisciplinary nature of archaeological interpretation.

## **2.6 CASE STUDY: The Amesbury Archer**

### **2.6.1 Overview**

The purpose of this brief case study is to review the best-preserved and most elaborate burial presently known to date from within the research period. The Amesbury Archer is an information rich recently discovered example of a Beaker burial, found in the spring of 2002 three miles south-east of Stonehenge. It had lain undisturbed for around 4500 years and contained the crouched remains of a man aged between 35-45 at death (Fitzpatrick 2002). An old but severe injury to his knee had left him crippled and in constant pain, as had a large abscess in his jaw. It is not known if either of these afflictions contributed to his death. In any event, he had been afforded an impressive burial – richer than any other known to date. It contained more than 100 objects, mostly of flint but including two gold hair tresses, three copper knives, 16 tanged-and-barbed arrowheads, two sandstone Archer's wrist guards and five Beakers.

Two of these pots were almost identical and placed in front of his face. They were incomplete, poorly fired and consequently darker than the more usual orange-red Beaker colouration. Their outer decoration consisted of an uncommonly fine plaited cord impression. Two of the other vessels were also closely matched in form and fabric – possibly because the same potter made them both. One was decorated in all-over combed style; the other had horizontal lines of comb impressions with triangular 'fringes'. The fifth Beaker had an all-over single cord impression and displayed signs of greater wear than the other pots. A black 'cushion-stone' and other artefacts have been interpreted as tools of the metalworking trade – quite possibly a rare and special ability during the Archer's lifetime. This has led to suggestions that he may have possessed such knowledge (Fitzpatrick 2005b).

### **2.6.2 Scientific 'proof' for long distance travel?**

The most remarkable aspect of this discovery did not come from the abundant grave goods, it came when oxygen isotope analysis was carried out on the enamel from one of his teeth. Wessex Archaeology at first claimed that the results show the Archer grew up in the Swiss, Austrian or German Alps: *"Tests were carried out on the Archer's teeth and bones and on objects found in the grave...They show that he came from the Alps region, and that the copper knives came from*

*Spain and France...*” (Fitzpatrick 2005b). However, tests of this kind cannot provide such precise results. The analysis is based on differing ratios of particular oxygen isotopes found in drinking water and absorbed by phosphates found in tooth enamel. These ratios change depending on distance from the coast; latitude; altitude and average rainfall temperatures. The British Geological Map reproduced in Fig. 2.2 shows a blue shaded area stretching from the Alps to Scandinavia and beyond. The test on the Archer determined that he had lived somewhere within this vast tract of Europe during the time that his adult teeth were developing (Evans *et al.* 2006, 311). The identification of the central European Alps as his place of origin is based not so much on the science, as on an archaeological judgement – prompted by the crossover of conjectured ‘Beaker territory’ with this modern oxygen isotope zone (Fitzpatrick, *pers comm*).

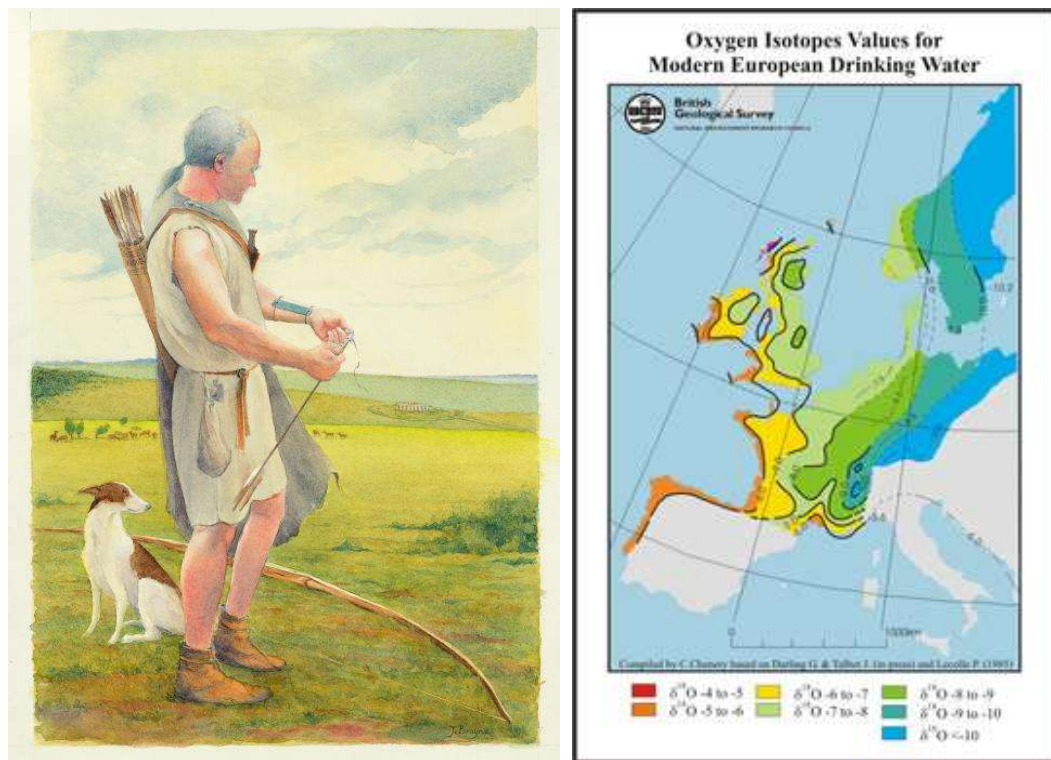


Fig 2.1: Left, an artist’s impression of the Archer in life drawn by Jane Brayne (copyright Wessex Archaeology, <http://www.wessexarch.co.uk/images/50875-amesbury-archer/artist-interpretation>).

Fig 2.2: Right, a British Geological Survey map showing oxygen isotope levels in modern European drinking water ([http://www.wessexarch.co.uk/projects/amesbury/tests/oxygen\\_isotope.html](http://www.wessexarch.co.uk/projects/amesbury/tests/oxygen_isotope.html)).

His exceptionally well-furnished burial has also led to the suggestion that he held high status – possibly that he was part of a ‘European elite’. Fitzpatrick (2005b) declared: “*He would have been a very important person in the Stonehenge area and it is fascinating to think that someone from abroad – probably modern day*

Switzerland – could well have played an important part in the construction of Britain’s most famous archaeological site”.

Buried close-by was a younger man, aged about 30 and genetically related to the Archer – determined via a bone malformation in the foot (Fitzpatrick 2005b). His grave was not as elaborate, although it did contain a pair of gold hair tresses. In this case the oxygen isotope analysis shows that he was ‘British’ born – possibly growing up in the Midlands or Scotland - adding further complexity to this story.



Fig 2.3: The Amesbury Archer burial in situ, showing the position of the various grave goods. (Photograph courtesy of Wessex Archaeology, [http://www.wessexarch.co.uk/images/burial\\_interp\\_large.jpg](http://www.wessexarch.co.uk/images/burial_interp_large.jpg)).

### 2.6.3 Observations on the Archer's story

It should be remembered that the Amesbury Archer and the associated second burial have not yet been definitively published and that most of the available material is of a 'popular' nature. Even so, the Archer's association with Beaker pottery is compelling but nevertheless, circumstantial. It cannot be said with certainty that the five pots or, indeed, any of the grave items – including the copper knives from Spain and France – actually belonged to him in life. They may not have been items of personal property and their use in a funerary context may have any number of meanings. Parker Pearson (2003, 85-86) cautions: "*Grave goods should not be seen simply as personal trappings...but as items bound up in gift exchanges with the dead*". He continues: "*There are enough ethnographic examples of funerary dress forming skewed representations of that which is worn in life to make the archaeologist wary of interpreting the adornment of the corpse as representative of the person's possessions and dress style in life.*"

The idea that because the grave is well furnished (Fig 2.3) it suggests the deceased held high status or rank can also be critiqued – see Section 2.4.4 'Forms of death'. The reasons may have been social: gifts to ease the dead man on his way or items that were considered 'polluted' and in need of disposal; or the objects may have been family possessions for which there remained no inheritor. It is also possible that their deposition may have been a political gesture: power-plays in the form of competitive gift giving by rival mourners seeking to enhance their own status (Parker Pearson 2003, 86-87). Alternatively, the items may have been placed there for economic reasons: to take them out of circulation or to deprive others of their benefit.

That he survived for several years after suffering a debilitating and chronically painful injury does suggest that, whatever his position or contribution within his community, he was appreciated enough to have been looked after; but that does not mean he held high status. It is also a fact that the Archer died far away from the place where he was born and grew up and his grave did contain 'exotic' items, including copper knives from distant lands. These are vitally important pieces of evidence. They potentially provide some of the earliest indications for both long

distance travel, and trade and exchange. What they do not provide is a motive or any indication of how common such activities were during his era.

Darvill has suggested that Stonehenge was a major centre for healing, akin to modern day Lourdes (2006). Accordingly, the Preseli bluestones, a feature of the monument and themselves apparently well travelled, are said by folklore to have healing properties. In support of this theory, he cites the unusually high number of second and third millennium BC burials in the area containing individuals with injuries, abnormalities or diseases. In pursuit of evidence to back up this hypothesis, Darvill, along with Geoff Wainwright, conducted a small excavation within the monument in the spring of 2008 with the intention of trying to find dating evidence for the erection of the first bluestone circle. The results were televised but have yet to be academically published.

A separate set of disclosures, this time from excavations at Durrington Walls, near Stonehenge<sup>13</sup>, seems to support the assertion that these monuments were attracting large numbers of visitors during an era that included the Archer's lifetime. Substantial settlement evidence – revealed by remote sensing and confirmed by excavation – apparently takes the form of standardized 'Scara Brae style' houses dating back to 2500 BC. Other buildings have been tentatively interpreted as elite houses, shrines, sanctuaries or temples (Parker Pearson *et al.* 2007). The lack of evidence for domestic activities such as craft working or crop processing coupled with evidence of conspicuous consumption has led Parker Pearson and his team to speculate that the settlement was a periodic festival or ceremonial site, in which the recently dead and their bereaved kin played a significant part.

Both these theories, and those relating to the Archer's precise origins, remain unproven. Their significance to this study is that they add further weight to the concept that long distance travel was a feature of at least some people's lives during the period under examination.

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<sup>13</sup> The Stonehenge Riverside Project <http://www.shef.ac.uk/archaeology/research/stonehenge>



## CHAPTER 3 METHODOLOGY

### 3.1 PREPARATION FOR DATA COLLECTION

#### 3.1.1 A conceptual framework

Before data collection could begin it was necessary to create a conceptual framework. This had to be capable of assimilating a wide range of material evidence. As with most forms of human behaviour, funerary practices have the potential to be infinitely variable. Consequently, the first step was to define a set of fundamental classes that could encompass evidence relating to *any* treatment of the dead. In essence, this was achieved by applying the principle of ‘Occam’s Razor’ to a range of ancient and modern funerary traditions. This process concluded with the following generic groups remaining:

- 1        Depositional practices and methods of transforming human remains;
- 2        Items used in association with funerary rites;
- 3        Mortuary or memorial monumentality.

For the sake of simplicity, and in order more appropriately to reflect the specific data being sought, these groups were then respectively renamed ‘human depositions’, ‘artefacts’ and ‘grave types’. In combination these are referred to as ‘monuments’, in part to distinguish them from the more generic term ‘site’. This is a special use of that term, so to avoid confusion, it’s particular meaning in the context of this thesis needs to be defined.

It is normal within British archaeology to encounter the words ‘monument’ and ‘site’ apparently being used interchangeably. The term ‘site’ is an arbitrary contrivance, taken as referring to a designated plot of land that has been, or is intended to be, subjected to investigation because it either does, or is thought to, have significance and some form of archaeology within its boundaries. Such an area may contain multiple features and artefacts from different chronological periods and it may only encompass a part of the surviving archaeology. This makes ‘site’ a term of convenience, but an imprecise descriptor.

Monument, on the other hand can, for the purposes of this study, be defined as *a distinct man-made circular construction used as a place for the deposition of the dead (with or without surviving interments) and/or as a focus for ceremonial activities*. In other words, a barrow or ring ditch. It is important to clarify this terminology because most grey, and many published, reports – in a developer-funded environment - do not simply deal with single, totally excavated monuments. They generally record excavations that unearth multiple or partial occurrences of monuments as defined above. Thus the Canterbury Archaeological Trust publication on the Monkton-Mount Pleasant, Thanet, site has details of 21 Beaker or Bronze Age inhumations and cremations and ten round barrows or ring ditches. Conversely, an excavation in The Droveaway, St Margaret's Bay, Dover was only able to reveal part of a barrow – the rest having been destroyed when a tennis court was built several decades ago.

Having identified the highest-level categories, sequential sub-divisions were then generated until the lowest useful unit of data was classified. The resultant data-tree (Fig 3.1) served as a blueprint for the construction of databases to record, process and analyze evidence pertinent to this research. It will be noted that branches within the data-tree divide and then recombine in the lower orders. This graphically demonstrates the fact that the primary evidential classes are linked when applied to single data sources. In other words, a monument can contain multiple burials - inhumations and cremations - as well as various types of artefacts, whether grave-goods or not. Avoiding repetition when extracting and classifying this data required the employment of a sophisticated cross-referencing system. How this was achieved is explained in Section 3.2.

## **3.2 IMPLEMENTATION**

### **3.2.1 Recording mechanisms**

As explained in Section 1.3, data was extracted from two distinct and very different sources: aerial surveys and excavation reports. In order to handle the wide variety, quantity and differing levels of complexity within these two categories it was vital to employ mechanisms specific to each for recording, assimilation and processing. This was achieved in the manner below.

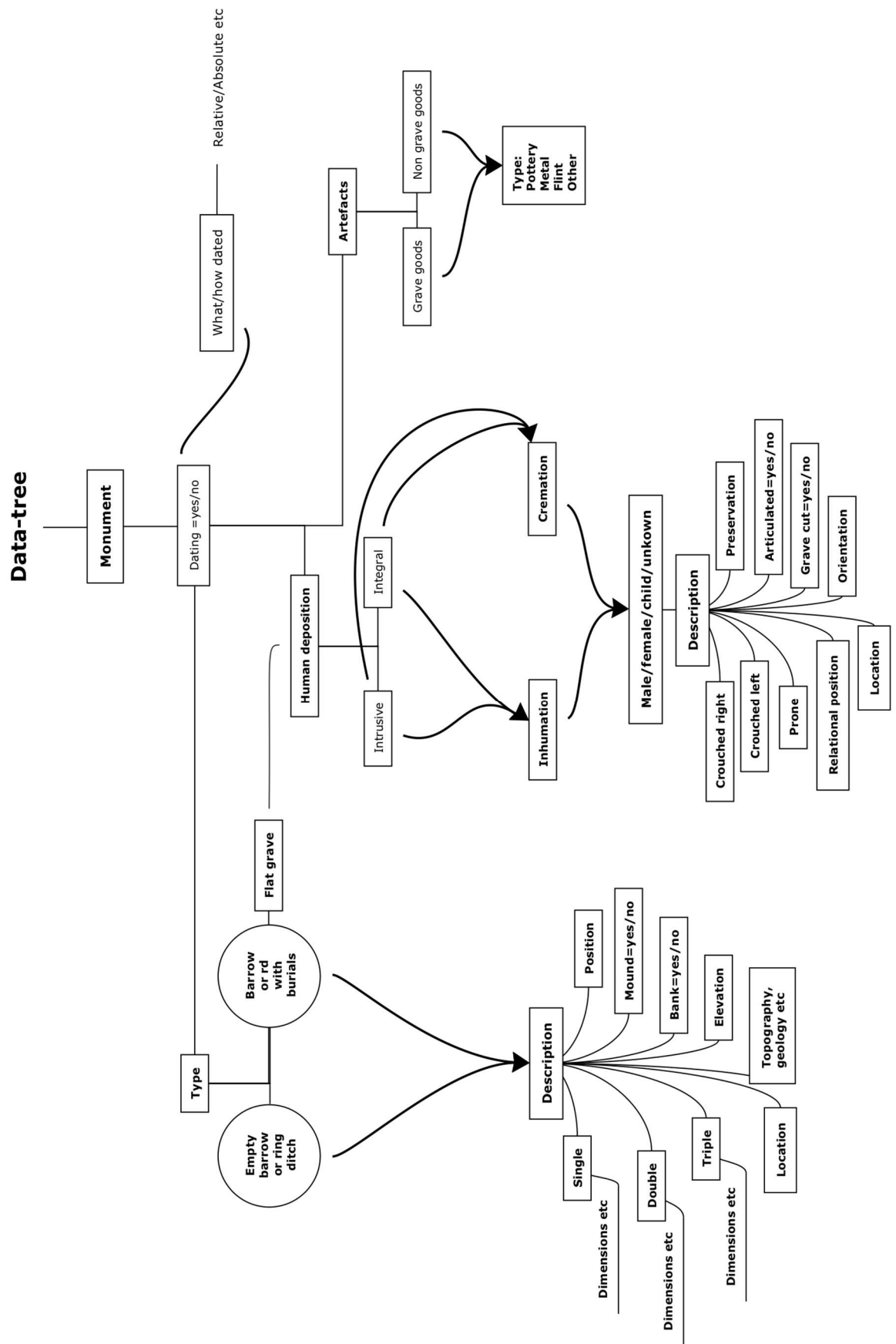


Fig 3.1: An 'organogram' or data-tree showing the structure used to define the categories of data used for this research

### 3.2.2 Aerial and other surveys

Circular monuments identified through aerial photography and other survey methods - without further investigation being undertaken - were processed by means of a computer software solution, Arcview 9.2. This type of application is known as a Geographic Information System (GIS). It is specifically designed to handle spatial, topographic and cartographic material. Different categories of data, such as geology and drainage can be layered, one on another, and combined with particular research data, in order to build and visualize landscape models. At its simplest, Arcview provides the means by which to plot distribution maps and these are used extensively throughout this study. Arcview also has a suite of tools that can be applied to datasets, enabling such things as ‘nearest neighbour’ analysis, which is used to determine whether a seemingly random distribution does, in fact, have order or organisation. As well as being imported into Arcview, data such as the number of ring ditches, their diameters and spatial co-ordinates were compiled using Microsoft’s Excel, where mathematical processing could then be undertaken.

### 3.2.3 Excavation evidence

A custom-designed relational database was created using a commercially available software package called Filemaker Pro 9. The basic element of any digital database is a *field* – an individual unit of information. Computer databases allow an almost limitless number of fields to be defined, constrained only by hardware capacity. To aid comprehension and to assist in data processing, these are grouped into sets, known as *records*, and a collection of records is called a *table*. The power of a relational database, as opposed to a simple flat-file database, resides in its ability to allow fields belonging to one table to be combined and/or manipulated in combination with fields from other tables. In the case of this study there is a primary table, and three subsidiary interlinked tables.

In accordance with the previously determined classification system, the database is entitled ‘Monuments’ and its three primary related tables ‘Grave Type’, ‘Burials’, and ‘Artefacts’. There is an additional table containing dating evidence, another holding illustrations and plans and two more with bibliographic and other reference data - examples of which are shown in Appendix A. Together they contain many thousands of individual items of data. The ‘Grave Type’ table alone

holds 172 records, each containing 39 fields<sup>14</sup>, on archaeological interventions from Kent up to spring 2008, when data collection ceased. This excludes round barrows and ring ditches known only through aerial and other surveys as these are handled in a different way (See Section 3.2.2, ‘Aerial and other surveys’).

In order to enter information into the Filemaker tables it is necessary to systematically deconstruct the source material. In effect, this is the first level of data analysis. For example, the absence of certain information, such as the diameters of ring ditches or the availability of dating evidence, becomes immediately apparent. Consequently, it is a relatively simple matter to create a list of excavated barrows that have radiocarbon dates attached. It also enables specific categories of information to be compared and manipulated in a variety of ways. So, for instance, it is possible to list all of the multiple-ring ditches in Kent separately from the single ditched monuments, or every male crouched-inhumation that is also laid on its right side, with the body orientated north-south.

This data manipulation is possible because each of these tables contains its own set of carefully defined fields, inter-connected in a very specific way. Each Burial and Artefact record has its own incremental, unique, identifying number. A Grave Type record has a similar numerical identifier, but it can be shared with selected records from other tables. In this way burial records B1171-73, dating record D5050 and artefact record A4207 are connected to each other and to Grave Type G252, by the common use of this monument identification number. This means that when Grave Type G252 – an excavated barrow from North Foreland Avenue, Broadstairs – is viewed, data from B1171-73, D5050 and A4207 can also be examined. Conversely, when artefact A4207 is called up G252, D5050 and B1171-73 also become available for examination. This means data only needs to be entered once in order for it to be available within linked records across all the other tables. It also ensures that complete datasets on individual monuments can be reconstructed automatically, with no concerns that relevant information is being omitted. The results of comparative tests applied through the use of Filemaker are included in Part 2.

### **3.3 DATA SOURCES**

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<sup>14</sup> This potentially totals 6708 individual units of data, but not all fields in all records are completed.

### 3.3.1 Collection procedures

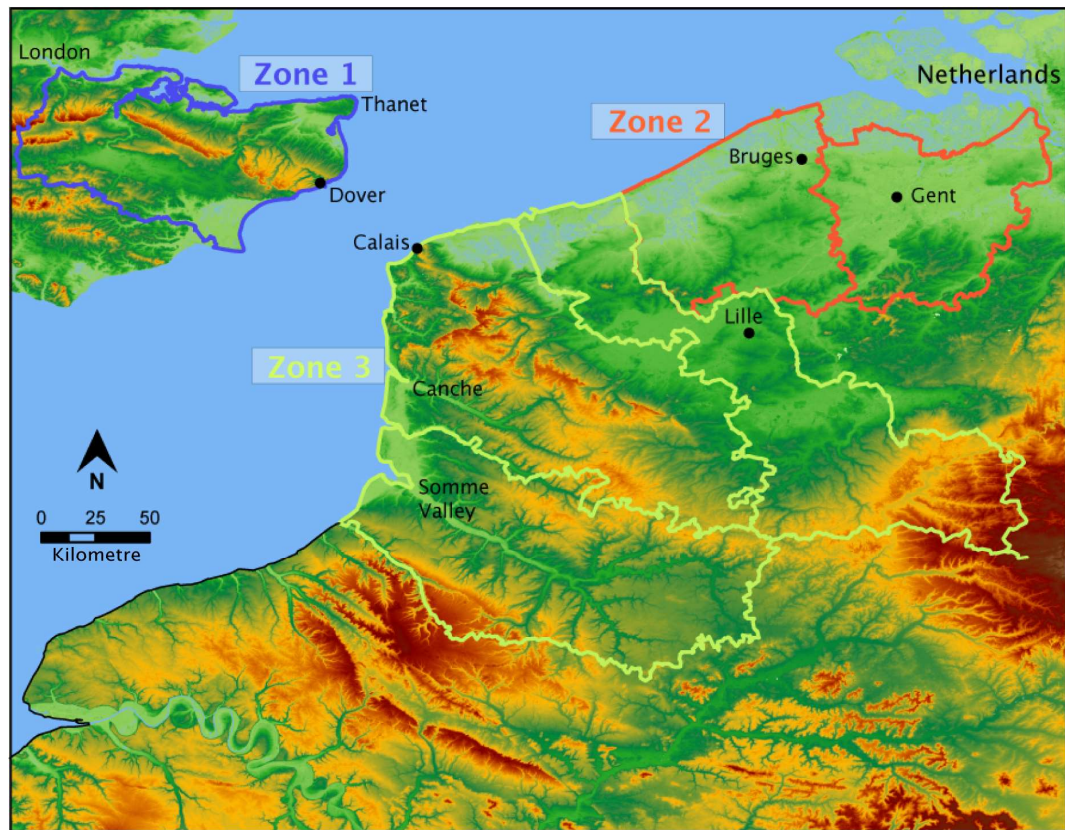


Fig 3.2: A general map of the English Channel region showing the areas under investigation. The individual study zones of Kent (1), Flanders (2) and the Nord/Pas-de-Calais (3), are colour coded. Created by the author in ArcGis 9.2 and Adobe Illustrator using data from NASA's Shuttle Radar Topography Mission (SRTM).

Data collection was carried out in three phases - in line with modern political and national divisions. Each of these geographically defined research zones (numbered 1-3, Fig 3.2) was then subjected in turn to the data gathering processes as explained below.

### 3.3.2 Air survey data and Geographic Information Systems (GIS)

Aerial photography surveys have been conducted across a large proportion of the research area as shown in Chapter 7, Fig 7.1, the results from which are summarised in Table 3.1. Raw positioning data for the Kent round barrows and ring ditches used in the GIS plots came from the Royal Commission on Historic Monuments' air survey of 1989 (Edis & Horne), the Trust for Thanet Archaeology and John Smythe (2007), University College London.

In north-eastern France, Roger Agache conducted multiple surveys during the decades following World War II (Agache 1978). The raw positioning data for the French round barrows and ring ditches used in the GIS plots was extracted from

the Agache archive – which is now mostly lodged with *Inrap* in Amiens - by Sébastien Toron of *L'université de Lille 3*.

Similar work has been done during the past 27 years in Flanders by a team from the *Universiteit Gent*, led by Prof Jean Bourgeois. Work began informally in 1982 and has so far generated more than 90,000 photographs. The project has revealed thousands of hitherto unknown archaeological features – many hundreds of which can reasonably be categorized as the vestiges of Bronze Age round barrows or ring ditches, due to the fact that many have been tested by excavation, auguring and by ground-level surveying. The monuments were initially identified from detailed visual analysis carried out by Marc Meganck, who sadly died during the course of this research.

	Kent - Zone 1	Flanders - Zone 2	NE France - Zone 3
Aerially detected ring ditches	830	868	929
Excavated or otherwise confirmed barrows	227 (115*)	116	126

Table 3.1: The number of ring ditches and barrows recorded by this research in each of the study zones. The similarity in the aerially detected numbers from each zone is striking but coincidental. See Appendix B for listings. \* Excavated.

### A. Base maps and geographic projections

The base maps used in this study come from a variety of sources. Some of those for the UK are Ordnance Survey digital maps. This includes the Land-Form Panorama DTM 1:50000 map tiles for Kent and the OS Land-Line Plus multi-scale digital map. UK Boundary data was supplied through the Edina Academic resource website under a Crown Ed-Line Consortium license. The French digital maps were sourced from *l'Institut Géographique National* (IGN). The *Universiteit Gent* archaeology department supplied the Belgian digital base maps. Other maps are based on NASA's Shuttle Radar Topography Mission (SRTM) data (<http://www2.jpl.nasa.gov/srtm/>), as are a number of the inter-regional maps and some of the Kent and Flanders' maps. When regions are displayed in isolation the respective national map projections used are: France conformal conical Lambert I and II for France, Belge conformal conical Lambert 1972 for Flanders and the British National Grid 1936 transverse mercator system for Kent. When projected across national boundaries the WGS 84 standard is used. In almost every case the maps have been created by the author - or occasionally adapted - using a combination of hand drawing, Arcview, Adobe Illustrator and Photoshop.

### 3.3.3 Excavation data

The task of populating these research databases began in Kent. Ostensibly, the reason for this was pragmatic; but in recognition of Hodder's exposition on relativism (2003, 16-19) it is acknowledged that this may also have been due to the unavoidably Anglo-centric nature of the study. Data from Kent took primacy, and not just because it was the first to be compiled. Acquiring comparable evidence from across the Channel was then carried out in light of that experience.

#### A. Kent sources:

- 1     **The National Monuments Record** – maintained by English Heritage and accessible via the PastScapes website. Such online searches cannot be easily refined and consequently reports that were returned dealt with Bronze Age Kent in general, rather than funerary activities in particular. Furthermore, they little more than identify a type, approximate geographic positions and source/bibliographic references.
  
- 2     **The Kent Sites and Monuments Record (SMR)**, maintained by the Heritage department of Kent County Council, offered a greater depth of information and provided a more refined filtering procedures. It returned 572 reports with Bronze Age and Beaker period funerary associations. However, a significant number of these related to circular crop or soil marks identified through aerial surveys, primarily that which was carried out by the now defunct Royal Commission on Historic Monuments (Edis & Horne 1989).
  
- 3     **Thanet SMR**, compiled by the Trust for Thanet Archaeology (TfTA) is a subordinate Kent database and all its records should be on the SMR and/or the NMR. In practice this is not so. The problem is further complicated by the fact that the recording methods and data categories used by TfTA differ from those used in the Kent SMR, making it necessary to ensure nothing was duplicated nor omitted due to being wrongly categorized. With this in mind, a list of Bronze Age funerary monuments on Thanet was added to the research database. This was



initially based on work carried out by Perkins (1999a) and then supplemented and refined using the SMR's, grey and published reports, and a variety of additional sources; including three recent, but unpublished, studies: An MSc, and two under-graduate, dissertations (Jones 2006; Fisk 2002; Smythe 2007).

- 4 **Published material:** This not only included site-specific monographs such as those relating to excavations like that of Monkton-Mount Pleasant (Clark and Rady 2009) and Ringlemere (Needham *et al.* 2006) etc, but general texts as well, all of which are listed in the bibliography.
- 5 **Unpublished reports:** Developer led archaeology has generated a wealth of new material relating to Kent in the third and second millennium BC. Much of this recent work remains to be fully published, meaning that in many cases the primary source is a grey report or a site archive. Such sources have been supplemented by direct communication with site directors, excavators and post excavation specialists. In this regard, it is notable that the author was granted access to materials from the UK Channel Tunnel Rail Link excavations whilst they were being prepared for publication.

## **B. Belgian and French sources**

Collection procedures in France and Belgium differed from that of the UK, having been modified in light of experience, and due to the differences in available source material. Whilst national digital databases exist in both these countries<sup>15</sup>, at the time this research was conducted, both were works-in-progress. In any event these sources have not been designed for research purposes and colleagues in both countries raised questions about the accuracy, detail and totality of the data available through these sources. Accordingly, after examination they were excluded from the data collection process. Access to grey reports also proved to be problematic and fairly unproductive. After a considerable expenditure of time

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<sup>15</sup> The central Archaeological Inventory ([www.cai.erfgoed.net/cai\\_publick](http://www.cai.erfgoed.net/cai_publick)) for Belgium and for France, Inrap's Sites Archéologique search engine (<http://www.inrap.fr>)

and effort it became clear that it was conventionally published excavations, dating prior to spring 2008, which offered the most viable sources of Continental data. A list of sites is included in Appendix C.

### **3.3.4 Concerning data quality**

The sources from which the data were harvested vary in quality, reliability, quantity and completeness. This may seem an obvious point, but it needs to be acknowledged and perhaps is best illustrated anecdotally: When data gathering for this research began in 2005, Grinsell's survey of Kentish round barrows (1992) was the only published list in existence. It was far from definitive and had unfortunately served to reinforce a generally held impression that Kent possessed relatively sparse funerary evidence dating to the Bronze Age. He listed 174 Kentish barrows and 17 Bronze Age flat graves. Many of these were identified from the records of the Ordnance Survey archaeological division and then inspected by him on the ground. He did not undertake a similar exercise using the results of a RCHME air survey of Kent (Edis & Horne 1989), and omitted almost all of the crop marks which its authors had interpreted as Bronze Age barrows. By his own admission, he also excluded most of the known Thanet barrows, believing these were to be the subject of a publication by the Trust for Thanet Archaeology. He also omitted, without explanation, barrows from other parts of the county (Smythe 2007, 15-19).

## **3.4 SAMPLING STRATEGY**

### **3.4.1 Setting the boundaries**

The absolute geographic limits of the study have been chosen primarily in correlation to the modern political boundaries: Kent, east and west Flanders, Nord-Pas de Calais and Picardie as far west as the Somme valley – with a focus on the littoral zones of each. On this basis, the research area covers approximately 13,860 sq kms (5350 sq miles) of land. The chronological limits encompass a 1000-year period (Section 1.4). Within these parameters lie approximately 2700 ring ditches or barrows known through crop and soil marks and around 250 excavated monuments. Clearly it is not feasible to conduct total analysis on all the funerary evidence available from within this space and time, so selection criteria had to be imposed in order to scale the research to achievable levels.

### 3.4.2 Applying limits

#### A. Criteria for analyzing air survey data

The air survey data forms the basis of a comparative landscape study. The quantitative nature of this method means that large datasets have to be manipulated in specific ways.

This was carried out using the following criteria:

- 1 Respective numbers and distribution in each of the three study zones;
- 2 Monument size – to the extent of what is achievable;
- 3 Distinguishing types, i.e. single, double, triple rings, pennanular etc;
- 4 Topography - including elevation, geology, natural features etc;
- 5 Potential relationship (s) to each other.

A fuller explanation of this is contained in the introduction to Chapter 7.

#### B. Quality criteria for analyzing excavation data

Firstly, an appraisal of the collected excavation evidence was undertaken to rank monuments according to the following quality criteria (where 1a is the best and 3e the worst):

- 1 Excavations with secure radiocarbon dates where:**
  - a. Human deposition (s) and grave-goods/artefact (s) survive.
  - b. Human deposition (s) survive but there are no grave-goods/artefacts.
  - c. Human depositions do not survive / are not present but grave-goods/artefact (s) are recovered.
  - d. Funerary use indicated, i.e. grave-cut but no other evidence recovered.
  - e. Monument devoid of relevant funerary evidence.
  
- 2 Excavations without secure radiocarbon dates but with relative dating determinations where:**
  - a. Human deposition (s) and grave-goods/artefact (s) survive.
  - b. Human deposition (s) survive but there are no grave-goods/artefacts.
  - c. Human depositions do not survive / are not present but grave-goods/artefact (s) are recovered.

- d. Funerary use indicated, i.e. grave-cut but no other evidence recovered.
- e. Monument devoid of relevant funerary evidence.

**3 Excavations without secure radiocarbon dates or relative dating determinations where:**

- a. Human deposition (s) and grave-goods/artefact (s) survive.
- b. Human deposition (s) survive but there are no grave-goods/artefacts.
- c. Human depositions do not survive / are not present but grave-goods/artefact (s) are recovered.
- d. Funerary use indicated, i.e. grave-cut but no other evidence recovered.
- e. Monument devoid of relevant funerary evidence.

Once this has been achieved the following selection was applied:

- 1 Burial types, were grouped according to individual rites, ie inhumation, cremation, etc, including the use of grave goods. NB: Beaker burials were isolated from the main corpus as they potentially constitute a variant group and are dealt with as a special case in Chapter 5.
- 2 Barrow/ring ditch construction, use and morphology was examined and compared – with particular reference to Garwood’s (2008) model.
- 3 Excavated barrow/ring ditch positions in the landscape were included within a landscape study that mostly draws on the air survey data.

Monuments or burials with associated radiocarbon dates are considered together, as well as within their typological groupings. They are also referred to from within the aerially survey based landscape study. Additionally, purposive samples were extracted from each of the three study areas, with the intention of carrying out close comparisons (see Part 2).

### **3.5 CONCERNING POTENTIAL DATA BIAS**

#### **3.5.1 Collection issues and potential solutions**

Specific problems relating to particular datasets are dealt with in the individual chapters. However, the two main categories of data are subject to potential distortion as a direct consequence of the collection procedures and those are best dealt with here. The primary factors that can introduce bias are as listed in Table 4.2. In most cases there is little that can be done to prevent this collection bias. It is therefore necessary to factor it in to the research strategy and subsequent data analysis. A commonsense, pragmatic, approach is called for: ring ditches are unlikely to be visible from the air within urban areas, so the question is, should such gaps in the data be ignored or should statistical methods for dealing with missing data (Collins *et al.* 2001) be applied?

Aerial photographic survey	Excavation reports and publications
Time of day, season and weather	Inconsistent excavation strategies
Differing sample sizes in each area	Incomplete post-excavation analysis
Incomplete survey coverage	Differing % sampling of monuments within and across all three research zones
Ground cover/usage (towns/forests etc)	
Variations in soil and geology	Taphonomic processes
Human error	Human error

Table 3.2: Primary factors that may introduce data bias.

### 3.5.2 Statistical solutions (respective drawbacks in italics):

- 1 **Case deletion:** Discarding all incomplete datasets, i.e.: where a monument was only partially excavated. **Problem:** *Those remaining may constitute an unrepresentative sample.*
  
- 2 **Reweighting:** Similar to above accept the remaining sample is adjusted in order to restore the original balance, i.e.: maintaining the respective percentages of single, double and triple ring ditch monuments or the observed geological distribution of monuments. **Problem:** *This may result in important data being discarded for the sake of balance.*
  
- 3 **Single imputation:** Filling in data by, for example, randomly replacing each missing value once only from a pool of observed values – know as the ‘hot deck’ method. **Problem:** *This can seriously distort the data as any subsequent analysis treats these random additions as if they are actual known values.*

- 4 **Multiple imputation:** This is designed to alleviate the single imputation problems by using sets of ‘plausible’ values to replace the missing data. The calculations are complex, but an open source computer program such as NORM<sup>16</sup> can be used, for example, to imply the likely distribution of ring ditches in areas where aerial surveying has not picked them up. ***Problem:** it may not be possible to tell whether an absence is real, and therefore analytically significant, or the consequence of a collection bias.*
  
- 5 **Likelihood method:** This takes a known sample and, assuming normal distribution, asserts that what hold true for it, will also hold true for the entire data population, i.e.: If two out of every ten **excavated** barrows is devoid of burials then, with certain caveats, it can be implied that a similar proportion of **all** barrows will the same.

Any of these techniques is capable of generating statistically sound analytical outcomes. However, it remains to be seen as to whether, in this case, such methods are necessary. In the event that it is considered so then the process will be made explicit.

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<sup>16</sup> Schafer, J.L. (1999) NORM: Multiple imputations of incomplete multivariate data under a normal model, version 2. Software for Windows 95/98/NT, available from <http://www.stat.psu.edu/~jls/misoftwa.html>.

## **PART TWO**

### **THE EXCAVATION DATASETS**

## CHAPTER 4

### DATING EVIDENCE

#### 4.1 RADIOMETRIC DETERMINATIONS

##### 4.1.1 Available datasets

Radiometric dating of ring ditches and barrows has provided results that span a period of around 1400 years, beginning circa 2300 BC. The number of dates available by the spring of 2008 totalled 94, obtained from 43 distinct archaeological interventions from across the research area (Table 4.1). The various dates included in the following tables are utilized and examined in different ways and at specific points within this thesis. However, general and synthetic comments are useful at this juncture.

<b>Zone</b>	<b>No. of radiocarbon dates</b>	<b>No. of interventions</b>
1. Kent	39	17
2. Flanders	36	16
3. France	19	10

Table 4.1: This shows the number of available radiocarbon dates in each of the three study zones along with the number of archaeological interventions from which they came.

The quality, types and contexts of the dating samples varied and their respective analyzes were spread across several laboratories. This means that caution is necessary when drawing inferences and comparisons. The Flanders dates are of particular concern, as almost all come from charcoaled wood fragments extracted from the bases and fills of ring ditches and postholes. They must therefore be considered potentially unreliable indicators of a monument's true age, due to other effects such as the sampling strategy, contamination, chemical preparation, 'old wood' (Ward and Wilson 1978; Bayliss and Tyers 2004) and even result calibrations (Lanting 2001; Olsen *et al.* 2008). These concerns must be set against the fact that all the samples were extracted from stratified contexts and, where more than one date was obtained from a single context; only the youngest has been used (Bourgeois *pers comm*).

In all cases, BP dates are provided, along with standard deviations usually at  $\pm 1$ -sigma values. The original corresponding cal BC dates have not been used as the accompanying probability percentages varied. Instead all cal BC ranges have been recalculated to a single value (95.4 percent probability). This provides a vital level



of consistency when calendar date ranges are compared across monuments. The plots displayed in the accompanying charts were achieved using the same OxCal 4.0 program (Bronk Ramsey 2007), which is based on recent atmospheric carbon data calculations (Reimer 2004) and Bronk Ramsey *et al*'s tree ring data (2001). A complete list of dates is included in Appendix D.

#### 4.1.2 Regional comparison

Whilst concern in relation to the Flanders' dates remains an issue, it is clear that, in the form presented, they display a distinct correlation with those from north-eastern France – especially during the period 1800-1500 BC. Superficially, on viewing the interregional comparison, shown in Fig 4.3 and Table 4.4, it seems that most of Kent's monuments are dated earlier than this, especially if the Monkton Mount Pleasant date (BM-3028) is excluded on grounds that it comes from a flat burial not a barrow. However, this comparison is based on the single earliest determination from each monument. When the full complement of dates is taken into account (Fig 4.4) all three sets look similar for the period 1800-1500 BC. This seems to suggest two distinct explanations:

- 1     **Either** construction of, or depositions within, Kent's monuments began earlier than those on the near continent;
- 2     **Or** many of the dates from monuments in Flanders and north-eastern France actually come from secondary activity phases, (with the primary constructions/depositions remaining undated or undatable).

It is certainly the case that taphonomic and pedological factors have combined during the intervening millennia to obliterate significant proportions of known monuments in most of Flanders, throughout the coastal belt of the Nord/Pas-de-Calais up to the Boulogne area and, to some extent, around the Canche and Somme estuaries. It has already been stated that organic materials do not survive in the sandy soils of Flanders, thus removing all traces of inhumations. Additionally, erosion in many parts of Flanders has stripped the surface level back by, in some cases, up to half a metre (Cherrette and Bourgeois 2005, 259-262), quite likely removing dating and other evidence in the process. The relative scarcity of Beaker inhumations in the Continental research areas - demonstrably the source of the earliest dates for Kent – may be indicative of this process of loss.

Where they do apparently survive and have been dated, as at Kruishoutem-Wijkhuis and Mol in Belgium, the determinations are comparably early. Unfortunately, very few Beaker graves have been found in north-eastern France and, of those that have, none has been radiocarbon dated<sup>17</sup> - an issue that will be examined in more detail in Chapter 5, Section 5.4.

### 4.1.3 Multiple ditched monuments

It may be significant that some of the earliest available dates relate to multiple-ditched monuments: 11 such have yielded 29 dates in total, starting in the latter part of the third millennium BC<sup>18</sup> (Fig 4.1) – although, clearly later dates are also present. These are not the only complex, potentially multi-phased, monuments to be found within the study areas and it is likely that others, currently without absolute dates, also have early origins. The significance of this is explored more fully in Chapter 7, Sections 7.6 and 7.7 and the topic is revisited in Chapter 8. At this juncture, it is sufficient to note that analysis of these more complex constructions seems to suggest a degree of commonality throughout the Transmanche and south-western Mer du Nord regions.

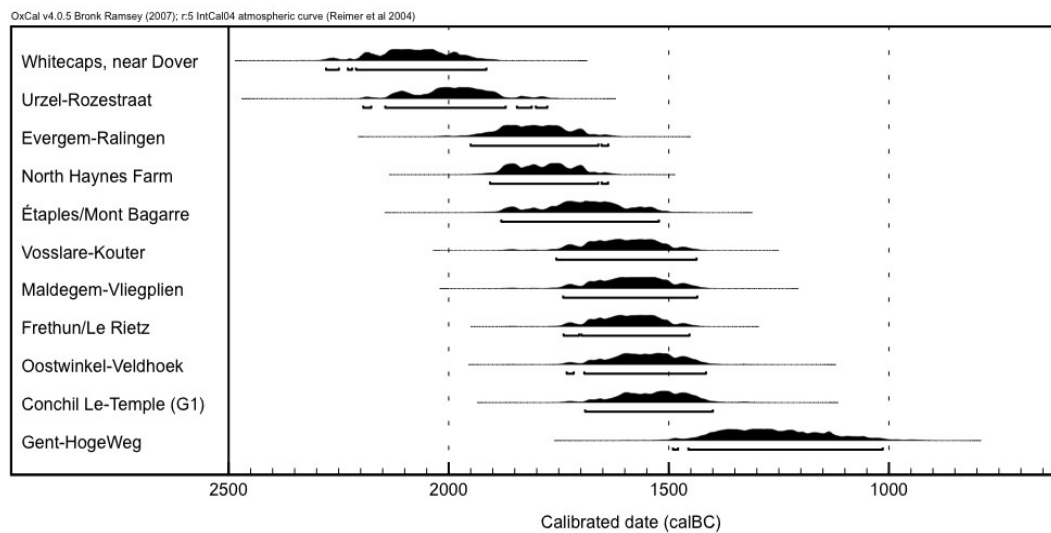


Fig. 4.1: Radiocarbon probability chart showing the earliest determination for multiple ringed monuments.

Each of these concentrically ringed monuments appears, at least in part, to have been used during their later phases for burials, but it is far from clear that they

<sup>17</sup> There are only three: Equihen, La Tombe Fourdaïne; Wallers, Sépulture d’Aremberg and Aubigny-au-Bac, Au-dessus-du-Moulin – and of those strictly speaking only the first is within the north eastern French study zone and it was excavated during the antiquarian period.

<sup>18</sup> Some monuments have more than one radiocarbon date; only the earliest determination is shown here. A list of all the dates, samples and contexts can be found below in Figs 4.5, 4.6 and 4.7.

started off that way (Clark 2008; Fokkens 2008). The apparent longevity, or *longue durée*, has been remarked on many times, most notably of late by Garwood (2008), who sets out a scheme which places southern British monuments into one of three categories and then attempts to define the varied uses applied to each type and the transformations that take place through time (Table 4.2).

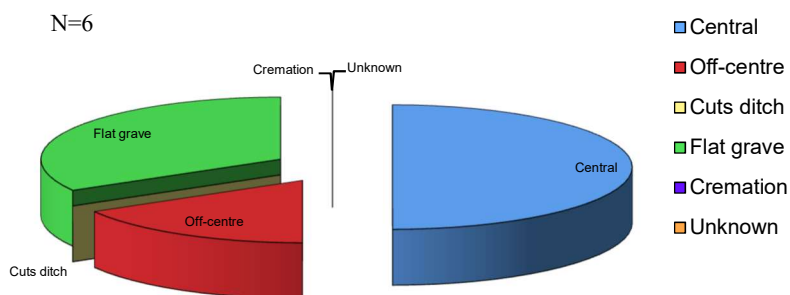
Type	c. 2500 - 2150 BC	c. 2150 -1850 BC	C. 1850 – 1500 BC
<b>Mounds</b>	Small, mostly single phase mounds. Elaboration rare. Timber circles rare and small. Occasional use of mortuary houses.	Wide range of mound sizes and forms. Some monuments progressively enlarged. Single phase mound building continues. Timber stake or post settings fairly common, most on top of existing mounds prior to burials.	Single phase mounds predominate, some v. large. Elaboration rare, although more construction of ‘fancy’ barrows. Timber stake or post circles less common and usually part of a single-phase funerary monument.
<b>Open arenas</b>	Ring barrows and ring cairns usually without burials – separate from funerary monuments.	Wide range of open arena constructions, i.e.: ring ditches; ring cairns, pond barrows and platform barrows. Difference between open arena and burial mounds blurs.	New open arena monuments are rare, but existing ones continue in use for funerary purposes.
<b>Burials</b>	Single inhumations centrally placed in monument. Some burial sequences in central grave pits. Adult males are most common primary inhumation. Most common grave goods are Beakers and associated artefacts. Food vessels appear late. Cremations are rare.	Single inhumation graves predominate. Depositions not always centrally placed. Multiple burials, with greater variety of gender and age. Beakers and food vessels most common grave goods. The number of cremations increases, many with collared urns.	Cremation replaces inhumation as the dominant funerary rite, many with collared or cordoned urns and/or food vessels. Multiple central burials rare.

Table 4.2: Garwood’s trajectory for circular monuments in southern Britain (after Garwood 2008, 41).

His interpretation is based on a relatively small number of excavated monuments - 22 multi-phase, 21 ‘open arena’ and 19 single-phase barrows with central burials. The restricted size of the overall dataset is a consequence of him eliminating all but the most complete published examples. Unfortunately, this has resulted in Kent being totally excluded – and the whole of south-east England is represented by just one monument, Hodcott Down A, Berkshire. The majority, in fact, emanate from Wiltshire, Dorset and Oxfordshire. This reductionist approach is understandable, but it almost certainly masks subtle and extraordinary regional variation in funerary practices. Garwood’s treatise is a rational interpretation of the cited evidence and provides a reasonable template against which to make comparisons. However, it should be approached with caution and not be viewed as a universally applicable scheme.

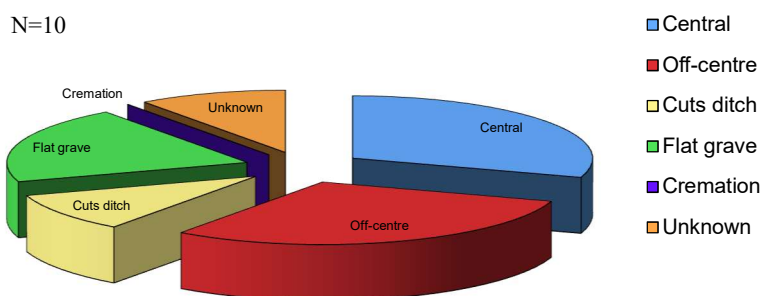
#### 4.1.4 Burial sequences and variability

2500-2150 BC



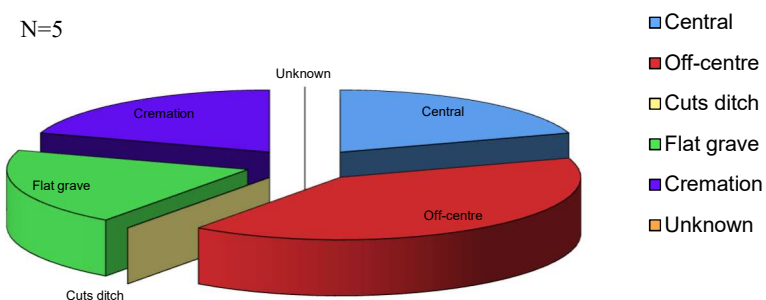
a

2150-1850 BC



b

1850-1500 BC



c

Fig 4.2: From top to bottom: Pie charts showing the percentage changes in the position of human burials relative to circular monuments, using the categories and chronological divisions determined by Garwood (2008).

Monument	A	B	C	D	E	F	BP date	Lab ref
QEQM Hospital				√			3852±33	Wk 18733

<b>North Foreland Ave, Broadstairs</b>	√						3799±31	Wk 18732
<b>Monkton Mount Pleasant, Thanet</b>				√			3700±50 3640±50 3360±100	BM-2923 BM-2898 BM-3028
<b>White Caps, Whitfield-Eastry Bypass, Dover</b>	√	√					3690±60 3490±60 3460±60	Beta 141269 Beta 141268 Beta 141270
<b>Castle Hill, Folkestone</b>	√						3675±65	OxA-4807
<b>South Dumpton Down, Ramsgate</b>	√						3630±45 3560±50 3520±40	BM 2975 BM-2940 BM-2864
<b>Manston Runway Approach, Thanet (LOTM 7)</b>		√					3630±50	BM-2642
<b>Cottingham Hill, Ebbsfleet, Thanet</b>				√			3630±60	BM-2725
<b>St Margaret's at Cliffe</b>						√	3620±120	OxA-4545 TA1
<b>Haynes Farm, Eyethorne, Dover</b>			√				3460±50	Beta 129270
<b>Fresnes-lès-Montauban/Le Motel</b>		√					3865±145 3380±50 3355±60	Ly 5334 Ly 5336 Ly 5335
<b>Frethun/Les Rietz</b>	√						3310±60	Gif 8928
<b>Rue/ Le Chemin des morts</b>						√	3295±40	GrA-14510
<b>TOTALS</b>	<b>7</b>	<b>6</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>1</b>		

Table 4.3: This shows dated human depositions 2500 BC - 1500 BC. A: Centrally placed crouched inhumation; B: Off-centre or peripheral crouched inhumation; C: Crouched inhumation cutting ring ditch; D: Crouched inhumation in flat grave or outside ring ditch; E: Centrally placed cremation deposit; F: Inhumation where post-depositional factors have rendered the context unknown.

The available radiocarbon dates demonstrate that some individual monuments had enduring, possibly spasmodic, episodes of funerary deposition<sup>19</sup>. The best example from Kent is that of White Caps, Whitfield-Eastry bypass, with inhumations and cremations spanning up to a 1000 year period from 3690±60 BP to 2690±50 BC. South Dumpton Down, Ramsgate, is another good case, with seven inhumation burials dated between 3630+45 BP – 3520±40 BP. The best example from the French zone is the previously mentioned Fresnes-lès-Montauban with three inhumations dated from 3865±145 BC to 3355±60 BC and three undated cremations - interpreted typologically as later. Other dated inhumations, such as the ones at Les Rietz, Frethun or QEQM Hospital, Margate, also have associated, but undated, burials within the same monuments.

Table 4.3 lists the types and positions of human depositions for which radiocarbon dates are available and the pie charts in Fig 4.2 compare these to Garwood's chronology, as defined above. Crouched inhumations that are centrally placed within ring ditches and barrows appear to be the most common rite from 2500 BC to 1500 BC. For the period 2500-2150 BC these account for 50 percent with

<sup>19</sup> Flanders is the exception because, for reasons previously stated, burial evidence is almost entirely absent.

another 17 percent of the total relating to off-centre or peripheral burials. Flat or external graves account for the remaining 33 percent. During the following period, 2150 BC – 1850 BC, central burials only drop slightly to 30 percent but greater variability in grave positioning is apparent. It is not until the final period 1850 BC – 1500 BC that central burials are eclipsed by off-centre depositions. Also worth noting is that the first radiocarbon dated cremation appears at this time.

#### **4.1.5 Interregional comparison of dated human depositions**

The potential for interregional comparison of dated human depositions is restricted by the small dataset; most evident by the fact that Flanders does not feature at all, whilst the northern French radiocarbon determinations number just five. In such circumstances meaningful inference is difficult to achieve so it is necessary to limit observation to gross trends. The graph (Fig 4.8) shows that central burials within ring ditches or barrows are less common in the northern French study zone than in Kent whilst off-centre or peripheral burials display a distinct parity. If central burials can be interpreted as the primary or founder event within a monument then this could be taken as support for the hypothesis that it is mostly secondary activities that are showing up in the Continental radiocarbon dataset. In other words, at least some of the northern French monuments are older than the radiocarbon dates suggest.

However, a clearer understanding about the range of burial and other ritual practices within circular monuments is needed before this can be said with confidence - and that requires far more data than is presently available. Another point of departure is the absence of flat graves from the French – and, of course, the Belgian - data. This form of burial simply does not feature as prominently in the Continental study zones, most likely due to a lack of detection rather than a genuine absence. Flat graves are impossible to identify through air survey analysis and have only become prominent in Kent in recent years as a result of increased developer led archaeological activities along with the more frequent use of ‘strip-and-map’ evaluation techniques.

## Interregional radiocarbon dates

(includes only the earliest date from each monument)

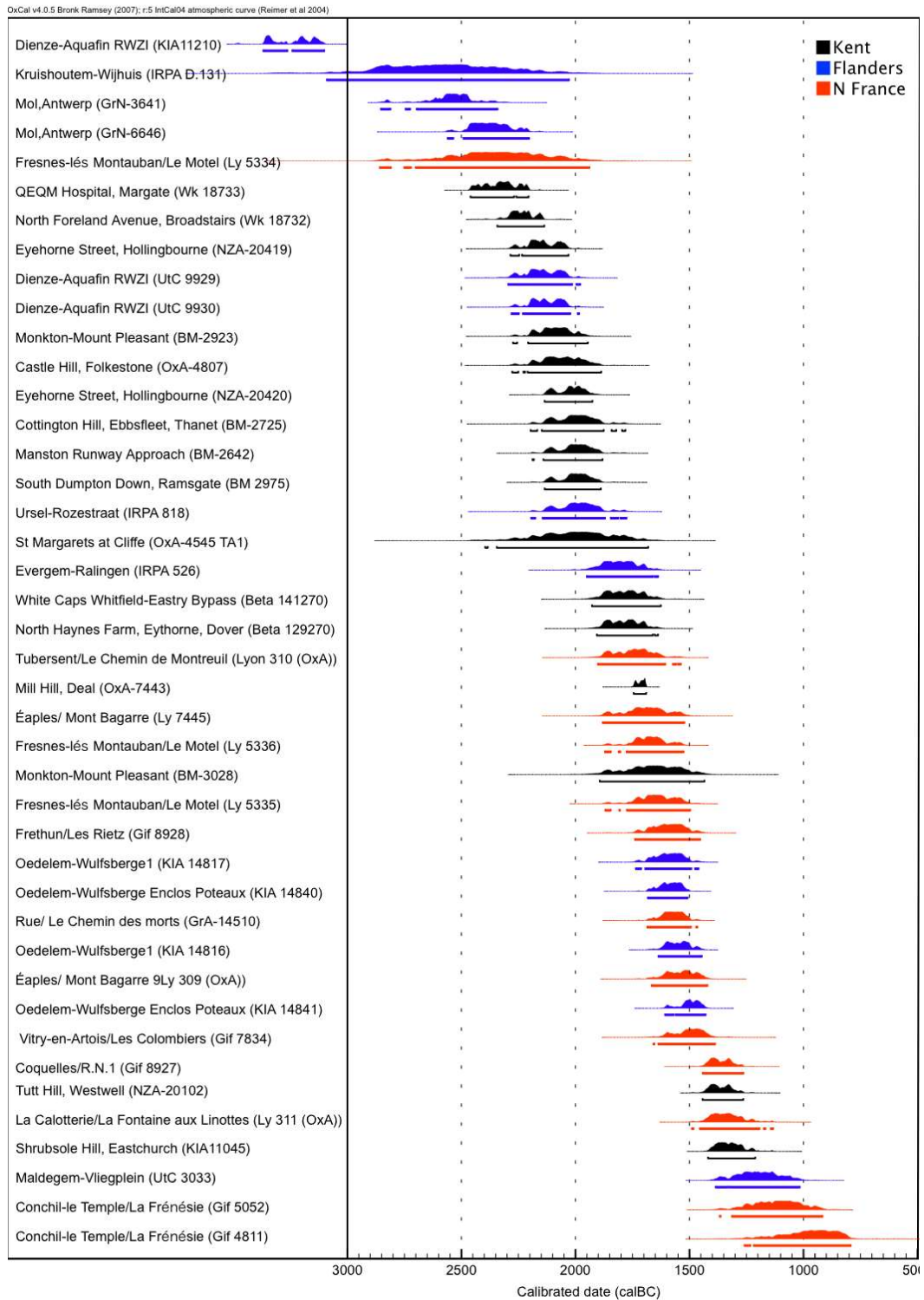


Fig 4.3: Chart showing the earliest date obtained from individual monuments in each of the study areas.

## Primary interregional radiocarbon dates

Monuments	Lab Ref	Date BP	Cal Bc 95.4%	Sample and context (context nos)
Dienze-Aquafin RWZI	KIA11210	4550±35	3370-3102	Charcoal from ditch base
Kruishoutem-Wijhuis	IRPA D.131	4036±189	3091-2029	Charcoal from cremation deposit
Mol,Antwerp	GrN-3641	4005±60	2854-2342	Wood from a grave lining or log coffin
Mol,Antwerp	GrN-6646	3895±55	2561-2204	Wood from a grave lining or log coffin
Fresnes-lès-Montauban	Ly 5334	3865±145	2859-1939	Human bone, inhumation (E) ring ditch 5
QEQM Hospital, Margate	Wk 18733	3852±33	2461-2206	Rib, crouched inhumation (SK2)
N. Foreland Ave, Broadstairs	Wk 18732	3799±31	2343-2137	Rib from adult female burial centre of r/ditch
Eyehorne Street, Hollingbourne	NZA-20419	3742±40	2286-2031	Charred hazelnut from primary fill of pit (23)
Dienze-Aquafin RWZI	UtC 9929	3740±50	2295-1980	Charcoal from ditch base
Dienze-Aquafin RWZI	UtC 9930	3730±40	2281-1985	Charcoal from ditch base
Monkton-Mount Pleasant	BM-2923	3700±50	2274-1946	Disarticulated bones (2a-c) flat grave (751)
Castle Hill, Folkestone	OxA-4807	3675±65	2278-1888	Bone - female burial central in ring ditch
Eyehorne Street, Hollingbourne	NZA-20420	3648±35	2136-1926	Charred hazelnut from primary fill of pit (60)
Cottington Hill, Ebbsfleet	BM-2725	3630±60	2197-1782	Skull and femur - remains of crouched burial
Manston Runway (LOTM 7)	BM-2642	3630±50	2189-1882	Human femur - (burial B1) off-centre in r/d
S. Dumpton Down, Ramsgate	BM 2975	3630±45	2135-1889	Bone from primary burial 1 in pit A
Ursel-Rozestraat	IRPA 818	3620±60	2195-1777	Charcoal from inner ditch base
St Margaret's at Cliffe	OxA-4545	3620±120	2396-1682	Human femur from crouched female burial
Evergem-Ralingen	IRPA 526	3480±60	1951-1638	Charcoal from ditch base
White Caps, near Dover	Beta 141270	3460±60	1928-1626	Bone collagen - adult inhumation (729)
Haynes Farm, Eythorne	Beta 129270	3460±50	1907-1639	Bone - adult male burial cutting middle ditch
Le Chemin de Montreuil	Ly 310 OxA	3430±60	1902-1538	Charcoal from base of ring ditch 2.
Mill Hill, Deal	OxA-7443	3420±??	1745-1691	Red deer antler primary fill ring ditch (F200)
Étaples/ Mont Bagarre	Ly 7445	3390±70	1881-1523	Charcoal from base of internal ditch 300
Fresnes-lès Montauban	Ly 5336	3380±50	1871-1527	Human bone - inhumation (A) ring ditch 1
Monkton-Mount Pleasant	BM-3028	3360±100	1894-1435	Femur - juvenile (4825), flat grave (537)
Fresnes-lès-Montauban	Ly 5335	3355±60	1870-1498	Human bone - inhumation (C) ring ditch 3
Les Rietz, Frethun	Gif 8928	3310±60	1740-1454	Human bone - central crouched burial
Oedelem-Wulfsberge 1	KIA 14817	3310±50	1736-1461	Charcoal from ditch base
Oedelem-Wulfsb' Enclos à pot	KIA 14840	3310±35	1683-1509	Charcoal from ditch base
Rue/ Le Chemin des morts	GrA-14510	3295±40	1686-1466	Carbonized bone from central inverted urn
Oedelem-Wulfsberge 1	KIA 14816	3270±40	1637-1447	Charcoal from fill of grave cut
Étaples/ Mont Bagarre	Ly 309 OxA	3255±55	1667-1422	Charcoal from base of external ditch 400
Oedelem-Wulfsb' Enclos à pot	KIA 14841	3230±35	1608-1430	Charcoal from ditch base
Vitry-en-Artois/Les Colombiers	Gif 7834	3220±60	1659-1388	Carbonized bone - central inverted urn (1)
Coquelles/R.N.1	Gif 8927	3095±40	1443-1264	Human bone - crouched (a) in rd ST 10
Tutt Hill, Westwell	NZA-20102	3094±40	1442-1264	Cremation/pyre debris
La Font' aux Linottes,Calotterie	Ly 311 OxA	3075±55	1489-1132	Charcoal from base of ring ditch (38)
Shrubsole Hill, Eastchurch	KIA11045	3052±39	1418-1211	Charcoal residue from Dev. Rim. urn (908)
Maldegem-Vliegplein	UtC 3033	3300±70	1741-1436	Charcoal from ditch base
Conchil-le Temple/La Frénésie	Gif 5052	2910±70	1689-1133	Charcoal from base of ditch (F)
Conchil-le Temple/La Frénésie	Gif 4811	2780±100	1391-851	Carbonized bone - unurned cremation (C25)

Table 4.4: This table should be read in conjunction with the radiocarbon probability chart (Fig 4.3) above.



## Secondary Kent dates (represented in bold italics)

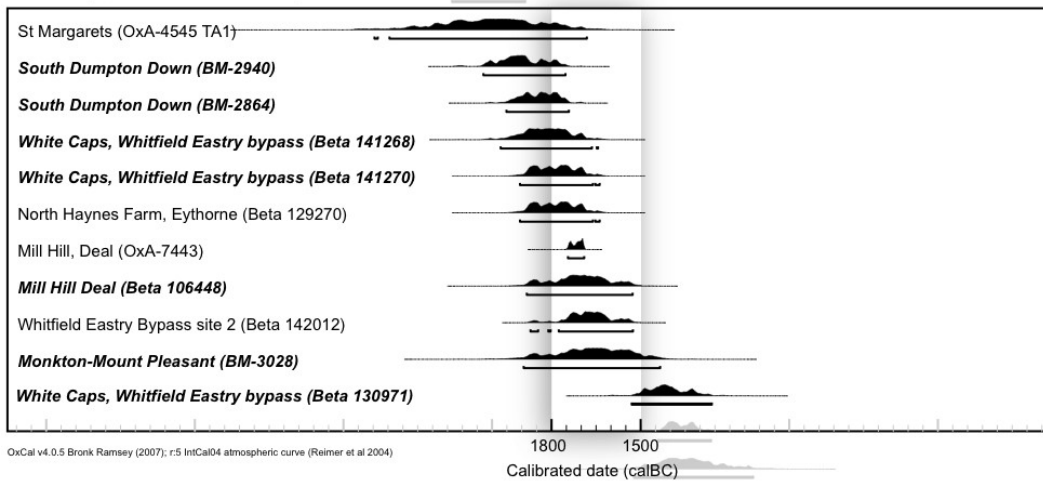


Fig 4.4: This chart illustrates that when the complete set of dates from monuments in Kent are included the perceived dominance of Flanders and north-eastern France during the period 1800 BC – 1500 BC is no longer applicable.

## N France radiocarbon dates grouped by monument

OxCal v4.0.5 Bronk Ramsey (2007); r:5 IntCal04 atmospheric curve (Reimer et al 2004)

Monument	OxCal Plot	BP at 95% (lab ref)	Sample and associations
Fresnes-lès-Montauban/ Le Motel		3865±145 (Ly 5334)	Human bone from burial in ring ditch 5
		3380±50 (Ly 5336)	Human bone from burial in ring ditch 1
		3355±60 (Ly 5335)	Human bone from burial in ring ditch 3
Tubersent/Le Chemin de Montreuil		3430±60 (Lyon 310 (OxA))	Charcoal from base of ring ditch 2
Étapes/Mont Bagarre		3390±70 (Ly 7445)	Charcoal from base of internal ring ditch 300
		3255±55 (Ly 309 (OxA))	Charcoal from base of external ring ditch 400
Frethun/Les Rietzil		3310±60 (Gif 8928)	Human bone from central crouched inhumation
Rue/Le Chemin des morts		3295±40 (GrA-14510)	Carbonised bone - central inverted urn cremation
Conchil-le-Temple/ La Frénésie		3250±70 (Gif 5053)	Charcoal from upper fill of ring ditch G1
		3170±100 (Gif 4134)	Charcoal from base of ring ditch F
		2910±70 (Gif 5052)	Charcoal from lowest fill of ring ditch A1
		2910±100 (Gif 4133)	Carbonised bone from unurned cremation C25)
		2780±100 (Gif 4811)	Carbonised bone from unurned cremation C22)
Vitry-en-Artois/ Les Colombiers		2750±95 (Gif 4398)	Charcoal from middle fill of ring ditch A1
		3220±60 (Gif 7834)	Human bone from inverted urn cremation (1)
Coquelles/R.N.1		3095±40 (Gif 8927)	Human bone from crouched inhumation 1/rd ST10
La Calotterie/ La Fontaine aux Linottes		3075±55 (Ly 311 (OxA))	Charcoal from base of ring ditch (38)
Waben/Le Sémaphore		3040±50 (Ly 8149)	Carbonised bone from unurned cremation in ditch
		2650±50 (Ly 8148)	Charcoal from upper fill of ring ditch

2500 2000 1500 1000 500  
Calibrated date (cal BC)

Fig 4.5: A full list of the available north-eastern Transmanche French radiocarbon dates grouped by monument.

## Kent radiocarbon dates grouped by monument

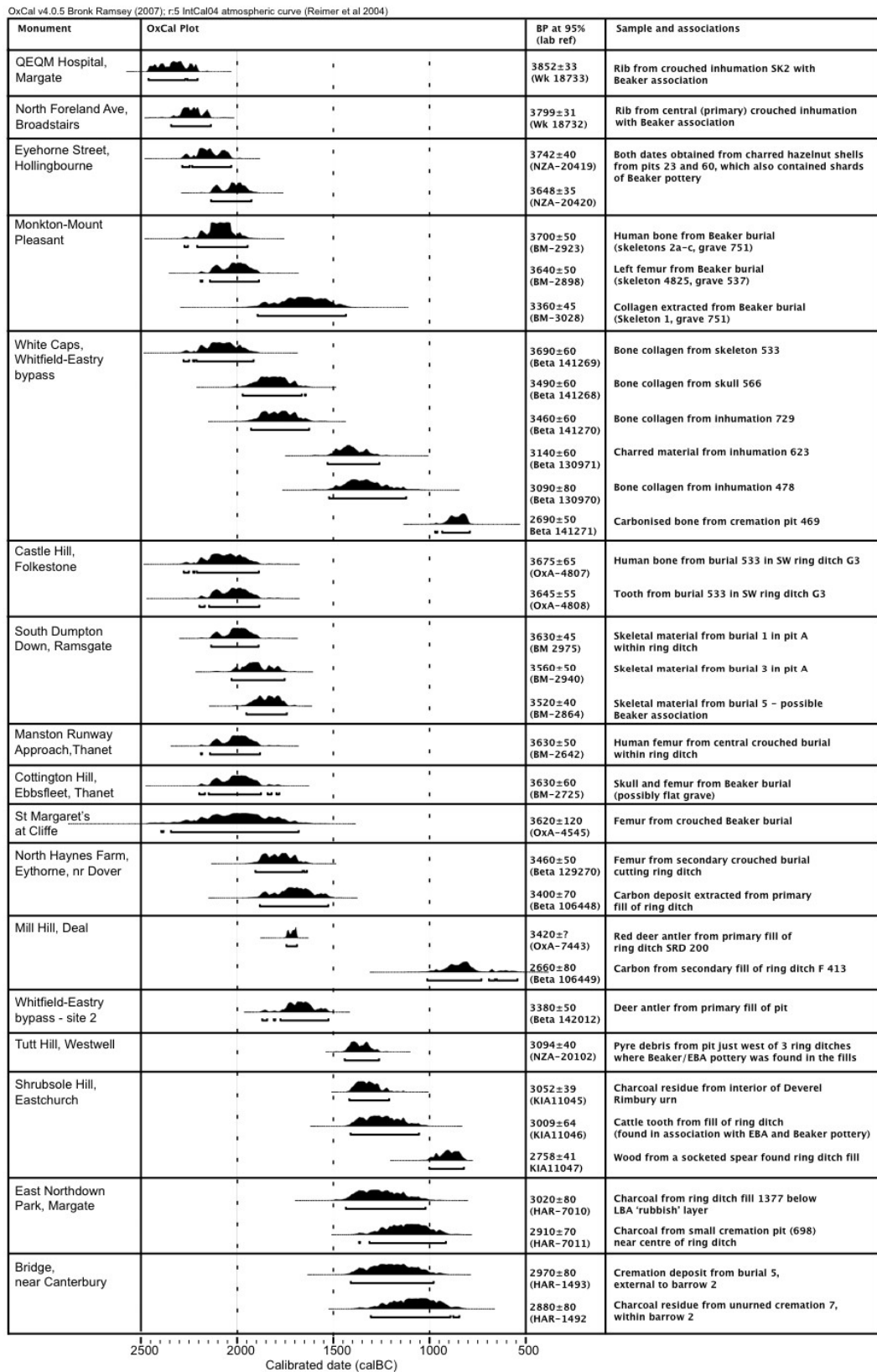


Fig 4.6: A full list of the available Kent radiocarbon dates grouped by monument.

## Belgium radiocarbon dates grouped by monument

OxCal v4.0.5 Bronk Ramsey (2007); r:5 IntCal04 atmospheric curve (Reimer et al 2004)

Monument	OxCal Plot	BP at 95% (lab ref)	Sample and associations
Knesselare-Flabbeert		4340±120 (UIC 2750)	Charcoal from middle of ring ditch
Dienze-Aquafin RWZI		4550±35 (KIA 11210)	Charcoal from base of ring ditch
		3740±50 (UIC 9929)	Charcoal from base of ring ditch
		3730±40 (UIC 9930)	Charcoal from base of ring ditch
		3540±50 (UIC 3540)	Unknown
		3400±40 (UIC 9864)	Unknown
Mol, Antwerp		4095±240 (IRPA-3)	Wood from grave lining
		4005±60 (GrN 3641)	Wood from grave lining
		3895±55 (GrN 6646)	Wood from grave lining
Kruishoutem-Wijhuis		4036±189 (IRPA D.131)	Charcoal from cremation pyre
Sint-Gillis-Waas-Reepstraat		3770±75 (IRPA 1069)	Charcoal from upper ditch fill
		3350±50 (IRPA 1070)	Charcoal from upper ditch fill
		3265±55 (IRPA 1072)	Charcoal from upper ditch fill
Ursel-Razestraat		3620±60 (IRPA 818)	Charcoal from base of earlist ditch
		2500±60 (IRPA 819A)	Charcoal from later of 2 ditch fills
		2490±55 (IRPA 819B)	Charcoal from later of 2 ditch fills
Evergem-Ralingen		3480±60 (IRPA 526)	Charcoal from base of ring ditch
Vosselare-Kouter		3320±70 (UIC 2019)	Charcoal from middle of ditch fill
		3310±50 (UIC 1065)	Charcoal from middle of ditch fill
		3260±60 (UIC 2017)	Charcoal from middle of ditch fill
Dedelem-Wulfsberge		3310±50 (KIA 14817)	Charcoal from grave cut
		3270±40 (KIA 14816)	Charcoal from base of ring ditch
		3180±35 (KIA 14819)	Charcoal from base of ring ditch
Dedelem-Wulfsberge enclos poteaux		3310±35 (KIA 14840)	Charcoal from base of ring ditch
		3230±35 (KIA 14841)	Charcoal from base of ring ditch
Maldegem-Vlieggelein		3300±70 (UIC 3033)	Charcoal from base of ring ditch
		2970±60 (UIC3032)	Charcoal from upper ditch fill
Ostwinkel-Veldhoek		3270±70 (UIC 3310)	Charcoal from middle of ditch fill
		2950±80 (UIC 3311)	Charcoal from upper ditch fill
Kortemark-Koutermolenstraat 1		3030±90 (UIC 2733)	Charcoal from middle of ditch fill
		3030±40 (IRPA 1033)	Charcoal from middle of ditch fill
Gent-Hoge Weg		3030±90 (IRPA 774)	Unknown
Dedelem-Drie Koningen		2940±80 (UIC 3302)	Charcoal from middle of ditch fill
Kortemark-Koutermolenstraat2		2680±60 (UIC 3187)	Charcoal from upper ditch fill
		2610±100 (UIC 2739)	Charcoal from upper ditch fill

Fig 4.7: A full list of the available Belgium radiocarbon dates grouped by monument.

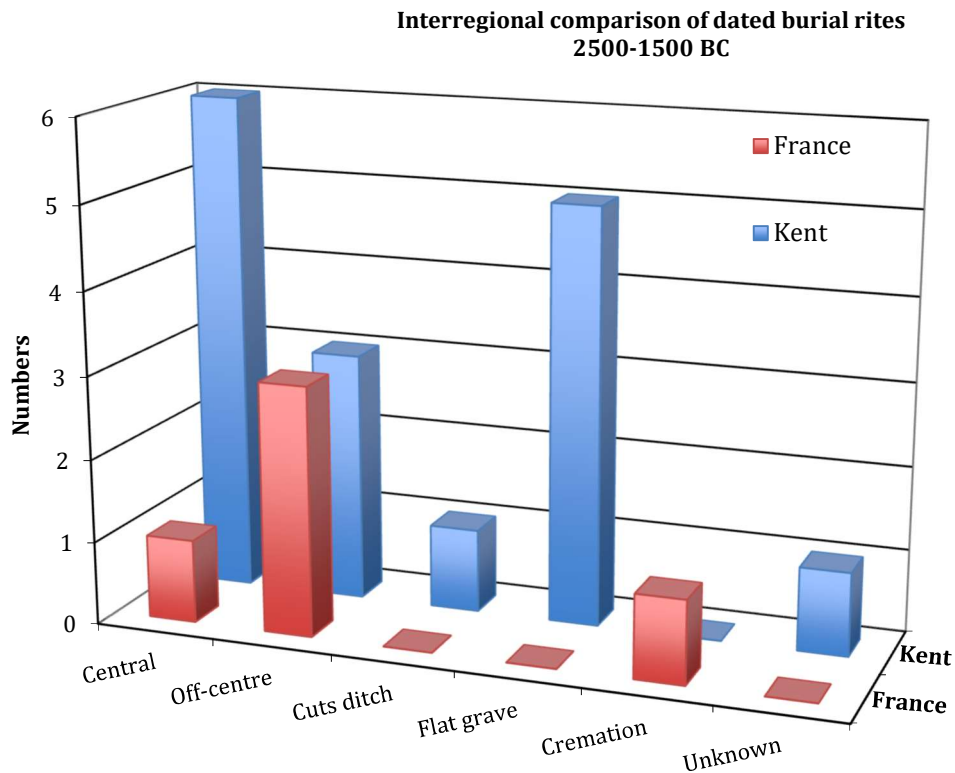


Fig 4.8: A comparison of the dated burial rites from Kent and north-eastern Transmanche France for the period 2500-1500 BC.

#### 4.1.6 Summative conclusions

There is, in fact, nothing remarkable about the overall spread of the available radiocarbon dates. They correspond, in broad terms, to the chronologies established by, among others, Needham (1996; 2009) Bourgeois and Talon (2009), De Laet (1982) and Blanchet (1984). In Kent and Flanders the earliest dates emanate from crouched Beaker inhumations – on the assumption that some of the charcoal dates such as those from Knesselare-Flabbaert 2 (UtC 2750) and Dienze Aquafin RWZI (KIA 11210) are false indicators (Bourgeois and Cherrette 2005). In the north-eastern French zone there are no radiocarbon dated Beaker burials but the earliest determination, from Le Motel, Fresnes-lès-Montauban – a short distance from the river Scarpe near Arras, Pas-de-Calais - relates to a crouched inhumation, one of three (Ly 5334, Lys 5336 and Lys 5335) found at that locality and spanning a period either side of 2000 BC (Desfossés and Masson 2000).

The available absolute and typologically determined dates do not suggest a chronological transition from one inhumation rite to another; rather the different burials appear to represent parallel traditions, or perhaps a single tradition with variant physical manifestations. The later dates, which fall outside the 1500 BC cut-off point established by the research parameters set out in Chapters 1 and 3, again comply with the accepted pattern of mortuary practices by demonstrating that a fundamental shift had taken place. Relatively few cremations definitively date prior to 1600 BC but thereafter they rise steadily to dominance, while at the same time inhumation burials decline. This implies that a new credo, requiring a new funerary rite, emerged during the middle of the second millennium BC, or that a long established minority belief has begun to attract more and more followers.

## **CHAPTER 5**

### **THE BEAKER PHENOMENON**

#### **5.1 INTRODUCTION**

The earliest period defined by this research project's chronology is dominated by the appearance in the archaeological record of Beaker pottery vessels. In order for the associated burial practices to be examined comparatively against other synchronous funerary rites, it is necessary for the data relating to this particular phenomenon to be extracted and analysed separately.

#### **5.2 ZONE 1 - KENT**

##### **5.2.1 Historical context**

Attention was first drawn more than 75 years ago to the collected Beaker pottery in Kent (Jessup 1930, 89-94). At the time Lord Abercromby's classification system was being used to group vessels into three categories, labelled A, B and C - later to become more descriptively known as Long-necked, Bell and Short-necked, respectively (Adkins 1982, 70). Jessup listed 20 Beakers found in different parts of the county. Forty years later his list was still the most prolific single source of data relating to Beaker finds in the county. It was then that David Clarke's (1970) seminal work, examining 1944 Beakers from across Great Britain and Ireland was published. It catalogued 31 vessels from Kent, including 13 previously listed by Jessup. Despite the growth in numbers, only six could be specifically attributed to funerary contexts, with another three having been associated with round barrows or ring ditches.

Clarke's scheme, whilst far more comprehensive, was not so much concerned with the context in which Beakers were found as it was to placing them into one of 16 categories - determined by vessel profile, surface decoration, style and fabric. In this way he hoped to establish both their points of origin and the development of regional styles over time. In attempting this he came to conclude that 'successive waves' of European Beaker people arrived in Britain from around 2100 BC onwards (Clarke 1970, 276-280). Clarke progressively published research in advance of his magnum opus, giving other scholars ample time to consider the assertions contained within. As a result the work was already subject

to question by the time it came out. His conclusions – particularly in relation to chronology, dissemination and association – were extensively criticized and ultimately entirely dismissed. Even so, and despite its widely accepted shortcomings, Clarke’s lasting legacy is the corpus of finds and the typology he devised. This became established as the pre-eminent system for classifying British Beakers (Fig 5.1). It remains so, even today, despite the chronology having been undermined by new radiocarbon dates (Kinnes *et al.* 1991; Case 1993).

Attempts by Lanting and Van der Waals (1972), Case (1993) and most recently Needham (2005b) to bring their own order to this confusing and enigmatic problem have further undermined aspects of Clarke’s work. However, whilst they have each brought new interpretations, and gained varying degrees of consensus, none has managed entirely to dislodge his classification system. For this reason it will be used here to identify Beaker types, but matters of dating, association and interpretation are explored by reference to the other published material – particularly Needham.

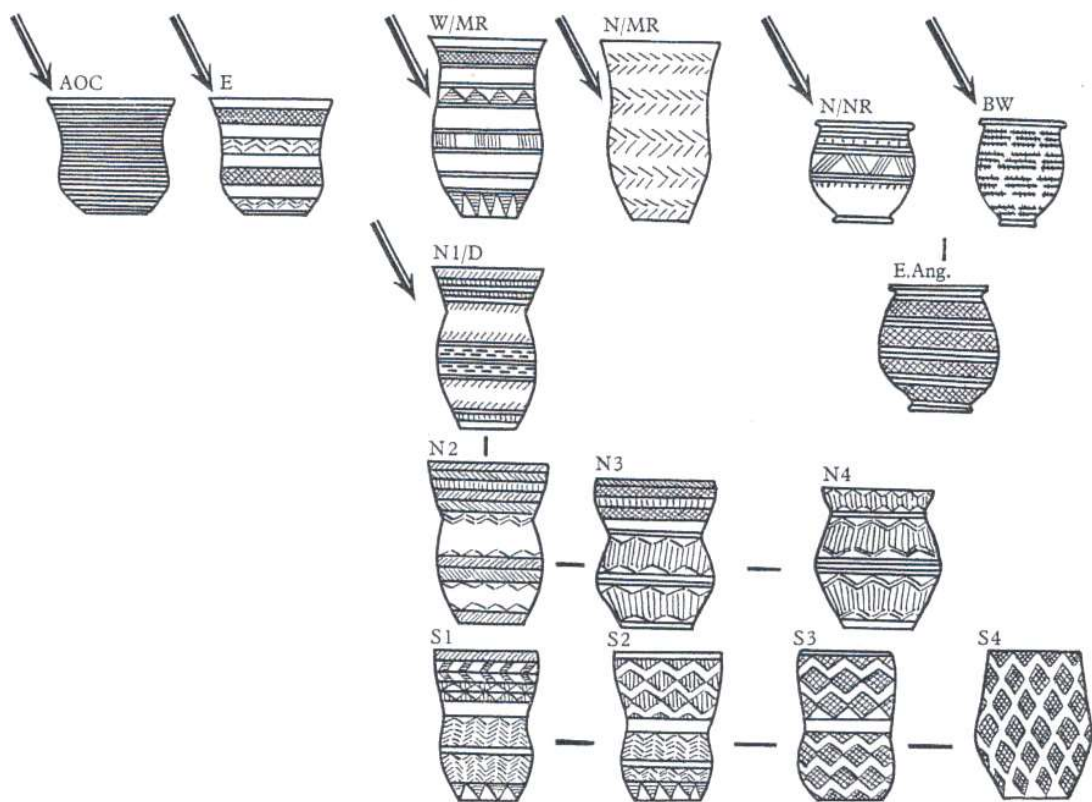


Fig 5.1: Clarke’s sketch of his British Beaker groups. Arrows indicate Continental intrusions and the lines link the three insular groups. The earliest form is at the top left, the latest is bottom right (1970, 42, fig. VII).

### 5.2.2 Number and types

Since Clarke's list was published in 1970 the number of Beakers recovered from Kent has grown steadily. As at August 2006, at least 49 new vessels from 28 archaeological excavations have come to light. Of these, 19 accompanied burials (Table 5.1); 22 were found in association with round barrows or ring ditches; five were isolated finds and the remainder came from domestic contexts.

Not all are sufficiently complete, or well enough preserved to be identified by reference to Clarke's schemata. By August 2006 the number that could be confidently assigned – excluding those for which specialist reports were pending – stood at 27, bringing the total of categorized Kentish Beakers at that time to 58.

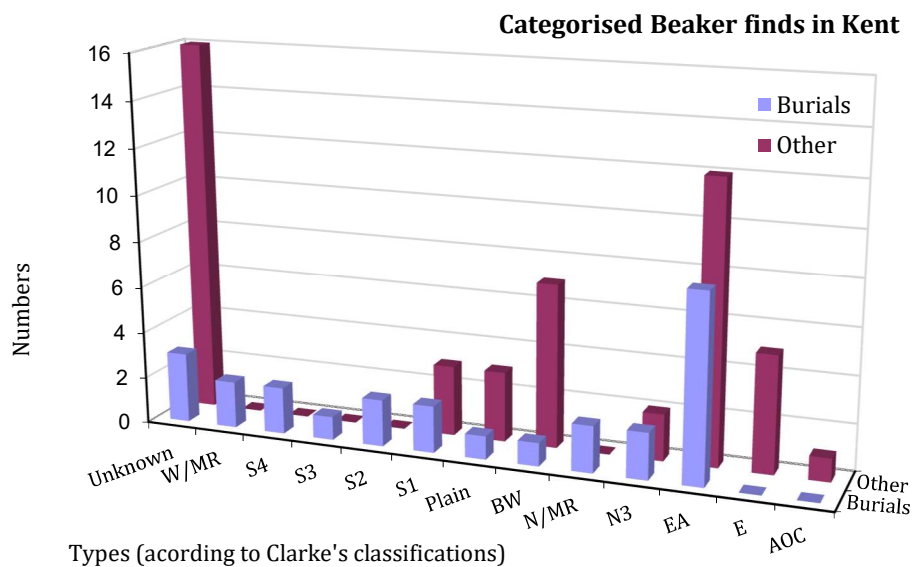


Fig 5.2: A bar graph showing the respective numbers of Beaker types found in grave contexts in Kent, after Clarke's (1970) classification system.

Additionally, sherds representing more than a hundred vessels, mostly of domestic types, have been recovered from excavations at Castle Hill, Folkestone; the Whitfield-Eastray bypass, Dover; Monkton-Mount Pleasant road improvements, Thanet; and at the conjectured Beaker settlements of Beechbrook Wood, Hothfield; the Lydden Valley, near Dover; Shrubsole Hill, Eastchurch; Holywell Coombe, Folkestone; Laundry Road, Minster, Thanet; Cottington Hill, North Foreland, Thanet and Cliffs End, Thanet. The largest classified Beaker type overall remains East Anglian (EA), with 20 pots, of which eight are from burial contexts. This also makes it the largest of Clarke's types to accompany Kentish Beaker burials (Fig 5.2).

No	Monument name	Type	Context	Other details/finds	Reference
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58	Chalk Hill, Ramsgate	?	Within central grave cut	50 sherds almost complete	(Shand 2002)
33	Gravel pit east of Sturry vicarage	BW	Disturbed burial in gravel pit	Found with wrist-guard	(Clarke 1970, corpus no 411)
18	Mongeham Lane, Upper Deal	EA	Sherds with crouched adult		(Clarke 1970, corpus no 414)
19	Erith	EA	Found in gravel quarry		(Clarke 1970, corpus no 398)
20	Erith	EA	Found in gravel quarry		(Clarke 1970, corpus no 399)
43	St Peter's rubbish tip, Margate	EA	Inhumation cut by ring ditch	Wrist-guard & second Beaker burial	(Minter and Hogarth 1972)
54	Cottington Hill, Ebbsfleet, Thanet	EA	Flat grave – in front of skull	Badly disturbed	(Perkins 1990b)
61	Northumberland Bottom, Southfleet	EA	In grave behind female pelvis	Complete	(Askew 2004)
62	Northumberland Bottom, Southfleet	EA or N/NR	Behind head of male skeleton	Fragmented	(Askew 2004)
1	St Margaret's at Cliffe, Dover	N3	From a disturbed burial		(Clarke 1970, corpus no 397)
51	Monkton-Mount Pleasant area 4	N3	Upright north of child's head	Snake head copper bracelet	(Clark and Rady 2009)
45	Nunnery Fields, Canterbury	N/MR	Unclear – rich burial?		(Clarke 1970, corpus no 398)
48	Cliff View Rd, Cliffsend, Ramsgate	W/MR	On base of two metre deep grave cut	Accidental find - almost complete	(Macpherson-Grant 1969)
59	Dumpton Park, Ramsgate	Plain	Behind female skeleton	Undecorated - unconfirmed	(Philp and Chenery 2001)
50	Monkton-Mount Pleasant area 4	S1	In front of skull	Third of fragmented pot	(Clark and Rady 2009)
67	Eyeborne Street, Hollingbourne	S1	In a cremation pit	25 sherds from six Beakers	(Barclay and Gardiner 2005)
71	LOTM 7/Manston runway	S2	Behind skeleton's back	Lop-sided, poorly decorated	(Fisk unpublished)
63	North Foreland Ave, Ramsgate	S2	At feet of crouched female	Damaged before deposition	(Hart 2005)
68	Eyeborne Street, Hollingbourne	S3	In a cremation pit	Unusually large pot	(Barclay and Gardiner 2005)
52	Monkton-Mount Pleasant area 4	S4	In northern end of grave cut	With juvenile burial	(Clark and Rady 2009)
49	Monkton-Mount Pleasant area 9	S4	At feet of crouched burial	Copper bracelet in grave	(Clark and Rady 2009)
66	QEQM, St Peters Rd, Margate	?	Sherds mixed with grave fill	Associated with second Beaker	(Moody and Gardner 2005)
55	South Dumpton Down	W/MR	With one of seven burials	Food vessel in same pit	(Fisk unpublished)
65	QEQM, St Peters Rd, Margate	W/MR	Behind head of male skeleton	Four tanged and barbed arrows	(Moody and Gardner 2005)
74	Cliffe, nr Gravesend	EA	With a crouched burial	Archer's wrist-guard	(Kinnes <i>et al.</i> 1998)

Table 5.1: A list of the known Beaker graves in Kent as at August 2006. Numbers correspond to map Fig 5.3. Numbers in the left-hand column correspond to those on the distribution map.

### 5.2.3 Distribution

Distribution map, Fig 5.3, shows the locations of all Beaker vessels and Beaker sherd assemblages recorded in Kent up to August 2006. The map also identifies a cist burial excavated in 1883 in Sittingbourne, which is of classic Beaker-style, containing an archer's wrist-guard and a copper dagger (Kinnes 1985, 27) but not a pot (Clarke 1970). In locations where more than one categorized Beaker has

been found the map symbol is duplicated. Thanet, with 19 identified vessels from 12 excavations, can be seen to have the highest concentration of Beaker finds. This is in marked contrast to the picture Clarke presented in 1970, which showed Thanet as being totally devoid of Beakers. However, both distributions demonstrate an observable bias towards East Kent. The majority of Beakers were recovered from areas where chalk dominated the geology (see Section 7.1.2, Fig 7.5). They also tend to be found in graves above the present-day 30-metre Ordnance Survey contour.

#### **5.2.4 Chronology**

British Beaker pottery has proved stubbornly resistant to reliable seriation. Ironically, it is the sheer wealth and variety of finds which has proved so problematic. Generalisations are possible - such as asserting that surface decorations evolved into more and more complex patterns. The morphogenesis of Beaker profiles is proving more helpful, but these vessels were in use for around 800 years – from approximately 2500 BC – 1700 cal BC and most styles were remarkably long lasting. It is also likely that as cherished objects some may have been passed down as ancestral relics or family heirlooms and continued to have a useful life long after that particular form had been superseded. As a consequence, anyone studying Britain's Beaker era faces a formidable challenge when trying to construct a cogent narrative.

Needham has, in part, risen to this challenge by suggesting a new chronology for broad lineages of funerary pottery. He has done this by using radiocarbon dating along with closed associations of grave assemblages. The 'lineages' are differentiated by reference to specific aspects of vessel profiles, such as the existence and position of a carination, or the length of a vessel's necks and, as he says: "*some...revive earlier classifications*". He is at pains to point out that by limiting the analysis to Beakers found in funerary contexts his chronology is: "*inevitably a product of selection from a broader life assemblage,*" (Needham 2007). He concludes that there was not a steady evolution of form in Britain, instead seeing diversity coming about during a period of rapid mutation which took place after a point in time he has dubbed the fission horizon (Needham 2005b, 171). He supports this hypothesis by attempting to determine each pottery

type's lifespan (Fig 5.4). This has also made it possible to re-assert that multiple forms were in use simultaneously right across Britain. For instance, his Long-necked variant includes a Kentish Beaker from the LOTM 7 excavation – and by association another from, North Foreland Avenue, Broadstairs – but others included in this category were found in northern Britain, Wales and Wessex.

As already noted, Needham has only applied his hypothesis to pots that have associated radiocarbon dates. An increasing number of Kentish Beakers have now yielded such determinations (see Table 5.2 and Chapter 4 on absolute dating). Of those currently available, it can be seen that the upper and lower limits of the table conform to the generally accepted 800-year period of established Beaker activity. Closer inspection reveals that the majority of dates are early – with QEQM (Queen Elizabeth the Queen Mother) Hospital and North Foreland Avenue presenting results that place them potentially at the genesis of Needham's fission horizon. The earliest profile type in his scheme is the Carinated Beaker. There is only one of these in Kent with a radiocarbon date – from the QEQM excavation – and it is the earliest in the Kentish sequence. Similarly, his S-profile Globular type is one of the later styles, and the single Kentish example, from Cottington Hill, does fall in the lower half of the dating sequence.

The bulk of these Kent radiocarbon dates cluster within the final quarter of the third millennium BC, averaging out to 2100 cal BC. This places them within Needham's Period 2: "*Beaker as an instituted culture c. 2250-1950 cal BC,*" (Needham 2005b, 209). Another point of interest is that at least one of the previously mentioned LN type Beaker's, the one from LOTM 7, was found along with a plano-convex flint knife and a jet button. While this does not strictly comply with Needham's scheme – where LN Beakers are associated with flint daggers (Needham 2005b, 205) it does resonate.

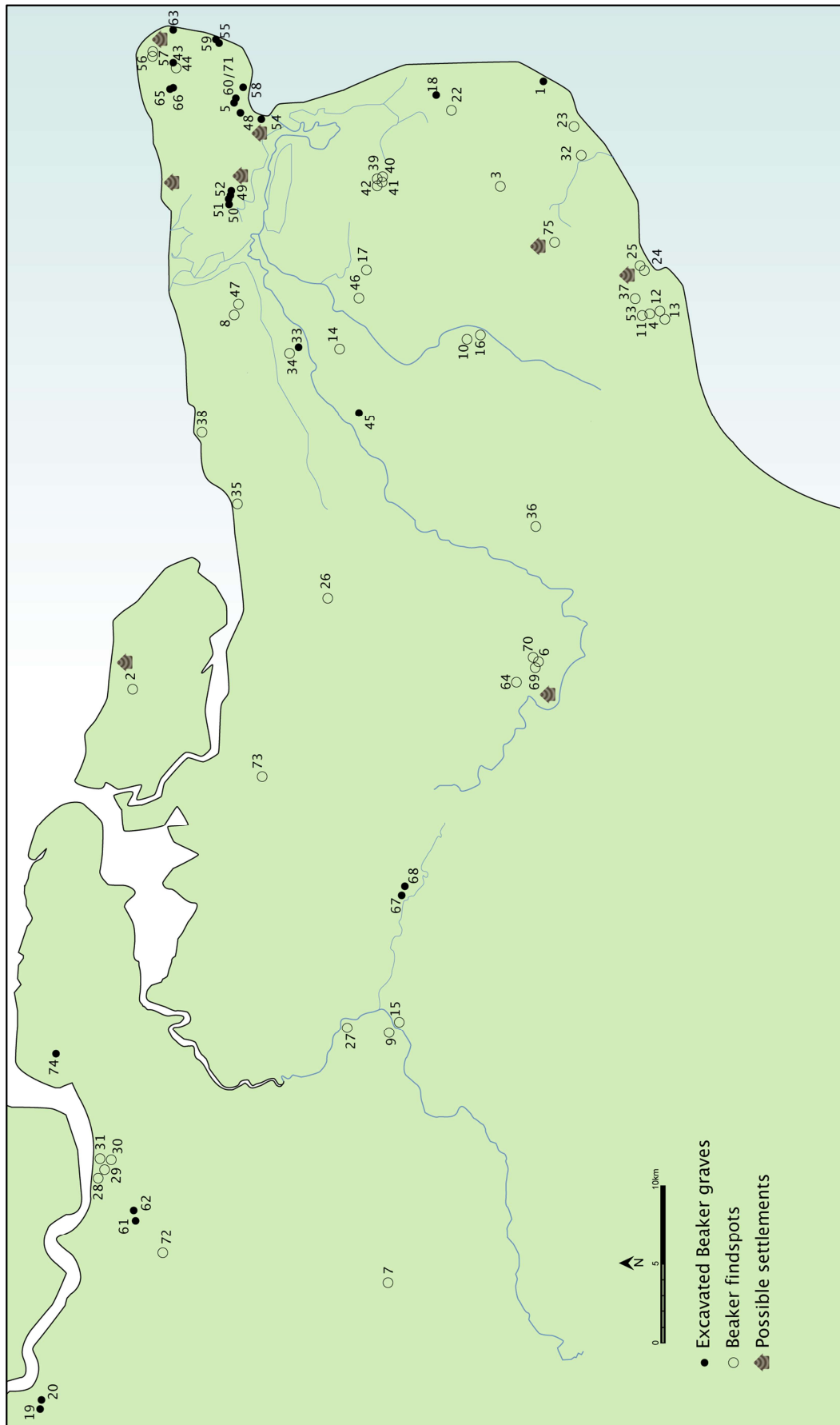


Fig 5.3: Distribution map drawn by the author showing all known Beaker findspots in Kent up to August 2006. The corresponding monument names are listed in Table 5.2.

