

**Settlement patterns from the Late Neolithic to  
the Late Bronze Age:**

**The central Welsh border region in context**

PhD for the University of Birmingham

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## **Abstract**

The thesis explores themes of settlement location, settlement form and settlement mobility from the Late Neolithic to the Late Bronze Age in north-east Powys and Shropshire. The study utilises existing finds and monument data, and incorporates new data from targeted field survey and excavation. It incorporates comparative evidence from other regions of Britain and detailed comparative data from studies in neighbouring regions.

The study examines the evidence for settlement sites, the distribution of lithics in the landscape and the potential relationship between round barrows and settlement. The relationship between metalwork and settlement is examined as is the evidence for the presence of land division.

A potential greater frequency of activity in the vicinity of lowland ring ditches is suggested through lithic distributions within a transitory pattern of occupation. This is supported with new excavation evidence for ephemeral settlement activity. At a broader level a greater intensity of activity is apparent in lowland gravel terraces than in neighbouring wetland areas of Shropshire and that the study area is part of a wider region characterised by low lithic densities in contrast to neighbouring regions to the south.

Subtle spatial separations may have existed between settlement activity and monuments and the siting of monuments may have reflected existing axes of movement through the landscape. The distribution of upland monuments suggests that activities may have been relatively focussed and localised, whilst close conceptual links may have been maintained with lowland and distant landscapes.

The distribution of metalwork emphasises rivers, floodplains and wetland contexts which may have been at the margins of settlement space. At a broader level the presence of metalwork in lowland landscapes serves to complement limited evidence for Middle Bronze Age occupation and places Late Bronze Age hilltop enclosures into a wider context.

Targeted excavation has provided new dating evidence from pit alignment features in the study area which may indicate localised areas of land division closely post-dated ring ditch monuments in the Early Bronze Age. This may have implications for the interpretation of similar land divisions in other regions.

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# Chapter 1: Introduction, Aims and Methods

## Introduction

Settlement patterns in the Late Neolithic and Bronze Age are poorly understood in the central Welsh border region. There is little evidence for settlement enclosures pre-dating the later Iron Age, landscape division is ambiguously dated, flintwork is sparse across much of the region and other artefacts in the landscape consist mostly of chance finds of metal objects, the relationship of which to settlement activities is unclear. Existing interpretations of modes of settlement during this period are largely based on data from southern England, where the greater quantities of artefacts in the landscape and far more frequent recognition of settlement sites has provided a firm basis for the interpretation of changing modes of settlement from the Neolithic to the Late Bronze Age. It is, nevertheless, necessary to broaden the archaeological narrative by examining in detail other regions of Britain.

This study focuses attention upon a region of north-east Powys and Shropshire (Fig. 1). This is an area which has a large number of funerary and ceremonial monuments, frequent Middle and Late Bronze Age metalwork finds and evidence for settlement and enclosure upon hilltops in the Late Bronze Age. A framework exists within this study area, therefore, for broad-scale patterns of settlement to be defined, over an extensive period of time from the late third to the early first millennia BC.

In other regions, this period of study has been suggested to encompass dramatic change in the form and intensity of settlement, whereby transitory short lived occupation episodes give way to more permanently settled locales and extensively organised agricultural landscapes. Comparatively little attention has, however, been given to understanding forms and modes of settlement within the study area during this time frame. A number of funerary and ceremonial monuments have been excavated which have provided significant insights into their chronological development and varied forms (e.g. Warrilow *et al.* 1986; Gibson 1994). Evidence for settlement structures has also been recorded (Britnell 1982; Britnell *et al.* 1997). There is, however, limited understanding of the contexts of these sites and monuments within wider patterns of occupation and chronological developments in patterns of settlement.

The purpose of this study is to define more closely the relationship between known sites and monuments and surrounding landscapes, in order to produce a broader narrative of