No	Monument name	District	Designation (Clarke 1970)
1	St Margaret's at Cliffe	Dover	N3
2	Shrubsole Hill, Eastchurch	Swale	Unknown
3	Whitfield-Eastray by-pass, Sutton	Dover	Unknown
4	Castle Hill, Folkestone	Shepway	East Anglian
5	Lord of the Manor 1	Thanet	2xRusticated
6	Beechbrook Wood, Hothfield	Ashford	East Anglian
7	Ightham	Sevenoaks	East Anglian
8	Chislet	Canterbury	European
9	Lower Fant	Maidstone	European
10	Barham	Canterbury	European
11	Castle Hill, Folkestone	Shepway	Unknown
12	Folkestone	Shepway	Barbed Wire
13	Folkestone Golf Course	Shepway	N3
14	Littlebourne	Canterbury	Barbed Wire
15	Tovil	Maidstone	Barbed Wire
16	Barham	Canterbury	East Anglian
17	Stourmouth-Adisham watermain	Canterbury	East Anglian
18	Mongeham Lane, Upper Deal	Dover	East Anglian
19	Erith	Dartford	East Anglian
20	Erith	Dartford	East Anglian
21	Bromley (not on map)	Bromley	East Anglian
22	Great Mongeham	Dover	East Anglian
23	Former airfield	Dover	East Anglian
24	Capel le Ferne	Shepway	N3
25	Capel le Ferne	Shepway	S1
26	Brendley	Swale	S1
27	Allington	Maidstone	Unknown
28	Gravesend	Gravesham	Barbed Wire
29	Gravesend	Gravesham	Barbed Wire
30	Gravesend	Gravesham	East Anglian
31	Gravesend	Gravesham	East Anglian
32	Connaught Park	Dover	East Anglian
33	Sturry, Gravel pit	Canterbury	Barbed Wire
34	Sturry	Canterbury	Unknown
35	Seasalter	Swale	Unknown
36	Wye	Ashford	Barbed Wire
37	Holywell Coombe	Shepway	Unknown
38	Swalecliffe	Canterbury	East Anglian
39	Ringlemere, Sandwich	Dover	Unknown
40	Ringlemere, Sandwich	Dover	Unknown
41	Ringlemere, Sandwich	Dover	Unknown
42	Ringlemere, Sandwich	Dover	Unknown
43	St Peter's Rubbish Tip	Thanet	East Anglian
44	St Peter's Rubbish Tip	Thanet	AOC ?
45	Nunnery Fields	Canterbury	Northern/Mid Rhine
46	Ickham	Dover	Unknown
47	Chislet	Canterbury	European
48	Cliff View Rd, Cliffsend, Ramsgate	Thanet	Wessex/Mid Rhine
49	Monkton-Mount Pleasant Area 9	Thanet	S4
50	Monkton-Mount Pleasant Area 4	Thanet	S1
51	Monkton-Mount Pleasant Area 4	Thanet	N3
52	Monkton-Mount Pleasant Area 4	Thanet	S4
53	Castle Hill, Folkestone	Shepway	Unknown
54	Cottington Hill, Ebbsfleet	Thanet	East Anglian
55	South Dumpton Down	Thanet	Wessex/Mid Rhine
56	East Northdown, Margate	Thanet	AOC
57	East Northdown, Margate	Thanet	Plain
58	Chalk Hill, Ramsgate	Thanet	Unknown
59	Dumpton Park Stadium, Ramsgate	Thanet	Plain
60	LOTM 7	Thanet	S2

No	Monument name	District	Designation (Clarke 1970)
61	Northumberland Bottom, Southfleet	Dartford	East Anglian
62	Northumberland Bottom, Southfleet	Dartford	East Anglian
63	'Beauforts' N. Foreland Ave,	Thanet	S2
64	Tutt Hill, Westwell	Ashford	Unknown
65	QEQM, St Peters Road, Margate	Thanet	Wessex/Mid Rhine
66	QEQM, St Peters Road, Margate	Thanet	Unknown
67	Eyeborne Street, Hollingbourne	Maidstone	S1
68	Eyeborne Street, Hollingbourne	Maidstone	S3
69	Beechbrook Wood, Hothfield	Ashford	S1
70	Beechbrook Wood, Hothfield	Ashford	Barbed Wire
71	LOTM 7/ Manston Runway	Thanet	European?
72	Whitehill Road, Southfleet,	Dartford	Unknown
73	Sittingbourne	Swale	No Beaker
74	Cliffe nr Rochester	Medway	East Anglian
75	Lydden Valley	Dover	Unknown

Table 5.2: A list of the known Beaker finds up to August 2006. Numbers correspond to map Fig 5.3.

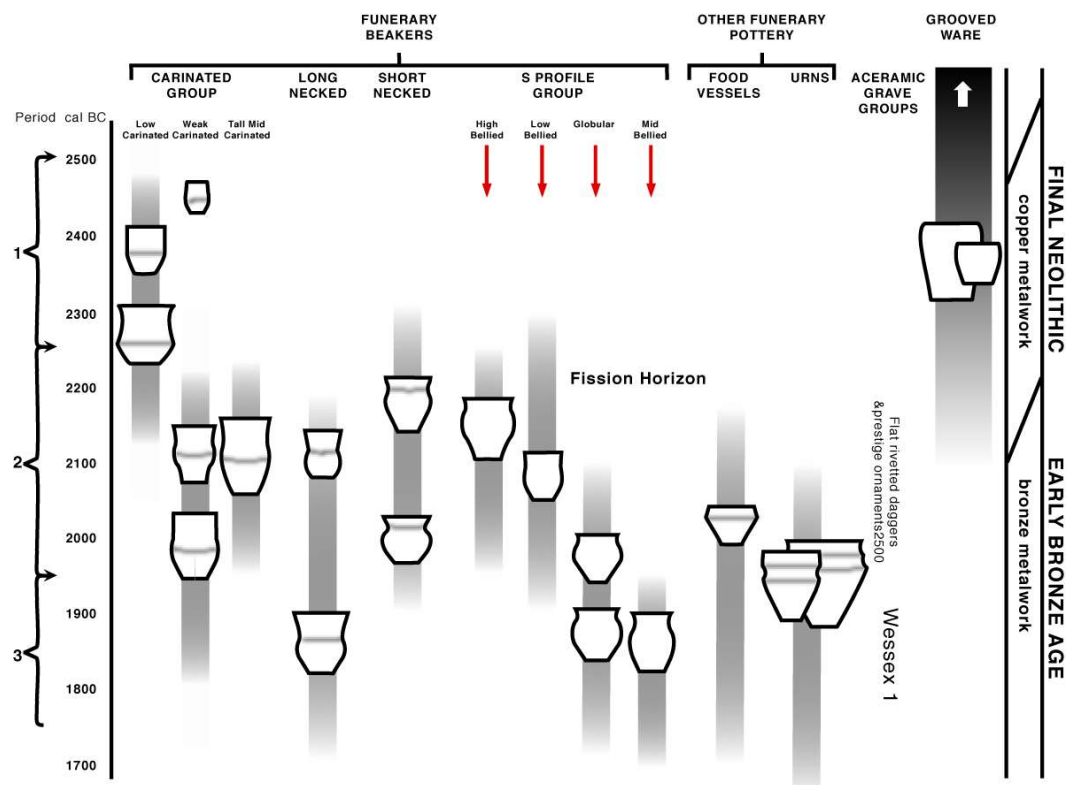


Fig 5.4: Chart detailing Needham's scheme – redrawn by the author (after Needham 2005b, 206).

Monument Zone 1	Lab Ref	Date BP 2 sigma	Cal Bc 95.4%	Context (context nos)	Additional information
QEQM Hospital, Margate	Wk 18733	3852±33	2461-2206	(SK2) crouched inhumation, no ring ditch or mound apparent.	W/MR Beaker and 3 tanged and barbed arrowheads, cut by second crouched burial SK2
North Foreland Ave, Broadstairs	Wk 18732	3799±31	2343-2137	From central – primary - adult female crouched burial	S2 Beaker found near feet. Body possibly in wooden coffin/grave lining

Monument Zone 1	Lab Ref	Date BP 2 sigma	Cal Bc 95.4%	Context (context nos)	Additional information
Eyehorne Street, Hollingbourne	NZA-20419 NZA-20420	3742±40 3648±35	2286-2031 2136-1926	From primary fill of pit (23) From primary fill of pit (60)	S1 & S2 Beaker sherds and cremated human remains found within fill of pit 23
Monkton- Mount Pleasant	BM-2923 BM-2898 BM-3028	3700±50 3640±50 3360±100	2274-1946 2190-1887 1894-1435	Disarticulated (2a-c) burial (751) Male crouched (1) flat grave (751) Juvenile (4825), flat grave (537)	751 contained large S1 Beaker frags. Burial 1 in same grave. S4 Beaker sherds in grave 537
South Dumpton Down, Ramsgate	BM 2975 BM-2940 BM-2864	3630±45 3560±50 3520±40	2135-1889 2030-1754 1952-1742	Primary burial (pit A) – male, Final burial in (pit A) - female Female, possibly, associated with Beaker W/MR	7 burials in 3 intercutting pits within oval single ditched barrow
LOTM 7/ Manston Runway	BM-2642	3630±50	2189-1882	Crouched Beaker burial of young adult (B1) close to centre of small ring ditch	With S2 Beaker. Second crouched burial (B2) near s. inner edge of ditch
Cottingham Hill, Ebbsfleet, Thanet	BM-2725	3630±60	2197-1782	Partial remains of crouched inhumation in flat grave	An EA Beaker and Iron Age pottery recovered
St Margaret's at Cliffe	OxA-4545 TA1	3620±120	2396-1682	Crouched female inhumation. Not possible to determine if there was a barrow/ring ditch	An N3 Beaker was previously found in same general area
Tutt Hill, Westwell	NZA-20102	3094±40	1442-1264	Three cremation burials: one in inverted bucket urn (from which sample taken) Other 2 cremations were unurned. Undiagnostic Beaker sherds also found.	4 Ring ditches nearby also Neolithic, late Iron Age and Roman industrial activity
East Northdown Park. Margate	HAR-7010 HAR-7011	3020±80 2910±70	1436-1022 1367-916	Ditch fill (1377) below LBA layer Cremation pit (698) in centre of ring ditch. AOC and Plain Beaker type sherds recovered.	Ring ditch had a cut in sw quadrant which may be a burial of Beaker or EBA date
N'thumberland Bottom	NZA-22735 NZA-22736	3601±40 3743±40	2127-1785 2286-2031	Female crouched burial EA beaker Male crouched burial EA or N/NR	Both inhumations in same grave

Monument Zone 2	Lab Ref	Date BP 2 sigma	Cal Bc 95.4%	Context	Additional information
Mol,Antwerp	IRPA-3 GrN-3641 GrN-6646	4095±240 4005±60 3895±55	3356-2026 2854-2342 2561-2204	All from a wooden grave lining or hollowed log coffin. Maritime Beaker, pygmy vessel and food vessel.	Evidence found of a mound but no ring ditch. Beaker association
Kruishoutem- Wijkhuis	IRPA D.131	4036±189	3091-2029	Cremation deposit. AOC Beaker and two tanged and barbed arrowheads	No indication of a barrow/ ring ditch. Beaker association
Kruishoutem- Kappellekouter		3920±50	2569-2213	Cremation deposit AOO Beaker and sherds from two others	Large amount of charcoal in pit
St Denijs- Westrem	KIA-36447	3765±25	2287-2057	Possible cremation deposit. Maritime Beaker sherds	Found in a pit with charcoal present

Table 5.3: Radiocarbon determinations. Further details in Chapter 4.

### 5.2.5 Non-funerary Beakers in Kent

Beaker pottery is not always found in funerary contexts. There are other circumstances in which sherds, and very occasionally whole pots, are found. Of most relevance are those recovered from what can best be described as ‘intra-monumental’ contexts, that is to say in proximity to, or associated with, barrows or ring ditches, but not within the graves they may contain. It is not unusual to find Beaker sherds in ditch-fills, pits and unstratified locations. In reality these may be the scattered remnants of burials, rendered beyond the reach of archaeological interpretation by post-depositional disturbances. It cannot be assumed that this is the case, or that their presence represents meaningless debris. Such sherds may be indicative of ritual or ceremonial activities such as feasting; or a deliberate acts of deposition. Table 5.4 lists ten sites from Kent where such finds have been made.

Site	District	Type
Shrubsole Hill, Eastchurch	Swale	Barrow and MBA cremations + Beaker pottery
Whitfield-Eastry by-pass	Dover	Barrow with burials + Beaker domestic pottery
Castle Hill, Folkestone	Shepway	Barrows with Beaker burial + Beaker pottery
LOTM 1, Ramsgate	Thanet	Barrow (Henge?) with burials + Beaker pottery
Ringlemere	Dover	Henge? + 3 complete Beakers + 1 fragment
St Peter’s Rubbish Tip	Thanet	Barrow with Beaker burial + Beaker pottery
East Northdown, Margate	Thanet	Barrow with burial + Beaker domestic pottery
Tutt Hill, Westwell	Ashford	Ring ditches/MBA cremations + Beaker pottery
Beechbrook Wood, Hothfield	Ashford	Barrow with burial + Beaker pottery
Whitehill Road, Southfleet	Dartford	Barrow with burial + Beaker pottery

Table 5.4: Excavations where Beakers or domestic Beaker ware have been found in non-funerary contexts.

Notable among these is Ringlemere, where excavations were undertaken following the discovery of a gold cup, believed to date between 1700-1500 BC (Parfitt 2007). In August 2006 three complete Beakers and the base of a fourth were unearthed from the monument. Their deposition appears to have been deliberate and to have taken place during an early development phase. These Beakers were not found in association with human remains – the monument has none, save those from the Anglo-Saxon period. However, it is possible that the associated burials have totally vanished as a consequence of taphonomic processes but Parfitt does not believe this to be the case. He is confident that the vessels were carefully placed within a ritual context, unrelated to any funerary activity (*pers comm*). In at least one case this can be said with some certainty, because the hole in which it was deposited was only large enough for the vessel and no associated grave-cut is discernible. However, Needham cautions: “*Bone does not survive in the prehistoric contexts on the site, so the absence of burials is a preliminary interpretation based on the cut features encountered,*” (Needham



2007). Also worthy of mention is Castle Hill, Folkestone, where Beaker sherds were spread more-or-less uniformly between three ring ditches and in secondary ditch fill deposits. Together they represented at least 32 different vessels of varying types. Gibson (2001) compared the range of this assemblage to ones recovered from nearby Holywell Coombe and Lord of the Manor, Ramsgate. The latter site contained a number of complex monuments including a long lasting triple-ditched circular enclosure, quite possibly originally built as an open arena (see Section 7.5). It only later acquiring burials, of which there were at least nine, phased over a 600-year period beginning circa 2100 BC. 49 sherds representing seven Beakers were found in a pit – which also contained ash - and ditch fills associated with the second phase of activity, dated to about 1950 BC. The crouched-left burial of a woman was located south-east of the enclosure and dated to around the same time. No Beaker material was found in her grave.

At Shrubsole Hill the Beaker material had been deposited in the ditch fill of a round barrow that was sited within 500 metres of a Neolithic causewayed enclosure. This entire area, just below the crest of a south facing hill slope, seems to have been in use – not necessarily continually - for 3000 years, from around 3750 BC onwards. The complex also includes a late Bronze Age enclosed settlement, cutting the upper quadrant of the causewayed enclosure. Similarly, the Beechbrook Wood site, near Ashford, provided evidence of long-term settlement from the Neolithic onwards – with two periods of more intense activity: one during the Beaker period and the other around the first millennium BC. A ring ditch was located close to the settlement area and a Beaker vessel and eight sherds from another vessel were found in its ditch fill. Other Beaker sherds were recovered from pits on the site. In total up to 17 different vessels, mostly of domestic types, were represented by this assemblage.

The Tutt Hill site contains four ring ditches all thought to be of Beaker date. They are sited on the Greensand fairly close to the River Stour, rather than on the more common Chalk downland location. The only excavated burials at Tutt Hill were cremations, dating to a period after 1500 BC. A number of Beaker sherds were recovered, mostly from the fills of the ring ditches. One, from the smallest ring ditch, was found in association with relatively large quantities of charred barley

and other plant remains.

A large assemblage of pottery sherds – 984 in total - was recovered from East Northdown, Margate, of which only nine pieces were Beaker. All were found in the fill of this oval-shaped ring ditch. Mixed with it were disarticulated human bone, probably from a single individual, and a quantity of flint, including flakes, cores and hammer-stones. Much of the remaining pottery was from the post Deverel-Rimbury period suggesting the monument either had an active life in excess of 600 years or that it was reactivated after a substantial period of lying dormant.

At the Whitfield-Eastry bypass monument, (Section 6.3.1) an unusual juxtaposition of evidence exists (Bennett in preparation). It presents a complicated history, going through at least three phases of use and becoming the repository for a minimum of nine burials - the first five of which were all child inhumations. The funerary use of the barrow began around 2265 BC and ended with a sequence of cremation burials as late as 795 BC (see Table 6.5). 22 Beaker sherds were found within the barrow enclosure and its ditch fills. They represented up to 19 different vessels, mostly of a locally occurring rusticated or domestic ware - although one piece, from a vessel with a flared-neck, did have a well-defined horizontal groove pattern incised on it. None of the sherds were specifically associated with burials. Finally, little can be said in relation to the St Peter's site due to the fact that, despite only being excavated in 1969, the archive has been lost. A complete Beaker was recovered from a flat grave that predated the ring ditch and possible barrow. Sherds of a second Beaker, made of a 'grey-ware' fabric, were found in a non-funerary context (Minter and Hogarth 1972, 16).

### **5.2.6 Summary of Kentish Beaker vessel findspots**

Of the 48 newly categorized vessels that have been discovered in Kent since Clarke's corpus was published – up to the point when data collection ceased in August 2006 - 19 accompanied burials, three came from settlement sites, five were isolated finds and the remaining 22 were found in the ditch fills of round barrows or ring ditches from ten excavations (Tables 5.1 and 5.2).

## **5.3 ZONE 2 - FLANDERS**

The Beaker phenomenon, in common with the Neolithic in general, is sparsely represented in the archaeological record of Flanders (Demeyere *et al.* 2006). Just seven finds have been recorded, all towards the northern part of the province. A further ten have been found in neighbouring Belgium provinces, seven in Limburg and two in Antwerp. One other discovery was made in the province of Brabant. These are areas bordering The Netherlands, a region that is acknowledged as a focus for Beaker activities, particularly in the north and around the River Rhine (Fokkens 2005, 360-361), but there are known Beaker graves in the south, notably around the Meuse and Ijssel rivers (Fig 5.5) (Beek 2004, 165).



Fig 5.5: Map, drawn by the author, showing the position of Southern Dutch Bell Beaker graves (after Beek 2004, 167) and Belgian Beaker finds are numbered – corresponding to Table 5.5.

The fact that Beaker finds and, more especially, Beaker graves apparently fade from the archaeological record on a north-south trajectory may owe more to

environmental and post depositional differences than human agency. The predominantly silt and clay laden Holocene outcrops which dominate much of the Netherlands give way in the south to a sandy soil covered Pleistocene geology (Beek 2004, 160). The former has relatively good preservative qualities, whilst organic material in particular rarely survives in the latter. Erosion and widespread sand extraction have also taken their toll. This may go some way to explain why Beaker finds in Belgium mostly comprise of a just few sherds, occurring within more general pottery scatters located on or above Neolithic occupation levels. However a complete vessel was discovered at Temse, East Flanders, along with a second at a nearby site. These were first referred to in 1898 (Bourgeois *et al.* 1989a, 40) and little is known about their discovery. Sherds of a similar pot were also discovered at Huise (De Laet 1982, 392). A significant number of these finds were located close to the river Scheld and only one is confirmed as a grave item, with two more being tentative (Vanmontford 2004), they are:

- Mol, province of Antwerp (definite);
- Kruishoutem-Wijkhuis, Eastern Flanders;
- Kruishoutem-Kappellehouder, Eastern Flanders.

	Site name	Province	Date	Context/type	Reference
1	Mol	Antwerp	1962	Crouched/Maritime	(Beex and Roosens 1963)
2	Kruishoutem-Wijkhuis	E Flanders		Cremation/AOC	(De Laet and Rogge 1972)
3	Kruishoutem-Kappellehouder	E Flanders	1989	Cremation two x AOO	(Braeckman 1991)
4	Huise	E Flanders	1962	Surface find	(De Laet 1963)
5	Sint Denijs-Westrem	E Flanders	2007	In pit fill/Maritime	(Hoore <i>et al.</i> 2007)
6	Temse-Krekel	E Flanders	1898	Antiquarian - unknown	(Bourgeois <i>et al.</i> 1989a)
7	Temse-Velle	E Flanders	1956	Antiquarian - unknown	(Bourgeois <i>et al.</i> 1989a)
8	Gouldenleeuwplein te Gent	E Flanders	1997	Found with a plano-convex flint knife.	(Crombé <i>et al.</i> 1998)
9	Lanaken	Limburg		No details available	(De Laet 1963)
10	Overspelt x2	Limburg		No details available	(De Laet 1963)
11	Lommel x4	Limburg		No details available	(De Laet 1963)
12	Merkplas	Antwerp		No details available	(De Laet 1963)
13	Terafene-Liedekerke	Brabant	1996	Three sherds of AOC	(Sargent 1997)

Table 5.5: List of the reported Beaker finds in northern Belgium. Numbers correspond to map, Fig 5.5.

The non-funerary findspots in Eastern Flanders are at: Huise; Sint Denijs-Westrem; Tempse-Krekel; Tempse-Velle and Gouldenleeuwplein te Gent. Others, in the northern half of the country were found in Limburg at; Lanaken; Overspelt x2; Lommel x4. In Antwerp at: Merkpas. In Brabant at: Terafene-Liedekerke (Table 5.5 and map Fig 5.5).

#### 5.4 ZONE 3 – NORTH-EASTERN TRANSMANCHE FRANCE

In 2004 a survey was published listing the numbers and types of late Neolithic pottery, recovered from the Centre-Nord regions of France (Brunet *et al.*). It showed that in Nord/Pas-de-Calais a little over a third (35 percent) of the corpus was Beaker, whilst in Picardie the proportion was nine percent. However, this amounts to a total of 13 discreet deposits, of which only three were found in funerary contexts - and just one of those in the littoral. Unfortunately none of the sites, funerary or otherwise, are named in this survey; but by comparing the included distribution map to the ones in Blanchet's earlier synthesis (1984, 98-99) it has been possible to identify the three funerary monuments (see Table 5.6 and map Fig 5.6). They are:

- Equihen: La Tombe Fourdaine
- Wallers: Sépulture d'Aremberg
- Aubigny-au-Bac: Au-dessus-du-Moulin

Equihen is particularly significant because it is the only known Beaker round barrow burial within the research area that is sited on the French channel coast; but, whilst the published report provides detailed descriptions, and includes an excavation plan, the antiquarian nature of the work inhibits the analysis that can be carried out. In fact, the most complete burial assemblage in the Nord/Pas-de-Calais region comes from the sépulture d'Aremberg at Wallers, Nord. However, at around 150 km from the coast, it is beyond the primary study zone. Nevertheless, due to a possible association between a copper dagger found in this grave and similar daggers from Flanders and Kent (as discussed in Section 5.13.2), it has been included. The third Beaker grave at Aubigny-au-bac, Nord, might also be considered too far inland, but warrants attention because it is just 25 km south-west, of the Wallers monument and is thought to be contemporaneous (Demolon *et al.* 1975). A fourth monument, at Rinxent in La Vallée Heureuse, was tentatively designated by Blanchet as a grave. The finds assemblage consisted of two small late style Beaker sherds and a tanged-and-barbed arrowhead. However, it is not the finds but the unusual location, within a cave, which appears to have prompted his suggestion of a sepulchral use. Brunet *et al* did not consider this sufficient cause to define it in the same way.

Blanchet also catalogued fragmentary Beaker finds, made in the 1950s and 1960s by Henri Mariette, from four sites in the Boulogne district: Wimereaux, La Pointe aux Oies; Longfossé, Hardelot and Etaples, Bel-Air, Sablins. However, he cautions that the original methods of reporting these have “*led to some confusion*” (Blanchet 1984, 80). The collected assemblages consist entirely of pottery sherds, with the exception of Etaples where there was the addition of four flint tanged-and-barbed arrowheads. None of this material appears to have been found in burial contexts. On that basis, it need not be of further concern. Two other finds, both in the Somme valley, are mentioned by Blanchet: Boismont, Pinchefalise and Longpré-les-Corps Saints. The first was a decorated rim sherd from a Beaker found in the mouth of the Somme estuary and the other consisted of five small sherds from a cord decorated vessel found on a settlement site with evidence of use stretching back to the Mesolithic. Neither finds have funerary contexts. It is also worth noting that a single sherd was recovered from a ring ditch – one of five excavated in 1988 at Fresnes-lès-Montauban, near Arras (Section 6.3.3).

	Site name	Place	Date	Context	Description
1	La Tombe Fourdaine	Equihen, Pas-de-Calais	1868	Funerary	Articulated male skeleton under round barrow mound
2	Aremberg	Wallers, Nord	1966	Funerary	Flat grave containing 2xBeakers, copper dagger, arrowheads, wrist-guard.
3	Au-dessus-du-Moulin	Aubigny-au-Bac	1975	Funerary	Child inhumation with Beaker in flat grave.
4	La Pointe aux Oies	Wimereaux	1960s	Settlement?	
5	Longfossé	Boulogne	1960s	Settlement?	
6	Hardelot	Boulogne	1960s	Settlement?	
7	Bel-Air, Sablins	Etaples	1960s	Settlement?	
8	Pinchefalise	Boismont, Somme		Isolated	Single rim sherd in Somme
9	Longpré-les-Corps Saints	Somme valley		Settlement?	Mesolithic/Neo occupation site
10	La Vallée Heureuse	Rinxent, Pas-de-Calais		Uncertain	Sherds found in a cave
11	Le Motel	Fresnes-lès-Montauban	1988	Funerary	Single sherd in ring ditch fill

Table 5.6: North-eastern French Beaker finds – numbers correspond to those on map Fig 5.6.

Finally, Salanova’s nationwide appraisal of the Beaker phenomena in France (2000, 330-331) lists just four Beaker finds in total from the same area - all previously mentioned: Boismont, Pinchefalise; Etaples, Bel-Air, Sablins; Aubigny-au-Bac, Au-dessus-du-Moulin and Wallers, Aremberg. It is not clear why he omits one of the funerary sites and most of the other Beaker sherd findspots. There are no radiocarbon dates associated with any of the French Beaker finds.

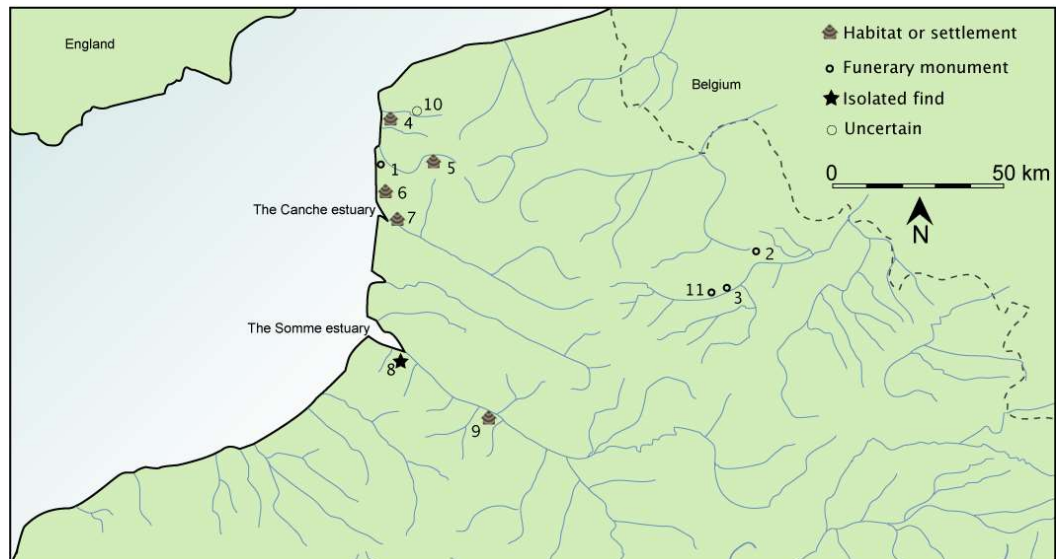


Fig 5.6: Map of Beaker finds drawn by the author (after Blanchet 1984, 98) – see Table 5.6 for details.

### 5.5 AGE, GENDER AND DEPOSITIONAL TRAITS

Poor preservation or post-depositional disturbances affected the quality of analysis that could be applied to many of the Beaker inhumation burials. Of those in Kent, it has only been unequivocally possible to determine the sex of the individual in 15 cases and only one of the Continental burials could be sexed – an adult male.

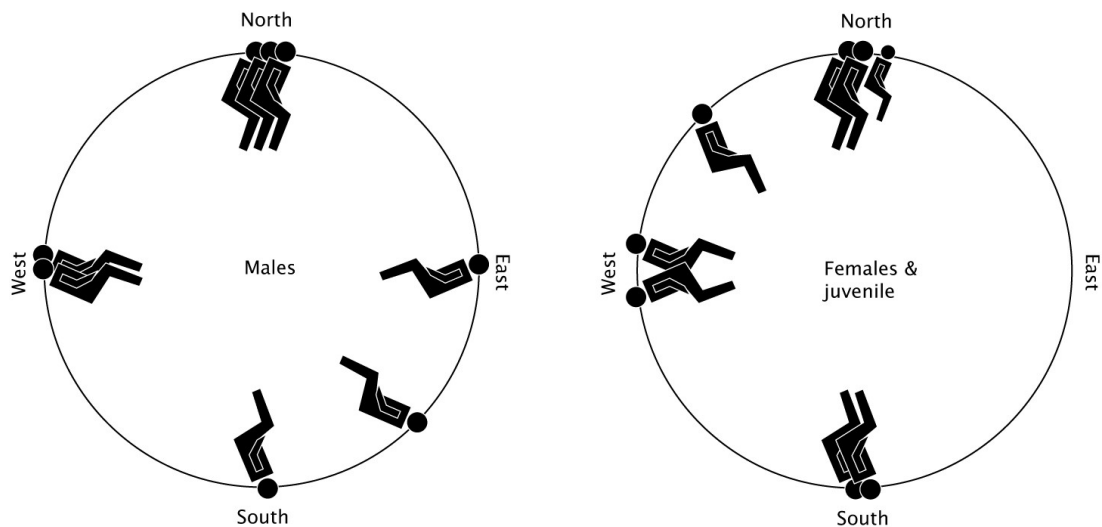


Fig 5.7: Diagram illustrating the respective depositional orientation of bodies in the grave - all from Kent.

Six of the Kent burials were male and nine female, of which one was a juvenile. Most of the females were estimated to be less than 30 years old, although the oldest was judged to be in her 50s. Three of the men were estimated to be in their fifties at death with just one possibly in his teens. All were laid in crouched attitudes with apparent deliberation regarding body orientation.

The much smaller number of Continental Beaker burials included one child inhumation and one adult male but all these burials were in extremely poor states of preservation. A summary is shown in Table 5.7.

Sitename	Sex	Age	Position	Oriented	Facing	Deposition
N' Foreland Ave	F	Adult (25-58)	Crouched left	N-S	East	Cut in enclosure
Castle Hill	F	Adult (u-25)	Crouched left	W-E	North	Central in mound
Dumpton Park	F	Adult (u-25)	Crouched left	N-S	East	Cut in enclosure
S Dumpton Down	F	Adult (u-25)	Crouched left	NW-SE	N-East	Flat grave
Monkton-M P	F	J (12-14)	Crouched left	N-S	East	Flat grave?
Monkton-M P	F	Adult (30's)	Crouched right	W-E	South	Flat grave?
N'umberland Bot	F	Adult (26-35)	Crouched right	S-N	East	Flat grave
QEQM, Margate	F	Adult	Crouched right	S-N	East	Flat grave
St Marg's at Cliffe	F	Adult (u-25)	Crouched	Nk	Nk	Flat grave
Chalk Hill	M	Adult (25-58)	Crouched right	Nk	Nk	Flat grave
LOTM 7	M	Adult	Crouched right	SE-NW	N	Central in mound
Monkton-M P	M	Adult (19-22)	Crouched right	S-N	East	Flat grave?
Monkton-M P	M	Adult (25-58)	Crouched right	E-W	North	Flat grave?
N'umberland Bot	M	Adult (26-35)	Crouched left	N-S	East	Flat grave
QEQM, Margate	M	Adult	Crouched left	N-S	East	Flat grave
Monkton M P	Nk	Adult (25-58)	Crouched left	W-E	North	Flat grave?
Mongeham Lane	Nk	Adult	Crouched	E-W*	Nk	Flat grave
Chalk Hill	Nk	Nk	Crouched	N-S*	Nk	Cut in enclosure
Cliffsend, Ramsgate	Nk	Adult	Crouched	Nk	Nk	Flat grave
St Peter's Tip	Nk	Nk	Crouched	Nk	Nk	Flat grave
Cottington Hill	Nk	Nk	Crouched left	W-E	North	Flat grave
Manston Approach	Nk	Adult	Crouched left	N-S	East	Central in mound
Equihen-P-de-Calais	M	Adult	Crouched	N-S*	Nk	Stone capped cut
D'Aremberg, Wall's	Nk	Nk	Nk	E-W*	Nk	Flat grave?
Aubigny-au-Bac	Nk	Child	Inhumation	N-S*	Nk	Flat grave?
Mol	Nk	Adult	Crouched right	NE-SW	S-East	Log coffin

Table 5.7: Summary of the known inhumation characteristics. Nk= not known.

\* Determines orientation of grave cut, not the body.

Despite this relatively small sample overall, a bias towards bodies being laid out along a broadly north/south axis is apparent, as is an inclination towards the corpse being placed so it faced east or in a general easterly direction. In other words, when the body was laid with its head to the north it was crouched on its left side, but when the head was to the south the body was placed on its right side (Fig. 5.7). More female burials in the dataset are on their left side whilst more males are on their right – this is in line with the established early Beaker period gender distinguishing rite, observed widely throughout the UK (Needham 2007; Parker Pearson 2003, 54). However this is distinctly different from the non-Beaker crouched inhumations investigated in Section 5.5. In those cases more than a third of the burials were aligned on a north-west/south-east axis, whilst just a quarter were orientated north/south. Additionally, nearly half were facing toward the south, with the east favoured by only a quarter.



## 5.6 BARROW, RING DITCH OR FLAT GRAVE?

Post-depositional factors often make it difficult to discern whether graves were enclosed by ring ditches and/or covered by barrow mounds. This is important when trying to identify so-called flat graves – cut into the natural soil and then backfilled without any apparent further elaboration. Ten excavations from Kent, incorporating 16 burials, present such a dilemma. They were found at: St Peter's Rubbish Tip, Margate; Cliffsend, Ramsgate; Greyhound Stadium, Dumpton Park; Chalk Hill, Ramsgate; Cottington Hill, Ebbsfleet; Castle Hill, Folkestone; Queen Elizabeth the Queen Mother (QEQM) Hospital, Thanet; Northumberland Bottom, Southfleet; South Dumpton Down, Thanet; and Monkton-Mount Pleasant, Thanet.

In three cases – all from Thanet – the excavator categorically identifies the grave as flat. At St Peter's Tip this was based on the grave having been truncated by a ring ditch – suggesting that it had been built later and was not intended to mark the Beaker grave. At QEQM and Cottington Hill stratigraphic or morphological reasons also appears to be behind the excavator's conclusions that these too were flat graves – but precisely how is not clear. In six more cases it is simply noted that no evidence of a mound and/or ring ditch could be found.

None of the graves from Flanders are classed as flat. This is most likely due to the fact that such burials are not easily detectable through aerial photography surveys and the generally hostile post-depositional environment in Flanders may also have destroyed what evidence there once was. However, two of the north-eastern French burials do appear to be in this category: those of D'Aremberg, Wallers and Au-dessus-du-Moulin, Aubigny-au-Bac.

At D'Aremberg, Wallers, an excavation opened up an area of approximately nine square metres on a sandy east-facing hillside following the chance find of a Beaker by a schoolboy (Félix and Hantute 1969). The trench came down on a hard layer of chalk less than a metre below the topsoil. At this level it was possible to discern two parallel cut marks each about a metre in length and orientated approximately east-west, possibly demarcating the edges of a grave or graves. The original Beaker find was made just to the west and in line with these marks. No human remains were discernible and this was accounted for by the

acidic nature of the soil. Quarrying and other human activities had truncated the features and the soil had been subjected to severe bio-perturbation from burrowing animal, making it impossible to determine whether the cut marks in the chalk subsoil were from a single grave, two graves or something else all together. Yet, because the total finds assemblage included sherds of a second Beaker, a copper dagger, an archer's wrist-guard, flint arrowheads and a scraper (Fig 5.23) it was considered safe to assume that at least one individual had been buried in the vicinity.

The depositional circumstances are more certain in regard to Au-dessus-du-Moulin, Aubigny-au-Bac (Demolon *et al.* 1975). This grave was discovered by chance when a sandstone boulder one metre long, 70cms wide and 25cms thick was moved by a farmer, concerned that it would damage his machinery. The boulder was partly covering a small rectangular grave pit measuring 1.4m long, 80cms wide and 60cms deep. The axis was orientated slightly east of north-south. The uneven base of the pit had been made smooth with a layer of 'marly limestone' on which the occupant had been laid to rest. There remained little of the skeleton: three fragments from the top of the skull, a jaw fragment and a tooth. Analysis suggested they came from a child, approximately six years of age. There were also traces of charcoal in the grave and the remnants of a single Beaker. A significant proportion was missing, but there were sufficient sherds recovered to allow for the vessel's reconstruction (Fig 5.31). It is described as a classic 'inverted bell' beaker (*classique campaniforme, cloche renversée*), measuring 16.9cms high and with a rim diameter of 17.1cms. The base diameter measured 6.1cms and the fabric was five to six millimetres thick. It was decorated with horizontal hatched bands and comb-incised parallel lines. The decoration is similar to that of the Wallers vessel, but the form is distinctly different.

## **5.7 COFFINS AND WOODEN GRAVE LININGS**

A rite attested to in Flanders and Kent is that of placing the body in wooden lined graves or coffins. At Mol, Antwerp, a hollowed out log was used as a coffin, (De Laet 1982, 382). It was placed on the ancient land surface, orientated north-east/south-west, and covered with layers of sandy soil sandwiching a band of humic soil – possibly indicating a turf layer. The coffin's occupant was only

discernible as a ‘sand-man’ laying on its right side, with knees slightly bent and the face turned towards the south-east. A wooden lining or a coffin may have also been used in at least some of the Monkton-Mount Pleasant graves, at the Whitfield-Eastray bypass barrow and at QEQM Hospital, Margate.

In the case of Monkton-Mount Pleasant four grave cuts numbered 751 (containing four individuals), 537, 6371(containing two individuals) and 643 (no Beaker in this grave) were discovered in Area 4 of the excavations (Figs 5.8 and 5.9) (Clark and Rady 2009). Cut 751 measured 2.4m by 1.0m and 0.7m deep. It had steep sides and a flat base. Around the edge was a layer of compact chalk and loam, which may have been packing between the cut and a timber lining. It contained a crouched inhumation of a young man, probably in his early 20s, and a few disarticulated bones from three other individuals.

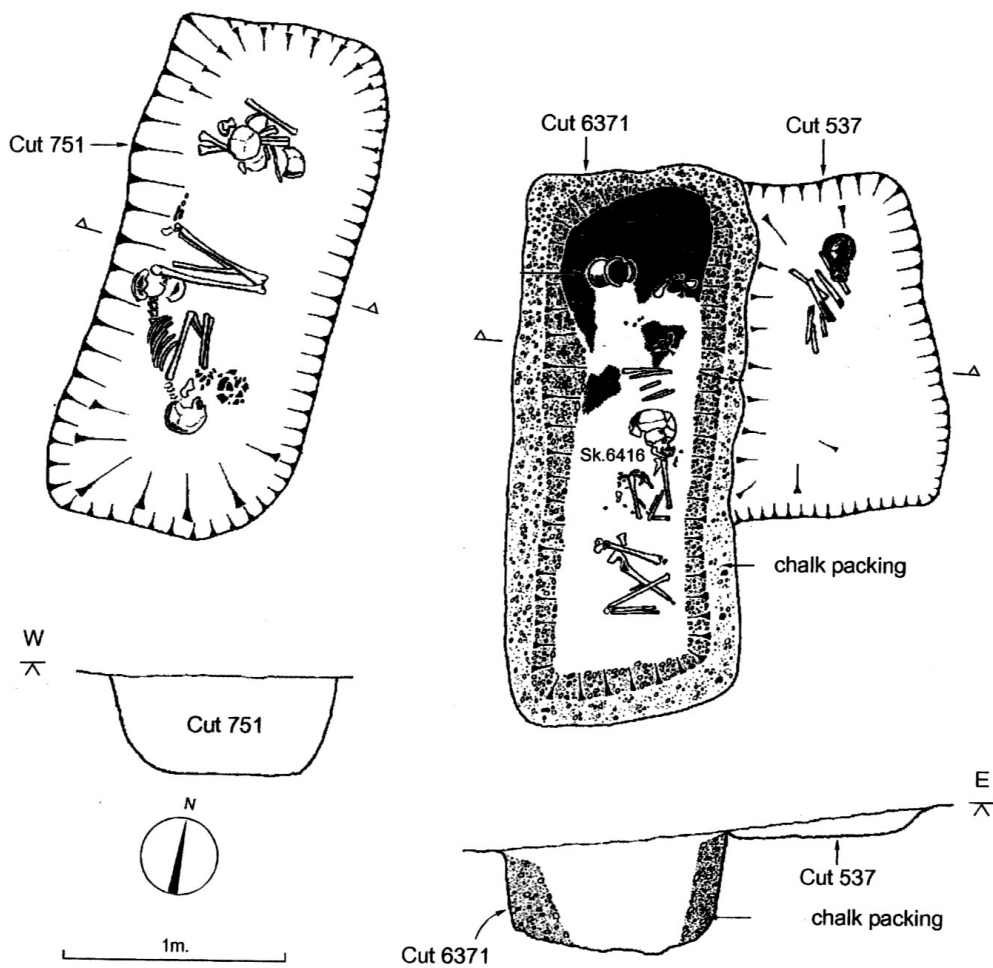


Fig 5.8: Grave cuts 751, 6371 and 537 (after Clark and Rady 2009, 19).

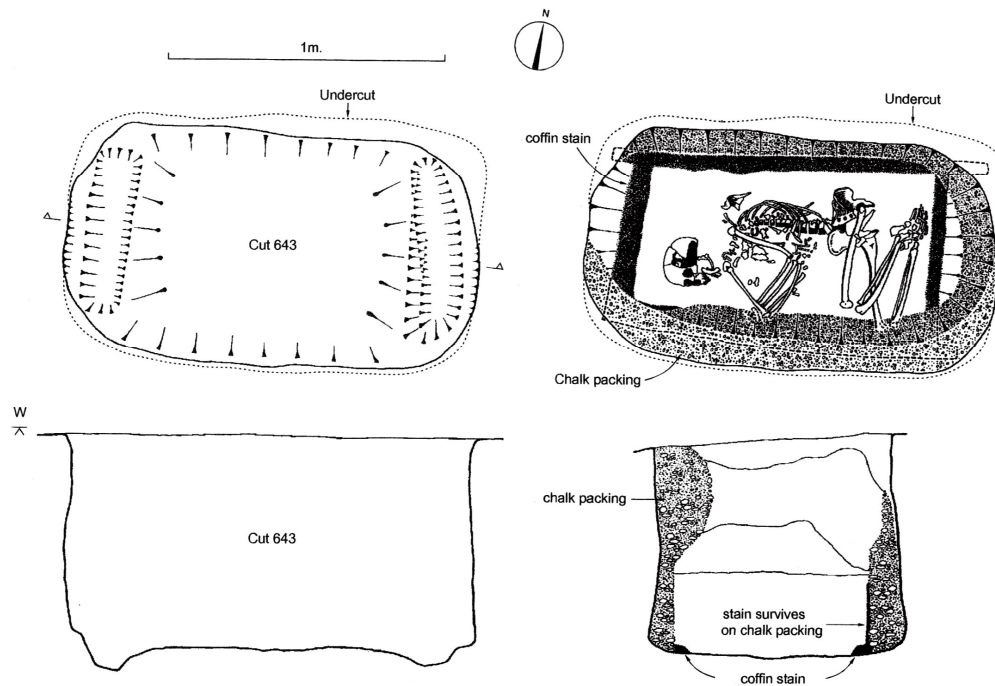


Fig 5.9: Grave cut 643 at Monkton-Mount Pleasant showing evidence of wooden grave linings (after Clark and Rady 2009, 21).

Similarly, the cut of grave 6371, measuring 2.5m by 1.0m wide and 0.6m deep, may have originally been wood-lined as there was crushed chalk and soil enclosing an area of 1.9m x 0.6m. It contained two burials. In the southern half was a crouched inhumation with its head to the north. The second burial was at the northern end. It appears to have been inserted later and may have been in a wooden coffin. Finally, grave 643, which was approximately 80m east of the others and also had evidence of having been timber lined. The cut measured 1.5m by 0.86m and 0.78m deep. It was aligned east-west and at each end there was a slot (0.6m by 0.1m and 0.2m wide by 0.04m by 0.08m deep), which has been interpreted as representing the sides of a rectangular wooden frame. The area enclosed by this was 1.03m-1.08m long by 0.5m-0.62m wide. There may also have been a timber 'coffin lid'.

A monument consisting of a segmented ring ditch and two later continuous ring ditches was discovered at the White Caps, Whitfield-Eastry bypass, excavation (Section 6.3.1, Fig 6.17). It appears to have developed in several phases and contained a minimum of eleven burials including five crouched child inhumations and one adult male, who was apparently interred in a wooden coffin or wood lined grave-pit (Bennett in preparation, 15-18). His was not the primary burial, but is

thought to be the highest in status. The grave, measuring 2.7m by 1.8m, was dug into the backfill of the inner ring ditch. Lining the cut was a layer of red-brown stained soil, which reduced the grave cavity to 1.85m by 0.75m. A large assemblage of items was found in the grave, including animal bones, burnt flint and other flints including blades, scrapers, piercers, flakes and four cores. There were also seven pottery sherds, three of Peterborough ware, one Beaker sherd and three undiagnostic fragments. It is not presently clear how much of this may have been residual.

### **5.8 MULTIPLE INHUMATION BEAKER BURIALS**

This category does not refer to monuments where more than one inhumation took place over an extended period of time, but to graves where it is possible that more than one person was interred either contemporaneously or in such a way as may imply the symbolic representation of a relationship. In Kent there are four such examples: QEQM Hospital, Thanet; Northumberland Bottom, Southfleet; the previously mentioned Monkton-Mount Pleasant burials, Thanet and South Dumpton Down, Ramsgate.

Of the known Continental Beaker burials none fits this category. Nevertheless, it is worth examining the Kentish evidence because individual elements can be compared with Continental practices. In particular, the first of these, the burial of a man at QEQM hospital, Thanet, displays evidence for the use of a hollowed log coffin (Moody and Gardner 2006). The grave – which contained the remains of an adult male - was cut by that of female burial and the fill also contained disarticulated bone fragments of a third individual, possibly that of a child (Fig 5.10). A similar multiple burial was discovered at Northumberland Bottom near Southfleet (Askew 2004). In both of these cases the articulated bodies were in flat graves laid out in head-to-toe orientations, with the women lying on their right sides and their heads to the south. The men were on their left sides with heads to the north. Consequently, all four were facing east.

Closer examination of these geographically separated burials reveals further similarities. The primary deposition at QEQM was the man, aged around 50 at death. He may have been interred in a wooden lined grave or a coffin. Three

tanged-and-barbed arrowheads accompanied the body along with a Beaker of Clarke's Wessex/Mid Rhine type, which was placed behind the head. It was broken, having a large hole just below the centre. This damage apparently occurred prior to deposition, and may have been a deliberate act. The woman's grave was smaller and cut the man's whilst still respecting his remains. It contained a single tanged-and-barbed arrowhead and unidentifiable Beaker sherds. Disarticulated bones from a third person, possibly a child, were also found in the grave fills. Radiocarbon dating carried out on the remains of the man provided a range of between 3852±33 BP (WK18733). There was no indication of an overlying mound or ring ditch.

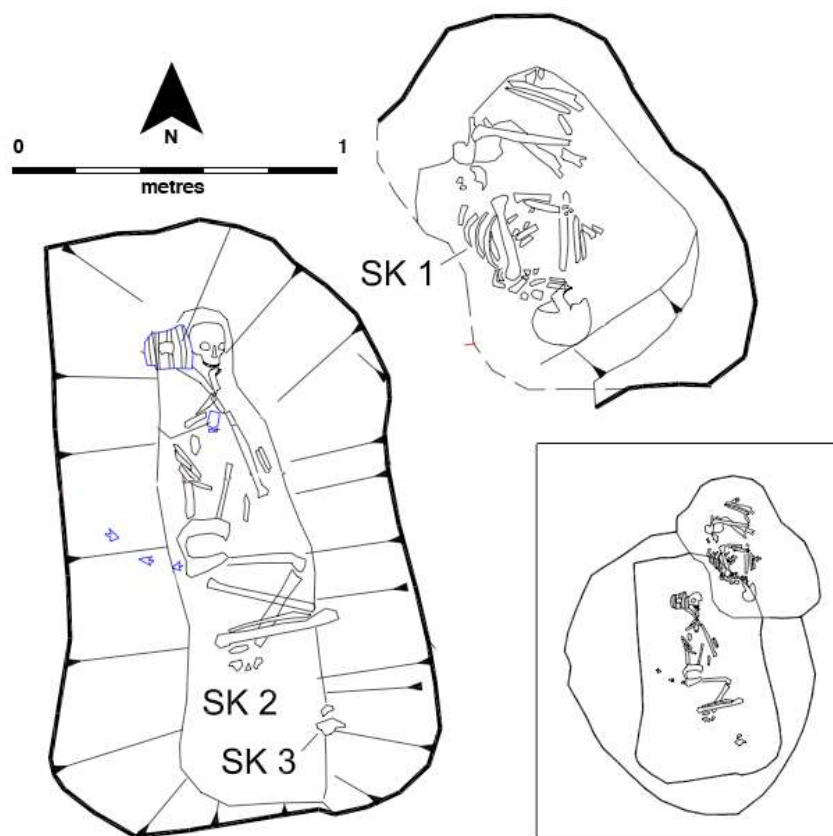


Fig 5.10: The QEQM Hospital multiple burial; The exploded view shows the two actual grave cuts, excluding the outer cut – the boxed inset shows the actual arrangement and relationships, (after Moody and Gardner 2005).

The Northumberland Bottom burials (Fig 5.11) were similarly devoid of mound and ring ditch evidence. The primary deposition in this case was the woman. An East Anglian type Beaker had been placed on the base of her grave. It was on its side behind her pelvis. Her age at death, and that of the man's, has been estimated at between 26-45 years. Sherds representing 30 percent of an East Anglian or

Northern/North Rhine Beaker were located behind his head. The disarticulated bones of a small child aged between three and five years were also found in the fill of this grave. Radiocarbon dates for the woman range between 3601±40 BP (NZA-22735) and for the man between 3743±40 BP (NZA-22736).

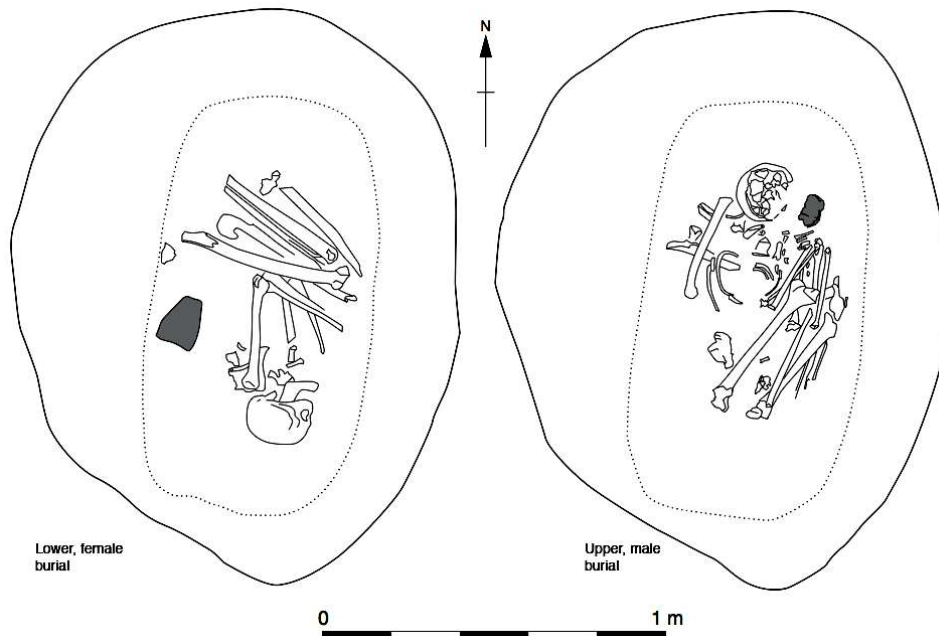
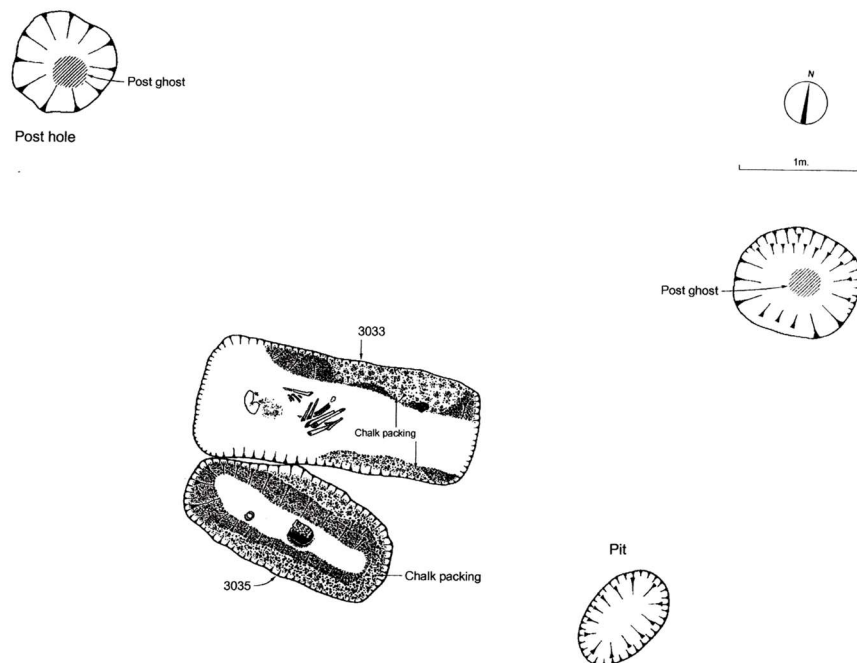


Fig 5.11: The Northumberland Bottom multiple burial (after Askew 2004).

Multiple Beaker burials from the extensive excavations at Monkton-Mount Pleasant, Thanet, are also noteworthy (Clark and Rady 2009). Two graves contained more than one person. Grave 751 (Fig 5.8) had four individuals. A single crouched right burial of a male aged between 19-22 years was located in the southern half. His head was to the south, facing east. Fragments representing one third of a Beaker of Clarke's S1 type had been placed in front of his face. Between his legs and the northern edge of the grave lay disarticulated bones representing parts of three people – probably a woman and two children, the youngest around two-years of age. This may represent a family grave. Radiocarbon dates for the male provide a range of 3640±50 BP (BM-2898). Dates for the disarticulated bone came out at 3700±50 BP (BM-2923).

Grave 537 was located a short distance to the east and abutted the eastern edge of grave 6371 (Fig 5.8). The relationship between the two graves is unclear. The former contained fragments of a heavily truncated and disturbed crouched burial of a juvenile accompanied by sherds representing a Clarke's S4 type or Needham

SLB Beaker – a first for Kent (Fig 5.31). There were indications that this grave had remained open for an extended period. An associated radiocarbon date of  $3360 \pm 100$  BP (BM-3028) is considered insecure due to the low collagen count in the sample. Grave 6371 (Fig 5.8) contained a crouched inhumation of a girl aged between 12-14 years at death. She was on her left side with her head to the north, facing east. A second burial at the northern end was of a child aged less than six years. A ‘snake-head’ type bracelet (Fig 5.27) was on one wrist of the badly decayed skeleton and a Beaker of Clarke’s N3 type (Fig 5.31) stood in an upright position just north of the head. An unfurnished crouched female burial, grave 643 (Fig 5.9) thought to be of similar date was found nearby.



Figs 5.12: Monkton-Mount Pleasant graves 3033 and 3035 which contained Beaker burials and exotic grave goods (after Clark and Rady 2009, 22).

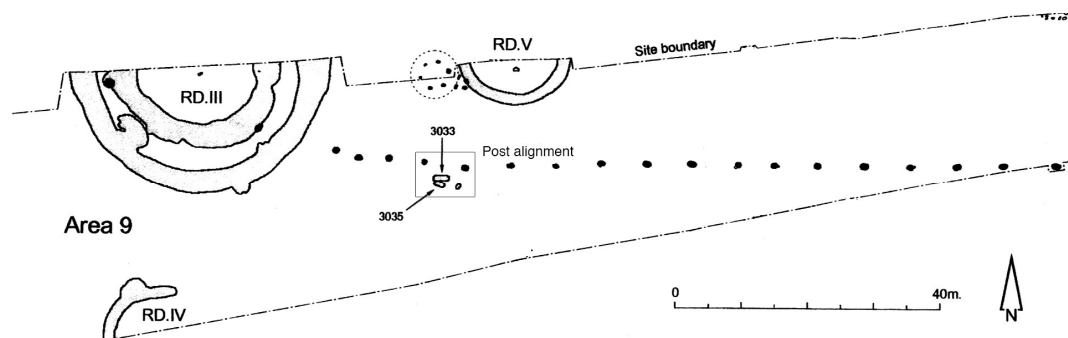


Fig 5.13: Plan showing the proximity of graves 3033 and 3035 to a post alignment and nearby ring ditches (after Clark and Rady 2009, 6).



There were two more Beaker graves excavated at Monkton-Mount Pleasant. They lay side-by-side, aligned west-east – roughly half way along, and parallel to, a distinct linear post-pit alignment (Figs 5.12 and 5.13). Grave 3033 contained a badly preserved crouched skeleton of an adult with its head to the west, facing south. Sex was indeterminate. A total of 217 small annular jet beads were recovered from the neck area, assumed to be from a necklace (Fig 5.27). Grave 3035, which partially abutted the southern side of 3033, had lost all trace of a skeleton. However, a copper alloy bracelet and a complete Beaker of Clarke’s N3 type (Fig 5.31) were recovered. Their respective positions have been taken to imply that the individual was laid in a crouched position with its head to the west and the Beaker at its feet.

Another multiple burial of some interest was excavated at South Dumpton Down. It was located within a small, nine metre-diameter, single-segmented ring ditch. The presence of a mound was indicated by the ditch fill stratigraphy. At the centre of the enclosure were three interlocking burial pits containing seven inhumation burials (B1-B7) (Perkins 1999, 72), details of which can be found in Section 6.3.1, Figs. 6.12-6.16. A Beaker of Clarke’s W/MR (Fig 5.30) accompanied at least one of the bodies, most probably that of a young man in his mid-20s, designated by the excavator as B6 (Fig 5.14).

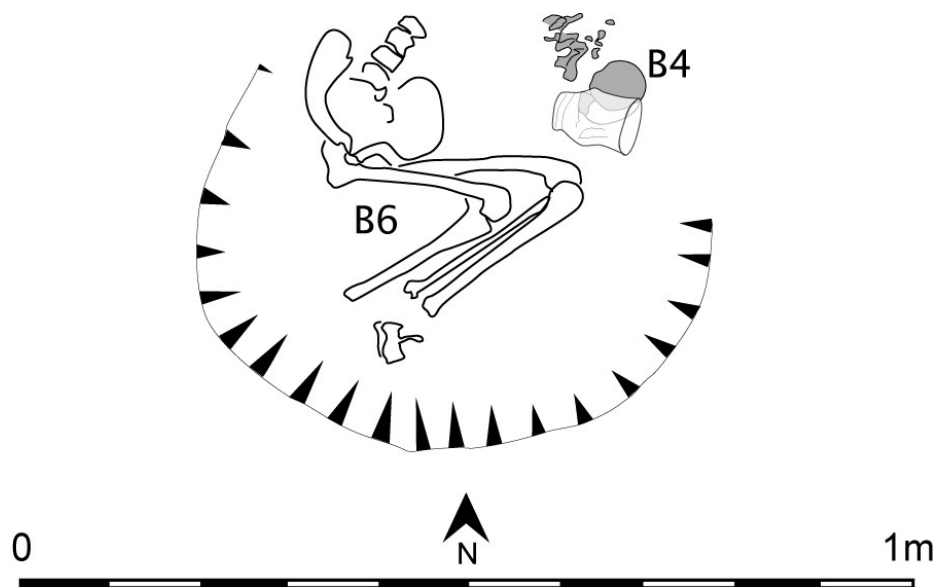


Fig 5.14: The remnants of burials B6, a young man in his mid-20s, B4 an infant and a Beaker were found along with five other burials in a small ring ditch at South Dumpton Down, Thanet. Drawn by the author (after Perkins 1994, fig 5).

His skeleton was missing the bones above its lumbar vertebrae, including the skull, but sufficient remained to determine that the body had been laid in north-east/south-west orientation and probably faced south. Another (labelled B5 by the excavator) – a young woman under 20-years-old at death – may have been buried with the rim of a rusticated Beaker. The monument was closed to burials when a cap of water-rolled flints was placed over the graves before an earth mound was raised. In total, four of the seven skeletons had their skulls removed. The excavator interpreted this as happening sequentially, as each burial was inserted (Perkins 1994, 3) - but this cannot be verified.

### **5.9 SINGLE INHUMATION BEAKER BURIALS**

This category relates to graves containing the remains of one individual. The associated monument, or excavation, may have encompassed other burials; but these would either be from different phases or lack a clear connection to the Beaker grave. There are 13 such burials within this total research corpus. At least five are females, whilst two are identified as male. Eight of these burials are from Thanet - they are: St Peter's Rubbish Tip; Cliff View Road, Cliffsend; Beauforts, North Foreland Avenue, Broadstairs; LOTM 7/Manston Runway Approach; Greyhound Stadium, Dumpton Park, Ramsgate; Chalk Hill, Ramsgate; East Northdown, Margate and Cottington Hill, Ebbsfleet. The other Kent burial is from Salisbury Road, St Margaret's at Cliffe, Dover.

As previously mentioned, the St Peter's burial was interpreted as a flat grave. Unfortunately, the excavation plans and section drawings have been lost. The only surviving record is a short summary in an annual report written in the same year as the excavation. This makes it clear that the barrow was later than, and unrelated to, the crouched burial: "*It's date is certainly later than the Beaker period as bones from the disturbed Beaker burial were included in the filling [of the ring ditch] since it had cut through the grave a little above the skeleton's waist,*" (Minter and Hogarth 1972, 15-16). In addition to an East Anglian Beaker (Fig 5.33) found with the skeleton, there were sherds from a second Beaker. These have been tentatively identified as All Over Corded (AOC) more commonly found in Wessex and the north of Britain (Gibson & Woods 1997, 16) but rare for Kent and unprecedented at the time of discovery. It is significant for being one of the earliest European Beaker forms.

A discovery at Beauforts, North Foreland Avenue, Broadstairs, (Fig 5.15) (Hart 2005) has produced a radiocarbon date of  $3799\pm 31$  BP, (WK-18732) – which is broadly comparable to that of the iconic Amesbury Archer. There have been other excavations in same area of Broadstairs that have revealed at least ten Bronze Age burials and three round barrows. The Beauforts one stands out though because it unearthed an intact female Beaker burial (Hart 2005). The woman, considered to have been about 40-years-old, was lying on her left side with a Beaker placed at her feet. Her rectangular north-east by south-west aligned grave was cut deep into the natural chalk and centrally placed within a 12m-diameter enclosing ring ditch. There were indications that a barrow mound had covered it. The position suggests this woman is likely to have been the monument’s primary burial. She may, in fact, have been the only burial, as no others were discovered, although this cannot be said with certainty because the excavation did not reveal the entire monument.

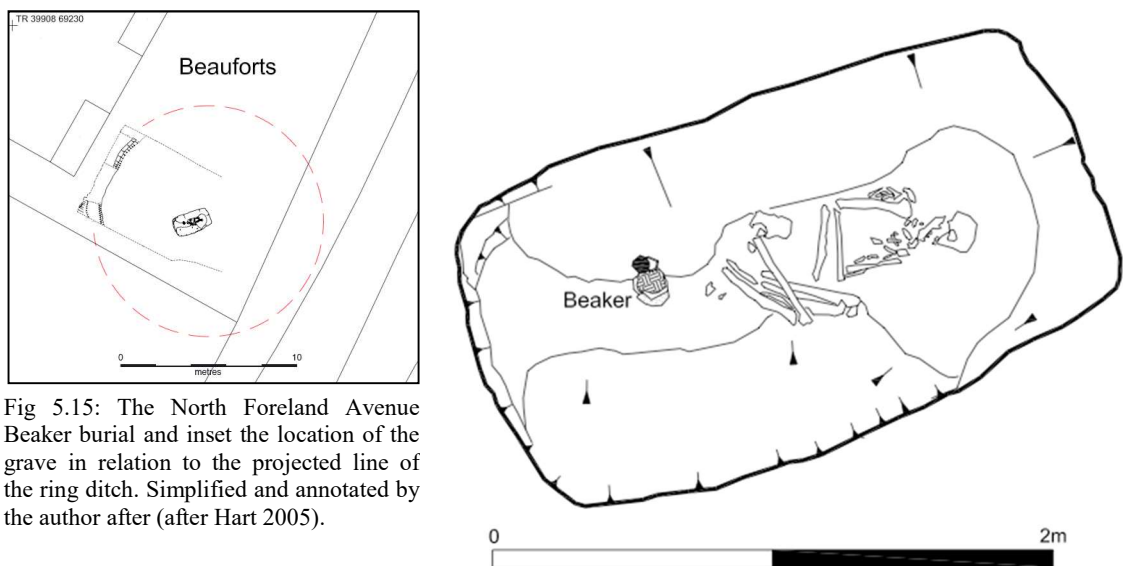


Fig 5.15: The North Foreland Avenue Beaker burial and inset the location of the grave in relation to the projected line of the ring ditch. Simplified and annotated by the author after (after Hart 2005).

A similar barrow was located just four miles south-east, at LOTM 7 - also referred to in the literature as Manston Runway Approach (Perkins and Gibson 1990). It contained a central north-south aligned rectangular grave cut. The crouched gracile adult occupant was lying on its left side with a Beaker placed behind the pelvis (Fig 5.16 and 5.17). Both these rites are seen in other Kentish burials, usually when the subject is a female – but the gender in this case could not be confirmed by physical examination due to post-depositional disturbances. The radiocarbon date of  $3630\pm 50$  BP, (BM-2642), presents only the slimmest possibility that this burial took place around the same time as the one at

‘Beauforts’, North Foreland Avenue (Fig 5.15). However, both Beakers have been designated as Clarke’s S2 - the only ones of this type known in Kent. Such vessels fit comfortably into Needham’s Long-necked (LN) category (Needham 2005b, 195) and the Southern variation of Case’s Group B (1993, 257). Each was formed from fine fabric but carelessly made and decorated (Figs 5.31 and Fig 5.33) a factor that both Gibson (2002-89) and Boast (1995a, 69-80) have observed elsewhere. This has led them to raise the possibility that many of the Beakers found in graves may have been specially made for the purpose, or chosen because of their imperfections.

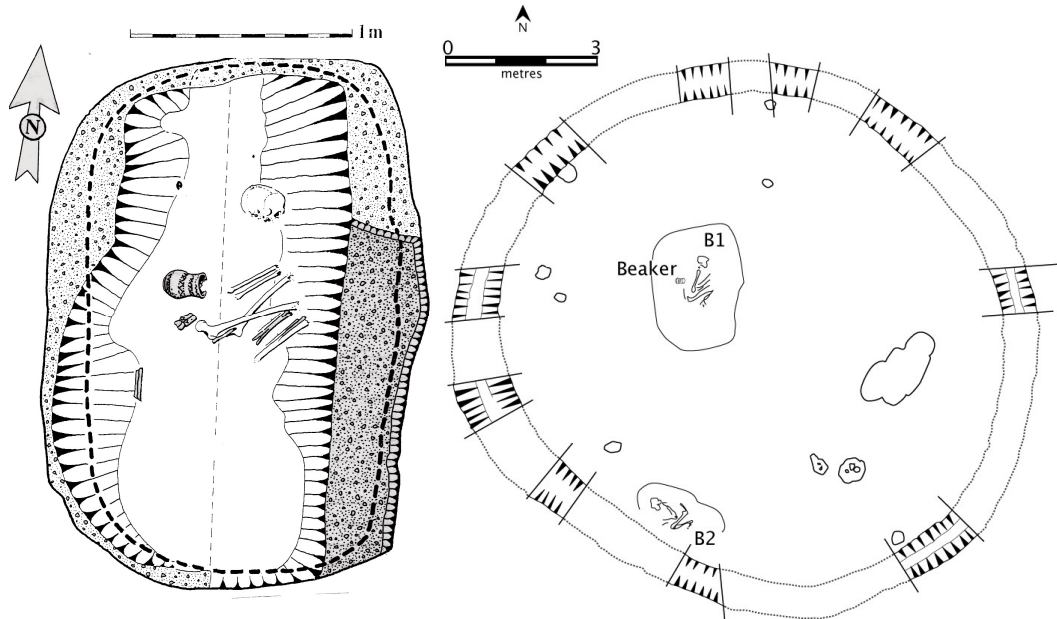


Fig 5.16: (left) The LOTM 7/Manston Runway Approach Beaker burial, (after Perkins and Gibson 1990).

Fig 5.17: (right) The LOTM 7 ring ditch showing the excavated areas and the two inhumations it contained. The other features shown are pits of unspecified date.

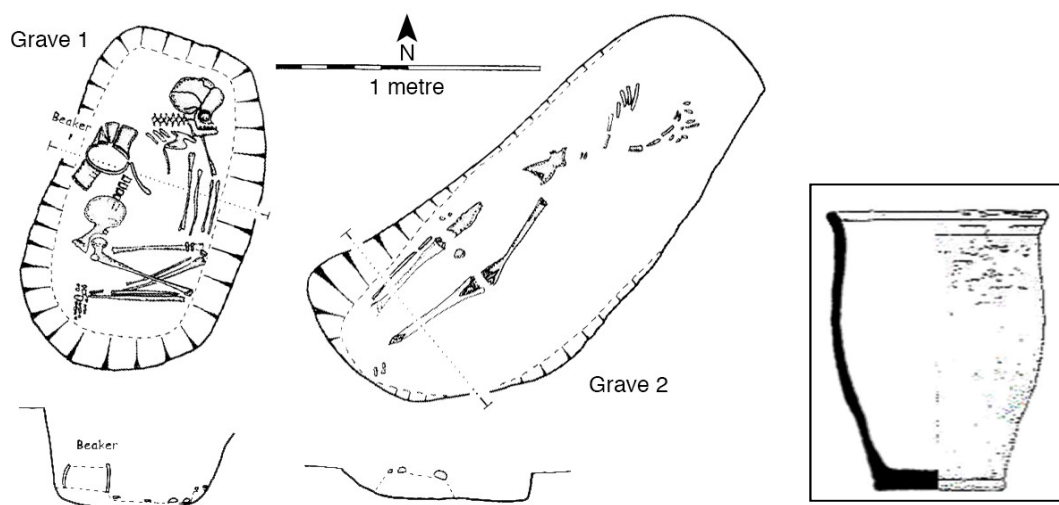


Fig 5.18: The crouched Beaker burial (Grave 1) and the other inhumation from Dumpton Park Greyhound stadium. Inset a sketch of the undecorated Beaker (after Philp and Chenery 2001).

Of the remaining single Beaker graves the one at Dumpton Park Greyhound Stadium stands out as having apparently produced the only undecorated Beaker from the county. However, the classification of this vessel has been questioned (Clark and Rady 2009; Hart 2006b) due to the fact that no specialist analysis of the vessel has been undertaken and the published report only provides a sketch drawing (Fig 5.18 and Fig 5.19) with the briefest of descriptions (Philp and Chenery 2001). The pot is believed to be in the possession of the Kent Archaeological Rescue Unit. A plan of the burial, showing the pot's deposition, is provided. The crouched body lay on its left side with head to the north, facing east. The excavator suggests it was a young woman aged between 18-25. The vessel was in an upright position on the grave floor to the rear of her pelvis. The 17-metre diameter ring ditch also enclosed a second burial, of uncertain gender. It was badly preserved and apparently devoid of grave goods. Neither grave was centrally placed within the enclosure.

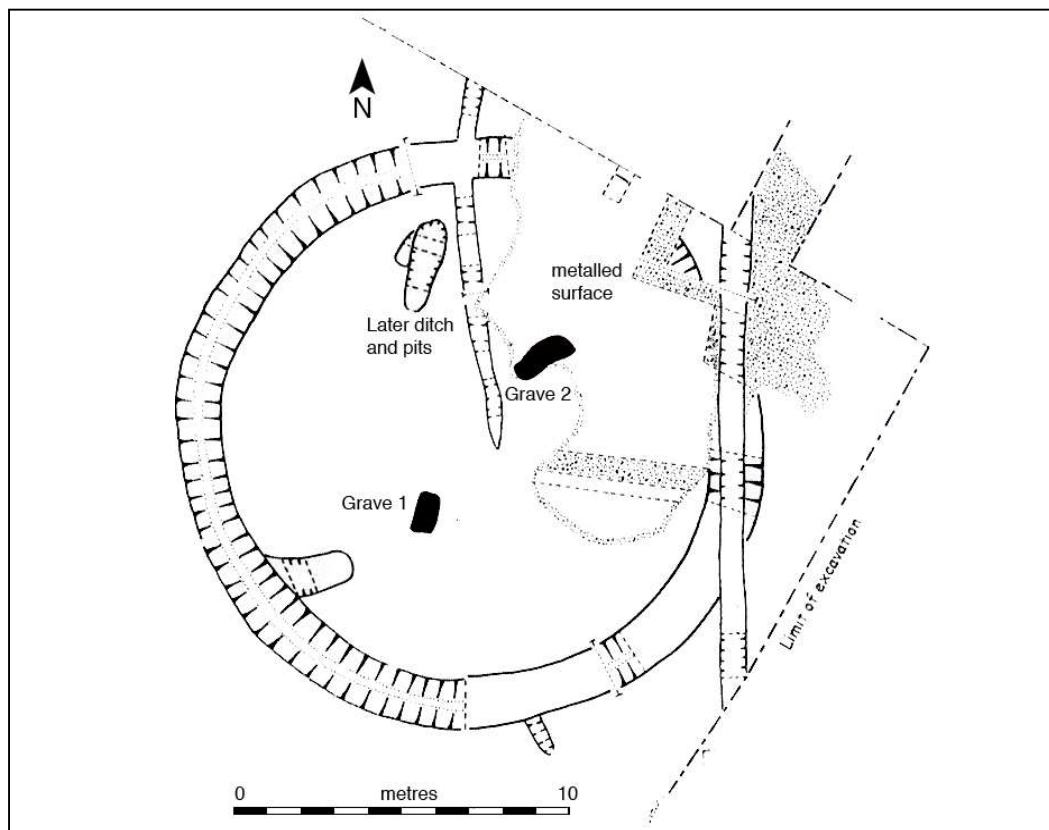


Fig 5.19: The full extent of the Dumpton Park ring ditch showing the location of the two crouched burials it enclosed (after Philp and Chenery 2001). Enhanced and annotated by the author.

Lastly, the only single burial to be excavated outside Thanet was found during building work to the rear of a house in Salisbury Avenue, St Margaret's at Cliffe, near Dover (Anderson 1994). This was a crouched left burial of a 25-year-old

young woman. Radiocarbon analysis on the skeleton provided a date of 3620±120 BP (OxA-4545). A Beaker listed by Clarke in his 1972 corpus (no 397) as an N3 type was unearthed 40 years earlier in approximately the same place, but lack of clarity over the precise find spot means it cannot be categorically stated that the two are associated.

Of the four Continental burials in this category three have already been described. They are: d'Aremberg, Wallers, Au-dessus-du-Moulin, Aubigny-au-Bac and Mol, Antwerp (Sections 5.2 and 5.2). La Tombe Fourdaine, Equihen, is the fourth (location 1 on map, Fig 5.6). A report and description of the excavation was published in the journal of the Société Académique de Bologne-sur-Mer (Hamy 1870-1872). It was one of three barrows positioned on a plateau overlooking the sea between Outreau and Equihen-Plage. In 1868, when it was excavated, the mounds were still visible. However, the other two, which were at a slightly lower elevation, were not dug and can no longer be seen as upstanding earthworks. This reveals that it was an oval shaped monument measuring circa 30m by 24m, orientated south-east/north-west, and sited 100 metres above the modern day sea level (Fig 5.20a).

No mention is made of a bounding ditch but at the time of the excavation an earth-and-turf topped mound rose to two metres. This mound was found to be covering a total of 22 'boundary' stones, 19 laid out in an ellipse with the other three forming a 'kind of entry' 3.1m wide cutting the southern quadrant. All the stones appeared to be set into the ancient soil surface. Many were large, ranging from 1.8m to 2.1m high, 80cms wide and between 30-40cms deep. None had been shaped or dressed. Hamy stated that they were of Portland stone. The primary burial is most likely that of a crouched inhumation placed within a north-south aligned grave that had been cut into the clay sub-soil (D on Hamy's plan). Also according to Hamy's plan this burial was slightly to the south-east of the mound centre. It contained a badly preserved male skeleton. Unfortunately, Hamy does not give the orientation or say whether the body had been laid on its right or left side.

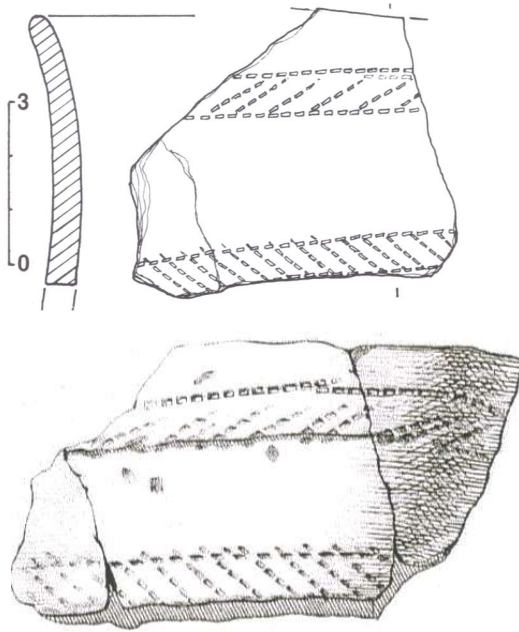
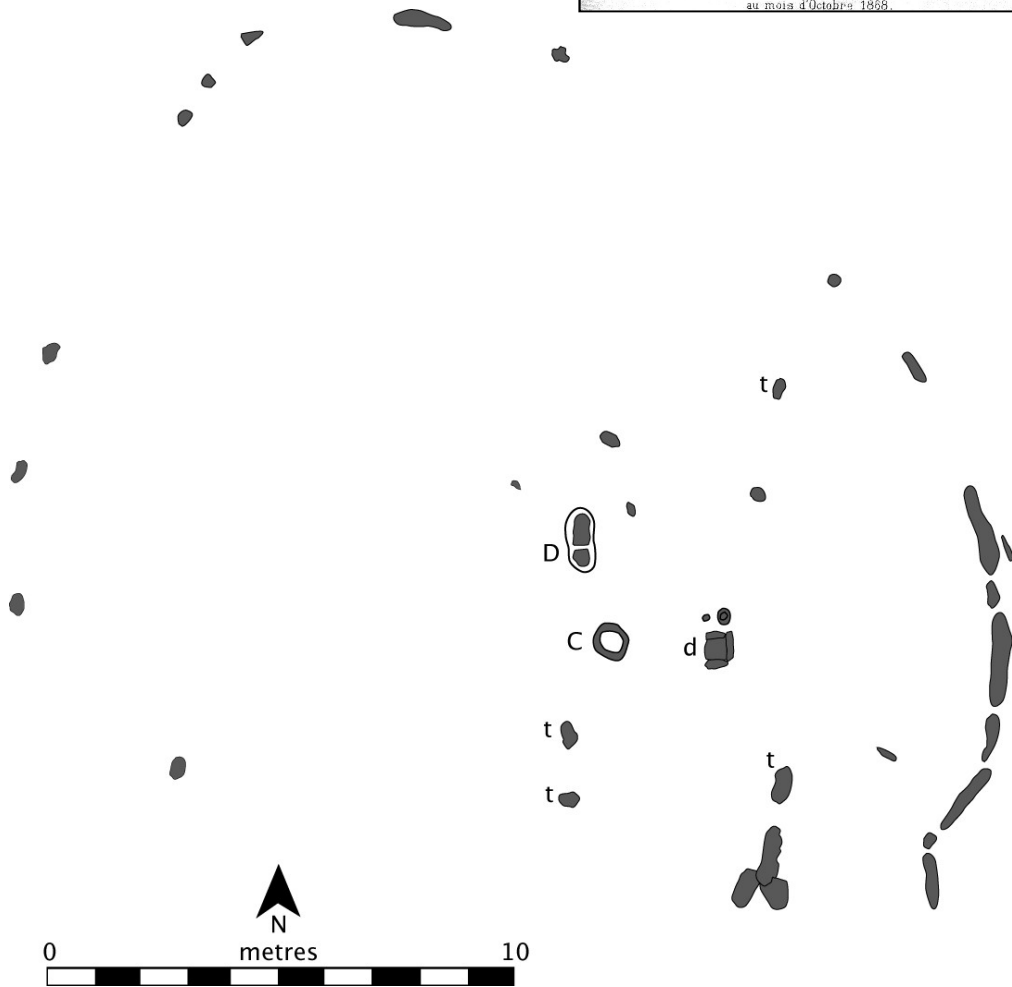
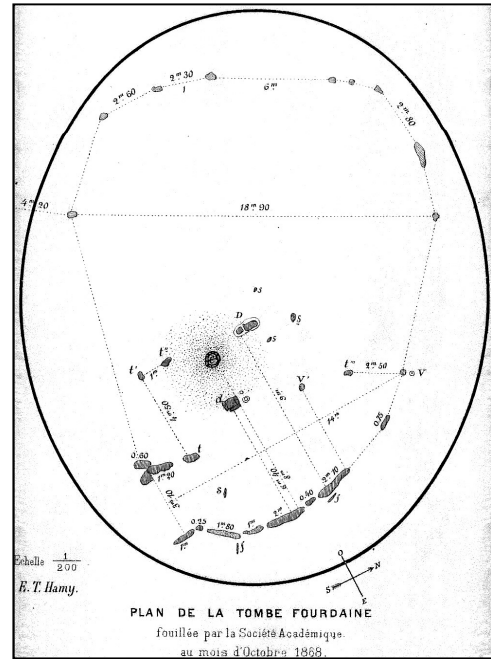


Fig 5.20b: The decorated Beaker sherd recovered from Equihen in 1886 after Blanchet (1984, 85)

Fig 5.20a: (Below) The original plan drawn by Hamy of the monument at Equihen near Boulogne-sur-Mer and a drawing of the stones and burials extracted by the author from that plan. (after Hamy 1870-1872).



He does, however, report that a broken Beaker vessel was found beside the head. He describes it as being made of *'fine clay, not turned on a wheel, but smoothed with care and irregularly fired,'* resulting in the fabric colour varying from red brick to yellowish red. He kept only the *'three best pieces'* (Fig 5.20b), which were drawn and reproduced in his report. There were no other grave-goods, but around the grave cut were found a number of knapped flint artefacts of unspecified types.

Within the interior of the monument he discovered more stones, some apparently forming a rectangular arrangement 4.5m wide by up to 8m long – later interpreted by Blanchet as the base of a mortuary house (1984, 85-86). Three of the corner stones are marked 't' on Hamy's plan – a fourth stone, in line but not in a corner, was designated in the same way. Each of these was found to be covering cremation deposits. He states: *"The incinerations had not been enough to destroy all the bones, Hidden in the ashes were the remains of long bones, jaws, teeth etc, and it was possible for me to recognize the remains of an old man, two other adults and a young person,"* (author's translation after Hamy 1870-1872, 218).

Inside the rectangular arrangement was a small cist ('d' on Hamy's plan). It consisted of four limestone slabs, one lining the base. The other three each measured approximately 35-40 sq cms and formed the sidewalls. The fourth side, facing the coast, had been deliberately left open. The cavity was filled with clay and sand. The broken base of a food vessel was found against the exterior of the northernmost wall. A second cist, cutting into the mound, was found two metres west of the first (C on Hamy's plan) and still within the rectangular arrangement of stones. Lining its pit were ten narrow sandstone slabs, each approximately 50cms high. A large flat had originally capped the cist. It was fractured and in pieces when discovered, allowing soil and stones to penetrate the cavity. This had mixed with the deliberately deposited material, described by Hamy (1870-1872, 220) as: *"ashes and fat resulting in a kind of brilliant black soot"*. As both these cists appear to have been cut into the mound rather than the natural soil it is reasonable to conclude that they represent a later phase in the use of the monument.



## 5.10 BEAKER CREMATIONS

Cremation as a method for disposing of the dead is very much a lesser rite in Kent and it is completely absent from the north-eastern Transmanche French study zone, but it forms the majority among the very few Beaker burials discovered in Flanders. However, as this consists of two out of three and as both of those were discovered in relatively close proximity, it is unsafe to draw conclusions. Nevertheless, it is noteworthy that this should be the case in a landscape where Beaker finds of any kind are rare. The discoveries were made at Kruishoutem-Wijkhuis (Braeckman 1991) and Kruishoutem-Kappellehouder (De Laet 1972), Eastern Flanders.

The land around the modern municipality of Kruishoutem has been under sporadic archaeological investigation for many decades due to the fact that a Roman settlement has been discovered there. Research has also taken place into the medieval occupation of the area. From time to time traces of prehistoric activity have come to light, and such was the case in an area known as Kappellekouter in 1990. Whilst excavating the artisan quarters of the Roman settlement, archaeologists from the Universiteit Gent discovered an elongated pit. It was sited on the top of the north-western flank of a prominent 70m high hill. The pit measured approximately 2.4m in length and 1.2m at its widest point, orientated north-west/south-east. Its fill contained a high proportion of charcoal and there were fragments from two Beakers. Both were decorated in the All Over Ornamented style (Fig 5.30). A piece of quartz and a sherd from a third Beaker vessel were also recovered from the edge of the pit. There was no indication of a burial, although the charcoal has been interpreted as possible cremation evidence.

In 1972 during an earlier phase of investigations on the Roman site, in an area known as Kruishoutem-Wijkhuis, a mechanical digger cut into a patch of charcoal blackened soil, destroying part of it. The subsequent excavation recovered fragments of calcinated bone from throughout the fill, but these were too small to provide details other than that they were of human origin. At first it was thought this was a Roman cremation grave, similar to others that had already been found in the area. However, an upturned All Over Corded Beaker vessel (Fig 5.31) was discovered just few centimetres from where the mechanical shovel had been

stopped. A radiocarbon date of 4036±189 BP (IRPA D.131) was obtained from the charcoal. A tanged and barbed flint arrowhead was also discovered on the floor of the grave.

The only examples of cremation burials from Kent have not yet been fully examined and are presently unconfirmed. An excavation near Eyehorne (Barclay and Gardiner 2005) uncovered Beaker pottery in association with two possible cremation pits. Sherds of an S1 type Beaker were recovered from one and an S3 from the other. Very small amounts of burnt human remains were recovered from these pits, which also contained charred hazelnuts shells. The pits were radiocarbon dated to 3742±40 BP (NZA-20419) and 3648±35 BP (NZA-20420). Other, possibly residual, domestic material was also found.

Small quantities of cremated human bone were recovered from Beaker period pits and the fill of a ring ditch at Beechbrook Wood. Due to the partial nature of the excavation the true extent of funerary activity on this site cannot be established. Beaker sherds recovered from these, and other contexts represent a minimum of eight vessels and possibly as many as 17, mostly domestic ware. A complete vessel and eight sherds of another were recovered from the fill of the ring ditch.

## **5.11 BEAKERS AND GRAVE GOODS**

### **5.11.1 Archers' wrist-guards and flint arrowheads**

Archer's stone wrist-guards, or bracer, have been found in a number of funerary contexts within the three study areas. One was recovered from St Peter's Tip, Margate, (Fig 5.21), but its precise deposition is not reported. The fabric is non-local mudstone rather than the more usual slate or schist (Smythe 2006). It has been classed as an Atkinson B1 (Clarke 1970) or by a more recent system as 2Spp (Smith Forthcoming; Fokkens *et al.* 2008, 111) (Fig 5.22). In either case, it is one of only five known from Kent<sup>20</sup>; the others are: Offham (incidental find – type 6Spp) (Smythe 2006); Cliffe near Rochester (unknown type); Sturry (type 2Spp) and Sittingbourne (type 2Spp). The St Peter's wrist-guard is the only published one in the three study areas found in association with a surviving skeleton -

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<sup>20</sup> Another was found during the Thanet Earth excavations during 2008 and awaits publication (Fig 6.75).

although the Sittingbourne and Cliffe examples were found in grave contexts, as was the only Continental find from D’Aremberg, Wallers, Nord (Félix 1969), (4Sbc, Fig 5.23).

Clearly, archer’s wrist-guards are generally uncommon: on the continent they are mostly found in central Europe (Fokkens *et al.* 2008) and in Britain they are nearly always discovered south of a line from Wiltshire to East Anglia. A total of 58 were recorded in a British survey conducted by Woodward *et al* (2006, 533) and, of those with secure dates, all fall early, either in or before Needham’s fission horizon. They are mostly associated with male burials and an example is the exceptionally rich Amesbury Archer, whose remains have been dated to 2400-2200 cal BC (Fitzpatrick 2005a). Unfortunately, there is no radiocarbon date for Wallers, St Peter’s or any of the other Kent wrist-guards. Although the Thanet Earth find may in due course change that (Fig 5.28).



Fig 5.21: The archer’s wrist-guard found in a Beaker grave at St Peter’s rubbish tip, Margate.

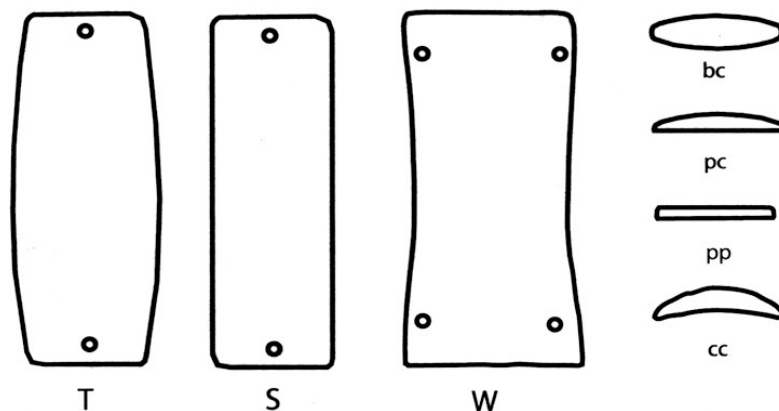


Fig 5.22: The Fokkens *et al* system for categorising wrist-guards.

They usually form part of the classic Beaker package of grave goods, which includes one or more of the following: flint tools, copper and flint daggers, gold disks, basket ‘earrings’ or hair-tresses and tanged and barbed arrowheads. Four of the latter were found in the QEQM graves (Fig 5.25): three well-made points were associated with a male burial and the fourth, less refined example, with a secondary female burial. The Wallers wrist-guard was found with five tanged and barbed arrowheads, a copper dagger, three scrapers and a Beaker (Fig 5.23). In addition to a wrist-guard the Sittingbourne burial contained a copper dagger, a spear point and a bone toggle or ring, but apparently not a Beaker (Fig 5.24).

Woodward *et al's* (2006) British study of wrist-guards concluded that particular materials, colours and possibly even the sources, were carefully selected. She and her colleagues carried out petrological examinations on 26 artefacts and discovered that all shared qualities of being made from exceptionally hard, fine-grained rocks and may have had common sources in Cumbria, the West of England and Wales. They were highly polished and for the most part showed little or no wear. Almost all had been broken, usually in one corner, diagonally across the drill-hole, a feature present in both the St Peters and Waller's artefacts.

It is far from certain that they were merely practical items of archery equipment. Instead, they may have had a social, prestige or symbolic function. Fokken *et al's* (2008) study of their depositions in the grave, using mostly Continental examples, shows that the majority were found on the outside of the forearm where they would have had no functional use. He contends that the high level of craftsmanship used in their manufacture – and the often distant source of the raw materials - lifted them beyond the utilitarian and invested them with '*higher values in society*', most probably linked to idealised and desirable concepts of masculinity, incorporating '*bravery, righteousness, stability and tranquillity*' (Fokken *et al.* 2008, 123-124).

This concept is not unlike that of the medieval chivalric doctrine, the underlying philosophy of which also spread widely across Europe. Whilst the wrist-guards' association with daggers and arrowheads seems to reinforce the idea of a warrior cult, the resultant 'package' could just as easily have been intended to represent the

hunter, a character whose everyday function within society would have been quite different. Although both would have been thought of as active agents in the transformational process of life into death – which could have led to either, or both, being invested with the role of interlocutor between those inhabiting the land of the living and the ancestors in the realm of the dead.

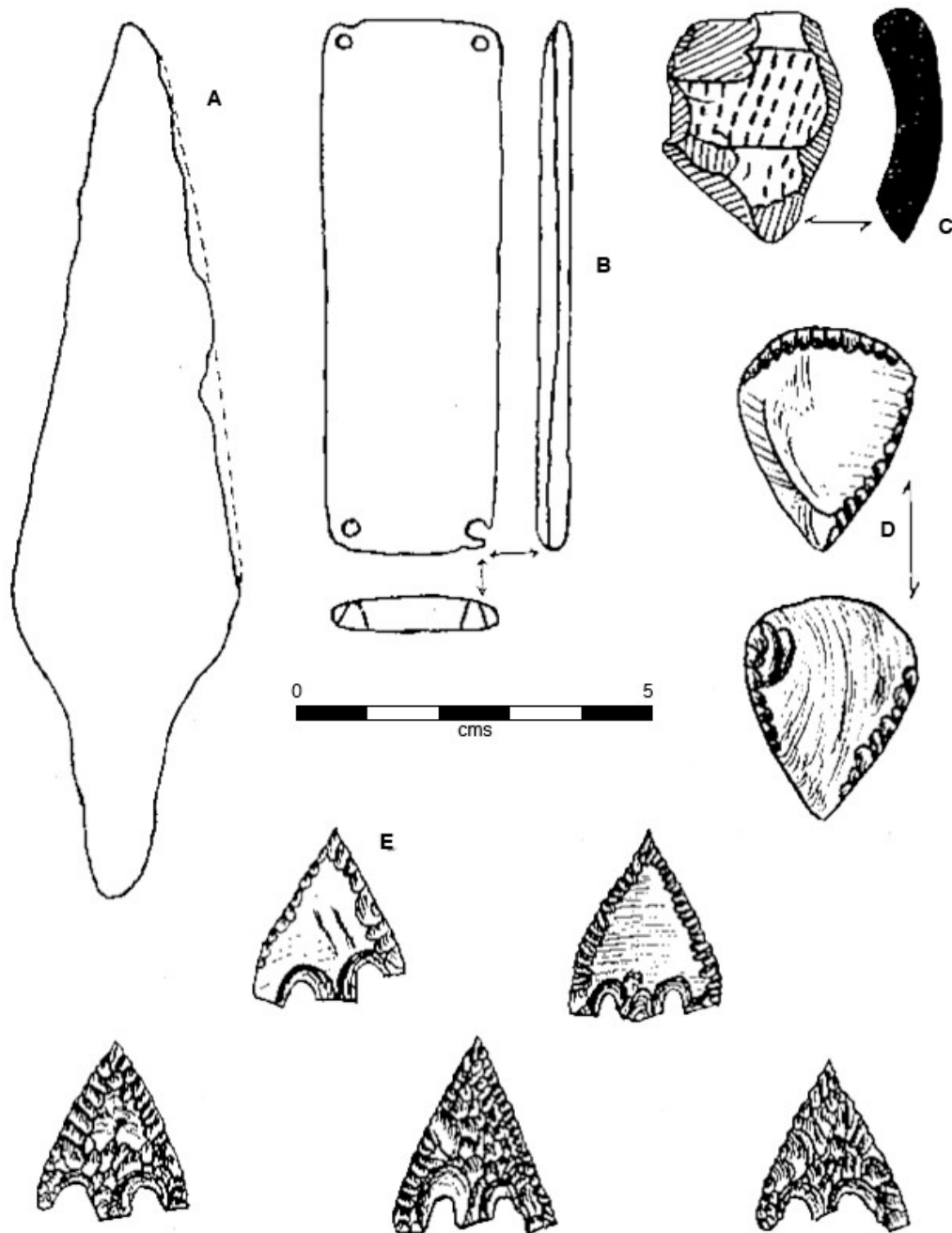


Fig 5.23: The Beaker grave assemblage from Wallers. A, Tanged copper dagger; B, Archer's wrist-guard; C, Flint scraper; D, point scraper and E, flint tanged and barbed arrowheads, (after Félix and Hantute 1969).

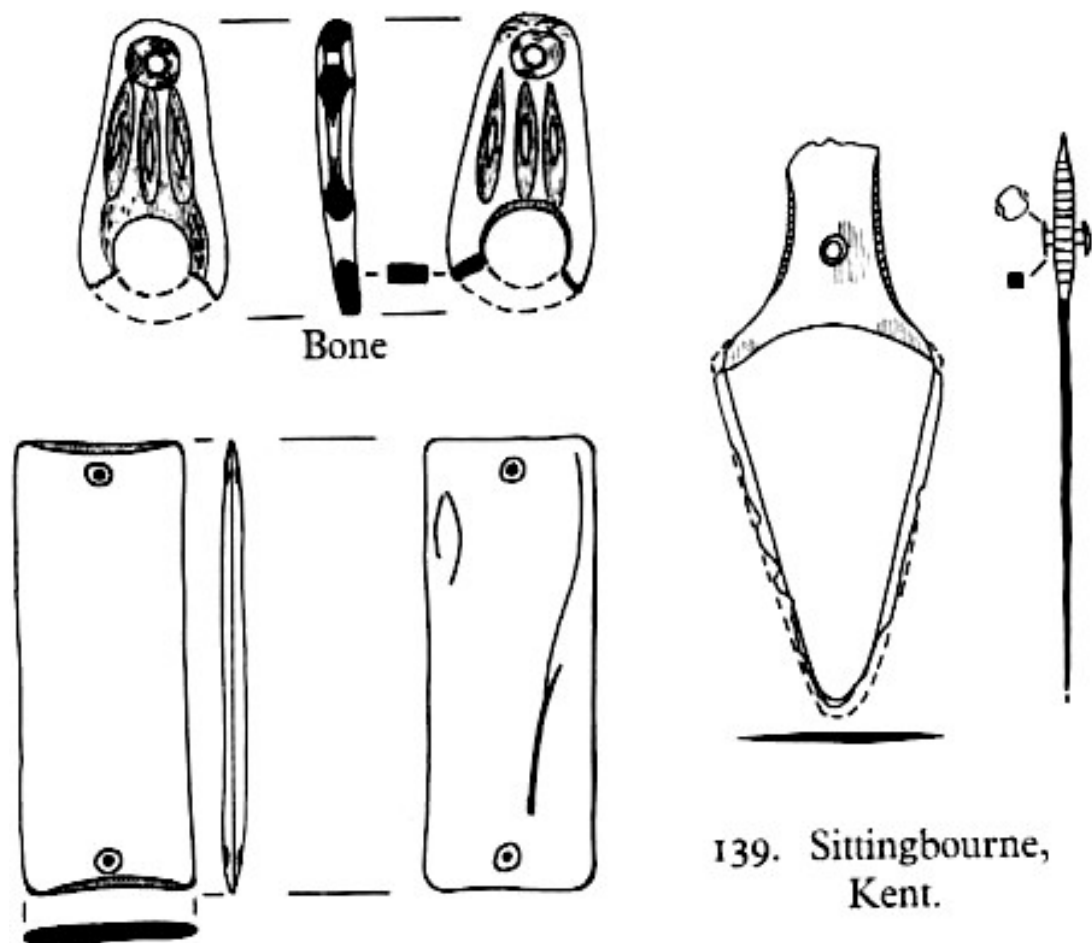


Fig 5.24: The Beaker grave 'package' found in Sittingbourne (Kinnes 1985)



Fig 5.25: The three tanged and barbed flint arrowheads found in with the primary QEQM Beaker burial (picture courtesy of TFTA)

### 5.11.2 Exotic material

In addition to the jet necklace found at Monkton Mount Pleasant (Sheridan & Davis 2009), a jet ‘button’ was found in the LOTM 7 grave along with a flint knife (Fig 5.26). The button is considered to be a prestige item and one that may have meaning beyond simple ostentatious display. In form, it is similar to others found in graves elsewhere – although it is the only one of its type to be discovered in the three study zones. Black, with a slight metallic sheen, it is approximately three centimetres in diameter with two holes drilled into its flat underside to form a ‘V’. The upper side is convex.

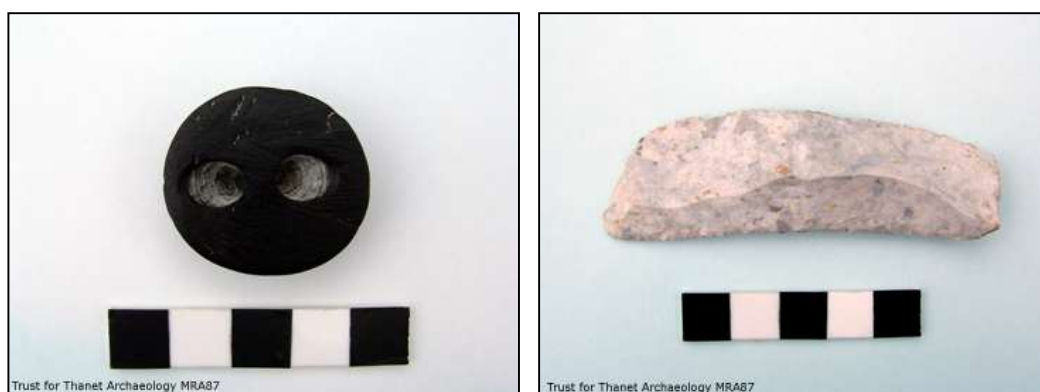


Fig 5.26: The jet button and plano-convex flint knife from LOTM 7 (pictures courtesy of TFTA).

The raw material from which it was fashioned came from the Whitby area of present day north Yorkshire. Whitby jet buttons are found in graves all over Britain, normally as single items. For instance, an excavation in 2000 of a cist burial at Rameldry Farm in Fife revealed the crouched body of a man aged between 40-50. It was radiocarbon dated to between 2280-1970 cal BC (Sheridan 2003).

LOTM 7 was not the only Kentish Beaker grave to contain a ‘button -like’ object. The other was in an oval – possibly un-mounded - burial cut at the centre of an enclosing penannular ring ditch at Chalk Hill, which is just 1.5 miles away (Shand 2002). Unlike the Manston artefact this one was made from shale and conforms to a type known as a pulley ring, the purpose of which is unknown. It was found with an almost complete Beaker (currently awaiting classification) and the crouched inhumation of an adult. A second, possibly contemporary, grave was found within the ring ditch. It contained the remains of a juvenile, a new-born baby and a fox cub. The site was excavated in 1997-98 and is better known for its

Neolithic Causewayed Enclosure, one of four found by excavation in Kent (Shand 2002). Post-excavation work is on-going and publication is currently limited to an assessment report. It includes the following brief description of the pulley ring: “...black in colour, decorated with concentric grooves on both surfaces with four perforations and v-bores from the edge. This is a particularly fine and decorative example...The closest source of shale in Britain is Dorset, but this is a much courser shale” (Nailer 2002, 30-31). Similar artefacts have been recovered from Beaker graves in other parts of Britain, primarily Wessex, such as at Winterbourne Monkton, Wimborne St Giles and Durrington Walls (Annable and Simpson 1964, 38-39).

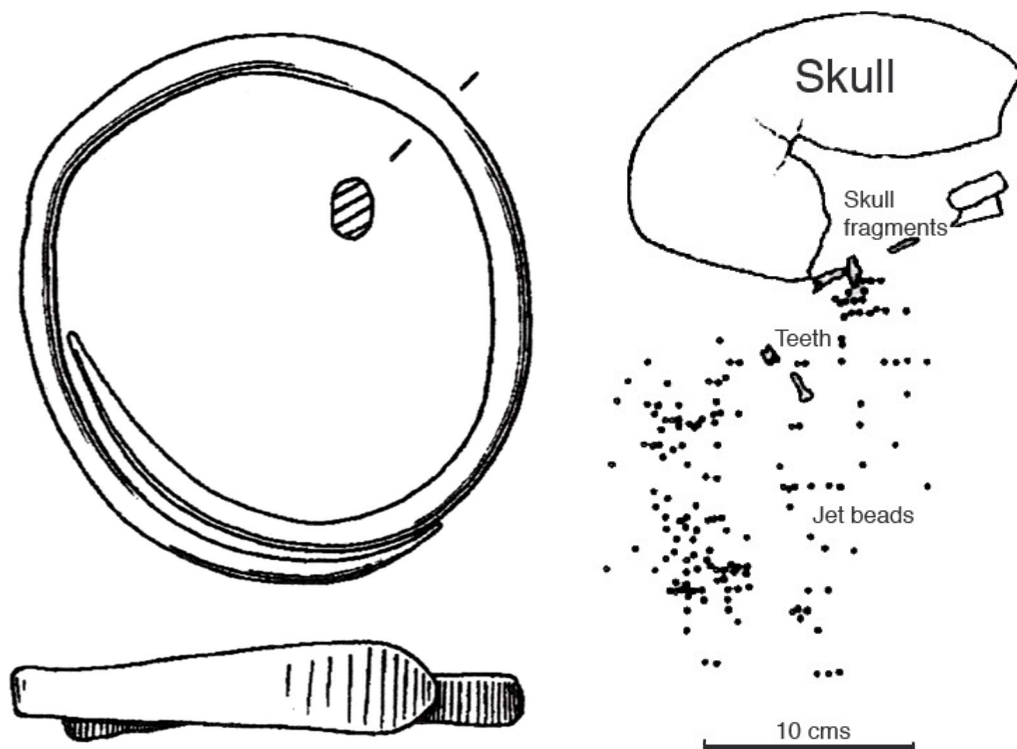


Fig 5.27: The 'snake-head copper bracelet from the Monkton Mount Pleasant child grave and the jet bead necklace drawn here in situ (after Sheridan & Davis 2009).

The previously mentioned Monkton-Mount Pleasant graves have yielded some of the more impressive items found in Kentish Beaker burials, including two copper alloy bracelets, one with a snake-head terminal and a jet bead necklace, totalling 217 individual beads (Figs 5.27). Post excavation analysis on the necklace has shown that it is quite rare, with only 25 known examples in the UK. More importantly, it is comparable to similar items of adornment found in central Europe, most particularly the Straubing Culture of Bavaria and the Únětice culture (Sheridan & Davis 2009).



Flint tools feature in many graves, particularly at Castle Hill, Shrubsole Hill, Lord of the Manor and Northumberland Bottom. The latter two also yielded single tanged-and-barbed arrowheads. At Whitehill Road, Southfleet a double ring ditched monument was devoid of a central burial, although there was four post holes marking the centre-point. A grave, cutting the inner ditch, contained the badly preserved remains of a crouched female. With it were 21 amber beads, four of them fragmentary. Also within the same ditch fill were 11 sherds of sandy ware pottery, four of which have been positively identified as Beaker.



Fig 5.28: A Beaker burial from Thanet Earth, complete with copper knife (lower left) and wrist-guard (top right). Photograph courtesy of Canterbury Archaeological Trust.

### 5.12 Beaker Vessel Comparisons

Monument	Location	Clarke's type
D'Arenberg, Wallers	Nord	Wessex/Mid Rhine
Kruishoutem-Kappellehouder	East Flanders	Wessex/Mid Rhine
QEQM	Margate, Thanet	Wessex/Mid Rhine
South Dumpton Down	Ramsgate, Thanet	Wessex/Mid Rhine
Cliff View Road, Cliffsend	Ramsgate, Thanet	Wessex/Mid Rhine
La Tombe Fourdaine	Equihen, Pas-de-Calais	European
Au-dessus-du-Moulin	Aubigny-au-Bac	European
Mol	Antwerp	European
Kruishoutem-Wijhuis	East Flanders	European
Sint Denijs-Westrem	East Flanders	European
LOTM 7/ Manston Runway	Thanet	European
Chislet	Canterbury	European
Lower Fant	Maidstone	European
Barham	Canterbury	European

Table 5.8: Beakers, some of which are illustrated below in Figs 5.30 and 5.31, from each of the three study zones that have either been categorized as Wessex/Mid Rhine (W/MR) or European Bell under Clarke's scheme.

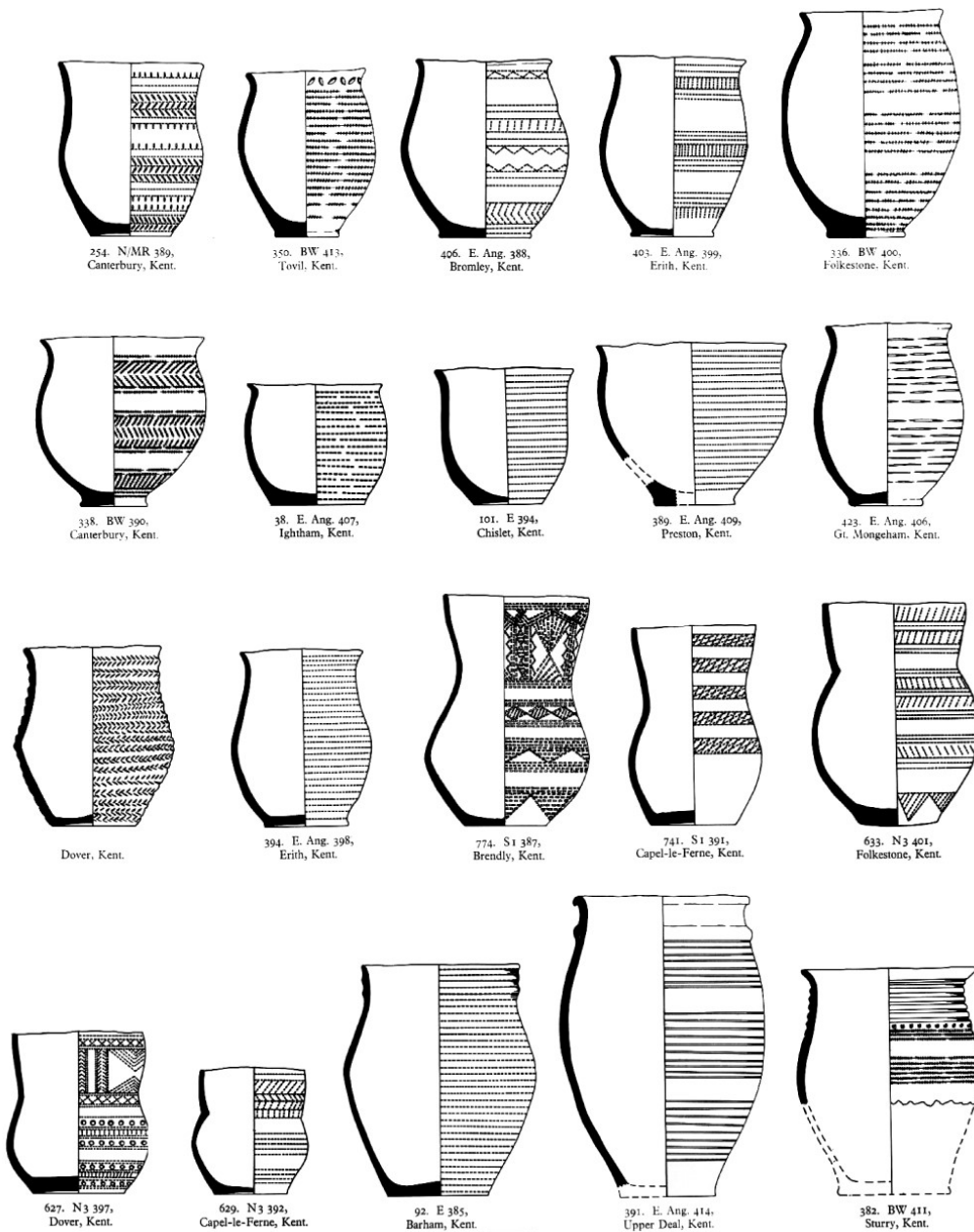


Fig 5.29: Kentish Beaker's from Clark's corpus (after Clarke 1970).

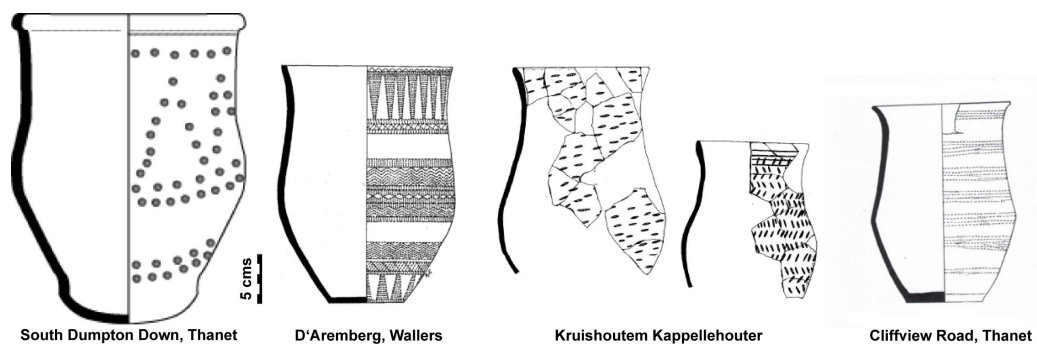


Fig 5.30: Each of these Beaker's has been designated as W/MR types. Drawings extracted from published sources that are cited elsewhere in this chapter, with the exception of South Dumpton Down, which was drawn by the author for the purposes of this research.

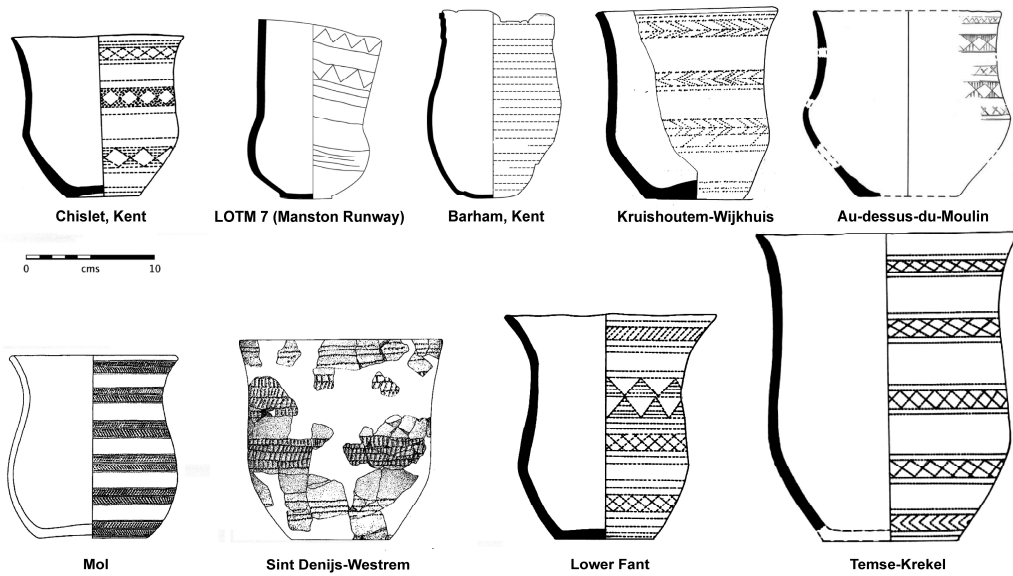


Fig 5.31: Beakers designated as European Bell. Drawings taken from published sources cited elsewhere in this chapter, except LOTM 7 and Barham, which were drawn by the author as part of this research.

### Monkton-Mount Pleasant Beakers

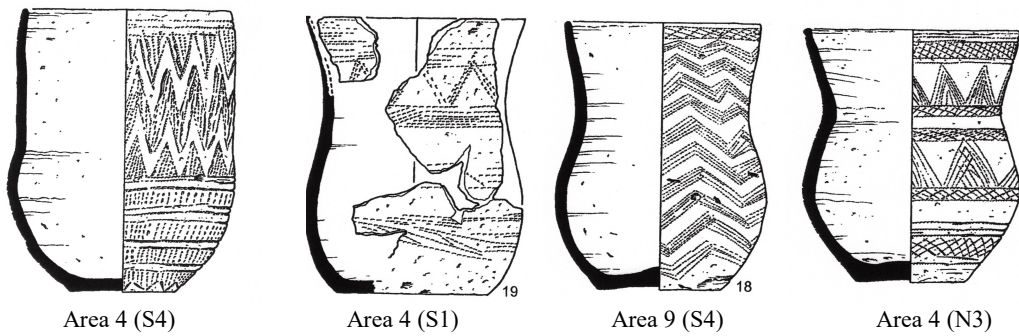


Fig 5.32: Beakers from the Monkton-Mount-Pleasant excavations in Thanet (after Clark and Rady 2009).

### Other Kentish Beaker finds

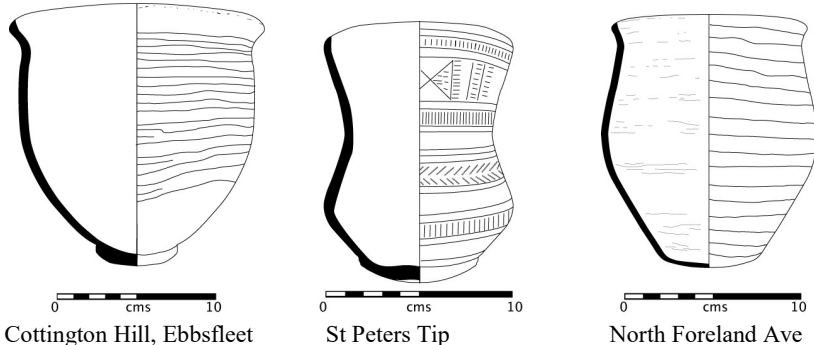


Fig 5.33: Three Beakers from recent excavations in Thanet – drawn by the author.

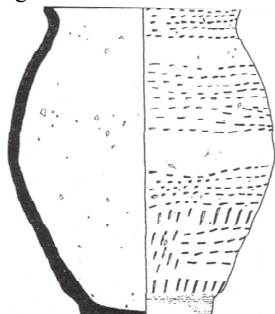


Fig 5.34: A Beaker from Swalecliffe found in 1975 when it fell out of a cliff face (Tatton-Brown 1977).

## 5.13 THE SIGNIFICANCE OF METAL ARTEFACTS

### 5.13.1 The copper age

Copper extraction from ore outcrops and its use is thought to have begun in different parts of the Near East as early as the late seventh millennium BC (Heskel 1983, 362), with heat treating and alloying being developed in the same general areas about two thousand years later (Budd 2000). Copper does not appear in the archaeological record of north-western Europe, and in particular the Transmanche region, much before 2500 BC and when it does the earliest examples are daggers recovered from Beaker graves where they form part of the ‘standard’ package (Needham *et al.* 1989, 386; Blanchet 1984, 121-124).

By whatever agency or association copper arrived, it would at first have been in scarce supply and viewed as an exotic substance – probably imbuing prestige on those who possessed items made from it, and possibly on anyone who knew how to work with it; although, ethnographic studies suggest that smithing skills need not automatically mark a person out as special, as part of a separate ‘class’ or of elevated status (Rowlands 1971). Therefore, it is not surprising that copper artefacts from this period are rarely found in the archaeological record. However, hundreds of years later, when it was sufficiently well understood and abundant enough to have been alloyed with tin to create bronze, such objects are still barely represented in the material culture. In fact, it is not until after 1400 BC, that metalwork becomes more visible in the archaeological record (Roberts 2007).

Despite this dearth of physical evidence, it would be wrong to assume that the supply of copper and bronze objects was heavily restricted. There is some cause to suggest that, even at the start of the period under examination, copper tools were in use. Parker Pearson points out that during his Stonehenge Riverside project (2008) tens of thousands of Neolithic and Bronze Age flint artefacts were recovered, but only one was an axe fragment. He said: “*They were still chopping down plenty of trees, so they must have been using copper axes and taking care not to lose them,*” (*pers comm* 2008). This is, perhaps, too strong an assertion – and he may well, on reflection, modify this view. Even so, it is a plausible interpretation of the observed anomaly.

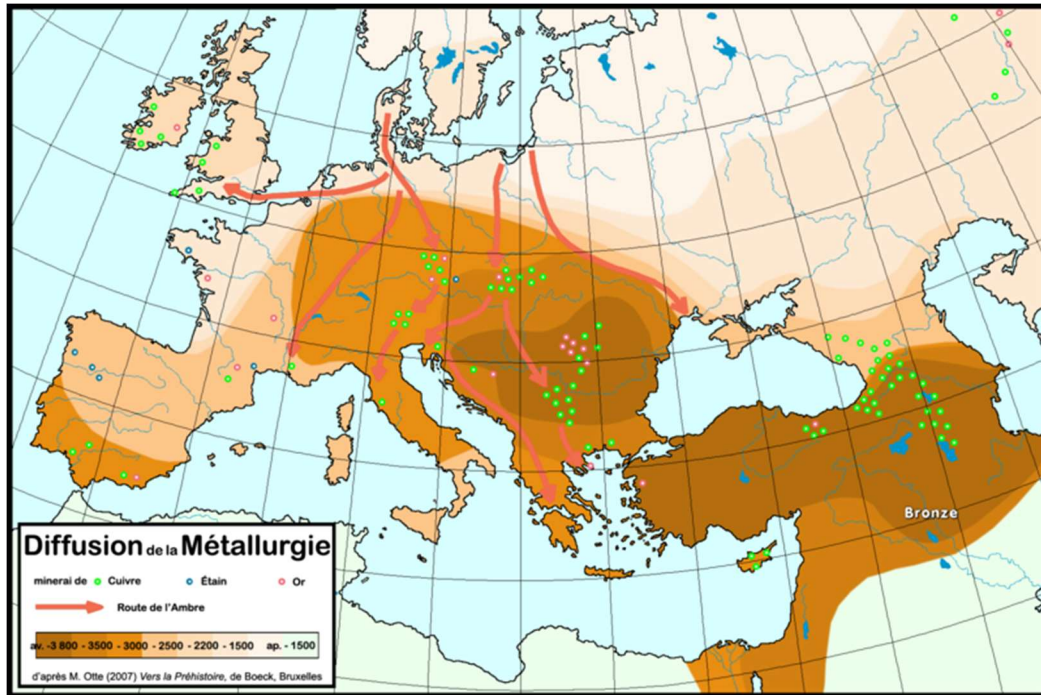


Fig 5.35: Map of Europe showing the diffusion of metals and amber (drawn by Hamelin de Guettelet: ([http://fr.wikipedia.org/wiki/Âge\\_du\\_bronze](http://fr.wikipedia.org/wiki/Âge_du_bronze)) after Otte, M (2007) *Vers la Préhistoire*, Bruxelles, de Boeck.

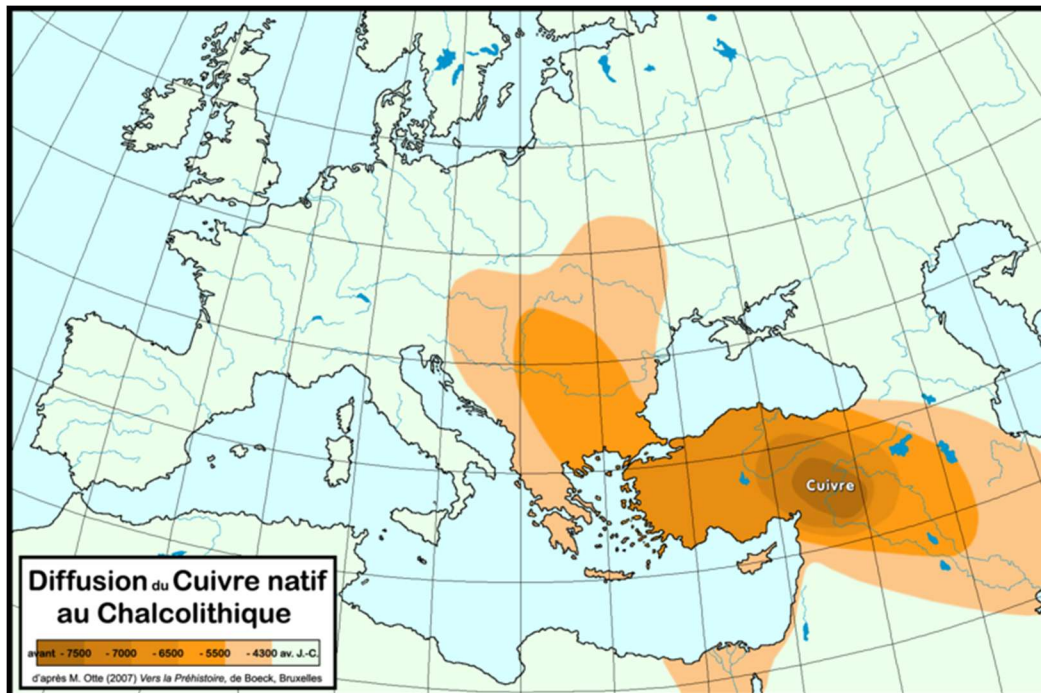


Fig 5.36: Map showing the spread of copper across central Europe (drawn by Hamelin de Guettelet: ([http://fr.wikipedia.org/wiki/Âge\\_du\\_bronze](http://fr.wikipedia.org/wiki/Âge_du_bronze)) after Otte, M (2007) *Vers la Préhistoire*, Bruxelles, de Boeck.

Whilst it is not presently possible to point to similar evidence from within the research area it is worth noting that numbers of metal finds, not just of axes, dating to between 2500 BC – 1500 BC are very low – implying that care was being taken to avoid loss and that worn out objects were probably being recycled. There are no known LN/EBA metal working sites in Kent, Flanders and north-

eastern France and definitely no sources of metal ore. This means that any metal dating to the period and recovered from within the study zones must have been imported. The nearest sources of copper are: north Wales and Cornwall; south-west Ireland; central Europe, southern Iberia, southern France and the Balkans, all of which are a considerable distance away.

### 5.13.2 Metal finds in Zone 1 - Kent

The south-east region of England as a whole only has 110 metal artefacts recorded as dating earlier than 1500 BC. The majority of these were accidental finds made by non-archaeologists, and consequently many have either poor, or no, provenances. Furthermore, three-quarters of the finds are axe heads, which are rarely found in graves (Barber unpublished). In Kent, up to 2003, just 23 single object finds, largely from non-funerary contexts, and three hoards, dating to the period 2000 BC - 1500



Fig 5.37: A copper dagger (no 42) and an archer's wrist-guard found during the Thanet Earth excavations.

BC, had been recorded (Yates 2007, 21). In 2008 that figure was being revised as part of work on the South-East Regional [Archaeology] Framework (SERF). By the autumn it had reached 35 (Appendix E) and was not expected to rise much further prior to publication (Barber, *pers comm*) Finds of metal objects in Kent that are dated earlier than 2000 BC are very low, and consist of:

- 1 A copper alloy dagger found in 1883 on the east side of Bell Road, Sittingbourne – associated with a Beaker burial (Appendix E, no. 33);

- 2 Two daggers discovered when an uncertain number of inhumation burials were uncovered by workmen at Aylesford some time prior to 1897 - along with a flat axe of type 4b which itself is dated to 2000 BC -1800 BC\* (no. 26);
- 3 A tanged copper-arsenic alloy dagger found at Faversham. This method of alloying faded out in the last two centuries of the third millennium in favour of tin bronze (Needham *et al.* 1989, 391-393); when it was registered at the Ashmolean Museum the dagger was accompanied by a halberd. Whilst not explicitly stated in the records, it is likely these were associated as they appear to have been found in the same brick-earth pit (Case 1954, 21) (no. 47);
- 4 A type 2 or 3 flat axe found embedded in a tree root at Fishpond Valley, Ightham, in 1947 (no. 1);
- 5 A flanged axe of type 3c found in Boxley Woods, near Maidstone in 1980 (no. 2);
- 6 A tanged copper dagger found during the Thanet Earth archaeological excavation in the spring of 2008, accompanying an early Beaker period burial (no. 42).

\*All axe classifications and dates (after Needham *et al.* 1985).

There have been only five finds of metalwork from funerary contexts in Kent, they are:

- 1 An axe and two daggers from grave(s) at Aylesford (Appendix E, no. 26);
- 2 A tanged copper dagger from a Beaker burial in Sittingbourne (no. 33);
- 3 A knife from a grave in Ramsgate (no. 36);
- 4 Two bronze bracelets found in separate, but quite possibly associated, graves during the Monkton-Mount Pleasant excavations dated to c2000 BC – 1700 BC (Clark and Rady 2009) (no. 41);
- 5 A copper dagger from a Beaker burial excavated at Thanet Earth (no. 42).

Of these, only the latter two discoveries have been recovered through the use of modern, scientific, excavation techniques.

### **5.13.3 Metal finds in Zones 2 and 3 – Flanders and north-eastern France**

The situation on the near continent is little different. Blanchet's still unsurpassed exploration of the first metal using cultures of north-eastern France records the earliest objects as two 'Beaker-style' copper daggers (*poignard en cuivre*) – one from La sépulture d'Aremberg at Wallers, Nord, and the other from d'Enencourt-Léage, in the l'Oise valley (Blanchet 1984, 86 and 93). He also lists four copper beads dating to the Chalcolithic period, one from the Somme valley and the others from the l'Oise valley. Additionally, he records 21 individual axe finds, three axe hoards, three spear-points, and four halberds, all dating to the Bronze Ancien period (Appendix E). There is also mention of a copper pin (*alène*) from a communal burial at d'Argenteuil, l'Oise valley, and a '*métallique*' arrowhead from Genainville, l'Oise valley, but it is unclear to which period these are attributed. A more recently compiled inventory of third millennium BC metal artefacts from the whole of the Centre-Nord area of France lists 48 metal items, ranging from beads to copper knives and bronze axes. Of these seven items, some already listed by Blanchet, were found in Picardie and one in Nord. No more than four have funerary associations (Mille and Bouquet 2004).

The earliest recorded metal finds in Belgium are two copper daggers – one apparently found in the River Scheld near Asper, eastern Flanders, and the other near Ronse, which is also in eastern Flanders. Neither have good provenances and the exceptionally large 28.5 cm long copper-arsenic Asper blade prompted De Laet to express doubts about its attribution (1982, 400-403). However, this dissipated after Warmenbol (2004, 29) pointed out that it is typologically a match for the dagger from Wallers, with the exception that this artefact is a more typical 13cms in length (Blanchet 1984, 86). In fact, the Aspers dagger more closely matches the one from Faversham, referred to above, which is 24cms long – even with a broken tip (Case 1954, 21) - and also has a matching design feature: the cutting edges of the Faversham blade is lined by double shallow grooves (Gerloff 1975, 28) – something which is also clearly visible on the Asper dagger.

The difference in size may, in any event, be of little significance; simply reflecting the amount of metal available to the smith. In fact, Gallay pays little heed to individual blade lengths and classifies all daggers of this shape as '*Le Bois-en Ré*' type (1981, 35-44) (Fig 5.38) – also referred to as a *poignard à*



*languette* (tanged dagger). They are most commonly found in association with Beaker burials and are distinguished by their elongated tapered blade and tanged handle end.

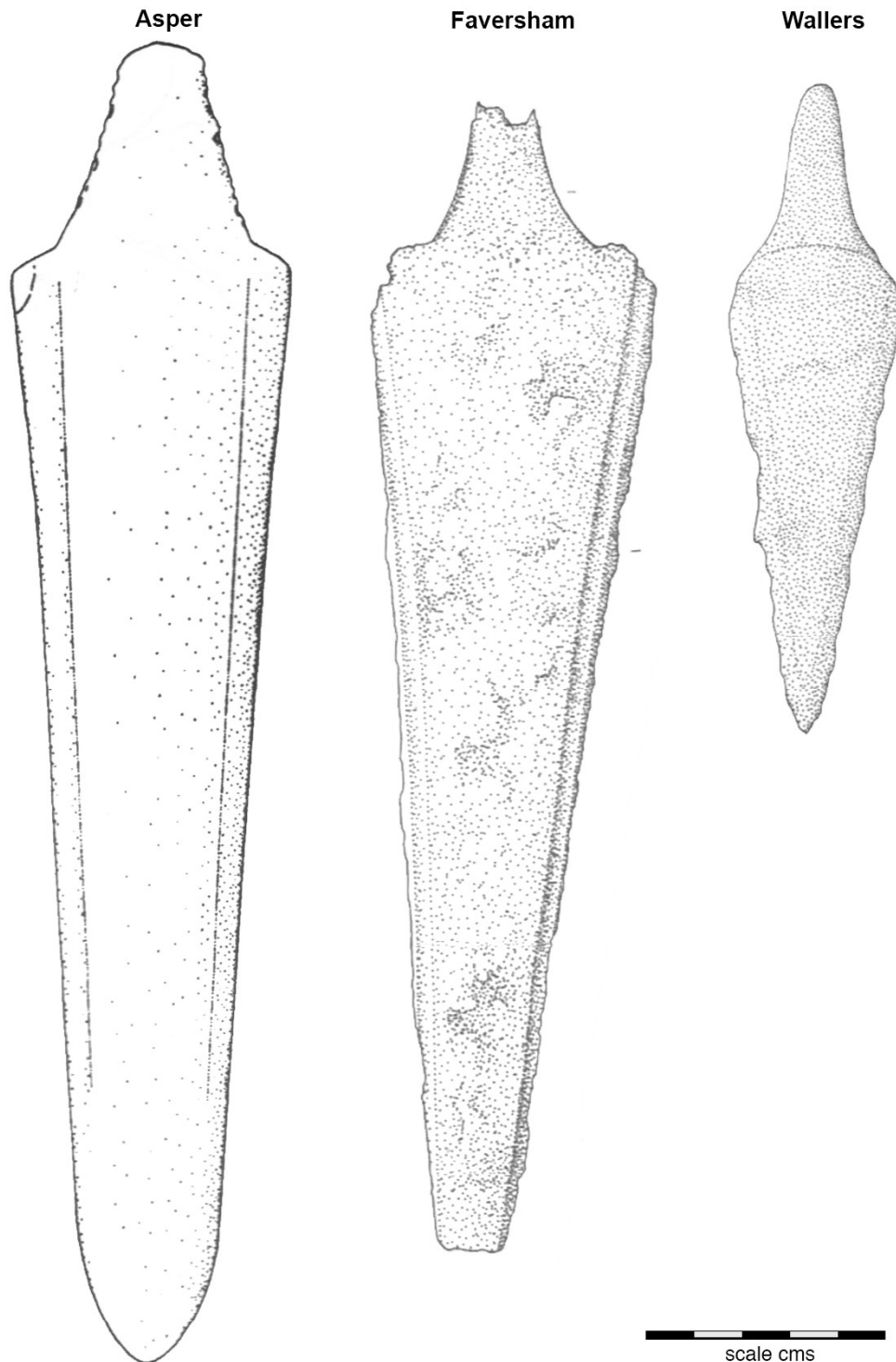


Fig 5.38: The three copper daggers classified by Galley as type “Le Bois-en Ré” (1981, 35-44). Illustrations (after Gallay 1981, tafel 4; Gerloff 1975, plate 1; Warmenbol 2004, 29, fig 1)

Of more importance is the fact that analysis of the metal used in the manufacture of these, and other objects, implies a common origin. Spectrographic analysis of

the Faversham dagger showed an arsenic content of seven per cent – which is unusually high and, as such, likely to be the result of a deliberate alloying technique rather than incidental or accidental contamination (Ottaway 2001, 97-99). Case drew attention to the fact that the high arsenic content of this dagger: ‘*is a nearly exact match*’ for a halberd from hoard I, found at Dieskau in the Saale region of Germany (Case 1954, 23). As previously mentioned, the Faversham dagger was discovered along with a halberd. Case found that its metallic compositions also matched a total of seven halberds from the Dieskau I and II hoards, which are associated with the Únětice (Aunjetitz) culture. He states: “...*this combination [of alloys] seems to have been rarely found outside the Saale region,*” and concludes that the metal used to manufacture both the Faversham dagger and halberd must have come from that area (Case 1954, 25). His work was carried out more than 50 years ago and analytical techniques have been refined since then but, as far as it can be ascertained, no new or contradictory evidence relating to these objects has been put forward.

Metallurgical analysis of the Asper dagger and that of the Faversham halberd are compared in Table 5.9 and show that the arsenic and antimony percentages are almost identical. This could indicate that the metal used in the Asper dagger derived from the same source. Unfortunately, the same cannot be claimed of the Wallers blade – the only one definitively found in a funerary context - because metallurgical analysis has not been carried out. However, as typological similarities are evident, it is reasonable to conclude that it too may have the same antecedence. None of the remaining Belgian metal finds for the period have been found in funerary contexts, with the exception of a fluorite bead from Mol (Beex and Roosens 1963).

Element	Symbol	Asper dagger %	Faversham halberd %	Faversham dagger %
Arsenic	<i>As</i>	4.46	4.6	7.0
Antimony	<i>Sb</i>	0.2	0.2	0.05
Silver	<i>Ag</i>	0.006	0.02	0.02
Nickel	<i>Ni</i>	0.039	0.17	0.1

Table 5.9: The chemical composition of metal blades from Faversham and Asper (after Case 1954; Warmenbol 2004).

## 5.14 BEAKER DISCUSSION

In general, it has been considered unwise to use the term ‘Beaker Folk’ since

Burgess and Shennan (1976) proposed that rather than providing material evidence for the inexorable expansion of a culture these distinctive vessels might, instead, represent the propagation of a cult. They based this interpretation on the general absence of cultural markers beyond the 'Beaker package' itself. Similar concerns had been expressed many years earlier by Piggott (1938, 125) but failed then to gain traction, perhaps because the established invasion/migration paradigm was still too deeply embedded. However, such patently cultural historic perspectives were no longer in vogue by the time Burgess and Shennan came to publish their hypothesis, allowing it to gain rapid and widespread support. Despite this, and even though more than 30 years have since passed, the Beaker burial rite is still not entirely viewed as evidence for the spread of a variant cult that required the application of distinguishing embellishments to existing funerary traditions.

On the contrary, the idea persists that, at least during the incipient phase, Beakers symbolize the florescence of a socially and ideologically distinct people, of uncertain origin (Boast 1995; Case 1995; Gibson 2004; Vander Linden 2007). Once they were established other socializing processes almost certainly came into play. Needham (2005) proposes that integration took place, with indigenous aspirants or converts seeking to adopt the practice and philosophy of Beaker use. Over successive generations this state of affairs led to a series of transformations in form and meaning, until eventually Beakers became part of the cultural norm. Some support for this comes from a study carried out using strontium isotope analysis on skeletal samples from 86 Beaker burials in Bavaria. It revealed that between 18-25 per cent of the graves contained people who had not grown up in the region. This applied across all age and gender groups and was interpreted by the authors as indicative of a significant migration wave (Douglas Price *et al*, 1998)<sup>21</sup>.

To some extent the Needham scenario as outlined is predicated on the assumption that when cultures encountered Beaker adherents they perceived of something desirable, worth adopting, acquiring or emulating. If so, this may have been linked to metalworking (Rowlands 1971, 215-217, Budd 2000, Vander Linden 2007, 348) or other craft skill (Brodie 1997). Helms (1998, 1993) offers up a broader

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<sup>21</sup> The British based Beaker Isotope project will update and add to these findings and provide data specific to this research project when it reports in 2010 (<http://www.shef.ac.uk/archaeology/research/beaker-isotope>).

interpretation: that it was linked to knowledge of a more esoteric kind, made all the more powerful for having originated in a distant land.

That the earliest forms of these vessels appeared in Continental Europe has long been recognized (Harrison 1980; Thomas, J, 1999a). Also widely accepted is that they later became known in Britain via two lines of transmission: one linking the Iberian peninsula, south-western France and Brittany to south-west England and Ireland and the other stretching from the Rhine and Netherlands to the east of England (Cunliffe 2001). However, this leaves a gap in north-eastern France and Belgium and implies that inspiration for the Beaker types found in Kent arrived either overland from East Anglia and western Britain or by sea from the Netherlands. Such a model grew up mostly because there seems to be precious few Beaker finds in Nord/Pas-de-Calais, Picardy and Flanders. Salanova's definitive work (2000) was only able to catalogue pre-existing antiquarian and accidental finds for north-eastern France, amounting to just four; whilst to date, the total number of discoveries in Flanders has not yet reached double figures (Table 5.6). Even the relatively recent process of developer led archaeological intensification, which has been underway in both countries, has failed to significantly increase the corpus. However, this dearth of Beaker finds can be accounted for, in part by a lack of fieldwork (particularly in the case of certain areas of Nord/Pas-de-Calais) but mostly as a consequence of hostile post-depositional environmental conditions (see Sections 3.3, 7.1 and 5.6).

The actual number of finds may be small, but their very existence is proof that the Beaker phenomenon did not bypass Kent's nearest Continental neighbourhood. Indeed, this is a fundamental point for Needham (2005b, 176) who envisages a Beaker '*Fusion Corridor*' sandwiched between the eastern Corded Ware and western Maritime Beaker cultures – centred pretty much on a line that would straddle present day Pas-de-Calais and, in effect, Kent. If Clarke's Beaker typology (reproduced in Fig 5.1) is accepted then the comparisons shown in Table 5.8 support the notion that contact must have been taking place between all three study zones. Such an assertion is strengthened by the apparent link between the daggers found at Aspers, Faversham and Wallers (Section 5.13). Both sets of artefacts are considered to be early examples of their type, suggesting that contact

was in place during the first part of the Beaker period. This can be supported by radiocarbon dates from Flanders and Kent (Table 6.3), but it is unfortunate that there are no such determinations available for the French zone. The current evidence suggests that Beakers arrived in Kent as early as 2460 BC and earlier in Flanders. It is also worth noting that most of the radiocarbon dates fall into, or before, the final quarter of the third millennium BC – appropriately early for a region that is considered to have been a Continental contact zone during the preceding era (Clark 2004b).

The extent of the nascent Beaker penetration in each of the study zones is hard to determine. Evidence for their distribution in Flanders and north-eastern France is too sparse and fragmented for conclusive analysis, although there does appear to be a concentration in what could be thought of as the littoral hinterland between Calais and Boulogne (Fig 5.6). In Kent the far more abundant evidence shows that Beaker use seems to have been biased towards the east of the county (Fig 5.3), the very threshold of Britain for anyone arriving via the shortest sea routes from Continental Europe. It is, however, difficult to say whether this markedly uneven distribution is the result of genuine usage patterns or reflects the sporadic application of archaeological intervention. There is certainly reason to be cautious: for instance, the clearly observable concentration in Thanet must be viewed in the knowledge that most of those discoveries were made as a result of developer-funded excavations - which have surged in that part of Kent since the 1980s. If Clarke's corpus, which was compiled prior to 1970, were still the only source of data, then Thanet would be seen as totally devoid of Beakers. Today, it stands out as a Beaker hotspot.

Similarly, the archaeological interventions that preceded construction of both the Channel Tunnel and its high-speed rail link have increased Beaker numbers in mid-Kent – between Folkestone and Maidstone. Once again there may be other factors influencing this distribution: geology, topography, agricultural land use or heavy woodland cover may all have had an impact. Even so, the bias is demonstrable, with 56 out of the 80 known Beaker findspots – that is 70 per cent - east of a line drawn from Whitstable to Hythe. The remainder are close to major rivers, such as the Thames and the Medway, or short distances from the northern

coastline. This distribution pattern is similar to that of the much more numerous Bronze Age circular monuments. In their case, studies have concluded that the north-east Kent bias is an historical reality (Field 1998, 314; Perkins 1999), but evidence compiled for this research does not entirely support that contention (see Section 7.2). It is, therefore, possible that a more even spread will become manifest as additional Beaker and barrow finds are made.

So far, this discussion has been conducted on the basis that Beakers represent more than just the adoption of a cult package and may originally have been introduced into north-western Europe by migrants or itinerant craftspeople. In part, the rationale for this comes from the recently discovered Amesbury Archer burial and also from the perceived connection to the spread of metalworking technology. The appearance of Beakers in the archaeological record coincides with a time when archaeologically visible funerary rites were changing. In particular, the single grave tradition was eclipsing communal burials (Thomas 1999, 151-162).

It therefore seemed apposite to separate Beaker burials from the other research data on funerary and ritual activities in order that depositional differences – beyond the obvious – could be comparatively analyzed. This strategy was justified when an apparently previously unnoticed distinction presented itself: a subtle but clear difference in the average orientation of bodies in the grave (Section 5.5). The data shows that Beaker crouched inhumations tended to be aligned north/south and mostly facing towards the east, whilst non-Beaker burials were orientated north-west/south-east and facing south. Further research using a larger dataset is needed to confirm these findings, but it may be indicative of a difference in the Beaker cosmology compared to that of the other contemporary rites.

## CHAPTER 6 LATE NEOLITHIC AND EARLY BRONZE AGE RITES

### 6.1 INTRODUCTION

#### 6.1.1 A rich legacy

The tradition of burying people within, or close to, circular mounds and ring ditches, whether by inhumation or cremation, began its ascendance in north-western Europe around the middle of the third millennium BC and peaked approximately 700 years later. This enduring practice has left a legacy that in numbers alone almost certainly exceeds any other form of prehistoric monument. It is therefore not surprising that after more than a century of antiquarian and archaeological attention there exists, even within the confines of the research area, a considerable volume of excavation data. Consequently, it has been necessary to filter this and divide the remainder into specific categories.

#### 6.1.2 Data selection criteria

A quality grading system for data extracted from excavations was laid out in Section 3.4. Accordingly, monuments with burials and secure radiometric dates are considered to be the most useful and will form the backbone of this chapter (Table 6.1), supplemented when necessary by those with relative dates. Monuments that cannot be dated are placed in the third category and, along with those for which there is little or no available data, will be referred to only when they can contribute to the analysis of collective characteristics, such as physical features or location.

Data relating to Beaker burials has been extracted in order that it can be examined in detail (see Chapter 5). Although, due to the habitual presence of this type of pottery vessel within monuments that also contain other types of burials, there is some crossover.

	Kent (zone 1)	Flanders (zone 2)	NE France (zone 3)
Quality grade 1	4	2	4

Table 6.1: Excavated monuments capable of providing the highest-grade data, divided by study area.

Accepting these qualifications, the excavation datasets are scrutinized below. Firstly, the evidence is grouped and summarized by study zone. Comparative analysis then takes place under the following headings:

1. Monuments containing inhumations and/or cremations;
2. Monuments where unequivocal burial evidence does not survive.

## 6.2 DATASET SUMMARIES

### 6.2.1 Zone 1 – Kent

Excavations in Kent have confirmed the presence of 115 circular monuments interpreted as dating to the third and second millennium BC (Fig 6.1) with more than 300 associated inhumations and cremations. Of the radiocarbon dates obtained from these, 24 fall earlier than 1500 BC (Chapter 4, Fig 4.6). However, only eight, from four excavations, relate to burials other than Beaker and even those – with one exception - are within monuments that either contain Beaker graves or have some other Beaker affiliation (Table 6.2 and Fig 6.2). Another 65 inhumation burials can be typologically, or by association, dated prior to 1500 BC (Appendix C), and once again many of these were discovered in monuments also containing Beaker burials. Additionally up to 65 cremations of varying types may also broadly relate to the research period.

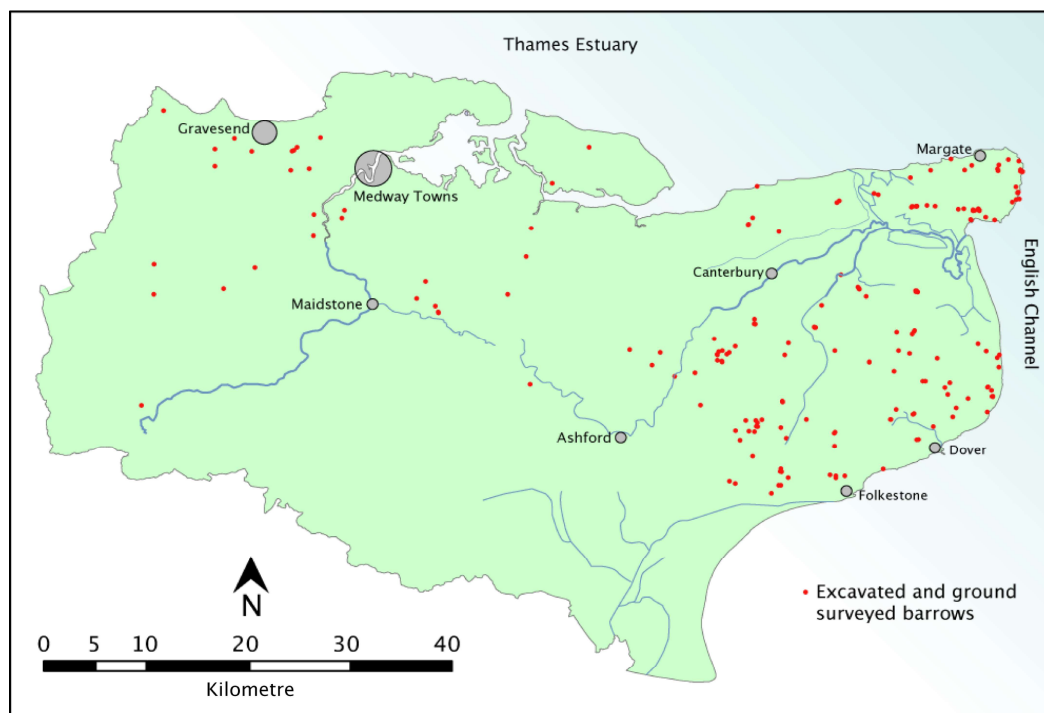


Fig 6.1: Map of Kent showing the distribution of monuments confirmed through excavation as Late Neolithic or Early Bronze Age barrows. Created in Arcview 9.2 and Adobe Illustrator by the author from data supplied by the Trust for Thanet Archaeology, extracted from published sources and (Edis & Home 1989; Smythe 2007).



Name and place	Summary description	Absolute (RC) dating	Primary reference
Haynes Farm, Eythorne, nr Dover	Partial excavation in 1982 revealed the presence of a multiple ring ditched monument. The outer – penannular - circuit measured 20m-diameter, the middle ditch was 11.5m-diameter and an inner ditch seen in aerial photographs was not excavated. Assuming it did exist, a mound, presumably raised during a later phase, had covered it. The northern segment of the middle ditch had an oval-shaped grave, containing a young adult male, dug into it. The majority of the monument, including the whole of the central area was not excavated and it is therefore possible that other graves remain undiscovered.	Inhumation: 3460±60 BP (Beta 129270)	(Dunning and Ashbee 1960; Parfitt 2004)
South Dumpton Down, Broadstairs	A single nine metre diameter ring ditch containing six crouched inhumations in three intercutting pits, and the burial of a child under four-years in age. A Beaker and a food vessel were found in the graves. The monument was eventually ‘closed’ by the construction of a flint capping.	Burial 1: 3630±45 (BM 2975);  Burial 3: 3560±50 (BM-2940);  Burial 5: 3520±40 (BM-2864)	(Perkins 1994)
White Caps, Whitfield-Eastry bypass, nr Dover	This circular monument presented a complex morphology. It probably began as a single ring ditch built in the latter part of the third millennium BC. One interpretation suggests it later gained an outer ditch, but this appearance may actually be the result of elaborate recuts. 11 burials were located within its confines, three of which were cremations. The only adult inhumation was a male in a wooden lined grave. There were six juvenile inhumations. 22 Beaker sherds were recovered from various fills.	Child skeleton 533: 3690±60 (141269);  Child skeleton 566: 3460±60 (141268);  Adult male 729: 3460±60 (Beta 141270)	Unpublished Canterbury Archaeological Trust archive and (Bennett in preparation)
Castle Hill, Folkestone	Three ring ditches were located on the lower southern slope of the hill. They measured 21.5m-diameter, 17m-diameter and 15m diameter. Only one formed an unbroken circuit, One of the two westerly monuments was horseshoe-shaped and the other had a 1.25m-wide entrance facing east. It was near the centre of this ring ditch that a badly degraded crouched inhumation of woman was found. Beaker pottery sherds were recovered from the primary ditch fill. These may have eroded down from a known Beaker settlement site.	Female burial 533, ring ditch G3: 3675±65 (OxA-4807)	(Rady 1987; Hutcheson <i>et al.</i> 2001; Hutcheson <i>et al.</i> <i>Unpublished-b</i> )

Table 6.2: A list of excavations in Kent where burials, other than Beaker, have returned radiocarbon dates that fall within the research chronology.

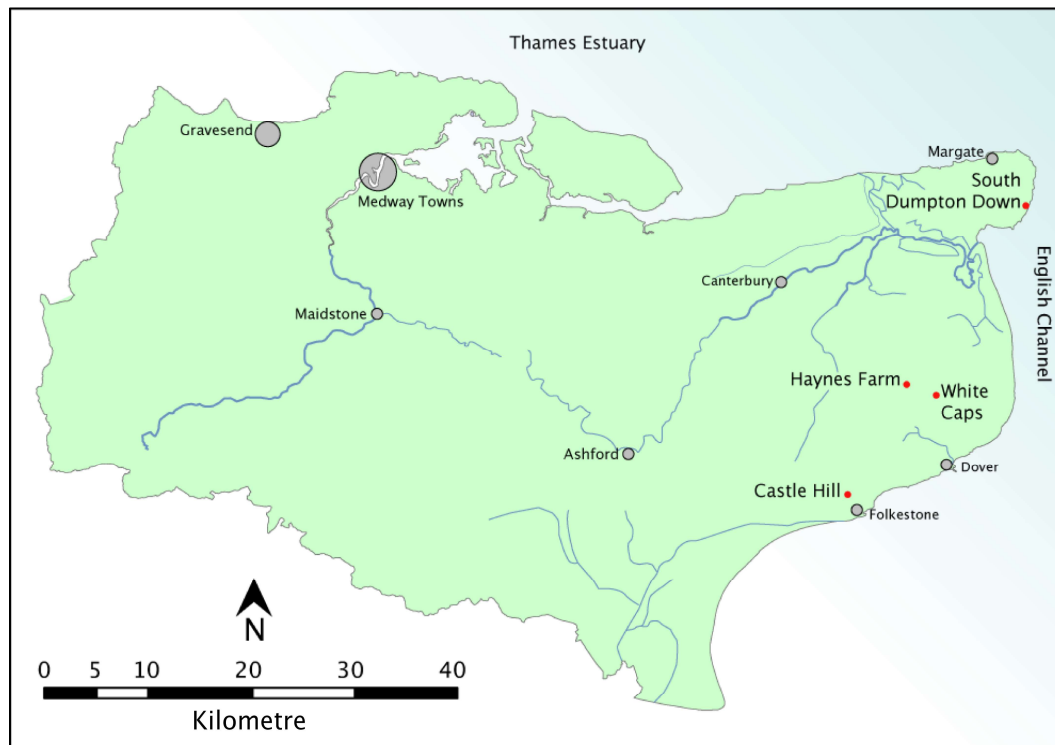


Fig 6.2: A map of Kent showing the locations of the four monuments from Table 6.2, which have provided radiocarbon dates earlier than 1500 BC for eight non-Beaker burials. Drawn by the author.

### 6.2.2 Zone 2 – Flanders

More than 100 circular monuments in Flanders have been subjected to some form of ground surveying or archaeological intervention, but in the majority of cases this simply consisted of auguring – carried out to recover organic material for analysis and to confirm that the circular crop and soil marks seen in aerial photographs were man-made. Approximately one third of this total has actually been excavated and, of those, most were small scale and partial in nature. Consequently, the number of monuments confirmed by excavation compared to those known through aerial surveying is small at less than 3.5 per cent of the total (Fig 6.3). To some extent this because the unfavourable environmental conditions in Flanders causes preservation of archaeological material to be extremely poor, restricting the quality and type of data that can be recovered and making full excavations of limited value.

A dozen excavations<sup>22</sup> have yielded data useful to this study (Table 6.3). However, the degree to which these have been published varies; with most being limited to summary accounts. Despite this, important aspects of the funerary

<sup>22</sup> The number of ring ditches is higher as some excavations uncovered more than one.

landscape in Flanders during the third and second millennium BC could be investigated because archaeologists at the Universiteit Gent made their time and their archive materials available to this study.

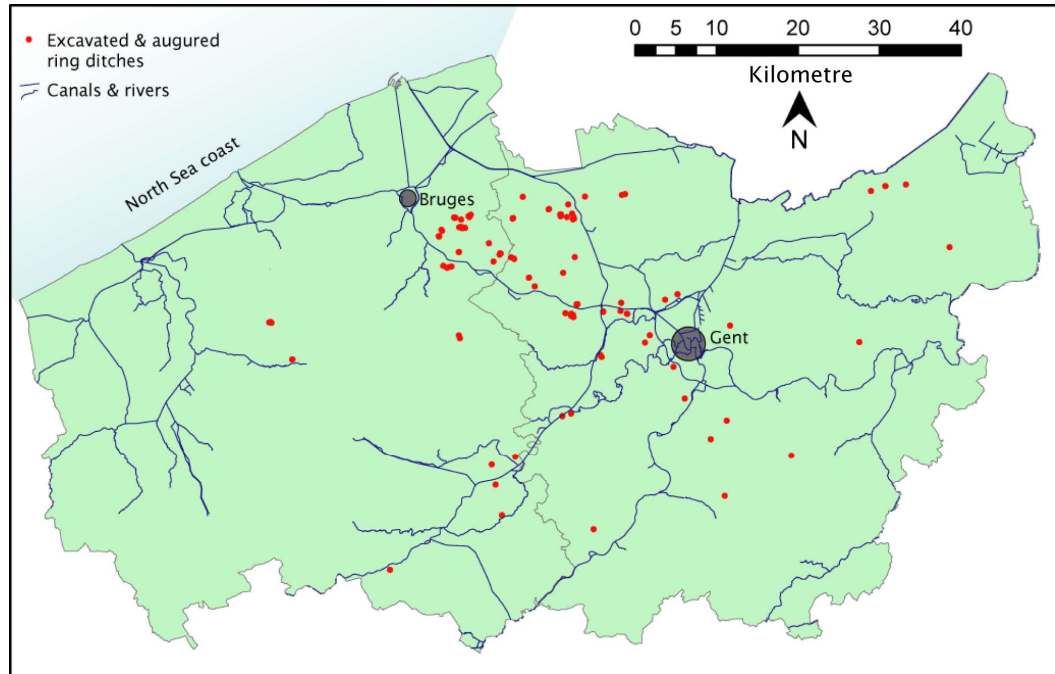


Fig 6.3: Indicative distribution map of East and West Flanders showing excavated and augured ring ditches (red dots) along with the major rivers and modern canals – many of which replaced more ancient natural watercourses. Drawn by the author from data supplied by the Universiteit Gent.

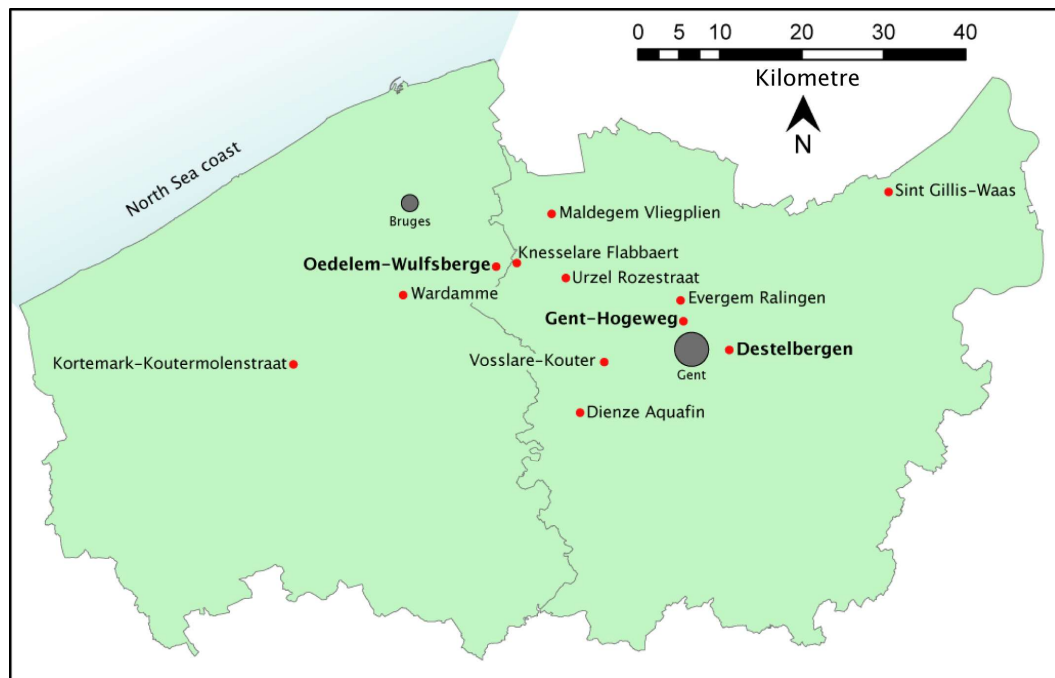


Fig 6.4: Map of East and West Flanders showing the locations of excavations that have yielded data examined in this chapter. Bold denotes sites where evidence of human burial – other than Beaker graves – may be present.

Name and place	Summary description	Absolute (RC) dating	Primary reference
<b>Gent Hogeweg</b>	Partial excavation of a multiple ditched monument - the largest and most complex of three. Charcoal deposit, interpreted as a cremation spread, found in a pit dug between outer two circuits.	3030±90 BP (IRPA 774)	(Raveschot <i>et al.</i> 1984)
<b>Oedelem-Wulfsberge</b>	Linear arrangement of several circular monuments. Possible cremation deposit found in single ditched Wulfsberge I. Another single ditched monument, Wulfsberge II, was also dated, as was the first of two post circle enclosures to be discovered.	3270±40 BP (KIA 14816). Oedelem Wulfsberge II, 3180±35 BP (KIA14841). Oedelem-Wulfsberge enclos à poteux, 3310±50 BP (KIA14840)	(Cherrette and Bourgeois 2003)
<b>Destelbergen</b>	Four post holes representing a rectangular wooden structure, interpreted as a mortuary house at centre a single ditched monument.	No	(De Laet <i>et al.</i> 1986b)
Evergem Ralingen/Molenhoek	Molenhoek was a recut double-ditched monument showing asymmetry suggesting its mound 'migrated' due to weathering – see Ursel Rozestraat. It could not be dated, but another double ring ditch close by at Ralingen yielded charcoal from its ditch base.	3480±60 BP (IRPA 526)	(Semey <i>et al.</i> 1983)
Knesselare Flabbaert	A single ring ditch. A radiocarbon dated from charcoaled wood taken from lowest ditch silt considered too old to be correct, casting doubt on date from an upper ditch fill.	5420±60 BP (IRPA 1091), 4340±120 BP (UtC 2750)	(Bourgeois and Rondelez 1992)
Dienze Aquafin	This was a rescue excavation that revealed a single asymmetrical ring ditch built on high ground between the ancient confluence of the rivers Lys and Kale. Its position in the landscape is considered significant.	4450±35 BP (KIA 11210) 3740±50 BP (UtC 9929) 3730±40 BP (UrC 9930)	(De Clercq and Van Strydonck 2002)
Kortemark-Koutermolenstraat	A ring ditch incorporating a 'redundant' inner circuit provides evidence of phased remodelling, including construction of a mound.	3030±90 BP (UtC 2733) 3030±40 BP (IRPA 1033)	(Bourgeois and Meganck 1993)
Vosslare-Kouter	One of only two known Flemish examples of a penannular ring ditch. It is also double-ditched, but unusually there is no berm or flat partition between the ditches.	3320±70 BP (UtC 2019)	(Bourgeois and De Mulder 1991)
Maldegem/Adegem Vliegplein	Double ring ditched monument cutting a smaller single ditched monument or annex.	3300±70 BP (UtC 3033)	(Ampe <i>et al.</i> 1996b, 73-76; Bourgeois <i>et al.</i> 1992)
Waardamme	Linear arrangement of monuments, including two with double-ditches and one with an annex.	No	(Demeyere and Bourgeois 2005)
Ursel Rozestraat	Double-ditched monument. The inner ditch covered by a mound which later 'migrated', requiring the outer ditch to be recut, creating an asymmetrical circuit.	3620±60 BP (IRPA 818)	(Bourgeois <i>et al.</i> 1989b)
Sint-Gillis-Waas	A single ring ditch incorporating a post circle. The precise spatial and chronological relationship between the two is unclear.	3370±50 BP (IRPA 1069) 3350±50 BP (IRPA 1070)	(Bourgeois 1990)

Table 6.3: A list of selected excavations from Flanders. Those in **bold** provide the best available evidence of human burials.

### 6.2.3 Zone 3 - North-eastern France

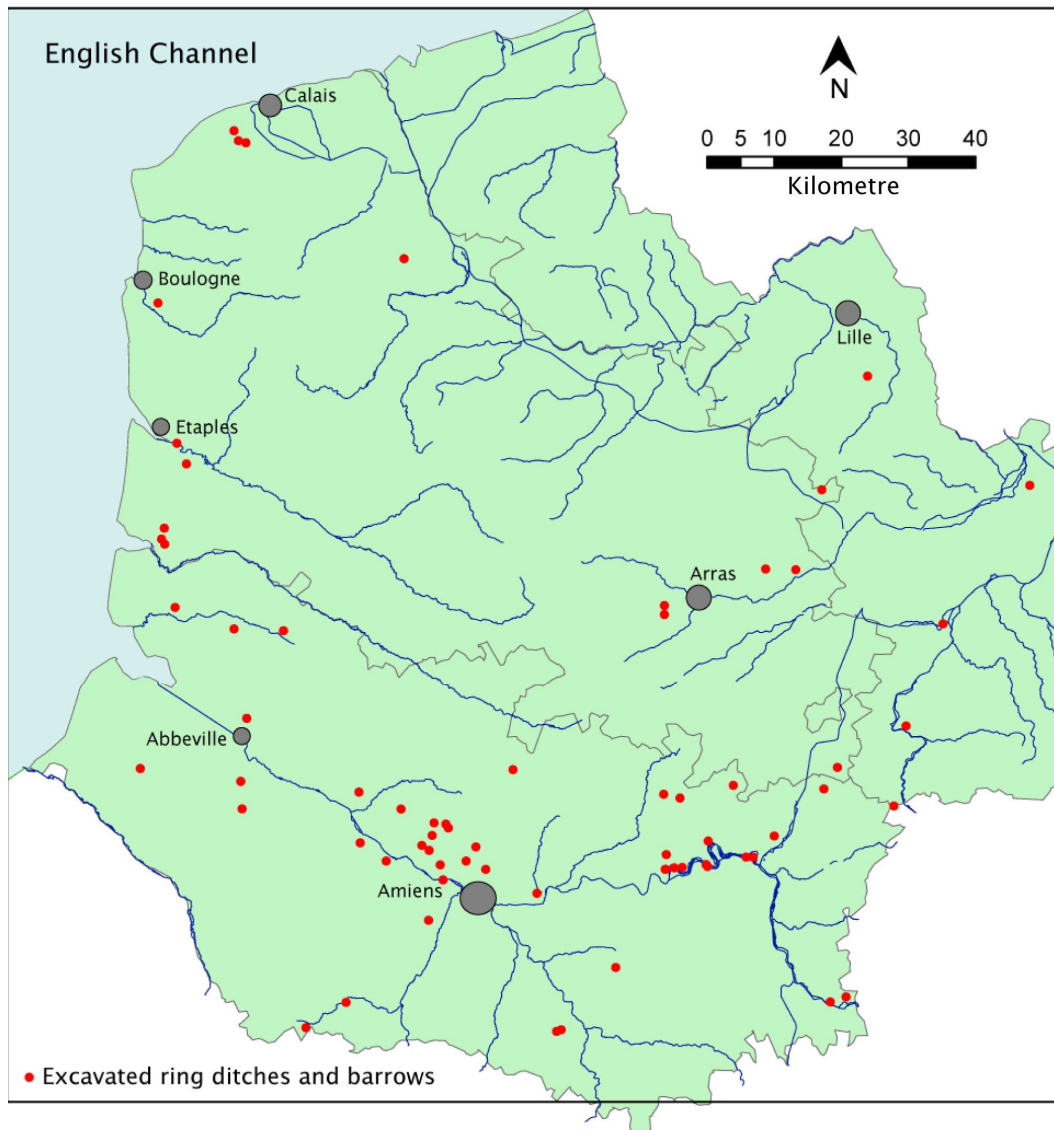


Fig 5.5: (Above) Indicative distribution map of north-eastern France showing excavated ring ditches (red dots) along with the major rivers and towns. Drawn by the author from data supplied by INRAP.

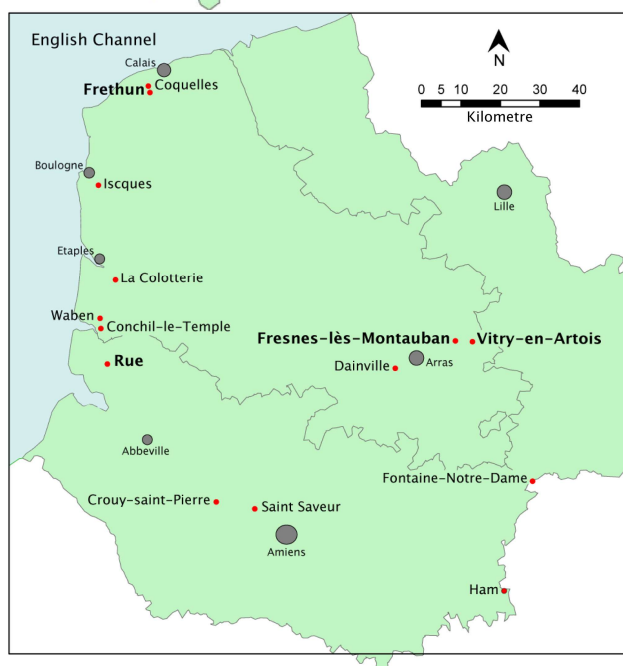


Fig 5.6: (Left) Excavated sites in north-eastern France that have yielded data examined in this chapter. **Bold** denotes sites where evidence of human burial – other than Beaker graves – has been radiocarbon dated earlier than 1500 cal BC.

Name and place	Summary description	Absolute (RC) dating	Primary reference
<b>Le Motel, Fresnes-lès-Montauban</b>	Five ring ditches: M1 contained a crouched female inhumation and inverted urn cremation; M2 an unurned cremation; M3 a crouched male inhumation and cremation; M4 an unurned cremation and M5 a female inhumation.	M1 inhumation 3380±50 BP (Ly 5336). M3 inhumation 3355 ±60 BP (Ly 5335) M5 inhumation 3835±145 BP (Ly 5334)	(Desfossés and Masson 2000)
<b>Les Rietz, Frethun</b>	Crouched inhumation near centre of triple ring ditched monument and an urned cremation in inner ditch.	Inhumation 3310±60 BP (GIF 8928)	(Bostyn <i>et al.</i> 2000b)
<b>Le Chemin des Morts, Rue</b>	Two ring ditches, one containing an inverted urned cremation close to the centre.	Inverted urn cremation 3295±40 BP (GrA 14510)	(Bucheze and Talon 2005)
<b>Les Colombiers, Vitry-en-Artois</b>	Three cremation, one in an inverted urn, at the centre of a single ring ditch.	Inverted urn cremation 3220±60 BP (GIF 7258)	(Azagury and Demolon 1990)
R.N. 1, Coquelles	Seven monuments: Two cremations in M1; Female crouched inhumation and two cremations in ditch of M10; Human bone in ditch of M6.	Human bone from crouched burial 3095±40 BP (GIF 8927)	(Bostyn <i>et al.</i> 2000a; Le Goff and Guichard 2005)
Le Sémaphore, Waben	Inhumation cutting inner edge of ditch and cremation in the ditch. Central cut may indicate a primary burial.	3040±50 BP (Ly 8149) from charcoal scatter. 2650±50 BP (Ly 8148) charcoal in upper layer of ditch filling	(Feray <i>et al.</i> 2000)
Le Frénésie, Conchil-le-Temple	Seven ring ditches in all. Monument C had nine unurned cremations in and around it.	2x Carbonized bone, 2790±100 BP (GIF 4811) and 2910±100 BP (GIF 4133)	(Piningre 1990)
Les Biefs, and la Neuvilleuil, Dainville	Base of a small urn or 'pygmy' cup found in ditch fill of Les Biefs. Central cremation in single ring at la Neuvilleuil.	No	(Gaillard and Jacques 2000)
Les Dix-huit, Fontaine-Notre-Dame	Double ditched monument with central pit containing charcoal fragments and a plain urn.	No	(Gaillard and Gustiaux 2004)
Les Arguillières, Frethun	A double ring ditch with a penannular inner circuit. Two cremations found in separate pits inside the ditch 'entrance'.	No	(Marechel 2000; Le Goff and Guichard 2005)
Herquelingue, Iscques	Two single ring ditches, one containing two central cremation pits.	No	(Anon 1999)
La Fontaine aux Linottes, La Colotterie	Two single ring ditches, one with a small pit containing sherds of a pot that is said to have similarities to some EBA British food vessel types.	No	(Desfossés and Feray 2000)
Les Quatres, Crouy-saint-Pierre	Central cremation in a biconical horseshoe handled urn.	No	(Bréart and Fagnart 1982)
Bassin Saint-Nicolas, Ham	Crouched inhumation and a cremation inside a single ring with two breaks, one in the north and other to the west.	No	(Feray and Herbert 1998)
Le Moulin de Pierre, Saint Saveur	Three unurned cremations inside a single ring ditch.	No	(Baray 1998)

Table 6.4: List of known circular monuments in north-eastern France that have yielded direct evidence of human burials. Bold type denotes those that returned dates categorically earlier than 1500 cal BC.

Excavations in north-eastern France have confirmed the presence of 126 circular monuments, many of which were discovered grouped together (Fig 6.5). Details

on 28 sites have been published in an accessible form<sup>23</sup>. However, as in Flanders, many of these are interim or summary reports. Nevertheless, they catalogue the discovery of human remains, or evidence of burials in the form of grave cuts and cinerary urns, from 15 excavations, which together uncovered 33 circular monuments (Table 6.4, Fig 6.6). There are no reported discoveries of flat graves dating to the period under examination. A total of 19 radiocarbon dates were obtained from ten sites (see Chapter 4, Fig 4.5). Eleven samples came from human remains<sup>24</sup>; seven from bone and four from cremation deposits. Only six of these definitively fall within the chronological parameters of this research. Of those, two dates were obtained from cremations at Le Chemin des Morts, Rue and Les Colombiers, Vitry-en-Artois. The other four were from crouched inhumations; one found inside a monument with multiple concentric ditch circuits, at Les Rietz, Frethun, and the remaining three from a single excavation at Le Motel, Fresnes-lès-Montauban.

### **6.3 MONUMENTS CONTAINING HUMAN REMAINS**

#### **6.3.1 Zone 1 - Kent**

##### **Haynes Farm**

The circular monument at Haynes Farm, Eythorne, near Dover, was partially excavated by the Dover Archaeology Group in 1982 after one of its members noticed a slight mound on a ridge of chalk downland (Parfitt 2004). On investigation, this proved to be the undisturbed core of a central barrow mound. In order to preserve any *in situ* archaeology the group decided to leave this area untouched, choosing instead to concentrate on the outer ditch circuits. It was within one of these that a crouched inhumation was discovered. It provided a radiocarbon date of 3460±60 BP (Beta 129270). This makes Haynes Farm the only circular monument in Kent dated earlier than 1500 cal BC that does not also have Beaker associations. However, as this was a partial excavation – and particularly because the central enclosure was untouched - it is possible that such evidence remains to be found. In any event, on the basis of its morphology and the discovery of sherds of Neolithic Grooved Ware pottery, the monument is

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<sup>23</sup> Data gathering ended in September 2008. Figures supplied by INRAP, the state archaeology service.

<sup>24</sup> Five carbonized wood deposits from ditch fills at le Chemin de Montreuil, Rue; Mont Bagarre, Etaples and Le Frénésie, Conchil-le-Temple were also radiocarbon dated prior to 1500 BC.

considered to have a long and complex use life. In plan it has three concentric ring ditches but is unlikely ever to have been seen during its active years in this form, as each circuit appears to represent a separate developmental phase. The excavator did not interpret the construction sequence but, on the available evidence, its most likely progression is proposed as follows (Fig 6.8):

Phase 1:

Although unexcavated, the inner ring ditch was located under the mound and must, therefore, stratigraphically represent the earliest construction event.

Phase 2:

This inner circuit was buried when the substantial mound was raised. It was apparently delimited by the middle ditch and possibly by a wooden revetment on the north-western side - as suggested by post-holes found in trenches 5, 6 and 10. It is of note that the middle ditch deviates at this point, quite possibly in order to respect the post-holes, demonstrating that they not only pre-date it but, more importantly, represent an essential and enduring feature of the monument. As a consequence the 11.5m-diameter middle ditch forms an imperfect circle. It was also penannular, but at 0.25m the south-facing gap is too narrow to be an entrance or causeway in a conventional sense. The mound later eroded into the middle ditch and eventually spread to reach an average diameter of 16.5m.

Phase 2a:

Excavation revealed 32 stake holes measuring a maximum of 0.18m-diameter and 0.27m in depth were cut into the natural chalk on the outside of the middle ditch. These holes may represent the remnants of a wooden fence or a post circle<sup>25</sup>, although the partial excavation means that it is not possible to determine whether they extend right around the monument.

Phase 3:

Some time after the steep-sided and flat bottomed middle ditch, which was between 1.5m-2m wide and 0.75m deep, had naturally silted up, a grave containing a crouched inhumation was dug into the fill of its north-eastern sector (Fig 6.10). The burial was of a young man aged in his early 20s at

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<sup>25</sup> As no dating or stratigraphic evidence relates these post-holes to any of the monument's other features their place in the construction sequence is a matter of conjecture.



death. He was 1.66m tall (5ft 6in). His NW-SE orientated oval grave measured 1.6m x 1.2m and was 0.35m deep when excavated. He was laid on his right side with head to the south-east, facing north. A sample of bone returned a radiocarbon date of 3460±60 BP (Beta 129270). The grave's position is indicative of it being a secondary burial.

Phase 4:

The outer ditch was most likely the monument's final modification. It measured 20m-diameter and had a seven-metre-wide gap in the circuit. The discovery of a securely sealed charcoaled wood deposit on the base of this ditch provided a radiocarbon date of 3400±70 BP (Beta 106448), placing its construction in the first half of the second millennium BC and making it broadly concurrent with the crouched inhumation. As this burial was cut into the silted up middle ditch it suggests that the outer circuit was a later addition.

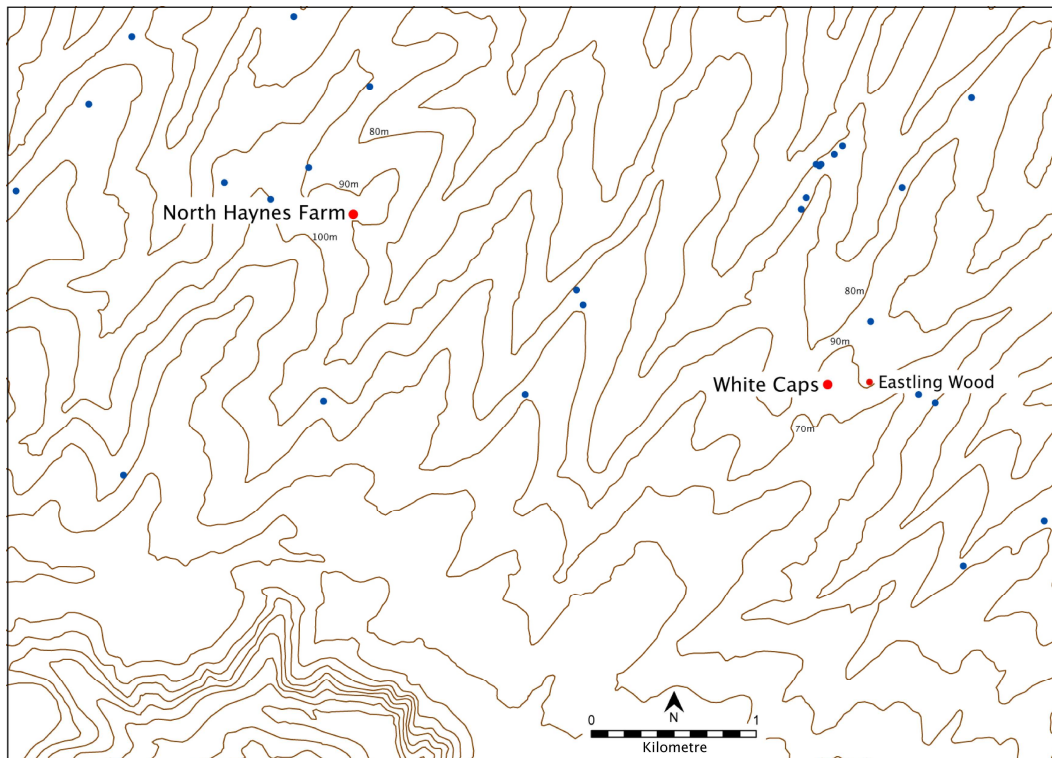


Fig 6.7: The topographic locations of the monuments at Haynes Farm and White Caps, along with all the known excavated (red) and aeryally detected (blue) monuments in the immediate area. Map created by the author in Arcview 9.2 and Adobe Illustrator from Ordnance Survey Mastermap data.

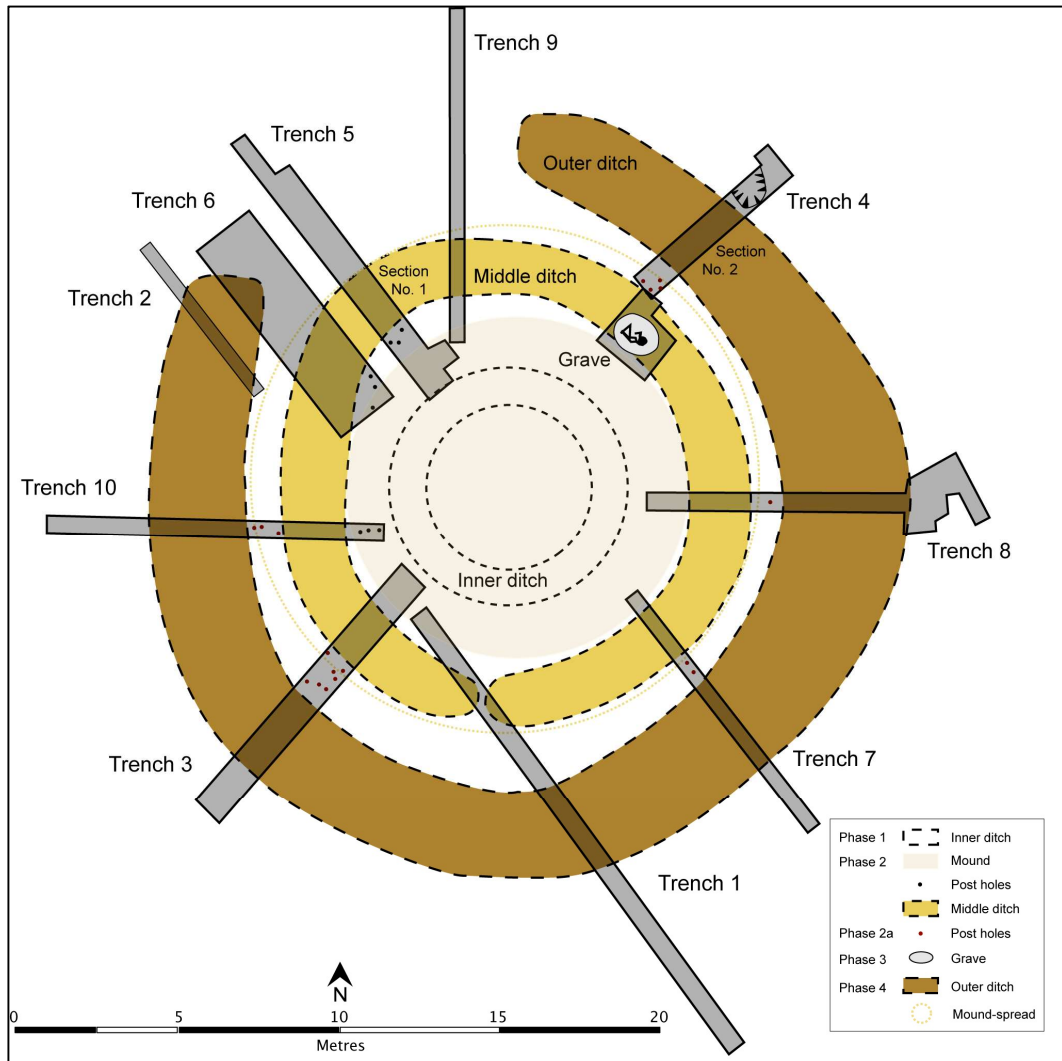


Fig 6.8: An excavation plan of the circular monument at Haynes Farm, Eythorne near Dover, showing the position of the secondary burial and the proposed phasing. Redrawn, annotated and computer-enhanced by the author (after Parfitt 2004, fig 1).

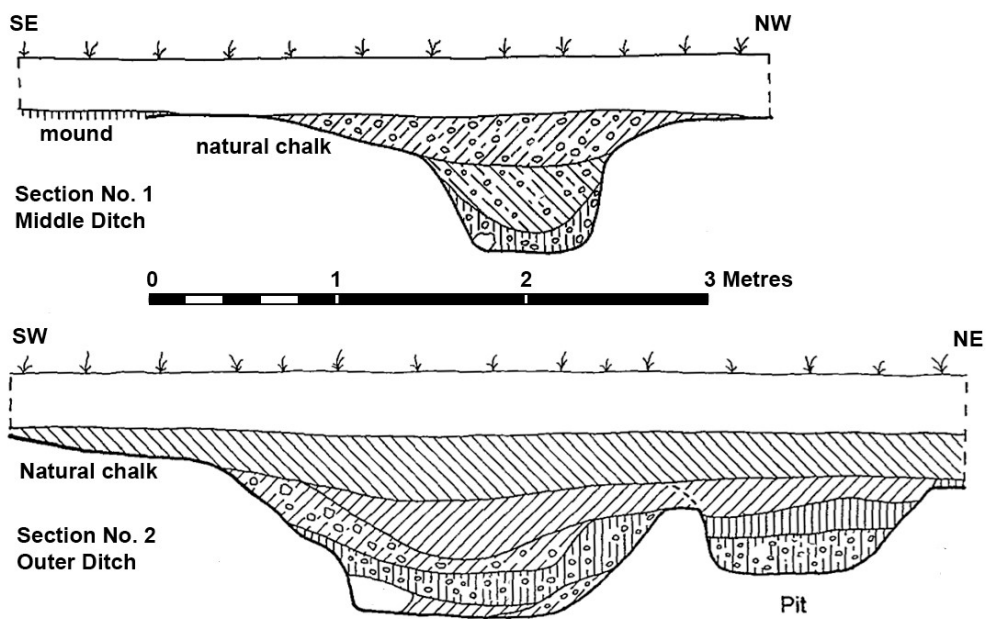


Fig 6.9: Section drawings from the Middle and Outer ditches of the Haynes Farm monument (after Parfitt 2004, figs 2 and 4).

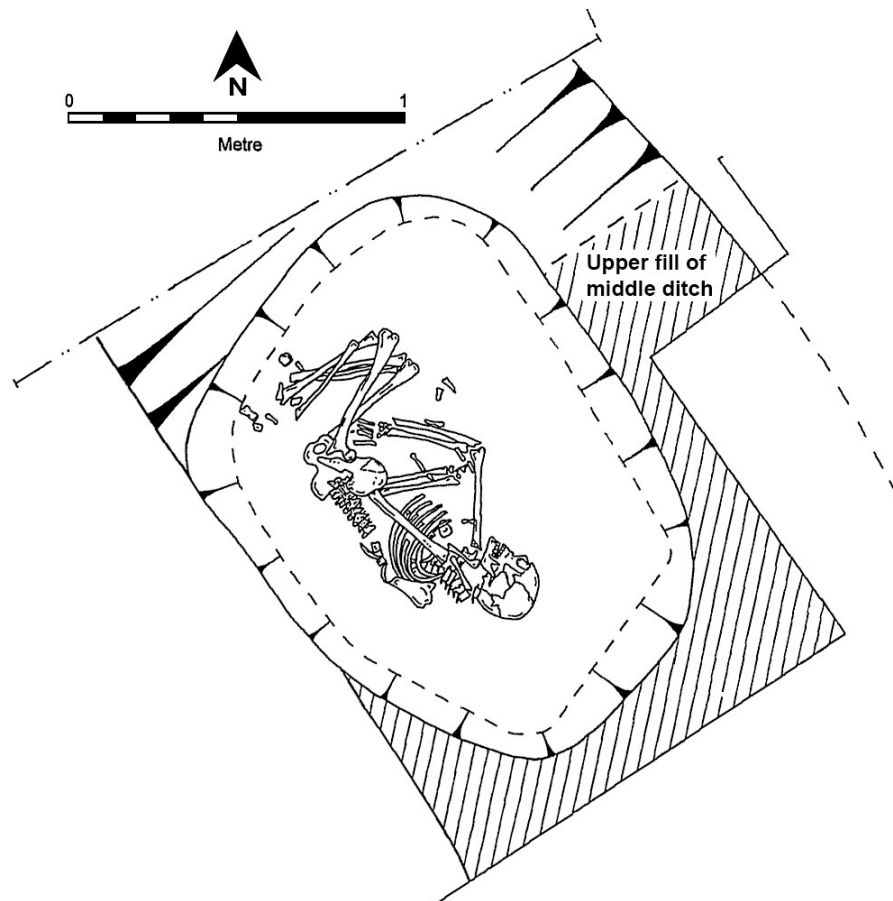


Fig 6.10: A plan of the Haynes Farm crouched inhumation (after Parfitt 2004, fig 3).

### **South Dumpton Down**

A circular monument with a particularly high number of surviving burials was discovered at South Dumpton Down, Thanet in 1992. A total of six crouched adult inhumations and one infant inhumation were found at the centre of a small single, segmented, ring ditch that had a maximum diameter of nine metres (Fig 6.20). There was no upstanding mound but tip lines on the inner edge of the ditch fill indicated that it had once been present. At the centre of the enclosure were three interlocking pits containing seven crouched-left burials, one with a Beaker (B1-B7) (Perkins 1999, 72).

The high body count and the nature of the depositions – in particular the fact that a crouched inhumation accompanied by a Food Vessel was apparently earlier than the Beaker burial - prompted the excavator to declare that the monument had an affiliation to a tradition mostly attested to in the Yorkshire Wolds, whereby multiple burials took place systematically over extended periods of time (Mizoguchi 1993; Perkins 1994, 6; Bradley 2007, 162). His conjectured

chronology begins with the digging of the ditch in 2135 cal BC and ends exactly 160 years later. However, the radiocarbon dates on which he based this (Chapter 4, Fig 4.6 and Table 4.3) cannot support such a precise interpretation. Furthermore, the depositional sequence he describes was established by arranging the burials in order according to the depth at which they were found – the deepest being the earliest. This, combined with the radiocarbon dates, prompted him to propose a four-phase burial sequence (Fig 6.13). Re-analysis for the purposes of this research confirms that stratigraphically the primary inhumation could have been that of B1 - a crouched-left older man, head to the north, facing east - as suggested by the excavator. However, it is contended that B6, a young man in his mid 20s, is just as likely to be the monument's first occupant. He was almost certainly the one accompanied by the Beaker and may also have been buried with the infant B4 - whose remains were located close to where the young man's arms were prior to their post-depositional removal (Fig 6.14).