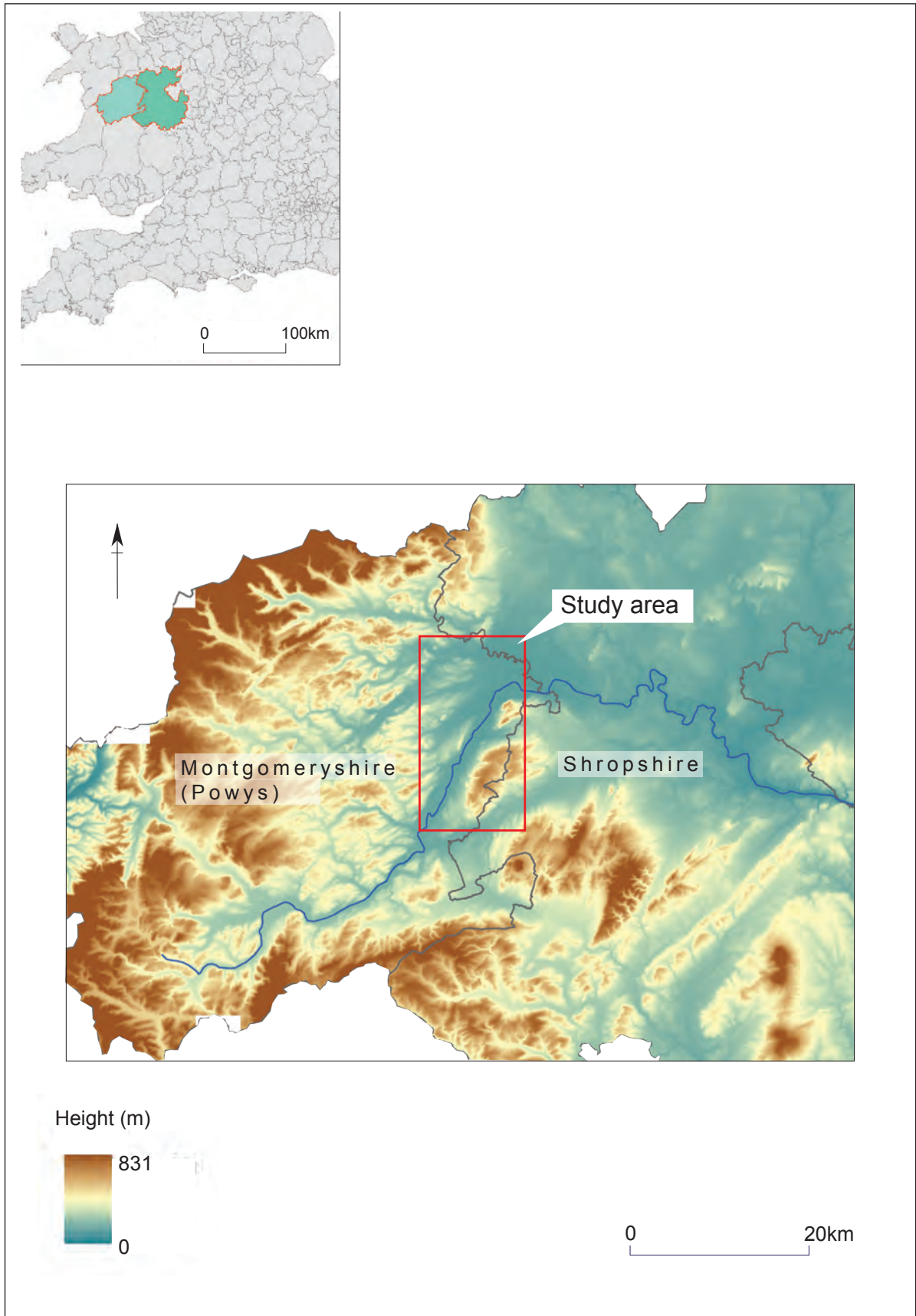


Fig.1 The study area location in relation to Montgomeryshire, Shropshire and physical terrain

settlement activity. This has been achieved by an examination of both existing data from published sources and Historic Environment Records and the collection of new data through targeted field survey and excavation. Fieldwork was designed to address specific questions about settlement location and the chronology of settlement development in the landscape. The topographic context of artefacts has been examined closely, in order to develop a clearer understanding of the changing location of activities over time. Detailed comparative analyses have been made with field surveys in the wider region and with the evidence for settlement in Britain. This has enabled a distinctive regional picture of settlement to be achieved.

## **Research Agenda in Late Neolithic and Bronze Age Settlement Studies**

The Late Neolithic and Early Bronze Age (c. 2500-1500BC) is characterised by a lack of clearly definable settlement sites across much of Britain and Ireland (Brück 1999a; Doody 2000; Thomas 1999, 8-10). This is in contrast to the large numbers of funerary and ceremonial monuments of the period which are readily identifiable in the landscape and which have formed the principal focus for archaeological investigation (e.g. Woodward 2000). The relationship between these monuments and patterns of occupation in the broader landscape is, therefore, largely unknown.

The lack of settlement sites from this period can be explained in a number of ways, such as the poor preservation of archaeological features in the landscape or the ephemeral nature of settlement structures. Evidence for settlements may have been destroyed by ploughing or modern development, particularly in lowland locations, or may have been masked by subsequent deposits of alluvium or colluvium (e.g. Allen 2005). Arguments of preservation as a factor in the identification of Neolithic and Early Bronze Age domestic structures have, however, been rejected, with the consistently ephemeral nature of settlement evidence and its general scarcity being emphasised (Brück 1999a, 53-4; Thomas 1999, 9-10). A lack of preservation also does not explain the more frequent identification of settlement structures from later periods in the archaeological record (Brück 1999a, 53; Thomas 1999, 9).

It is notable that settlement evidence for the Late Neolithic and Early Bronze Age period is not generally associated with enclosures or other substantial features that may be readily identified from the air or by geophysical survey. The identification of enclosed settlement from later periods may be more readily recognisable, creating a potential bias in the archaeological record. This does not, however, explain the general lack of clearly definable Late Neolithic and Early Bronze Age settlement locales, which is particularly notable in large-scale developer funded archaeology projects, where any evidence for Neolithic or Bronze Age settlement activity is often ephemeral in nature (e.g. Powell *et al.* 2008). A general lack of settlement

evidence for this period does appear, therefore, to confirm that settlement sites and structures were ephemeral and short-lived. Brück has suggested that the whole concept of domestic space is a construct of modern western societies and that permanently occupied settlement sites may not have existed in the Early Bronze Age (Brück 1999a, 60-61).

There are, nevertheless, examples where settlement sites and structures have been identified in locations of favourable preservation. A number of examples within coastal contexts have identified Late Neolithic and Early Bronze Age domestic structures beneath sands in regions as far apart as south Wales and the Western Isles of Scotland (e.g. Benson *et al.* 1990; Simpson *et al.* 2006) and beneath both sands and later phases of settlement in Cornwall and the Isles of Scilly, for example (Nowakowski *et al.* 2007, 25-6; Robinson 2007, 76-7). It is questionable, however, as to the extent to which such sites are representative of forms or patterns of settlement inland and in other regions of Britain. Elsewhere, in northern Cheshire, there are examples of Late Neolithic structures preserved beneath later archaeological deposits (Nevell 1988) and examples where midden deposits and associated structures have been favourably preserved beneath deeper soils (Garner 2007). Beaker settlement activity has been recorded beneath colluvial masking deposits on the southern English chalkland (Allen 2005). Settlement locales may, therefore, be present in the landscape, yet remain difficult to identify and appear to be subject to exceptional circumstances of preservation.

There are several examples where possible settlement structures have been identified beneath funerary monuments (e.g. Gibson 1982, 35-38; Britnell 1982; Lynch 1993, 157-60). This may suggest that such 'houses' have been fortuitously preserved, yet there is often a degree of doubt expressed about the function of these structures, often by the excavators themselves (e.g. Lynch 1993, 158-60). The relationship between any houses or settlement activity and subsequent funerary monuments may not necessarily have been fortuitous, and Thomas has questioned the domestic interpretation of pre-barrow structures, preferring to see them within sequences of funerary and ceremonial activity (Thomas 1996). The relationship between settlement location and funerary activity is, therefore, ambiguous but need not necessarily be mutually exclusive. Settlement and occupation at monument sites may have been part of a process in the formation of places and the establishment of monuments. This may be exemplified by the recent discovery of Neolithic houses pre-dating the henge monument at Durrington Walls, Wiltshire, in association with exceptional quantities of artefactual material and discarded animal bone (Parker Pearson *et al.* 2007). It is difficult to envisage such activity as being typical of year-round settlement patterns in the wider landscape, yet any such gathering points must, nevertheless, have formed a component of the settlement pattern perhaps within annual cycles of activity. The identification of house structures beneath monuments is by no means a routine occurrence, however, suggesting that the principal focus of settlement lay



elsewhere. Even where house structures are accepted beneath later monuments, this does not answer the question of settlement location post-dating monument construction and that which is contemporary with the large numbers of funerary and ceremonial monuments of the Late Neolithic and Early Bronze Age.

The lack of easily identifiable settlement locales for the Late Neolithic and Early Bronze Age has led to settlement being repeatedly discussed in terms of mobile patterns of occupation within systems of seasonal transhumance, (Fleming 1971; Pollard 1999, 80-82; Yates 2007, 83). Mobile systems of occupation in the landscape have prevailed in the archaeological literature since the 1990s. Thomas' rejection of a sedentary earlier Neolithic (Thomas 1991; 1999) led to a re-evaluation of Neolithic settlement. Whittle proposed a number of potential models for mobile systems of settlement in the Neolithic, each with varying degrees of attachment to place (Whittle 1997). Brück's discussion of Early Bronze Age residential mobility, incorporating episodic activities at monuments and the exploitation of wild resources, can be seen within this interpretative context (Brück 1999a). Such studies have highlighted that there must have been varying scales of movement within settlement patterns potentially involving different components of a community at different times of the year (Whittle 1997; Thomas 1999, 18; Brück 1999a; Pollard 1999, 81). Patterns of mobility may have interacted with monuments across the landscape as part of a variety of activities including economic resource exploitation, exchange, or funerary and ceremonial events (Brück 1999a, Whittle 1997). It is the nature and location of settlement activities which may have formed part of such mobile patterns which remains unclear in many regions of Britain.