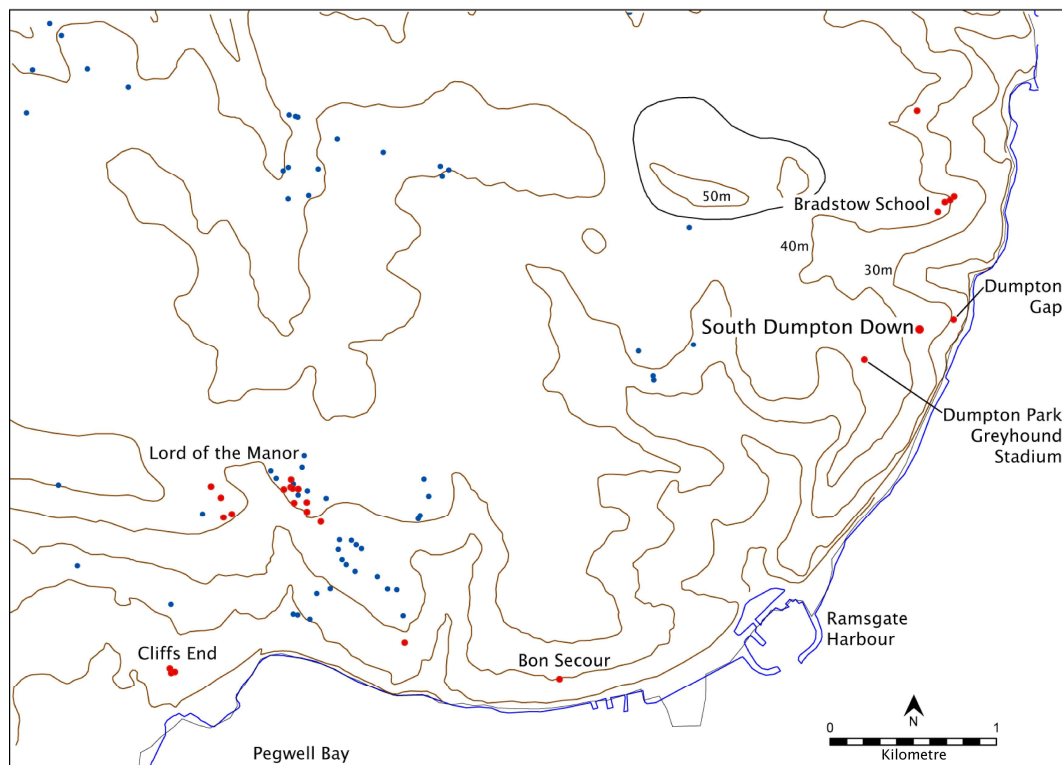


Fig 6.11: The topographic location of the South Dumpton Down monument along with all the known excavated (red) and aerially detected (blue) monuments in the surrounding area. Map created by the author in Arcview 9.2 and Adobe Illustrator from Ordnance Survey Mastermap data.

In all probability B6 and B4 represent a completely separate depositional event from the other burials. The fact that they do not rest on the base of the pit may indicate the presence of a grave lining or simply attest to post depositional disturbances. As well as the arms, the torso and head of B6 were missing, which

seems to imply that the body did not rest in peace. Of course, it could have been removed before burial, but is more likely to have been lost when B2's grave was dug. This was a teenage boy and probably the burial that was accompanied by the Food Vessel (Fig 6.15). However, the fact that B2's skull was also missing may suggest that both corpses suffered damage simultaneously. Unfortunately, of these four burials only B1 was radiocarbon dated, to  $3630 \pm 45$  BP (BM 2975). This makes it impossible to definitively place B6 and B4 in the depositional sequence.

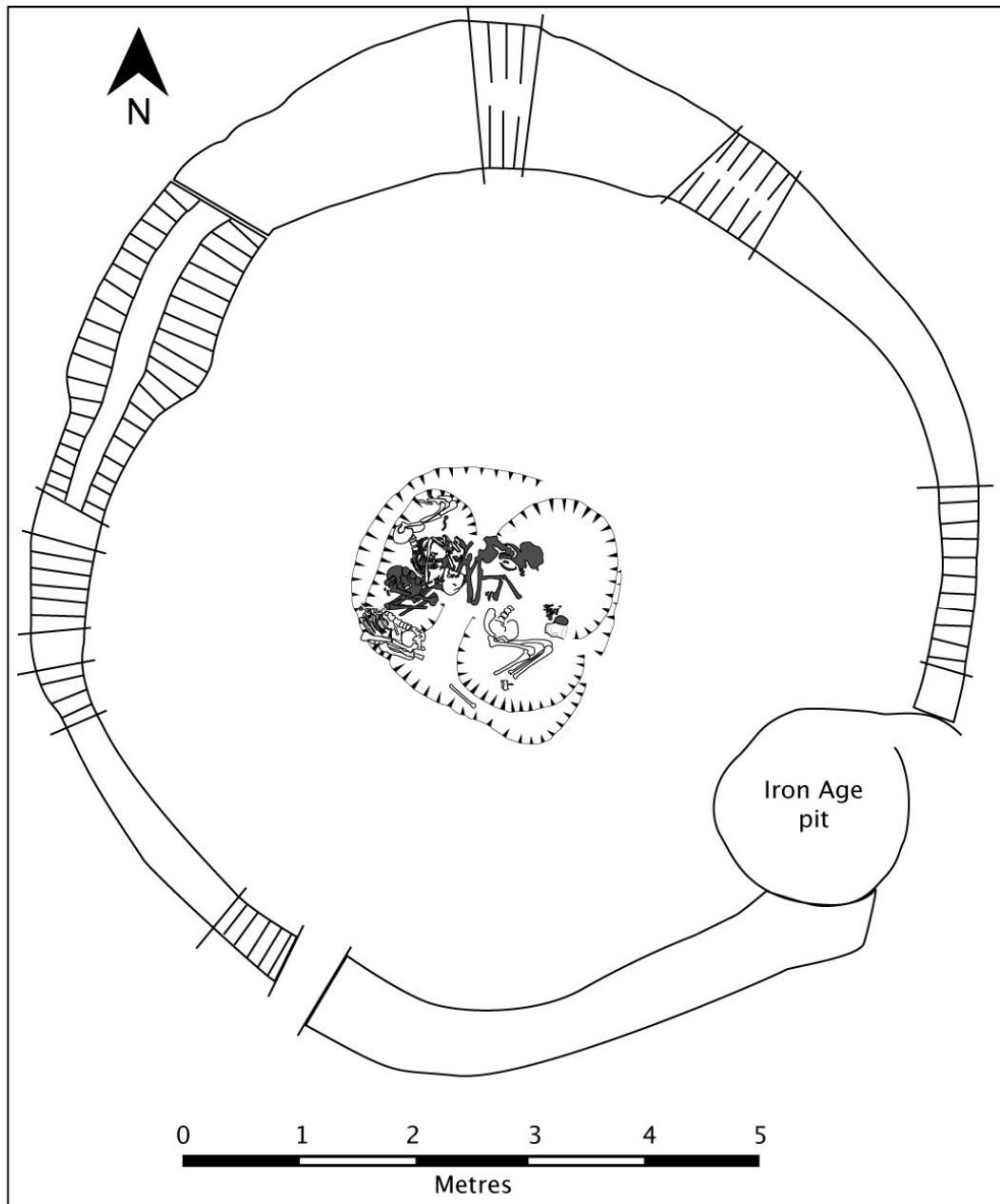


Fig 6.12: The South Dumpton Down ring ditch showing the central multiple burial pits. Redrawn by the author (after Perkins 1994, fig 5).

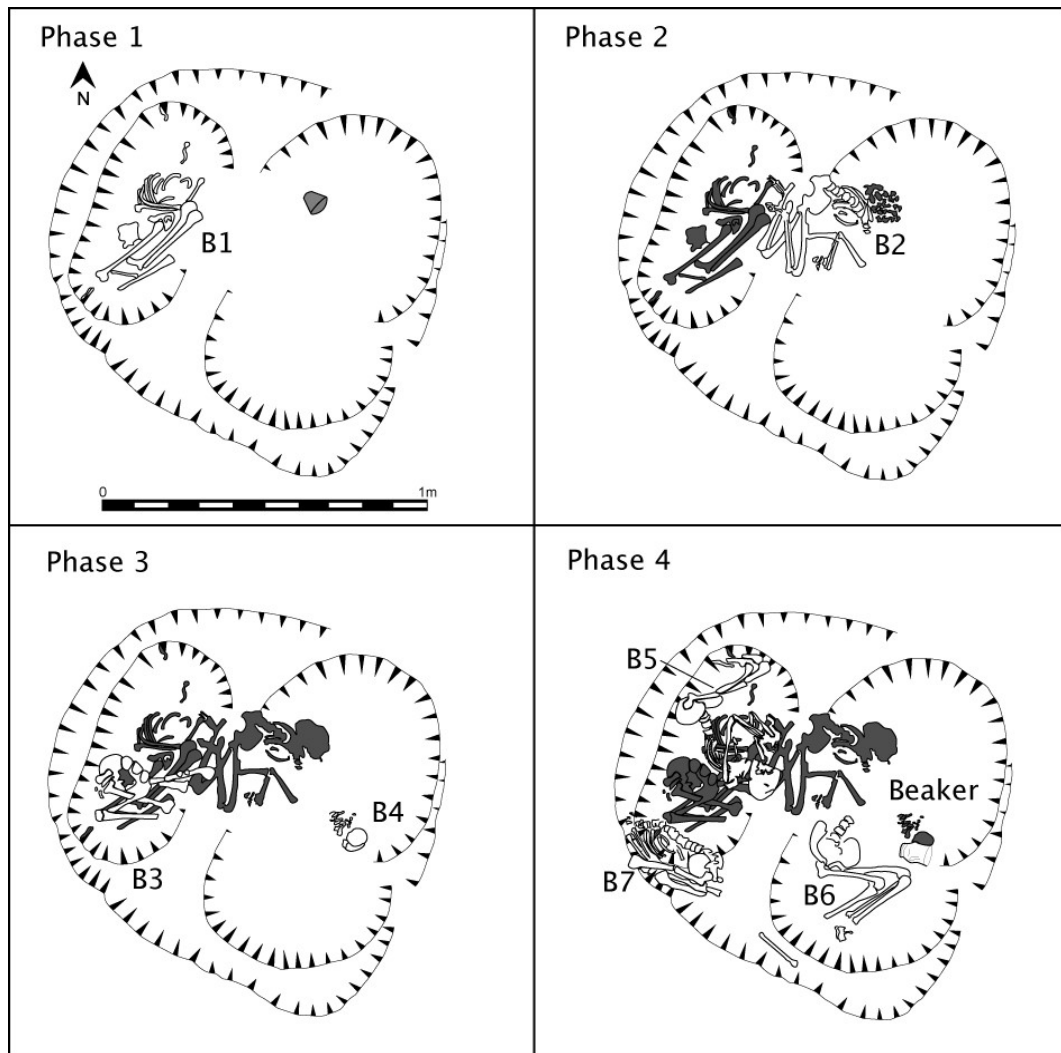


Fig 6.13: The South Dampton Down multiple burials showing the excavator's four-phase interpretation. The skeletons are labelled B1-B7. Redrawn and digitally enhanced by the author (after Perkins 1994, fig 5).

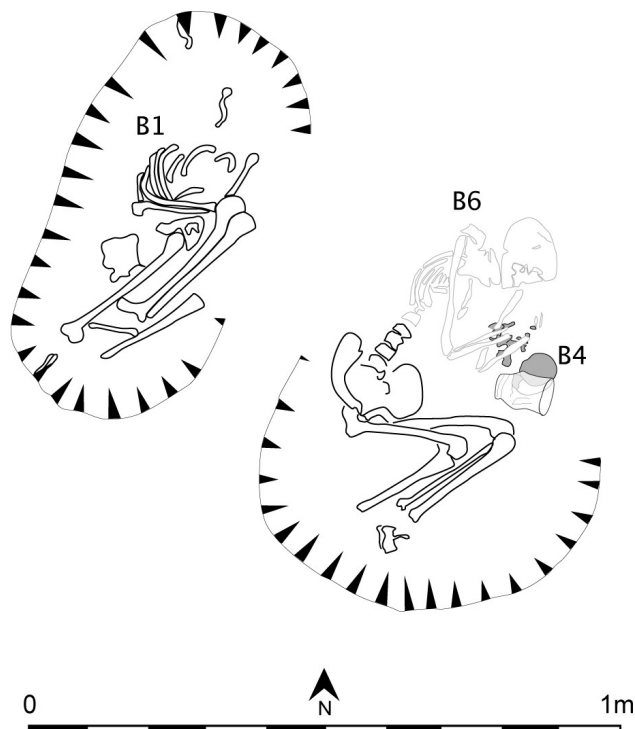


Fig 6.14: This drawing shows B6 and B4 as being buried together along with the Beaker as phase one. The upper skeleton and skull have been drawn in to illustrate the spatial connection to the infant. In this scenario B1 represents phase two - a different depositional event. These phases could be reversed, but whichever came first it is notable that both graves are on the same alignment and respect each other - unlike the subsequent burials.

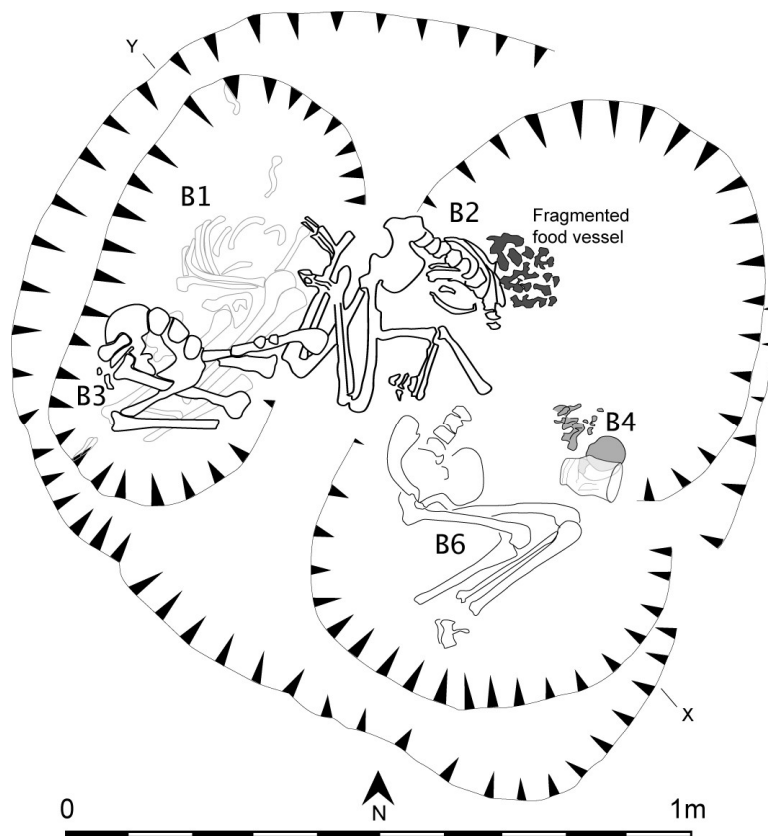


Fig 6.15: The position of B2 in this illustration suggests that its burial could have caused the damage to B6. It is also the only burial with a clear spatial connection to the food vessel. B3 is buried at the same depth and appears to be alongside B2, offering the prospect that it was contemporary.

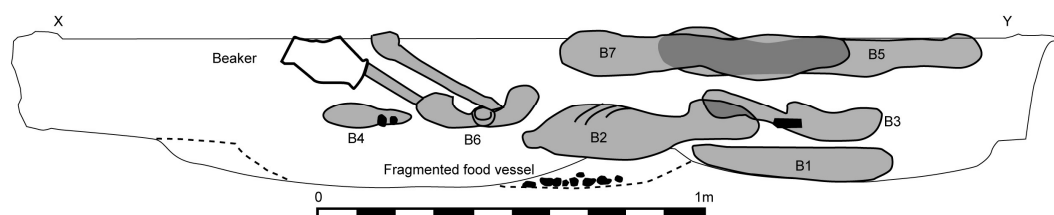


Fig 6.16: This Section drawing, marked in Fig 6.15, of the South Dumpton Down burial pits shows the superimposition of bodies, assumed by the excavator to be analogous with a chronological sequence, hence his numbering sequence. All three figures (6.22-6.24) were redrawn by the author (after Perkins 1994, fig 5).

Phases	New sequence	Perkin's sequence
1	B6 - Young man in mid-20s associated with Beaker B4 - infant	B1
2	B1 - Man aged up to 58-years-old at death - 3630±45 BP (BM 2975)	B2
3	B2 - Teenage boy 13-17-years-old, buried with Food Vessel B3 - Adult female - 3560± 50 BP (BM-2940)	B3 B4
4	B7 - Adult male B5 - Young woman aged under 25 - 3520± 40 BP (BM-2864)	B5 B6 B7

Table 6.5: A proposed alternative depositional sequence based on reassessing the available evidence and the excavator's original sequence.

Of the remaining skeletons B3, a female, was radiocarbon dated to 3560± 50 BP (BM-2940) and B5 – a young woman under 20 years of age at death – to 3520± 40 BP (BM-2864). These dates do not greatly help to resolve the depositional sequence, as they are too close in time to separate. However, having reassessed

the available evidence a plausible new burial sequence – which places the Beaker and Food Vessel depositions the other way around - presents itself as shown in Table 6.5. The final act was the placing of a cap, made of water-rolled flints, over the three pits before an earth mound was raised. This event most probably took place prior to 1740 cal BC, after which the monument appears to have remained untouched.

### **White Caps, Whitfield-Eastry bypass**

An even more complex set of issues is presented by White Caps barrow, which was excavated in the early 1990s prior to the construction of the Whitfield-Eastry bypass, near Dover. It contained at least seven crouched inhumations, six of which were children under 12-years-old at death, and four cremations, one in an inverted urn. There were also deposits of disarticulated human bone and spreads of charcoal, indicative of additional cremation deposits. The number and nature of the interments raises many questions, but it is the ditch configuration that has generated most discussion (Fig 6.17).

Indeed, publication of the excavation has been held up because of uncertainties about the construction and morphology of White Caps. The excavator is convinced that it had a unique spiral ditch arrangement. However, the phasing proposed here, in Fig 6.18, raises the possibility that White Caps was built as a single ring ditched monument which was subsequently modified, possibly influenced by the central mound spreading, or ‘migrating’ in one direction – a process that is more definitively demonstrated at Ursel Rozestraat, (Section 6.8). Natural degradation processes affect all round barrows to some extent, but mound migration is rarely cited, and is most likely only noticeable when monument’s have exceptionally long use-lives - as demonstrated in this case by a sequence of radiocarbon dates obtained from five separate crouched inhumations and a cremation. They suggest that burial rites were practiced at White Caps for up to 1500 years beginning in the final quarter of the third millennium BC – but not necessarily continuously (Chapter 4, Fig 4.6 and Table 6.6 below). In fact, pauses in use might explain the complex construction phases, as refurbishment and repair work would almost certainly have been required prior to each reactivation event.



Source	Lab ref.	Date BP	Cal Bc at 95.4%	Sample
Inhumation sk. 639	Beta 141269	3690±60	2279-1915	Bone Collagen
Skull sk. 566	Beta 141268	3490±60	1972-1644	Bone Collagen
Inhumation sk. 730	Beta 141270	3460±60	1928-1626	Bone Collagen
Inhumation sk. 623	Beta 130971	3140±60	1531-1261	Charred material
Inhumation sk. 558	Beta 130970	3090±80	1523-1122	Bone Collagen
Cremation 495	Beta 141271	2690±50	971-791	Carbonized bone

Table 6.6: Radiocarbon dates obtained from White Caps burials.

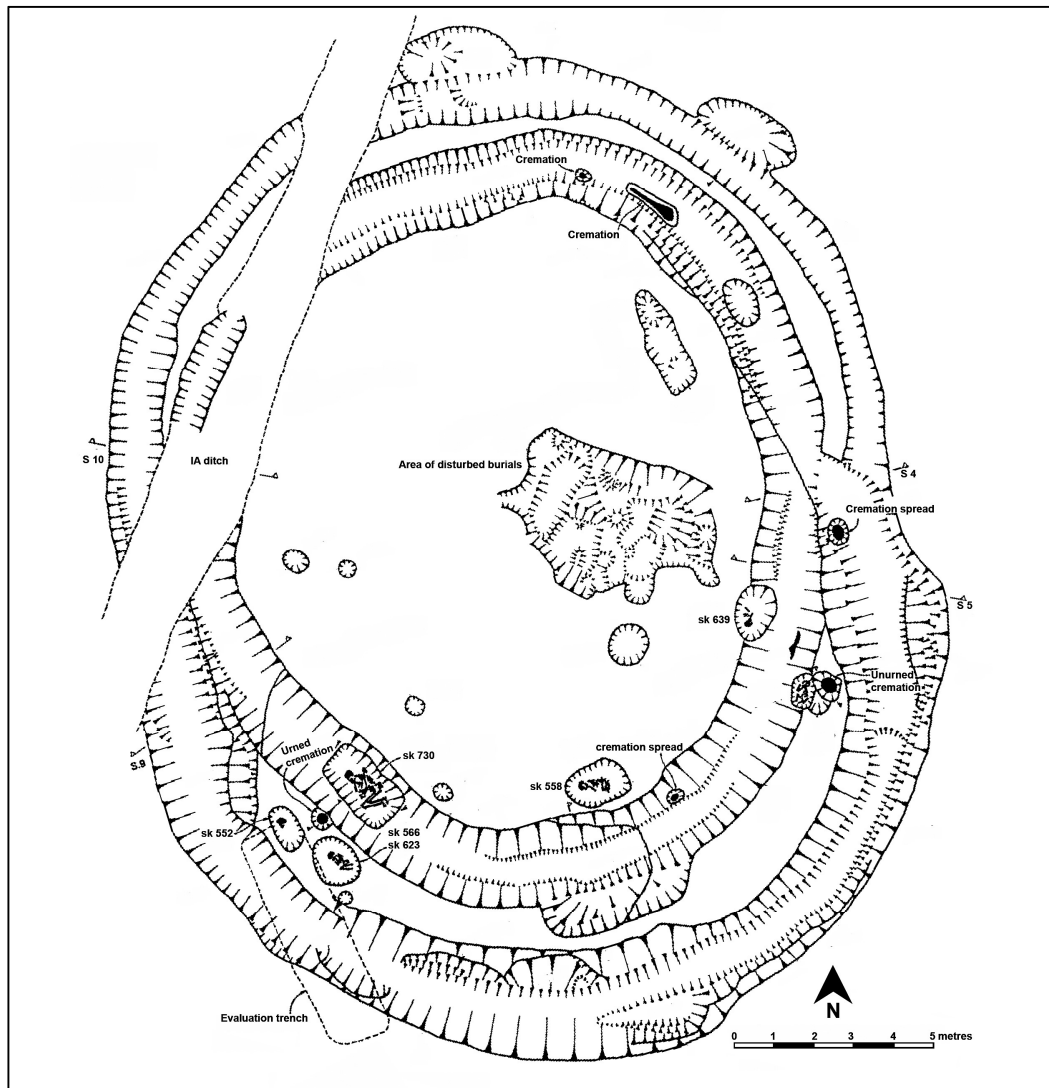


Fig 6.17: The excavation plan of White Caps, Whitfield-Eastray bypass, near Dover, (after Bennett in preparation).

The conjectured construction phases proposed in Fig 6.18 are based on an examination of the excavator's original plans and section drawings. A definitive interpretation would require unambiguous evidence of the relationships between the ditch circuits where they intersect; but unfortunately this does not exist. On the western side, a late Iron Age ditch destroyed much of the stratigraphic detail.

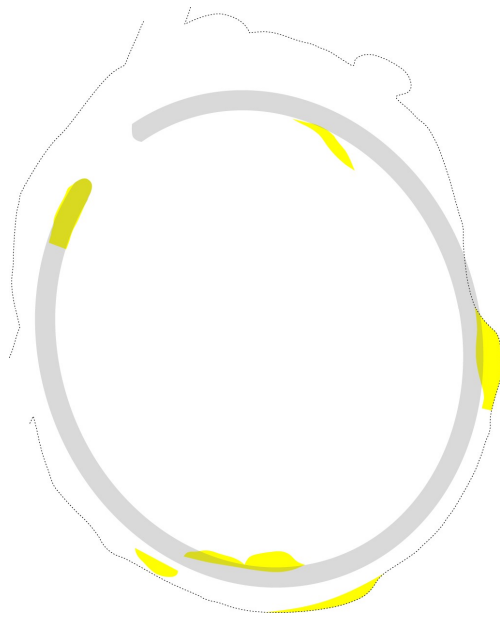


Fig 6.18a: Phase 1 – Ephemeral traces of the earliest construction are picked out here in yellow. The most significant feature is a short length of narrow ditch with a clear terminal end. The grey ellipse imposed on this illustration is the conjectured line of the ditch circuit. Pottery finds suggest Neolithic occupation of the site.

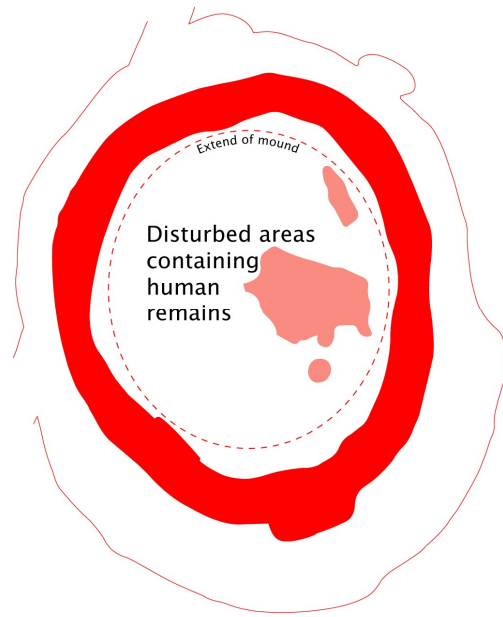


Fig 6.18b: Phase 2 – A ditch circuit with a maximum diameter of 21m was constructed during the latter part of third millennium BC. A mound and an area within the enclosure (in pink) containing disarticulated human remains may also date to this phase.

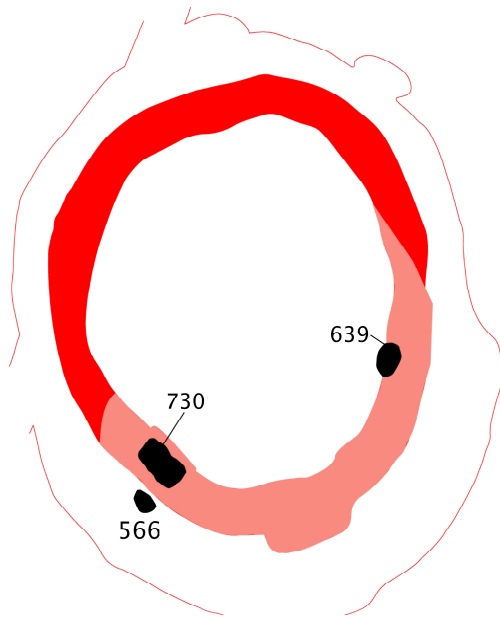


Fig 6.18c: Phase 3 – The ditch circuit, coloured pink, infills from its inner edge, presumed to be caused by the mound eroding or migrating in a southerly direction. Inhumation graves 639 and 730 were cut into this fill dating the completion of the process to a period either side of 2000 BC. Skull 566 is similarly dated.

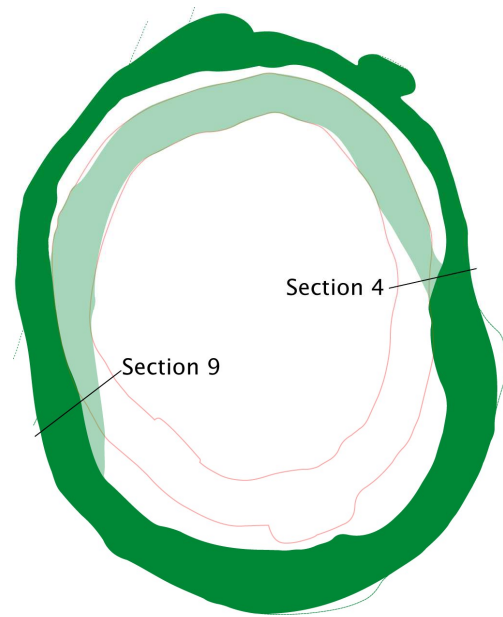


Fig 6.18d: Phase 4 – A new southern segment is cut, probably in order that the circuit remains intact around the mound. A narrow outer ditch at the northern end is also added. This may have happened simultaneously or as a separate modification. The northern inner ditch (pale green) may have been backfilled at the same time – although there is little evidence of this.

NB: The author devised the above illustrative scheme using data and plans supplied by Canterbury Archaeological Trust.

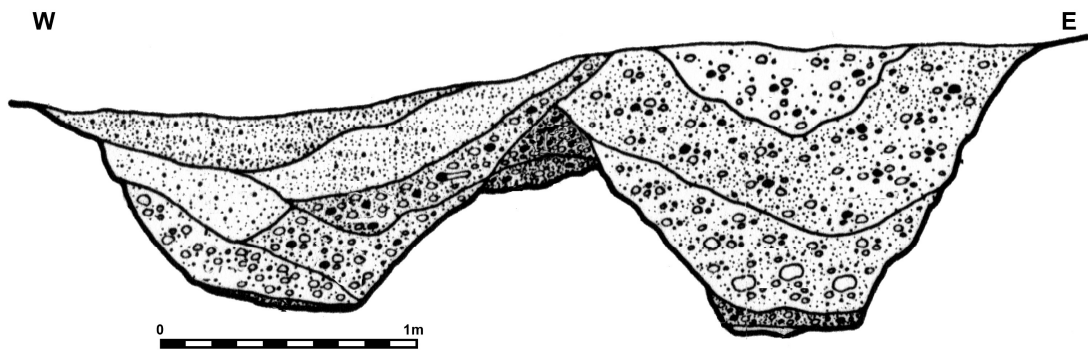


Fig 6.19a: White Caps section 9 – drawing supplied by Canterbury Archaeological Trust.

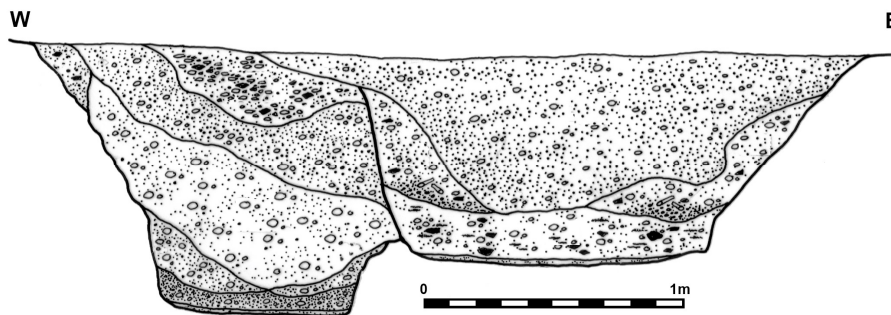


Fig 6.19b: White Caps section 4 – drawing supplied by Canterbury Archaeological Trust.

However, section 9 does confirm that the southern outer ditch is later than the corresponding inner, as does section 4 on the opposite side (Fig 6.19a/b – for position see Fig 6.18d). In both cases tip lines also suggest the presence of a mound. The proximity and intercut nature of these ditches suggests that on the eastern and western flanks they were not open at the same time. There is also clear evidence from burials sk. 730 and sk. 639 that the southern sector of the inner circuit was infilled prior to the outer circuit being cut, and it seems most likely that the same happened at the northern end. Therefore, on the balance of probabilities, White Caps should be considered a single ring ditched monument that underwent significant modification, either with the intention of adding an additional circuit or of replacing one that had been subsumed by the mound.

The monument's earliest phase is reminiscent of Lord of the Manor (LOTM) 1, 2d, 3a and 5 (see Section 7.5). Like them it seems to have been constructed during the second half of the third millennium BC and originally presented a penannular form. It is possible that such monuments were established as more than places for disposal of the dead, even if burials appear to be an integral activity (Fig 6.20). The earliest radiocarbon date for White Caps was extracted from skeleton Sk. 639 (burial group 2) but stratigraphic and typological evidence suggests that a number

of interments predated its deposition. Therefore, the first burial phase is most probably a large area of shallow cut features on the eastern side of the enclosed area (481, 505, 566, 544 and 499). These contained human remains, mostly from children and neonates, mixed in with sherds of Peterborough Ware, Grooved Ware, domestic Beaker pottery and Food Vessels – indicative of Neolithic and Early Bronze Age activity. Additionally, two deposits of charcoal, along with urn sherds and five grammes of burnt and eroded human bone were found at the base of the south-eastern sector of the inner ditch (cuts 716 and 735) – meaning they also predate the burial of Sk. 639.

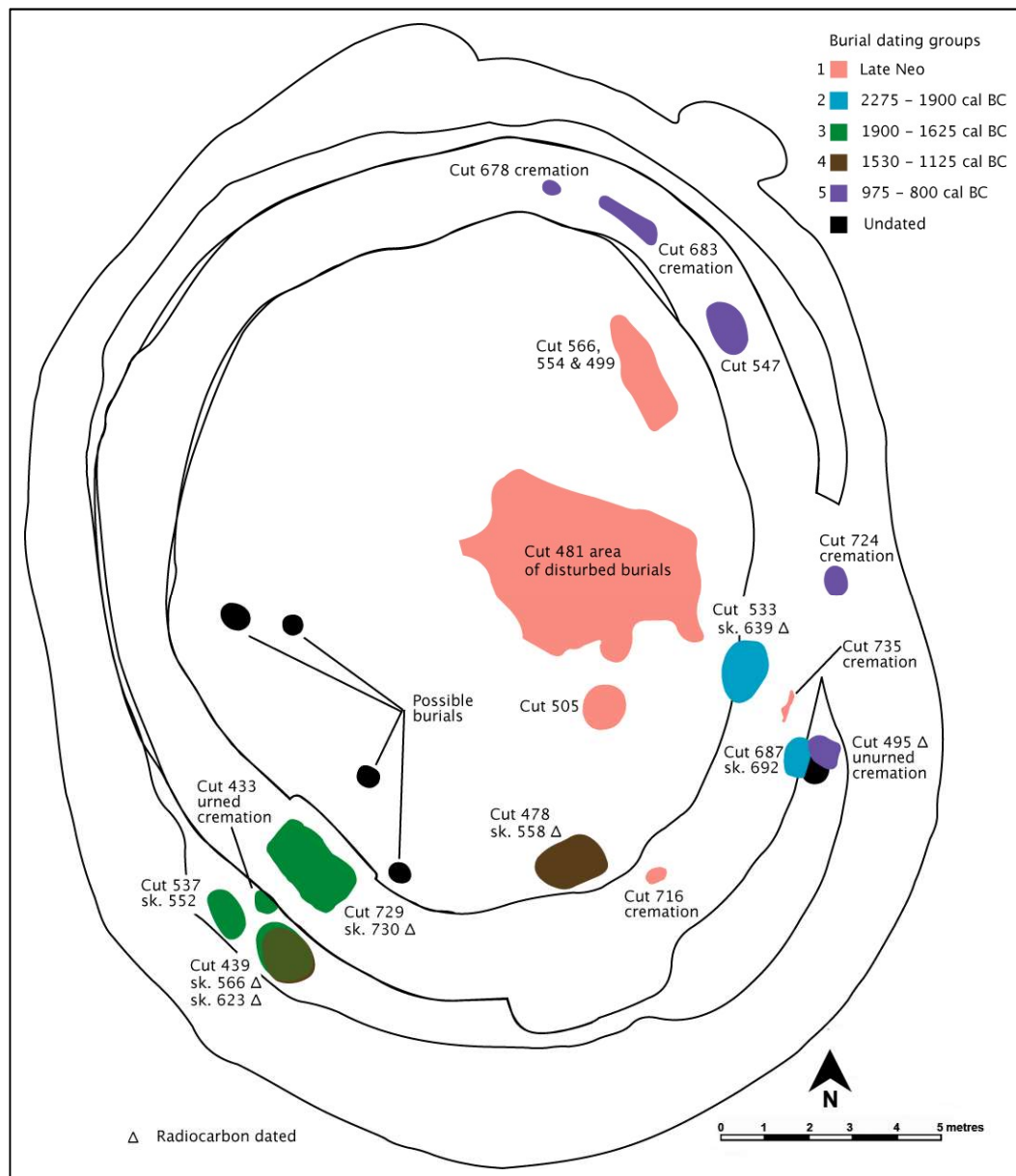


Fig 6.20: A multi-phase outline plan of White Caps showing burial positions colour coded according to the most likely periods to which they belonged. Devised and drawn by the author from data supplied by Canterbury Archaeological Trust.

## Burial group 2

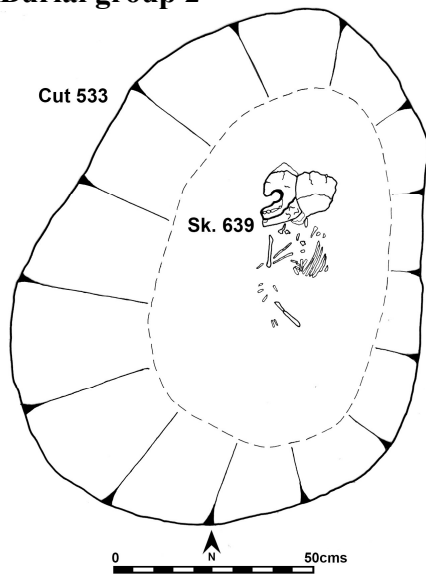
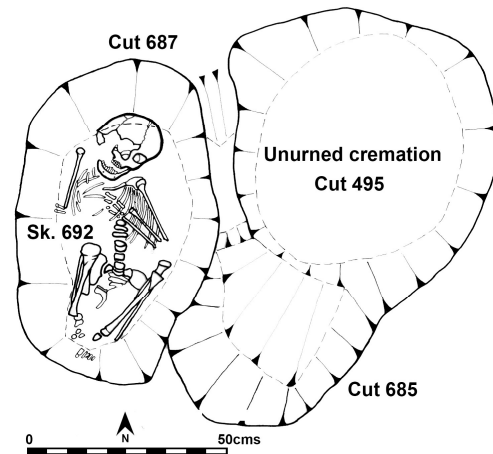


Fig 6.21: Sk. 639 was the earliest radiocarbon dated burial was of an 8-month-old child buried in a crouched right position, facing west.



## Burial group 3

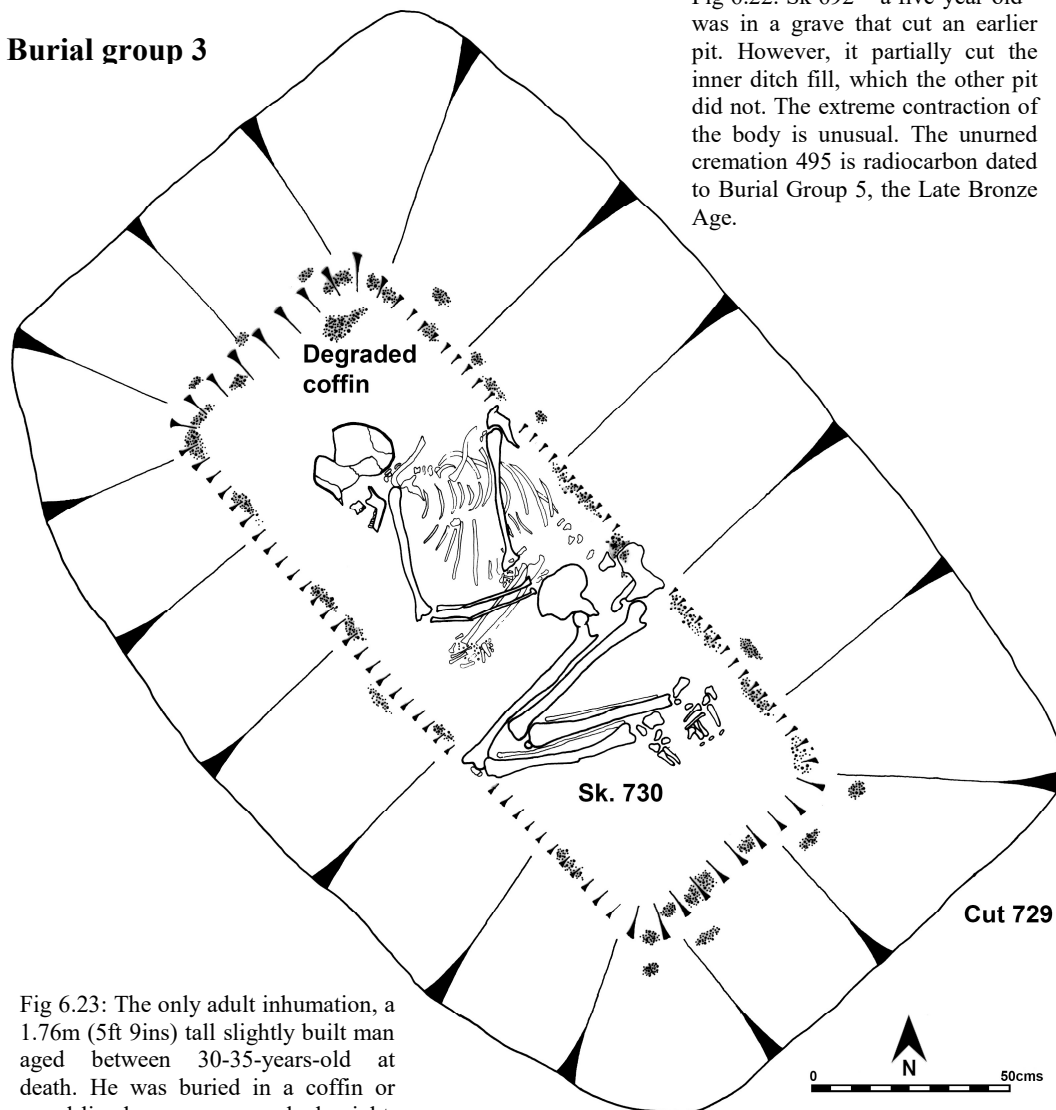


Fig 6.22: Sk 692 – a five-year-old - was in a grave that cut an earlier pit. However, it partially cut the inner ditch fill, which the other pit did not. The extreme contraction of the body is unusual. The unurned cremation 495 is radiocarbon dated to Burial Group 5, the Late Bronze Age.

Fig 6.23: The only adult inhumation, a 1.76m (5ft 9ins) tall slightly built man aged between 30-35-years-old at death. He was buried in a coffin or wood-lined grave, crouched right, facing north-west.

**Burial group 3**  
continued

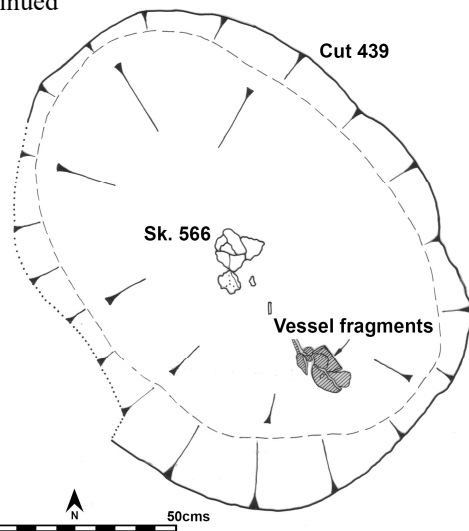


Fig 6.24: A foetal skull found in association with a Food Vessel. A sample was radiocarbon dated and shown to be later than, but deposited above Sk. 623 (Fig 6.27 below), suggesting it had been redeposited.

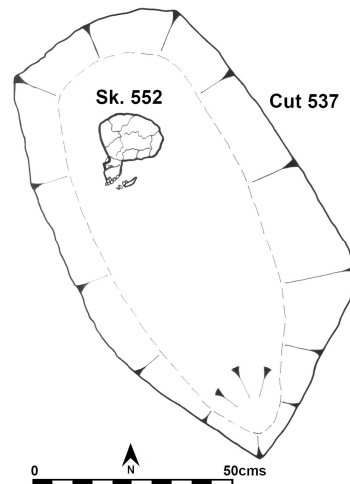


Fig 6.25: Only the skull of this two or three-year-old child survived in the grave.

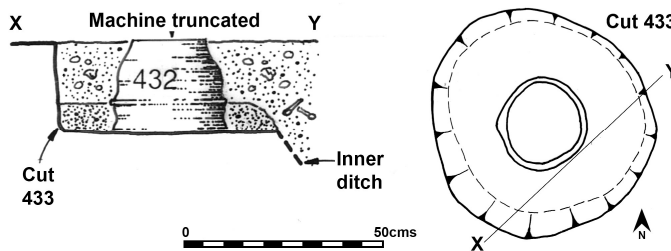


Fig 6.26: A section drawing and plan of the inverted urn cremation at White Caps.

**Burial group 4**

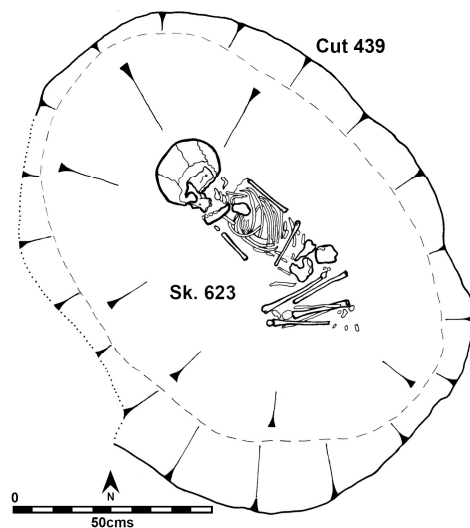


Fig 6.27: The skeleton of a five-year-old found in the same grave as skull sk. 566 (Fig 6.24). The body was below the skull but dated to a later period.

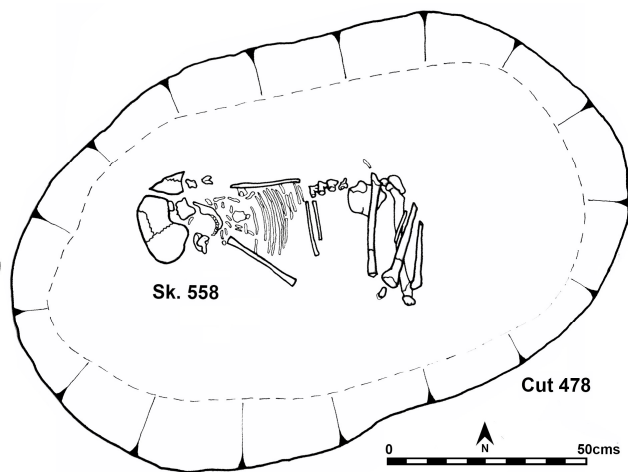


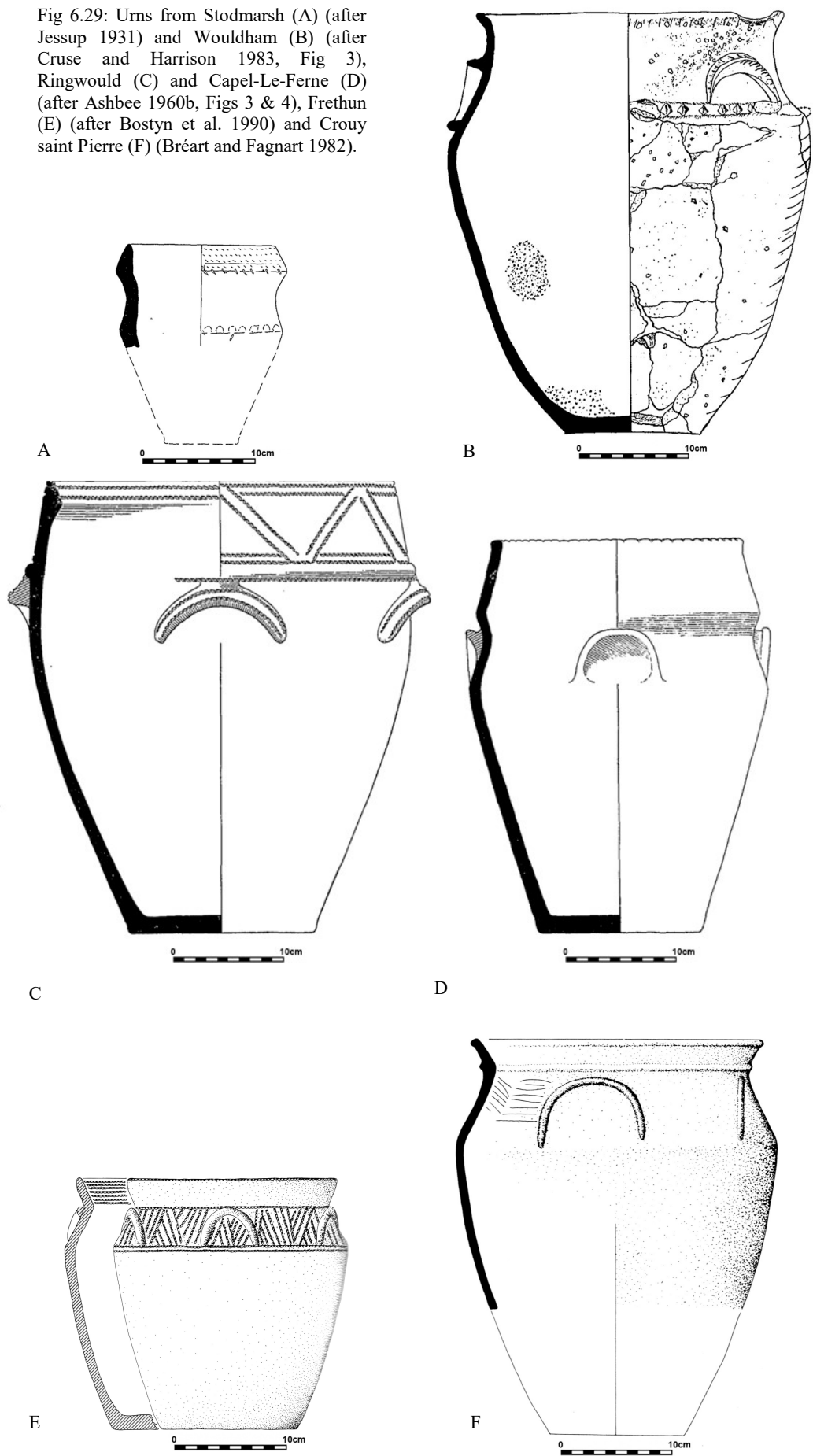
Fig 6.28: The crouched inhumation of a child aged no more than 12-years-old at death. Radiocarbon dating suggests it took place later than 1500 cal BC.

NB: For ease of comparison, Figs 6.21 to 6.28 are scaled and orientated identically. Each was digitised, enhanced or redrawn and annotated by the author using original drawings provided by Canterbury Archaeological Trust.

The third burial phase, dated 1900-1625 cal BC consists of an eclectic group: the encoffined adult crouched inhumation sk. 730 (Fig 6.23); two child inhumations, Sk. 566 (Fig 6.24), Sk. 552 (Fig 6.25) and the monument's only known urned cremation 432 in cut 433 (Fig. 6.26). They were located in and just outside the south-west sector of the inner ditch. The most striking of these is the adult burial, which had been cut into the ditch after it had completely infilled. The nature of the burial implies that this was a respected individual within his community. A red-brown stain around the inner edge of the 2.7m by 1.8m wide grave probably indicates the presence of degraded wood. The stain's outline measured 1.85m by 0.75m, appropriate dimensions for a coffin. Contained within it was the skeleton of a 1.75m (5ft 9ins) tall man, of slight build and aged between 30 and 35-years at death. He was crouched on his right side, facing south-west – directly at the remaining burials within this group. The grave's backfill contained pottery sherds, including three pieces of Peterborough Ware and one of Beaker. There were also animal bone fragments, pot-boiler flints, burnt daub, carbonized oak and 147 pieces of worked flint. Inclusion of this cultural material may be accidental, having been residually present in the soil that was used, but this amount is more likely to indicate ritual activity, perhaps including funerary feasting.

Predating the burial of Sk. 730 is a cremation in an upturned tripartite collared urn (Fig 6.26). That this is included in an otherwise entirely inhumed burial group is not without precedent. Woodward points out that 23 such mixed groups have been recorded on the Yorkshire Wolds (2000a, 23). The White Caps urn sat in a niche, cut into the outer edge of the inner ditch. An eight centimetre deep layer of clay-loam and chalk fixed it in place. The rest of the urn appears to have been left exposed and visible, particularly from the open side facing into the ditch. It only became completely covered over when the entire ditch filled in - and it was into this layer that sk. 730's grave was cut. As yet there is no specialist report on this vessel. It was decorated with finger-tip impressions and twisted cord, in a similar style to one found at Stodmarsh in Kent (Longworth 1984, 216, no. 800) (Fig 6.29A). Perhaps more significantly it has handles, demonstrating a typological affinity to Wessex-type horseshoe-handled urns, which can date earlier than 1700 BC (Gibson and Woods 1997, 69-71).

Fig 6.29: Urns from Stodmarsh (A) (after Jessup 1931) and Wouldham (B) (after Cruse and Harrison 1983, Fig 3), Ringwoud (C) and Capel-Le-Ferne (D) (after Ashbee 1960b, Figs 3 & 4), Frethun (E) (after Bostyn et al. 1990) and Crouy saint Pierre (F) (Bréart and Fagnart 1982).





A preliminary analysis (Bennett in preparation) has compared the urn to the South-East style of Longworth's Secondary Series (1984, 35-44), analogous to Burgess' Late phase, (1986, 350), which would make it chronologically anomalous. However, a more recent study (Brindley 2007), based on Irish radiocarbon dates, indicates that previous typologies are wrong and British collared urns are now thought to date no later than 1500 BC, making this vessel's place within the third burial phase perfectly viable.

Such urns are already known in Kent, from excavations of ring ditches at Hill Road, Wouldham (Cruse and Harrison 1983) (Fig 6.29B), Ringwould, Capel-Le-Ferne (Ashbee 1960b, 51-52 Figs 3 & 4) and Cobham Golf Course, Gravesend (Davis 2005). Similar vessels have been found in north-eastern Transmanche France, such as at Frethun and Crouy Saint Pierre, Les Quatres, Somme (Bréart and Fagnart 1982) (Figs 6.29E and 6.29F), where they are generally considered part of the '*groupe des urnes à décor plastique*' (Blanchet 1984, 102-103) and to the Hilversum and Drakenstein traditions in the Netherlands.

Only the skulls of the remaining burials in this group, Sk. 552 and Sk. 566, survived to the modern era. Sk. 552 was the badly preserved remains of a two or three-year-old child apparently lying in a crouched right position, facing west. Sk. 566 was a foetus and may originally have been buried inside a crushed Food Vessel found nearby. A sample of its skull was radiocarbon dated and shown to be broadly concurrent with the adult burial. However, it was earlier than, but deposited above, Sk. 623 (Fig 6.27) suggesting it had been redeposited, possibly due to being inadvertently disturbed when this later burial took place. In fact, Sk. 623 is one of two burials, the other being Sk. 558 (Fig. 6.28) which were radiocarbon dated to the period falling just after the 1500 BC chronological limit of this research. Sk. 558, a child no older than 12-years at death, was prominently located to the south of the enclosure and lying on its right side, facing south.

Throughout the very long period when White Caps was used as a place for burials one trait persistently stands out: the high proportion of child burials. Only one adult is definitively represented and whilst there is clear evidence that other burials took place, the bones of children dominate even the disarticulated

remnants. It is also evident that all of the archaeologically detectable activity took place in the south-eastern half of the monument. With the exception of the intrusive late Iron Age ditch – which may have destroyed some evidence of earlier activity – the north-western sector of the ring ditch enclosure appears to be archaeologically sterile.

### Castle Hill

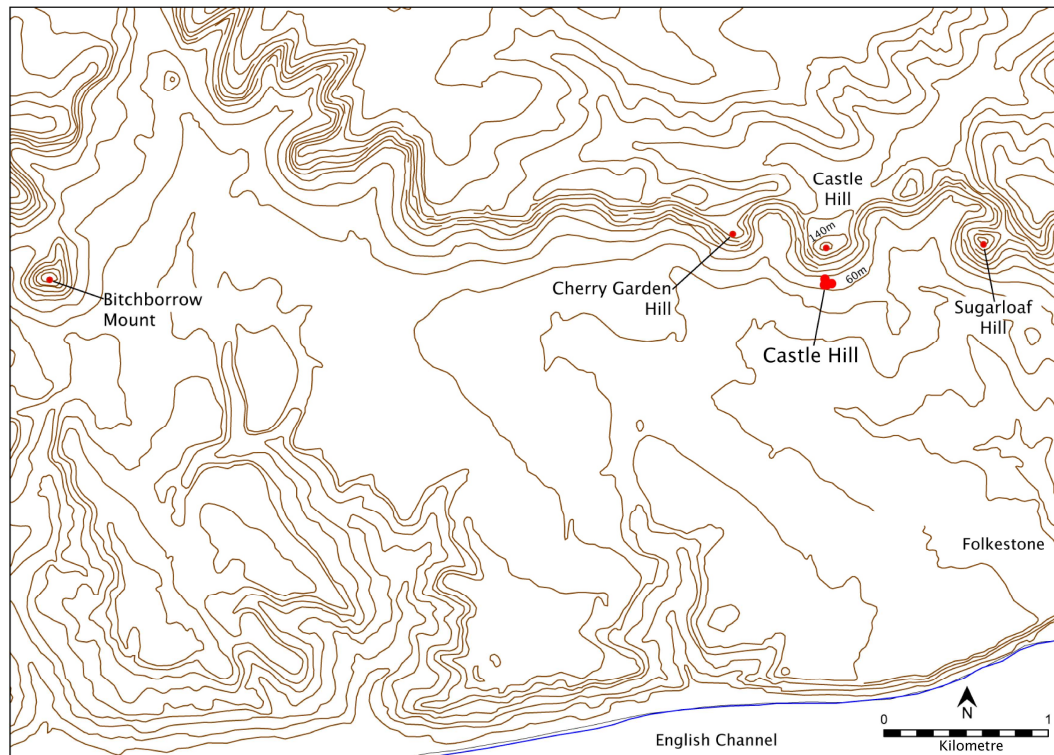


Fig 6.30: The topographic location of the Castle Hill monuments along with all the known monuments in the surrounding area. Note there are no aerially detected monuments. Map created by the author in Arcview 9.2 and Adobe Illustrator from Ordnance Survey Mastermap data.

The final Kentish circular monument with an associated radiocarbon dated burial was excavated near Cheriton, in advance of the Channel Tunnel terminal construction (Hutcheson *et al.* Unpublished-b; Rady 1987). Located at the base of Castle Hill were three ring ditches, only one of which had an unbroken circuit. The poorly preserved grave of a 20-25-year-old woman was found close to the centre of the south-west monument (Fig 6.31). The oval grave cut measured 1.5m by 0.9m and survived to a depth of 0.15m. Little could be recovered of the badly degraded woman's skeleton, except 20 loose teeth. She was apparently in a crouched position with her head to the west. A radiocarbon date places her death at 3675±65 BP (OxA-4807).

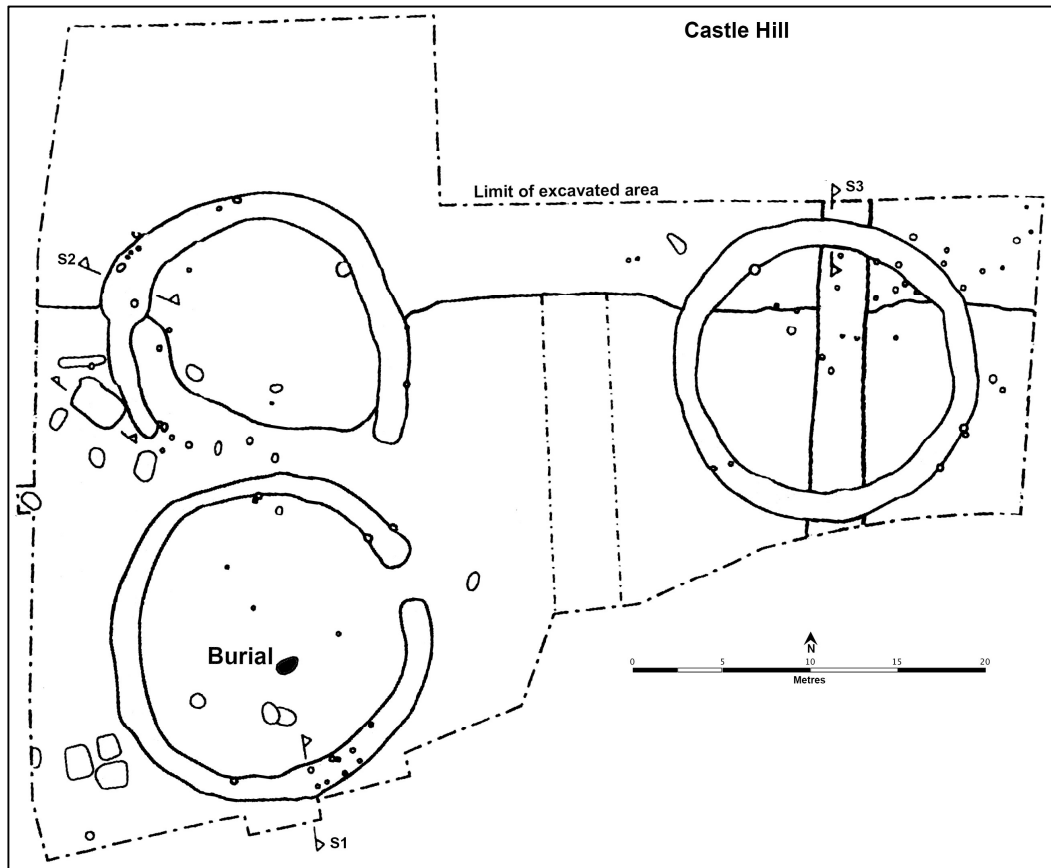


Fig 6.31: A plan of the monuments located below Castle Hill, (after Hutcheson *et al.* Unpublished-b, 75).

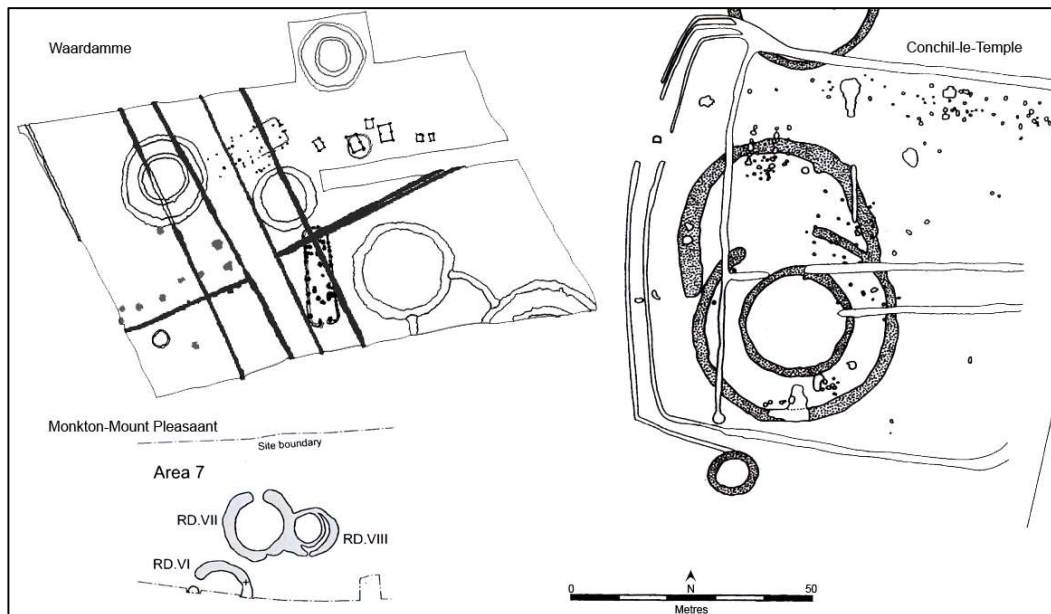


Fig 6.32: Examples of 'annex' type ditch circuits at Waardamme, Flanders, (Demeyere and Bourgeois 2005) and Conchil-le-Temple, Pas-de-Calais (Piningre 1990) and Monkton-Mount Pleasaant, Thanet (Clark and Rady 2009).

All three of the ring ditches were poorly preserved and it was only in the north-western monument that evidence for a mound survived. The incomplete, or horseshoe-shaped, monument was 15m-diameter with a seven-metres opening. A

similar arrangement is known from Monkton-Mount Pleasant, where ring ditches VII and VIII adjoin each other (Clark and Rady 2009, 36-40). Continental comparators for this unusual construction can be found at Waardamme, Flanders (Demeyere and Bourgeois 2005) and Conchil-le-Temple, Pas-de-Calais (Piningre 1990) (Fig 6.32). These are usually referred to as annexes, implying a subsidiary role, such as ceremonial enclosures or areas for preparing the deceased prior to burial. However, the fact that traces of a mound were found within the one at Castle Hill weakens this hypothesis.

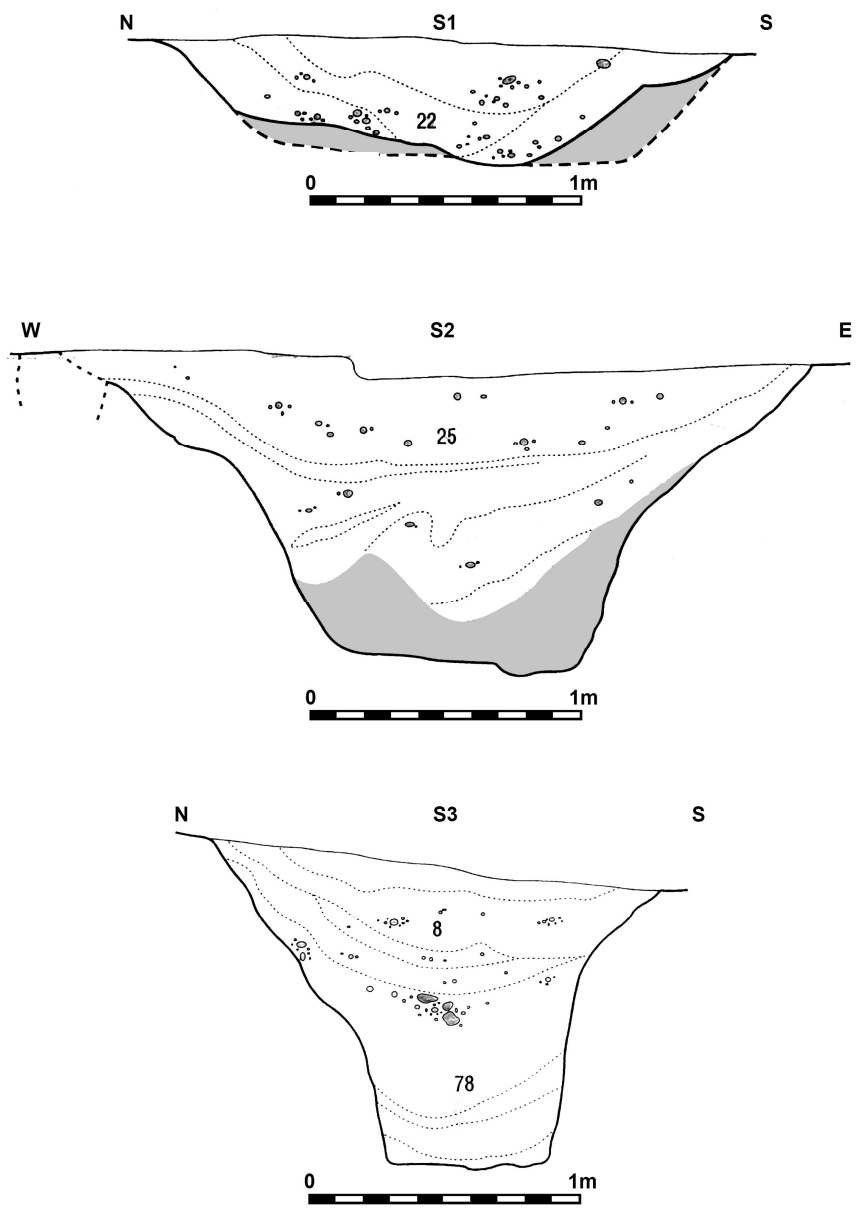


Fig 6.33: Representative ditch sections from each of the Castle Hill circular monuments. Their positions are marked on the plan Fig 6.31 (after Hutcheson *et al.* Unpublished-b, 75).

The eastern, closed-circuit, monument measured 17m-diameter. The largest, at 21.5m-diameter, was the one containing the burial. It also had a 1.25m wide causewayed entrance to the east. The ditches were between one to two metres wide with steeply sloping sides and flat bottoms. Depth varied from 0.6m to 1.5m (Fig 6.33). The only notable features were a cluster of 12 post-holes cut into the primary fill of the south-western penannular ring ditch and a, possibly contemporary, pit containing shellfish, cow bone, charcoal, burnt clay and pottery sherds representing at least 24 Secondary Series south-eastern type collared urns, mostly dated after 1550 BC. A large assemblage of Neolithic pottery – representing more than 80 vessels - along with sherds from 32, mostly domestic, Beakers were recovered from the upper ditch fills of all three monuments. It is likely that most of this came from higher up the hill, where settlement evidence had previously been discovered (Hutcheson *et al.* Unpublished-a).

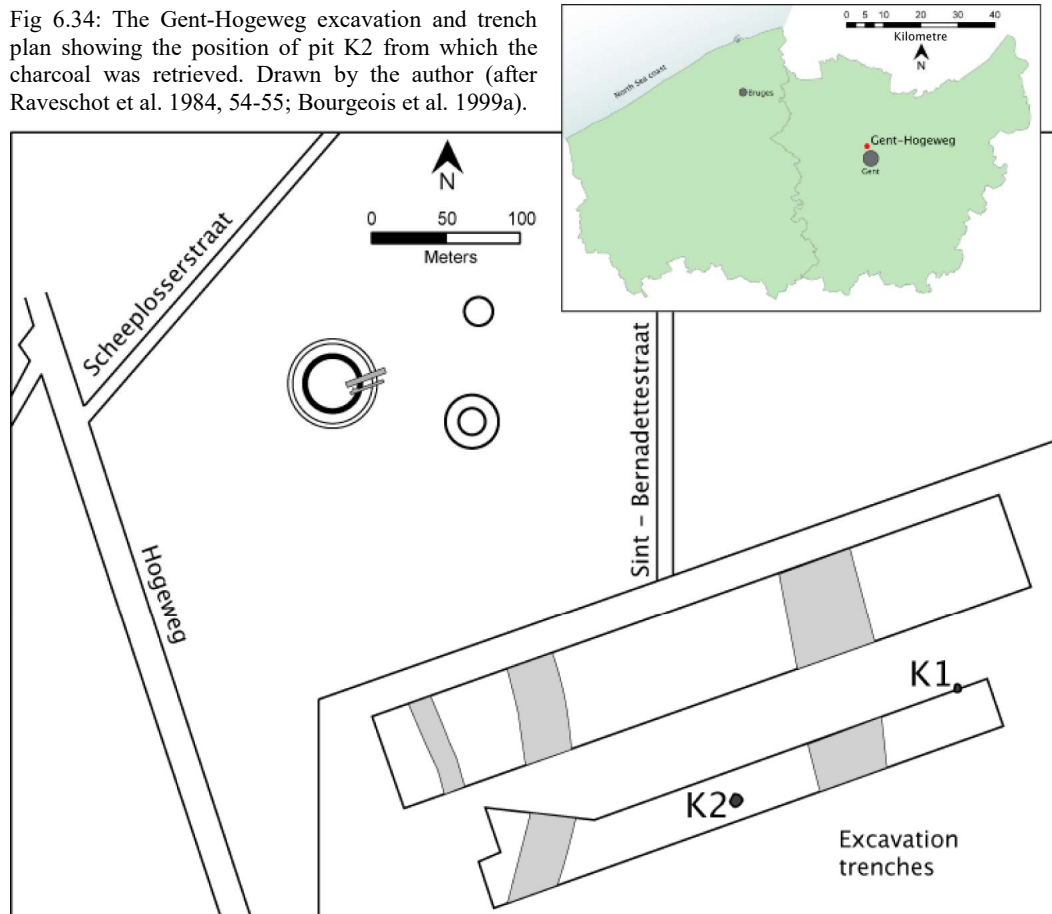
### **6.3.2 Zone 2 - Flanders**

#### **Gent-Hogeweg**

Occasionally, as at Gent-Hogeweg, a charcoal deposit can be interpreted as the vestiges of a cremation burial (Ampe *et al.* 1996b, 80; Raveschot *et al.* 1984, 13). It was found in a pit that had been dug between the inner and outer circuits of a large concentrically ditched monument (Fig 6.34). Two other monuments were located by aerial survey to the east, but were not investigated at ground level. The large monument's outer ditch measured 55m-diameter (from the ditch centre) with an average width of three metres and depth of 1.3m. The next smallest was 28m-diameter, with an average width of 2.6m and a depth of one metre. Traces of a third, possibly inner circuit, also showed up. It measured an estimated 21m-diameter.

However, the presence of this circuit, which was seen in the air photographs, could not be confirmed because the centre of the monument was not excavated. The charcoal deposit was found when two trenches were dug across the eastern quadrant of the outer two ring ditches. Apart from these, the only other cut features were two small pits, labelled K1 and K2.

Fig 6.34: The Gent-Hogeweg excavation and trench plan showing the position of pit K2 from which the charcoal was retrieved. Drawn by the author (after Raveschot et al. 1984, 54-55; Bourgeois et al. 1999a).



The charcoal came from the fill of K2, which measured 46cms in diameter and 46cms deep, a sample of which was radiocarbon tested and yielded a date of 3030±90 BP (IRPA 774, Chapter 4, Fig 4.7), meaning that it post-dates the 1500 BC cut-off for this research project. The earliest diagnostic pottery – most of which came from pit K1 - showed affinities with the Eramécourt culture, centred in north-eastern Transmanche France and the Hilversum culture, of the Netherlands. Such pottery is also considered to be concurrent with the British Deverel Rimbury period (Bourgeois and Talon 2009, 39). However, a few worked flint finds - notably fragments of four tanged-and-barbed arrowheads, similar to those found in Beaker graves (Fig 6.35), did come out of a pale brown humic layer sandwiched between the base of the outer ditch and a 58cm deep layer of darker sandy soil directly below the topsoil.

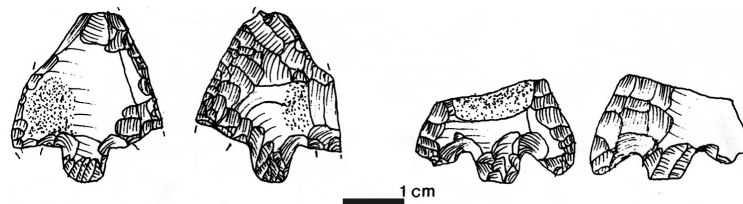


Fig 6.35: The four tanged and barbed arrowheads from the double ditched monument at Gent-Hogeweg (after Raveschot et al. 1984).

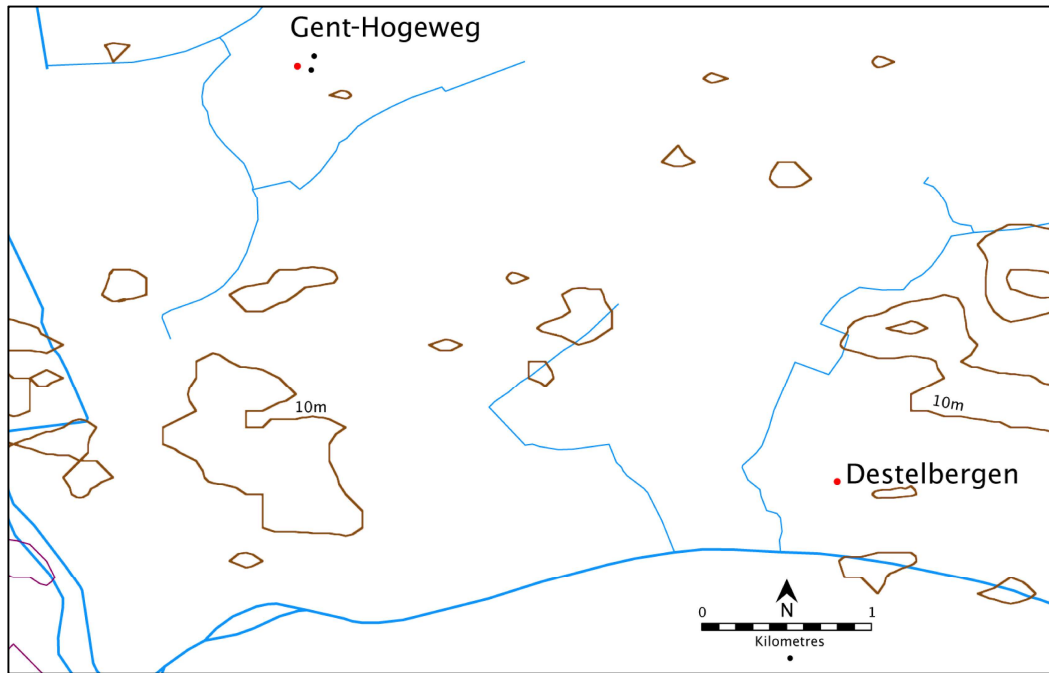


Fig 6.36: The topographic location of the Gent-Hogeweg and Destelbergen monuments along with all the known excavated (red) and aeryally detected (black) monuments in the surrounding area. Map created by the author in Arcview 9.2 and Adobe Illustrator using NASA's Shuttle Radar Topography Mission data.

In the absence of a stratigraphic link it is impossible to determine what, if any, relationship there was between the pits containing charcoal and pottery and the ring ditches. Assuming they are remnants of burials, their peripheral positions suggest the monument was not built for them. Furthermore, their depth makes it unlikely that they were dug prior to, or during, construction because – taking into account the substantial loss of soil due to erosion - the consequent original depths would have been around 1.5m, which is twice the average adult arm length and therefore impractical to dig given their diameters.

### **Destelbergen Eenbeekeinde**

Another monument has provided indications that it may have contained a burial. Destelbergen Eenbeekeinde (Fig 6.37) was discovered in 1973 when a drainage ditch was cut north of the River Schelde. It was excavated in 1982 (De Laet *et al.* 1986b). The single ring ditch measured 11m-diameter (from the ditch centre). The cut width varied from 0.9m to 1.2m and the depth averaged 0.55m. Close to the centre of the circle were four small postholes, interpreted as the remnants of a wooden mortuary structure. There were no other finds and it was not possible to date the monument. Similar four-post structures have been found in Kent at Whitehill Road, Southfleet, (Bull in preparation) and Cliffs End Farm, Ramsgate, (Schuster in preparation).

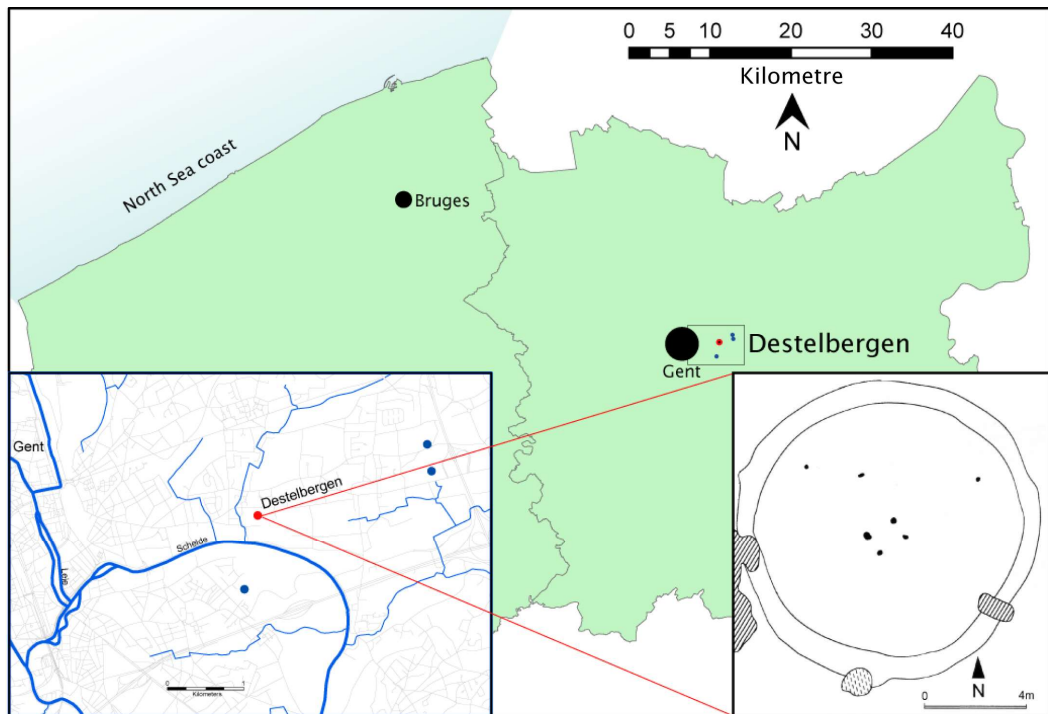


Fig 6.37: The position of the Destelbergen Eenbeekeinde ring ditch, (red) along with nearby aerially detected monuments (blue dots). Inset (left) an enlarged plan of the area and (right) an excavation plan showing the central posthole arrangement (after Bourgeois *et al.* 1999a, 45-46).

### Oedelem Wulfsberge

The only other excavated monument in Flanders to provide burial evidence – excepting the Beaker burials which are examined in Chapter 5 – is a ring ditch at Oedelem Wulfsberge, on the southern flank of an area of relatively high ground known as the Maldegem cuesta (Fig 6.38 and 6.39, also see Section 7.2.3, p.224, for a detailed description of the region). This clear linear arrangement of varied circular monument types was discovered during a research excavation following aerial surveying. It is orientated north/west – south/east and set on land that is between 15m and 20m above sea level.

During the first year two single ring ditches and a post circle were revealed. A pit within the enclosure of Wulfsberge I has been interpreted as a cremation burial (Fig 6.40). It consisted of a shallow, off centre, cut containing charcoal, burnt bone and a few sherds of pottery. A date of  $3310 \pm 50$  BP (KIA 14817) was obtained from a sample of the charcoal. A date for Wulfsberge II, a single ditched monument, was obtained from charcoaled wood deposits recovered from the ditch fill. It came out at  $3180 \pm 35$  BP (KIA14819).



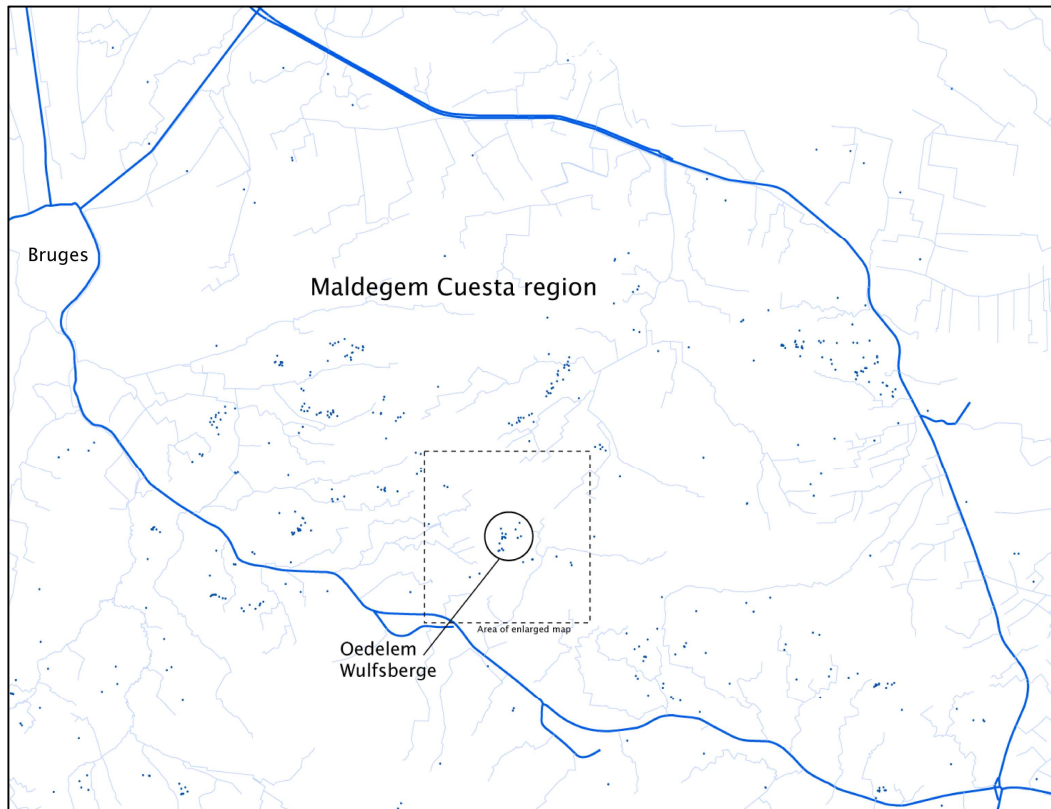


Fig 6.38: Oedelem Wulfsberge located within the wider region. This maps also shows the distribution of aerially detected ring ditches and the modern hydrography. Map created by the author in Arcview 9.2 and Adobe Illustrator from data supplied by the Universiteit Gent.

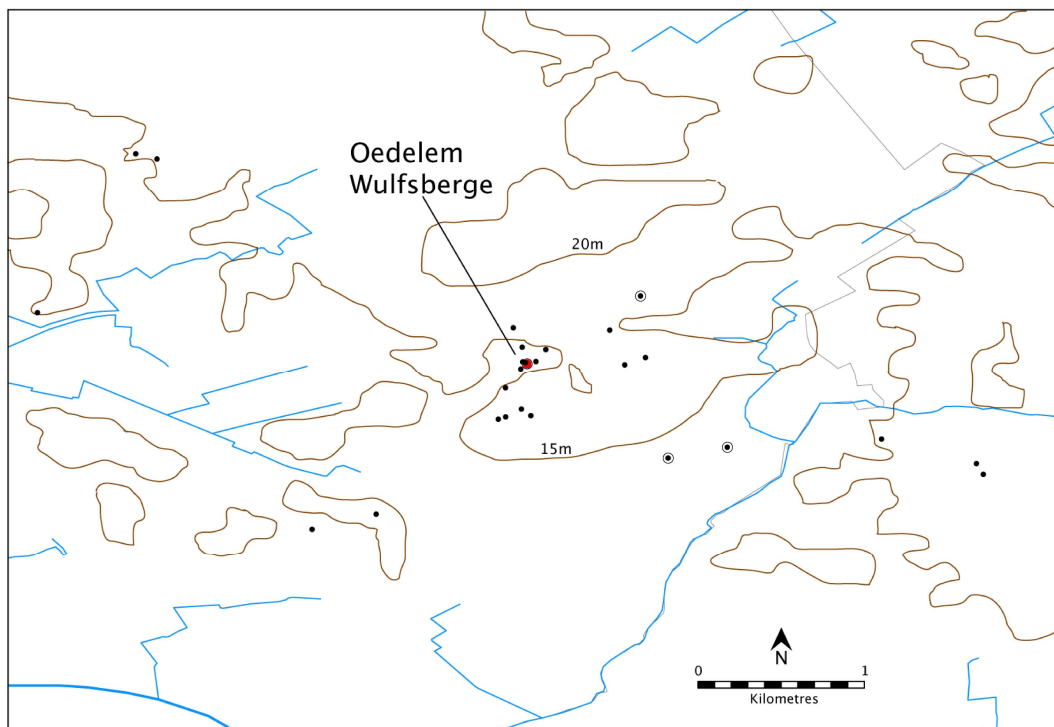


Fig 6.39: The topographic location of the Oedelem Wulfsberge monuments along with all the known monuments in the surrounding area. Red dot denotes area of excavation; nearby double ring ditches are marked with additional outer rings. Map created by the author in Arcview 9.2 and Adobe Illustrator using NASA's Shuttle Radar Topography Mission data.

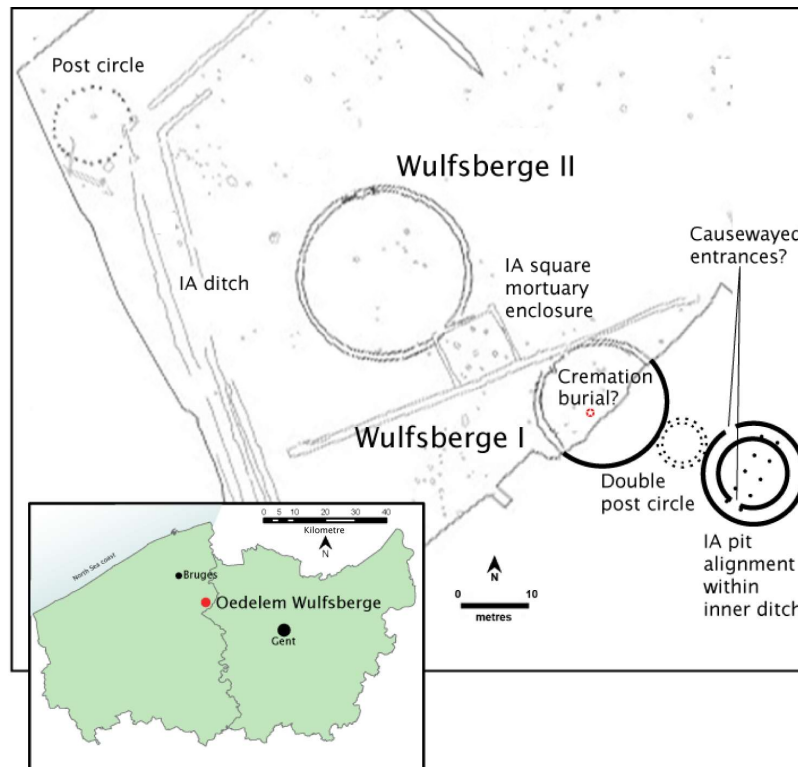


Fig 6.40: A strip and map plan revealing the post circle at Oedelem Wulfsberge, which did not show up in aerial photographs. It was discovered during excavations of the nearby ring ditches and an Iron Age/Roman cemetery. (After Bourgeois et al. 2001a; Cherrette and Bourgeois 2002; Cherrette and Bourgeois 2005, Fig 5). Also drawn in by the author are the other discoveries made during the follow-up campaign (Cherrette and Bourgeois 2003).

The following year a small double post circle and a double ditched monument, on the same south-easterly alignment, were discovered. The double ring ditch – whose outer circuit measured 22m-diameter and inner 14m-diameter – is only the second penannular monument known in Flanders<sup>26</sup>. Unfortunately, there are no radiocarbon dates for these later discoveries and full publication of the excavation has not yet taken place.

However, it has been reported that the double ring ditch was built in two separate phases, with the inner ditch showing signs of having been deliberately backfilled, possibly at the same time as the outer ditch was cut (Cherrette and Bourgeois 2003). Both ditches had openings of about one metre in width; the inner was interrupted in the south-west quadrant and the outer in the north-west. Cut across the centre of the monument, aligned to the inner south-west ‘entrance’ and at right angles to the alignment of the monuments, was a set of parallel post-holes, dated to the late Iron Age by pottery sherds in the fills.

All five of the Oedelem Wulfsberge ring ditches form a clear linear association and were built along a sandy ridge of relatively high ground overlooking a small

<sup>26</sup> The other penannular monument is Vosslare-Kouter.

river. It is conjectured that they may all have been constructed over a relatively short period of time beginning with the double-ditched monument (Cherrette and Bourgeois 2005). However, there is no unqualified evidence presently available to support this hypothesis and, in fact, the double-ditched monument may not even have been a barrow in the sense of containing a mounded grave, or graves. The Iron Age post alignment, which cuts across it, seems to indicate that whilst the ditch and possibly a bank was visible, no mound existed in the centre - presenting the prospect that it was, and may always have been, a flat open arena.

Odelem Wulfsberge represents a diverse collection of monuments and their close spatial and – assumed - temporal association could be interpreted as indicating that each was built for a particular use. Alternatively, the variation could be the result of changes in ritual behaviour over time or related to the status or roles of the individuals to whom each monument was dedicated.

### **6.3.3 Zone 3 - France**

#### **Fresnes-lès-Montauban**

Fresnes-lès-Montauban was discovered during a rescue excavation and has proved exceptional for north-eastern Transmanche France: only four other excavations in the region have confirmed the presence of similarly sized groupings of ring ditches (Fig 6.41) and none has produced as many inhumations or been so extensively investigated. The site is on a chalky plateau to the east of the town of Arras and approximately 100kms from the present day channel coast. The five excavated monuments were found at an elevation of 50m above sea level on the northern side of a shallow valley created by an east-west orientated tributary of the river Scarpe (Fig 6.42).

The three largest ring ditches – and the ones containing crouched burials - formed a 150m long linear arrangement that respected the valley slope's topography. The two smaller monuments, both of which had been severely damaged by erosion and ploughing, were either side of the central ring ditch on a broadly north-west/south-east alignment. Each monument is numbered in Fig 6.43 and Table 6.7.



Fig 6.41: Map of north-eastern Transmanche France showing named excavations (red dots) where groupings of five or more ring ditches have been discovered and where aerial photography has detected groups of similar size (blue dots). Created by the author using Arcview 9.2 and Adobe Illustrator.

Monuments 1, 3 and 5 contained crouched inhumations (Fig 6.44 and 6.45). None were centrally located within the ring ditches, nor did they appear to favour particular positions inside the encircled areas. The earliest diagnostic pottery find was a single Beaker sherd from the ditch of M3, whilst the earliest of the three radiocarbon dated burials – by a margin of up to 700 years – was the one found in M5. The date of  $3835 \pm 145$  BP (Ly 5334) suggests that this diminutive young woman died some time within the second half of the third millennium BC. She was aged around 20 and about 1.42m (4ft. 6ins.) tall. Her grave measured 1.1m x 0.8m x 0.2m and was orientated south-east/north-west. She was placed in a tightly flexed position on her right side with her head to the east, facing north.

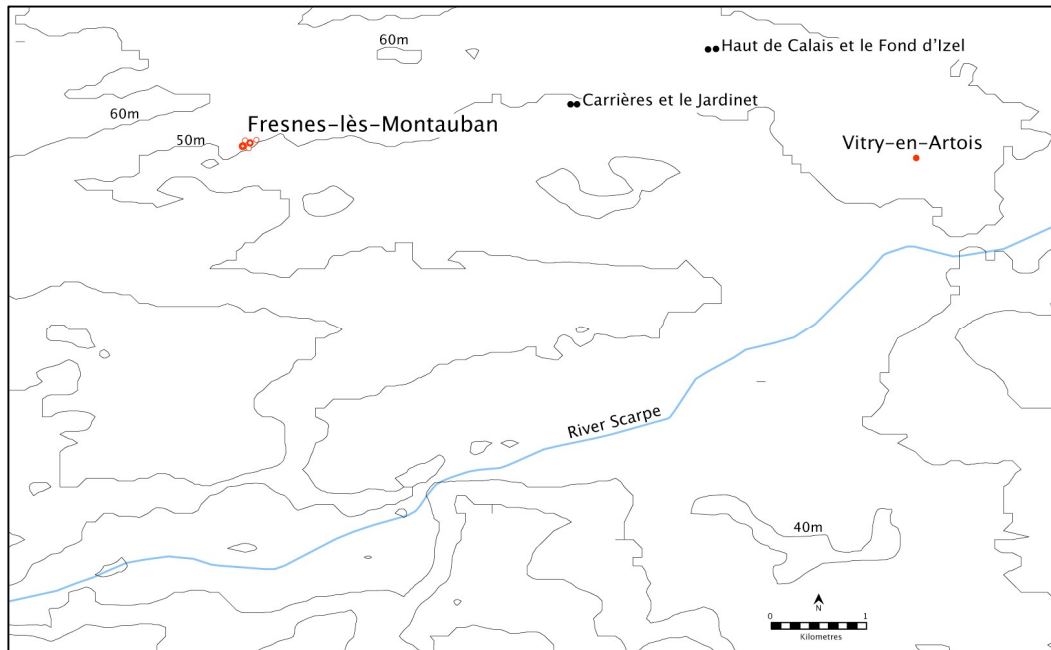


Fig 6.42: A contour map of the area surrounding Fresnes-lès-Montauban showing the location of the monuments in respect to the topography. Drawn by the author in Adobe Illustrator from data supplied through NASA's Shuttle Radar Topography Mission (SRTM).

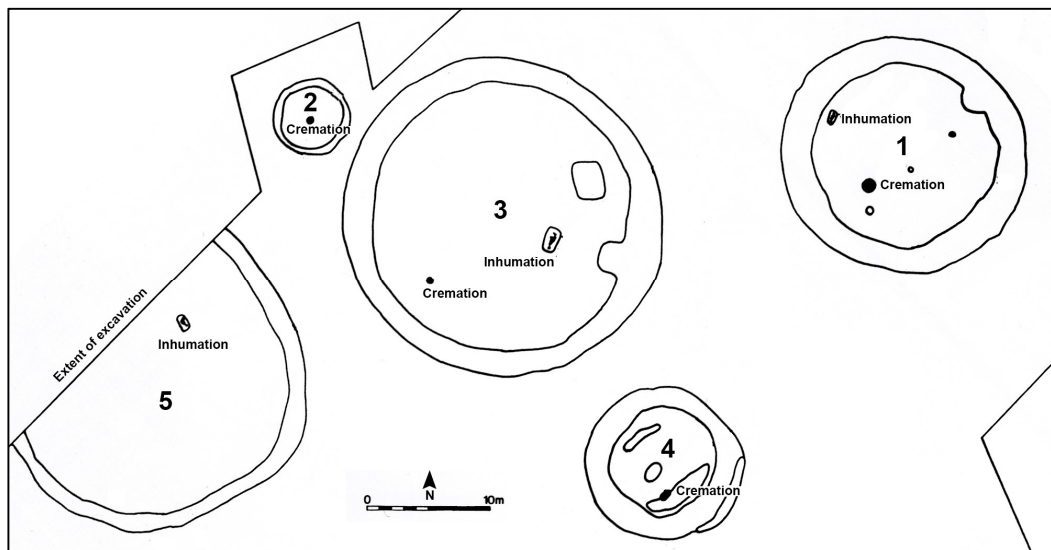


Fig 6.43: Plan of the excavated ring ditches showing burial positions and the monument identification numbers. This plan was drawn and annotated by the author (after Desfossés and Masson 2000).

Monument	Ring ditch diameter (m)	Ditch width (m)	Ditch depth (m)	Inhumation	Cremation
1	19	2-3	0.4	1	1
2	6.2	0.5-0.6	0.3		1
3	25.5	2	0.7-0.8	1	1
4 (double?)	12 7	1.5 1.5	0.35-0.7 0.5	1?	1
5	25	1.2	0.4-0.5	1	

Table 6.7: The physical characteristics of each monument at Le Motel, Fresnes-lès-Montauban. M4 is interpreted as the heavily truncated and eroded remains of a small double ring ditched monument.

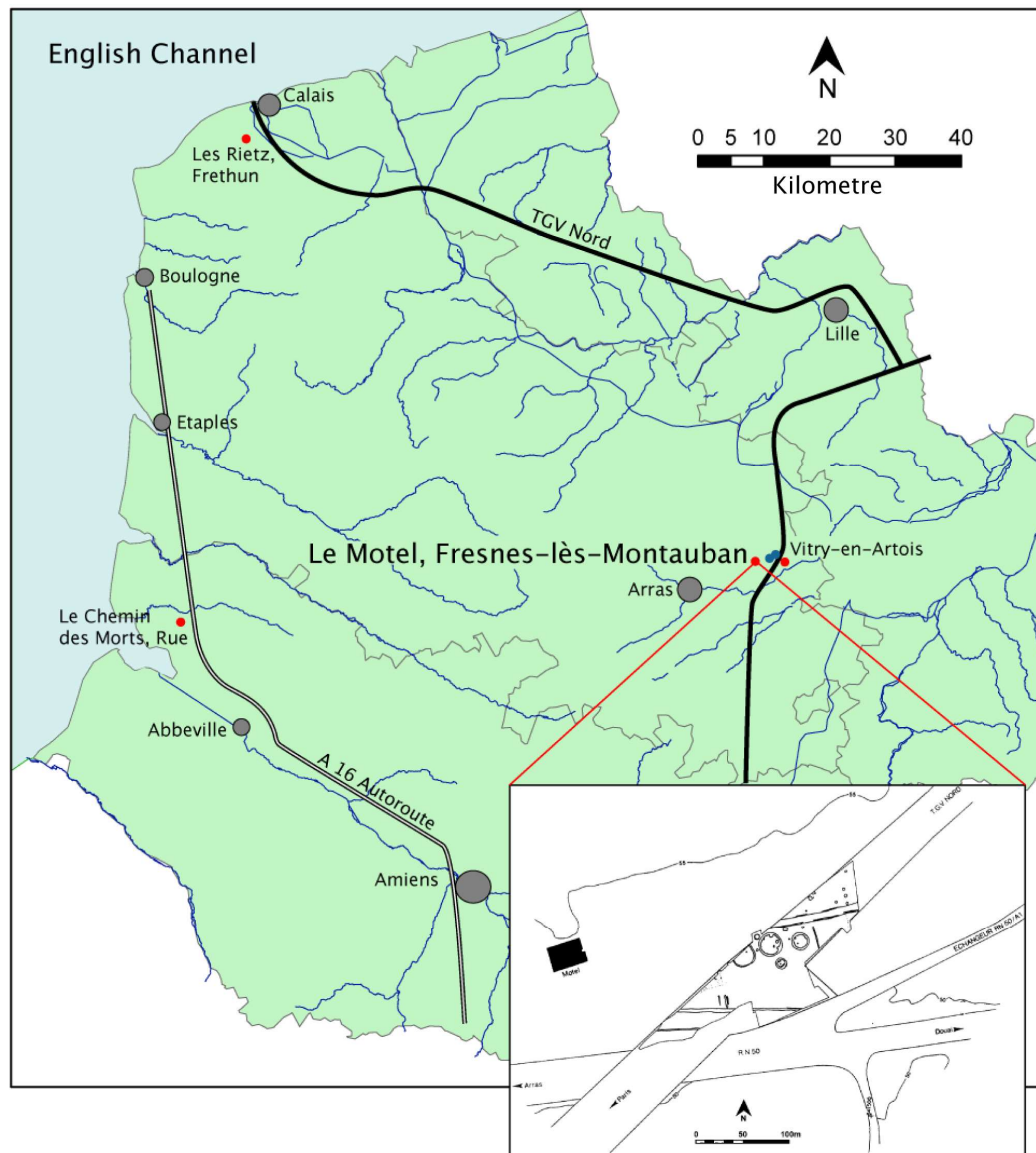


Fig 6.44: (Above) The site of Le Motel, Fresnes-lès-Montauban is marked along with nearby excavated (red) and unexcavated (blue) monuments. Only one other monument, that of Les Rietz, Frethun, has provided an inhumation burial with a radiocarbon date that fits the research chronology. However, excavations at Vitry-en-Artois and Rue, also marked on the map, did return suitable radiocarbon dates from cremations in inverted urns.

Inset: A plan of the excavation at Fresnes-lès-Mantauban showing the TGV route and main roads. Also note the position of the 55m contour line marking the valley topography.

Her grave was at variance to the other crouched inhumations at Le Motel, firstly because the alignment was different and also because she was buried with grave goods: A dog's tooth with a perforation was discovered close to her right elbow and a spiral of bronze wire was found next to the right auditory canal of her skull. Both items were most likely bodily adornments: the tooth being part of an armlet and the wire an earring or possibly a hair tress (Fig 6.46).

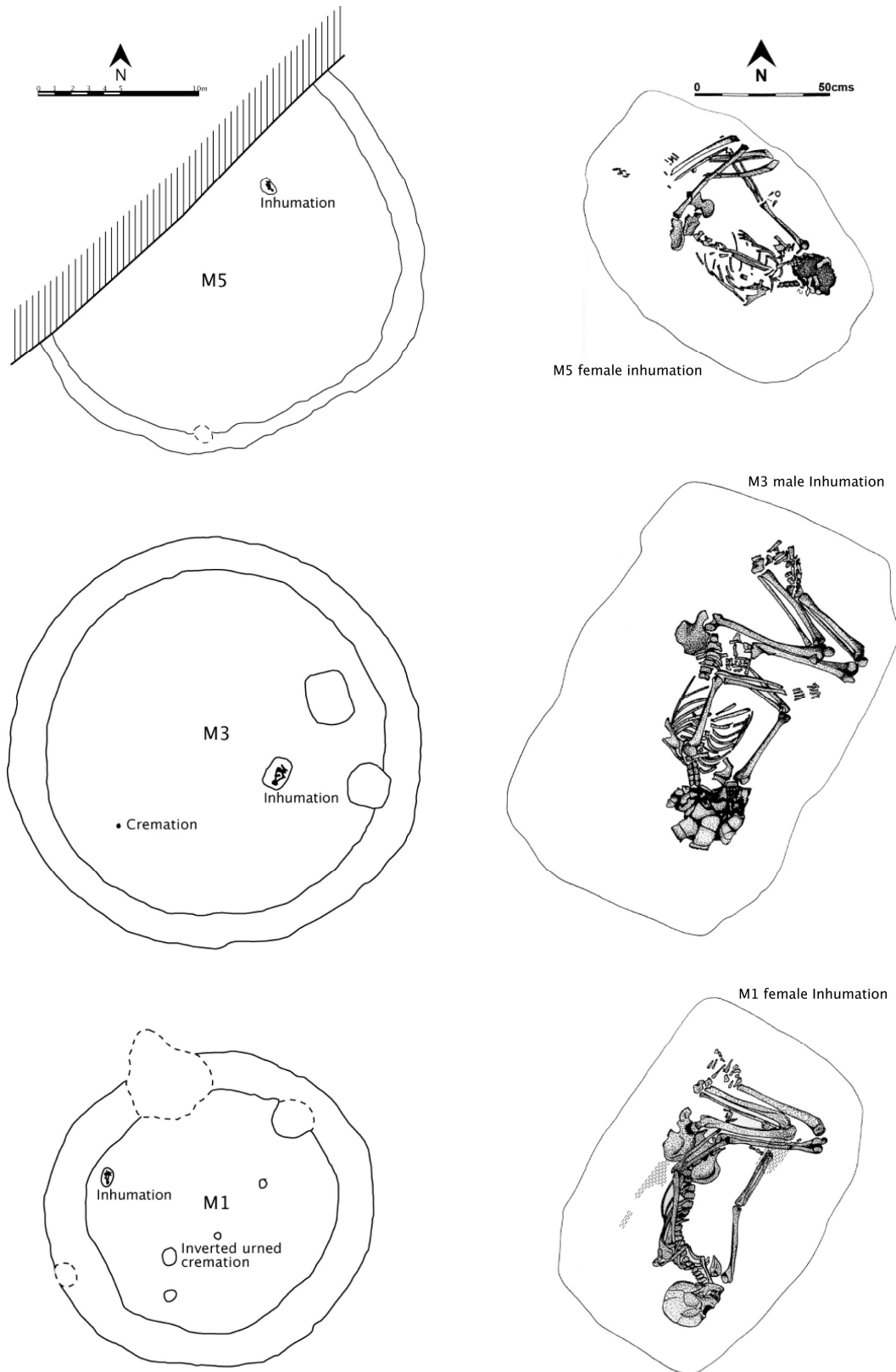


Fig 6.45: The three circular monuments at Le Motel, Fresnes-lès-Montauban, showing grave positions within the ring ditches and (right) illustrations of the respective skeleton depositions. The author drew the annotated ring ditch plans. The grave illustrations were digitized and amended (after Desfossés and Masson 2000).

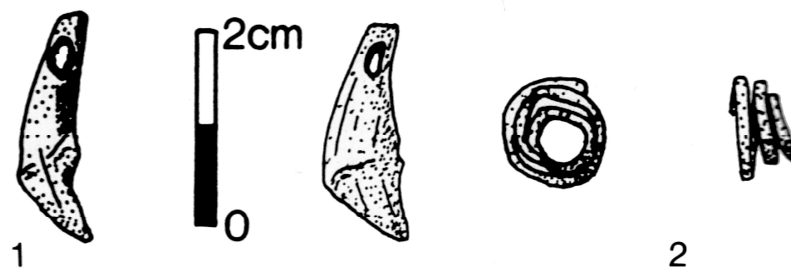
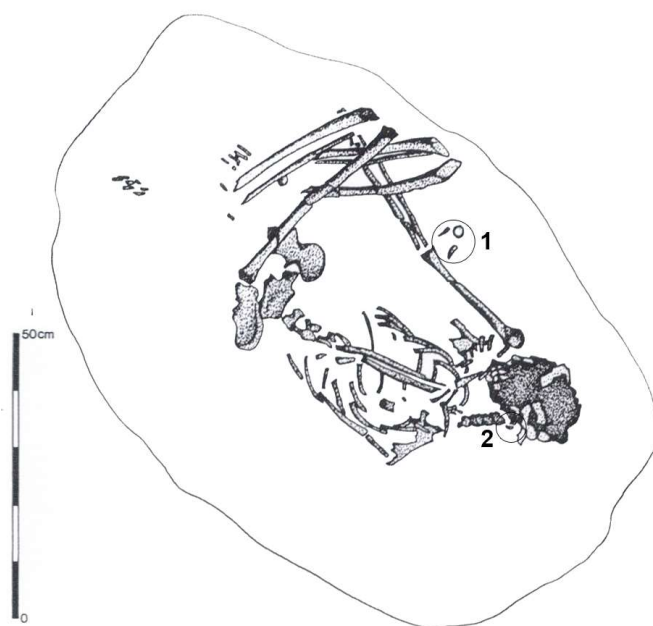


Fig 6.46:  
 (Above) The dog's teeth and the coiled bronze wire found with in the grave of a woman at ring ditch M5 of Le Motel, Fresnes-lès-Montauban



(Left) A drawing of the grave and the skeleton from M5 with the positions of the grave goods marked.

Both illustrations (after Desfossés and Masson 2000, 40).

The crouched inhumations in M3 and M1 occurred within a short time of one another, as they returning dates of  $3355 \pm 60$  BP (Ly 5335) and  $3380 \pm 50$  BP (Ly 5336), respectively. Calibration suggests that both deaths took place after 1850 BC, probably around the end of Veruz's Bronze Ancien (A2) period (Section 1.4, Table 1.4). The crouched burial inside M3 was of a young man aged between 16-20 years. He was 1.64m (5ft. 4ins.) tall and laid on his right side with head to the south, facing east. His grave was to the east of the monument's centre and orientated north-east/south-west. It was two metres long, 1.3m wide and was 0.4m deep. Ring ditch M1 was to the east of, and smaller than, the other two, with a diameter of 19m (taken from the centre of the ditch cut). Located just inside the encircled area on the western side was the well-preserved crouched inhumation of a woman. She was approximately 1.54m (5ft.) tall and aged between 35-40 years at death. Her grave was orientated north-east/south-west – the same as the M3 grave - and measured 1.3m x 0.9m x 0.6m. She too had been laid on her right side with her head to the south, facing east (Desfossés and Masson 2000, 26-28).



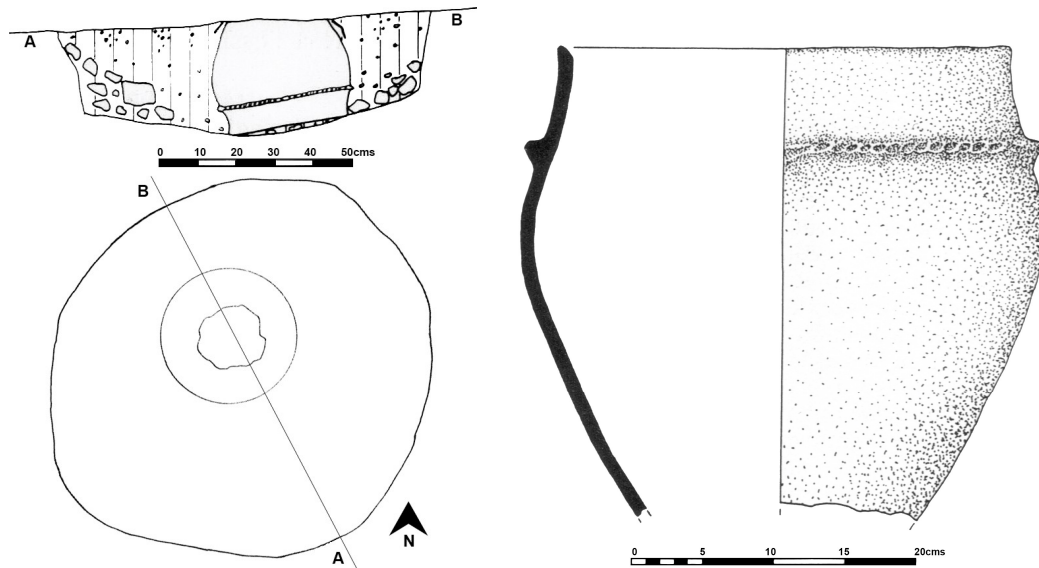


Fig 6.47: A plan and section of the inverted urned cremation from ring ditch M1 at Le Motel, Fresnes-lès-Montauban and an illustration of the recovered vessel. Digitised and annotated by the author (after Defosses and Masson).

Both monuments also contained cremations: M3 had a badly damaged urned deposition and there was a cremation in an inverted pot found inside M1 (Fig 6.47). Unfortunately, neither was radiocarbon dated, but typologically the latter vessel belongs to the *'groupe des urnes a décor plastique'*, thought to date from the Bronze Ancien A2 period (Buche and Talon 2005, 165-166 and fig. 6; Bourgeois and Talon 2009, 52-56). An indication of the age of this burial can be gained from similar inverted urn cremations (Fig 6.48) that have been radiocarbon dated and found elsewhere in the region: Les Colombiers, Vitry-en-Artois, 3220±60 BP (GIF 7258), is a few kilometres east of the Le Motel site and Le Chemin de Morts, Rue, 3295±40 BP (GrA 14510), is to the south of the river Maye, close to the Somme estuary.



Fig 6.48: The biconical urn from Les Colombiers, Vitry-en-Artois (after Azagury & Demolon).

Their dates suggest both burials occurred around 1500 BC, which would accord with the Le Motel example – although in each case the vessel types varied; the one from Vitry-en-Artois was biconical with an everted rim (Fig 6.48) and the Rue pot, although poorly preserved, was identified as coming from the Eramecourt tradition, which resonates with British Deverel Rimbury pottery.

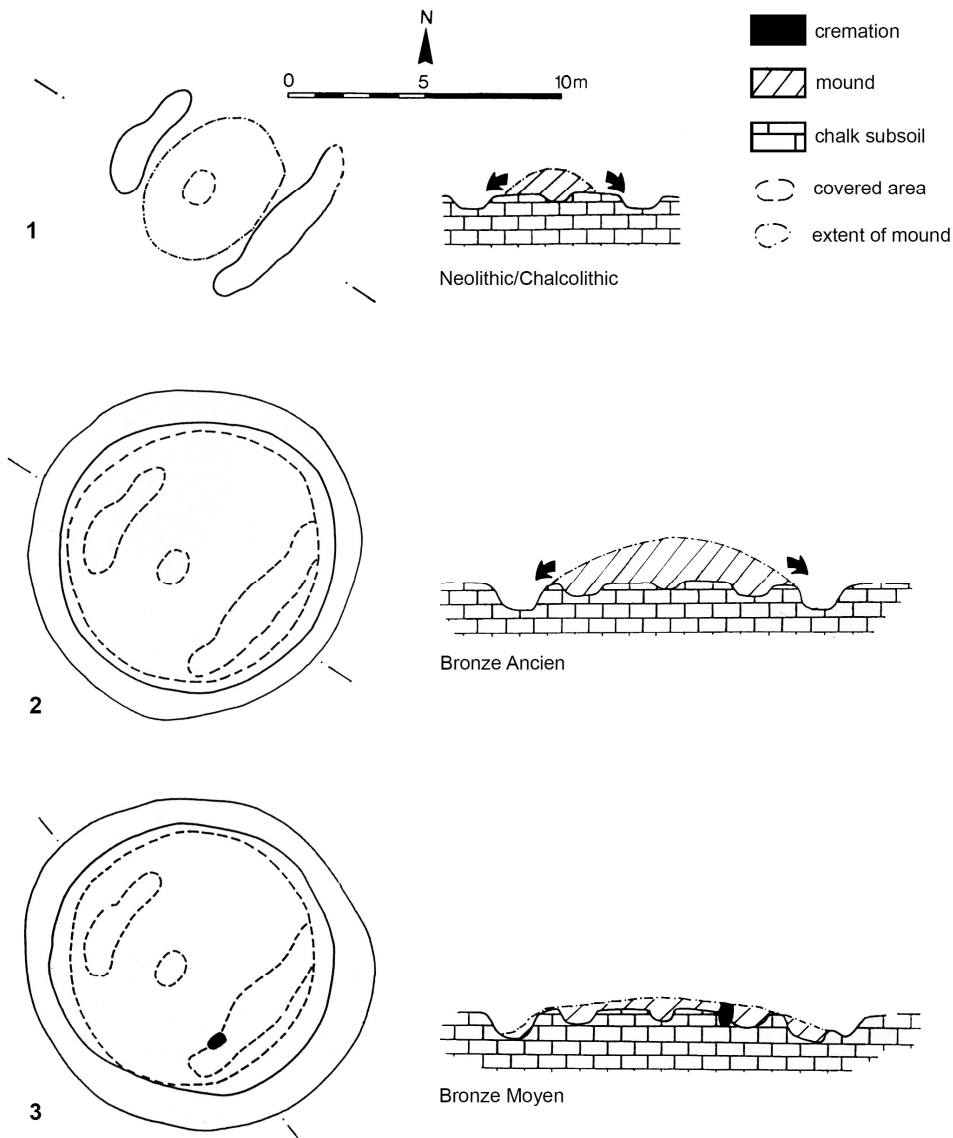


Fig 6.49: Ring ditch M4 at Le Motel, Fresnes-lès-Montauban shown here separated into Desfosses' three phases (2000, 56, Fig 35). Redrawn digitally and annotated by the author.

Le Motel ring ditch M2 also produced a cremation but this was severely truncated by plough action and in very poor state of preservation. M4 contained an urned cremation that was in better condition, but this monument is more interesting for the signs it shows of having been a complex, multi-phased, structure (Fig 6.49). At 12m in diameter it is small; even so, within its enclosure there were indications

of another ditch, possibly with opposing entrances. There was also evidence that a small mound had been raised to cover or mark a central grave, although nothing remained of the burial. The oval shaped cut – measuring 1.5m x 0.8m x 0.15m – is on the same south-east/north-west alignment as the graves in M1 and M3. Defosses and Masson believe M4 to be the site's founder monument (2000, 57), which would mean that it was constructed in the latter part of the third millennium BC and potentially remained in use up to a 1000 years later.

### **Les Rietz, Frethun**

The only other significant radiocarbon dated burial from within the French study zone is a crouched inhumation found at Les Rietz, Frethun, during excavations in advance of the Channel Tunnel construction (Bostyn *et al.* 1990; Bostyn *et al.* 2000b). It is also the regions only excavated example of a triple ring ditched monument, although aerial photography in the Somme valley has detected another eight monuments potentially of this type (Fig 6.50).

Les Rietz was itself discovered through aerial photography in 1976 along with other simpler monuments in the immediate vicinity (Fig 6.51), a few of which remain unexcavated due to being outside the Tunnel development area. Their position in the wider landscape is particularly notable: when seen topographically it is clear they are located on rising ground just above the maritime plain which stretches from Calais away to the north-east (Fig 6.52). Les Rietz, in particular, is sited on a chalky plateau at the edge of '*des collines de l'Artois*' overlooking a river valley. The modern-day Channel coast is five kilometres away to the north and west. However, this area is known to have suffered a number of marine transgressions; the first, called the Calais Assise, took place between 4500-2800 BC and the second, the Assise of Dunkerque, is divided into three phases beginning at around 2000 BC (Ampe *et al.* 1996b, 50). It is quite possible, therefore, that when these monuments were constructed they overlooked the sea or at the very least inhospitable tidal salt marshes.

Les Rietz is the largest circular monument to be excavated in north-eastern Transmanche France, but three others are potentially analogous – one, Le Crocs St Pierre, Crotoy, almost certainly has triple concentric ditches and is similarly sited

close to the channel coast, on the northern side of the Somme estuary. The other two, Sole de Baillon, Abbeville and Hameau de Bellifontaine, Bailleul, show up as large single ring ditches – although it is possible that they have additional circuits that the aerial photographs do not reveal. Single ring ditches of this diameter are often referred to by the more general epithet ‘enclosure’, due to the fact that their anomalous size could be an indication that they were used for something other than funerary activities.



Fig 6.50: Map showing the location of the triple ring ditched monument at Les Rietz, Frethun, along with other potentially similar large or complex monuments in the Somme region located through aerial photography. Those named on the map have been recorded as 60m or greater in diameter (actual sizes in brackets).

Les Rietz’ outer ring is certainly of this magnitude, but the original monument may have been more modestly proportioned. The profile of the outer ring ditch shows it as having a one metre wide flat bottom, whilst the inner rings are cut as distinct ‘V’s (Fig 6.53). There is no obvious reason for this constructional change,

particularly as the entire area has the same chalk subsoil. It is, therefore, quite possibly indicative of a later building phase. Additionally, evidence for raised earth between the inner and middle ditches, which was interpreted by the excavator as a bank, could actually be the remnants of a central mound covering the inner ring. This would explain why analysis of the ditch strongly suggested that it was filled in within a few years (Bostyn *et al.* 2000b, 113).

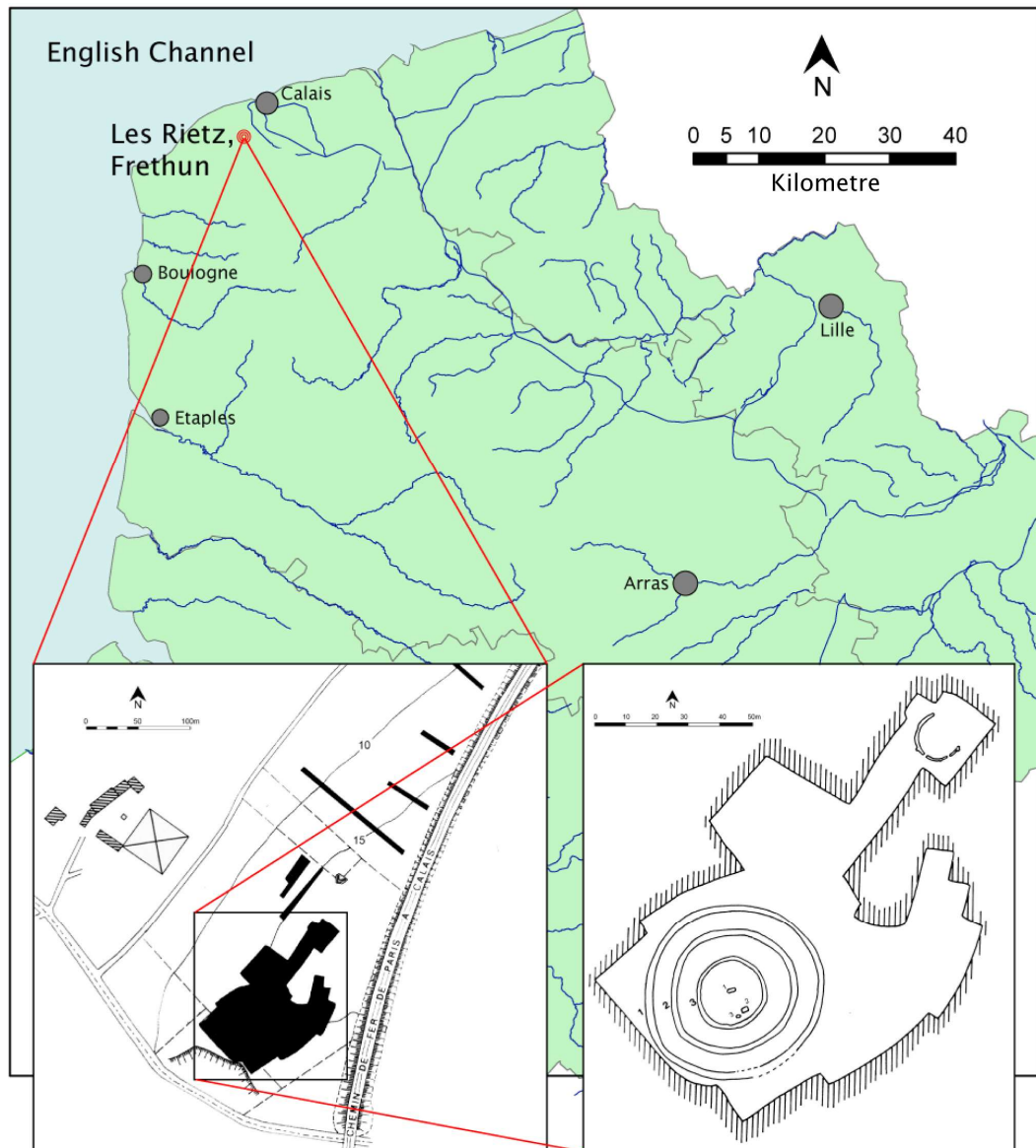


Fig 6.51: Map showing the location of Les Rietz, Frethun. Inset left: The excavation limits in black. Inset right: A plan of the monument and a smaller interrupted circuit nearby (after Bostyn *et al.* 2000b, Fig 3 and Fig 4).

These factors can be interpreted as the consequences of monumental aggrandisement; but it is also possible that construction of the outer circuits and the mound (Fig 6.54) were prompted by a change of use. Neither interpretation accords with the established French view. Archaeologists there believe that Les

Rietz was planned and executed in one phase, essentially because the monument displays an overall symmetry – primarily its evenly spaced ditch circuits – implying, in their eyes, that it was conceived as a single entity.

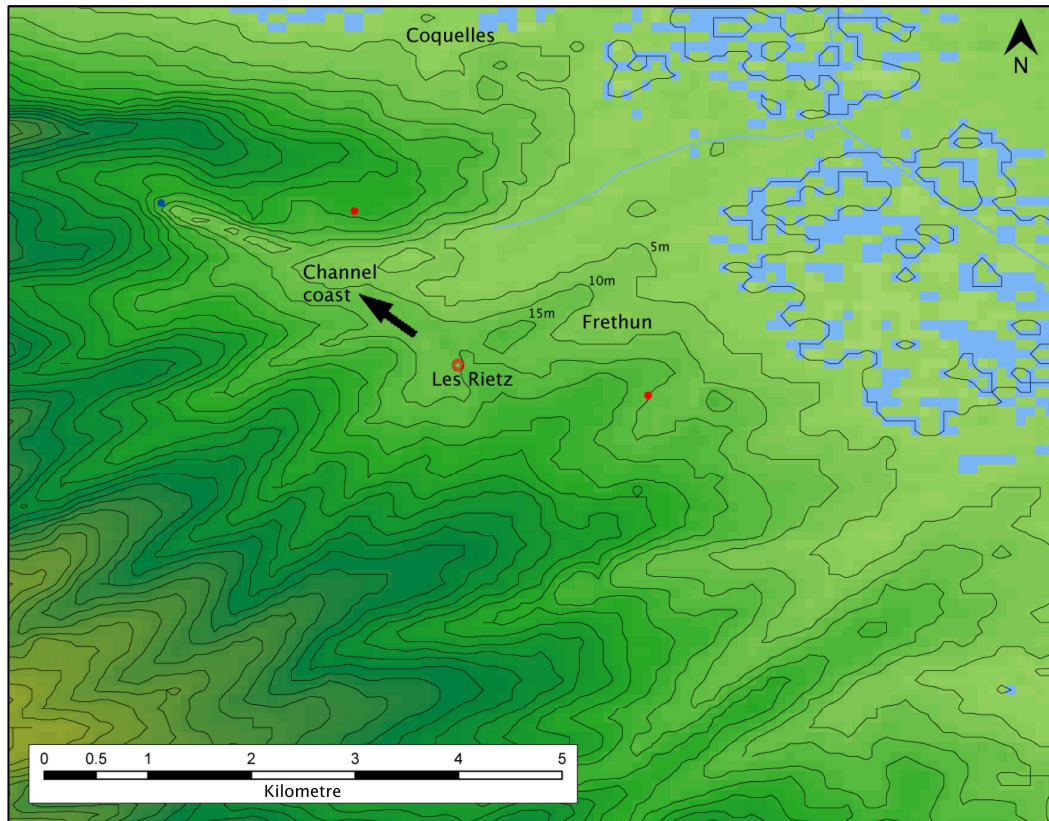


Fig 6.52: The monument at Les Rietz, Frethun, shown on this topographic map along with other known sites containing Bronze Age ring ditches. The light blue areas denote land which is at, or close to, present day sea levels. The darker blue dot denotes an unexcavated circular crop mark and the red dots excavated ring ditches. Illustration created by the author using Arcview 9.2 and Adobe Illustrator from data supplied by NASA's Shuttle Radar Topography Mission.

Regardless of the monument's construction sequence at some stage burials were an integral function of Les Rietz in much the same way that they were for so many late Neolithic and Bronze Age circular monuments. Evidence comes from a crouched inhumation, which was radiocarbon dated to  $3310 \pm 60$  BP (GIF 8928), placing it in the first half of the second millennium BC. This burial was located close to the inner ditch in a 2.6m x 1.7m pit orientated south-west/north-east.

Within this cut were the remains of an adult female laying on her right side with head to the east, facing south – a similar alignment to the M3 and M1 burials at Le Motel, Fresnes-lès-Montauban. The lower part of her skeleton was disconnected from the upper, and most of the bones from her arms and abdominal area were missing, suggesting post depositional disturbance, most probably during the medieval period (Fig 6.55). Hers was almost certainly a secondary burial

because at the middle of the central 22m-diameter enclosure was a larger pit on a similar orientation (Figs 6.56). Unfortunately, it had been truncated during the medieval period. Nevertheless, there was sufficient evidence to conclude that it once had a mortuarial function.

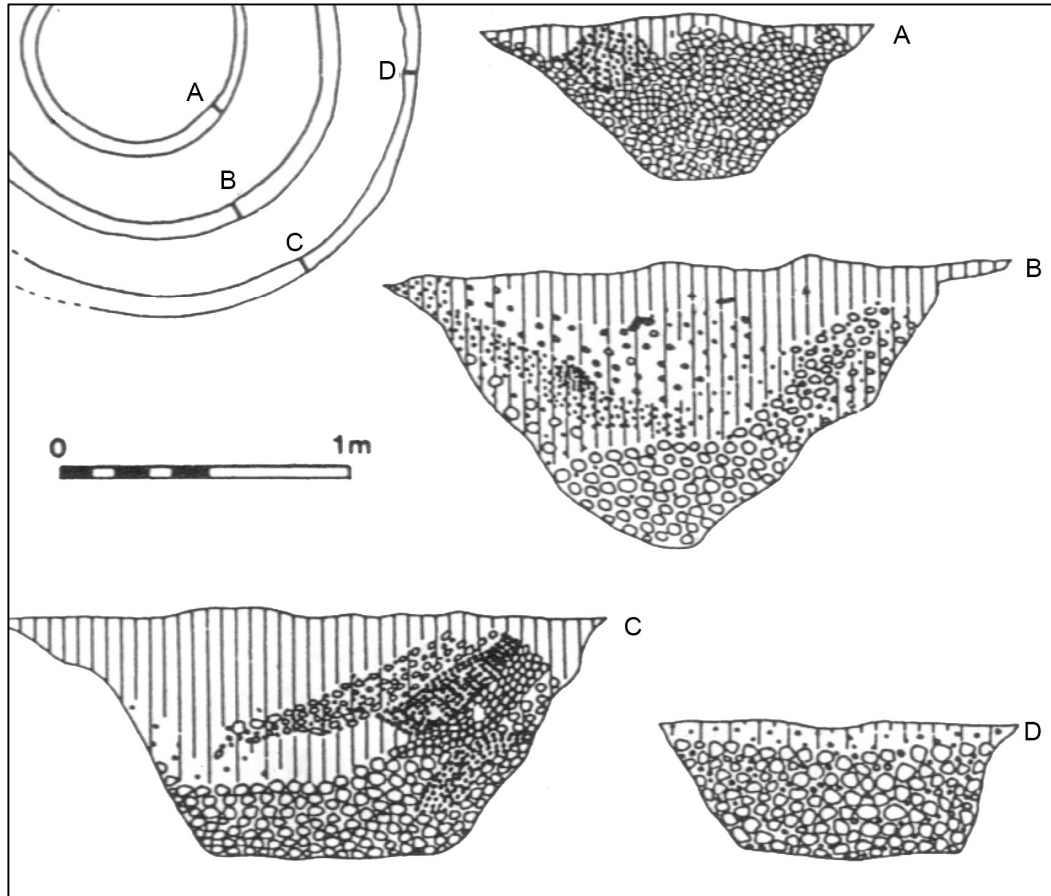


Fig 6.53: Examples of the ditch profiles from all three ditches. D shows the effect of truncation and erosion on certain sections of the outer ditch. Digitally enhanced and annotated by the author (after Bostyn *et al.* 2000b, fig 7).

It appears to have been more than just a simple grave (Fig 6.57) being described by the excavator as: “*cette structure très peculièere*” (Bostyn *et al.* 2000b, 118). It consisted of an elongated pit, a metre wide and originally more than three metres in length. Each side was lined with locally sourced flint nodules that had been carefully selected to ensure consistency of size. They had been precisely laid, in order to create a substantial walled interior standing at least three courses high, but apparently stopping short of the top.

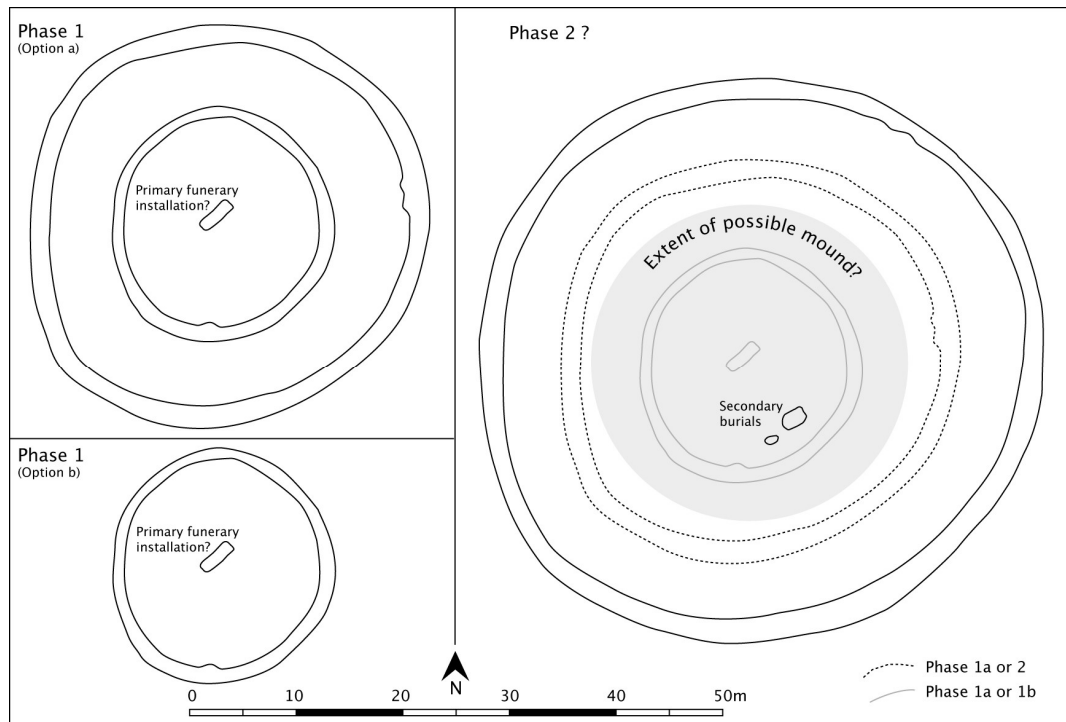


Fig 6.54: Proposed two phase development of Les Rietz: Option 1a shows it as a double ditched monument which had an outer ring added later; Option 1b shows a simple single ring ditch which was superseded by a double ditched monument – author’s scheme, drawn (after Bostyn *et al.* 2000b, Fig 3).

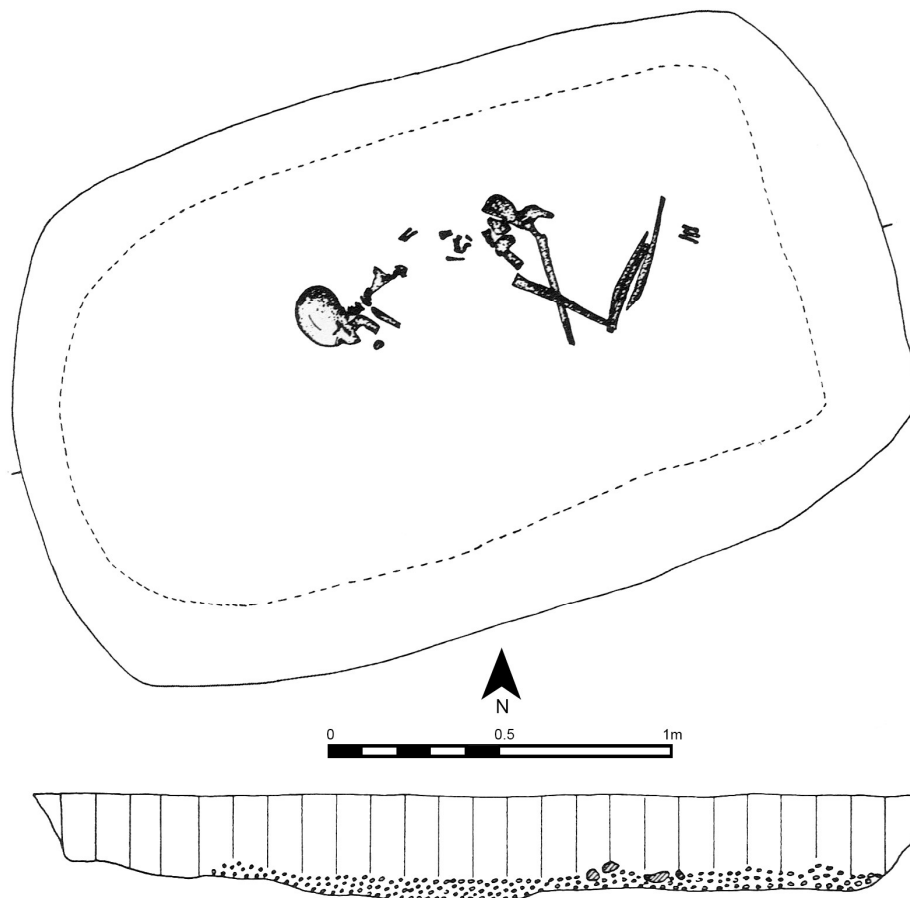


Fig 6.55: A plan and Section drawing of the crouched inhumation at Les Rietz (after Bostyn *et al.* 2000b, Fig 10).



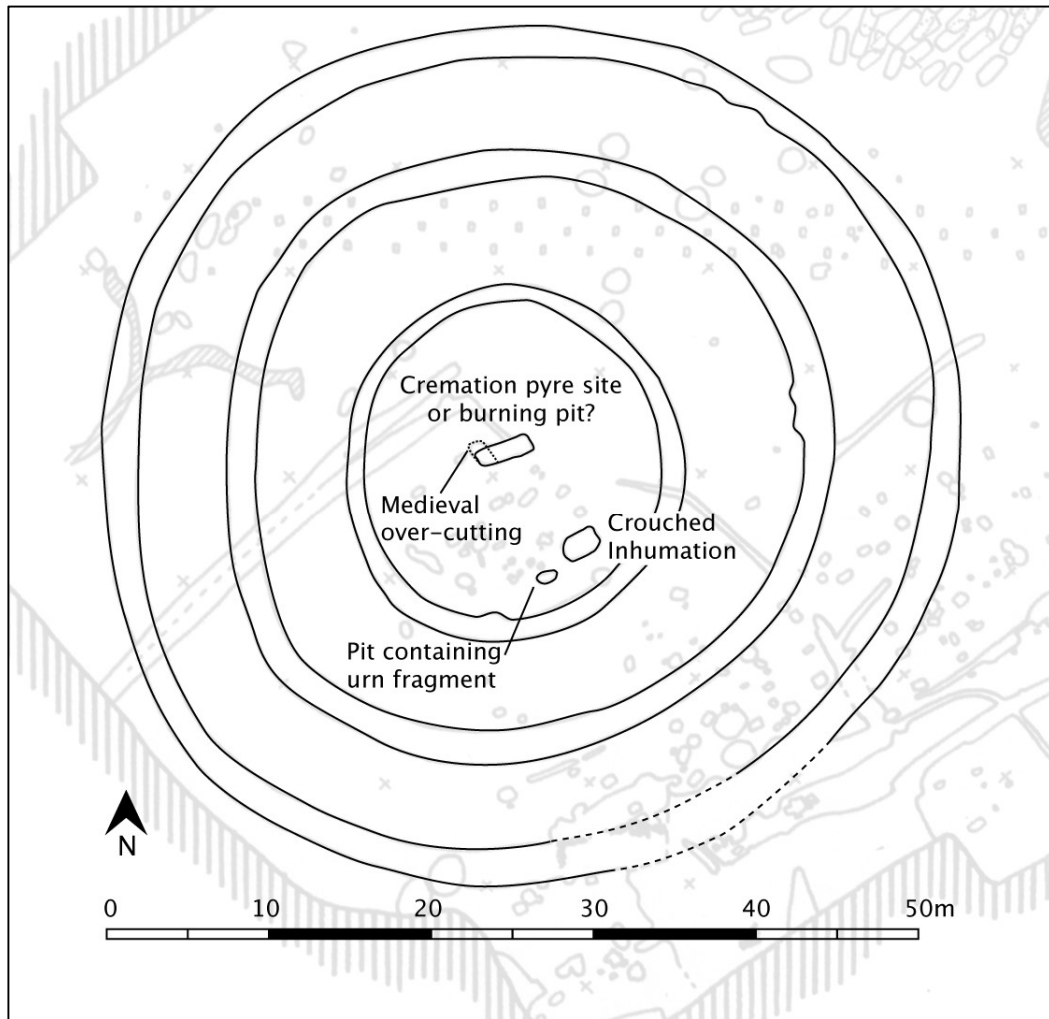


Fig 6.56: Plan showing all three ditches at Les Rietz, Frethun along with the confirmed Bronze Age features. Greyed out in the background are excavated features from other periods including the medieval ditch, which cut the central Bronze Age pit. Drawn by the author (after Bostyn *et al.* 2000b).

At the south-western end, separated by a line of flint nodules, was an area of intense burning which had scorched the flint walls and covered the base of the pit with charcoal to a depth of two centimetres. Mixed in with this were fragments of ‘terracotta’. A small piece of human skull was also recovered from this area. Radiocarbon dating was not carried out, but the pit’s position at the centre of the monument would seem to suggest that it was an integral part of the original design.

Finally, there were indications of other cremation deposits - typologically dated to the Bronze Ancien (A2) period, based on sherds from a vessel belonging to the ‘*groupe des urnes à décor plastique*’ (Fig 6.58). The first had been deposited in a small pit, located close to the southern perimeter of the inner ditch. It was severely truncated, being no deeper than 15cms, possibly because it had been originally

dug into the mound, which subsequently eroded away. Whatever the process, the result was that any other traces that may have supported a funerary interpretation had gone. A similar, but better-preserved vessel was recovered nearby, from the uppermost fill of the inner ditch, allowing its complete form to be reconstructed (Fig 6.59). It too may have come from a disturbed cremation.

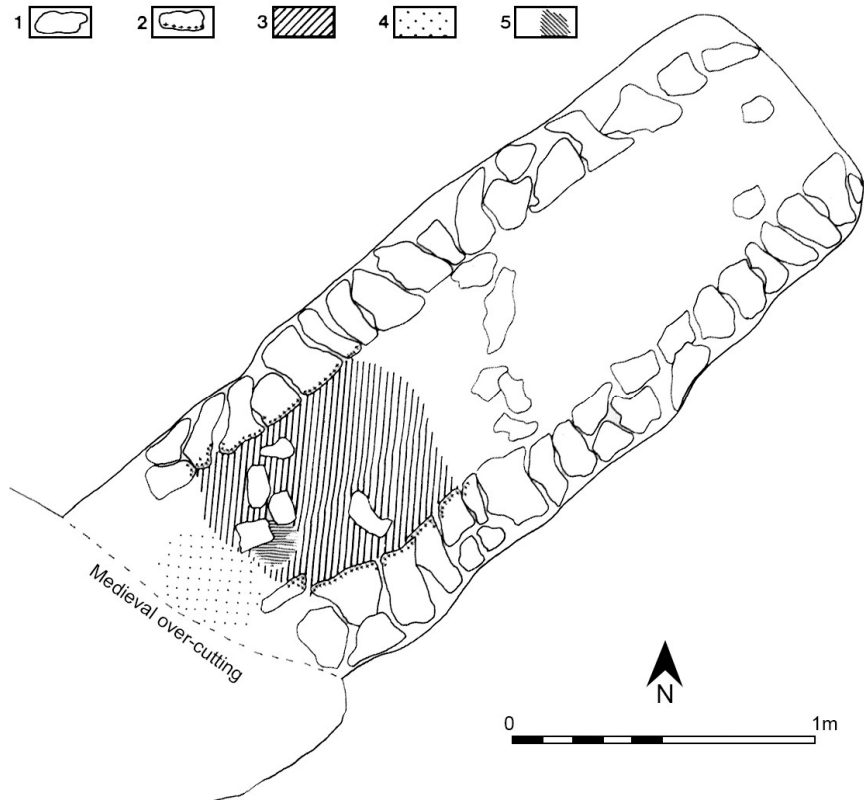


Fig 6.57: The central pit at Les Rietz, interpreted as an elaborate funerary installation. 1. Flint nodules; 2. Burnt flint nodules; 3. Area of intense burning, charcoal and terracotta; 4. Chalk showing signs of burning; 6. Location of skull impression and fragment. Annotated and digitally enhanced by the author (after Bostyn *et al.* 2000b, Fig 13).

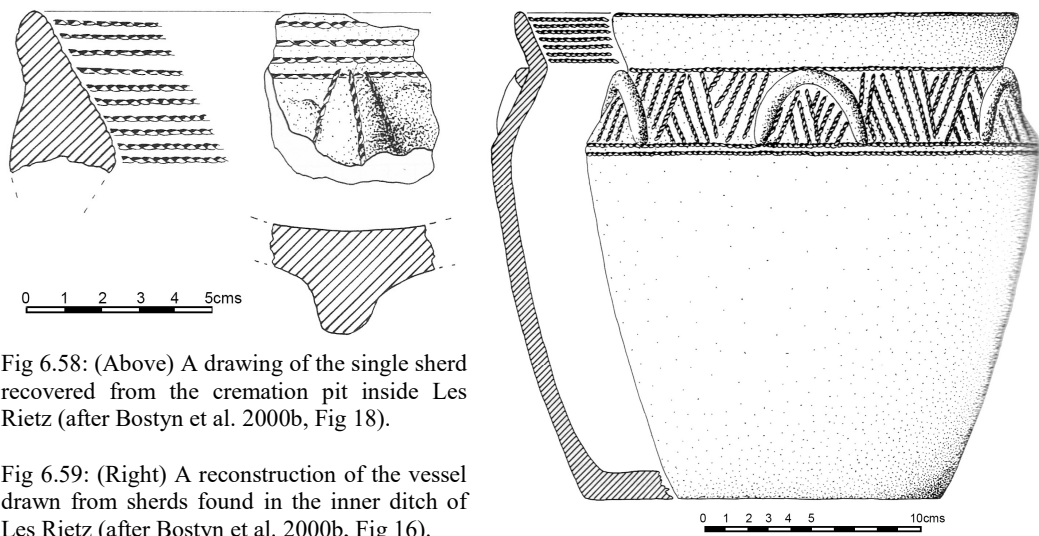


Fig 6.58: (Above) A drawing of the single sherd recovered from the cremation pit inside Les Rietz (after Bostyn *et al.* 2000b, Fig 18).

Fig 6.59: (Right) A reconstruction of the vessel drawn from sherds found in the inner ditch of Les Rietz (after Bostyn *et al.* 2000b, Fig 16).

## 6.4 SUMMARY OF BURIAL DEPOSITIONS

### 6.4.1 Inhumations

There are a total of 73 excavated (non-Beaker) inhumation burials that are either absolutely or typologically dated to within the research chronology. Of those, 65 are from Kent, with the remainder coming from the French zone (Table 6.8). This asymmetrical spread of evidence detrimentally impacts on inter-zonal comparisons, but does not prevent quantitative analysis from revealing general trends.

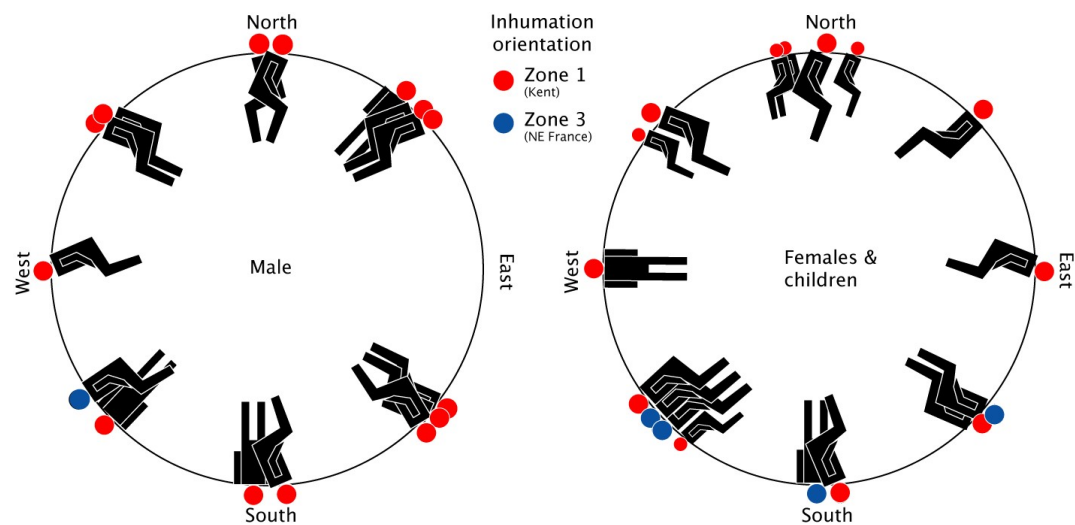


Fig 6.60: Diagrams illustrating the orientation of inhumation burials for men, women and children in Zones 1 and 3. Compiled and drawn by the author.

Neither age nor gender appears to have influenced a person's eligibility to be buried within a ring ditch or barrow mound. Almost as many women as men have been identified and whilst children form a minority, this may reflect the fact that their remains were simply not robust enough to survive through to the modern era. Patterns of orientation and deposition are apparent, but investing these with meanings presents many challenges (Fig 6.60). It is clear that bodies were treated respectfully and placed in the grave with deliberation.

The most distinct trait appears to be a preference for corpses to be crouched on their right sides: 34 have been recovered in this position; of which it is possible to determine that eight were men, seven were women and four were children. The sex of the others was indeterminate. A further 17 bodies were found crouched on their left sides: four men, three women, two children and eight of unknown gender. Three bodies were discovered lying face-up, 16 were simply recorded as crouched and the remainder were disarticulated or poorly preserved.

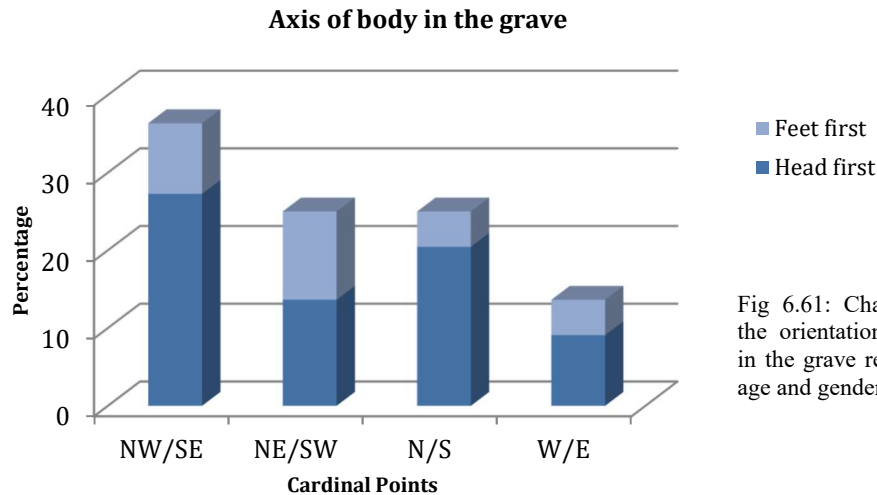


Fig 6.61: Chart showing the orientation of bodies in the grave regardless of age and gender.

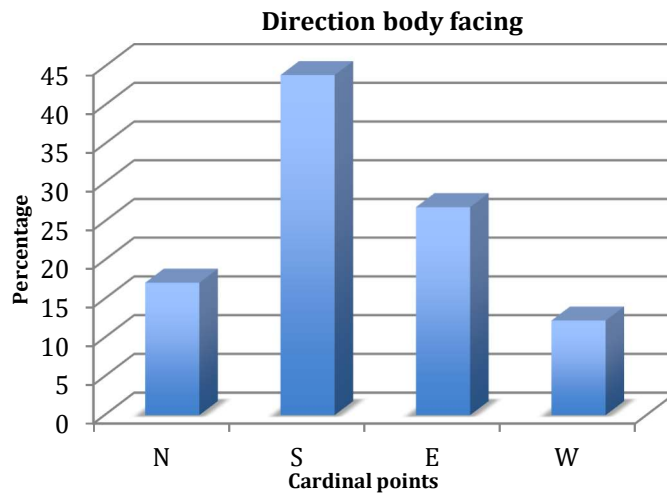


Fig 6.62: Chart showing the direction in which the bodies were facing to the nearest cardinal point.

The most common orientation overall was a NW-SE alignment, and the bodies tended by a considerable margin to be facing towards the south (Figs 6.61 and 6.62), but every other direction and alignment was also represented to some extent, with the least popular being the W-E axis. In general it is accepted that crouched burials dating to the period 2400 BC – 1700 BC tended to be laid facing east, with males on their right sides and females on their left (Parker Pearson 2003, 54). Only a small proportion of the non-Beaker Transmanche dataset complies with these rules. In fact, it seems more the case that depositional configurations were determined according to individual or monument specific tradition, as can be evidenced from the monuments at South Dumpton Down, White Caps, Eden Roc and Fresnes-lès-Montauban – all of which have burials which suggest that during certain periods in their use-life specific local rites were being applied to successive burials. That these ‘rules’ could change over time is also evident.

Monument	Type	Age	Deposition	Oriented	Facing
<b>Zone 1 – Kent - Males</b>					
Haynes Farm, Eythorne, nr Dover	Crouched right	Adult (mid 20s)	Grave cut into ditch fill	SE-NW	N
South Dumpton Down, Broadstairs	Crouched right	Adult (late 50s)	In pit A	SE-NW	N
	Crouched left	Juvenile (13-17)	Across pits A and B	NE-SW	S
	Crouched left	Adult (23+)	In pit B	NE-SW	S
	Crouched left	Adult	In pit A	SE -NW	S
White Caps, Whit-Eastry bypass	Crouched right	Adult (30-35)	Encoffined in pit	NW-SE	S
Hill Road, Wouldham	Crouched right	Young adult	In pit within enclosure	N-S	W
N.Foreland Avenue, Broadstairs	Crouched	Adult (under 25)	In pit within enclosure	S-N	
St Stephen's Col, Broadstairs	Crouched left	Adult (30-40)	In ring ditch enclosure	N-S	E
Chalk Hill, Ramsgate	Crouched right	Adult (30-40)	In pit outside enclosure	NW-SE	S
Greyhound Stadium, Ramsgate	Extended face-up	Adult	In pit within enclosure	SW-NE	
Saltwood Tunnel, Folkestone	Crouched right	Adult	Centrally in mound	S-N	E
Lord of the Manor (LOTM)1	Crouched right	Adult		W-E	S
	Crouched face up	Adult		NE-SW	
<b>Zone 3 - NE France - Males</b>					
Le Motel, Fresnes-lès-Montauban M3	Crouched right	Adult (16-20)	In a grave pit	SW-NE	S

Monument	Type	Age	Deposition	Oriented	Facing
<b>Zone 1 – Kent - Females</b>					
S Dumpton Down, Ramsgate	Crouched left	Adult	In pit A	N-S	E
Castle Hill, Folkestone	Crouched	Adult	In a grave pit.	W-E	
Whitehill Road, Southfleet	Crouched right	Adult (17-25)	In pit, in ditch	NE-SW	N
N Foreland Avenue, Broadstairs	Crouched right	Adult (25-58)	In pit outside enclosure	S-N	E
Saltwood Tunnel, Folkestone	Crouched left	Adult	Flat grave	E-W	S
Lord of the Manor (LoTM)1	Crouched right	Adult	In ditch	SE-NW	N
	Crouched left	Adult (under 25)	In pit outside enclosure	SW-NE	N
	Crouched right	Adult (under 25)	In pit within enclosure	NW-SE	S
<b>Zone 3 - NE France - Females</b>					
Coquelles RN1 M10	Crouched	Adult	Grave pit in ditch	S-N	
Fresnes-lès-Montauban M5	Crouched right	Adult (circa 20)	In grave pit	SE- NW	N
Fresnes-lès-Montauban M1	Crouched right	Adult (35-40)	In grave pit	SW-NE	S
Les Rietz, Frethun	Crouched right	Adult	In grave pit	SW-NE	S

Monument	Type	Age	Deposition	Oriented	Facing
<b>Zone 1 – Kent - Children</b>					
S Dumpton Down, Broadstairs	Crouched left	Infant (und-4 yrs)	In pit B	NW-SE	S
White Caps, Whitfield-Eastry bypass	Crouched right	Baby (8-mths)	In burial pit cutting ditch	N-S	W
	Crouched left	Child (5-yrs)	In pit cutting ditch	N-S	E
	Crouched right	Infant (und-3 yrs)	In grave pit	N-S	W
	Crouched right	Child (5-yrs)	In a grave pit	NW-SE	S
St Stephen's, Broadstairs, M3	Crouched right	Child (4-13 yrs)	In terminal end of ditch	SW-NE	S

Table 6.8: Ring ditch associated inhumations from each of study zones 1 and 3 that are absolutely or typologically dated to the period prior to 1500 BC.

### 6.4.2 Cremations

Evidence for cremation is more evenly spread geographically than that of inhumation burials; but it presents a more intractable problem. Very few have been radiocarbon dated and whilst pottery typology can eliminate later cremations a significant number are placed, by the same means, within very broad time-spans, which in total cover the middle 600 years of the second millennium BC. It is therefore difficult to determine whether a particular burial comes within the research parameters. Table 6.9 provides a list of those that are considered to date no later than 1300 BC, with further details provided in Appendix C.

There are notable exceptions to this uncertainty: Hill Road, Wouldham; White Caps, Whitfield-Eastray bypass; Gent Hogeweg; Oedelem Wulfsberge I; Le Rietz, Frethun; Le Colombiers, Vitry-en-Artois; Chemin des Morts, Rue; Le Motel, Fresnes-lès-Montauban - all of which are discussed above. In one or two cases the evidence corroborates the accepted paradigm that cremations were a minority rite from very early on. Eyehorne Street, Hollingbourne, for example provides radiocarbon dates that may indicate cremations took place prior to 2000 BC at -3742±40 (NZA 20419) and 3648±35 (NZA 20420) (Hayden 2005). In Zone 2, Kruishoutem-Wijkhuis (see Section 5.4 on Beaker burials for details of this site) provides an earlier date of 4036±189 (IRPA D.131).

However, the majority of cremation burials recorded in the research dataset date much later than either of these and support the long held observation that this funerary rite increased in popularity across Britain and north-western Europe after about 1750 BC, eventually eclipsing inhumation burials (Needham 1996, 132-133). During the same period construction of new circular monuments is also said to have declined (Garwood 2008), a contention that is supported by a range of evidence from all three of the study zones, including the fact that many cremations, particularly in Kent, are found in circumstances that suggest they were secondary or later additions within pre-existing structures.

Monument	Inverted urn	Urned	Urned
<b>Zone 1 – Kent - Cremations</b>			
Hill Road, Wouldham	∆		
Northumberland Bottom	∆		
LOTM 6	∆		
Staines Hill, Westbere	∆		
‘Salterfen’, Godmersham	∆	∩	
Dover Road, Capel-Le-Ferne	∆	∩	
Bon Secours, Ramsgate	∆x3	∩x3	
Tutt Hill, Westwell	∆	∩x2	
Monkton-Mount Pleasant	∆x3	∩x4	#
White Caps, Whitfield-Eastray bypass	∆	∩	#x2
Parish Field gravel pit, Aylesford		∩	
High Street, Cheriton		∩	
Monkton-Mount Pleasant Area 7		∩	
Springhead, nr Gravesend		∩	
The Street, Iwade		∩	
Parish Fields, Aylesford		∩	
Epps Farm, Rochester		∩	
High Street, Cheriton		∩	
Kingston Down, Kingston		∩	
LOTM1		∩	
LOTM3		∩	
LOTM4		∩	
LOTM8		∩	
Beechbrook Wood, Hothfield		∩x2	#
Saltwood Tunnel, Folkestone			#x16
Eyehorne Street, Hollingbourne			#x2
Royal Marines’ Barracks, Deal			#
Hawkinge Aerodrome			#
<b>Zone 2 – Flanders - Cremations</b>			
Gent Hog Weg			#
Destelbergen Eeenbeekiende			#
Oedelem Wulfsberge			#
<b>Zone 3 – NE France - Cremations</b>			
Le Motel, Fresnes-lès-Montauban M1	∆		
Le Chemin des Morts, Rue	∆		
Les Colombiers, Vitry-en-Artois	∆		
Le Motel, Fresnes-lès-Montauban M3		∩	
Les Dix-huit, Fontaine-Notre-Dame		∩	
Les Rietz, Frethun		∩x2	
La Fontaine aux Linottes, La Colotterie		∩	
Les Quatres, Crouy-saint-Pierre		∩	
Herquelingue, Isques		∩	#
La Frénésie, Conchil-le-Temple C			#x9
Coquelles RN1 M1			#
La Neuvireuil, Dainville			#
Coquelles RN1 M10			#
Les Arguillières, Frethun			#x2

Table 6.9: A summary of ring ditch associated cremations from each of the study zones, many of which may date earlier than 1500 BC. All are considered unlikely to date later than circa 1300 BC.

## **6.5 GRAVE GOODS AND FURNITURE**

### **6.5.1 A paucity of finds**

Pottery sherds and worked flint aside, the discovery of grave goods in non-Beaker burials is the exception rather than the rule. In Flanders there are none for the period under investigation and in north-eastern Transmanche France only the M5 burial at Fresnes-lès-Montauban, described above, fits the category. Kent fairs little better, with most of its more notable items dating to later than 1500 BC, such as a jet bracelet and amber bead from Tothill, Ramsgate (Gollup 2005); a Picardy pin from St Margaret's at Cliffe (Hawkes 1942) and a Cornish Trevisker jar from Thanet (Clark and Rady 2009-57)<sup>27</sup>. However, this does not necessarily mean that burials went unadorned. It is possible that individuals were laid to rest with items that have since vanished. The occasional discovery of buttons implies that corpses were clothed when buried, and there are instances where the tightly flexed nature of a skeleton suggests that it had been wrapped or bound prior to deposition. So it is possible that graves may have also contained other woven items or foodstuffs, liquid libations, animal hides, furs, wooden objects; in fact, any manner of perishable items. Supporting evidence for this is weak and circumstantial, being based on the fact that some grave cuts are much larger than they need to be. Without the benefit of sampling methods capable of providing further corroboration this line of reasoning can do no more than offer up the possibility.

## **6.6 MONUMENTS WITHOUT UNEQUIVOCAL BURIAL EVIDENCE**

### **6.6.1 Why Flanders is different**

Whilst there are examples of circular monuments in both Kent and north-eastern Transmanche France that lack unequivocal burial evidence, in Flanders the entire corpus fits into this category. For reasons enumerated elsewhere in this thesis – primarily related to geomorphology and adverse land use, such as extensive ploughing and sand quarrying – circular monuments in Zone 2 have been significantly truncated, in most cases by half a metre or more (Cherrette and Bourgeois 2005, 262). Consequently, little other than the outline and the bottom of the ditches tends to endure; internal features seldom survive. Finds are also infrequent, usually consisting of a few pottery sherds - mostly dating no earlier

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<sup>27</sup> A few metal objects are associated with burials and these, along with other categories of recovered metalwork are dealt with separately in section 6.12.



than the middle Bronze Age - and isolated pieces of worked flint. Therefore, it is the broad constructional similarities – primarily in comparisons to Dutch *ringwalheuvels* and southern British barrows – which gave Belgian archaeologists the confidence to assert that their ring ditches are monuments to the dead (Ampe *et al.* 1996b, 80).

## 6.7 DITCH PROFILES

### 6.7.1 The effects of geology and pedology

As far as it is possible to tell - given the estimated degree of truncation – ring ditches throughout Flanders were dug to a common profile<sup>28</sup>, regardless of individual diameters or circuit numbers. Ampe *et al.*'s study (1996b, 73-77) revealed that most had flat or slightly rounded bottoms and steeply angled sides. The same applies in both Kent and north-eastern Transmanche France. On average the excavated dimensions of ditch cross-sections in Flanders vary between 1m-2m across and 1m-1.5m deep. In Kent and north-eastern Transmanche France the average is slightly larger at between 1.5m-2.5m across and 1.5m-2m deep.

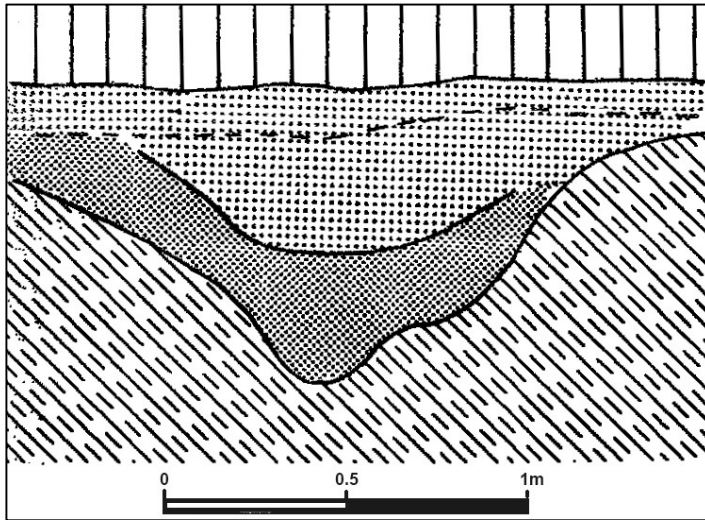
In all three zones the majority were dug as single continuous circuits with a few exceptions, such as of Kemezeke-Verkeerswisselaar 1 (Anon 1992) - which was formed by a chain of 1.5m long segments, separated by a few centimetres of soil - and St Stephen's College, Broadstairs (Boast *et al.* 2006), where ring ditch 1's circuit had been cut in a series of straight segments. In Flanders almost all of the ditch fills have turned out to be uniform, with a shallow humic layer on the base, followed by yellow sandy material that appears to have eroded in, probably from mounds. This is overlain by a dark, relatively deep (50-60cms on average), humic layer, which almost certainly indicates a period of slow silting up. Such a pattern implies that, once built, these monuments were allowed to naturally integrate into the landscape. The much more varied geology and topography in Kent and north-eastern Transmanche France negates against such uniformity. However, in both areas it is noticeable that ring ditches have a tendency to be discovered on marginal soils often underlain by chalk<sup>29</sup>. Whilst evidence of recutting, cleaning and even back-filling is relatively common, most ditches appear to have been cut and then slowly allowed to silt up.

## 6.8 EVIDENCE FOR MOUNDS

<sup>28</sup> With the exception of some inner circuits of double ditched monuments, i.e., possible outer ring ditch, at Voslare-Kouter showing an asymmetrical tip line on the inner edge, suggesting the presence of an eroded mound (after Bourgeois and De Mulder 1991).

<sup>29</sup> This could be a consequence of such soils being more susceptible to crop marks.

Fig 6.63: Drawing of a section through the outer ring ditch at Voslare-Kouter showing an asymmetrical tip line on the inner edge, suggesting the presence of an eroded mound (after Bourgeois and De Mulder 1991).



### 6.8.1 Tip lines and soil migration

Another crucial factor for the Flemish archaeologists was being able to confirm the widespread presence of central mounds, despite there being few upstanding examples<sup>30</sup>. Their proof that these existed is based mostly on ditch-fill profiles, a third of which display asymmetrical filling or 'tip lines', such as the one at Vosslare-Kouter (Fig 6.63), excavated in 1990 (Bourgeois and De Mulder 1991). Comparative examples from South Dumpton Down, Ramsgate and Haynes Farm, Eythorne, Kent and Le Motel, Fresnes-lès-Montauban and Les Rietz, Frethun, in north-eastern Transmanche France have already been described earlier in this chapter.

In Flanders however, more extraordinary corroboration comes from a monument at Ursel Rozestraat, excavated in 1987 (Bourgeois *et al.* 1989b). It not only provides good evidence for a mound, but also clearly indicates use over an extended period of time, beginning in the late third millennium and going through to the Late Iron Age/Early Roman period (Fig 6.64). It has three distinct Bronze Age phases; the first being the construction of a small ring ditch dated from charcoaled wood, extracted from the base of the ditch, to 3620±60 (IRPA 818) (Chapter 4, Fig 4.7). This circuit measured 7.5m-diameter and was between 0.7m-0.4m wide. The depth of the ditch when excavated varied between 0.3m-0.6m.

<sup>30</sup> The exception is a cluster at Ronse in the Province of East Flanders, DE LAET, S. J. & ROOSEN, H. (1952) Opgraven van een bronstijdgrafheuvel op de Kluisberg. *Cultureel Jarb, Provincie Oost-Vlaanderen*, 2, 45-39. FOURNY, M. (1985) Nouvelle contribution a l'étude de la nécropole de la civilisation de Hilversum/Drakenstein (âge du bronze ancien/moyen). Examen des anciennes collections du Musée du Centenaire à Mons. *Vie Archaeologie*, 41-68.

The second phase saw this ditch filled in and covered by a mound, which was most probably raised at the same time as a second, outer, ditch was cut. The mound was in place for a long time - quite likely hundreds of years - before phase three, the recutting of the outer ditch, which resulted in a rather curious shape. A *terminus ante quem* in the late Middle Bronze Age is provided by the recovery of Hilversum type biconical vase fragments from the base of this recut. Evidence for the existence of the mound comes primarily from a deviation in the new circuit on its eastern side. The accepted explanation for the bulge is that it was caused by the need to avoid a mound that had ‘migrated’ or spread out from its original position; most likely due to a prevailing westerly wind continually blowing the loose sandy soil eastwards (Warmenbol 2004, 647; Bourgeois *et al.* 1989b). Additionally, the fact that the inner ditch was not recut seems to confirm that it had been superseded and covered over.

One other Flemish monument, that of Evergem Moelenhoek (Semey *et al.* 1983), is known to display a comparable morphology. Also, as discussed earlier in this chapter, a similar case can be made to account for the unusual ground plan of the White Caps monument in Kent (Fig 6.18). This is a less clear-cut example, but provides a plausible explanation for how the ring ditch circuits came to take on such an atypical configuration. Like Ursel Rozestraat, White Caps has an exceptionally long use-life – spanning more than 1500 years from the late Neolithic to the Iron Age. Assuming it to be a genuine phenomenon, this may explain why evidence for mound migration is sparse: the effects of wind and weather would have been gradual and, in order to show up, ditch recutting must take place after the mound moves an appreciable distance. Other possible reasons for the scarcity, excluding a lack of awareness on the part of excavators, include:

- 1 Mounds being stable and therefore unaffected by wind action;
- 2 Mounds being absent or repositioned when recuts took place;
- 3 Recuts happening before mound migrations took place;
- 4 Ring ditches not being recut;
- 5 Most monuments not having mounds.

It is very unlikely that the latter is correct because abundant evidence for the existence of mounds has been found, including: the asymmetrical ditch silting

described above; the presence of animal burrows inside encircled areas<sup>31</sup> and other examples of ‘redundant’ inner circuits - dealt with in Section 7.6.2 on multiple ring ditched monuments. Additionally, in Kent and north-eastern Transmanche France excavations regularly reveal the presence of vestigial eroded mounds. Also, when Anglo-Saxon/Merovingian graves are discovered their disposition often suggest they were cut when a mound was still substantive.

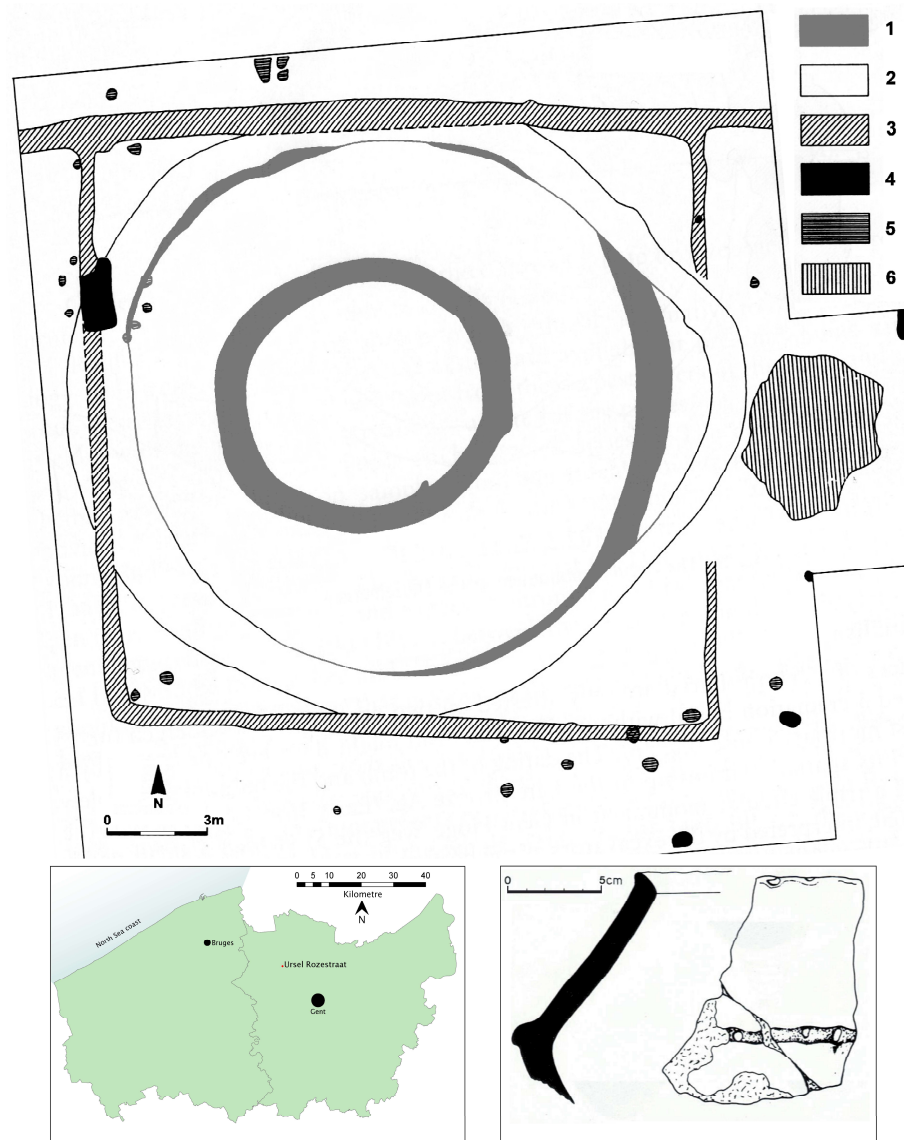


Fig. 6.64: (Above) A plan, (after Bourgeois *et al.* 1989b, 14), of the Ursel Rozestraat monument showing the various phases: 1a and 1b Early-Middle Bronze Age circuits; 2 Middle-Late Bronze Age recut outer ditch; 3 Late Iron Age rectangular ditch; 4 Late Iron Age/Roman period cemetery; 5 Post alignment of indeterminate date; 6: Tree hole. Inset: A map of Flanders showing the monument’s location.

Fig 6.65: (Above right) Sherds from a Hilversum type biconical vase found at the base of the re-cut outer ditch at Ursel Rozestraat, (after Bourgeois *et al.* 1989b, 41).

## 6.9 PENANNULAR RING DITCHES

Monument	Diameter (s)	Gap width	Facing	Reference
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<sup>31</sup> Burrowing animals are known to construct their habitats on sloping ground.

<b>Zone 1 - Kent</b>				
Haynes Farm	20m/11.5m	7m outer/ 0.25 inner	NE/S	(Parfitt 2004)
Hartsdown M1	22m/14m	Unknown – in outer	N	Unpublished TfTA report
LOTM 1	30m/12m	8m – in outer	SE	(Perkins 1977)
LOTM 2d	23m	6m	SW	
LOTM3a	30m	0.5m	S	
St Stephen's College M3	10m	0.4m	N	(Boast <i>et al.</i> 2006)
Castle Hill	15m	7m	S	(Hutcheson <i>et al.</i> 2001)
Castle Hill	21.5m	1.25m	W	
Cobham Golf Club	20m	2m	S	(Davis 2005)
Monkton MP IV	c. 10.5m	Truncated	E	(Clark and Rady 2009)
Monkton MP VI	12.5m	0.5m	W	
Monkton MP VII	14.5m	2m/1m	S/W	
Bradstow School	25m	0.5m	W	(Hart 2007)
<b>Zone 2 - Flanders</b>				
Vosslare Kouter	18m/15m	2.2m – in inner	E	(Bourgeois and De Mulder 1991)
Oedelem Wulfsberge	22m/14m	1m - inner/1m – outer	SW/NW	(Cherrette and Bourgeois 2003)
<b>Zone 3 – North-eastern France</b>				
Conchil-le-Temple A	35m/21m	Truncated outer	N	(Piningre 1990)
Conchil-le-Temple C	40m/21m	12m – in outer	N	
Les Arguillières, Frethun	32m/16m	3.5m – in inner	NW	(Marechel 2000)
Les Pigeonniers, Daours	50m/32m	Unknown	NE	(Duvette 1993)
Fresnes-lès-Montauban	12m/7m	Truncated – in inner	SW/NW	(Desfossés and Masson 2000)
Bassin St Nicolas, Ham	37m	2.6m/1.8m	N/W	(Feray and Herbert 1998)
Bois Vieil, Vignacourt	7.6	0.5m	N	(Baray 1998)

Table 6.10: Double and single ditched monuments with causewayed openings, organized by study zone.

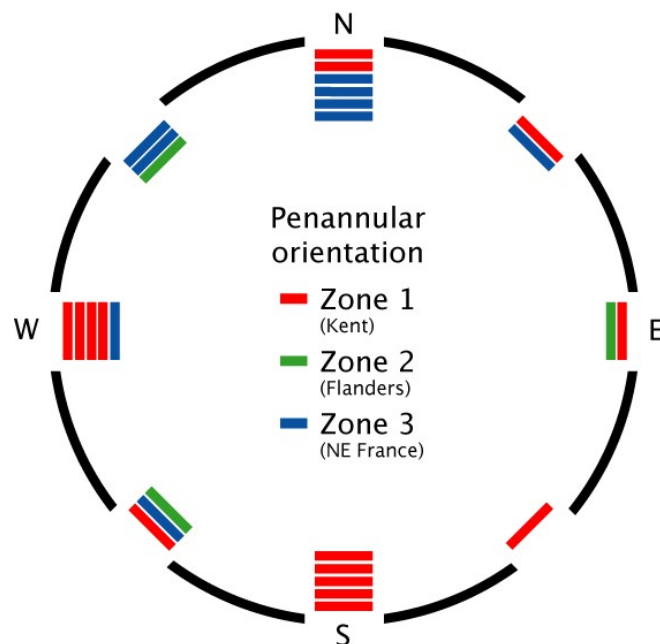


Fig 6.66: A graphic representation showing the number and orientation of openings in penannular ring ditches, colour coded according to zone. Drawn by the author.

### 6.9.1 Orientation

Not all circular monuments have unbroken ring ditches; some have ‘causeways’ or ‘entrances’. These gaps can vary in size from several metres in width to tens of centimetres. A total of 24 have been discovered in the research area, ten of which also have more than one ditch circuit (Table 6.10). The orientations of their

openings show no positive preference; rather they tend to avoid facing in an easterly direction (Fig 6.66). The only clear inter-zonal distinctions are that Kent displays a predilection for the south and west, whilst those from the French zone mostly open towards the north.

### 6.9.2 Zone 1 - Kent

Excavations in Kent have uncovered 13 penannular circular monuments. Of these, three are double ditched, with the outer being the broken circuit. Two, Haynes Farm and LOTM 1 (Lord of the Manor, Ramsgate), are discussed in detail elsewhere in this thesis; not much is known of the third at Hartsdown Community Centre, Margate. It was originally discovered through aerial survey and evaluation trenches were dug across it in 1995 but no further work has been carried out. An excavation plan is reproduced in Fig 6.67. It is notable that of the remaining Kentish examples there are two concentrations, one at LOTM and the other at Monkton Mount Pleasant, both in Thanet.

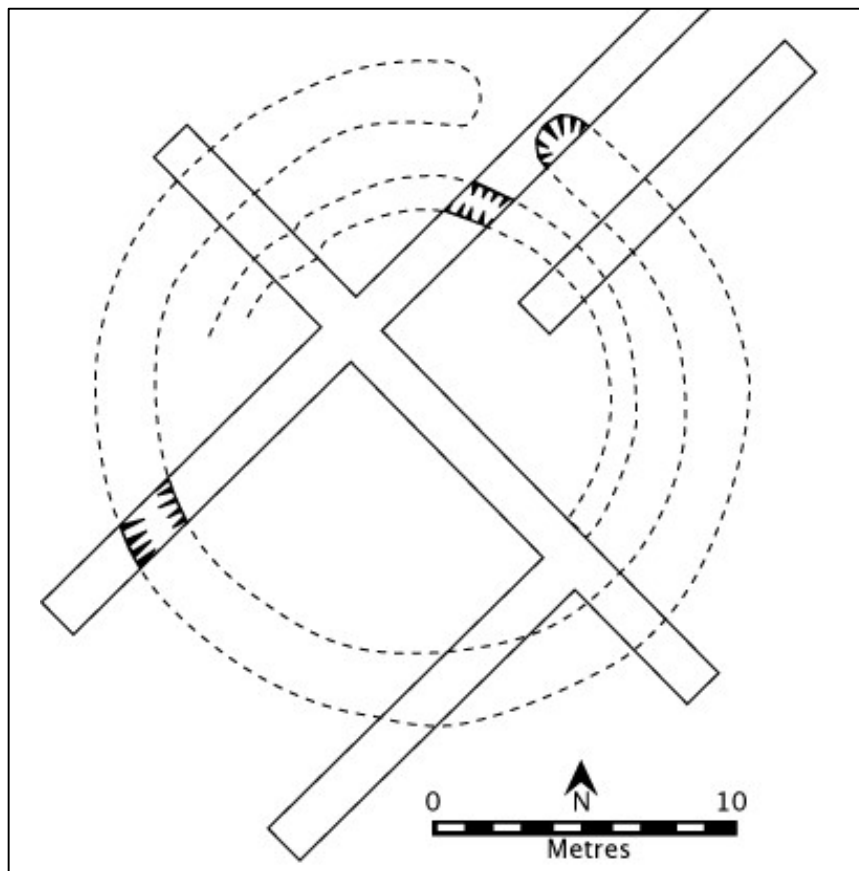


Fig 6.67: A plan of the penannular double ring ditched monument at Hartsdown Community Centre, Margate, showing the position of the evaluation trenches and the projected line of the ditch circuits. Drawn by the author from plans supplied by the Trust for Thanet Archaeology.

Also in Thanet is ring ditch M3 at St Stephen's College, Broadstairs. It was one of three monuments excavated in that area during the period 1999 - 2003. The site is at the head of a valley rising up to 40m O.D. from the modern day coastline at Joss Bay, making the location highly visible from the sea. M3 measured 9.6m-diameter and had a 0.4m break to the north of its circuit (Fig 6.68). The ditch profile was unusual, having near vertical sides and a uniform flat bottom. There was no evidence for a central mound. Whilst no absolute dating of this monument has taken place the excavator expressed the belief that it originated in the late third millennium BC (Perkins 2004). In the western terminal end was the burial of a child aged approximately ten-years-old at death – designated skeleton 2395. The body was crouched on its right side with head to the west facing south-east. The grave – measuring 1.75m x 0.75m and 0.18m deep - had been inserted into the ditch when it was still open. The body was partially covered by a whale mandible before the grave was backfilled. The body was partially covered by a whale mandible before the grave was backfilled.

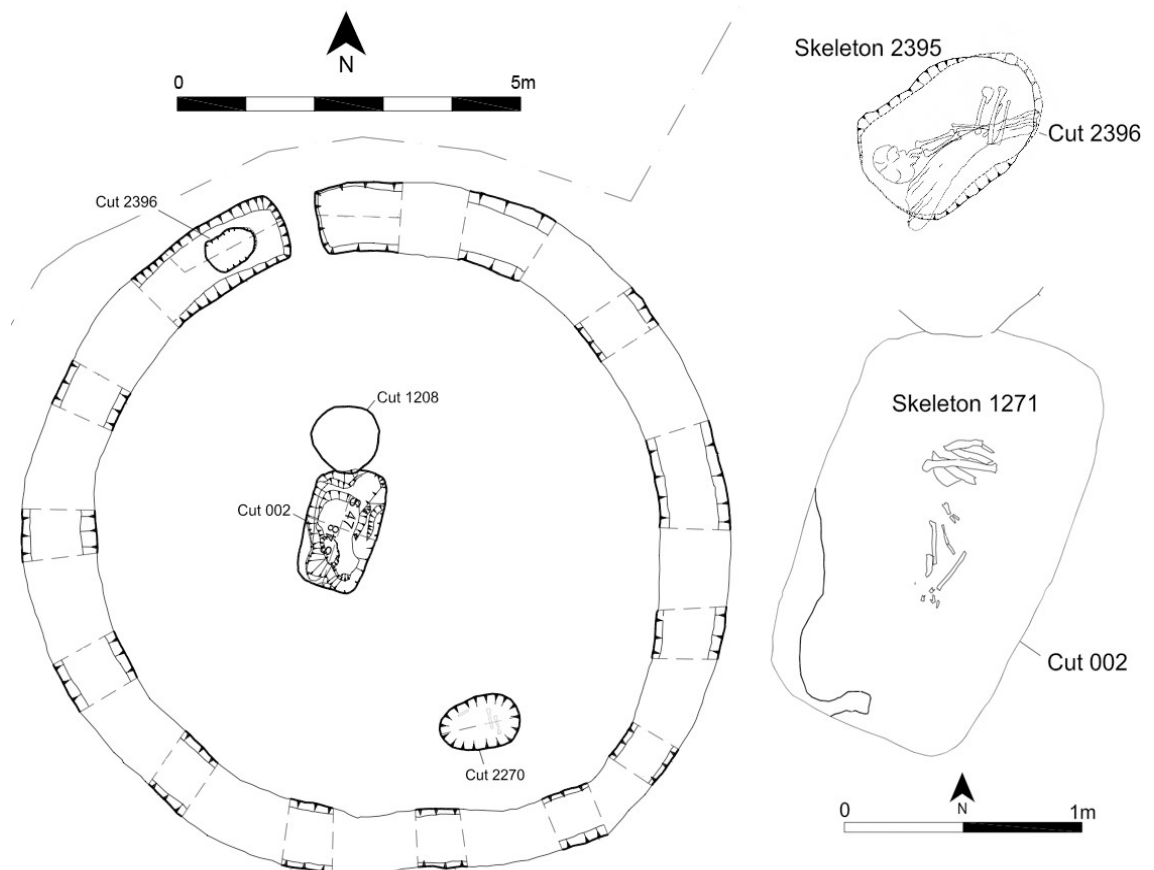


Fig 6.68: An excavation plan of ring ditch M3 at St Stephen's College, Broadstairs with enlarged plans of the child burial showing the whale mandible and the central burial. Redrawn by the author (after Boast *et al.* 2006).

A near central grave cut was also excavated. It measured 1.75m x 1.05m and was 0.3m deep with vertical sides and indications of a coffin or grave lining. The fragmentary remains of an adult aged between 25-35 years old at death (skeleton 1271) - had been laid in a crouched position, head to the south facing west. A third, oval shaped grave (cut 2270) contained the heavily eroded remains of a tightly crouched individual. No absolute dates were obtained and the only dating evidence was intrusive Iron Age flint-tempered pottery, found in the upper fill of cut 002.

Immediately north of the central grave was a 1.3m-diameter relatively deep pit (cut 1208) containing a primary fill of tightly packed burnt flint overlain by larger flat flints and fragments of ragstone, with further fragments of flint used for packing. The upper fill was chalky silty clay. It has been suggested that the flint and stone was intended to form a stable base for a totem or substantial burial marker post (Boast *et al.* 2006). This can be compared to an enigmatic arrangement found within the penannular ditched LOTM 2d – possibly a mortuary house. In that case a central grave was located adjacent to a series of post-holes, a rammed chalk surface and a flint and earth bank.

### **6.9.3 Zone 2 - Flanders**

Only two examples of penannular ring ditches are known in Flanders: one at Odelem Wulfsberge and the other at Vosslare Kouter. Both have double-ditches, but neither can be considered typical of the type seen across the three zones. At Odelem Wulfsberge (see Section 6.3.2) the inner and outer circuits both exhibited breaks (Fig 6.40), something only present in one other monument, Haynes Farm, Kent. As discussed elsewhere, this is possibly due to the fact that the inner ring ditch was backfilled prior to the outer being built – meaning that this was a two-phased construction.

At Vosslare Kouter there is no berm or flat partition between the inner and outer ditch arrangement (Fig 6.69a). The outer, continuous, ditch measured 18m-diameter, 1.8m wide and between 0.8m-0.5m deep. The inner ditch was 15m-diameter and had a width of 2.2m and depth of between 1m-1.3m deep (Bourgeois



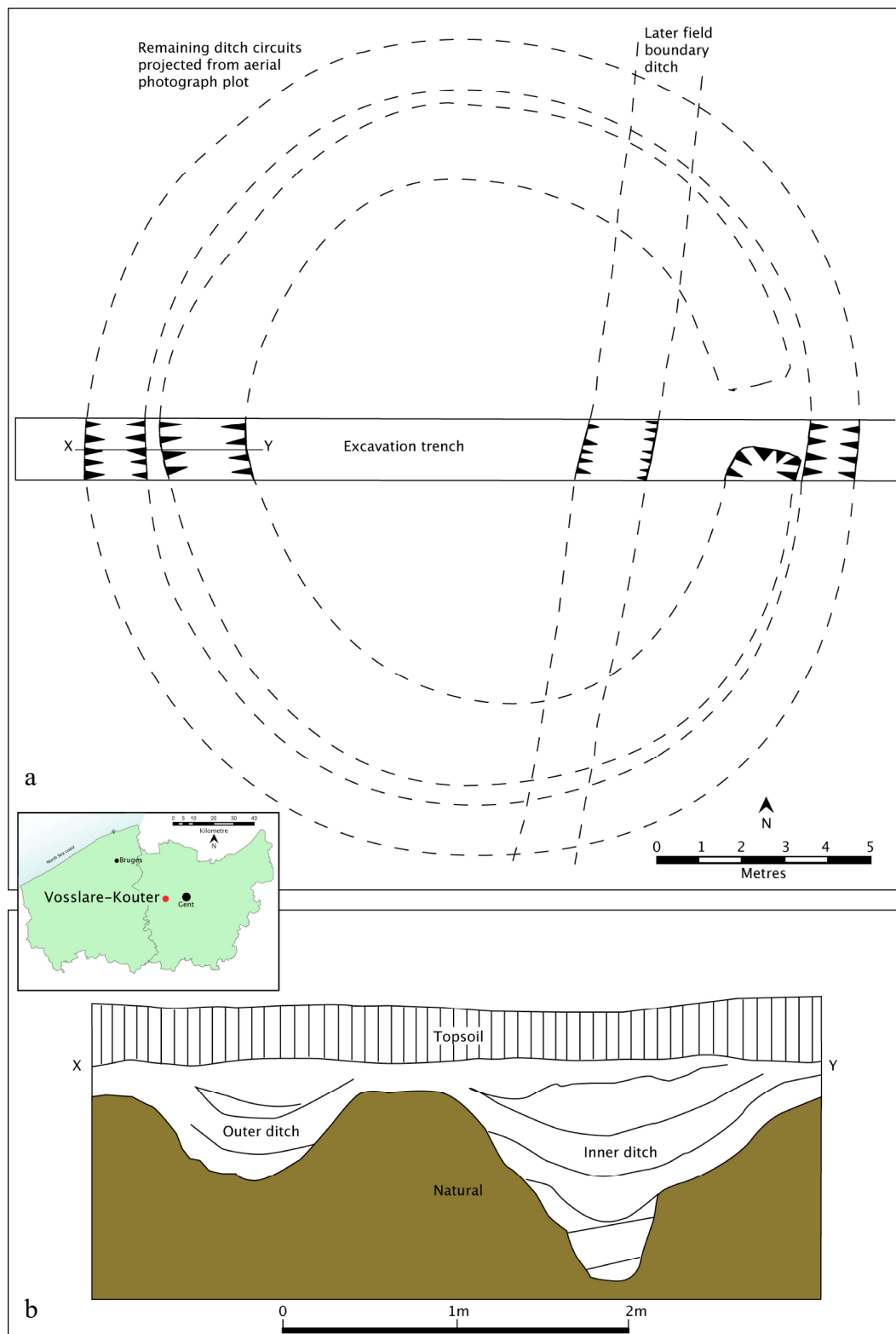


Fig 6.69: (a) A plan of the double ring ditched monument at Vosslare-Kouter showing the excavation trench, the inner ditch's southern terminal end and the projected line of the circuits as determined from aerial photographs. The width of the 'entrance' shown here is speculative due to the fact that the excavation did not discover the position of the northern terminal. The field boundary ditch crossing from top to bottom is dated to the Middle Ages, 980±60 BP (Utc 2016). (b) The section drawing shows the relationship of the two ditches and their respective dimensions. Note their unusually close proximity. Both drawings were created by the author (after Bourgeois and De Mulder 1991).

and De Mulder 1991; Bourgeois *et al.* 1999a, 119-123). A sample of charcoaled wood from the inner ditch provided a radiocarbon date of  $3320\pm70$  BP ((Utc 2019), whilst two samples from the outer ditch returned dates of  $3310\pm50$  BP (IRPA 1065) and  $3260\pm60$  BP (Utc 2017) (Chapter 4, Fig 4.7).