In East Anglia, Late Neolithic and Early Bronze Age settlement evidence is often formed by ephemeral clusters of stakeholes, pits or insubstantial gullies, associated with hearths and diffuse scatters of artefacts (e.g. Bamford 1982; Evans and Knight 1997, 31; Pollard 1998). Elsewhere, evidence beneath monuments is also often comprised of arcs of stakeholes, and a variety of pits and postholes which often do not form coherent plans (e.g. Gibson 1999, 33-47; Thomas 2005, 73-4). Such activity may reflect suggested transient modes of settlement (Thomas 1991; Whittle 1997; Brück 1999a). The presence of dating evidence from more than one phase of activity (Gibson 1999, 33-47), may suggest repeated occupation at specific locations. Evidence for structured deposition within pits at certain sites has also been suggested to reflect activities at specifically recognised places (Pollard 1998, 451). Such evidence suggests that mobile patterns of residency may have been structured by a relationship with certain places in the landscape which was replicated over potentially long time scales. Defining such places is necessary if patterns of settlement are to be more fully understood across different regions of Britain.

One way of examining the location of settlement in the landscape may be to define the

distribution of contemporary lithics in the landscape. In certain regions of Britain, particularly southern England, the profusion of lithic tools and debitage can, however, create problems in defining specific activity foci. Thomas suggested that the distribution of lithics may reflect a variety of activities in the landscape which may not necessarily be equated with permanent settlement sites as such (Thomas 1999, 17-23) and Richards has highlighted the difficulty in isolating spatially and chronologically definable settlement areas within widespread flint scatters (Richards 1990, 18-19). It may be possible, nevertheless, to use lithics within fieldwalking data to examine the relative densities of activity in the landscape and evaluate relationships with certain topographic zones or monuments (e.g. Gaffney and Tingle 1989). In regions where lithics are less prevalent in the landscape, it can be argued that where these can be identified they may usefully reflect activity foci. This has been achieved at a regional scale in recent studies of the west midlands for example (Barfield 2007) and in regions of the north west of England (Cowell 2000; Evans 2008). It may also be possible to examine lithic distributions at smaller scales, in order to evaluate the relative frequency of activities in the landscape and the potential relationship between occupation foci and monuments.

In contrast with the Late Neolithic and Early Bronze Age, far clearer evidence for settlement sites exists for the Middle Bronze Age (c. 1500-1100BC), principally in the south of England. This period marks a significant change in patterns of settlement and a shift away from landscapes dominated by funerary and ceremonial monuments to one structured by fixed settlement sites, more clearly defined agricultural systems and tenures over land (Barrett *et al.* 1991, 143; Barrett 1994, 147-9; Bradley 2007, 181). These developments have been seen within the context of agricultural intensification, marking the principal distinction between an earlier Bronze Age and a later Bronze Age (Barrett and Bradley 1980; Yates 2001). The catalyst for such significant change in the occupation of the southern English landscape is open to debate, although discussion has focussed upon themes of fragmentation within existing social systems (Barrett 1994, 147; Brück 2000), and the formation of group identities expressed through households and tenures over land (Bradley 1980, 65; Barrett 1994, 147-9).

In southern England settlement sites formed by clusters of roundhouses or rectangular enclosures have been recorded on the downland chalk landscapes of Sussex and Wessex (e.g. Burstow and Holleyman 1957; Drewett 1982; Barrett *et al.* 1991). These sites are often recorded in association with, or in the vicinity of, systems of arable fields marked by cultivation lynchets (e.g. Gingell 1992; McOmish *et al.* 2002). Field systems have in fact been identified across widely separated regions of southern England south of a line from the Wash in the east to the Bristol Channel in the south-west (Yates 2007, 85). These have been recorded in a variety of contrasting landscapes from the coaxial boundaries on upland Dartmoor in south-west England (Fleming 1988; Johnston 2005) to systems of enclosures and droveways at the

fen edge in East Anglia (Pryor 2001, 409-10). It has been highlighted that river systems such as the upper Thames valley (Yates 2007, 37) or the principal river systems of the Fens (*ibid.*, 84), appear to have acted as a focus for the development of agriculture and field systems from the Middle Bronze Age. Many of these systems appear to be related to livestock management and a pastoral economy (Pryor 1998; 2001; Yates 2001, 65-6).