Quite aside from the general issues of reliability (see Chapter 4 for a discussion regarding the veracity of radiocarbon dating from Flanders) these results are much too close on their own to determine whether the construction was a multi-phased or a single event. However, as a tip line is present on the outer ditch (Fig 6.69b) it is possible that the inner, entranced, arrangement was superseded by a mound and new perimeter ditch.

#### 6.9.4 Zone 3 – France

Of the French examples, perhaps the most atypical is one found at Bassin St-Nicolas, Ham (Fig 6.70). It had two ‘entrances’, the northern one 2.6m across and the western one 1.8m. Within the eastern half of this 37m-diameter enclosure was a poorly preserved crouched inhumation of a child and to the south-west an unurned cremation (Feray and Herbert 1998).

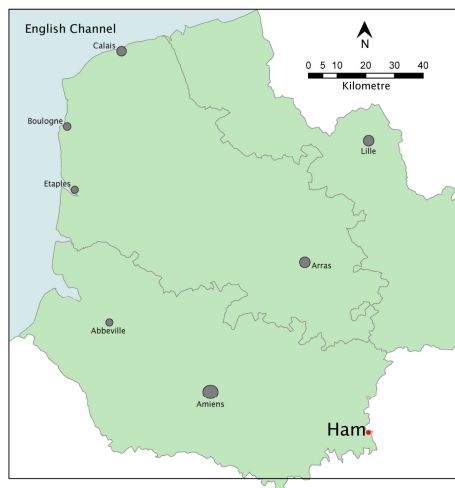
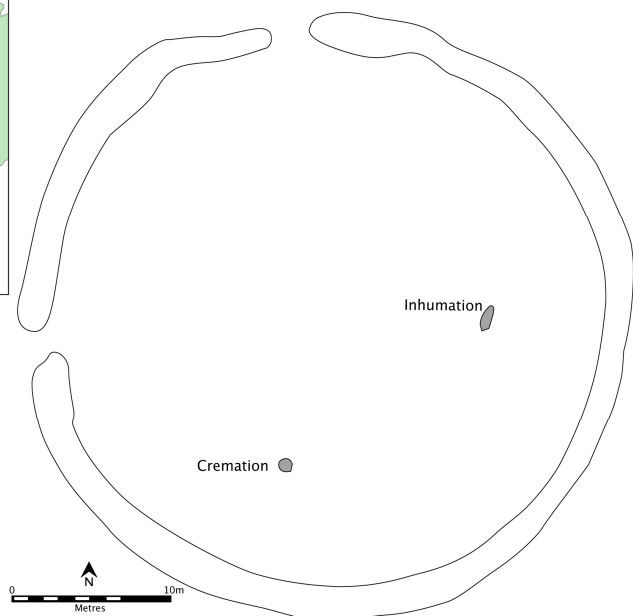


Fig 6.70: A plan of the double entranced ring ditch at Bassin St-Nicolas, Ham. Drawn by the author (after Feray and Herbert 1998).



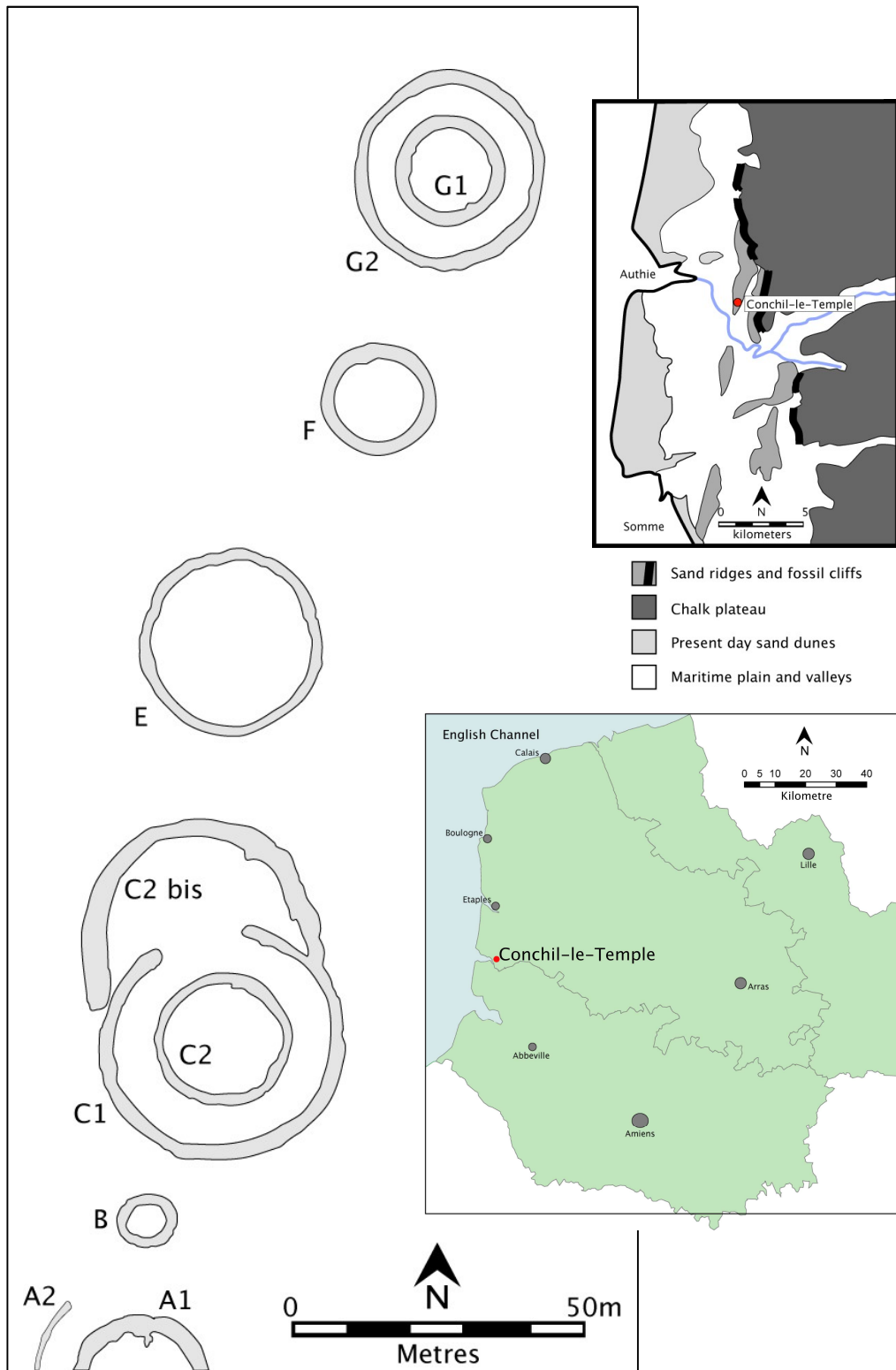


Fig 6.71: A plan of the Conchil-le-Temple complex. Inset: (above) the general location and (top) the precise location, showing the local geology. Drawn by the author (after Piningre 1990, Figs 2 & 3).

At Conchil-le-Temple the causewayed double ring ditch 'C' is just part of a complex linear alignment of at least seven circular monuments which were excavated in the late 1980s (Piningre 1990) (Fig 6.71). This particular monument is not only causewayed, but also has an annex, stratigraphically interpreted as a later addition. The excavator expressed the opinion that the main circuits C1 and C2 were built simultaneously, although no radiocarbon determinations were obtained. Six samples from other parts of the site did return dates; the earliest was  $3250\pm70$  (Gif 5053) from the upper fill of ring ditch G1, placing it in the middle of the second millennium BC (Chapter 4, Fig 4.6).

## **6.10 POST OR STAKE CIRCLES (and ring ditches with ancillary wooden structures)**

### **6.10.1 A variety of interpretations**

Another anomalous type of monument is the post circle. In southern Britain circular post arrangements of this kind are usually interpreted as preceding more conventional barrow constructions and if dated prior to 2100 BC may have been used in ways other than funerary (Garwood 2008, 34-36). An extensive appraisal of the evidence for timber structures, post circles and post alignments, both in the UK and the near Continent, has been carried out recently by Clark (2009, 89-91). He concludes that many of the circular arrangements are almost certainly the remnants of houses, including one found at Monkton-Mount Pleasant, Thanet, (Clark and Rady 2009, 12-15) and Lord of the Manor 2D, Thanet, (Macpherson-Grant 1980b) but he also catalogues evidence from elsewhere which suggests that circles such as the one at Knowth in Ireland (Eogan and Roche 1997) are more likely to be ritual in nature and quite possible date to the Neolithic period.

### **6.10.2 Zone 1 - Kent**

Clark mentions a settlement at Grovehurst, Sittingbourne, (Payne 1880) and the Channel Tunnel Rail Link excavation at White Horse Stone, Maidstone, in the context of Neolithic timber structures, but is unable to offer examples of ritual timber circles in Kent. The best evidence for their existence comes from Haynes Farm, Eythorne, which incorporated a number of post holes, as described in Section 6.3.1, (Fig 6.8). These measured a maximum of 0.18m in diameter and 0.27m in depth and were cut into the natural chalk on the outside of its middle

ditch. In total 32 of these were located when five trenches were dug, positioned to the north-east, east, south-east, south-west and west; but because the excavation was partial it cannot be said with certainty that they form a continuous circuit. Additionally, a grouping of post-holes was discovered between the inner and middle ditch. These are interpreted as the remnants of a short revetment or fence.

A similar post alignment was discovered cut into the primary ditch fill of the south-west ring ditch at Castle Hill, Folkestone (Fig 6.31). Only one other occurrence of a post-hole arrangement associated with circular monument has been recorded in Kent and that is at Ringlemere (Parfitt 2006b).

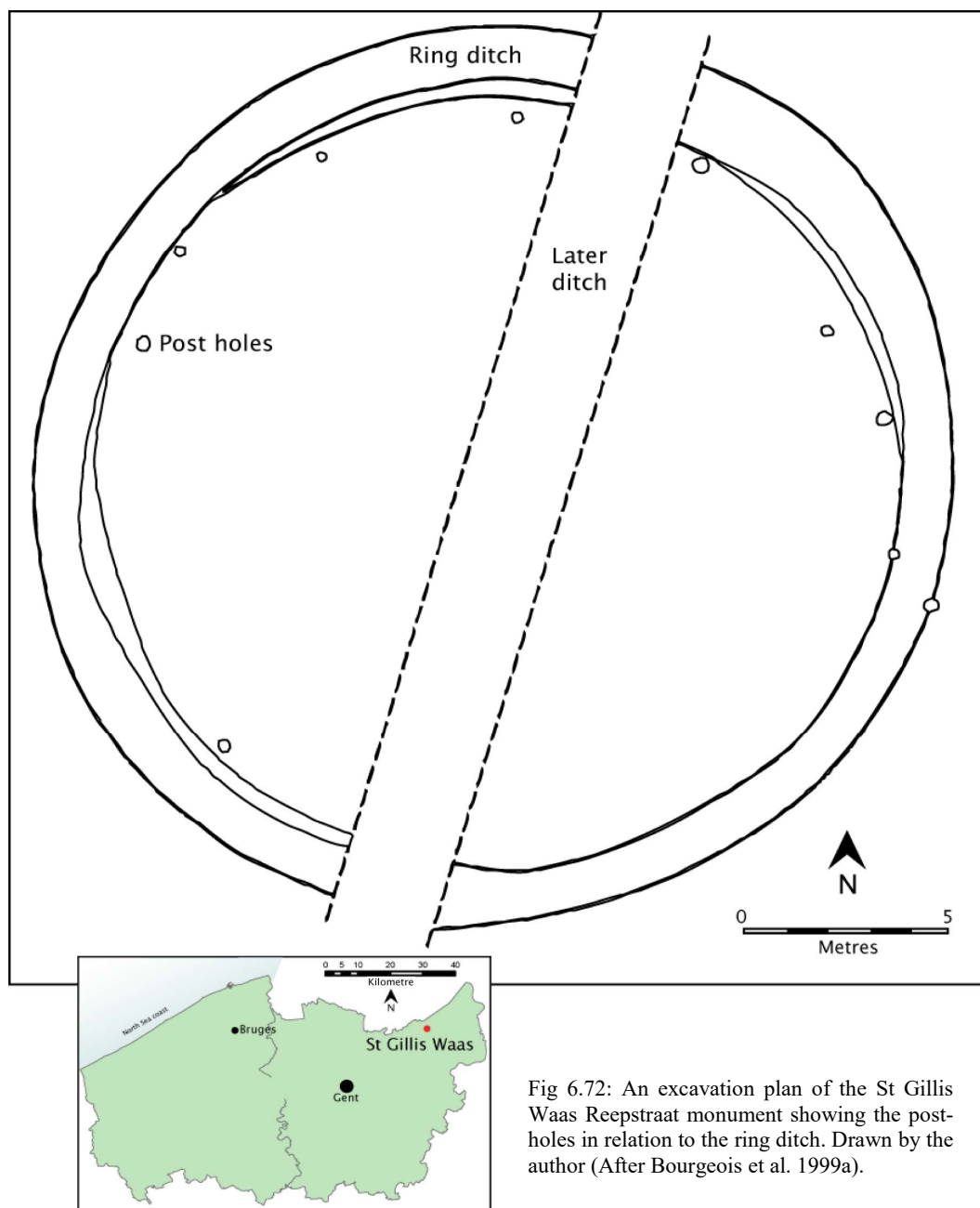


Fig 6.72: An excavation plan of the St Gillis Waas Reepstraat monument showing the post-holes in relation to the ring ditch. Drawn by the author (After Bourgeois et al. 1999a).

### **6.10.3 Zone 2 – Flanders**

A monument at Sint Gillis-Waas, Reepstraat, had a series of post-holes running around the inside of its ditch at intervals of approximately five metres (Fig 6.72). In a few cases the holes appeared to overcut the ditch fill, stratigraphically implying they were a later modification; although this interpretation was tentatively expressed by the excavator (Bourgeois 1990; Bourgeois *et al.* 1999a, 105-106, Fig 73). The actual ditch was radiocarbon dated to between 3770±75 BP (IRPA1069) and 3265±55 BP (IRPA 1072) (Chapter 4, Fig 4.7), suggesting that it was cut in the latter part of the third millennium BC.

Another post circle was discovered in Flanders at Oedelem Wulfsberge (Section 6.3.2, Fig 6.40). Preservation of the 12m-diameter circle was poor but 23 fairly evenly spaced holes were visible (Cherrette and Bourgeois 2002). Two radiocarbon dates, 3310±35 BP (KIA 14840) and 3230±35 BP (KIA 14841) (Chapter 4, Fig 4.7), were obtained from charcoaled wood samples, placing the post circle within Belgium's Middle Bronze Age period (Section 1.4). The following year a small double post circle, on the same south-easterly linear alignment, was discovered. As yet details of this circle have not been published.

### **6.10.4 Zone 3 - France**

The only known example from the French study area is a 29m-diameter single ring ditch at Les Avergnés-des-Fées, Maisnières-en-Vimeu. It is one of three ring ditches on a hillside – one a double – that were discovered by aerial survey. A small evaluation excavation revealed a complex arrangement of intercutting ditches and recuts, along with indications of a post circle (Moliere 1983).

## **6.11 SUMMARY**

### **6.11.1 A comparative problem**

The aims of this chapter were to present specific evidence<sup>32</sup> relating to pre-1500 BC circular monuments and (non-Beaker) burials; to demonstrate why this particular material has been extracted from the available excavation datasets; and to test whether it was of sufficient standard to make meaningful inter-zonal

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<sup>32</sup> A quality grading system, as defined in Chapter 3, Section 3.4 “Sampling Strategy”, was applied.

comparisons. Filtering the data and quantifying the results was a relatively straightforward task and disclosed that at least 100 monuments have been excavated in each of the three study zones. However, closer examination revealed that the majority are of limited value because they lack vital components – primarily empirical evidence for burials and reliable dating evidence.

Both are particular problems in Flanders where inhumations and cremations are circumstantially implied rather than proven and where appropriate samples for radiocarbon dating are hard won. This is not the case in the French study zone. Burials are definitively proven to exist there, but the volume of recovered evidence is quite small and the number of radiocarbon determinations reflects this. Only in Kent is burial evidence found in relative abundance, but even there the availability of absolute dates has proved an impediment. When these factors are taken into account the number of grade one sites dwindles to just four from Kent, two from Flanders and four from north-eastern Transmanche France.

Whilst this is a relatively small number, each one proved capable of illuminating various aspects of the period under examination. In fact, the detailed site-by-site descriptive analysis has brought to light factors which, whilst not necessarily comparative, contribute to a broader understanding of how circular monumentality impacted on the ritual landscape of the Transmanche region during the period under examination. For example: White Caps is an especially potent example of monument longevity, reuse and modification as, to a great extent, is the M4 monument at Le Motel. Similarly, Oedelem Wulfsberge and Le Rietz appear to demonstrate deliberation in the choice of monument locations. Furthermore, it has been possible to show that in some cases the interpretations offered up by the excavators are open to critical re-evaluation and have therefore been significantly revised, most especially in the cases of South Dumpton Down, and Le Rietz.

Over and above this, it has been possible to identify common threads<sup>33</sup>. In particular, monument constructional similarities are evident. The majority of ring ditches are comparable in the width and depth of their cuts – to the limit that this

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<sup>33</sup> Other lesser grade sites were called into use as the needs arose in order to investigate specific points.

can be determined given the variable levels of truncation and erosion that have taken place. There also appears to be a standard ditch profile, best described as a foreshortened ‘V-shape’. Evidence exists to suggest that this may have changed over time; in other words, later ditch cuts were more ‘U-shaped’, having more vertical sides and wider bases. Either way, ring ditches were almost always dug as single continuous circuits, rather than as a series of joined segments. Ditch fills indicate that most monuments throughout the entire research area were allowed to go slowly back to nature – potentially implying the existence of a common credo that did not incorporate a regular maintenance regime, perhaps because absorption into the landscape was itself an essential symbolic function, vital to the successful conclusion of the rite. However, some ditch cleaning or recutting is evident but, like the more complex monumental modification and aggrandizement, its presence probably indicates the inception of a new activity phase – a recommissioning or recharge in preparation for the next operating cycle.

Finally, the existence across the research area of penannular ring ditches, stake circles and other complex constructions could be taken as an additional indication of a shared symbolic ‘grammar’. However, other than the inclusion of an incomplete circuit, penannular monuments seem to be little different from standard ring ditches. Only St Stephen’s College (Fig: 6.68) stands out as being clearly unusual, having had a child burial in a ditch terminal and possibly a large marker post or totem alongside a central burial. With regard to stake or post circles, it is unfortunate that so little evidence is available. The one at St Gillis Waas (Fig 6.72) is the best example from the research zone but unfortunately the radiocarbon dates are not good enough to be used in support of Clark’s assertion that such monuments originated in the Neolithic.

### **6.11.2 Summative conclusion**

The selected elements of excavated data that have been examined in Chapter 6 strongly suggest that shared social structures, in relation to the treatment of the dead, were long-standing and endemic. If so, then at some level, Transmanche cultural contact must have been the norm.



**PART 3**

**DATA DERIVED FROM  
AERIAL SURVEYS**

## CHAPTER 7

### EXAMINING AND ANALYSING THE RING DITCH EVIDENCE

#### 7.1 INTRODUCTION

##### 7.1.1 A view from above

Significant numbers of ring ditches remained upstanding and highly visible in the landscape until relatively recently. Perhaps this was because generation after generation considered them, or the ground on which they stood, to be sacred or taboo. The construction and use of these circular monuments was widespread but, despite many variations in detail (Garwood 2008), their essential form remained recognisably consistent; and whilst the part they played in society may not have been entirely constant, it seems reasonable to conclude that a connection to the dead was an important and enduring function. Nevertheless, there is sufficient evidence to conjecture that at least some of these circular monuments had other, possibly additional, roles. Whatever meanings they embodied, their allure was exceedingly resilient, lasting not just throughout the Bronze Age, but well beyond; with successive cultures modifying and reactivating barrows right up until the Anglo Saxon period in England and the Merovingian period in Northern France<sup>34</sup>.

Now, in the modern era, they have almost entirely vanished from ordinary sight – flattened by a combination of environmental and man-made factors (Cherrette and Bourgeois 2005; Field 1998). Given the right conditions however, the remnants are still visible from the air. Testament to this are the results of aerial photographic surveys carried out independently in each of the three study zones (Fig 7.1). In Belgium air photography began in 1982 and the *Universiteit Gent* became formally involved in 1991 (Ampe *et al.* 1996b). To date more than 90,000 oblique photographs have been generated, revealing in excess of 1000 ring ditches and barrows. In Northern France work of a similar nature, mainly by Roger Agache, has generated a catalogue of oblique photographs, which under recent and on-going analysis has so far identified a similar number of circular

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<sup>34</sup> Although it should be noted that in Belgium the picture is not quite so clear. To date, not one Late Bronze Age urn-grave has been discovered in proximity to a barrow, nor are there any indications of barrow use continuing later than the Roman period.

earthworks, mostly in the Somme Valley (Agache 1978; Toron 2005). Finally, in Kent more than 800 monuments have been identified from diverse sources, including vertical and oblique RAF reconnaissance photos, the Cambridge University Collection of Aerial Photographs and an air survey by the now defunct Potato Marketing Board. A great deal of this output was the subject of a study by the former Royal Commission on Historic Monuments (Edis & Horne 1989) and since then, further work has refined and added to the corpus (Perkins 1999; Smythe 2007). In fact, the discoveries in all three countries have been subjected to varying degrees of analysis, but not previously on a comparative Transmanche basis. Therefore, the aim of this section is to use the available datasets to assess how far it is possible to evaluate and compare:

- The relative intensities of the phenomenon;
- Respective relationships between landscapes and monuments;
- How the monuments relate to each other;
- Morphological characteristics, i.e. diameters and ground plans.

### **7.1.2 Factors affecting data veracity**

The map in Figure 7.1 shows an indicative distribution plots of both excavated and aerially detected ring ditches and barrows across the entire research area. In addition to identifying zones of relative intensity, it also appears to show that large sections of the landscape are sparsely populated by, or entirely devoid of, such circular monuments. So it is important to note that a number of factors can introduce bias and distortion in aerially collected data. These include:

#### **A. Voids in survey coverage:**

The sampling methodology used in the air surveys is responsible for some of the voids in the distribution data from Flanders and north-eastern Transmanche France. In particular, aircraft range has restricted the Gent team to an area of approximately 2200 sq kms broadly centred on the home airfield, located west of the city and excluding major airport control zones (Fig 7.2). In France, Agache concentrated his efforts on the Somme valley. He did make some attempt to survey the Calais-Dunkerque area but this meant flying to the limits of his aircraft's range and as the results were disappointing he abandoned the

idea to concentrate efforts closer to his Abbeville base<sup>35</sup> (Fig 7.3). Kent is a more compact region and proportionately more of it has been surveyed from the air. Voids in its monument distribution pattern (Fig 7.4) are therefore not considered to be due to a lack of available photography, but a consequence of unresponsive soil types, land use and genuine historical absences.

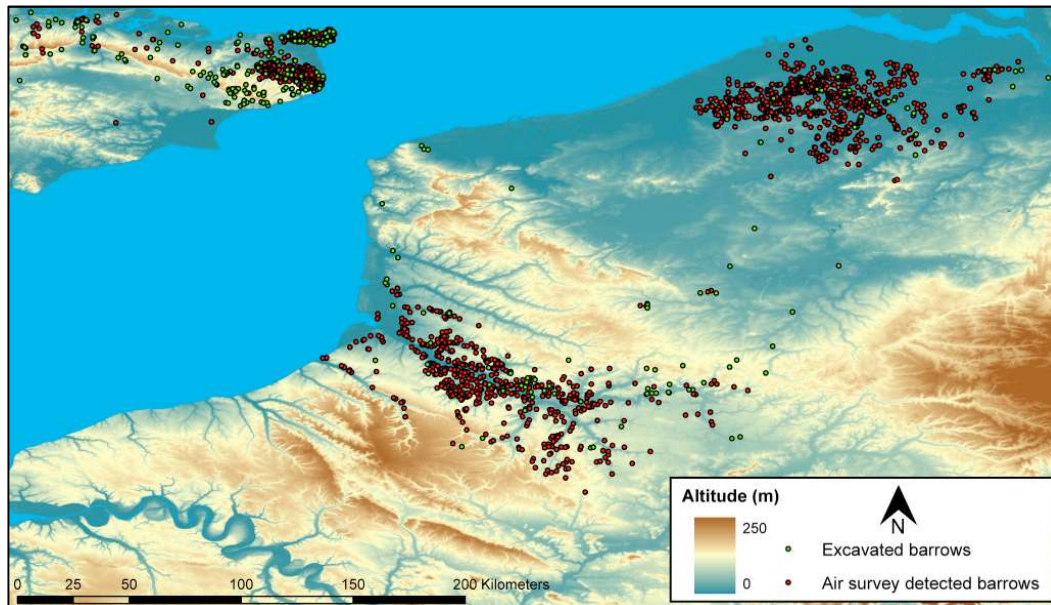


Fig 7.1: A composite map showing an indicative distribution plot of barrows and ring ditches in each of the three study areas (after Hammond *et al.* 2009).

### B. The masking effect of:

- Soils that resist the formation of crop and parch marks;
- Adverse land use such as that of urban or other developments;
- Dense natural ground cover such as forests:
- Destruction due to quarrying and gravel extraction etc.

It is possibly a combination of the above factors which accounts for a distinct lack of monuments having been discovered in the Weald of Kent - the southern area below the North Downs ridge, running from west to east (Fig. 6.5). This is an area composed of heavy clay soils and it remains covered by the scattered remnants of dense ancient woodland. In fact, soil types that are resistant to crop marks, geo-morphology and negative ground cover may explain why excavated barrows, largely found as a consequence of developer-funded archaeology, appear to be slightly more evenly distributed (Fig 7.6).

<sup>35</sup> Further inland, to the east around Cambrai, a recent aerial survey has detected the presence of ring ditches.

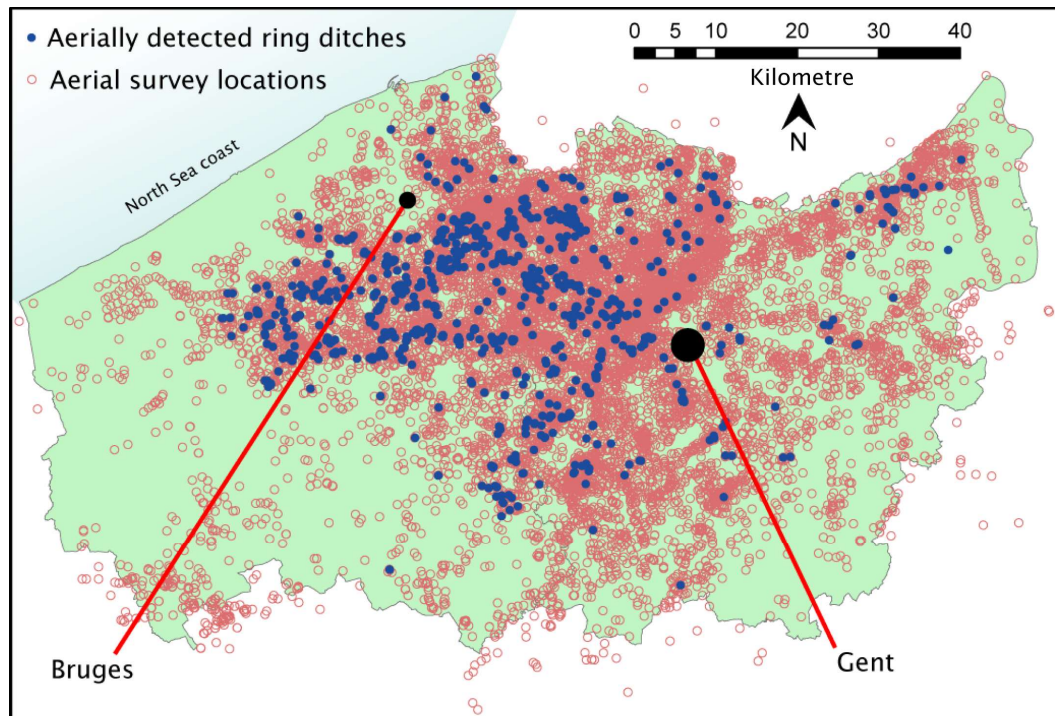


Fig 7.2: Map of East and West Flanders showing the extent of the aerial survey flights in relation to detected ring ditches. Created in Arcview 9.2 by the author using source data supplied by the Department of Archaeology, *Universiteit Gent*.

A comparison of excavated and aeryally detected barrows and ring ditches in the French study area (Fig 7.3 and 7.7) tells a less distinct, but nevertheless, similar story. However, comparing the distribution of aeryally detected and excavated barrows and ring ditches in Flanders does not show the same effect because almost all the monuments in that area were originally discovered through air surveys (Fig 7.8 and 7.9). As already explained, the pattern in Flanders is influenced by the survey methodology; although pedological factors have also had an impact, as demonstrated by the fact that the detected monuments are concentrated in the western half of a broad band of sandy soil (Fig 7.10). However, as yet there is no explanation as to why the eastern half is much less densely populated. One possible reason is that this was waterlogged and inhospitable land during prehistory – an environmental condition that also seems to have influenced human activities in the Wantsum channel area of north-eastern Kent (Hammond *et al.* 2009).

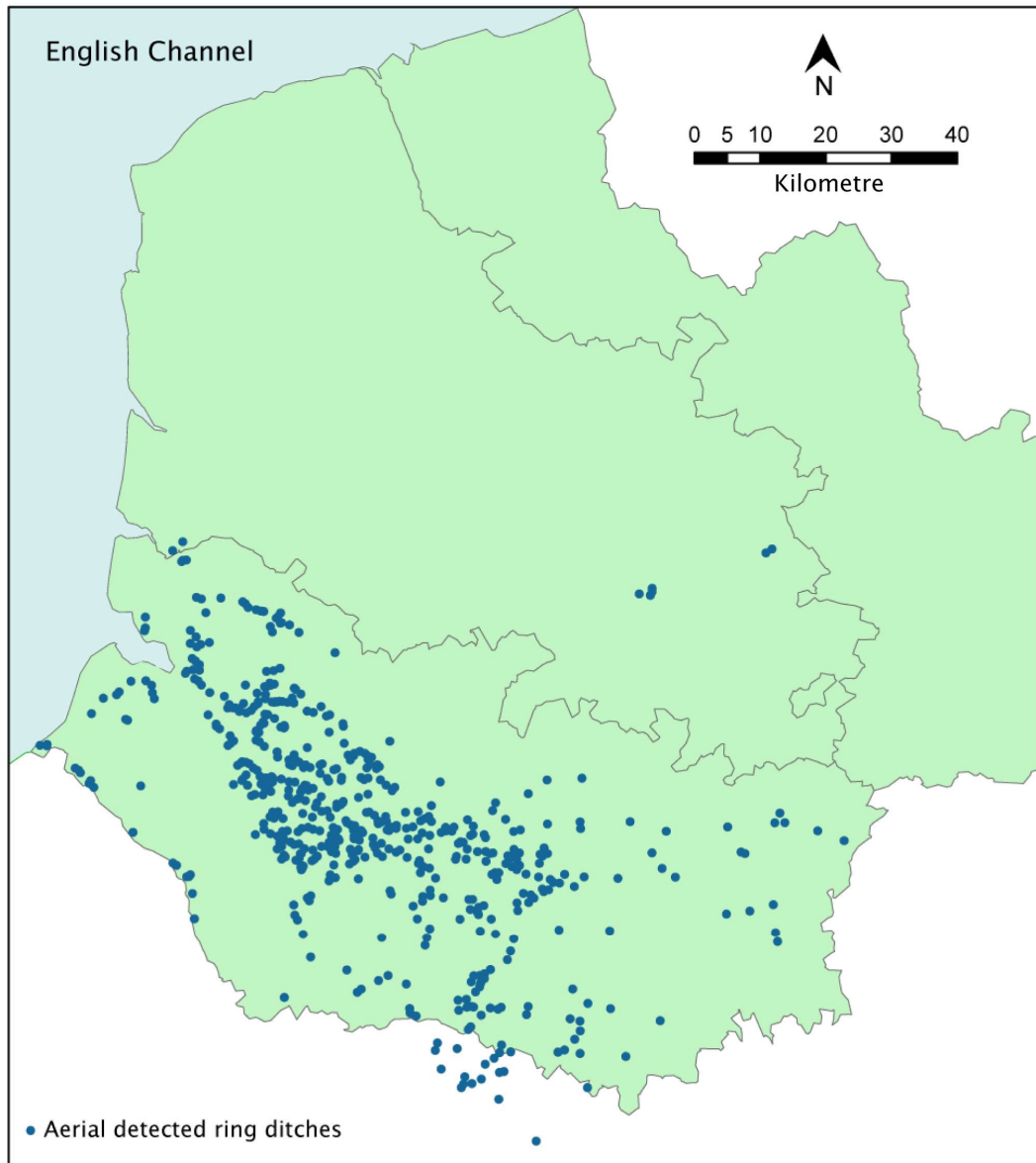


Fig 7.3: Map of (Zone 2) Nord/Pas-de-Calais and Picardie indicating where circular crop marks have been photographed, primarily by Agache's aerial survey campaign. Created by the author using Arcview 9.2, data (after Toron 2005).

This could also account for the paucity of known monuments in the littoral areas of Flanders, Nord, the northern coastal areas of Pas-de Calais and the estuarine areas of Picardie. However, the apparent absence in this case may also be due to a combination of alluviation, erosion and human action. The coastal landscape is essentially flat, low lying and composed of loess soil and substantial alluvial deposits – especially in the north (Fig 7.10 and 7.11). All factors which negate against the discovery of such fragile and ephemeral archaeological traces. The inland areas of Pas-de-Calais and Nord have not been aerially surveyed, although a recent survey in the Cambrai area has successfully detected relatively large numbers of monuments, which would

seem to imply that distribution is more even than the data available for this research suggests.

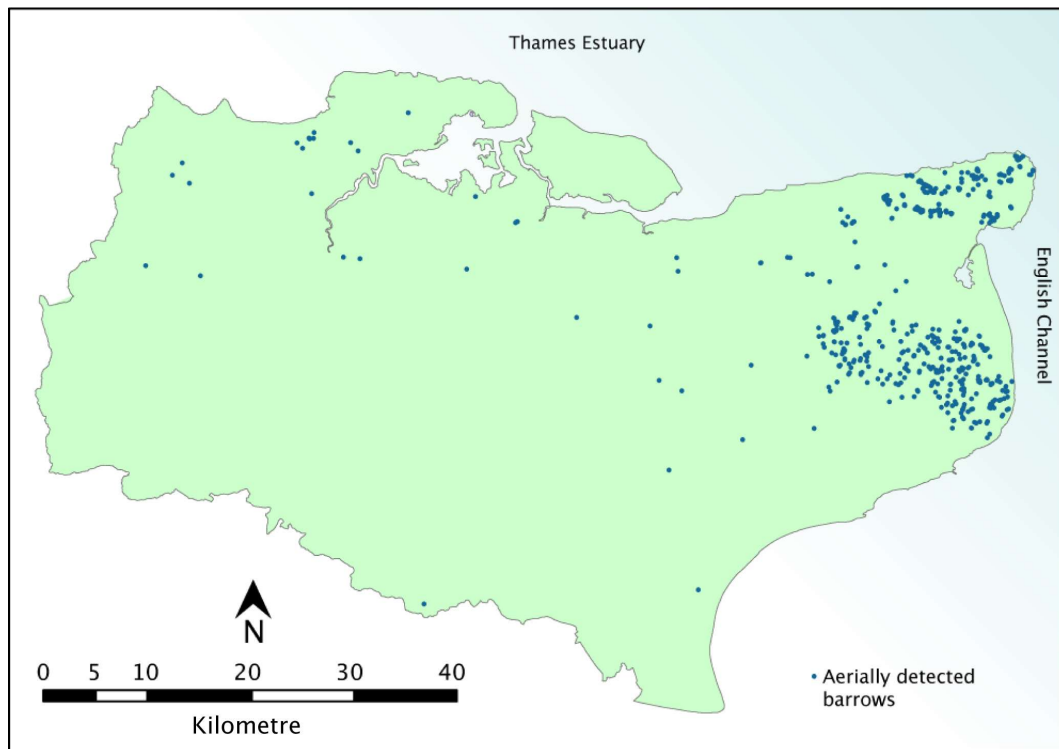


Fig 7.4: Map of Kent showing the ring ditch distribution concentrated to the north and east of the county. Created in Arcview 9.2 by the author from data supplied by the Trust for Thanet Archaeology and extracted from ((Edis & Horne 1989 ; Smythe 2007).

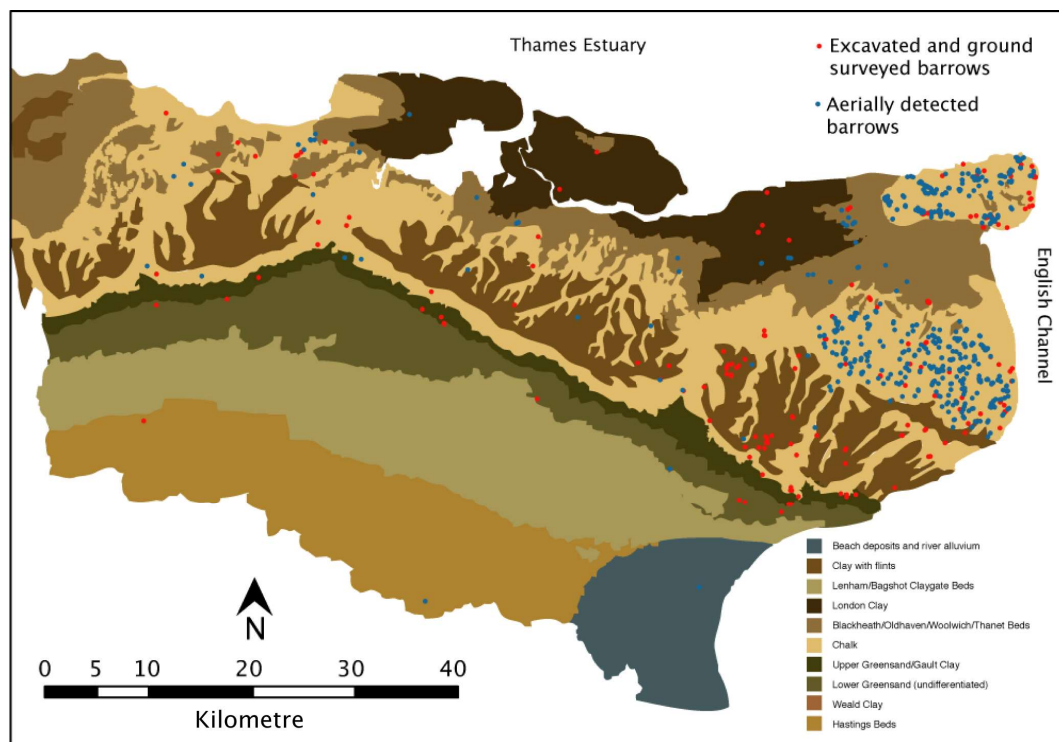


Fig 7.5: Map of Kent showing the sub-soil geology overlain by the distribution plots of excavated, ground surveyed and aerially detected ring ditches and barrows. Drawn by the author (after Hills 2004, 1).

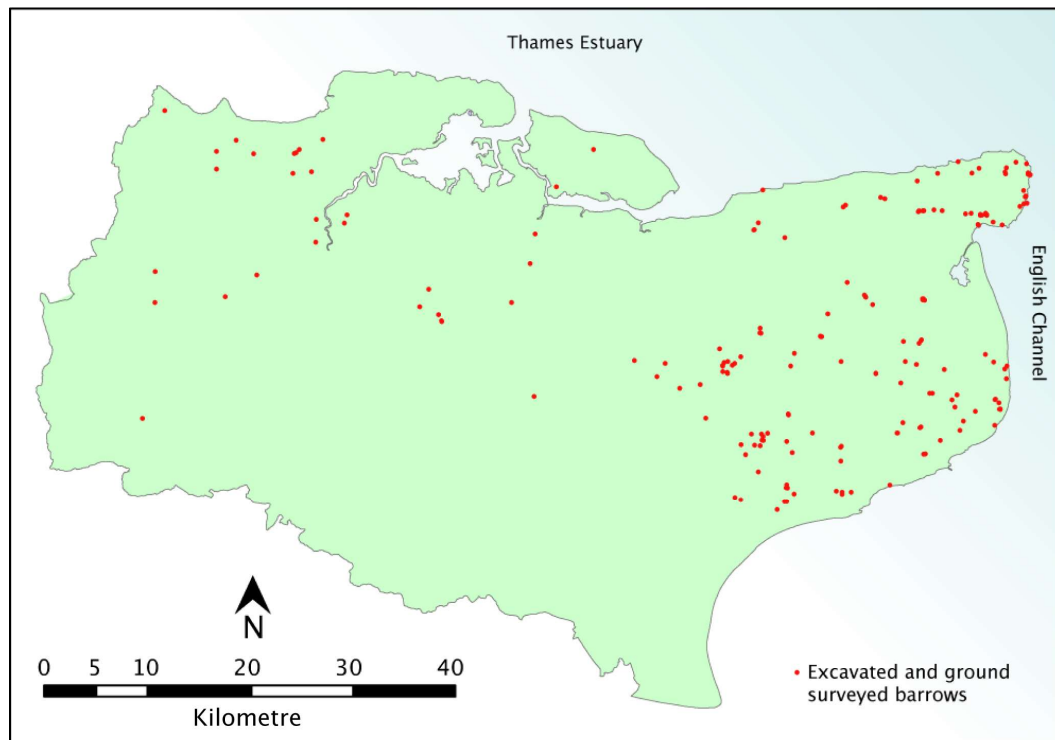


Fig 7.6: Map of Kent showing the distribution of monuments confirmed as Bronze Age barrows compared to those discovered through aerial photography alone as seen in Fig 7.4. Although the Weald of Kent still remains essentially empty. Created in Arcview 9.2 and Adobe Illustrator by the author from data supplied by the Trust for Thanet Archaeology and extracted from ((Edis & Horne 1989 ; Smythe 2007).

### C. Mistaken interpretations resulting in incorrect classification:

Whilst human error cannot be ruled out, confidence in the classification of certain categories of crop marks as Bronze Age ring ditches is high because excavations in all three countries have invariably borne out this classification. In fact, as far as Kent is concerned, the specific RCHME listings 19-21 may be too cautious. A recent discovery at Bradstow school, Broadstairs, of a 6.5m diameter barrow containing four Bronze Age crouched inhumations<sup>36</sup> (Hart 2007; Moody 2008, 95) suggests that at least some ring ditches, previously thought to be Anglo-Saxon in date due to being less than 10m in diameter – lists 22-23 - (Edis & Horne 1989 , 3.2.12), may emanate from the earlier period after all. Additionally, lists 25–32 of the RCHME report include 69 Bronze Age circular, sub-circular, and curvilinear enclosures, which were designated as such partly on the basis of their large diameters. Edis admits that at least some of these may be barrows (1989, 3.2.16). Lists 33-39 include 22 Bronze Age oval and irregular enclosures and list 53 contains 179 ‘maculae’, which are interpreted as most likely being the degraded remains of barrows.

<sup>36</sup> At the time of writing no absolute (radiometric) dates for these burials were yet available.



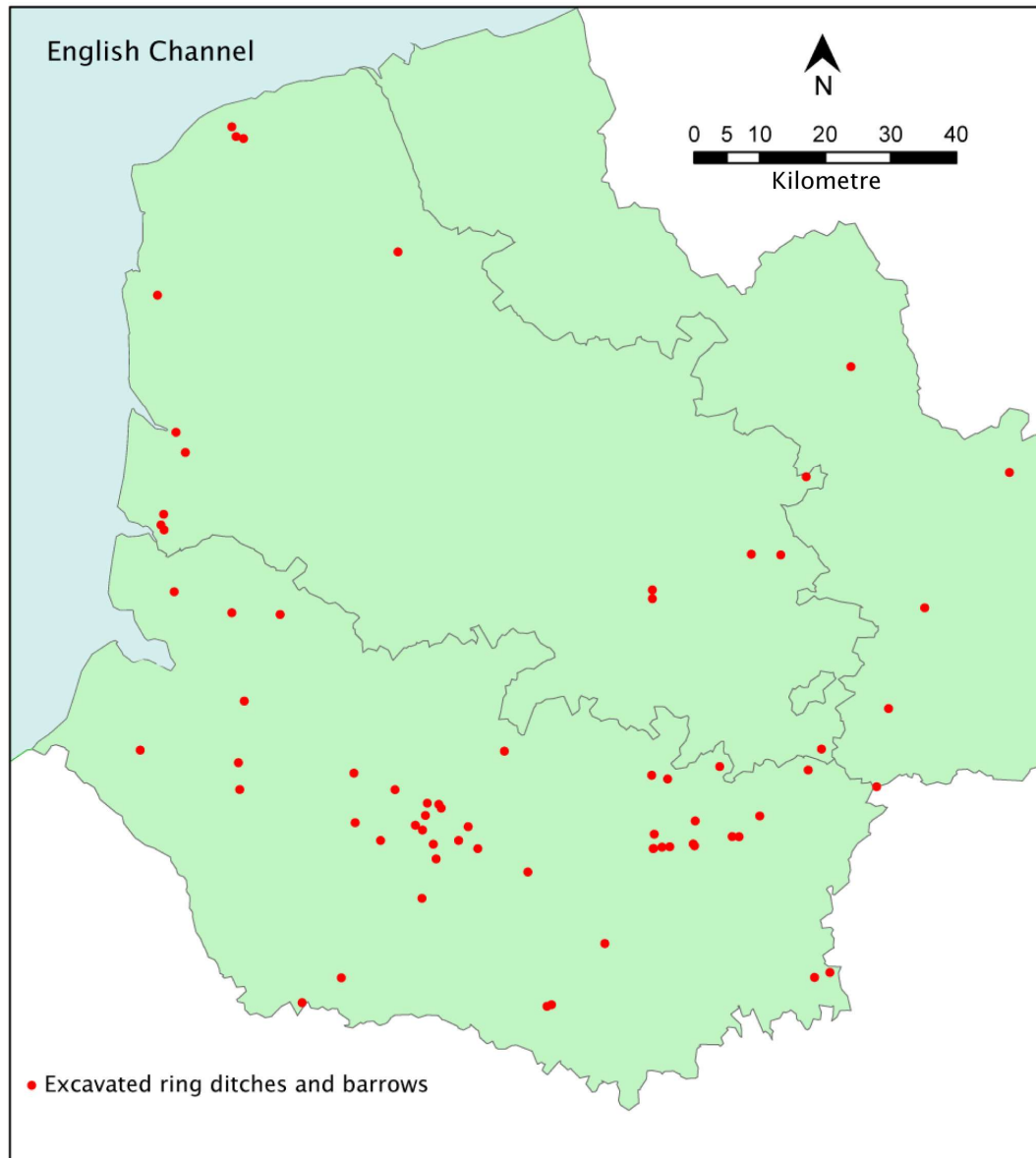


Fig 7.7: A map of the north-eastern Transmanche French study zone showing the distribution of excavated ring ditches and barrows. Created by the author in Arcview 9.2 and Adobe Illustrator (after Toron 2005).

## 7.2 DENSITIES AND DISTRIBUTION

### 7.2.1 The survey areas

The number of aurally detected circular crop and parch marks recorded by early 2009 for each of the study zones can be seen in Table 6.1 below. All three sets have been corrected to exclude monuments that have also been excavated or subjected to ground survey as these are dealt with elsewhere.

Study zones	1. Kent	2. Flanders	3. NE France
Ring ditches identified only by air survey	830	868	929

Table 7.1: The number of ring ditches and barrows recorded through air photo interpretation in each of the study zones. See Appendix B for full listings.

When each of the study zones is drawn at the same scale it can be seen that they differ significantly in overall land surface and in the distribution of monuments

(Fig 7.12). For comparative purposes a grid – designed specifically as part of this research and unrelated to any national grid system - has been superimposed on each (Fig 7.13). The horizontal (x) and vertical (y) lines are spaced five km apart, meaning that a single cell encompasses 25 sq km, or 2500 hectares. The x-axis is identified by numbers and the y-axis by letters.

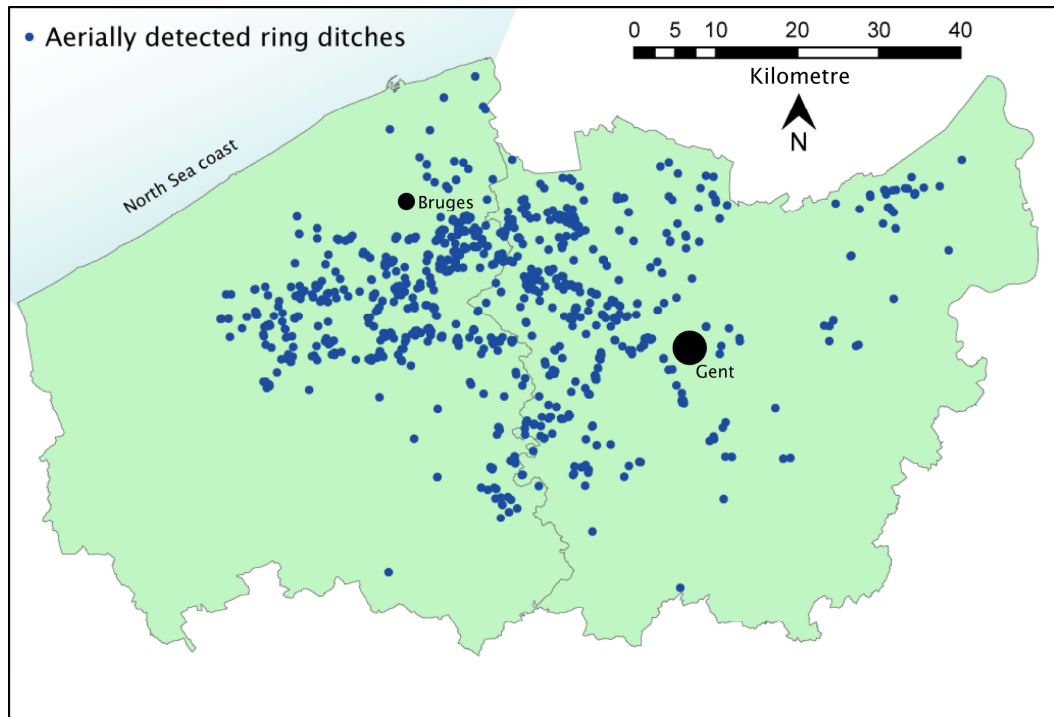


Fig 7.8: A map of the Flanders study area showing the distribution of aerially detected ring ditches.

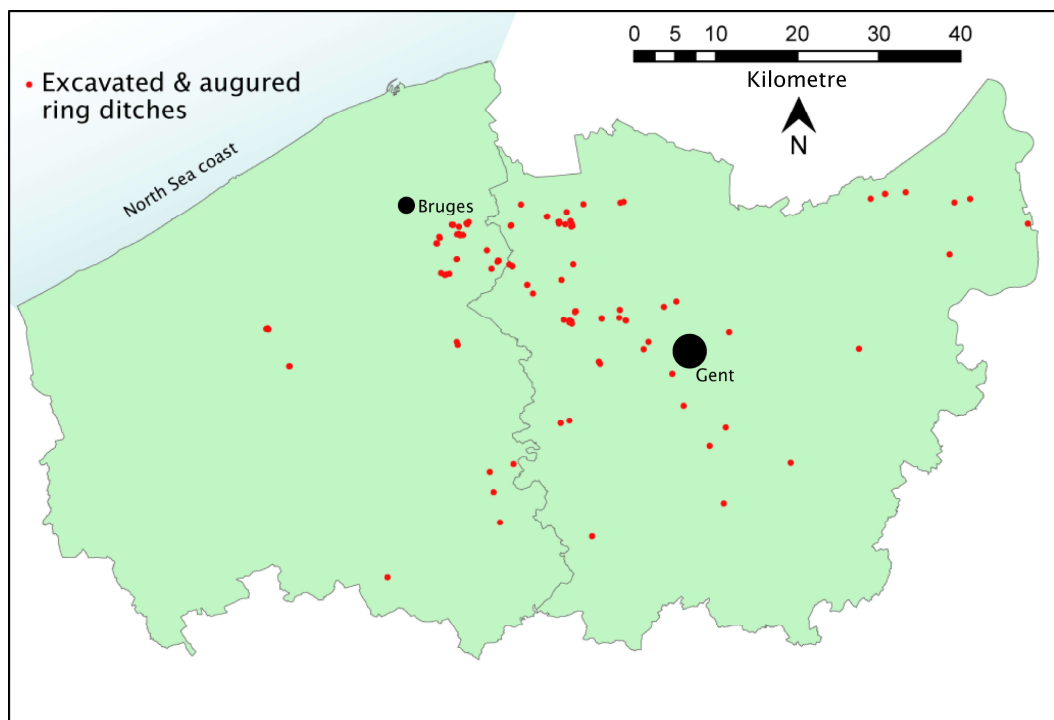


Fig 7.9: A map of the Flanders study area showing the distribution of excavated, augured and ground surveyed ring ditches and barrows.

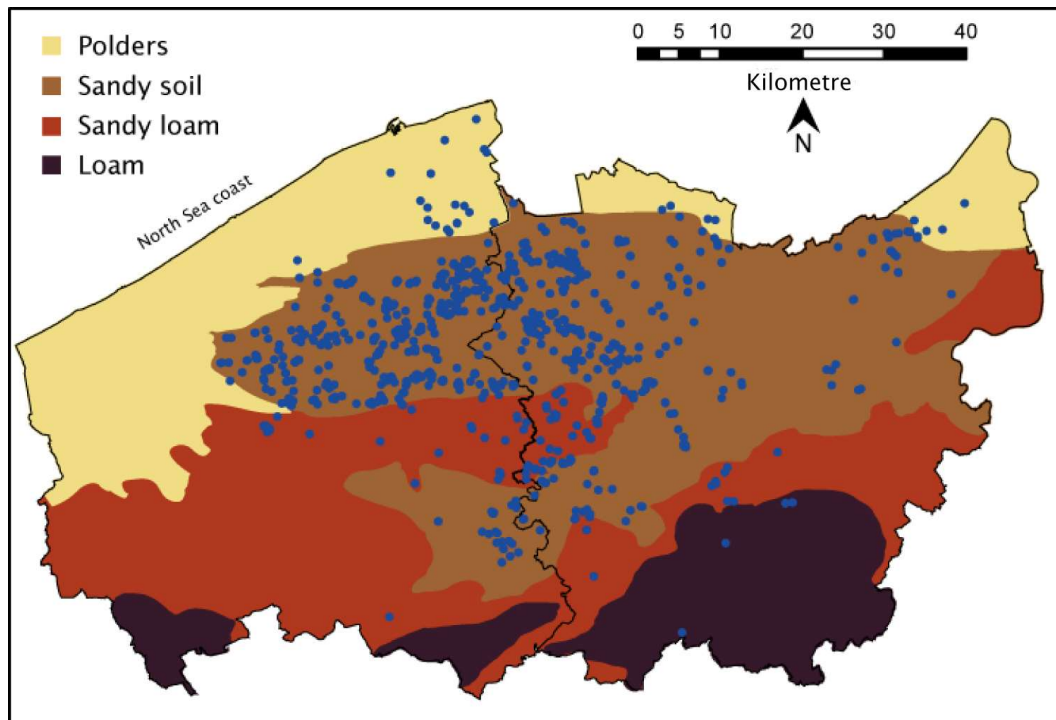


Fig 7.10: A simplified map of Flanders showing the sub-soil geology overlain by the barrow and ring ditch distribution plot. Drawn by the author (after Ampe *et al.* 1996b, 47).

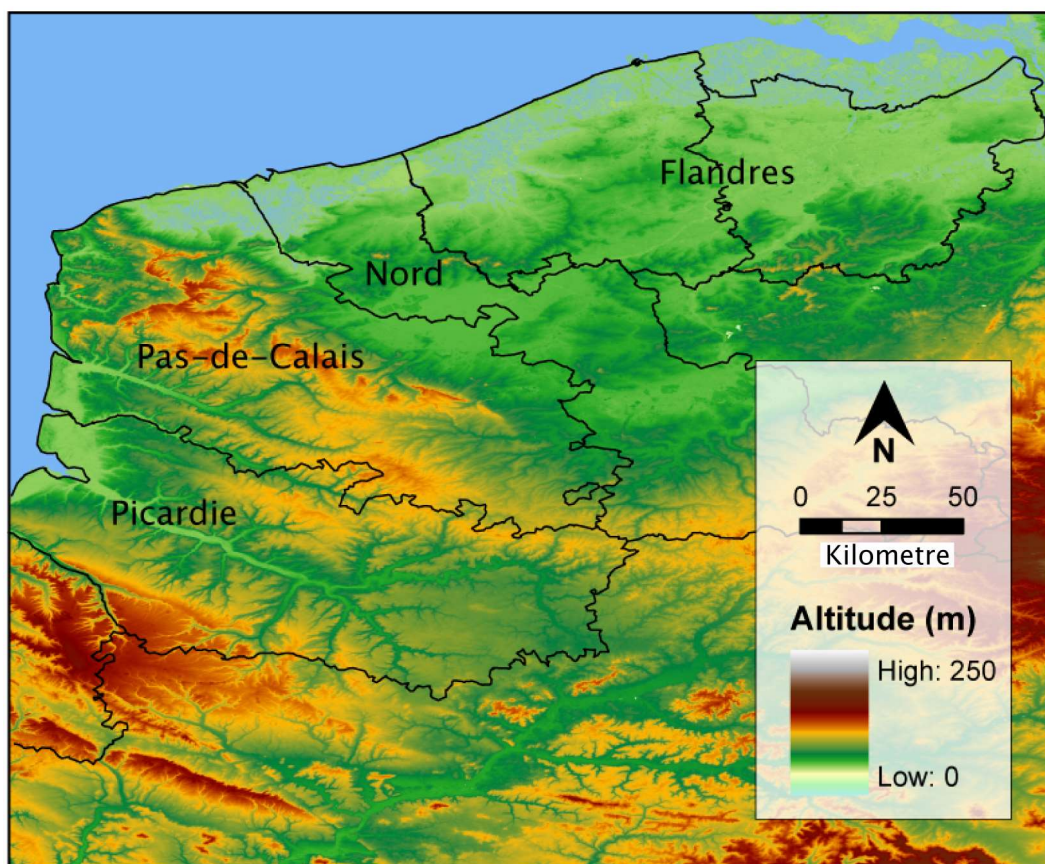


Fig 7.11: A topographic map of north-eastern Transmanche France and Flanders derived from Shuttle Radar Topography Mission (SRTM) data distributed by NASA and created in this form by the author using Arcview 9.2. Note the pale blue shading in coastal areas denoting that the land barely rises above sea level.

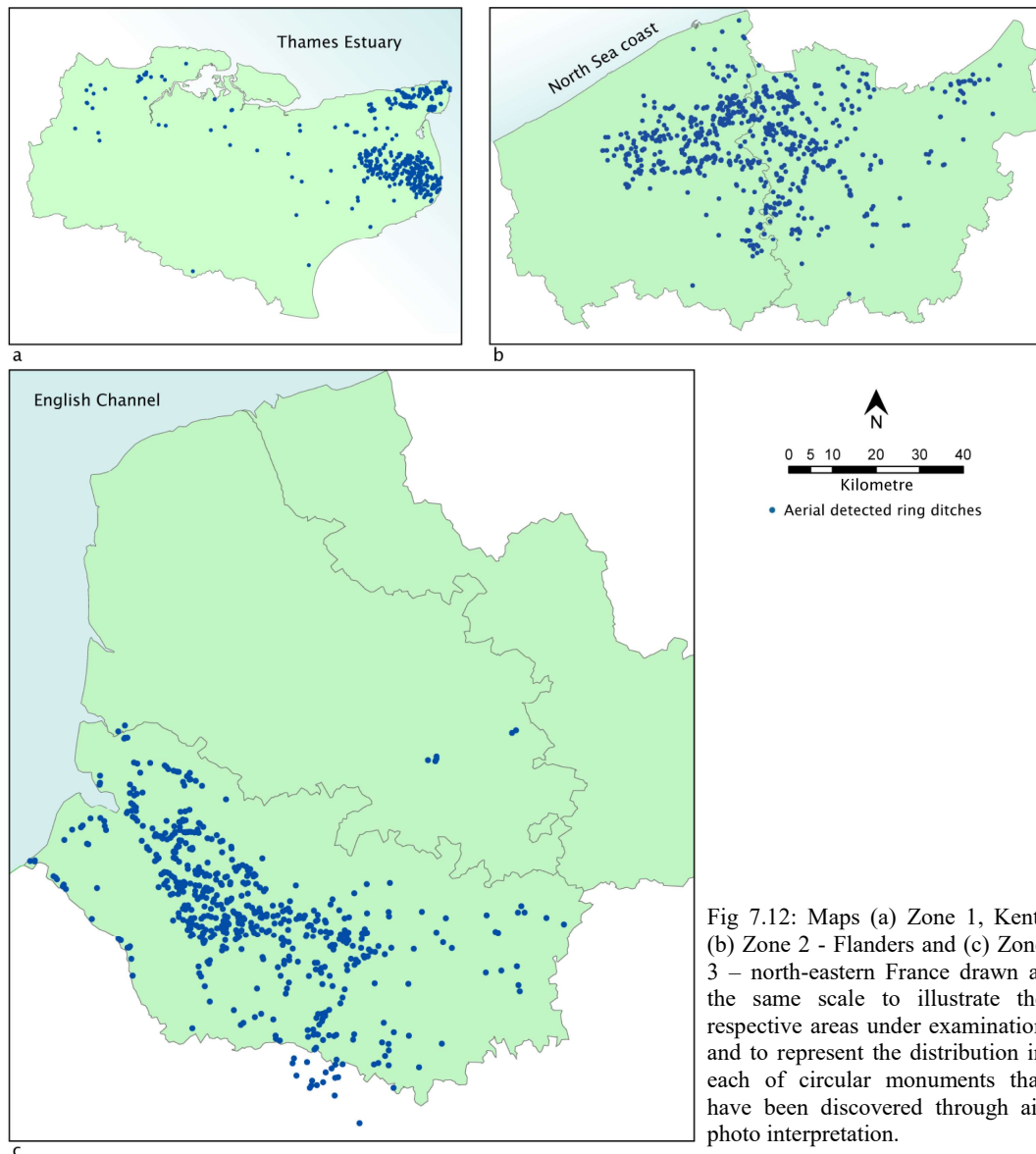


Fig 7.12: Maps (a) Zone 1, Kent, (b) Zone 2 - Flanders and (c) Zone 3 – north-eastern France drawn at the same scale to illustrate the respective areas under examination and to represent the distribution in each of circular monuments that have been discovered through air photo interpretation.

The Kent grid reveals that land in the county extends to approximately 4075 sq km; the next largest is Flanders at 6400 sq kms and then, what is essentially the Somme valley section of the French study zone, at 8175 sq kms. Table 7.2 demonstrates that despite these differences in area, approximately 40 percent of the cells in all three zones have aerially detected monuments within them. The average mean density per sq km for aerially detected monuments in each of the 25 sq km cells has been calculated (Table 7.3).

Study zone	Grid (x-y)	Total cell coverage	Excluded cells*	Residual number	Without monuments	With monuments	% with monuments
1 - Kent	19x13	247	84	163	113	50	37
2 - Flanders	24x15	360	104	256	151	105	41
3 - France	25x19•	475	147	328	192	136	41

Table 7.2: The number of ring ditches and barrows recorded through air photo interpretation in each of the cells as shown in Fig 7.13, broken down by zone.

\* Denotes cells outside the designated study zones. • The actual total for north-eastern Transmanche France is 36x40, but the grid has been truncated to exclude the northern portion which was not surveyed from the air.

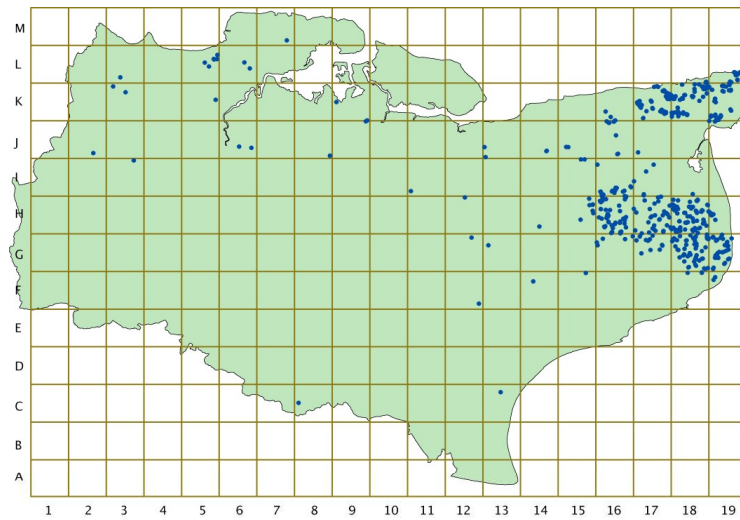
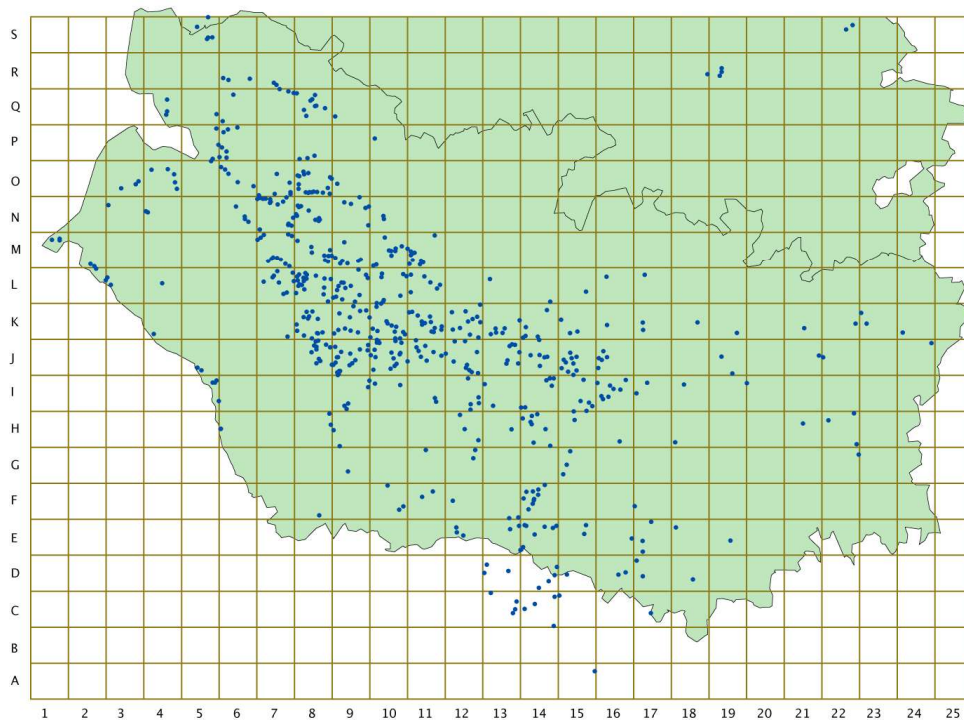
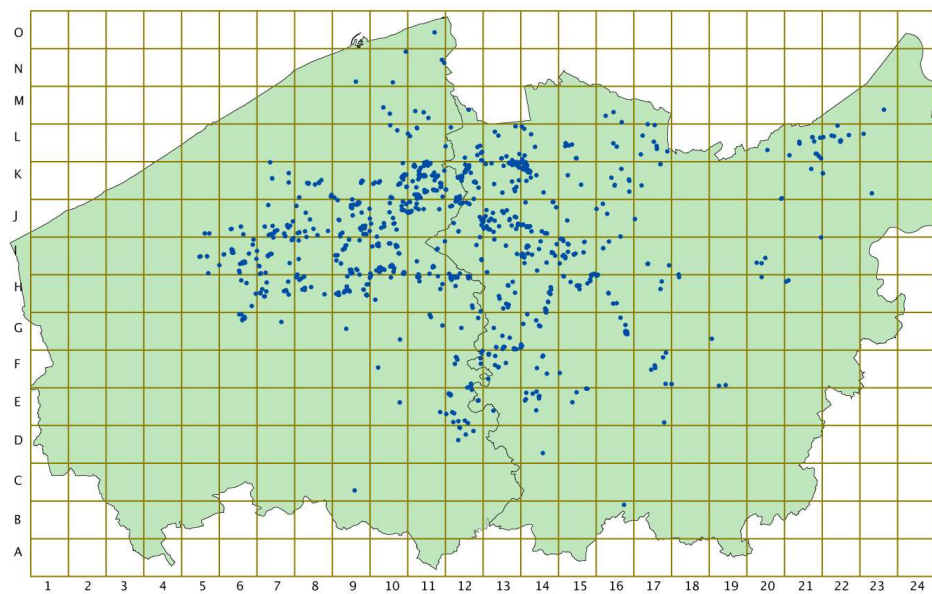


Fig 7.13: The three study zones drawn at the same scale showing the distribution of aerially detected ring ditches and barrows with the 25 sq km grid superimposed on each.



Monuments per cell	Cell nos per density level for Kent	Cell nos per density level for Flanders	Cell nos per density level for the Somme	Average density per sq km for each cell
1	20	20	37	0.04
2	10	15	17	0.08
3	2	8	12	0.12
4	1	7	8	0.16
5		6	8	0.2
6		3	7	0.24
7		2	5	0.28
8	1	3	6	0.32
9	1	5	2	0.36
10	2	3	3	0.4
11		3	4	0.44
12	1	3	2	0.48
13	1	1	1	0.52
14		1	4	0.56
15	1	1	2	0.6
16			2	0.64
17		1	3	0.68
18		1	1	0.72
19		1	1	0.76
20	1	1	1	0.8
21		1	1	0.84
22			2	0.88
23		1		0.92
24		1		0.96
25		4	2	1
26		1	1	1.04
27		2		1.08
28	1			1.12
29		1	2	1.16
30		1		1.2
31		1		1.24
32				1.28
33		1		1.32
36		1	1	1.48
37		1		1.52
38		1		1.56
39	1	1	1	1.6
42				1.68
43	1			1.72
44		1		1.76
52	1			2.08
62	1			2.48
76	1			3.04
84	1			3.36
95		1		3.8
128	1			5.12
178	1			7.12

Table 7.3: The number of monuments in each grid cell along with respective density levels.

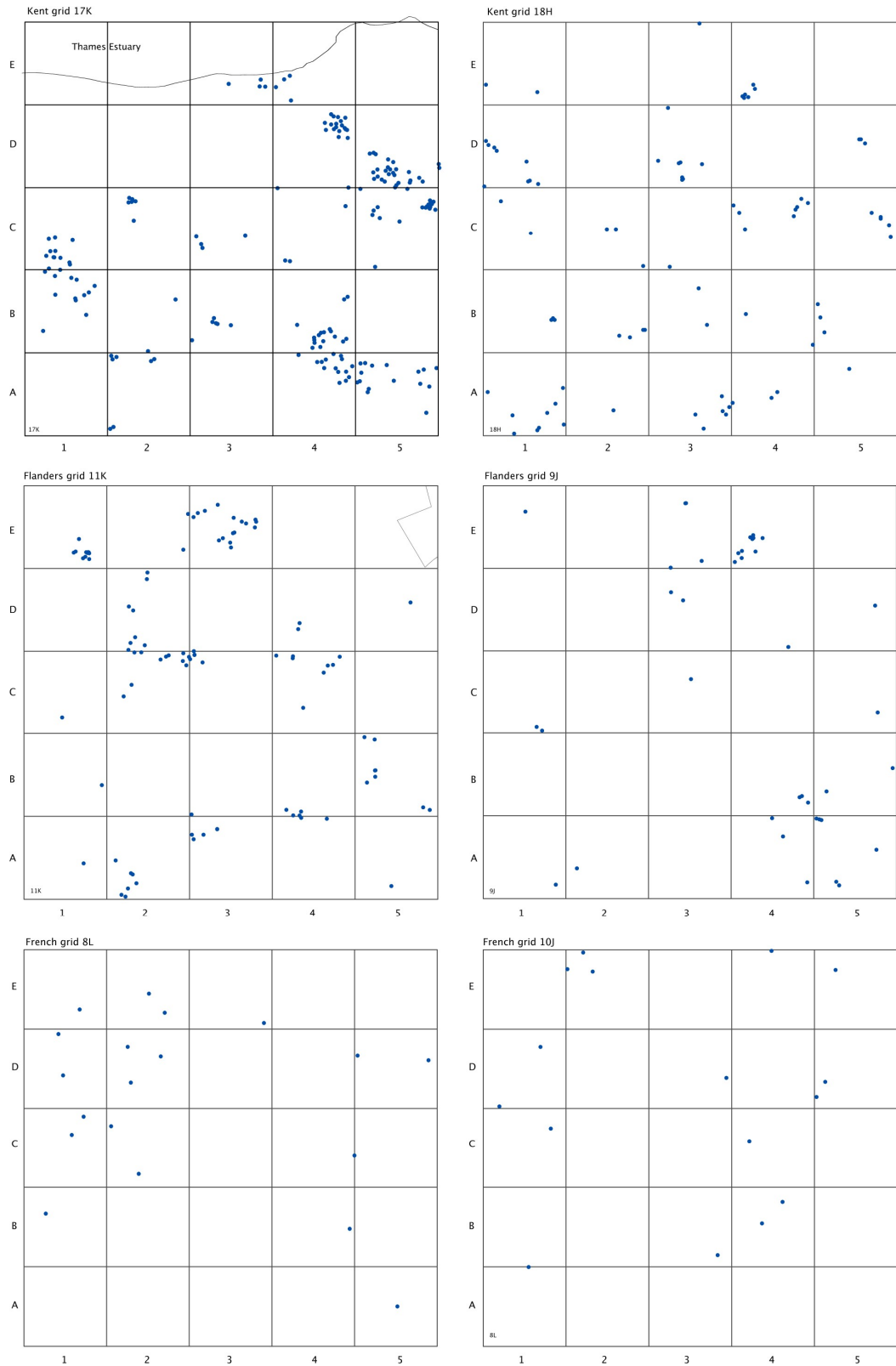


Fig 7.14: Two grids from each of the study zones are shown here with indicative points representing the distribution of circular monuments picked out in blue. The identifying co-ordinates for each grid are attached top left (see maps Fig 7.13). Each is sub-divided into 1km squares and respective density levels for each of these blocks is shown in the accompanying Table 7.4. Note that some of the French distribution points refer to sites where more than one circular monument is present – see Fig 7.15 and Table 7.5 for further information.

## 7.2.2 Density comparisons

This technique allows comparison within and between the study zones, but the method differs from that used when a similar exercise was carried out by Woodward (1996) in the Stonehenge and Avebury area. In that study, densities were calculated per square kilometre for excavated and otherwise detected monuments found within given radii, the largest of which was 3.3 km in diameter (a total area equivalent to 34 sq km). This method returned mean densities of 14.3 and 4.2 per sq km respectively (Woodward 1996, figs 2 and 4).

In this context it should be noted that Kent has 227 additional barrows discovered through means other than aerial detection and in France the number is 126<sup>37</sup>. In order to more meaningfully compare density levels with those of Woodward's, these must be taken into consideration. For Kent the extra monuments represent a mean average of 4.54 per grid cell and in France the uplift is 0.93 per grid cell. This increases the maximum density in Kent from 7.12 per sq km to 7.3 per sq km and in France from 1.6 per sq km to 1.64 per sq km. As the maximum for Flanders is 3.8 per sq km it can be seen that, at this sampling level, densities in the Continental study zones do not in general match up to those of Stonehenge or Avebury, although specific clusters do - as illustrated in Table 7.4 and the bar chart, Fig 7.15.

Density per sq km	Sub-cell frequency Kent		Sub-cell frequency Flanders		Sub-cell frequency Somme	
	17K	18H	11K	9J	8L	10J
0	9	4	7	9	12	12
1		3	5	9	6	4
2	1	6	3	2	1	6
3		4		3	3	3
4	3	1	2		1	
5	2		1			
6	1	1		1		
7		3	1			
8	1	1	3		2	
9		1				
10		1		1		
11	1		1			
13			1			
14	1					
15	1					
16	1		1			
17	1					
22	1					
27	1					

Table 7.4: Monument density levels measured against the number of times each occurs in a sq km sub-cell. The heavier outlined rows indicate the Avebury and Stonehenge density levels, respectively.

<sup>37</sup> In Flanders this particular issue does not apply as almost all the barrows and ring ditches were originally detected through aerial photography.



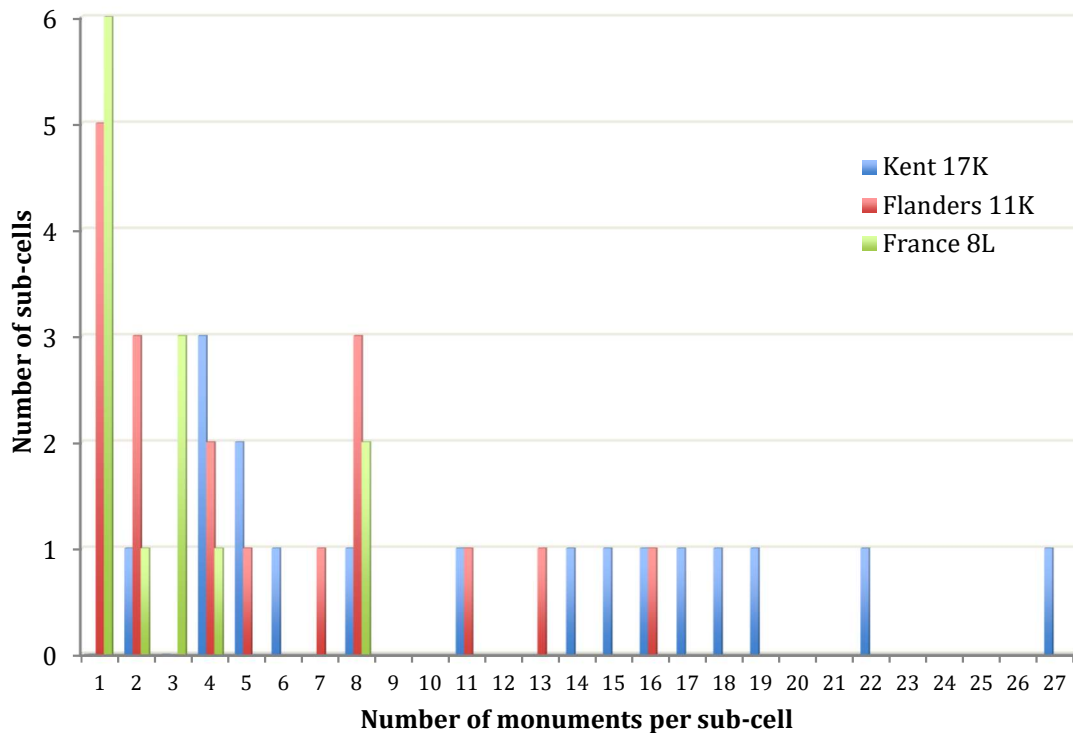


Fig 7.15: The coloured bars represent the most densely populated 25 sq km grid-cell from each of the three study zones. These bars are divided into 1 sq km sub-cell, the number of which is indicated by bar height. The horizontal axis refers to monument density levels.

### 7.2.3 Positions in the landscape

In order to further explore issues of density and to consider matters relating to distribution the three most heavily populated grid cells (Kent 17K, Flanders 11K and France 8L) along with three other randomly chosen cells (Kent 8H, Flanders 9J and France 10J) were further subdivided into one sq km or 100 hectare sub-cells (Fig 7.14). As expected, many of the smaller grid densities are comparable with Stonehenge and Avebury levels, with one from Flanders and five from Kent even exceeding the highest (Table 7.4 and Fig 7.15). Apart from this, the most notable aspect is how much less dense monuments are in the Somme region than in either Kent or Flanders. In fact, approximately half of the one sq km sub-cells in both 8L and 10J are empty.

In the samples from Flanders empty cells represent less than a third, whilst in Kent the picture is more varied, but the number remains well below that of the Somme. It should be noted that the French database contains 581 records, of which only 377 refer to individual monuments. The other 204 refer to sites, of unspecified sizes, containing between two and nine ring ditches each (Fig 7.16).

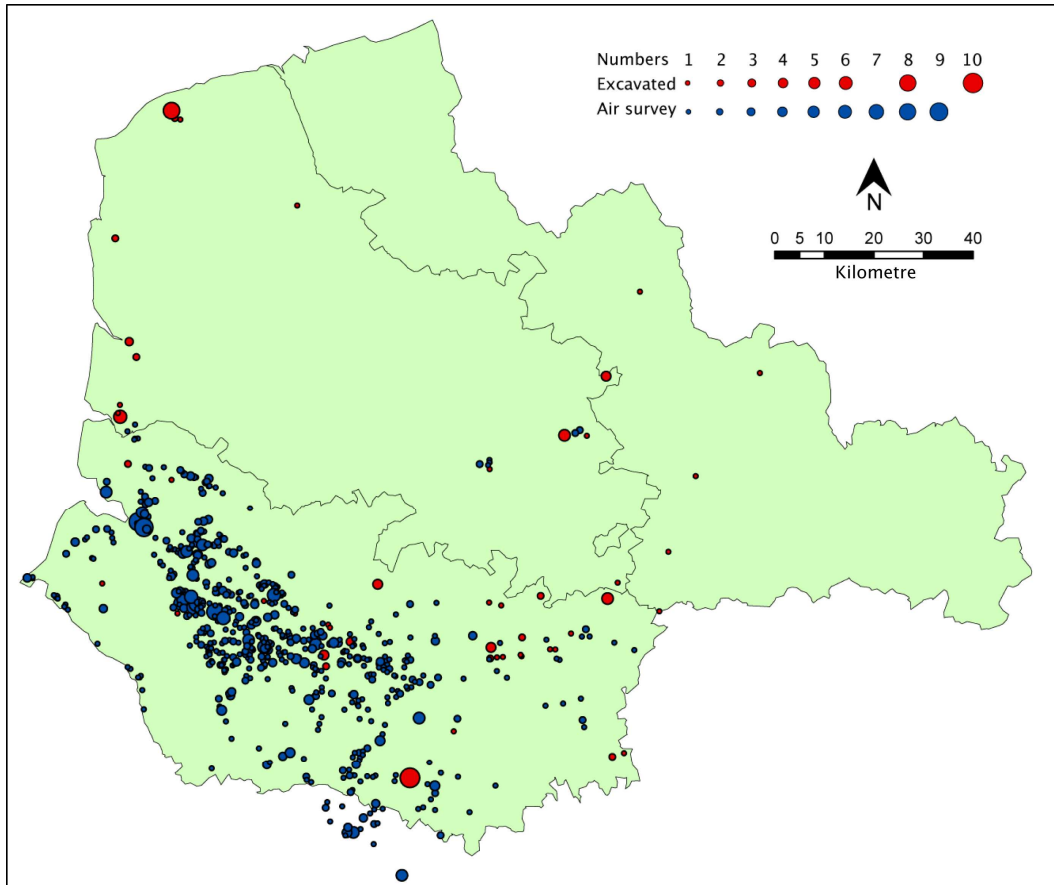


Fig 7.16: Map indicating where the data records the presence of multiple monuments at single sets of coordinates.

Table 7.5 (below): Monument numbers and elevation figures for the French grid cell 8L.

Monument ID	A	B	C	D	E	F	G	H	I	J	K	L	M
Numbers	2	1	1	1	1	2	2	1	2	7	2	7	2
Elevation (m)	61	64	65	77	67	85	112	69	75	62	72	65	70

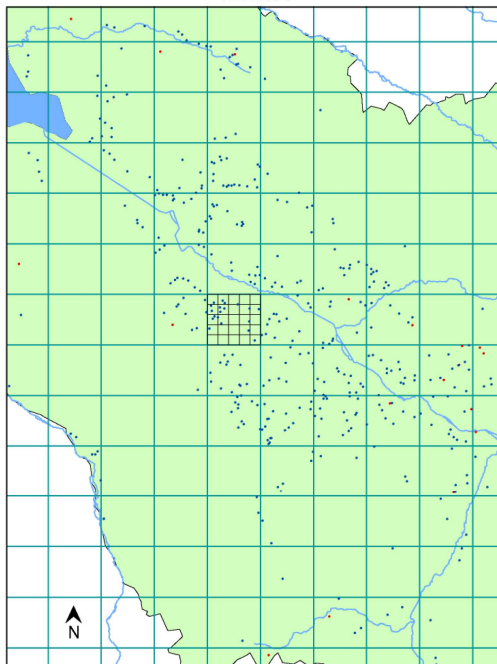
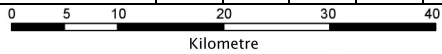
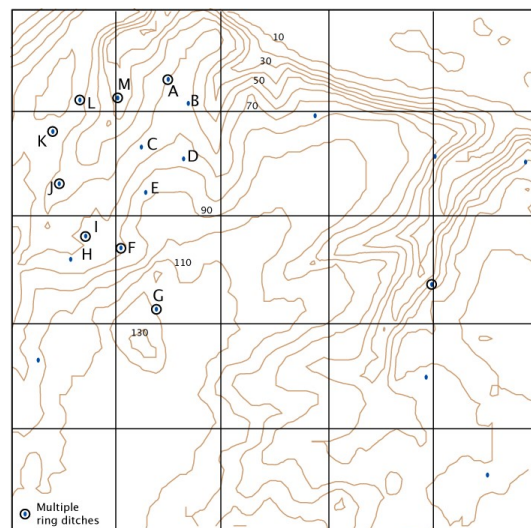


Fig 7.17 (left): Map showing the French 25 km grid cell 8L in the wider Somme valley landscape.

Fig 7.18 (below right): 8L showing the 10m contour lines in relation to ring ditch positions in the landscape. Note the sites with multiple monuments.



Whilst this has been taken into account, it is possible that the difference in recording methodologies has affected results. The French system also makes it difficult to visually discern groupings or patterns of clustering. However, on close examination of cell 8L, it is clear that the crop marks coalesce in the upper left quadrant, on the edge of the Bellifontaine valley. The topography may have influenced the choice of location, as the monuments are positioned along the sides and end of a u-shaped depression in the chalky landscape.

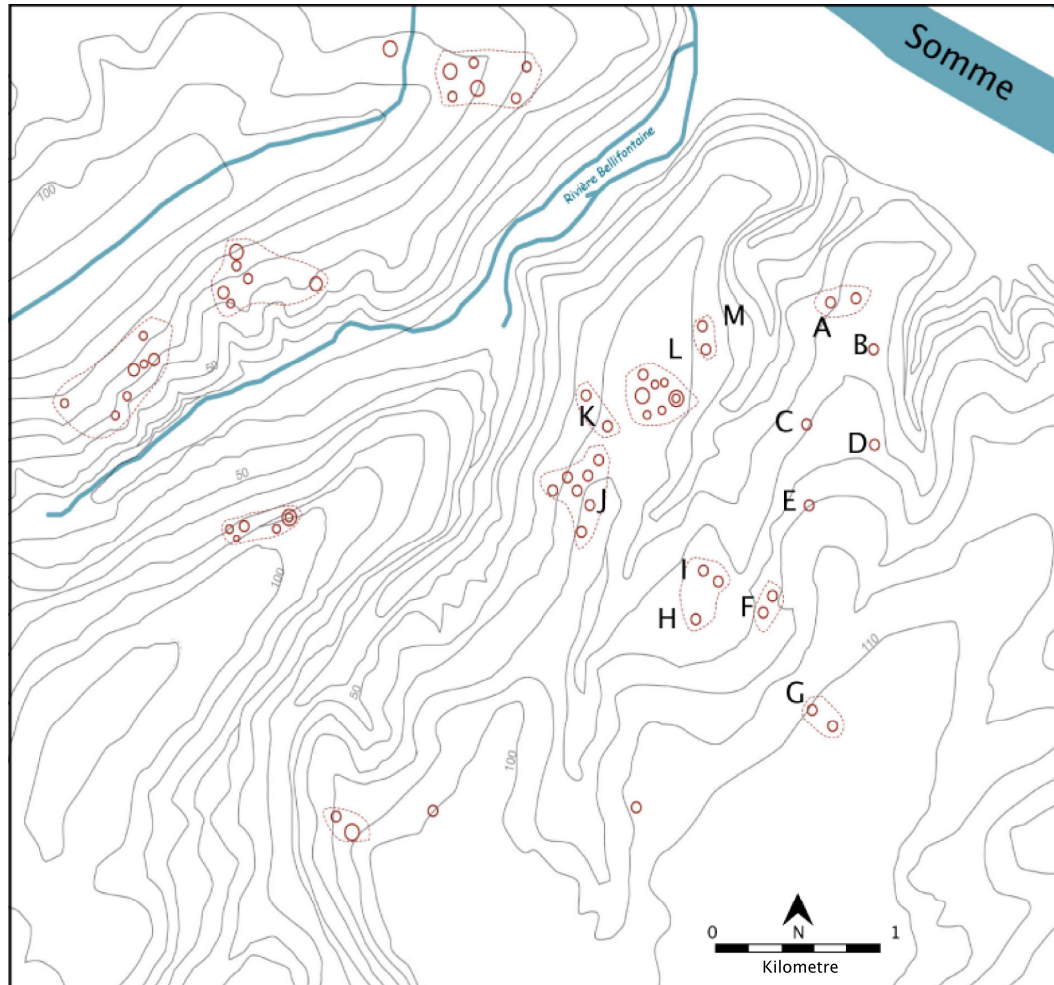


Fig 7.19: A contour map of the Bellifontaine valley showing the disposition of the ring ditches from grid 8L along with other known aerially detected monuments in the land that lies immediately to the north-west on the other side of the river. The Somme is shown to the north-east (after Hammond *et al.* 2009).

The site is close to the mouth of the Somme, 30 km east of the Channel coastline (Fig 7.17). The land rises steeply then levels out before reaching a peak of 130m above sea level. There are multiple ring ditches on its slopes, marked by 13 sets of co-ordinates, labelled A-M (Fig 7.18 and 7.19). Table 7.5 lists corresponding ring ditch numbers along with elevations. They demonstrate that the height at which these monuments were sited was fairly consistent, with few deviating significantly from a mean average of 63m. This can be set against the mean average elevation of

all the known circular monuments in the French study zone, which is 70m, with 13 percent at or above 100m and two percent at or below 10m (Fig 7.21a). None of the monuments in grid 8L is positioned on a hill summit, but they are all in high places that would have made them clearly visible from one to another and from a distance, providing the area was not heavily wooded - but this cannot be determined without environmental data. Another significant aspect is that groups J and L each encompass seven circular monuments, one with a double concentric ring ditch, measuring 45m-diameter. These and the adjacent ring ditches are located on the north-eastern side of the Bellifontaine valley (Fig 7.19). The whole area extends to approximately 35 sq km and contains more than 60 aerially detected ring ditches. Their disposition in the landscape is typical of the Somme region (Fig 7.20), with most monuments following valley profiles and overlooking the waterway networks.

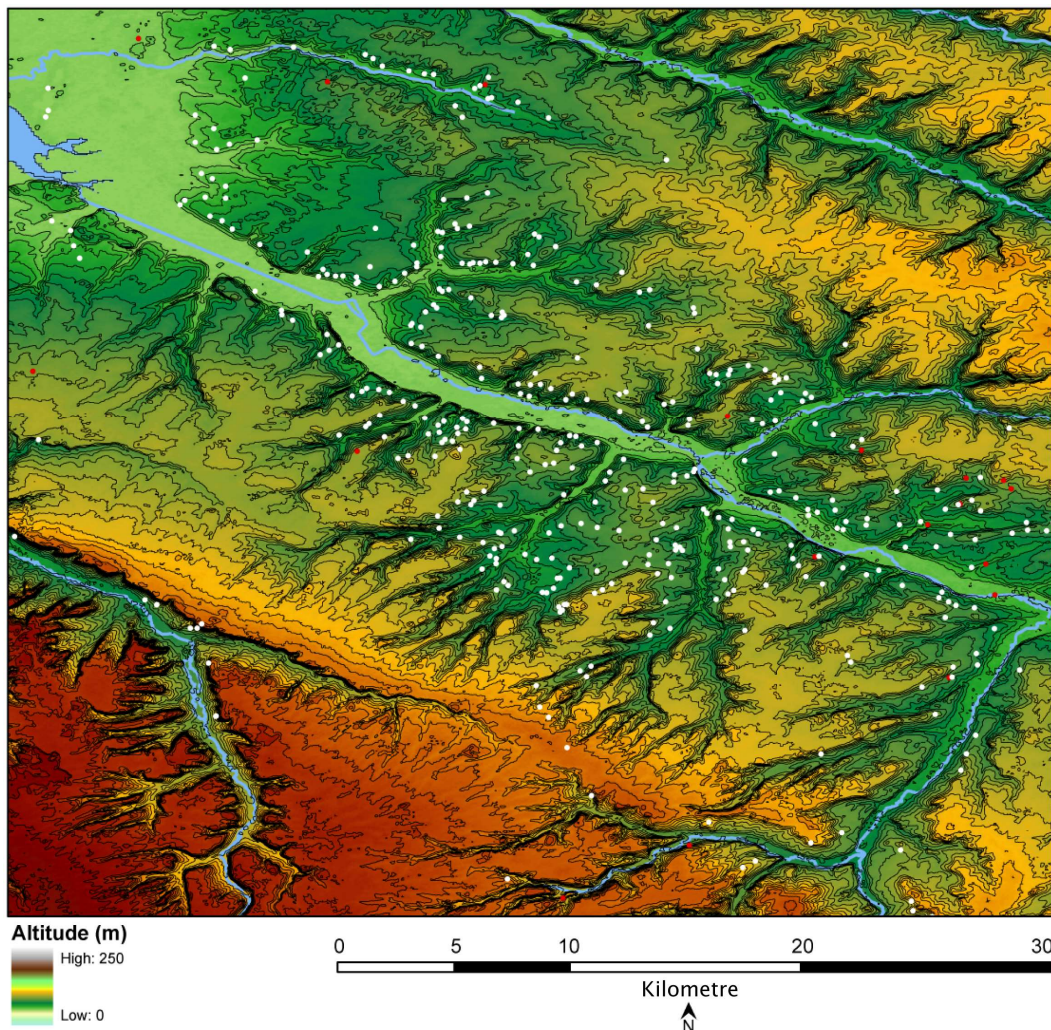


Fig 7.20: A relief map of the Somme valley and surrounding landscape derived from Shuttle Radar Topography Mission (SRTM) data and created in this form by the author. The positions of aerially detected circular monuments are picked out in white, with excavated barrows in red. Note the apparent affinity to valley sides and watercourses.

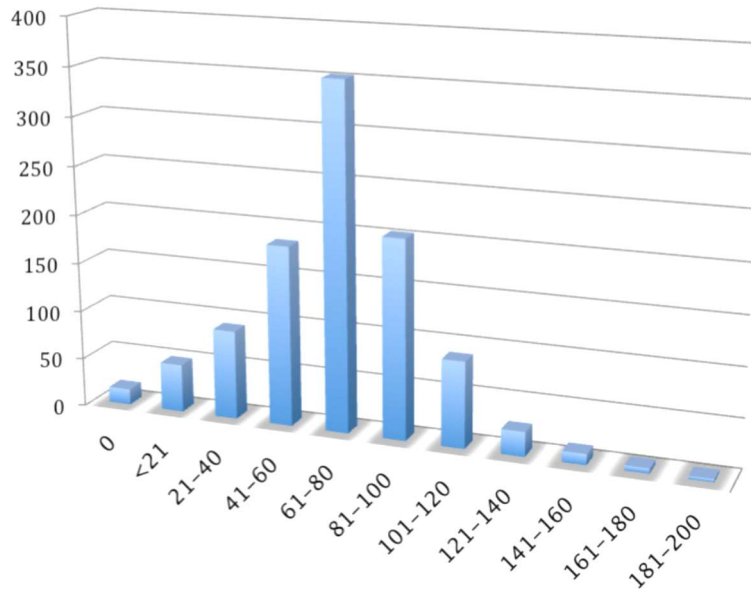


Fig 7.21a: Zone 2 – north-eastern France. The number of circular monuments (vertical axis) is plotted against elevations - divided into 20 metre blocks.

Where only a site elevation is provided by the database, the number of monuments recorded for that site is used as a multiplier.

a

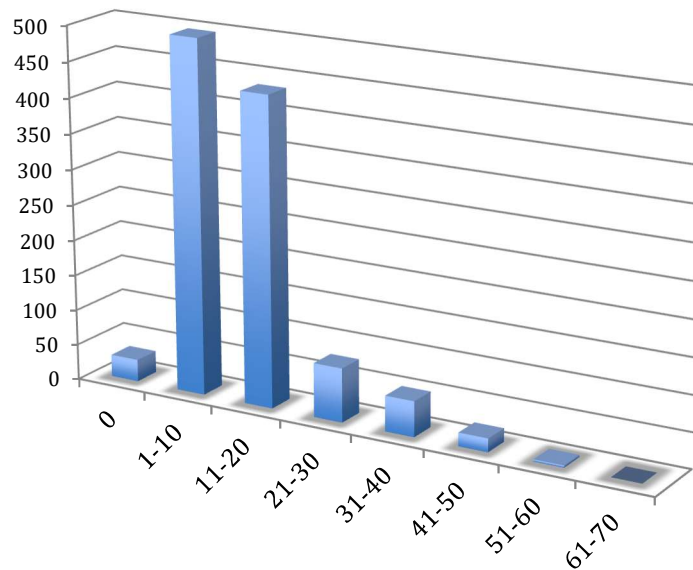


Fig 7.21b: Zone 3 - Flanders: The number of monuments (vertical axis) is plotted against elevation divided into 10m blocks.

b

In Flanders the mean average elevation for ring ditches and barrows is 14.23m, with 75 percent of them being lower than 20m (Fig 7.21b). The mean average elevation for aerially detected ring ditches in Kent is calculated at 46.4m<sup>38</sup>. However, comparing elevation data in this way is of limited value due to the naturally varying topographies of each zone – most especially noticeable for Flanders, where more than two-thirds of the land is less than 20m above sea level (Fig 7.23). The apparent propensity for the Somme valley monuments to be

<sup>38</sup> This is based on data used to compare ring ditch sizes against their elevations SMYTHE, J. (2007) *Using GIS to find and Explore the Bronze Age Round Barrows and Ring Ditches of Kent*, MSc dissertation, Institute of Archaeology, University College, London.

constructed below hillcrests and on valley slopes – often in positions that overlook watercourses or areas that may otherwise be considered liminal – bounding distinct landscape changes - is potentially more significant. This same tendency is demonstrably present in Kent (see below) and is even detectable in Flanders. Despite the generally flat nature of the terrain, land to the east of Bruges rises to 30m above sea level due to a *cuesta*, or sloping outcrop of tertiary Eocene marine sedimentary rock (Fig 7.22). This promontory, which is named after the Maldegem municipality, is especially rich in monuments, particularly along its periphery (Ampe *et al.* 1996b, 66-70; Cherrette and Bourgeois 2005, 259)

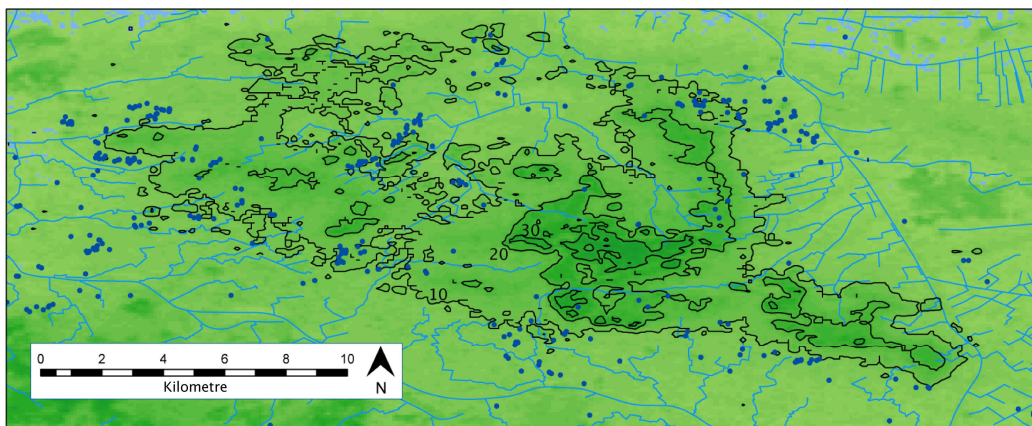


Fig 7.22: Relief map of Maldegem cuesta, east of Bruges, rising to 30m above sea level, creating a distinct promontory. The contour lines are in 10m increments. The watercourses shown here are a mixture of ancient natural streams and man-made drainage channels and canals. Note the circular monuments (blue spots) around the periphery. See Fig 7.23 for the location of the cuesta within the Flanders' landscape. Derived from SRTM data and created in this form by the author.

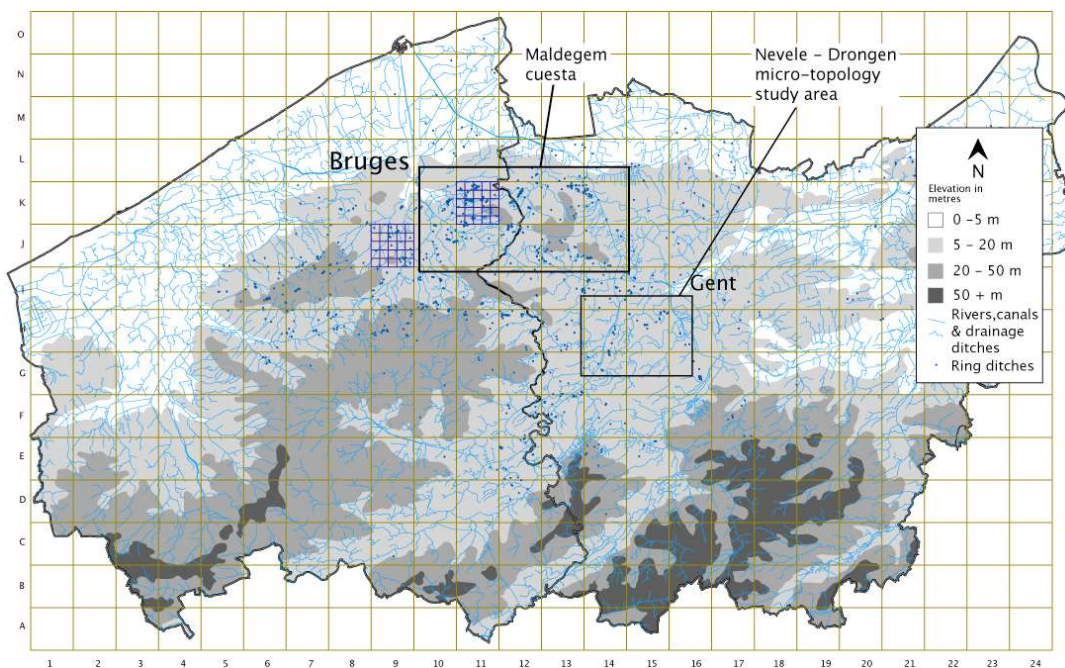


Fig 7.23: East and west Flanders showing relative elevations and the drainage patterns, which provide an indication of slope. Sample grids 11K and 9J are also indicated on this map and extracted and enlarged below.

Despite the fact that it accounts for just four percent of the land area of Flanders, approximately a third of all known ring ditches and barrows – around 300 - have been found on the *cuesta*. This unusual concentration was noticed soon after air surveying began in the 1990s and it was originally thought to be bias brought about by the fact that the Ursel airfield, out of which the reconnaissance sorties were flown, is in the same locality. However, when operations changed to Sint-Denijs-Westrem, just west of Gent, discoveries around the *cuesta* continued unabated, leading to the conclusion that this was a genuine phenomenon (Ampe *et al.* 1996b, 65). Additionally, recent studies of the ‘micro-topology’ – in essence the surveying and recording of small variations in sandy ridges - have indicated that even at this scale ring ditches are predominantly sited on the more prominent high ground (Cherrette and Bourgeois 2005, 262). Such undulations rise no more than a few metres above their surroundings but are distinct features in the otherwise flat landscape. An example can be seen south-east of Gent on land between Nevele and Drongen (Fig 7.24).

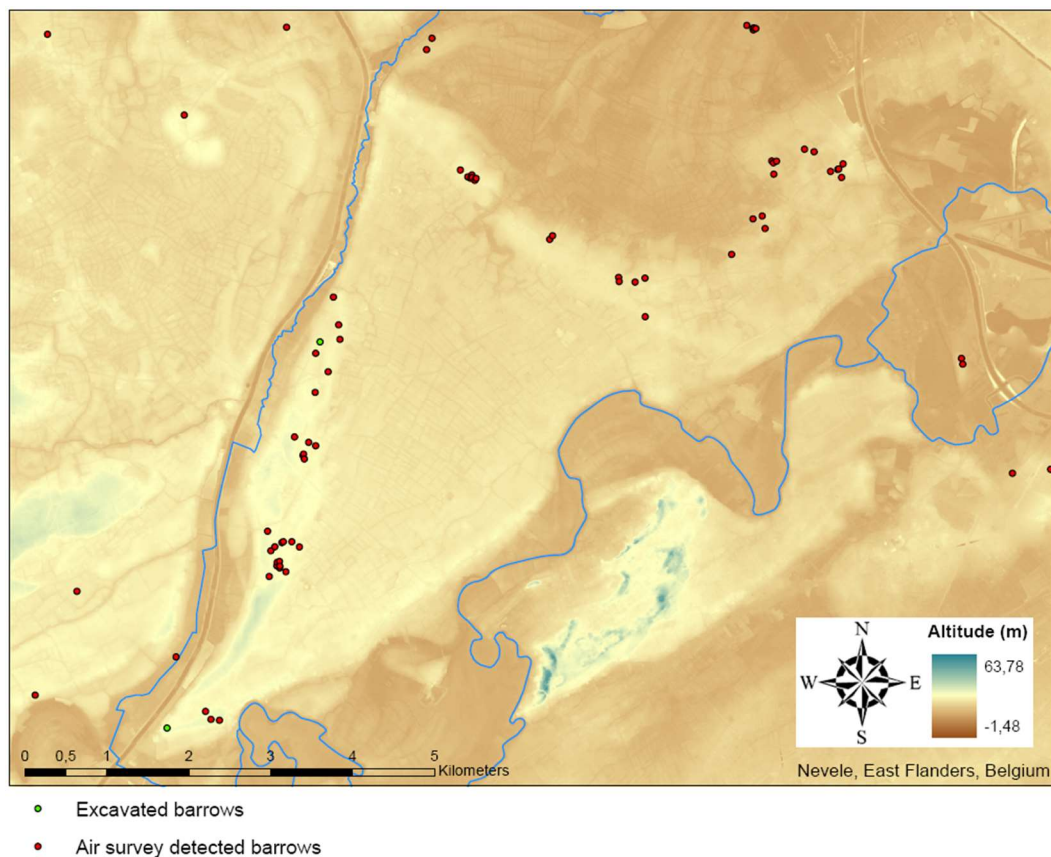


Fig 7.24: The Nevele – Drongen area of Flanders – see Fig 7.22 for location - sandwiched between the river Lys to the south-east and the river Kale to the west, it rises no more than two-metres above the surrounding landscape. The break of slope on two sides of this triangle was a focus for barrow building. It is not understood why the third side is devoid of monuments (after Hammond *et al.* 2009).

The area consists of a triangular strip of land between the rivers Lys and Kale rising just two metres above the respective ‘valleys’. Fairly evenly spaced groups of monuments are located along the eastern flank of the Kale and these are matched by a similar arrangement to the north-east. However, intensive air and ground surveys along the third side, facing the Lys, have failed to locate any ring ditches. There is, as yet, no explanation for this absence (Hammond *et al.* 2009).

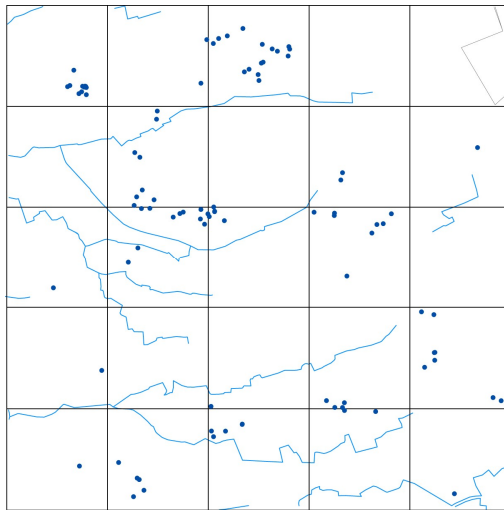


Fig 7.25a: Flanders sample grid 11K

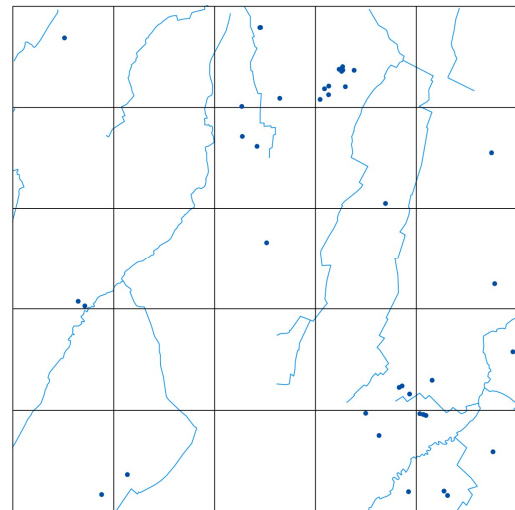


Fig 7.25b Flanders sample grid 9J

Finally, an examination of grids 11K and 9J (Fig 7.25a and b) also suggests deliberation in the positioning of monuments. Not only do they often appear grouped together but also seem to follow the line of waterways. Of course, caution is needed when drawing such an inference because modern Flanders has an intensive water network, making it difficult to avoid. Also, many of the channels may now follow different courses, or may not even have existed at that time the monuments were built.

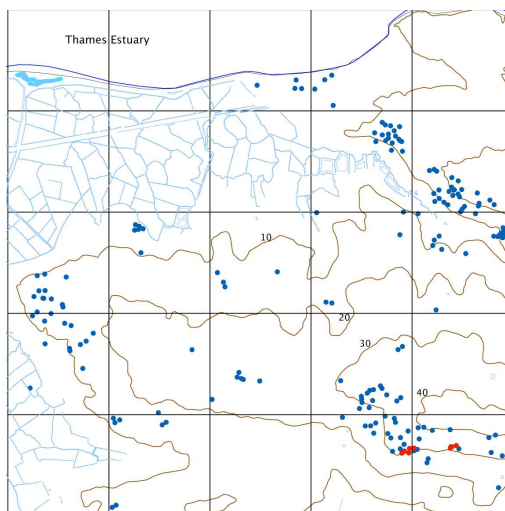


Fig 7.26a: Kent sample grid 17K

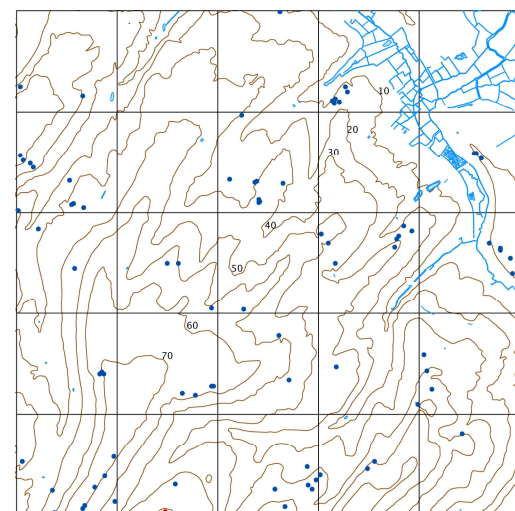


Fig 7.26b: Kent sample grid 18H



In Kent ring ditches and barrows are also frequently found in prominent positions, which often means at relatively high altitudes. This is most evident in sample grid 17k (Fig 7.26a), which encompasses part of the Isle Thanet – an area noted for the high density of circular monuments especially around its perimeter (Fig 7.27). Although now no longer an island it was once surrounded by tidal waters: The estuary of the River Thames is to the north, the English Channel to the east, the river Stour to the south and the river Wantsum to the west. The latter two rivers have silted up over time, progressively creating an alluvial plain that, sometime since the medieval period, has resulted in a continuous land bridge being formed between the island and mainland Kent. Thanet is today a roughly rectangular plateau, formed by a chalk anticline or bulge.

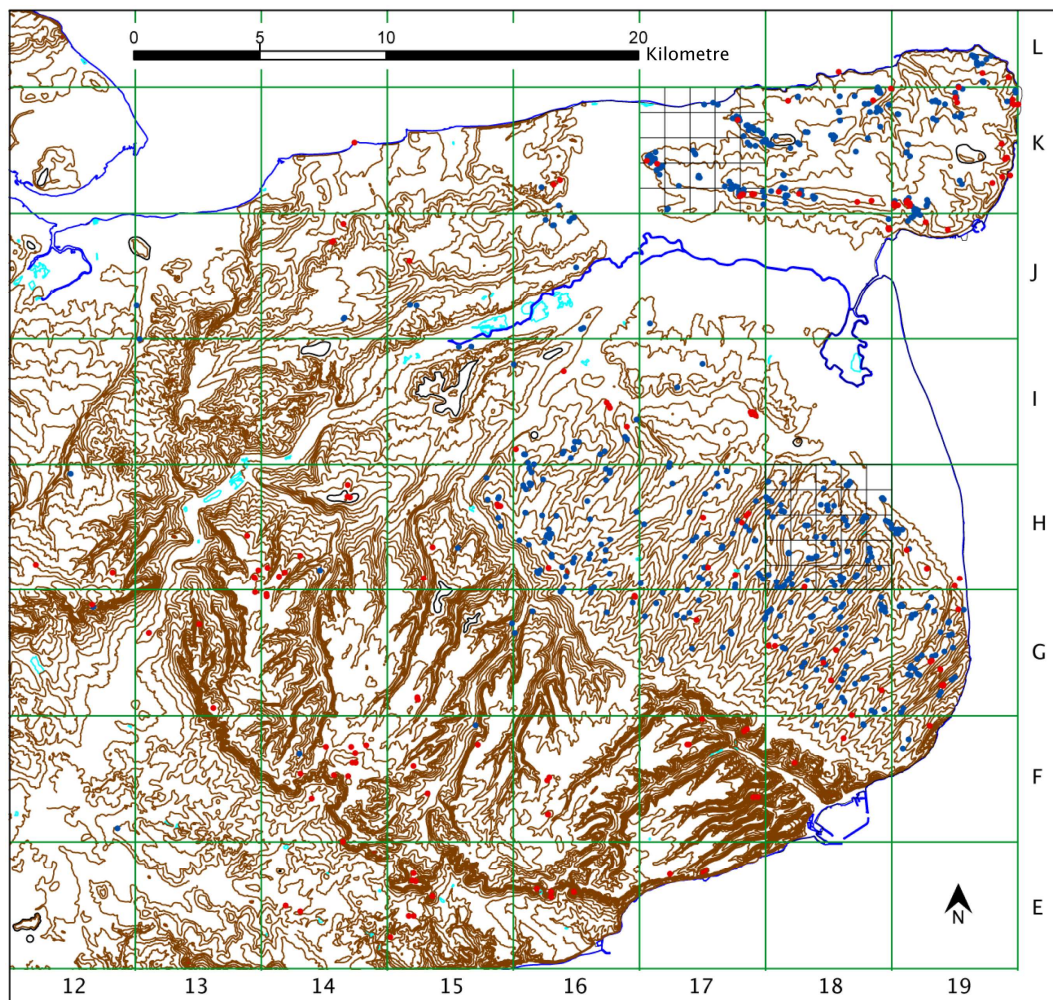
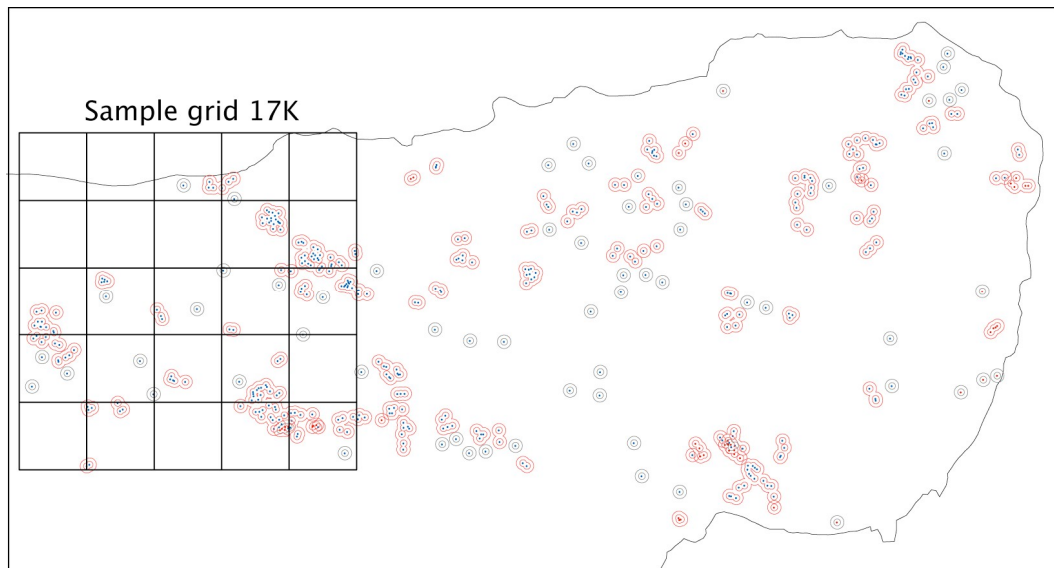


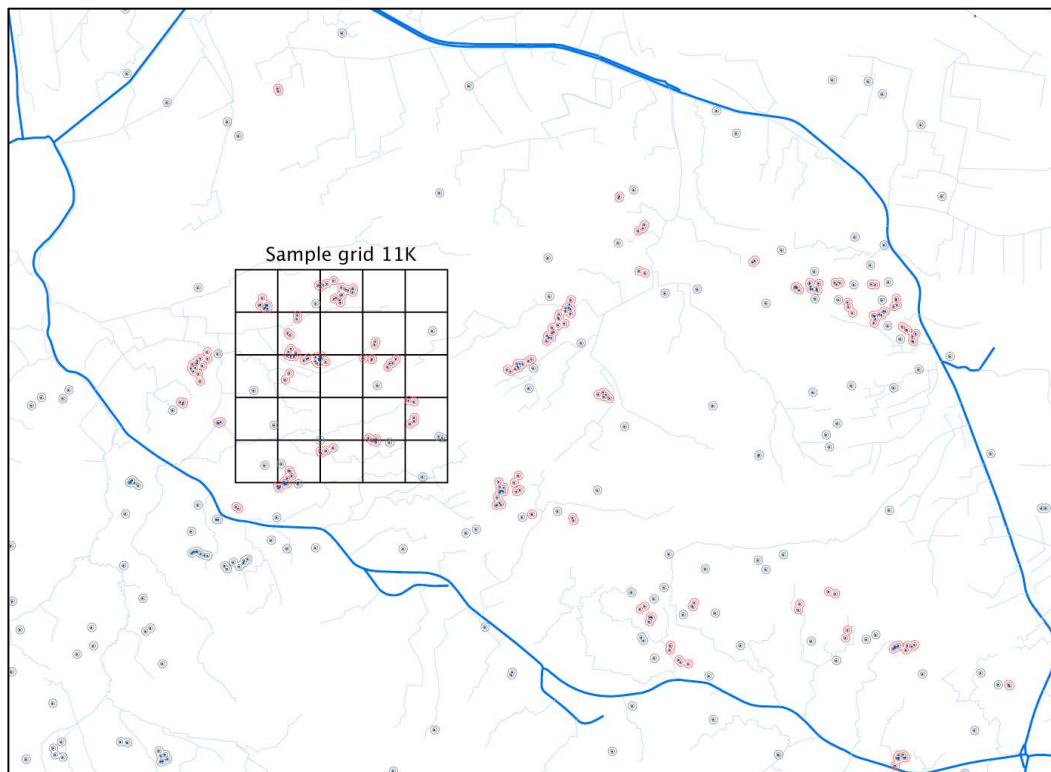
Fig 7.27: OS Landline contour map of east Kent, imposed with the author's grid and ring ditch dispositions.

Serendipitously, there are similarities between it and the Maldegem cuesta. Although the geological processes that created them are different, the effect on the land surface in both cases is to produce low-lying promontories, each of which

risers by just tens of metres above the surrounding landscapes. They have relatively flat interiors and sloping sides. The *cuesta* is larger, measuring 25km by 12km, whilst Thanet is 16km by 7.5km. The most significant difference is that during the barrow-building era the Maldegem *cuesta* was not an island, although it was surrounded by inland waterways, marsh and heathlands. Nevertheless, there are valid comparisons that can be made.



a. Thanet



b. Maldegem *cuesta*

Fig 7.28: The monuments shown in pink in Thanet (a) and the Maldegem *cuesta* (b) demonstrate 2-dimensional spatial proximity, tested through the imposition in Arcview 9.2 of 50m and 100m buffer zones – as measured from their centre points  $\pm 1^2$ m. See Fig 7.30 below for enlarged views of the sample grids. It is also possible that some monuments beyond the 100m limits may fall within these groupings.

In common with Maldegem, Thanet appears to have a disproportionate number of barrows and ring ditches. Nearly half of all the known Kentish monuments – around 500 – have been found in Thanet – an area that accounts for just three percent of the land in Kent. A further similarity is the tendency to find circular monuments grouped together. In the Maldegem cuesta 43 sets have been identified ranging in size from two to ten (Ampe *et al.* 1996b, 66). Applying the same criteria to Thanet suggests the number of similar sets exceeds 80. In other parts of Flanders and Kent the level of coagulation appears to be lower – but this may simply be a function of the lesser density levels, which in turn may reflect the degree to which particular areas have been surveyed.

The capability to examine intra-monument associations in this way is made possible because each recorded set of geographic co-ordinates in Kent and Flanders refers to an individual circular crop mark rather than capriciously to sites containing multiple occurrences - as is the situation with the north-eastern Transmanche French dataset. In such a circumstance, it has to be accepted that the 204 site records from the Somme region, which log monument groups of between two and nine, refer to a similar phenomenon rather than simply being a methodological shortcut (Fig 7.16). In which case this apparent tendency for monuments to cluster, is present in all three study zones. Even so, it could be a false impression: a consequence of any number of external or environmental influences. However, it is more likely to be the manifestation of a ritual imperative, particularly as it is a widely recognized phenomenon (Darvill 1988).

## **7.3 POPULATION ESTIMATES**

### **7.3.1 Empirical models?**

Attempts have been made to formulate empirical methods for estimating Bronze Age populations with varying results. The first of these was used in Wessex and is based on the concept of home territories, each of which is assumed to be synonymous with the catchment area of a barrow cemetery. By calculating the density of these cemeteries in the landscape it is possible to arrive at an estimate for the maximum amount of land under occupation. When this is divided by the carrying capacity - adjusted to take account of fallow land – upper and lower population projections can be derived (Fleming 1971, 150-154).

An alternative method was formulated to assess the number of people living in the Great Ouse Valley during the period 2100 BC – 1200 BC. Green based his model on the premise that circular monuments contained an average of three graves, which together represented a known percentage of the overall population. He combined this with an estimate for the average Bronze Age lifespan, i.e. a single generation, in order to create a formula,  $P = (B/G)*x$  - where P represents the population, B the number of monuments, G the number of generations and x the average number of people served by each barrow (Green 1974, 130-136).

Applying both of these techniques to the three study zones, using the data as described in Section 7.2, returns the results in Tables 7.6 and 7.7:

Zones	Number of cemeteries	Total area of zone	Area with monuments	Area under occupation	Population at 1ha level	Population at 2ha level
1. Kent	143		1250	8.7	870	1740
		4075		28.5	2850	5780
2. Flanders	180		2625	14.6	1460	2920
		6400		35.6	3560	7120
3. France	204		3400	16.7	1670	3340
		8200		40.2	4020	8040

Table 7.6: Population estimates for each study zone based on Fleming's method. Measurements in <sup>2</sup>kms.

Zone	B (known)	B (projected)	G (2500 BC -1500 BC)	x (at 2.25% or 1 in 44)	P (population)
1. Kent	928	3025	33.3	132	3679-11992
2. Flanders	1108	2701			4392-10708
3. Somme*	929	2241			3683-8881

Table 7.7: Population estimates for each study zone based on Green's method.

P = population, B = number of circular monuments, G = number of generations, x = average number of people served by each barrow.

\* The southern half of the French zone was excluded from the original density analysis.

Both tables provide estimates of upper and lower population levels. The lower figures are derived from recorded data - unadjusted to take account of possible detection deficiencies<sup>39</sup>. The upper levels are projections; arrived at by extrapolating density figures on the basis that monument coverage was evenly spread throughout the study zones. The two methods fundamentally differ in regard to their basic premises and it is impossible to assess whether one is more accurate than the other.

Fleming's method was predicated on the concept that only people who were settled in the landscape built and used circular monuments for burials; but he

<sup>39</sup> Excavation evidence suggests that even in totally surveyed areas monument density levels are understated and may be as much as three times higher.

postulated that most people practiced pastoralism or some form of transhumance, especially during the earlier period, rendering the total population unquantifiable. Green approached the problem from a different perspective and assumed a largely static population (Green 1974, 159-164). Using research regarding land use and carrying capacity in Africa (Allen 1965) he calculated that only one in 44 (2.25 percent) people were afforded barrow burials, which meant he could estimate the total population.

The results from each of these methods are not incompatible, and could be regarded as complementary. Although in reality, neither method should be considered as providing reliable estimates of population levels because the known variables, such as monument densities and cemetery numbers, have too many possible permutations. However, Table 7.8 demonstrates that, providing there is data equanimity across the study zones<sup>40</sup>, the results do provide another point of comparison. When the respective land areas are added this provides figures for population levels and suggests in Green's case that in Kent it was more than twice as dense.

Zone	Green's mean average	Population per km <sup>2</sup>	Fleming's mean average	Population per km <sup>2</sup>
1. Kent	7835	1.9	4315	1.0
2. Flanders	7550	1.2	5340	0.8
3. Somme	6282	0.8	6030	0.8

Table 7.8: An inter-zonal comparison of the average results from both population estimation methods.

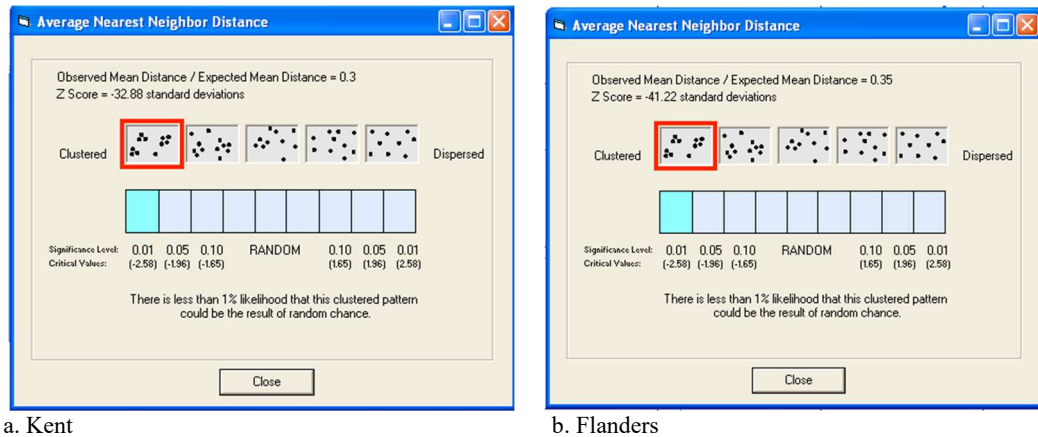
## 7.4 TESTING MONUMENT DISTRIBUTION PATTERNING

### 7.4.1 Nearest neighbour analysis

To rule out the possibility that the perceived concentrations are the result of unintentional or chance events, a method of spatial analysis known as average nearest neighbour was applied to each set of aerially detected monuments in Kent and Flanders. The results establish that there is less than a one percent likelihood of the distribution patterns being random. In other words the perceived clustering, apparent on visual inspection, is genuine (Fig 7.29 a-b). Unfortunately, this could not be carried out on the French study zone's aerial dataset because of the way it has been collated, as referred to above. This does not rule out the possibility that such clustering exists in the Somme region. It simply means that the nearest

<sup>40</sup> Any errors, omissions or inaccuracies must apply to all three zones and then they will cancel each other out.

neighbour test cannot be applied to the data in the form that they are presently available.



a. Kent

b. Flanders

Fig 7.29: These are screen-shots of the readout generated after applying Arcview’s Nearest Neighbour tool to all the known aerially detected circular monuments in Kent and Flanders. The test works from the basis of a null hypothesis, which in this case states that the monuments are randomly distributed. It then applies a number of statistical tests. The Nearest Neighbour index is the ratio of the “Observed Distance” divided by the “Expected Mean Distance” – as shown in the first line of the screen-shots. When this is less than 1, clustering is present. Results of 0.3 and 0.35 are therefore very significant. A further test to provide a Z value is also carried out. This is a calculation intended to determine if the ‘null hypothesis’ should be rejected. If the Z value is 0 then the null hypothesis is true. The further the result is from 0, the higher the standard deviation and the more likely it is that the null hypothesis is false. Results of 32.88 and 41.22 are therefore definitive: the null hypothesis must be false, which means that the distribution of monuments in both Kent and Flanders are not random. Euclidean distances (as the crow flies) were specified and the unit of measurement was square metres.

#### 7.4.2 Defining barrow cemeteries

A likely reason for clustering is that the monuments were purposefully organized into barrow cemeteries. The English Heritage (EH) definitions for such entities states that they consist of between 5-30 monuments, each of which is generally no more than 100m apart (Darvill 1988) and they are configured in one of the following ways:

- **Linear:** Barrows arranged in more or less straight lines; average distance between barrows rarely exceeding 100m. One or two auxiliary barrows off the main axis may be considered part of the cemetery.
- **Nuclear:** Barrows arranged in a tight cluster or bunch, of generally rather irregular outline, although sometimes containing two or more apparent alignments.
- **Dispersed:** Barrows lack a focal point or alignment and are scattered loosely within a confined area at irregular intervals of no more than 150m.

An additional category also commonly recognized is:

- **Geometric:** Essentially a variation on linear, which takes into account the influence of topography and other natural factors.

### 7.4.3 Buffer zone analysis

A further experiment intended to test the first of the EH criteria, that of being less than 100m apart, makes use of the proximity tool in Arcview 9.2. Monuments within the Kent and Flemish study zones had 50m and 100m circular buffer zones imposed on them. Credible groupings of monuments show up clearly in Thanet and the Maldegem cuesta (Fig 7.28) and it is possible to find clusters that fit all the EH barrow cemetery definitions; with nuclear or geometric arrangements appearing slightly more dominant in the Belgian grids, despite the fact that linear is said to be the more common cemetery type in that country (Bourgeois and Talon 2009, 40). This phenomenon can also be seen distinctly in the sample grid cells Kent 17K and Flanders 11K (Fig 7.30 a-b).

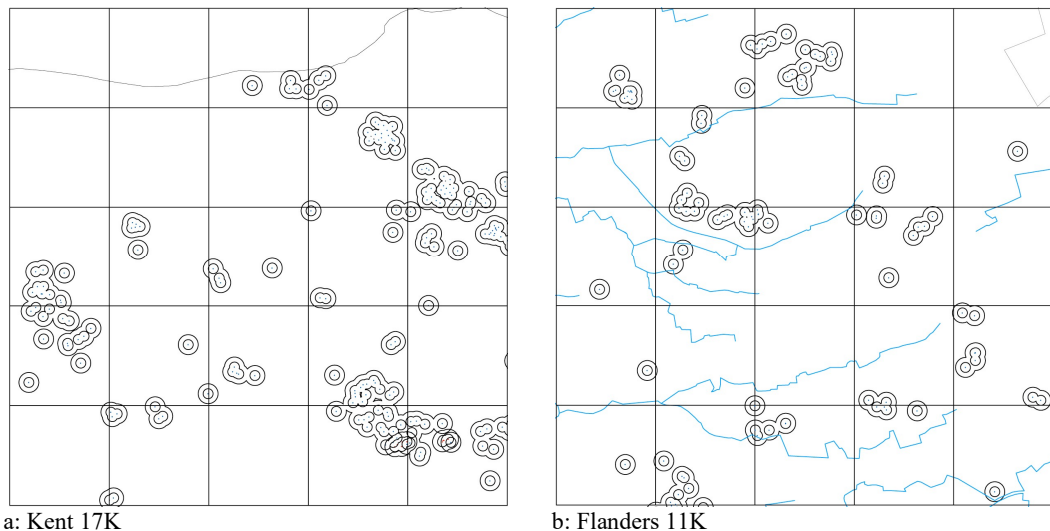


Fig 7.30: Clustering in both these grids suggests the presence of barrow cemeteries under the English Heritage definitions. Wider area cemeteries and even small barrow groups also appear present.

The proximity test was another that could not practically be carried out on the French data. However, clusters J and L in the French grid 8L (Fig 7.18) and other clusters in the Bellifontaine valley (Fig 7.19) clearly qualify as a barrow cemeteries under the EH definitions, particularly as one also includes a double ring ditch, something noted from other cemetery clusters and examined in more detail in Section 7.6.

## 7.5 LORD OF THE MANOR, THANET – a case study

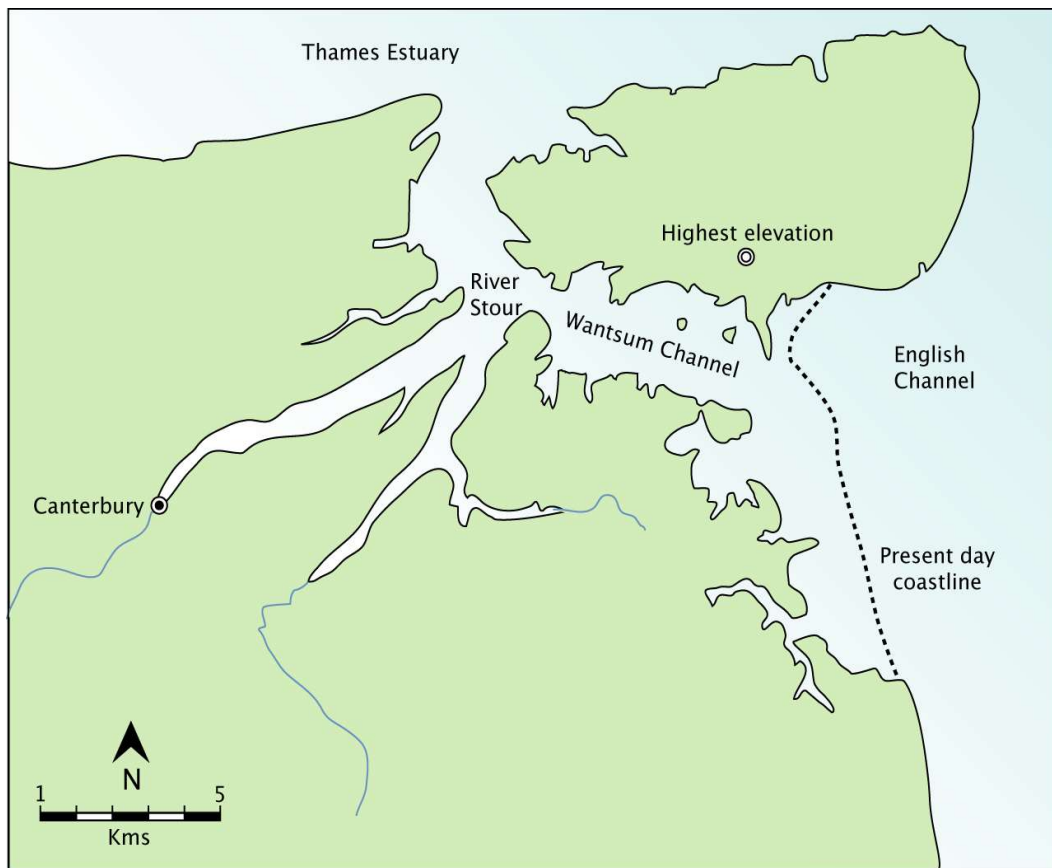


Fig 7.31: A sketch plan of the Isle of Thanet during the third and second millennia BC drawn by the author (after Smith 1987, 239).

There are different estimates as to the number of barrows and ring ditches that have been detected in Thanet and the total is constantly changing as more are located and some eliminated by on-going research. The most definitive record is maintained by the Trust for Thanet Archaeology, which in the spring of 2008 listed 56 excavated and 425 unexcavated monuments (see Appendix B).

The coastline to the north and east of Thanet comprises cliffs, with interruptions where rivers and streams have cut through. The southern and western edges are more gently sloping and also cut by watercourses. The highest elevation is 53 metres above ordnance datum, at Manston, on the southern flank (Figs 7.31 and 7.32). Thanet measures approximately 16km from east to west and 7.5km from north to south, giving an area of about 120 square km or 8620 hectares (Fig 7.33).



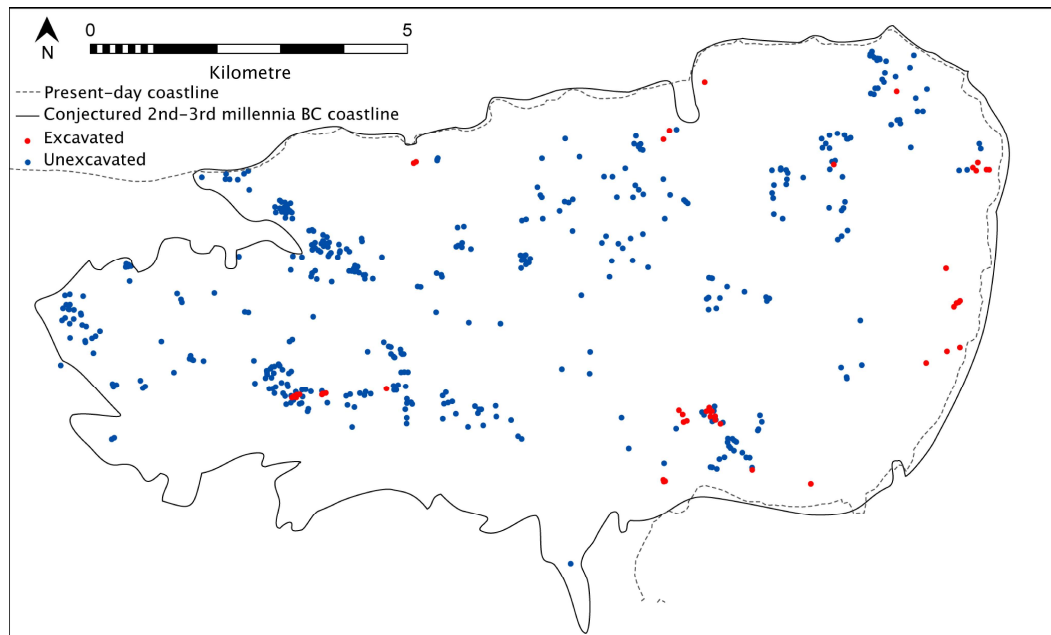


Fig 7.32: Thanet showing the conjectured limits of the island in the third and second millennia BC. Drawn by the author (after Smith 1987, 239). Ring ditch and barrow data supplied by the Trust for Thanet Archaeology.

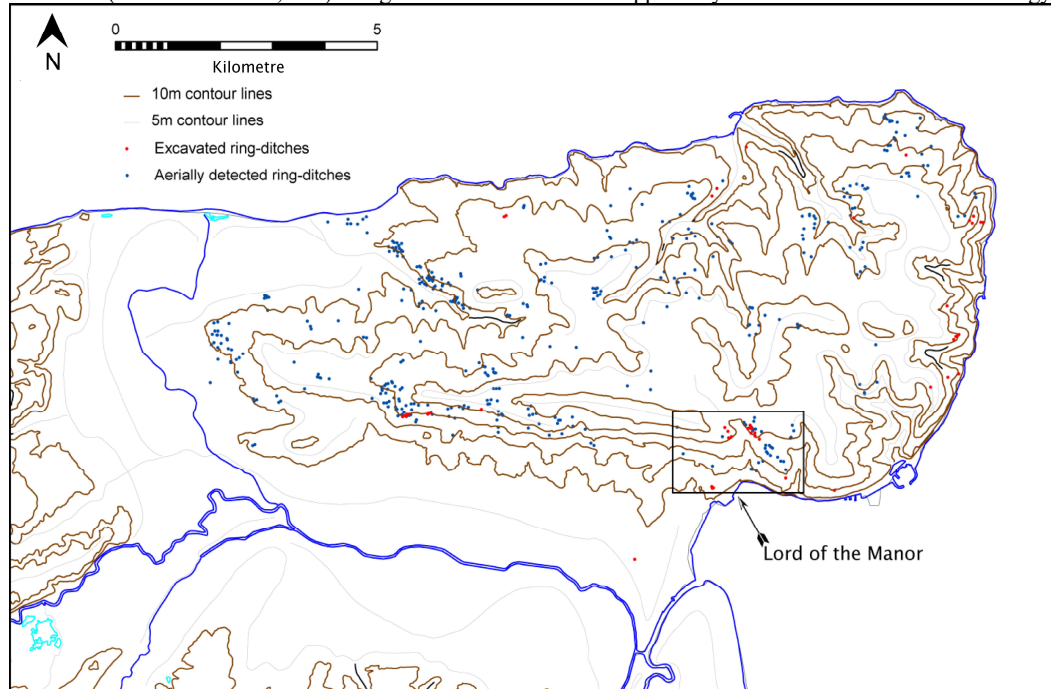


Fig 7.33: The Isle of Thanet today, showing the positions of excavated and aerially detected ring ditches and barrows in relation to the contour lines set at 10 metre intervals. Created by the author from topographic data supplied by the Ordnance Survey. Ring ditch and barrow data supplied by the Trust for Thanet Archaeology.

Using Arcview 9.2 an average nearest neighbour test was applied to Thanet's ring ditch data and established that – in common with the whole study zone - there is only a one percent likelihood of the monument distribution pattern being random (Fig 7.34). In other words the perceived clustering, apparent on visual inspection, is genuine. The causes of this, however, remain open to conjecture. In an attempt to identify factors that potentially account for this phenomenon, a more detailed examination was conducted into a smaller area where clustering is present.

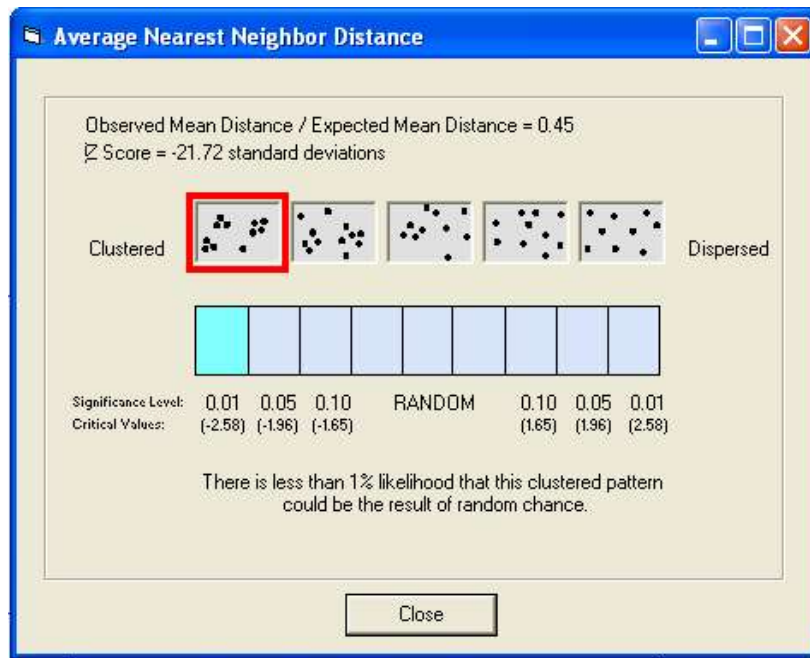


Fig 7.34: This is a screen-shot of the readout generated after applying Arcview’s Nearest Neighbour script to all the known Thanet barrows. The test works from the basis of a null hypothesis, which in this case states that the monuments are randomly distributed. It then applies a number of statistical tests. The Nearest Neighbor index is the ratio of the “Observed Distance” divided by the “Expected Mean Distance” – as shown in the first line of the screen-shot. When this is less than 1, clustering is present. A result of 0.45 is therefore very significant. A further test to provide a Z value is also carried out. This is a calculation intended to determine if the ‘null hypothesis’ should be rejected. If the Z value is 0 then the null hypothesis is true. The further the result is from 0, the higher the standard deviation and the more likely it is that the null hypothesis is false. A result of 21.72 is therefore definitive: the null hypothesis must be false, which means that the distribution of monuments in Thanet is not random. Euclidean distances (as the crow flies) were specified and the unit of measurement was square metres.

The location for this case study is known as Lord of the Manor (LOTM) and covers approximately 300 hectares immediately south-east of Manston, overlooking the place where the now silted up Wantsum flowed into the English Channel. It contains a total of 51 known barrows and ring ditches – of which 17 have been investigated by excavation (Figs 7.33 and 7.35). However, none of the excavated barrows has yet been fully analyzed or published, but data does exist, mostly in the form of grey literature. This is not ideal but their collective positions, along with those of the other 34 aerially identified monuments, at the mouth of what must have been a significant waterway, is sufficiently compelling.

By means of a simple calculation it was possible to determine that the monument density for the LOTM area as a whole is 0.17 per hectare – although another estimate, based on slightly different figures, puts this value at 0.2 (Jones 2006). Either way, the results are significantly higher than those provided by Woodward for Stonehenge and Avebury at 0.14 and 0.04 respectively (1996).

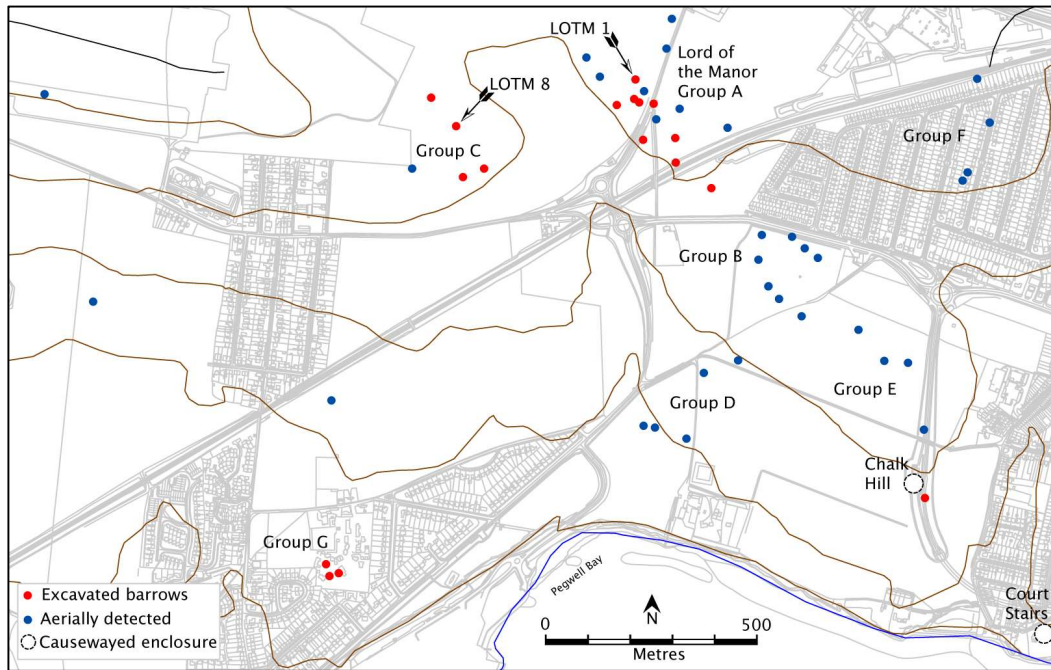


Fig 7.35: A plan showing the circular monuments in the Lord of the Manor area of Thanet along with the modern land use and Ordnance Survey 10 metre interval contour lines, (author's illustration).

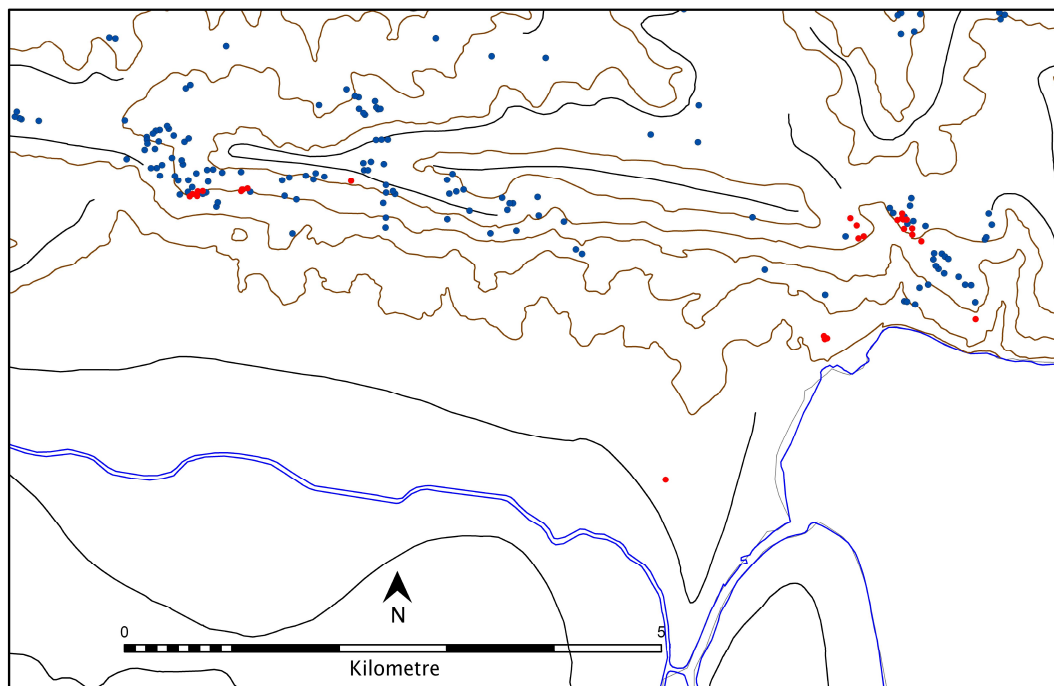


Fig 7.36: The extended linear arrangement of barrow cemeteries along Thanet's eastern flank. Note the gap to the east of the centre line where Manston airfield stands, (author's illustration).

In fact, if the calculation is carried out on individual clusters within the LOTM area, such as the LOTM Group A<sup>41</sup> (Fig 7.35), the values are even higher. This group covers an area of nine hectares and consists of at least 17 barrows and ring ditches, giving a density that is ten times greater than the area average.

<sup>41</sup> The English Heritage definition calls small concentrations, of less than five barrows or ring ditches, groups in order to distinguish them from cemeteries. The term group will be used in this study when referring to any number and may be considered interchangeable with the word cemetery, unless otherwise stated.

It may be the case that the barrows and ring ditches within LOTM were part of a much larger series of installations stretching almost the entire length of Thanet's most southerly flank – a distance of approximately 7kms (Fig 7.36). Superficially, there seems to be a break east of the centre line, dividing LOTM from the other monuments spaced along this ridge of relatively high ground. Further investigation suggests this break is most likely the result of an airfield, complete with an exceptionally large tarmac runway, having been built there during the 1950s as a USAF strategic bomber base. Undoubtedly, its construction destroyed or obscured a great deal of evidence for ring ditches and barrows.

On this basis the LOTM area becomes the eastern terminus of what may have been a very large linear 'super' cemetery not unlike that of the South Dorset Ridgeway (Woodward 1996, 277). If this is so, it is unlikely to have been planned that way from the outset, as it would have taken many centuries to reach such a state. It most probably developed through the continual repetition of ancient burial customs and other ceremonial practices. Individual constituent groups are, however, more likely to have been organized or planned to some degree. Indeed, under the English Heritage barrow cemeteries definitions (see Section 7.2) it has been possible to identify groupings - labelled A, B, C, D and E, in Fig 7.35.

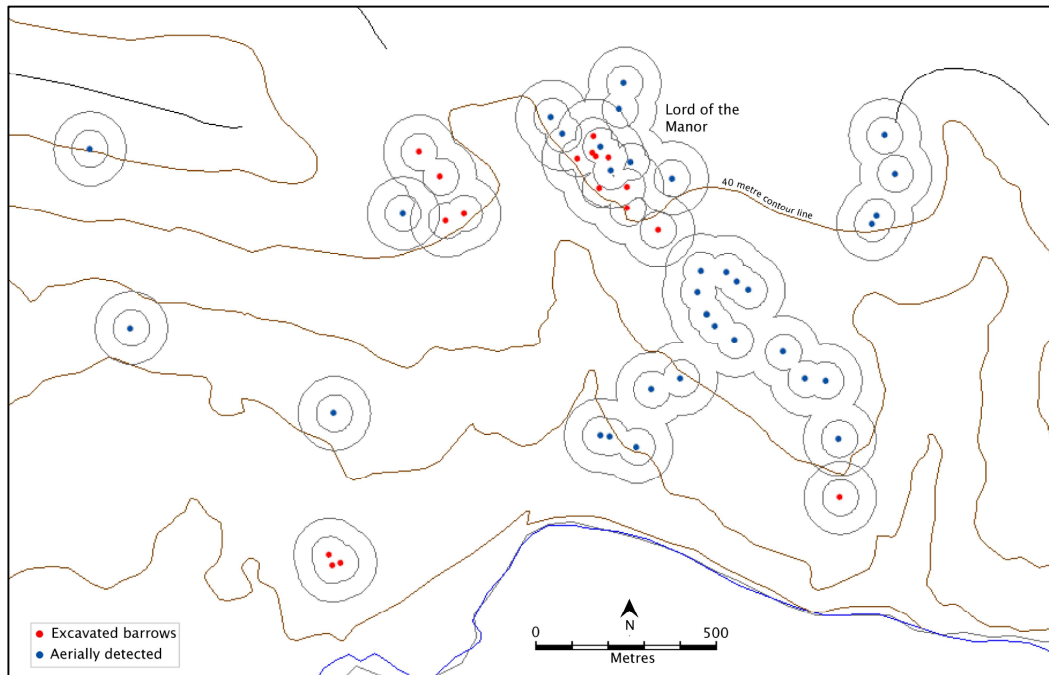


Fig 7.37: All monuments in the wider LOTM area exhibiting two-dimensional spatial proximity through the imposition in Arcview 9.2 of 50m and 100m buffer zones – as measured from their centre points  $\pm 1m^2$ , (author's illustration).

On the whole, all the LOTM groups seem to display linear/geometric characteristics as indicated in Fig 7.37. Particularly striking is the arrangement of monuments in groups A and C, both of which appear to follow the modern Ordnance Survey 40-metre contour. Those in Group A may even be in successive rows, beginning with a line of six (Fig 7.38a). Behind those – at a distance of approximately 75m - is another similarly orientated alignment, which includes LOTM 1, a large triple ring ditched monument (Fig 7.38b). A third rank, orientated slightly differently, intervenes between these two rows (Fig 7.38c). It is, of course, difficult to discern whether such linear arrangements were intentional, merely happenstance or the consequence of an innate desire on the part of the researcher to pattern-match. Group A may simply be part of an exceptionally large nuclear or dispersed cemetery, taking in most of the LOTM area including the outlying monuments. However, the proximity of the Group A barrows and ring ditches to each other and their position in the landscape strongly implies deliberation on the part of successive builders, as illustrated in Fig 7.38d.

An examination of Group A shows that it contains 17 monuments, of which nine were excavated at the end of the 1970s (Macpherson-Grant 1977; 1980b) and early 1980s in advance of road improvements and other developments (see Fig 7.39). Many of these barrows are sited on a false crest part way down a gradual escarpment. The land to the north rises until it reaches the highest point in Thanet, approximately 750m away. In the opposite direction the gentle south-westerly slope ends abruptly about one kilometre away, and 30m lower, at the cliff top above one side of Pegwell Bay.

Assuming that the area was devoid of trees – which soil and snail analysis seems to suggest (Baker 1977; Jay 1977), or other obstructions - these monuments would have been visible from the sea and the Wantsum/Ebbsfleet valley below. Similarly, anyone standing within Group A, or on top of any mound that may have been present, would have had unobstructed views throughout an arc of approximately 135 degrees, from due west to south-east.

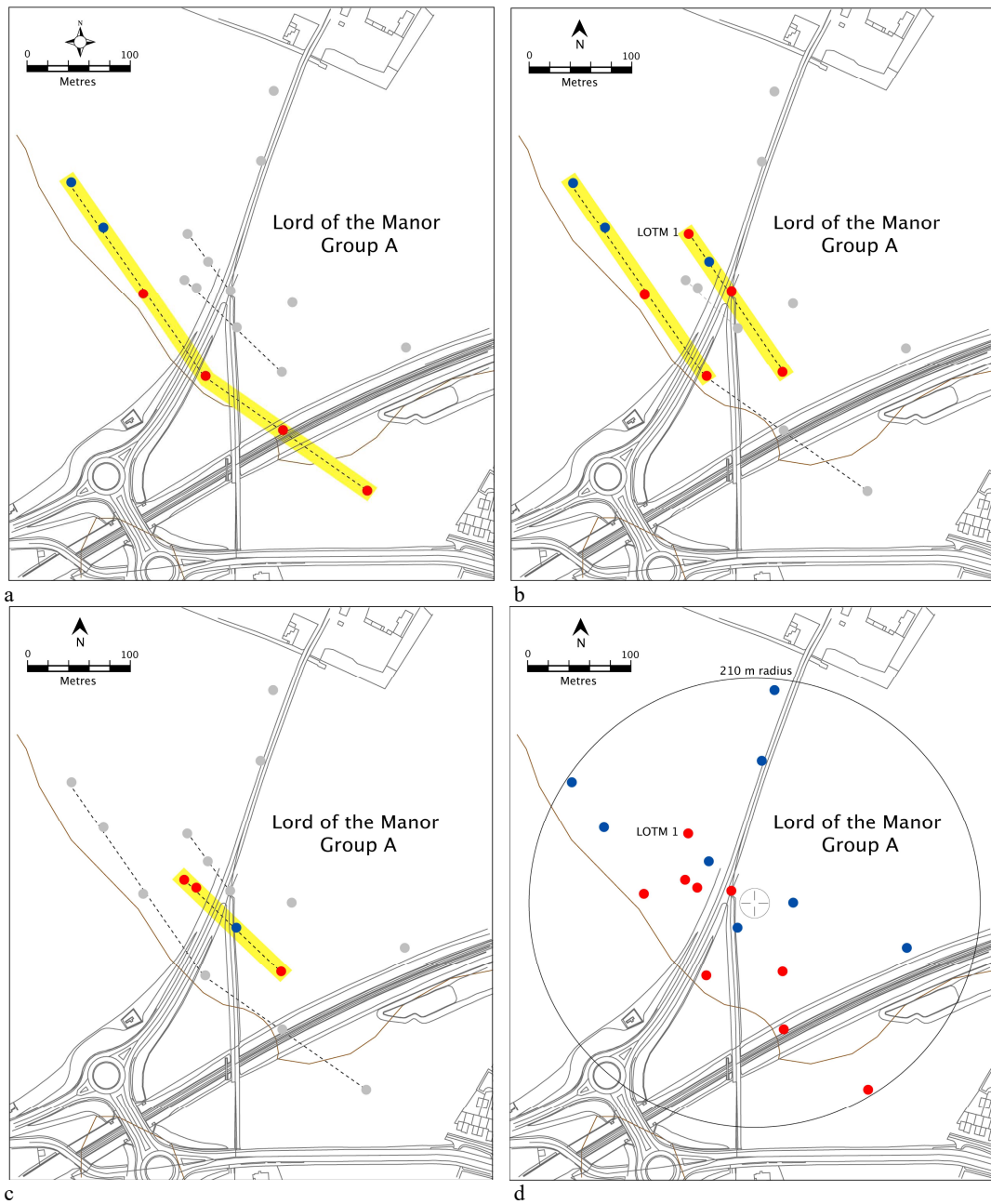


Fig 7.38: Panels a-c show a selection of possible linear alignments in LOTM Group A - which seem to respect the 40m contour line. Panel d shows the known limits of the cluster and its projected centre point. Scheme devised and by the author and created with Arcview 9.2 and Adobe Illustrator using data from the Trust for Thanet Archaeology and Ordnance Survey base maps.

LOTM	Barrow types	Diameters (m)	Number of burials found
1	Triple ditch / causeway	30, 19, 12,	10 (see Table 5.16)
2a	Single	12.5	0
2b/c	Single	14.5	0
2d	Single / causeway	23	1 crouched inhumation
3	Single	30	1 disarticulated, 1 unurned cremation
4	Oval	12	1 unurned cremation
5	Single / poss' causeway	32.5	5 disarticulated
6	Single	20	1 Inverted urned cremation
7	Oval	11.7	2 Beaker crouched inhumations, 1 disarticulated
8	Double	28, 9	1 central burial (cremation?), Beaker sherds

Table 7.9: The excavated barrows which form part of the LOTM complex.

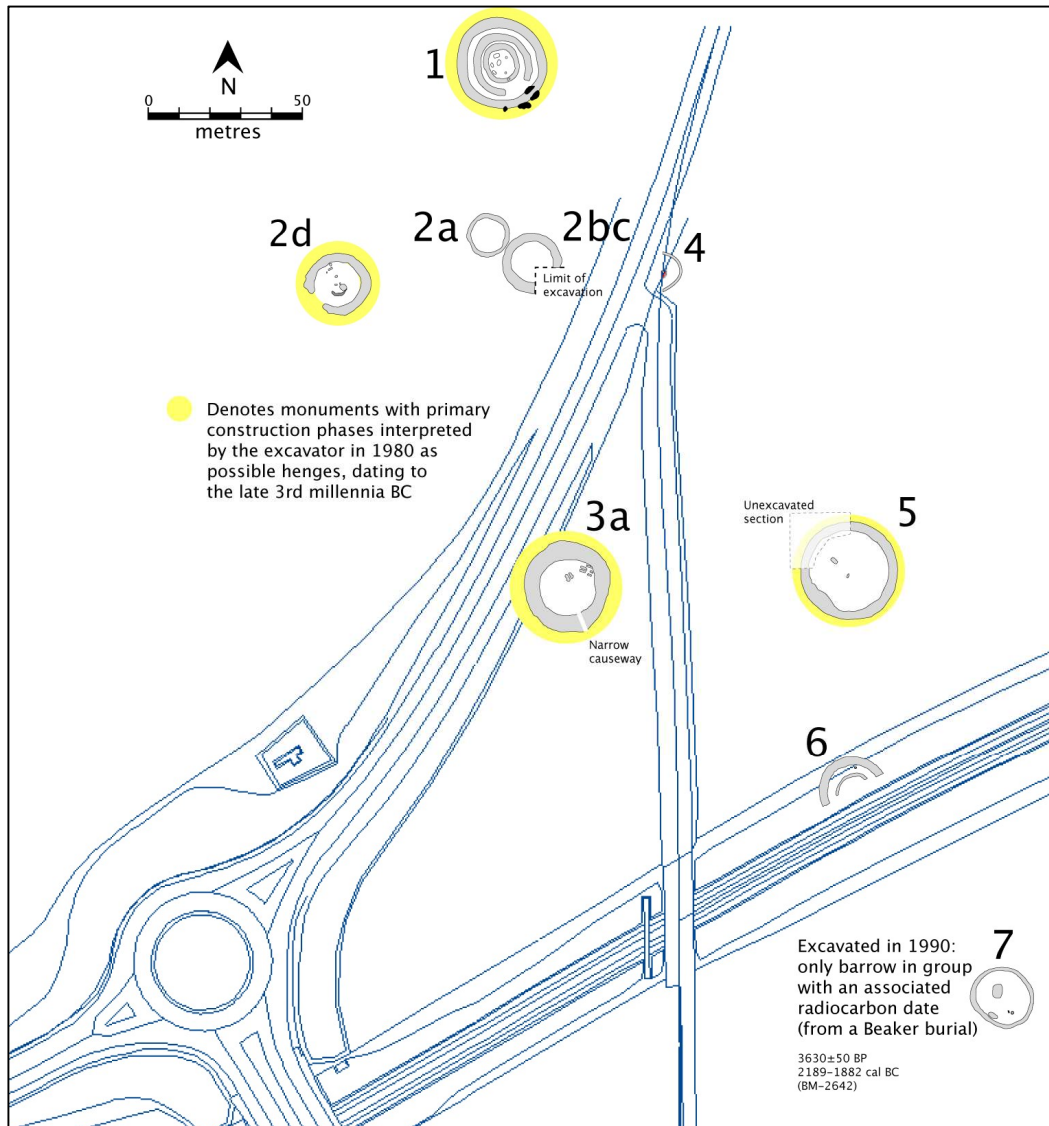


Fig 7.39: A plan of the Lord of the Manor complex showing the excavated barrows. Note the multiple ring ditched LOTM 1 at the top of the map, also 2d, 3a and 5. These have been interpreted as having late third millennium BC origins (author's illustration).

Inter-visibility may also have been a factor in the siting of these monuments. It is certainly the case that they favour prominent positions in the landscape and many of the cemeteries, if not all the individual monuments, are visible one to another. This is clearly demonstrated by Group A's position in relation to Group C. These clusters, complete with their own multi-ditched monuments, stand directly opposite each other at similar elevations on either side of a coombe valley (Fig 7.35).

LOTM Group C consisted of five monuments, the most complex of which was LOTM 8 (Fig 7.44), being both multi phased and multi-circuit. Its inner, and earliest, ditch measured nine metres in diameter. Within the fill were small sherds

of pot, including a few with impressed decorations suggestive of a Beaker. At the centre of the enclosed area was an oval pit measuring 1.2m x 0.5m. It was 0.25m deep. It contained a few sherds of flint-gritted pottery and two human teeth - presumed to be all that was left of a cremation burial. LOTM 8's outer ditch measured 25m-diameter when first cut, but was later expanded to 28m by a recutting event. A loom weight and an unspecified bronze artefact were recovered from the ditch fill.

The barrows and ring ditches in Group A varied in size and type (Table 7.9). One of the largest was LOTM 1, a multi-ring ditched monument with an outer ditch diameter of 30m, a middle ditch measuring 19m and an inner ditch of 12m. It is the most intricate of those that have so far been excavated and also one of the earliest. By the time LOTM 1 fell out of use at least ten burials had either taken place within or close by the monument: eight crouched inhumations, the deposition of disarticulated bones and the cremation of a child (Tables 7.10). This monument apparently remained in use for several hundred years, from at least 2100 BC - undergoing four phases of use:

- 1 This begins with the construction of the outer ring along with an internal bank. Grooved-ware pottery was found in association with this phase (Moody 2008, 73). This distinctive pottery type is commonly found in association with henge monuments, including Ringlemere in Kent, where, along with a radiocarbon determination (Beta-183862) it suggested activity dating to 2890-2600 BC (Parfitt and Needham 2007, 48). Its presence at LOTM 1 may therefore set the first construction phase to a period at least as early, if not earlier than suggested by the excavator (Fig 7.40a).
- 2 This was followed by a ditch recutting event (Fig 7.40a), which also saw the introduction of Beaker pottery sherds into a pit within the enclosure. These sherds are thought to be early in type and were dated by the excavator to 1950-1850 BC. This too could be misleading as radiocarbon dates from Beaker burials in the area, including LOTM 7/Manston



Runway Approach provide dates that are significantly earlier (see Section 6.8).

- 3 Phase three is characterized by the cutting of the inner 12m ditch and the crouched burials of a man, aged approximately 35, and a teenage girl of around 16 years of age, in the same slightly off-centre grave. A mound was then raised over them (Fig 7.40b). Dating of this phase by the excavator is based mostly on morphological and stratigraphic evidence.
- 4 The fourth and final phase was when most of the burials took place. It is also when the middle, penannular, ditch was cut (Fig 7.40b). This phase was dated to between 1700-1500 BC by the presence of a cord decorated food vessel used in the cremation of a neo-nate. Curiously the pot also contained a tanged-and-barbed flint arrowhead – often associated with Beaker burials (Fig 7.41). It is now believed that vessels of this type were in use as early as 2000 BC, and generally not much later than 1700 BC (Hart 2006a), making dating of this final phase more uncertain than previously thought. The monument appears to have been ‘closed’ to burials by the cutting of a ditch across the gap or causeway, but there is no way of dating this event.

Unfortunately, this all serves to demonstrate that the presently available data is insufficient to precisely date the phases of activity. Perhaps, more importantly, it shows that the monument could have originated far earlier than first believed and may also have gone out of use sooner than originally thought. Without radiocarbon dating, or other diagnostic material on which to establish dates, it is unlikely that these issues will be resolved.

All that can be said is that the monument was active for up to 900 years, during which time it underwent one minor and two major rebuilds (Fig 7.42) – possibly indicating changes of use or ritual belief and/or practice.

Phase	Excavator's dates (BC)	Alternative chronology	Construction	Artefacts	Burials
1	2100-1950	2600 - 2200	A 30m-diameter ditched enclosure with an interior bank is dug	Assemblage of small grooved-ware sherds	None
2	1950-1850	2200-1800	Original ditch is re-cut along with addition of small pits	Beaker sherds and ash found in pits	Crouched burial (1A) of 22-25 year old female, SSE <b>outside</b> ring ditch
3	1800-1750	Circa 1800	The outer ditch begins to silt up and an inner ditch is cut. A centrally placed grave is dug, containing two crouched burials	Flints, animal bone and pottery (including Beaker) recovered from inner ditch. Small chalk cup found in inner ditch. No grave goods	35-year-old male burial along with 16-year-old female (G5)
4	1700-1500	1800-1600	Inner ditch silts up. A middle - penannular - ditch is dug and its up-cast covers the inner ditch. Six burials take place within the existing mound. The monument is 'closed' when a ditch is dug across the causeway.	Grave G2 – flint scraper and flint awl. Grave G6 – cord decorated pot containing cremation and barbed-and-tanged arrowhead. Two carved chalk objects of unknown purpose also recovered.	Five inhumations and one cremation (G6): G1 – Female aged 30-35 G2 – Male aged 40+ G3 – Child aged 3-4 G4 – Male aged 45+ G6 – Child cremation G7 – Female aged 23-24

Table 7.10: The main phasing of the Lord of the Manor M1, (after Macpherson-Grant 1977) – alternative dates column added by the author.

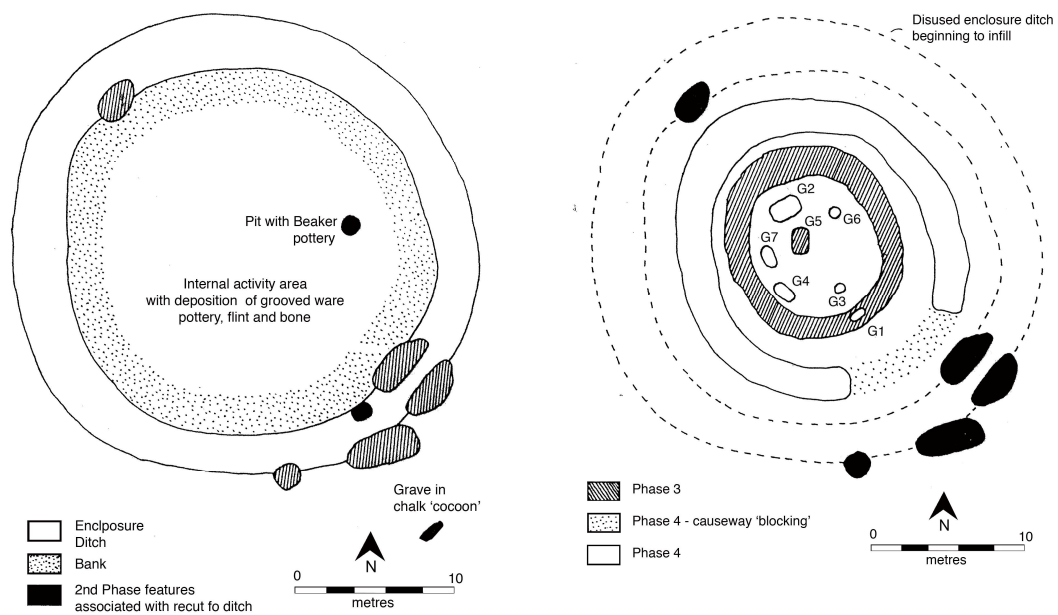


Fig 7.40: Excavation plans of LOTM 1, showing phases 1-2 ((a) and 3-4 (b) redrawn and annotated by the author (after Macpherson-Grant 1977).

The non-funerary first phase of LOTM 1 displays characteristics that are common to barrows 2d, 3a and 5 – the origins of which the excavator also assigned to the late third millennium BC. Each has either proved, or is assumed, to have had penannular ring ditches – although the openings are orientated differently. An

internal bank is evident for 2d, but erosion and plough attrition has removed any trace that might have existed for this to be determined in the other two cases. However, these barrows, 3a and 5 at 30m and 32.5m respectively, are similarly proportioned to LOTM 1. The earliest ceramic evidence comes in the form of Beaker sherds found in the ditch fill of 2d. The only pottery associated with the other two barrows is Middle Bronze Age and clearly from later phases: a tripartite collared cremation urn in LOTM 3 and sherds of a cord decorated collared urn in LOTM 5.

In fact, the only securely dated barrow in Group A is LOTM 7/Manston Runway Approach. It is unambiguously a Beaker affiliated burial monument, and quite different in character to those in question here. It has only one phase: the ditch was cut in six distinctly separate segments and there is evidence that it had a mound from the very beginning. None of this proves that the four multi-phased monuments were contemporary and it is difficult, on the above evidence, to verify the excavator's original interpretation.

So what can be said about these monuments? It may be significant that all four are components of the linear alignments shown in Fig 7.39. There is also the fact that in each case the first phase of construction and use shows no signs of funerary activity – although, of course, this may be a consequence of poor preservation rather than genuine absence. In the case of 2d, however, post depositional loss is unlikely to be a factor because distinct features from the earliest phase do survive. These comprise a rammed chalk surface, a flint bank and a series of post-holes, indicative of an internal timber structure (Fig 7.43). This may have been a mortuary house or even a dwelling, as its plan is similar to that of roundhouses excavated elsewhere (Clark 2009, 89-91). A crouched burial cuts one of the post-holes, making it a later inclusion. So, there seems little reason to doubt that this monument, and quite likely the other three, began as open arenas and were only later converted or used for burials. This would fit comfortably with the scheme described by Garwood (2008, 32-36). Their size is another distinguishing factor. Ring ditches in the research area have a mean average diameter of 20m-25m (see chart, Fig 7.45). Those of around 30m or more – which is the case for monuments 1, 3a and 5 - are less common.

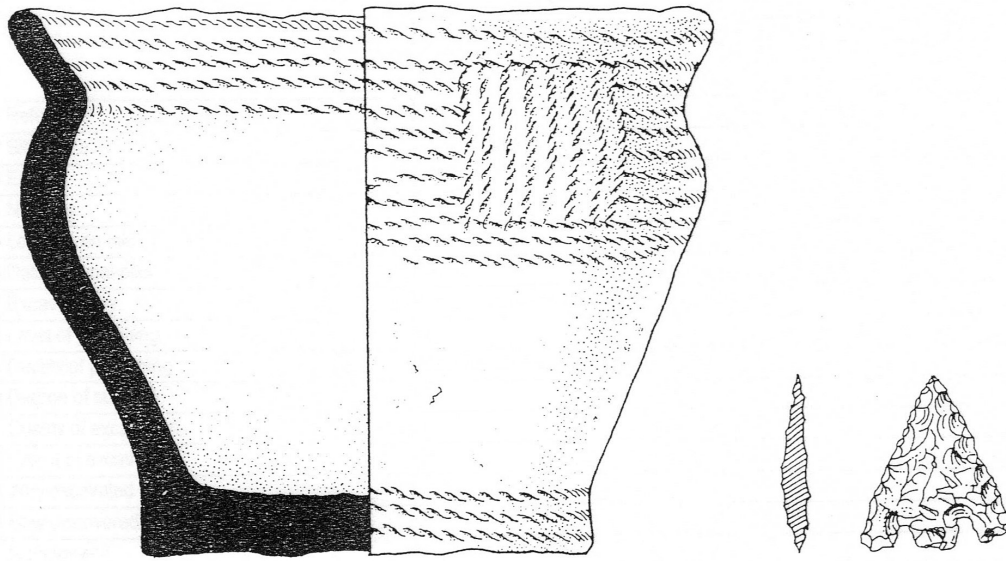


Fig 7.41: A cord decorated food vessel in which was found the cremated remains of a baby and the tanged-and-barbed arrowhead shown to the right, (after Macpherson-Grant 1977).

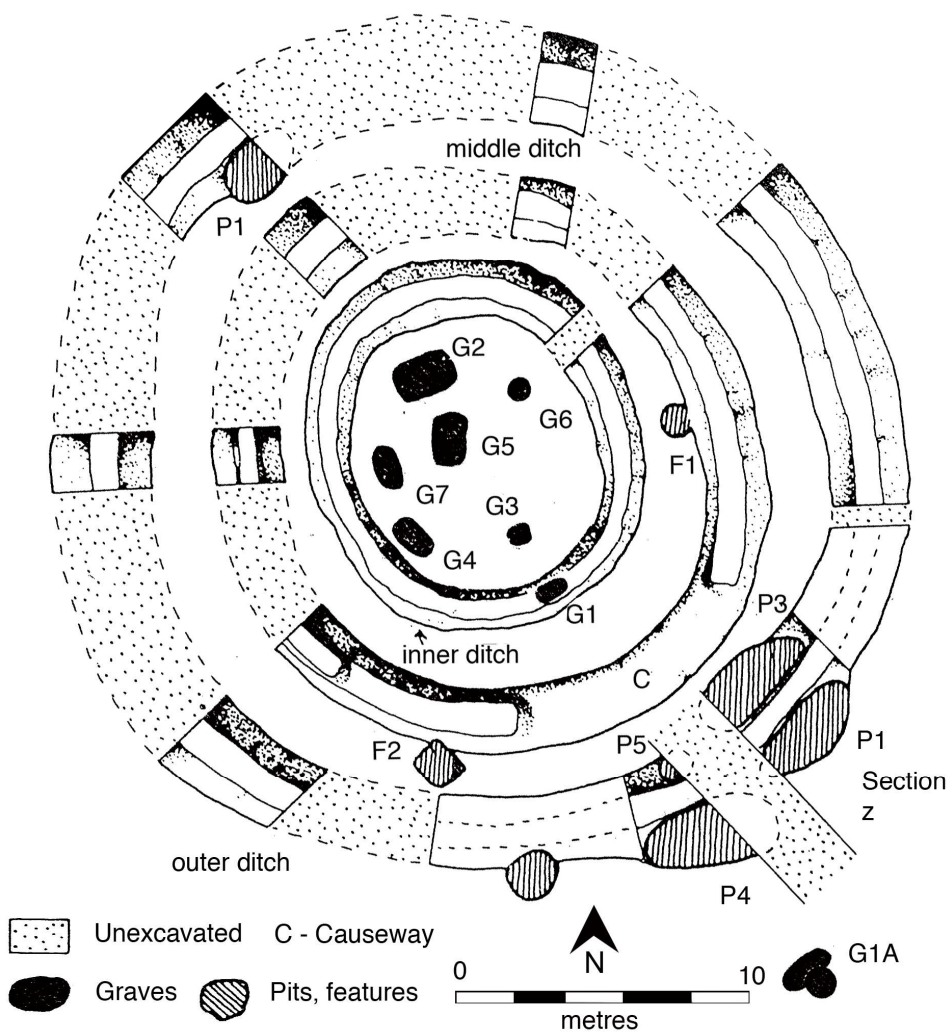


Fig 7.42: An excavation plan of LOTM 1 reflecting aspects of all four phases, the complete burial set, a number of enigmatic pits (P1-5) and other features of indeterminate use (after Macpherson-Grant 1977).

It has been suggested that at the root of these more complex ring ditches was an intermediary phase of monumentality dating to the end of the Neolithic (Moody 2008, 75-78; Clark 2008); and that this was the materialisation of a transition from one belief system to another. This is a compelling hypothesis strengthened, in this case, by LOTM's proximity to two causewayed enclosures (Fig 7.35) and other evidence of Neolithic activity in the area (Shand 2002; Hammond 2007; Moody 2007). Their presence at the centre of a distinct cluster of barrows and ring ditches, most of which do not appear to display such complex and enigmatic biographies, also requires further investigation. It could be that their prominence in the landscape acted as a catalyst for later barrow building and led to the development over time of the cemeteries.

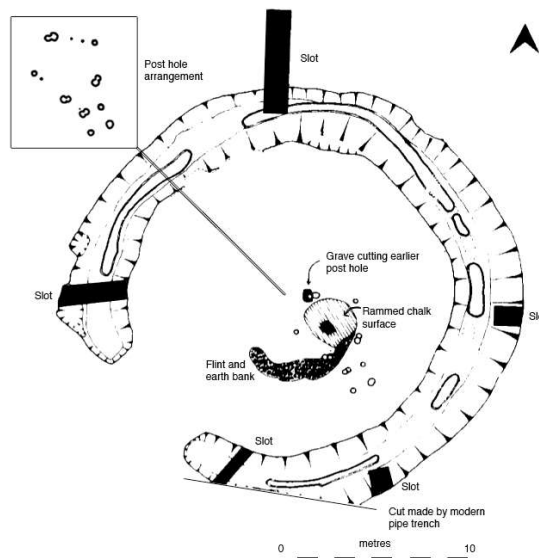


Fig 7.43. LOTM 2d showing the internal features associated with the earlier phase of use (after Macpherson-Grant 1980b). Inset: The post-holes which are located with the other internal features.

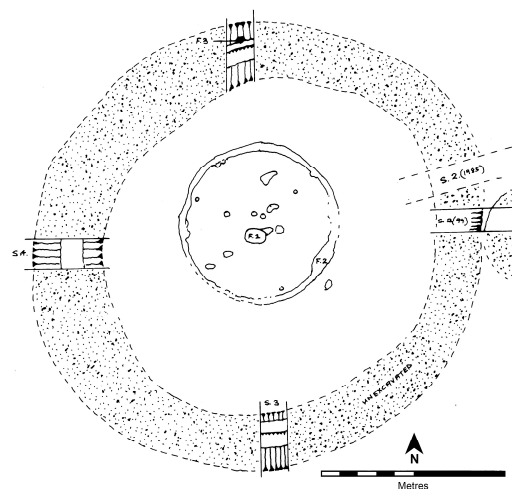


Fig 7.44. LOTM 8 showing the small internal ring ditch which was later completely covered by a mound – plan courtesy of the Trust for Thanet Archaeology.

## 7.6 COMPLEXITY IN CIRCULAR MONUMENT MORPHOLOGY

### 7.6.1 Types and sizes

The majority of monuments - 92 percent in Zones 1 (Kent) and 3 (Flanders) and 90 percent in Zone 2 (France) - are single-ditched, apparently quite simple constructions. Most are interpreted as primarily for burials and are customarily categorized as types of barrow, such as: bowl, bell, disc, pond or saucer – the most common being the first two. Whilst undoubtedly these classifications have their place they do not comprehensively describe the range and diversity of known variants, which is why English Heritage, among others, recognizes additional types, such as the platform barrow. Conversely, when excavated, preservation is seldom good enough to definitively apply the standard typology in meaningful ways, forcing a reliance on the generic terms ‘barrow’ and ‘ring ditch’. Whilst such epithets are practical, they can be taken as implying homogeneity, whereas in reality circular monuments take many forms; the most obvious being that ditch circuit diameters vary significantly. On average, the greater proportions - 37 percent in Zone 1, 49 percent in Zone 2 and 29 percent in Zone 3 - fall into the range 20-25m (Fig 7.45).

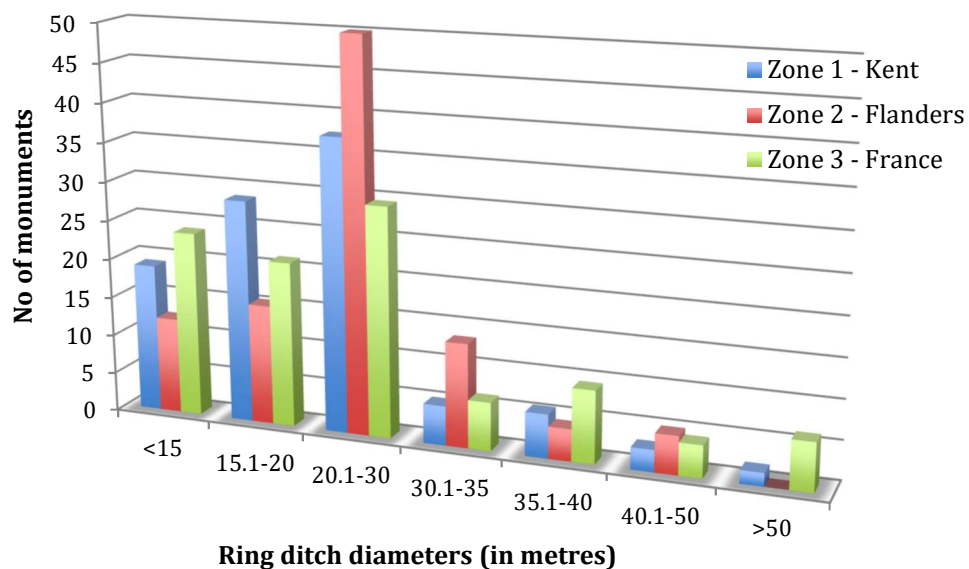


Fig 7.45: Bar graph showing the percentage (vertical axis) of monuments in each of the three study zones, broken down by their ring ditch diameters in 5m blocks.

Additionally, at least ten percent of all monuments are distinctly atypical, mostly because they have multiple concentric ditch circuits and/or display other complex structural arrangements such as incomplete ditch circuits, causeways, post alignments and earth banks. They may also lack evidence for a mound, or show signs of having acquired one during later construction phases.

## 7.6.2 Multiple circuit monuments

The number of monuments with double ring ditches accounts for approximately ten percent of the total research dataset, whilst the number with triple ditches accounts for less than one percent. Their distribution and setting in the landscape does not appear to distinguish them from single-ditched monuments (Figs 7.47 to 7.49). However, their size does: excavations have shown that multi-ditched monuments are larger. Those in north-eastern Transmanche France have a mean maximum diameter of 36m against 24m for singles; in Flanders the differential is 30m to 27m and in Kent it is 29m to 23m (Fig 7.46). The overall mean average double to single size differential is therefore 32m to 25m<sup>42</sup>.

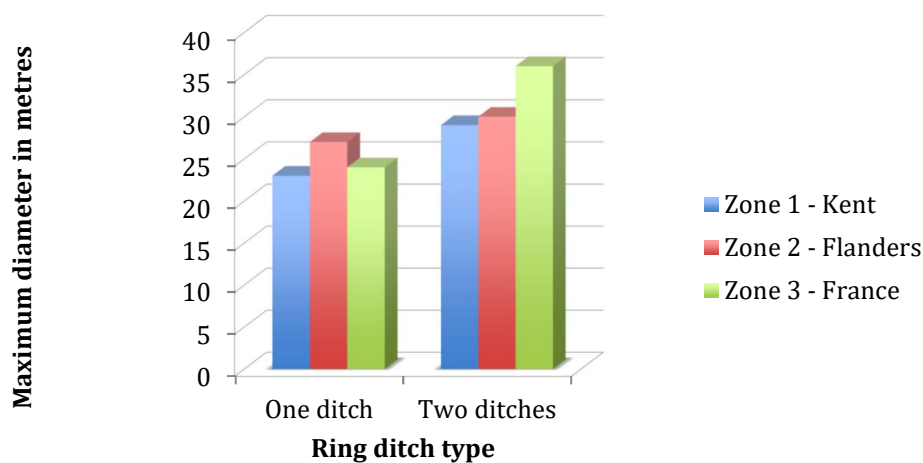
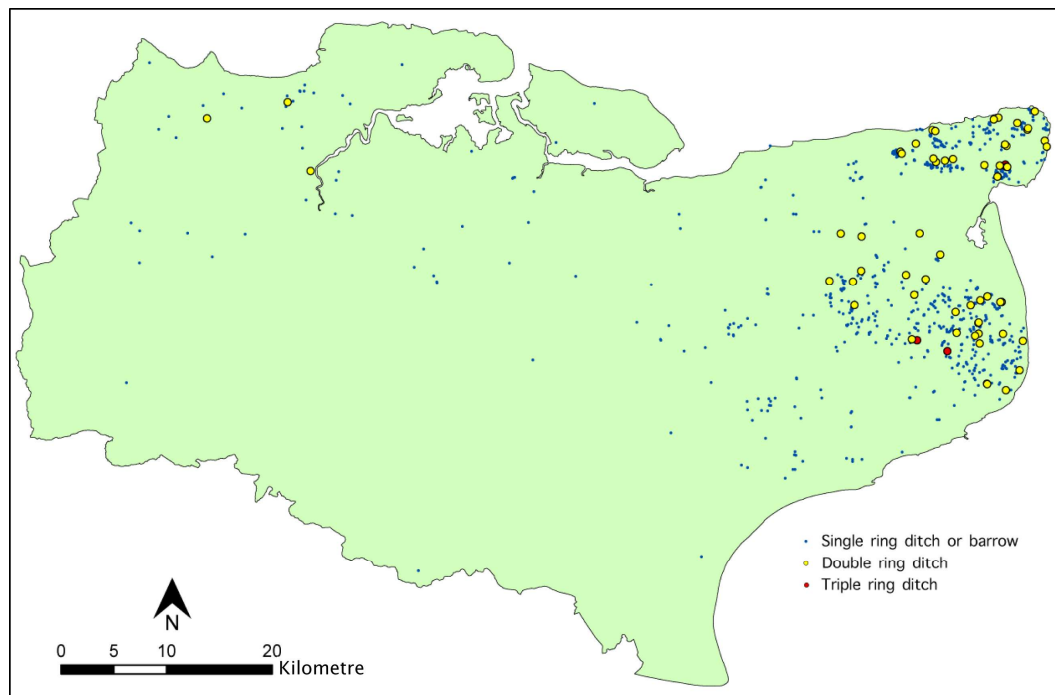


Fig 7.46 Graph showing the maximum diameter of monuments in each of the study zones, separated by type.

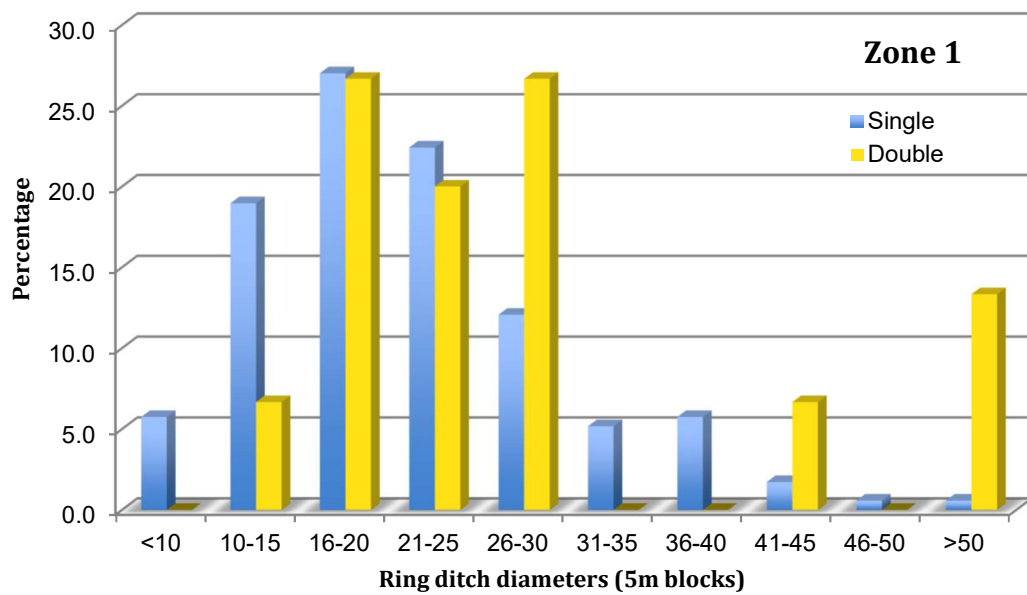
The difference also applies to the upper and lower limits of respective ring ditch diameters. This is most clearly demonstrated in France where double-ditched diameters do not fall below 20m compared to single-ditched monuments, which can be less than ten metres. The differentials in Flanders and Kent are less pronounced but are still apparent. This may be because fieldwork methods vary between zones. In Flanders research priorities have led to the active targeting of probable double-ditched monuments; in Kent, increasingly, excavations begin with site-wide 'stripping and mapping'- a technique which is especially good at identifying and recording monuments of this type. Both strategies may have led to more multi-circuited structures being uncovered. Then if so, it suggests that the size range of double-ditched monuments may also be greater in Zone 3 than the figures suggest.