Although extensive field systems have been recorded elsewhere in the country, beyond southern England and into regions such as Yorkshire (Field 2008, 207) or the Peak District (Barnatt 2000, 17-18 and 25) it is far from clear that these necessarily date to the Bronze Age (Field 2008, 207-8; Bradley 2007, 195-6). This does not necessarily preclude the presence of settlement or fixed settlement locales, yet it is possible that less clearly defined tenures over land characterised other regions of Britain (*cf.* Yates 2007, 85). Field systems have been increasingly recorded in lowland valley contexts, in regions such as the south-west of England, through developer funded excavation programmes (*ibid.* 65-6). These are, however, in regions where upland field systems are well-known and there appears to be a genuine lack of land division in central and northern regions of Britain for this period, suggesting that patterns of settlement may also have differed.

The identification of settlement sites elsewhere in Britain for the Middle Bronze Age does, however, suggest that changes in residency patterns and shifts from what may have been predominantly mobile systems were occurring beyond the south of England. Nucleated settlement sites have been recorded in regions such as Northern Ireland for example (Conway *et al.* 2005) and individual settlement structures have also been identified in south-west Scotland, possibly as part of more extensive settlement and agriculture (Dunbar 2007). There also appears to be greater numbers of Middle Bronze Age houses in other regions when compared to structures of the Late Neolithic and Early Bronze Age, where detailed studies of the data have taken place in Ireland and south-west England (e.g. Doody 2000, 243; Robinson 2007, 207-8). Where excavation has demonstrated a succession of activities there appears to be more substantial evidence for settlement from the Middle Bronze Age (e.g. Nowakowski *et al.* 2007, 24-31). It appears, therefore, that there was a shift in the nature of settlement between the Early Bronze Age and Middle Bronze Age across widely separated regions of Britain and Ireland, with more 'permanent' settlement sites becoming established from the mid-second millennium BC in a variety of locations. The presence of nucleated groups of contemporary structures appear, however, to be largely confined to the south of England.

Individual regions may well have developed in different ways according to a variety of potential environmental and social factors. Narratives based on established settlement patterns recorded in the southern English chalk downlands for instance, may not necessarily apply to other regions of Britain (*cf.* Harding 2000). It is necessary, therefore, to characterise the evidence for

settlement in areas such as the upper Severn Valley, where field systems of this period are not apparent (Yates 2007, 101-6), in order to assess the degree of change in patterns of settlement between the Early and Middle Bronze Age.

Metalwork has been recorded on certain Middle Bronze Age settlement sites, associated with boundary ditches and house structures, with liminal contexts highlighted (Brück 1999b, 152-5). At Flag Fen the well known deposits of Mid-Late Bronze Age metalwork are recorded at the edge of a pre-existing field system and settled landscape (Pryor 1992; 2001). The extent to which metalwork reflects patterns of occupation in other regions, where settlement evidence is less prevalent, must also be considered.

The Late Bronze Age (c. 1100-800BC) is marked by a diversity of settlement types (Brück 2007), including broad areas of relatively intensive lowland occupation, midden sites and hilltops together with extensive metalwork deposition and the continued development of field boundaries and other forms of land division.

Extensive areas of settlement have been recorded in the Thames Valley at Reading Business Park (Moore and Jennings 1992; Brossler 2001), and at Shorncote Quarry in Gloucestershire for example where evidence for metalwork production has also been recorded (Hearne and Heaton 1994). Elsewhere, nodes of activity are represented by the creation of enormous middens covering large areas, at sites such as East Chisenbury (McOmish 1996) and Potterne in Wiltshire (Lawson 2000) and a recently discovered example in the west midlands (Waddington and Sharples 2011). These places reflect significant gathering points in the landscape, associated with the repeated consumption and deposition of food resources and domestic materials.

Settlement on the site of later hillforts has also been suggested to emerge in this period (Coombs 1971; Coombs and Thompson 1980; Savory 1971). Hilltops sites have been associated with metalwork and evidence for metalworking and in some instances with early phases of enclosure (Ellis 1993; Musson 1991; Musson *et al.* 1992; Drewett and Hamilton 1999, 20-21). Evidence for settlement structures on these sites in this period is, however, often ephemeral and ambiguously dated (e.g. Barrett *et al.* 2000, 154-6) and the nature of settlement, its extent and duration, is uncertain. The relationship between activities on hilltops and surrounding landscape is also ambiguous. In Sussex the role of early hilltop enclosures as settlement sites has been questioned, which have instead been interpreted as places designed principally for 'looking out' across the landscape (Hamilton and Manley 1997). Yates has highlighted that ring-work settlements in the Thames Valley overlooked field systems and it may be possible that any settlement on hilltop sites, had a similar relationship with surrounding settled landscapes in other regions (Yates 2001, 68-73).

The ambiguous nature of settlement activity on hilltops is underlined by the presence of hoards of metalwork at a number of sites. Significant metalwork depositions appear to indicate that they were a focus for the potential votive deposition or conspicuous consumption of objects (*cf.* Barrett and Needham 1988; Bradley 1990). At Dinorben, Denbighshire, a hoard of horse harness was recorded outside the hillfort (Savory 1980, 119) and at South Cadbury hillfort, Somerset, a Late Bronze Age shield was recorded in a ditch at the foot of the hill (Coles *et al.* 1999; Tabor 2008, 84-92). It is significant that the shield at South Cadbury is the only example of its kind not recorded in a wetland context (*ibid.*; Coles *et al.* 1999). It is possible, therefore, that prominent hills may have been the foci for metalwork deposition at natural places in the landscape, as with wetlands or rivers (*cf.* Bradley 2000; Drewett and Hamilton 1999; Bradley 1990; 1998). It is possible therefore that these significant places in the landscape were defined by significant artefact depositions alongside more sustained activities associated with occupation.

Yates has highlighted the association between settlement and field systems in the Thames Valley with corresponding areas of river metal deposition (Yates 2001, 67-8 and 74-8). There are also examples of river-side settlement and midden sites on the Thames such as Runnymede Bridge (Needham and Longley 1980; Needham 2000) and Wallingford (Cromarty *et al.* 2006) which are associated with significant assemblages of metalwork. Metalwork deposits have also been recorded within middens together with probable domestically derived material such as animal bone and pottery in Wiltshire (e.g. Lawson 2000). Late Bronze Age metalwork together with a variety of well-preserved domestic-related material has also been recently recorded deposited within a wetland context at Must Farm, Whittlesey, Cambridgeshire (Knight 2009). There appears, therefore, to be a close relationship between settlement and metalwork, yet it is clear that much of the metalwork of the period was deposited in non-settlement contexts such as rivers or wetlands. A clarification of the relationship between settlement sites and places of metalwork deposition in the landscape, particularly for regions beyond the well-studied Thames Valley (Yates 2001; 2007), is clearly necessary.

Beyond settlement sites, landscapes continued to be extensively divided in this period in many regions of southern England (Yates 2007). The development of field systems associated with livestock management has been recorded in the Thames Valley (Yates 2001) and in Wessex substantial and extensive linear ditch systems may have changed tenures over land, marking a shift to large scale pastoral farming practices (Bradley *et al.* 1994; McOmish *et al.* 2002; Cunliffe 2004). It is clear that dividing landscapes at large scales was significant, suggesting that tenorial control was a significant factor. Such landscape division is not, however, apparent beyond southern England (Yates 2007). Pit-alignment boundaries may instead have been created across extensive areas of landscape in this period (Bradley and Yates 2007, 98-99), particularly

in river valley contexts, as in the English west midlands for example (Coates 2002; Chapman *et al.* 2010; Wigley 2007a) or the Trent Valley (Knight and Howard 2004). The function of such intermittent boundary features is, however, unclear and their date is often ambiguous (Pollard 1996; Waddington 1997). The extent to which landscapes beyond southern England were divided therefore, remains uncertain, and the possibility of significant regional distinctions in the development of settlement and agriculture in the Late Bronze Age clearly exists.

## **Late Neolithic and Bronze Age Settlement Studies in the Welsh Marches**

A number of broad-scale studies have approached themes of settlement in the region of the central Welsh borders for the Late Neolithic and Early Bronze Age. Previous studies have examined the evidence for settlement at a large scale, highlighting the scarcity of evidence for settlement sites (Halsted 2005). Barfield examined variations in lithic distributions in the West Midlands, including Shropshire and highlighted potential regional diversity in the intensity of settlement (Barfield 2007). The distribution of monuments, metalwork and burnt mounds have also been discussed at a smaller scale within the context of potential settlement location for the Early to Middle Bronze Age in the central and northern Welsh Marches and Shropshire (Halsted 2005; Halsted 2007). These studies placed an emphasis on potentially suitable geological contexts for settlement on the basis of precedents for the few recorded settlement sites in the region.

Chitty (1963) explored the concept that artefacts and monuments may mark route-ways through the landscape in south-west Shropshire, which in turn highlighted concepts of mobility at a regional scale. It is doubtful, however, that any such route-way can be taken literally, in view of the incorporation of post-medieval trackways and an artefactual and monumental dataset which must only be partial.