<sup>42</sup> These figures relate to excavated monuments. Some caution is necessary regarding this result because it must be weighed against the possibility that the difference in single and double ditched sample sizes may create distortion.

## A. Zone 1 – Kent



a

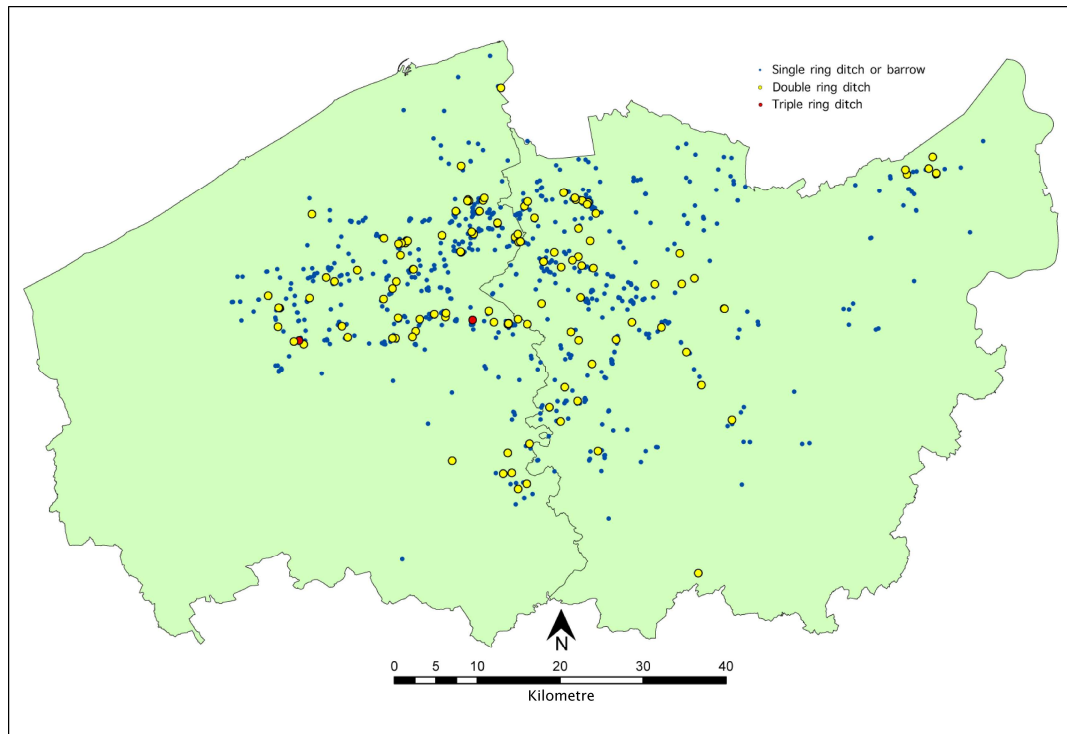


b

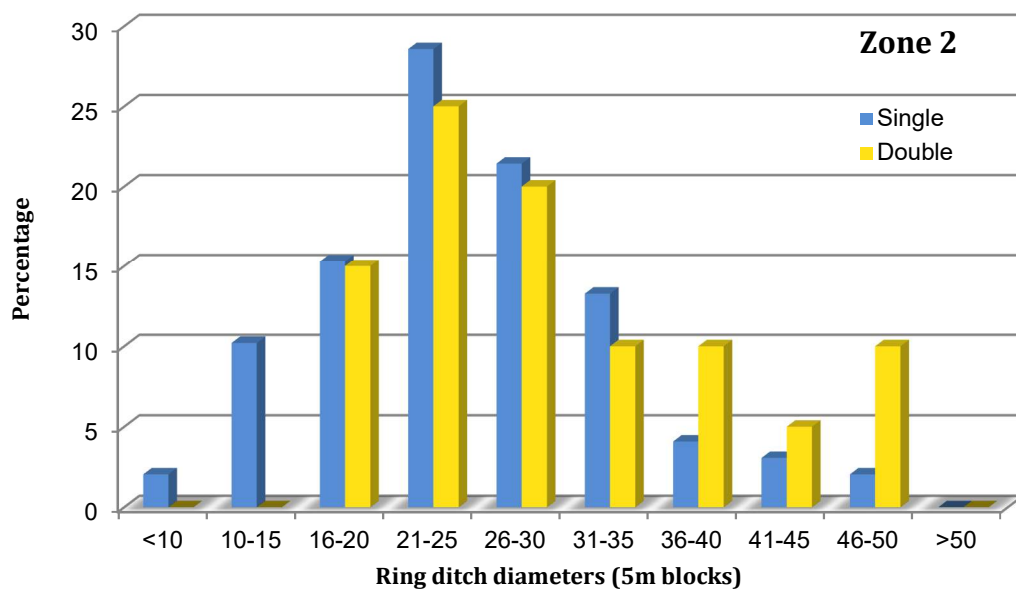
Fig 7.47: (a) Distribution map of Zone 1 showing known aerially detected and excavated single, double and triple-ditched monuments. (b) The associated bar chart compares excavated singles and doubles according to the percentages of each that fall within five metres (maximum) diameter blocks. Created in Arcview 9.2 and Adobe Illustrator by the author from data supplied by the Trust for Thanet Archaeology and extracted from ((Edis & Horne 1989 ; Smythe 2007).



## B. Zone 2 – Flanders



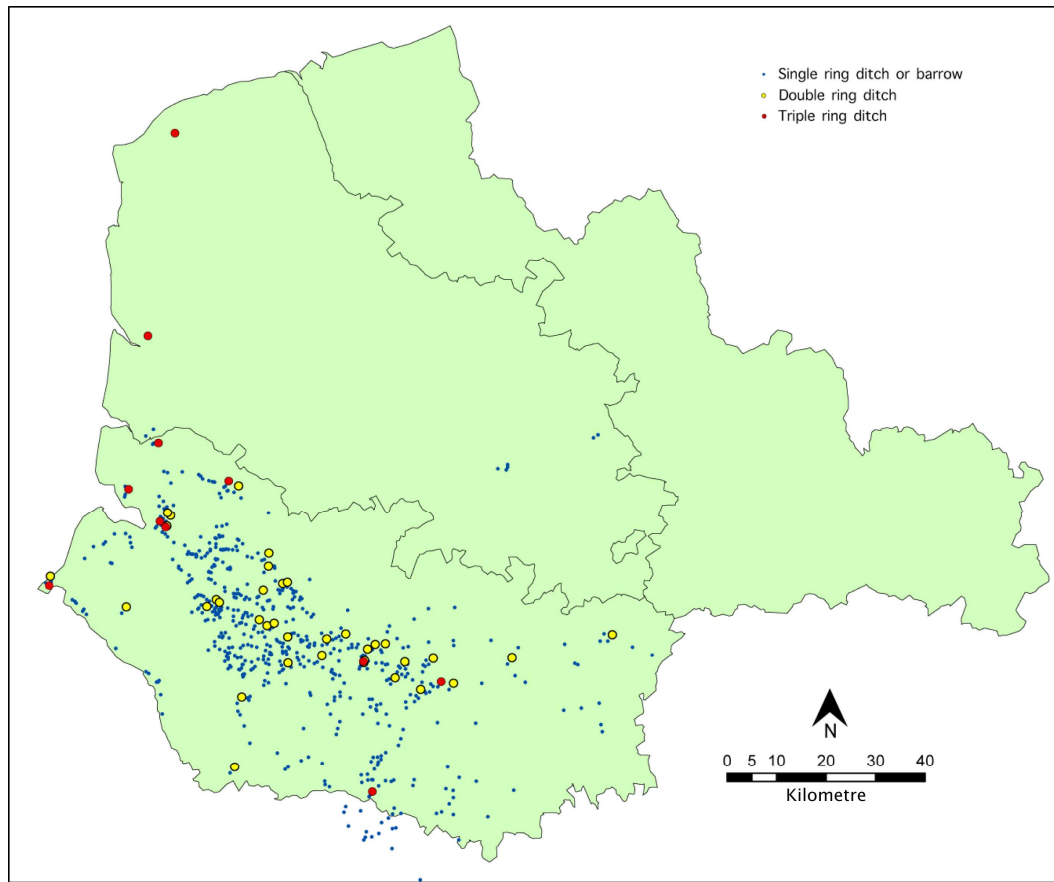
a



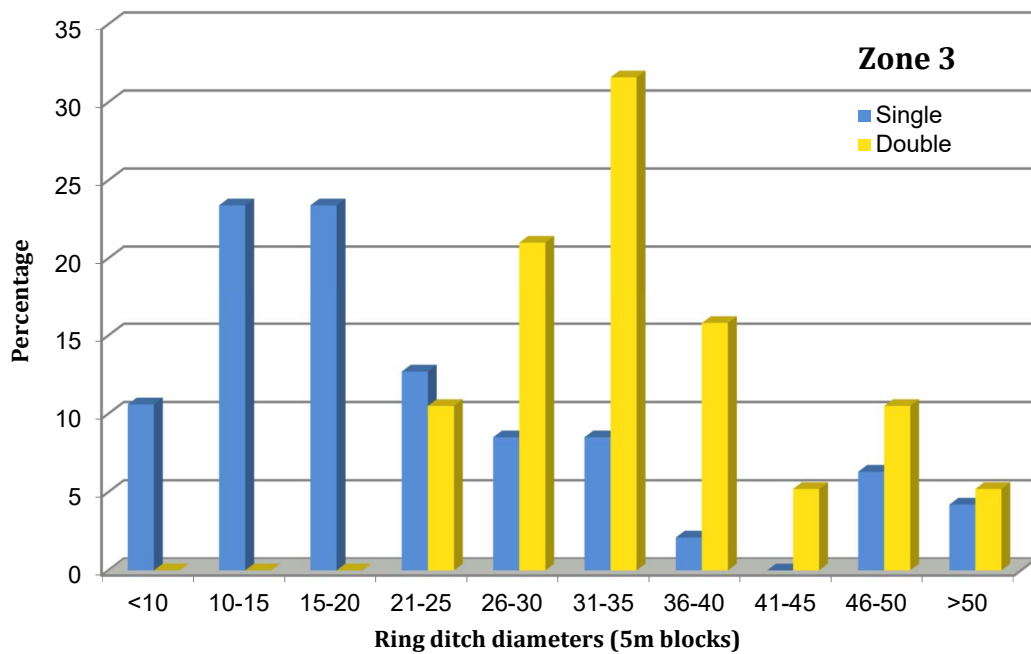
b

Fig 7.48: (a) Distribution map of Zone 2 showing known aerially detected and excavated single, double and triple-ditched monuments. (b) The associated bar chart compares excavated singles and doubles according to the percentages of each that fall within five metres (maximum) diameter blocks. Created in Arcview 9.2 and Adobe Illustrator by the author from data supplied by Universiteit Gent.

### C. Zone 3 – France



a



b

Fig 7.49: (a) Distribution map of Zone 3 showing known aerially detected and excavated single, double and triple-ditched monuments. (b) The associated bar chart compares excavated singles and doubles according to the percentages of each that fall within five metres (maximum) diameter blocks. Created in Arcview 9.2 and Adobe Illustrator by the author from data supplied by INRAP (after Toron 2005).

### 7.6.3 Single and multi-phase constructions

Multiple ring ditched monuments were not all conceived as such from the outset (i.e., single-phase constructions), some were created as simple circles and subsequently gained new ditch circuits through later modifications (i.e., multi-phase constructions). This distinction is important because it has the potential fundamentally to affect perceptions of function and meaning: if something is designed and built in a particular way and then modified this implies either that it was not fit for purpose or that the purpose changed.

The difficulty is that, superficially, there appears little to distinguish single-phased monuments from the multi-phased versions. Only through excavation has it been possible to make this distinction. However, evidence presented below suggests that it may be possible to separate the two by comparing the ratios of inner to outer ditch circumferences. Known multi-ditched monuments are used to establish the phenomenon. These appear to fall within precise parameters depending on the type of construction (Tables 7.11 and Fig 7.50) and regardless of the overall size of individual circular monuments.

Double ring ditch construction	Ratio of inner to outer ditch circumferences (where inner is a constant of 1)			
	Zone 1 - Kent	Zone 2 - Flanders	Zone 3 - France	Mean average
Single-phase	1.7	1.8	1.7	<b>1.7</b>
Multi-phased	3.0	2.5	2.9	<b>2.8</b>
<b>Combined ratio</b>	<b>2.2</b>	<b>2.0</b>	<b>2.0</b>	

Table 7.11: The average inner to outer ditch circumferences ratios – where the inner is a constant of one – broken down by study zone. Also see Fig 7.50 below.

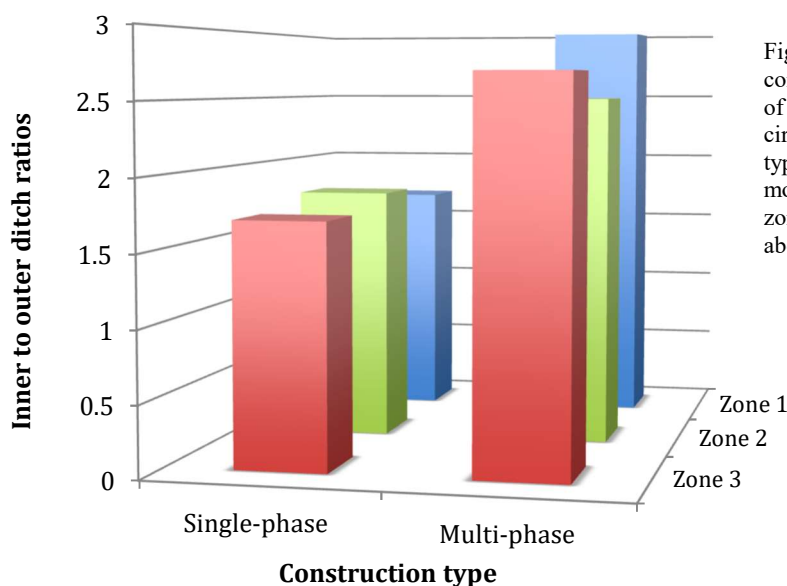


Fig 7.50: Bar graph comparing the average ratio of inner to outer ditch circumferences for the two types of double-ditched monuments in the three study zones. Also see Table 7.11 above.

Single-phased double ring ditches have an inner to outer ratio range of between 1:1.1 – 1:2.1 compared to a multi-phase ratio range of between 1:2.3 – 1:3.3. This equates to an average of 1:1.7 for single-phase constructions and 1:2.8 for multi-phase (Tables 7.12 and 7.13)<sup>43</sup>. In other words, the relationship between ditch circuits is regulated by a mathematical formula, the results from which provide a means of distinguishing ‘true’ from ‘aggrandized’ double ringed monuments.

<b>Zone 1 – Kent</b>	Whitehill Road, Southfleet	Prings Quarry, Halline	Broadstairs	King Edwards,	Broadstairs	Bradstow School,	Cliffs End (B1) Rainsgate	Ringlemere M5	<b>Mean averages</b> (Standard deviation in brackets)
<b>Outer circuit (in metres)</b>									
Diameter	18.0	11.0	18.0	24	23.0	28.0	23.3		
Circumference	56.5	34.6	56.5	75.4	72.3	88.0	63.9		
<b>Inner circuit (in metres)</b>									
Diameter	11.2	8.0	8.8	14.0	14.0	16.0	12.0		
Circumference	35.2	25.1	27.6	44.0	44.0	50.3	37.7		
<b>Ratio of the outer circumference in relation to the inner</b>									
<b>Ratio</b>	<b>1.6</b>	<b>1.4</b>	<b>2.0</b>	<b>1.7</b>	<b>1.6</b>	<b>1.8</b>	<b>1.7 (±0.1)</b>		

A

<b>Zone 2 – Flanders</b>	Bellem Hansbeke kapel	Maldegem Vliegplein	Oedelen Maandagse	Adegem Staalizer	Ostwinkel Veldhoek	Kenzke Verkeerswiss selear	Hoeye Rode Poort	Machelen	Maldegem Vliegplein	Moortsele Uijlhoek	Gent Hoge-Weg	<b>Mean averages</b> (Standard deviation in brackets)
<b>Outer circuit (in metres)</b>												
Diameter	40.0	46.0	38.0	25.0	27.5	30.0	29.0	31.0	42.0	50.0	35.9	
Circumference	125.7	144.5	119.3	78.5	86.4	94.2	91.1	97.4	131.9	157.0	112.6	
<b>Inner circuit (in metres)</b>												
Diameter	33.0	35.5	22.0	14.0	14.5	16.0	14.0	15.0	20.0	23.3	20.7	
Circumference	103.7	111.5	69.1	44.0	45.5	50.3	44.0	47.1	62.6	73.2	65.1	
<b>Ratio of the outer circumference in relation to the inner</b>												
<b>Ratio</b>	<b>1.2</b>	<b>1.3</b>	<b>1.7</b>	<b>1.8</b>	<b>1.9</b>	<b>1.9</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>	<b>1.8 (±0.075)</b>	

B

<b>Zone 3 – NE France</b>	Le Frenaise Conchil-le-Temple, A	Le Frenaise Conchil-le-Temple, G	La Foraine d'Authie, Waben	Au dessus du Grand Rideau, St Vaast-en-Chausée	Mont Bagarre, Etrappes	<b>Mean averages</b> (Standard deviation in brackets)
<b>Outer circuit (in metres)</b>						
Diameter	35.0	32.0	33.0	34.4	51.0	37.1
Circumference	110.0	100.5	103.7	108.1	160.0	104.1
<b>Inner circuit (in metres)</b>						
Diameter	21.0	17.0	16.0	19.1	44.5	23.5
Circumference	66.0	53.4	50.3	60.0	140.0	54.6
<b>Ratio of the outer circumference in relation to the inner</b>						
<b>Ratio</b>	<b>1.7</b>	<b>1.9</b>	<b>2.1</b>	<b>1.8</b>	<b>1.1</b>	<b>1.7 (±0.1)</b>

C

Table 7.12 (A, B, and C): Known single-phase construction double ring ditched monuments from each study zone, along with relevant dimensions and inner to outer ditch ratios. \*See note on page 255 regarding adjustments for error.

<sup>43</sup> Double ditches with uncertain phasing are factored out.

<b>Zone 1 – Kent</b>	Monkton-Mount Pleasant	Lord of the Manor 8	Lord of the Manor 1	Haynes Farm, Eythorne	<b>Mean averages</b> (Standard deviation in brackets)
<b>Multi phase construction</b>					
<b>Outer circuit (in metres)</b>					
Diameter	38.0	28.0	30.0	20	29.0
Circumference	119.4	88.0	94.2	62.8	91.1
<b>Inner circuit (in metres)</b>					
Diameter	12.0	9.0	12.0	6	9.8
Circumference	37.7	28.3	37.7	18.8	30.6
<b>Ratio of outer circumference in relation to the inner</b>					
<b>Ratio</b>	<b>3.2</b>	<b>3.1</b>	<b>2.5</b>	<b>3.3</b>	<b>3.0 (±0.4)</b>

A

<b>Zone 2 – Flemish</b>	Ursel Rozestraat	Evergem Rsalingen	Kortemark Koutemolen	<b>Mean averages</b> (Standard deviation in brackets)
<b>Multi phase construction</b>				
<b>Outer circuit (in metres)</b>				
Diameter	17.0	26.4	30.5	24.6
Circumference	53.4	82.9	95.8	77.4
<b>Inner circuit (in metres)</b>				
Diameter	7.5	10.7	11.0	9.7
Circumference	23.6	33.6	34.5	30.6
<b>Ratio of outer circumference in relation to the inner</b>				
<b>Ratio</b>	<b>2.3</b>	<b>2.5</b>	<b>2.8</b>	<b>2.5 (±0.3)</b>

B

<b>Zone 3 – NE France</b>	Les Dix-huit, Fontaine-Notre-Dame	Les Rietz, Frehan	<b>Mean averages</b> (Standard deviation in brackets)
<b>Multi phase construction</b>			
<b>Outer circuit (in metres)</b>			
Diameter	35.0	56.0	45.5
Circumference	110.0	175.9	142.9
<b>Inner circuit (in metres)</b>			
Diameter	12.0	22	17.0
Circumference	37.7	69.1	53.4
<b>Ratio of outer circumference to inner</b>			
<b>Ratio</b>	<b>2.9</b>	<b>2.5</b>	<b>2.7 (±0.2)</b>

C

Table 7.13 (A, B and C): Lists of the known multi-phase construction double ring ditched monuments from each study zone, along with their relevant dimensions and inner to outer ditch ratios. • See note below.

For good practical reasons a berm is needed between the inner and outer circuits of a double ring ditch in order to ensure structural stability and possibly to accommodate a bank; but for it's width to be governed by a universal principle based on a sophisticated appreciation of what is now known as Euclidean geometry is surprising to say the least. That the resultant calculation also uses

• NB: The field methods used to measure ditch diameters varied. For this reason the calculations were also worked using a standard deviation of 5% - based on an average ditch cut width of 2m. The results show no significant difference. All the ratios stayed within the original calculated parameters. The variations in the mean average ratios are displayed in brackets at the end of each table.

different variables, depending on whether the monument is a new-build or a modification, adds an additional layer of complexity. In fact, the whole concept seems intriguingly complex and implies that other factors were influencing their manifestation.

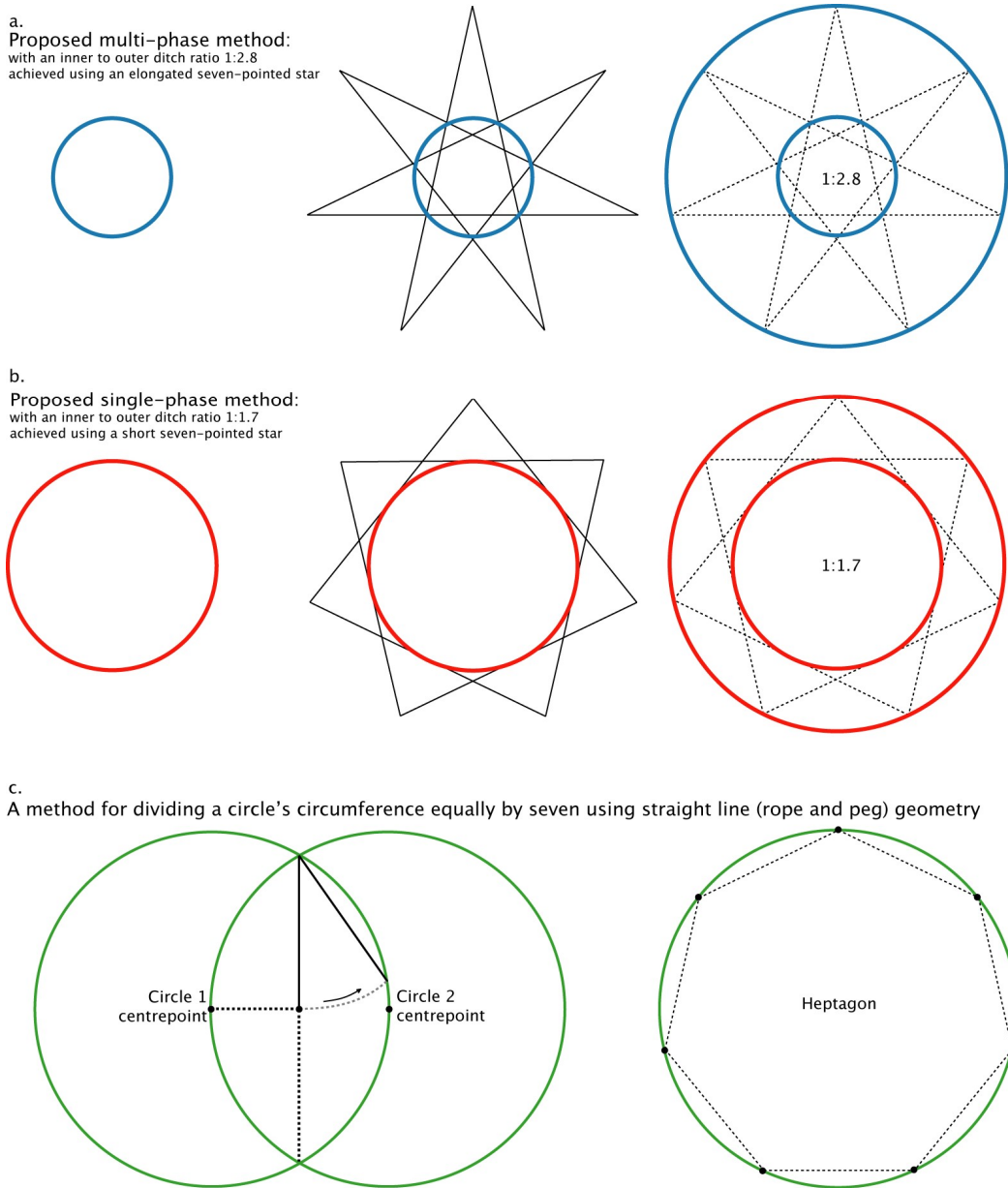


Fig 7.51: Illustrations 'a' and 'b' show proportionally accurate graphical representation of the mathematical relationship between inner and outer ditches of multi and single-phase double ditched circular monuments, based on average ratios. Both sets represent a practical solution for how the two ratio types could have been created and scaled using ropes and wooden pegs or stakes to draw straight lines. These illustrations show the inner ditches (which can be any diameter) as being laid out first, although the method works just as well the other way around. The second ditch is derived by creating the appropriate seven-pointed star (it can only be drawn in two configurations) in such a way that the apexes determine the diameter. The double ditch ratio is governed by this choice. Illustration 'c' shows a method for locating seven equally spaced points around the circumference of a circle, again using a simple rope and peg method. This is an essential preparatory process for constructing either version of the seven-pointed star.

The maths and geometry contained in this section and elsewhere were checked by Dr Patrick Hooker of Global Digital Systems Ltd.

Perhaps even more remarkable is the way in which the respective diameter relationships were apparently derived. The average ratios 1:1.7 and 1:2.8 seem arbitrary and it was initially difficult to discern any underlying significance. More fundamentally, it was not easy to explain how such ditch ratios could be accurately replicated from one construction project to the next. It has long been accepted that the most likely method used to create simple ring ditches was to inscribe a circle by attaching a length of rope to a stake or peg. It therefore seems probable that similar techniques would be used to create double concentric circuits. However, this would require complicated mathematical calculations to determine the outer rope's length in order to maintain the appropriate ratios over a range of diameters. There had to be a simpler solution. By means of computer-aided design it was possible to generate accurate straight-sided geometric shapes and test whether these could produce the desired results. In the event, the outcome was entirely unexpected (Fig 7.51a and b) and not only made sense of both ratios but also provided such an elegant solution that the chances of it being anything other than intentional seem highly improbable.

Name	BP date	Cal Bc	Lab ref	Construction
Whitecaps, near Dover	3690±60	2279-1915	Beta 141269	Multi-phase
Urzel-Rozestraat	3620±60	2195-1777	IRPA 818	Multi-phase
Evergem-Ralingen	3480±60	1951-1638	IRPA 526	Multi-phase
Haynes Farm	3460±50	1907-1639	Beta 129270	Multi-phase*
Étapes/Mont Bagarre	3390±70	1881-1523	Ly 7445	Multi-phase
Vosslare-Kouter	3320±70	1756-1438	UtC 2019	Single phase
Frethun/Le Rietz	3310±60	1740-1454	Gif 8928	Multi-phase*
Oostwinkel-Veldhoek	3270±70	1733-1416	UtC 3310	Single phase
Conchil Le-Temple, G	3250±70	1691-1401	Gif 5053	Single phase
Kortemark-Koutermolenstraat 1	3030±90	1392-1134	IRPA 1033	Multi-phase
Maldegem Vliegplien	2970±60	1385-1061	UtC 3033	Single phase
Gent-Hogeweg	3030±90	1491-1015	IRPA 774	Single phase

Table 7.14: Excavated multi-ringed monuments in chronological order according to associated radiocarbon dates. \* Denotes triple ditched – all others are double ditched.

One further layer of complexity is provided by radiocarbon dating, which suggests that 'true' single-phase double-ditched monuments emerged no earlier than 1750 BC (3320±70 BP UtC 2019) (Table 7.14). It is quite possible that prior to this circular monuments only had one ditch, because a process of retrofitting additional ditches to existing monuments seems to have taken place at around the same time<sup>44</sup>. This double-ditch horizon corresponds with the changes that mark

<sup>44</sup> This assertion is based on available radiocarbon dates. Where second or even third ditches appear to be earlier than 1750 BC analysis suggests these were not necessarily in use, or even visible, concurrently. Some ditches became redundant and were covered over or filled in; see Le Rietz, Frethun and Haynes Farm, Eyethorne.

the transition from the Early to the Middle Bronze Age as set out in Section 1.4 Table 1.5, and fits comfortably with Garwood's scheme (2008, 41).

The implications are potentially far-reaching. The superimposition of true and retrofitted double-ditch monuments on the sacred landscape, with seven-pointed star geometry apparently deliberately encoded within their construction, may be symbolic of a sophisticated doctrinal cosmology. At the very least it demonstrates a technical prowess beyond that which is generally acknowledged for this era. In comparison, the long established and widespread practice of building broadly standardized single-ditched circular monuments was a relatively simple process. Quite why, at this point in time, it was considered necessary to modify some of these by adding a second ditch, and to create purpose-built double-ditched monuments in addition, is a matter for future investigation. It is unlikely though to be happenstance because similar constructions, encoded with very similar average ratios, are found in each of the study zones and, by implication, probably well beyond. The skills needed to accomplish and replicate such deliberately harmonious results are unlikely to have been common, so there had to be a reliable - possibly restricted - method of knowledge transfer in order for this to have been achieved on the scale suggested by the research data. If so, this could be taken to imply the existence of an organized credo, propagated by people whose affiliations transcended that of individual communities. These issues will be developed more fully in Chapter 8.

## **7.7 FOUNDER MONUMENTS AND CEMETERIES**

### **7.7.1 Adding and altering circuits**

Once built, the majority of single ditched monuments remained essentially unaltered, but as demonstrated in Section 7.6.3, a small number gained second and even third circuits during later construction phases. In some cases, the original ditch fell out of use, suggesting this was a process of replacement rather than addition. However, other examples were clearly intended to augment, and for that there is currently no satisfactory explanation. An understandable supposition is that monuments gained multiple ditches to emphasize the status of those buried within them. This not only assumes the existence of a hierarchical society but also suggests – despite evidence to the contrary - that these complex structures were



simple grave markers. It seems unlikely that this aggrandisement was the consequence of random or meaningless actions and rather implies that specific monuments were singled out for special treatment.

One possibility is that these were ‘founder’ monuments, a classification that has been invoked in each of the study zones (Piningre 1990, Ampe *et al* 1996, Perkins 1999). These are monuments that are interpreted as focal points around which barrow cemeteries evolved. By definition they must date earlier than the structures around them. However, given the limits of the available data from within the research area, there is little prospect of determining which, in any of the spatially associated groupings, are the oldest monuments. Absolute dates for individual concentrically ring ditched monuments, such as those in Table 7.14, cannot be used to prove the point without the addition of radiocarbon dating sequences, or credible relative chronologies, for whole cemetery groups – neither of which appear to exist. The best available evidence is to be found in:

Zone 1: Monkton-Mount Pleasant and Lord of the Manor, Thanet,

Zone 2: Oedelem Wulfsberge and Waardamme,

Zone 3: Conchil le Temple and Fresnes-lès-Montauban.

All of these, and other examples, are examined variously within this thesis but none provides the proof, or otherwise, that is needed. Another issue is that quite a few of these complex monuments are found in comparative isolation. Whilst conversely, many barrow cemeteries do not offer up multiple-circuit founder monument candidates<sup>45</sup>; although it must be remembered that the majority are known only through aerial detection and some of the apparently simple constructions may have undetected second or even third ditch circuits.

### **7.7.2 Testing for the existence of barrow cemeteries**

By applying Arcview 9.2’s ‘nearest neighbour’ and ‘proximity buffer’ tools to ring ditch distributions it has been possible to demonstrate that, according to the English Heritage criteria, barrow cemeteries exist within the research area in

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<sup>45</sup> Whilst it is accepted that if founder monuments did exist as a concept they need not have been multiple ditched, for the purposes of this constituent hypothesis it is assumed that they were.

significant numbers. Precisely how many is open to some interpretation<sup>46</sup>, but counting groups of two or more provides a totally inclusive basis for assessing potential affiliations to double ditched monuments.

Zone	Two or more monuments within 100m proximity	Total number of double ditched (triples in brackets)	Number of groups that include double ditched monuments	Percentage of groups that include double ditched monuments
1. Kent	143	56 + (4)	32	59
2. Flanders	180	122 + (4)	73	61
3. France	204	38 + (11)	21	57

Table 7.15: List showing the group relationships of multi-and single ditched monuments.

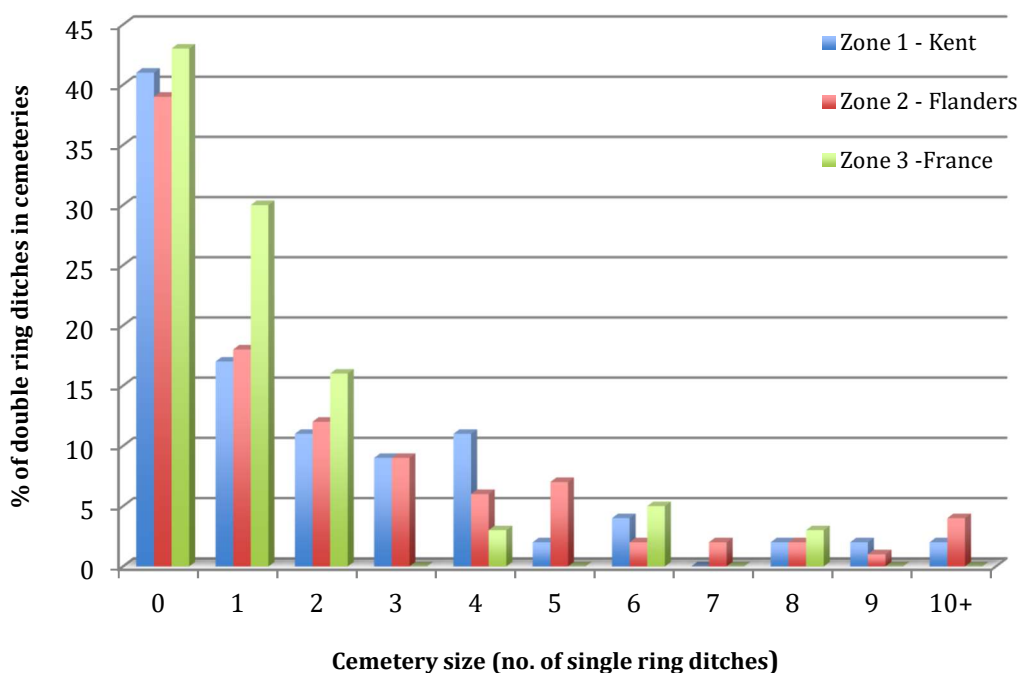


Fig 7.52: The percentage of double ditched monuments known to be associated with cemetery groups.

The actual number of groups in each zone differs substantially (Table 7.15) and it would be surprising if that were not the case; there are many factors to account for this, as discussed in Section 7.1.2, “Factors affecting data veracity”. Of more relevance are the percentage breakdowns of double ditched monuments against group sizes (Fig 7.52). Just under two thirds of the total - 59 percent in Zone 1, 61 percent in Zone 2 and 57 percent in Zone 3 - have some level of group affiliation. In Kent and Flanders this remarkably close correlation pervades the entire sequence and, even though individual percentages differ, in the French zone the trajectory remains broadly similar.

<sup>46</sup> Barrow cemeteries must contain five or more monuments to qualify under the English Heritage definition.

### 7.7.3 Network distribution

Another way of considering this is that approximately 40 percent of double ditched monuments are apparently isolated in the landscape. As these are primarily aurally detected, it is feasible that there are other unseen monuments close by. Excavations have demonstrated that undetected ring ditches can be located close to known circular monuments. On the other hand, the fact that the same percentage is affected in each zone does serve to undermine this notion. Assuming that some are genuinely solitary, this raises the question of whether location, rather than associations to other monuments, was the builders' most important consideration.

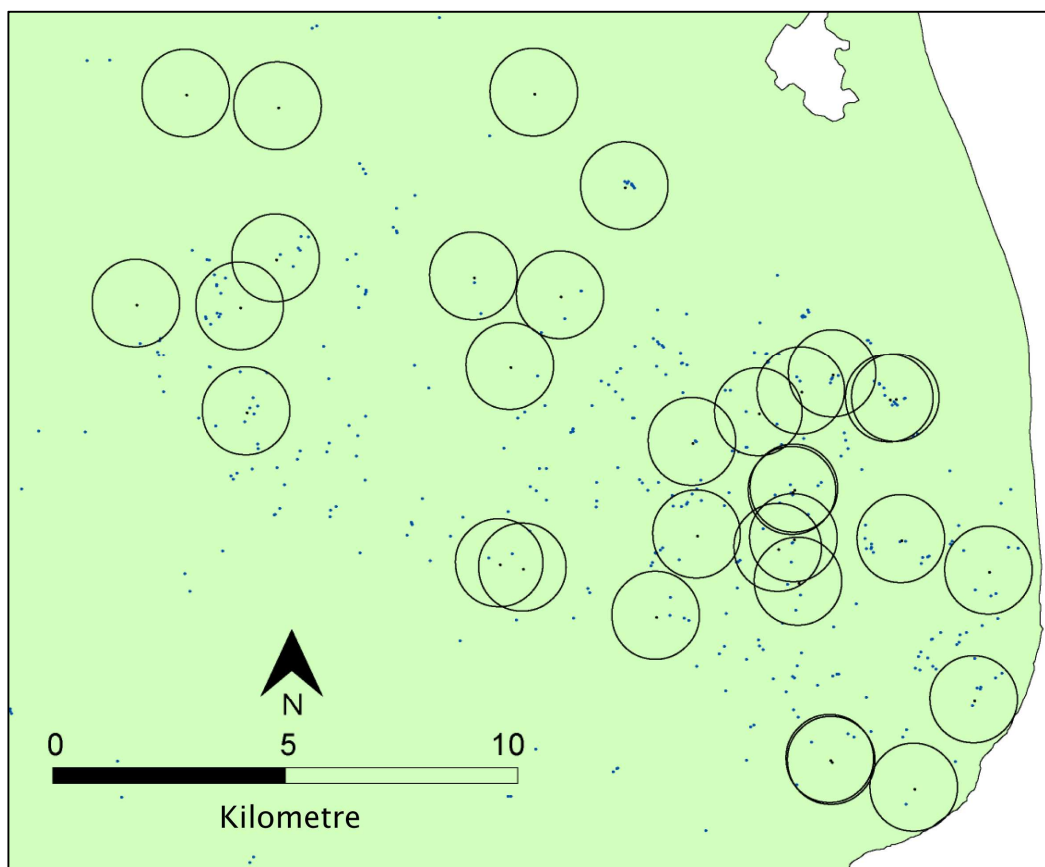


Fig.7.53: East Kent showing ring ditch distribution with two kilometre buffer zones centred on double ditched monuments. Note the even spacing (even underlying areas of overlap) - a pattern that persists throughout the research area.

In each of study zones double ditched monuments appear to be spaced throughout the landscape with an underlying regularity that implies deliberation<sup>47</sup>. By imposing a proximity buffer in Arcview (Fig 7.53 and Fig 7.54) it is possible to determine that the majority are approximately two kilometres apart.

<sup>47</sup> Allowing for the incomplete nature of the available data.

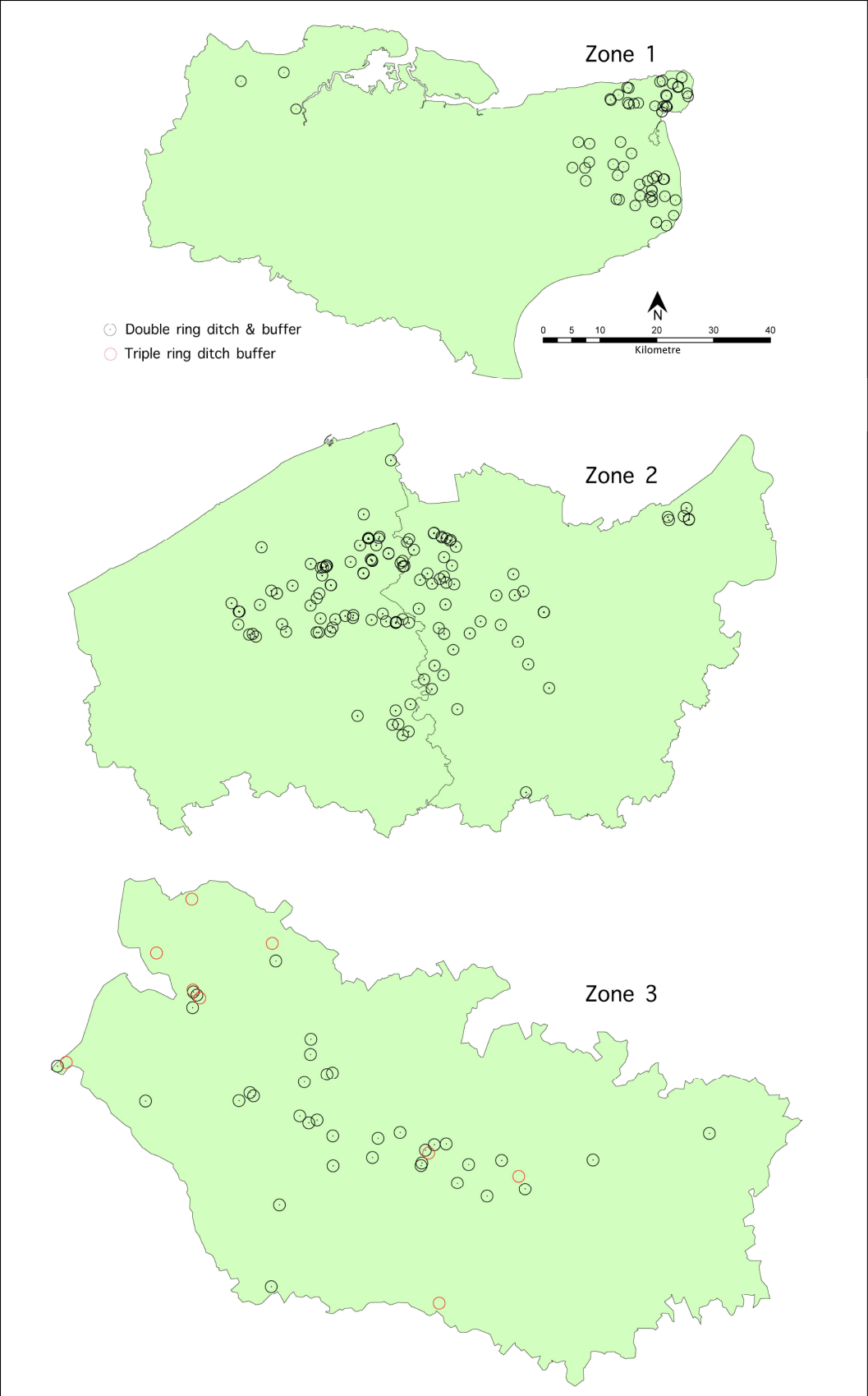


Fig 7.54: Maps of all three study zones demonstrating a similar tendency towards double ditched monuments being evenly spaced at intervals of approximately two kilometres.

There are clear gaps and areas of overlap, but the general consistency is quite compelling. Although a Type 1 statistical error<sup>48</sup> or an instance of apophenia – the state of seeing patterns in random events - cannot be completely ruled out, the core data is reliable and the spatial analysis technique sufficiently robust to conjecture that where this regular proximity relationship is demonstrable it is unlikely to be a coincidence or a methodological anomaly. Predicting locations where undetected double ditched monuments should exist, and then seeking confirmation in the field, could test the validity of this hypothesis. Such a course of action is presently not feasible, although it could form the basis of a future research project.

In the meantime, if it is assumed that this patterning is genuine, it is difficult to explain such a phenomenon. One possibility is that these were not all built as funerary monuments. They may have been intended as district foci, akin to a parish church or village hall, embracing a wide range of community and ritual activities. This may help to explain why up to 40 percent are not associated with barrow cemeteries. As ceremonial centres they need not have had a direct funerary function. Instead, they may have worked in ways similar to that envisaged by Parker Pearson (2008) for the Durrington Walls area – namely as places for celebrations to do with the living – effectively as counterpoints to associated monuments for the dead. Such might originally have been the case with Lord of the Manor (LOTM) 1, which is explored along with several associated monuments in Section 7.5. It did ultimately become a repository for several burials, but the available evidence strongly suggests this was not the original purpose. There are other examples where funerary activity is either completely absent or appears secondary in nature, including Ursel Rozestraat (Fig 5.64) and Conchil-le-Temple (Fig 5.71). Even so, this type of use would not require monuments to be evenly distributed, unless associated settlements or land divisions were also equally apportioned - which seems highly unlikely.

Another possibility is that these were carefully sited in order to be visible, one from the other; but there are a number of problems associated with this

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<sup>48</sup> A false positive: rejecting the null hypothesis (in this case, that distribution is random) when it is actually true - Allchin, D. (2001) Error Types, *Perspectives on Science*, Vol.9, No.1, (Spring), pp.38–58.

hypothesis, the main one being that the average human eye cannot clearly resolve items the size of an average adult beyond a 1200m range. Undulating terrain, vegetation and site elevations are also potentially negative factors. If inter-visibility was a primary intent then it is more likely the monument locations would be spaced according to the natural lie of the land and in turn that would almost certainly thwart attempts at creating a regular pattern. In any event, it is difficult to comprehend how the envisaged layout could have been practically achieved. A considerable level of organisation and long-term planning would have been needed. Surveying over such a distance in order to establish evenly spaced nodal points within the network would also have required great technical prowess. All this seems to suggest that the perceived patterning is an illusion, but this must be set against the fact that the two-kilometre buffer zone is clearly visible in many instances.

## **7.8 SUMMARY**

### **7.8.1 Glimpsing the bigger picture**

This chapter set out to examine the degree to which it was possible to compare the physical characteristics of ring ditches in each of the study zones as observed and recorded through the medium of aerial photography and landscape analysis. In particular, it was intended that the number, distribution and locations of circular monuments be scrutinized along with any morphological characteristics that can reasonably be deduced through observation, such as diameters and ground plans. The datasets that were available for this task presented a number of challenges; most especially because they had been compiled at different times, in different countries and in different ways. This meant that it was not always possible to achieve a satisfactory level of equivalency. For the most part these shortcomings were either minor in nature or quantifiable (see Section 7.1.2) and did not, therefore, prevent the primary aims from being achieved.

On matters of density and distribution the imposition of a standard 25km grid onto each of the zones provided a means of making like-for-like comparisons. It made possible a statistical method for assessing monument intensity and allowed the output to be evaluated against similar results obtained by other researchers in areas such as Wessex. The grid was also useful in assessing respective positions

of circular monuments in the landscape. Empirical analysis in Arcview categorically ruled out the possibility that monument distribution in Kent and Flanders is random. The data collection method for north-eastern Transmanche France prevented its data from being subjected to the same tests. Nevertheless, it was still possible to demonstrate that monuments sited there seem to have been located according to the same criteria as applied in Kent and Flanders.

An examination in Section 7.6 of circular monument morphology noted that ring ditch diameters vary in size by up to 50m. The pattern of this variance was shown to be similar across the zones and in all three cases the mean average fell into the range 20m-25m. Similarly, the proportion with multiple concentric ditch circuits was also the same at approximately ten percent. These multiple ringed monuments were further analyzed and a distinction was drawn between single and multi-phase constructions. This process exposed a mathematical rule, which seems to govern the relationship between the inner and outer ditch circuits and distinguishes multi-phase from single-phase monuments. In itself this is quite remarkable, but when the known radiocarbon dates were tabulated (Table 7.14) another pattern emerged. This raised the possibility that a double-ditch horizon may have occurred circa 1750 BC, during which time selected monuments were retrofitted with additional ditch circuits.

Section 7.7 looked at whether some, if not all, of these complex constructions are indicative of so-called 'founder' monuments. The earlier work on monument clustering was recalled and combined with additional analysis to determine whether this supports the concept of barrow cemeteries. Here too, a level of conformity was demonstrable across the research area, with approximately 60 percent of multiple ring ditches in each zone being associated with monument groups. Further analysis of double ring ditch spatial proximity revealed an apparent pattern. The imposition in Arcview of buffer zones around each of these monuments appears to demonstrate regularity in their spacing, most noticeable in Kent and Flanders, but also visible in north-eastern Transmanche France. It is feasible, but somewhat improbable, that this particular aspect of monument disposition is genuine. If it were so this would imply there existed an underlying strategy for determining locations over an astonishingly wide area. Further research is needed to determine the veracity of this phenomenon.

This could take the form of a predictive methodology, whereby potential monument sites were identified and then tested by excavation or geophysical surveying.

Finally, a case study of the Lord of the Manor (LOTM) area of Thanet (Section 7.5) revealed layers of complex intra-site relationships, most particularly in terms of monument longevity, change of use and physical adaptations. Cemetery layouts were regular and may have been planned. They seem to have been located with considerable care and deliberation, quite possibly with aspects of visibility in mind.

### **7.8.2 Summative conclusion**

The primary goal for this chapter was to quantify by study zone certain closely defined characteristics of circular monuments in order to conduct comparative analyses. This was substantially achieved and, on the basis of the consequent results, it is reasonable to conjecture that circular monuments in all three zones arose out of common social, ideological and cultural processes.



## **SECTION 4**

### **INTERPRETATIONS AND IMPLICATIONS**

## CHAPTER 8

### IN PURSUIT OF MEANING

#### 8.1 A CIRCULAR ARGUMENT

##### 8.1.1 Introduction

Circular monuments endured in each of the study zones throughout the whole of the period under investigation; and for all of that time some people were being buried within them or close-by. Such a persistent association has led to the generally held assumption that this was their sole *raison d'être*. The generic term barrow does not help in this regard because it is too closely related in most minds with simple burial mounds and implies homogeneity of form and function<sup>49</sup>. As Garwood (2008) has demonstrated, the truth is quite different; a number of ritual structures existed, and more than a few are manifest in the data compiled for this research. Moreover, some monuments were clearly modified, which may indicate that their purpose changed. It is therefore likely that archaeologists are encountering a range of distinct structures, most of which look similar in plan because of an apparent preoccupation with concepts of circularity on the part of the builders. Why this was so, and how pervasive it was, forms the core of the following discussion.

##### 8.1.2 Excavation evidence

Specific burial rites may have varied across a wide gamut, incorporating many styles of inhumation and cremation, but excavations reveal that they were an integral - if apparently infrequent and not necessarily exclusive – component of most circular monuments. It is generally accepted that only a proportion of the population could have been buried in this way and the assessment carried out in Section 7.3 suggests a figure of one in 44. If this is correct then more than 97 percent of the population were disposed of by other means when they died, and although a few flat graves and the occasional cemetery pyre have been found, no other method is visible in the archaeological record.

This absence of data makes it impossible to determine why certain people were singled out, but clearly barrow burials of whatever kind were minority rites. The

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<sup>49</sup> Even allowing for the accepted English Heritage variations such as bell, pond and saucer.

most obvious potential qualification for inclusion is membership of a distinctive group: a clan, family or sect (Brück 2000, 289-290). Alternatively, it may have been a person's social or cultural position that made them eligible – in which case the inclusion of children raises issues of inherited status. It may even be the case that those who ended up buried in a circular monument did so because they were excluded for some reason from the evidently more popular invisible funerary rite. Another possibility is that death itself selected these people. For example, if the prevailing belief system was centred on the cyclical nature of certain stellar objects then particular times of the year would have been marked out as special. Dying during such festival periods may have been interpreted as being chosen by the gods.

The Transmanche research database contains examples of men, women and children, being afforded barrow burials, sometimes in the same monument - as is the case with the White Caps, Whitfield Eastry Bypass monument. Therefore exclusion on the grounds of age or sex can be generally ruled out – although it may have been so in particular instances or during relatively short periods of time within the era under investigation. This concept of equality in death – at least regarding those for which there is evidence - is reinforced by the more detailed analysis of bodily depositional arrangements.

In the case of non-Beaker burials (Chapter 6), no structured differences between male and female deposition were discernible. The majority of inhumations were placed on their right sides and, contrary to received wisdom, the largest number were laid out on a north-west/south-east axis, facing south. This deviates from the accepted norm and may indicate a peculiarly local custom. It is therefore unfortunate that so little comparable burial evidence is available from the Continental zones, because the Kent data may, in fact, be presenting a false impression. In the case of the Beaker burials (Chapter 6) the majority of females, and of the inhumations overall, were laid on their left sides and with their heads to the north, facing east. The majority of males were on their right sides with heads to the south, also facing east. This does comply with Beaker burial depositional traits seen elsewhere in Britain.

These differences seem to indicate a distinct division between Beaker and non-

Beaker burials in terms of the way they were laid in the grave, although a detailed examination showed that a wide variety of depositional formats for both rites were in use. The available absolute and typologically determined dates do not suggest a chronological transition from one type of inhumation to another; rather the different types of deposition were parallel traditions, or perhaps a single tradition with variant physical manifestations.

This variability requires closer scrutiny. It is generally considered that the communal long barrow funerary rites of the Neolithic gave way to single occupancy round barrow burials and thus signalled a shift towards the growth of individual status within society (Thomas 1999a). It has already been demonstrated that only a very small proportion of the population was buried within circular monuments. These burials may at first have been incidental to the original purpose. As previously discussed in Sections 7.6 and 7.7 there is sufficient evidence to conjecture that some circular monuments had a use-life that pre-dated the funerary function. It is also perfectly feasible that certain types of burial were constituent within a range of ritual activities.

This may account for the fact that many of these earlier circular monuments were used for a succession of temporally distinct burials, with some remaining active over a very long period of time. This process is attested to by an investigation into a barrow with multiple burials at Barnack, Cambridgeshire (Last 1998) and from a study of the trajectory of burial practices in north-east England (Mizoguchi 1993). It is a concept that has most recently been explored by Bradley (2007, 158-168) and Garwood (2008, 32-33). Woodward, in her investigation of these so-called cemetery barrows (2000a, 22-28), provides an example from Lincolnshire of a single circular monument that contained a succession of distinctly different types of burial representing seven phases of depositional activity. She interprets this as the result of people from different generations acting out variations on the perceived ancestral rites, changes having been caused either by altered beliefs or flawed memories. The latter concept gains favour with Mullin (2001) who investigated the use of natural mounds as Early Bronze Age burial sites and concluded that these were cases of mistaken identity; people wanting to follow the rites of their ancestors' and be buried alongside them, but apparently unable to

remember where the genuine mounds were located.

Last (1998), however, does not subscribe to either of these explanations and favours the deliberate imposition of ‘difference’. His exploration of an exceptionally large number of burials within a barrow at Barnack, Cambridgeshire, suggested to him that each was a carefully constructed act. The particular rite, the depositional aspects, the relative location and any grave goods were chosen carefully to signify aspects of the individual and especially their position within the community that had singled them out for inclusion in the monument. This theme was in part taken up by Brück (2004) who examined identity in the context of Early Bronze Age grave goods in Ireland and Britain. She argued that such items were more likely to reflect relationships forged in life than to objectively portray the individual’s identity. In other words the deceased was presented in death according to the way other people perceived them in life.

This all seems to suggest that personhood or individual identity was no more significant during the Early Bronze Age than the period that preceded it. Yet changes in mortuary practice are evident in the archaeological record and most obviously manifest themselves as an emphasis on circularity. Field (1998, 323) described this as ‘*intriguing*’ and suggested that round monuments may have been an allusion to a new social order with: “*only one centre and everything else being secondary*”. He also raises the possibility that mounds represented the celestial dome, bringing the debate around to the relevance of astronomy during the third and second millennia BC.

There is a considerable weight of academic literature concerning solar and lunar alignments of earlier stone monuments, most especially Stonehenge, but relatively little attention has been paid, either to the rest of the celestial canopy and its myriad other stellar bodies prominently visible in the night skies of Atlantic Europe, or to the potential significance of round barrows; although Garwood has recently drawn attention to the fact that some mid-second millennium BC linear cemeteries appear to be directed towards the setting sun on midsummer’s day (2008, 41) and the alignments of many Bronze Age Irish monuments are also well documented (O’Brien 2002). There seems to be reason here to hypothesize that a

robust cultural package, which included an established relationship with the heavens, survived the observable changes in physical monumentality – attested to, in part, by the durability of Collared Urns and Food Vessels throughout this period (Section 5.1.4, Fig 5.4), (Needham 2005b, 206).



Fig 8.1: A time-lapse photograph taken in southern England showing the movement of celestial bodies around the pole star.

The imposition of a novel, possibly more earthly, philosophy centred on the importance of the individual may explain this dichotomy. It is feasible that Beaker adherents, with their superior technologies, presented a powerful alternative cosmology and ultimately rivalled the old order. Eventually, a hybrid ideology developed, melding the two traditions. In this context cemetery barrows, which encompassed a range of burial traditions and were apparently no less communal than long barrows or chambered tombs, make sense because they reflect what was happening in the wider society. New ideas were not supplanting the old, merely modifying them.

Many Beaker graves such as LOTM 7 (Section 7.8), (Perkins and Gibson 1990) were relatively small, even to the extent that those designated as ‘flat’ may, in fact, have had such ephemeral mounds and/or ring ditches that they soon completely vanished (Demolon *et al.* 1975; Moody and Gardner 2005; Clark 2009, 92). This could explain how a Beaker burial in Thanet came to be over-cut

by a ring ditch (Minter and Hogarth 1972). Furthermore, the overwhelming majority of Beaker burials from the Kent zone were single inhumations – although in some cases – i.e. South Dumpton Down (Section 6.3.1) - monuments were subsequently used in a non-Beaker funerary context. The few Beaker examples available from the two Continental zones were also apparently solitary burials (Section 5.3 and 5.3). Clearly single occupancy graves emphasize individuality. Externally such burials may have presented a modest façade but personal status was emphasized by the incorporation of grave goods – which may have included a range of standard durable artefacts commonly associated with Beaker graves, other precious objects and quite possibly organic items that do not survive – as evidenced by the Amesbury Archer (Fitzpatrick 2002).

Whereas, examples of circular monuments containing non-Beaker burials, some of which are described in Section 6.6, imply not just a sense of community but often have a distinct air of externalized conspicuous display about them. For this reason it is useful that in each of the study zones there are monuments that show signs of having extremely long and complex histories. The fact that these persisted for generation after generation is in itself testament to the validity of the above hypothesis. The resilience of monuments such as White Caps, Ursel Rozestraat and Fresnes-les-Montauban M4 – each of which functioned for at least a thousand year period – has provided an ideal opportunity to establish that there was correspondence between the three study zones in this regard. Other monuments, such as Haynes Farm, Les Rietz and Vosslare Kouter may not demonstrate the same degree of longevity, but they still present robust and valuable evidence for the enduring role of such circular monuments within society. It is true that distinct structural modifications or additions to ditch circuits and central enclosures indicate that this role was subject to modification or renegotiation, but in the context of this research that is all to the good because these trends are shown to be very similar right across the research area, as is the data on human deposition<sup>50</sup>.

Such is the case for the era referred to in Section 7.6.3 as the ‘double ditch horizon’. Among other things, this point in time marks the end of the Beaker period and it is almost certainly not a co-incidence that this was also when

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<sup>50</sup> Unfortunately, this excludes Flanders due to the almost complete absence of burials for the period.

Stonehenge began to fall into disuse. More generally, society was undergoing significant change. Metalworking had long since become established and must have been a relatively mundane, economically driven, activity rather than the mysterious transformative act of the early Beaker period. Agrarian communities were populating the landscape, as evidenced by the number of field systems and settlement sites that have been located in Kent (Yates 2007, 20-24) and throughout the rest of Britain.

Whilst it is difficult to definitively establish the existence of either Perkin's Gateway community (1999) or Clark's People of La Manche (2004a) trade across the Channel is plainly visible through evidence of the transfer of material goods, including exotic items such as jet, amber and precious metals (Needham 2000; Desfossés 2000; Butler and Fokkens 2005; Bourgeois and Talon 2009). By 1500 BC '*nouveaux riche*' had emerged most probably through the control of raw materials such as Cornish tin and other good (Coles and Taylor 1971; Champion 2004). In this respect it is of note that a connection between Kent and Cornwall - and by association north-eastern Transmanche France - dated 1600-1320 cal BC (3175±50 BP OxA-6141) is definitively attested to by the discovery at Monkton, Thanet, of a Trevisker Urn (Gibson 2009, 54-61).

Around this time crouched inhumation burials were being replaced by cremations in the visible burial record implying that a new credo, requiring a new funerary rite, had emerged. There could be many reasons for this but one possibility is that pyre smoke rising into the sky may have symbolized the deceased's journey to the heavenly realms. This would fit with the earlier analysis, which described a sophisticated cosmology that in some respects harked back to, or perhaps reinvigorated, the religious outlook of the Neolithic. Of course, it is likely that beliefs based on stargazing never entirely went away; they just became subsumed for a while by a precocious ideology that eventually ran its course.

### **8.1.3 Aerial surveys and landscape analysis**

The only noteworthy differences to come out of the analysis of the three aerial survey datasets relate to density levels. Circular monuments in the Somme are spread much thinner in the landscape than is the case in either Flanders or Kent. In



fact, Kent is up to four times more dense and Flanders twice as dense. This is significant and may be a real distinction, but it could equally reflect variations in topography, ground cover, geology and survey methodologies. However, in this instance a far more likely reason is that the photographic record of the Somme has not yet been fully catalogued and analyzed and it may be that the numbers are presently understated to a higher degree than is the case in the other two zones. Support for this comes from the fact that to some extent these differences dissipate at the small scale (one km<sup>2</sup> sub-cell and less) (Fig 7.15).

It is also important to note that the higher density levels in Kent are primarily restricted to Thanet, and in Flanders to the Maldegem cuesta. In both cases this would appear to be a genuine manifestation of an historical reality. These regions seem to have qualities that made them favoured places. Their most obvious physical distinction is relative height in comparison to the surrounding landscapes. Whilst not exactly the same for the Somme, it is nevertheless the case that the majority of its circular monuments are also found at relatively high elevations on valley slopes. This naturally suggests that visibility was an important consideration; that monuments across the entire research area were located with as much prominence as was practically available.

This observation regarding a preference for high places in the positioning of circular monuments fits comfortably into the accepted paradigm; it has been noted by many scholars, including (Ashbee 1960a; Fleming 1971; Field 1974; Lynch 1993; Ampe *et al.* 1996b; Field 1998; Desfossés 2000; Garwood 2003; Bourgeois and Talon 2009). It may, however, be somewhat overstated. Despite long-term and continuing efforts, knowledge regarding ring ditch numbers and distribution remains fragmentary, mostly due to the fact that, even where terrain has been thoroughly surveyed, the results are often affected by a variety of natural and man-made factors, as discussed in Sections 3.3, 3.5 and 7.1 (Wilson 2000, 88-89). One consequence of this is that in most circumstances it is impossible to determine whether the absence of evidence is real or a consequence of survey inadequacies.

Certainly in the case of Kent there is reason to believe that a considerable depth of colluvium, especially at the base of the North Downs escarpment, could be

masking evidence for a great deal of prehistoric activity. The investigations at Holywell Coombe and Castle Hill, near Folkestone, (Hutcheson *et al*) and at White Horse Stone, near Maidstone, (Brown 2001) clearly demonstrate that Neolithic and Bronze Age archaeology exists under this build-up of soil. Contrary evidence comes from Flanders – where overburden is definitively not an issue. The micro-topography investigation in the Nevele – Drongen triangle (Section 7.2.3, Fig 7.24) confirmed that even small rises in the terrain attracted greater attention from ring ditch builders.

In both cases it is possible that intensive or continual long-term agricultural activity during the intervening millennia has obliterated a great deal of the evidence. In his review of factors influencing the survival or destruction of barrows Peters suggests this would mostly impact lower lying arable land (1999), which may be the case in Kent, but in Flanders – where the terrain has been severely eroded – one would expect the more sheltered depressions between the ridges to be where survival was at its best. Regardless of these incongruities, at present the weight of evidence suggests that more than 30 generations of monument builders in Kent, Flanders and the Somme valley all favoured relatively high places.

Another factor that is apparently common to all three zones is a predilection for locations that overlook water. This is more difficult to establish with certainty from the research data. However, in Kent there is good evidence from Thanet, where barrows were positioned along the island's southern coastline overlooking the Wantsum Channel. Considerable evidence is also present in north-eastern Transmanche France, especially along the Somme valley and its connected waterways. The same can be said of the major rivers in Flanders, although extensive changes to the hydrography in that zone make such assessments more speculative. Assuming that both these observations regarding positions in the landscape are correct, there could be many reasons why this was so. It is not central to this investigation that these be explored in depth.

Nevertheless, a review of the more dominant themes would be enlightening, and one such has already been undertaken by Field (1998) in the context of the Downs

region of south-east England. He weighs, what the modern western mind thinks of as, the purely practical against more esoteric motives and concludes that such distinctions are inappropriate. Barrow builders may well have been pragmatists who positioned their burial grounds or ceremonial sites on less productive marginal land, or placed them prominently in order to clearly emphasize power and dominion. However, that does not preclude them from having also adhered to religious or cosmological imperatives in order to harmoniously place symbolically charged monuments within the landscape. Field rightly points out that ethnographic studies have provided ample evidence for outstanding natural features being regarded as sacred (1998, 322). Locating special structures in association with such places could have been intended to facilitate the harnessing of supernatural powers, or to bridge the gap between 'heaven and earth', 'life and after-life'. They may have been thought of as liminal zones: with watery places providing portals into the underworld and promontories acting as stairways to the heavens. Such ideas could explain why both Thanet and the Maldegem cuesta were favoured: they present all the necessary qualifications, both sacred and profane.

Tilley (1994) goes to some length in elaborating on this concept of the interconnectedness of physical and symbolic landscapes, a theme he returned to more specifically with an investigation into the Bronze Age landscape of central southern England (Tilley 2004a). His appraisal of why barrows were built in certain places is firmly rooted to the ground. He sees their disposition as a metaphor for the landscape itself. Another view is altogether more lofty and predicated on the idea that ancient people practiced astronomy - an assumption for which there does seem to be ample support, and not just in relation to classical civilizations.

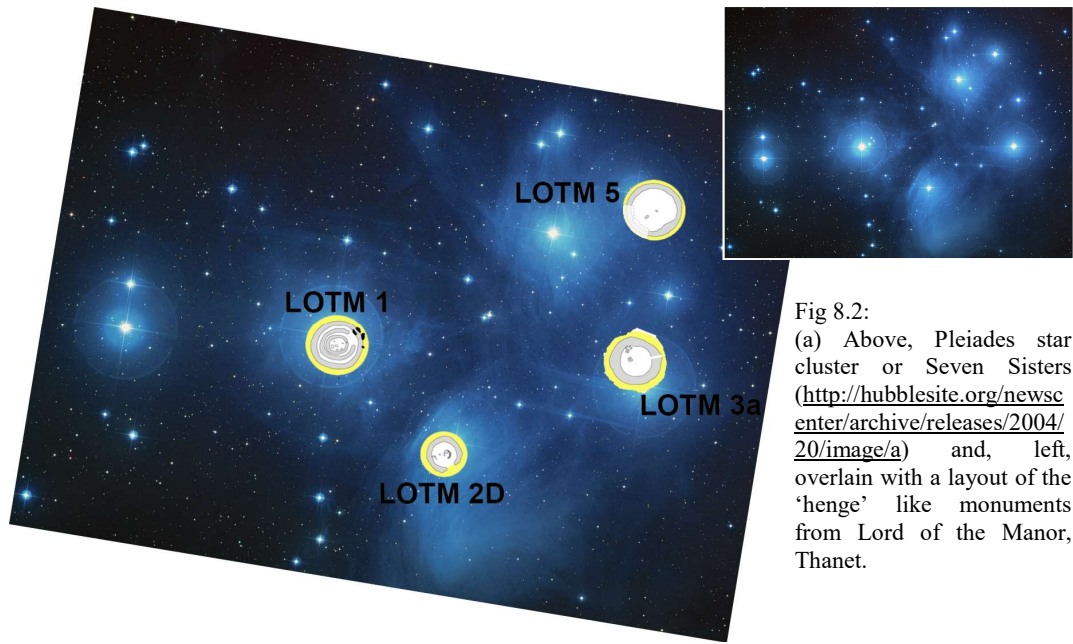
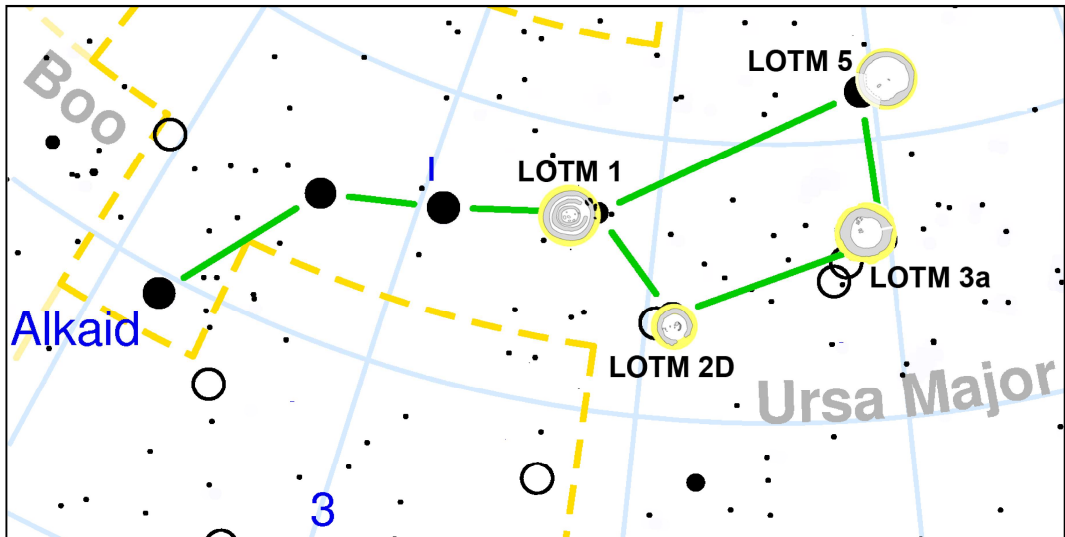
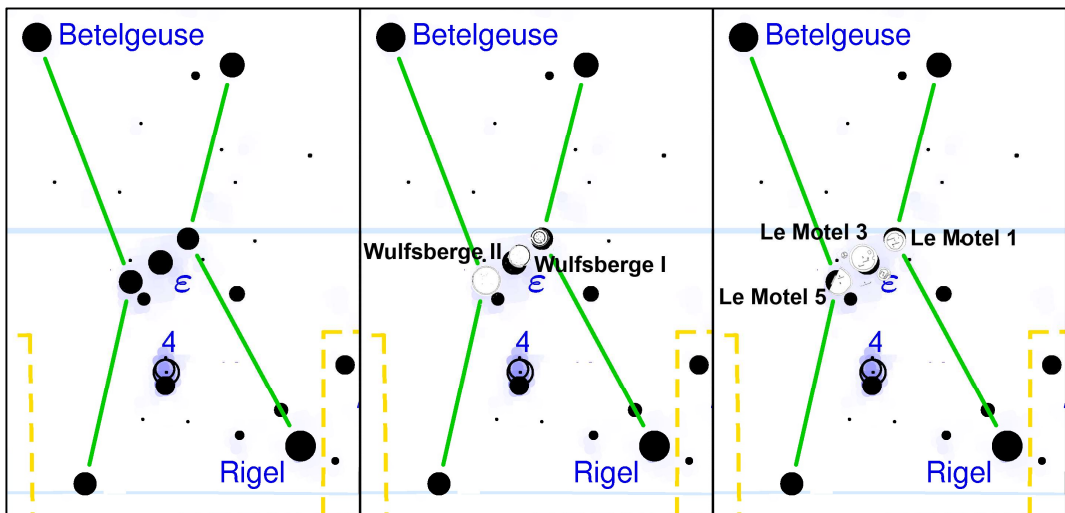


Fig 8.2:  
 (a) Above, Pleiades star cluster or Seven Sisters (<http://hubblesite.org/newscenter/archive/releases/2004/20/image/a>) and, left, overlay with a layout of the 'henge' like monuments from Lord of the Manor, Thanet.



(b) The same Lord of the Manor monuments also imposed on a skymap of Ursa Major (also known as The Great Bear, Big Dipper, the Plough and Arthur's Wain).



(c) The constellation of Orion overlain with Oedelem Wulfsberge and Le Motel, Fresnes-lès-Montauban's ring ditches. The star maps used in b and c are courtesy of Dr Torsten Bronger, Jülich Research Centre, Aachen, Germany.

Good evidence exists to suggest that Neolithic north-western Europeans invested time in stargazing (Thurston 1994, 45-63, Ruggles 1999, 12-67) and more than 100 years ago Mortimer expressed the view that 16 groups of barrows<sup>51</sup> in the Yorkshire Wolds had been deliberately laid out to represent constellations, in particular Ursa Major (1895; 1905). Support for this concept, if not Mortimer's specific interpretation, has been forthcoming quite recently. Field states that: "*Such ideas may seem fanciful, but they should not be dismissed without consideration...it is possible that barrows were constructed to be seen from the spiritual world, hence a need to reproduce features or patterns of the heavens here on earth,*" (1998, 315).

Coincidentally, the four circular monuments from the Lord of the Manor, Thanet complex, identified by their excavator as being possible henges, do present a strikingly similar pattern to that of Ursa Major and, perhaps more significantly, the central configuration of the Pleiades star cluster (Fig 8.2a and b), which is part of the constellation of Taurus. The Pleiades stars are referred to in western folklore as the Seven Sisters, although they go under a variety of names in the myths of other cultures around the world. This astronomical phenomenon not only forms one of the brightest objects in the night sky but also, by association with the passage of the Sun through the vernal equinox from south to north of the ecliptic, marks the entire winter period (Appleton 2009). Consequently, they are thought to have been important to many agricultural societies and are known to have been observed as early as 1800 BC by Babylonian astronomers who used another of their features, a cyclical association with the moon, to determine when leap months needed to be added to their calendar (Thurston 1994, 66).

The Pleiades are also apparently depicted on the Nebra Disc (Fig 8.3) - a remarkable artefact uncovered in Germany in 1999 and dated no later than 1600 BC. It appears to show the cluster along with other stars, the sun and the moon (Pásztor and Roslund, 2007). The exact function of the disc continues to be debated, but it may be relevant that the acronychal rising of the Pleiades during the middle of the second millennium BC coincided with the astronomical cross-quarter day, the

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<sup>51</sup> This totalled 196 monuments, all of which Mortimer had personally excavated.

halfway point between the summer and winter solstices - later marked by the Celtic Samhain festival, which was associated with the dead and corresponds to modern day Halloween. At the same time the heliacal setting fell in March and effectively marks the start of spring or the modern day Easter holiday.



Fig 8.3: The Nebra Sky Disc with the Pleiades cluster, top right. © LDA Sachsen-Anhalt (Foto: Juraj Lipták).

Despite this, and the additional examples (Fig 8.2c) of possible celestial referencing, there is no conclusive evidence in the research dataset for monuments having been deliberately positioned in such a way as to mirror the night sky. The biggest problem is that the number of known ring ditches is so high that it is fairly easy to create recognizable patterns by joining the dots. Even so, it appears that monument locations and cemetery layouts were not generally chosen at random. The spatial analysis experiments carried out in Arcview 9.2 could not have been more definitive on this point. Although, as the results are dependent on statistical and mathematical variables extracted from the aerial survey and excavation datasets, it is wise to treat them with caution. Nevertheless, it seems reasonable to

accept that most of the known circular monuments were sited with conscious intent. More importantly, this appears to have been achieved in all three zones by the application of very similar criteria.

Additionally, barrow cemeteries matching all the English Heritage defined categories can be found in Kent, Flanders and north-eastern Transmanche France and groups with less than five monuments are also a feature of each zone's ritual landscape. The Lord of the Manor, Nevele – Drongen and Bellifontaine valley studies demonstrate that cemetery sites were also chosen purposefully. In particular, intra-visibility appears to be one of the criteria – a phenomenon that has been attested to elsewhere (Lagerås 2002). It is patently the case in regard to the Lord of the Manor cemetery groups A and C (Fig 7.35), which stand opposite one another on either side of a coombe valley. Similarly, many of the Bellifontaine groupings are arranged in order to be seen one from another (Fig 7.19). In the case of the Nevele – Drongen triangle the Gent team carried out a viewshed analysis in Arcview, which demonstrated that monument groups would have been clearly visible to each other. The range was set at 1200m, the limit at which a person with perfect eyesight can distinguish details, such as individual trees in a forest (Fig 8.4).

Whilst exploring this clustering phenomenon it also became apparent that quite a few cemeteries incorporated multi-phased or atypical monuments. The fact that these more complex, and often larger, structures can be found amid groups of conventional barrows has been taken to imply that they were 'founder' monuments, an idea that was raised in Section 7.7. Bradley (2007, 158-168) suggests that barrow cemeteries did not become a feature of the ritual landscape until circa 1850 BC, a point also strongly made by Garwood's analysis of the development of monumental architectural forms over time (2008). Consequently, many of these so-called founder monuments present long and complex histories. Examples include: South Dumpton Down, Kent (Section 6.3.1, Figs 6.11-6.13); White Caps, Whitfield-Eastray bypass (Section 6.3.1, Figs 6.17-6.24) and to some extent, ring ditch M4 at Le Motel Fresnes-lès-Montauban (Section 6.3.3, Fig 6.47).

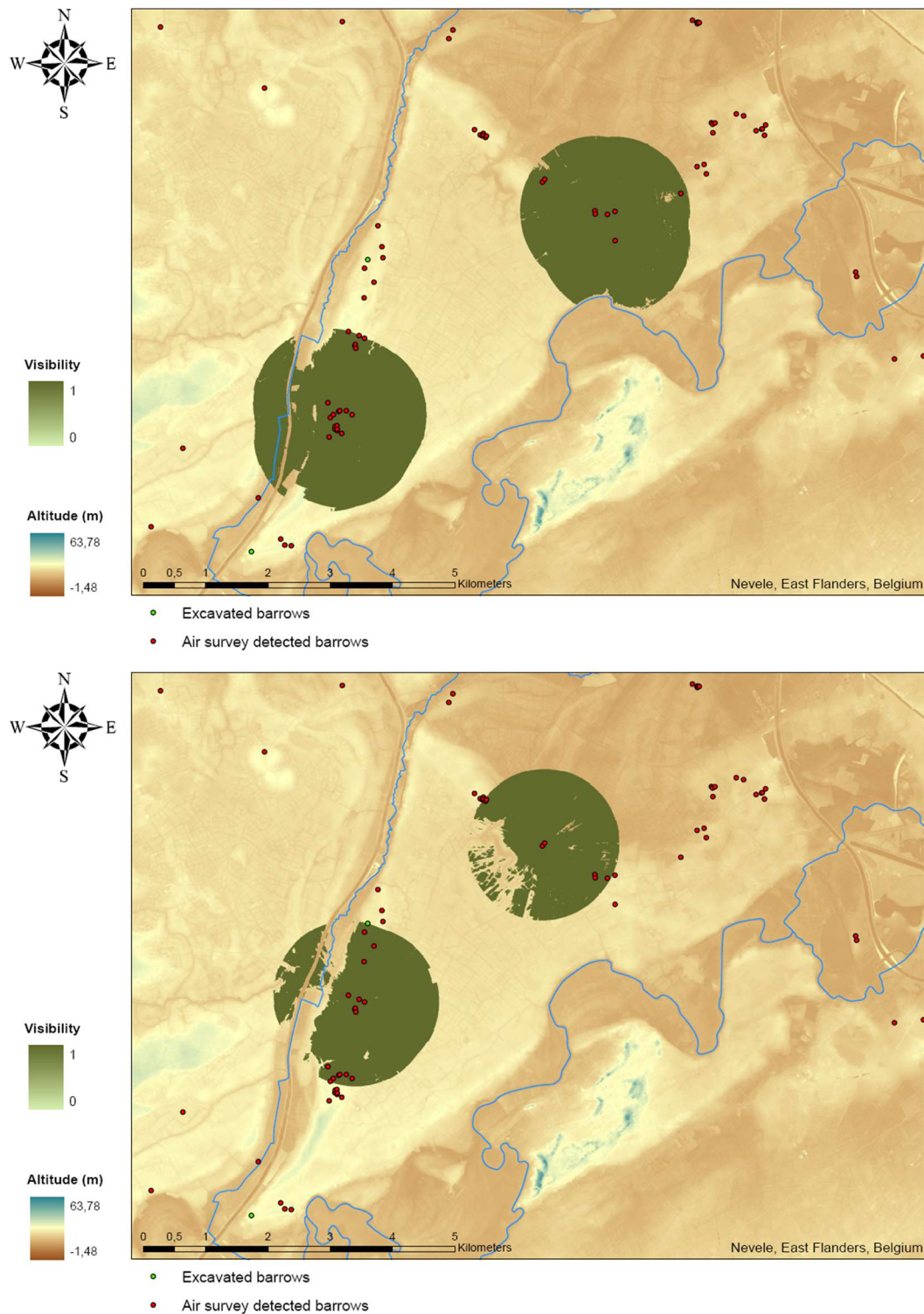


Fig 8.3: The result of viewshed analysis by Jeroen De Reu, Universiteit Gent, on groupings of barrows at Nevele – Drongen, Flanders (after Hammond *et al.* 2009).

More particularly, the Lord of the Manor (LOTM) case study revealed that its complex monuments do, in fact, date very early and quite possibly started out as something far more enigmatic than simply places for disposing of the dead. Only later, generally after significant modifications, did they acquire burials; so perhaps a better term for these monuments is ‘ceremonial’. Ringlemere is almost certainly



another example of a ceremonial structure – most probably a henge - that later became the focus for a barrow cemetery (Parfitt 2006b). The proximity of the LOTM monuments to two Neolithic causewayed enclosures and Ringlemere's late Neolithic origin may indicate that despite changing systems of belief there was an enduring reference to the sacred nature of particular places. It is more difficult to definitively identify similar examples in the Continental study zones, but sites with candidates include, Oedelem Wulfsberge (Section 6.3.2, Fig 6.37), (Cherrette and Bourgeois 2003), Waardamme (Demeyere *et al.* 2006) and Conchil le Temple (Piningre 1990) (Section 6.9.4, Fig 6.71).

Whether founder or ceremonial, a common, but not universal, characteristic of these monuments is the incorporation of multiple ditch circuits into their design. It is not universally synonymous but an association between the two does nevertheless exist. Double ring ditches identified from each zone's aerial data make up just ten percent of the circular monument total, and in Section 7.7.2 it was possible to determine that at least 60 percent of them were located within barrow groups and could therefore qualify as founder/ceremonial monuments. Simplistically, this indicates that the other 40 percent were isolated from other monuments, possibly because they were built later and for a different purpose.

Proximity analysis revealed that the combined distribution of clustered and solitary double ditched monuments appears to be remarkably even, with a commonly recurring separation of approximately two kilometres. Such distances mean that inter-visibility is unlikely to be behind the choice of locations, particularly in areas where the terrain undulates. Assuming this patterning is a genuine phenomenon, it suggests their placement was in some way being predetermined and may even imply the existence of an overarching scheme, or grand design. Whatever the reason for this apparent regularity it seems to be applicable to all three zones and, by implication, quite possibly well beyond. An extensive network of this kind would transcend the ritual needs of local communities and can only be interpreted as evidence for a more pervasive belief system.

Needham's theory regarding the existence of a 'maritory' in the period 2000 BC –

1500 BC (2006; 2009) – outlined in Section 2.2.2 – may be of help in this regard. The kind of social order he envisages was not bound together by economic or political means, but through a shared cosmology and diverse commonalities of purpose. He suggests that this disparate alliance was maintained partly through the imposition of a ritual package that involved the use of precious cups like the one found at Ringlemere (Needham 2009, 33). The significance of these vessels is explored by Kristiansen and Larsson (2005). They are able to demonstrate that such objects were being used over a much wider area of Europe, weakening Needham's case for a supposed symbolic link based primarily on maritime cultures. Interestingly, the authors do express the belief that changes to the material culture in central and northern Europe indicate that new social and religious institutions were introduced just prior to 1700 BC (2005, 157-158).

The repetitive nature of barrow dispositions apparent from the above discussion is explained by them in terms of a 'decentred cosmology', whereby a commonly held belief system is repeatedly made manifest by each subscribing community within their own individual sphere of influence (2005, 357-359). Another way of interpreting this duplication of ceremonial monuments, and of the barrow cemeteries that cluster around them, is offered by Bernadini (2004). He sees them as surrogate villages: metaphors for settlements of the living. He suggests that where populations are dispersed they come together on special occasions to *'create, reproduce and symbolize a community through the construction and use of a central monument,'* (2004, 335). Of course, his model makes most sense for people who were isolated or constantly on the move. If they were already living in communities or in relatively close proximity there would have been less of an imperative to establish periodic gathering places or build symbolic homesteads.

On the other hand, if the ancestors had already chosen these places and had them marked with special monuments then their continued use and maintenance may well have been considered a sacred duty. This may help to explain the conjectured double ring ditch horizon discussed in Section 7.6. Radiocarbon determinations suggest that it dated to circa 1750 BC – as previously noted, a time of significant cultural change across the whole of north-western Europe (see Section 1.4 on chronology). The research data indicates that this is precisely when a major

transformation was taking place in burial traditions, with cremation replacing inhumation as the more popular rite and a modified form of circular monumentality also appearing. This took the form of completely new monuments with double concentric ditches – some being built in previously unused locations. At the same time selected pre-existing monuments had second ditches added. This seems to imply that a shift in belief was taking place, although connections with the ancestors may have been maintained through the continued use of ancient sanctified places.

Further proof for the existence of a new doctrine comes from statistical analysis (summarized in Tables 7.11 - 7.13), which reveals that the relationship between the concentric ditch circuits of individual monuments in all three zones is regulated by a mathematical formula. Moreover, when applied to the array of known measurements, it consistently returned results that fell within one of two set parameters, depending on whether the inner and outer ditch constructions were single or multi-phased events. Devising a practical method for consistently and accurately accomplishing this distinction on the ground, regardless of circuit diameters, would be an extraordinary achievement; and the solution (proposed in Section 7.6, Fig 7.51) bears witness to the existence of a sophisticated appreciation of circular geometry more than a millennium earlier than a similar understanding was demonstrated by Greek mathematicians like Euclid (Hartshorne 2000).

Whilst the interpretation contained in Section 7.6 is evidentially derived it should still be considered tentative. Such an apparently fundamental breakthrough demands a great deal more work, using a much wider range of data. A task of that magnitude would have necessitated digressing from the core aims of this research and was therefore set aside for the future. In the meantime it is worth reviewing the potential impact. At its most prosaic this could provide novel new methods for analyzing and interpreting multi-ditched circular monuments. For instance, it may be possible to use aerial data to determine the difference between single and multi-phase constructions. More profoundly this discovery offers the prospect of revealing insights into the cultural dynamics, social structures and dominant cosmological mindset of the period. Quite simply, there had to be very good reasons why the builders went to such lengths to so precisely construct concentric ditch circuits. It seems improbable that they were motivated by the 1:2.8 and 1:1.7 ratios. These were more likely an unavoidable

consequence of constructing monuments that incorporated a particular geometric form: that of a seven-sided star (Fig 7.51). Those who understood the need for this underlying magical or sacred design would have known that it existed within certain monuments. In fact, it is quite possible that the humblest of believers was well aware of this symbolism, in the same way that religious architecture, such as that found in Christian churches, is widely appreciated in the modern era (Bradley 1993, 3-4).

However, it is unlikely that everyone would have possessed the ability to actually encode circular monuments with esoteric geometry and, more importantly, known how to use it. Those that did would most probably have commanded power over and respect or even fear from the population at large. So how could such knowledge be protected and still spread throughout the three study zones and potentially beyond? Those that used and transmitted it would have needed an extensive contact network at an appropriate social level. This begs the question as to whether an organized, possibly itinerant, cognoscenti class had emerged and was setting about evangelising a new or modified mystical ideology.

The philosophy that underpinned this credo is unlikely ever to be fully recovered, especially as there is considerable obfuscation created by a vast body of modern-day 'fringe' material about mystic symbolism (Ruggles 1999, 3-6). However, the geometric relationships that are plain to see in Fig 7.51 invoke a sense of wonder and underline the fact that, even today, this branch of mathematics remains an arcane scientific endeavour (Ferguson 2008). As to the original symbolic meanings: apart from the Pleiades (Seven Sister's) connection, it is surprising just how often the number seven features in the folklores and faiths of various extant as well as ancient cultures. These include the Bible's seven days of creation, seventh heaven, seven wonders of the ancient world, the seven sages, the seven liberal arts, the seven seas, and so on. There is, however, one concept that seems to recur frequently and may have significance in this context, particularly in light of the earlier discussion about astronomy. The seven-pointed star has often been interpreted as representing the number of stellar objects in the solar system visible to the naked eye – Moon, Mercury, Venus, Sun, Mars, Saturn and Jupiter. Many ancient and classical cultures deified these objects – and it is the main reason why the days of the week are so named (Boutsikas *pers comm*). The idea that celestial references

were encoded within circular structures is by no means a new concept, particularly in light of all the research carried out at Stonehenge (Harding 2003, 71; Sims 2006; Darvill 2006; Chippendale 1999, 220-232; Ruggles 1999, 44-47; Thurston 1994, 45-55). It is also fairly obvious that the heavens held great significance in prehistoric cultures and not just for religious reasons. There were good practical benefits to be had from understanding the movements of celestial bodies, primarily for agriculture and navigation; both of which would have been relevant to people living on either side of the Transmanche region.

#### **8.1.4 Summary**

This chapter contains a series of hypotheses related to past belief systems. The possibility is explored that when the Beaker philosophy arrived in the third millennia BC it brought with it a novel set of beliefs, discernible through subtle differences in burial practices. This ideology was based far more on personhood and individual identity than the pre-existing communally centred credo, but over time the two appear to have melded to create a hybrid religion which lasts until around 1750 BC. Then, for reasons that are not clear and just as cremations begin to eclipse inhumations as the primary burial rite, a sophisticated monumental symbolism becomes manifest; seemingly making reference to the movement of certain celestial objects in the night sky. It is conjectured that central to this phenomenon was the concept that death and rebirth are cyclical in nature. However, even if this was the case it does not necessarily follow that the population as a whole subscribed to the same cosmological view. In fact, it is more than likely they did not. Diversity in ritual practice existed and may account for at least some of the aberrant forms of circular monument that are scattered throughout the archaeological record. Once again, meaningful interpretation is of less importance to the outcome of this thesis than verification that all these unusual circular monument types were being built in each of the zones - and for that there is adequate proof.

## CHAPTER 9

### GENERAL CONCLUSIONS

#### 9.1 MEETING THE CHALLENGE

##### 9.1.1 A journey of discovery

This research project set out to assess whether archaeological evidence dating between 2500 BC – 1500 BC from funerary contexts in Kent, Flanders and north-eastern Transmanche France was sufficient to make valid comparisons between social and cultural structures on either side of the short-sea Channel – Transmanche – region. It was a challenging task, made even more complex by the discovery of an unconventional and potentially contentious strand of evidence. It was certainly not the intention to add such an element to the exploration of Transmanche Bronze Age circular monuments, but the revelation that sophisticated and potentially symbolically charged geometry had apparently been purposefully encoded within some of these structures could not be ignored.

The first reaction was one of disbelief and a fair degree of scepticism remains, despite the fact that corroborative evidence has since been forthcoming. None of this was anticipated; the original discovery simply appeared in the form of a regular pattern of numbers during the application of a standard statistical procedure – one of a range that was intended to provide a means of comparing monument characteristics from one zone to another. A considerable volume of material had been compiled from within the study zones and this mathematical technique was one part of the quantitative method being deployed to process and analyze it.

The overall objective at that point was to provide a bedrock of empirical data, hard facts generated by hard science; only when this had been done was it the intention to delve into less empirical realms. In the event, this discovery has gone some way to answering the second part of the research aims: “*Can these comparisons be used to determine the existence or otherwise during that period of shared social/cultural structures on either side of the defined maritime divide?*”

Even before the unexpected revelation it was becoming obvious that most of the funerary rites showing up in the data were quite similar, symbolically charged and highly ritualized, constructs - as were the circular monuments with which these events were so closely associated. Therefore, attempts had to be made to understand the ideological, social and cultural imperatives that underpinned this behaviour and led to the development and subsequent enduring appeal of circular monuments.

Evidence based on the recovery of grave goods did not in itself support the concept that trade and exchange between the people of the Transmanche research areas was either frequent or endemic, despite Perkins' (1999), Defosses' (2000) and Clark's (2004a) assertions to the contrary. It seems unlikely that such contact across the Channel would ever have been routine or commonplace during the period under examination, even though spatially the area is not especially large – covering less than 20,000 sq km. Theoretically a man walking for eight hours a day could circumnavigate such a territory in under two weeks or cross from one side to the other in three days. These are manageable distances and it is quite easy to envisage journeys of such length being undertaken. However, crossing a wide-open expanse of water is a far more hazardous and daunting prospect and would have been an altogether more elaborate enterprise. Helms (1988; 1993) and Van De Noort (2006) compellingly argue that those who embarked on such voyages were 'special' people, quite possibly driven by a desire to acquire knowledge, power or glory rather than material wealth. Of course, both types of motive could have been at work. Such journeys are known from the Aegean Bronze Age and rock art in Scandinavia attests to a highly developed concurrent prehistoric seafaring tradition (Johnstone 1988, 102-121). Furthermore, the discovery in Britain of traded items such as Neolithic jadeite axes<sup>52</sup> (Edmonds 1995, 49-53) confirms that Channel crossings were taking place long before the Dover Bronze Age Boat was constructed.

Regardless, it now seem plausible that during most of the period 2500 BC – 1500 BC the geographically separated Transmanche communities were bound together by factors far beyond the material. The evidence strongly implies a level of

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<sup>52</sup> A Scandinavian style polished stone axe was found at the earthen long barrow known as Julliberries Grave, Chilham, Kent.

ideological conformity on both sides of the Channel. The problem, though, is that such esoteric concepts are interpretive and definitively subjective. To explore them required the use of techniques such as cognitive archaeology, agency theory and phenomenology, along with other theoretical approaches advocated by Hodder (1982; 2003) Shanks (1987) Tilley (1994) and others of the post-processual persuasion. That is what makes the discovery of the double ring-ditch ratios so stimulating. Hodder puts great emphasis on recognising and interpreting symbolic language and in effect the seven-pointed stars are precisely that. They seem to represent a lost lexicon and should be regarded in exactly the same way as one would a more conventional ancient language.

Assuming this perceived symbolism is real then the veil may have lifted enough to begin teasing out elements of a credo to which scholars could only previously allude; a process that Sections 7.6, 7.7 and Chapter 8 endeavour to begin. However, it is not necessary to understand this geometric imagery in order to use it in pursuit of the core aims of this research. Its apparent use in all three zones towards the end of the period under examination can be taken as corroboration for the existence at that time of a common ideology – at least among specific sectors of society.

Evidence of a shared culture from the beginning of the period primarily comes in the form of the widespread Beaker phenomenon. Chapter 5 demonstrated that this class of data is abundant in Kent but quite sparse in the Continental zones. Nevertheless, it does exist and the generally pervasive nature of Beakers to the north-east and south-west of these zones would seem to suggest that the evidential paucity is most likely a consequence of poor survival. This problem also affected human depositional evidence, particularly in Flanders. The situation is better in north-eastern Transmanche France, but only barely. This severely restricted comparative analysis but the abundant evidence from Kent meant that in Chapter 6 general trends could still be examined. Thankfully, the quality and amount of data on the distribution, location, morphology and use of circular monuments in all three zones is far better, mostly due to extensive aerial surveying over several decades – as demonstrated in Chapter 7. Common traits are apparent and it is logical to accept that this is because the same processes were at work throughout the Transmanche region.



Therefore it is reasonable to conclude that, despite the noted inadequacies and when taken as a whole, the available datasets are of sufficient quality and volume to allow for the successful application of various comparative analyses. Furthermore, these tests have demonstrated a level of conformity that – at the very least - strongly suggests a stratum of cultural homogeneity existed throughout the Transmanche region. However, because burials within barrows were a minority rite, it seems unlikely that the visible archaeological evidence is representative of society as a whole. Nor would it be correct to assume that one ideology or cosmology fits all. The timescale alone negates this; in human terms 1000 years is a vast tract of time, capable of consuming more than 30 generations of people. It is not surprising then that death and burial was subject to various treatments. The fact that such changes as are apparent seem to have developed simultaneously in each of the zones adds additional weight to the theory that contact throughout the Transmanche region was endemic. Even so, it may not have been continuous; there may actually have been times of relative isolation – the data is simply too coarse to eliminate such a possibility.

So there it is, the available evidence *is* capable of being appropriately interrogated, and as a consequence it now seems reasonable to assert that at least some people living in Kent, Flanders and north-eastern Transmanche France during the period 2500 BC – 1500 BC shared cultural and social structures. As to the majority: in life as in death, they remain shrouded in obscurity.

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