Gibson (2002) has investigated the landscape context of all known monuments in the upper Severn Valley including spatial distributions in relation to natural landforms such as ridge-ways and river systems, and has identified varying densities of activity at a broad scale. Gibson's thorough examination of monument distribution does, however, highlight the difficulty in creating a definitive synthesis of monument location that can easily be equated with settlement patterns at a relatively large scale. This analysis has been influenced by existing interpretations regarding route-ways established by Chitty (1963) and barrows as territorial markers within systems of transhumance (Fleming 1971). It is less clear, however, how monuments may have interacted with settlement activity at smaller spatial and temporal scales.



A number of previously excavated sites in the study area have produced evidence for settlement, either in the form of artefact scatters or ephemeral structures and features preserved beneath later monuments (Fig. 2). Excavations at Trelystan have revealed two potential Late Neolithic settlement structures beneath two Early Bronze Age barrows (Britnell 1982), together with a significant assemblage of flintwork (Healey 1982). Ephemeral features and small groups of artefacts at other monuments in the study area, and within the wider region generally, may suggest a relationship between settlement location and later funerary activity. There is, however, very little data regarding the relationship between monuments and contemporary settlement. If monuments are to be used as a means of assessing settlement distributions at anything other than very large landscape scales, it is necessary to explore further this relationship.

There is, in fact, very little evidence for contemporary activity beyond monuments in this period, besides occasional isolated Early Bronze Age metalwork finds. Where extensive systematic surveys have taken place, these have indicated a low level of flintwork, some of which may potentially date to the Late Neolithic or Early Bronze Age, across neighbouring landscapes of Shropshire (Barfield 1998). The study area in north-east Powys has not, however, been subject to extensive systematic or targeted survey. What surveys have taken place are either small-scale or have not yet been published. The predominance of pasture land on the Welsh border has not generally given rise to traditions of fieldwalking as in other regions. Apart from general spatial patterns formed through the study of monuments at a broad landscape scale, therefore, very little is known about Late Neolithic and Early Bronze Age settlement patterns and the relationship between monuments and settlement generally.

More extensive evidence for Middle Bronze Age settlement has been recorded in the region, yet this is still relatively scarce when compared with other regions of Britain. A significant Middle Bronze Age round-house structure has been excavated in the upper Severn Valley (Britnell *et al.* 1997), which gives some indication as to the location of settlement in the region in this period. Burnt mounds have been dated to the Middle Bronze Age in Shropshire and the West Midlands (Hannaford 1999; Hodder 1990) and their distribution has been discussed in terms of their potential relationship with settlement alongside distributions of Middle Bronze Age metalwork in Shropshire (Ehrenberg 1991; Halsted 2007).

In other respects, however, and especially in comparison with the evidence from southern England, there is very little settlement data for the Middle Bronze Age within the study area. There is no evidence, for example, of enclosed or nucleated settlement sites or field systems of the kind that may be recognisable from the air or through other non-intrusive methods. There is also very little understanding of how frequently Middle Bronze Age communities engaged with existing Early Bronze Age monuments or how settlement patterns were structured in the

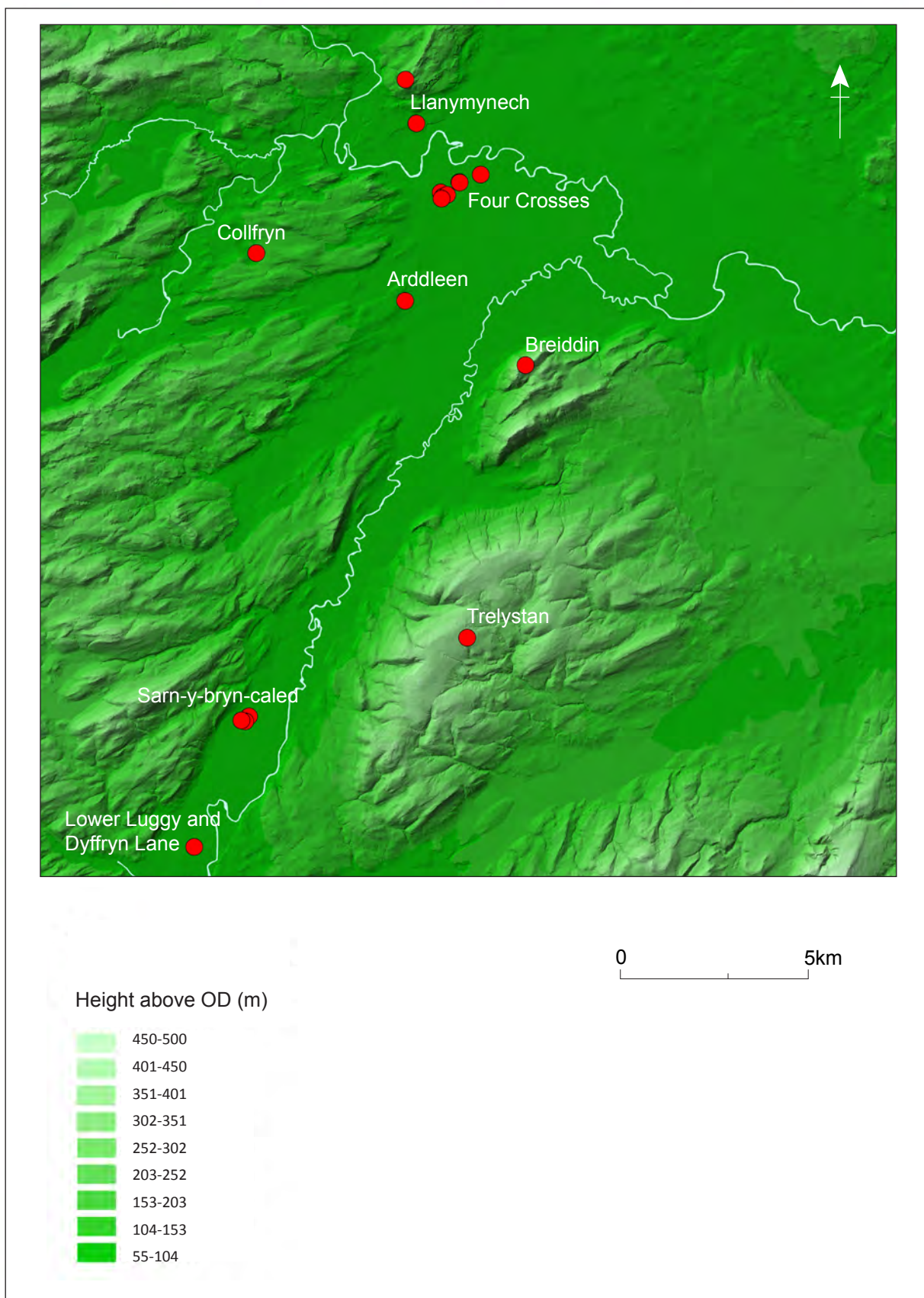


Fig.2 Previously excavated sites within the study area



landscape.

For the Late Bronze Age extensive excavations at the Breiddin Hillfort within the study area have produced evidence for settlement in the form of pottery and metalwork, hearths and ephemeral structures, enclosed within a rampart (Musson 1991, 25-8). How this site interacted with settlement in surrounding landscapes is, however, unknown. The recent re-examination of environmental data from the hill has suggested that it may not have been occupied in the early first millennium BC (Buckland *et al.* 2001), which also casts doubt on the intensity of Late Bronze Age occupation in the late second millennium BC. Whatever the intensity of occupation on the hill, surrounding landscapes are likely to have been occupied in this period, as in other river valleys elsewhere in southern England, although no such Late Bronze Age settlement sites have yet been recorded within the study area.

Much of the discussion for the Late Bronze Age in this region has been focussed upon metalwork. Chitty reported frequently upon the provenance of metalwork finds in the early twentieth century for areas of Shropshire and Powys (e.g. Chitty 1928a; Chitty 1943). Other studies focussed upon the composition of hoards and typological affinities of artefacts within them (e.g. Gareth-Davis 1967; Savory 1966). Burgess placed the typological affinities of barbed spearheads from the region into a broad-scale Broadward Complex, which also recognised common contexts of deposition (Burgess 1972). Recent hoard discoveries have also emphasised commonalities within regional practices of deposition (Gwilt *et al.* 2005). There has, however, been little discussion of the potential context of metalwork and hoards within contemporary settled landscapes. The context of metalwork finds over a broad geographic area has been examined in relation to landscape context and geology, with areas such as rivers and wetlands being highlighted as places of frequent deposition (Halsted 2005). Nevertheless, the potential distribution of contemporary settlement in the landscape remains unclear and a closer definition of the relationship between metalwork and settlement is necessary.

There is no evidence for Mid-Late Bronze Age field systems or linear boundaries in lowland parts of the central Welsh border region. Extensive areas of cropmarks have, however, been recorded which include linear boundaries of uncertain date (Collens 1988, 149-50). Pit alignments in the study area have been discussed within an Early Iron Age context (Wigley 2007a), although it is important to note that no artefactual or absolute dating evidence has been recovered from pit alignments in the upper Severn valley, prior to the present study. Research excavations in the 1980s at Four Crosses were unable to retrieve any datable material (Owen and Britnell 1989). There is, therefore, the potential that certain linear features in the landscape may have origins in the Mid-Late Bronze Age in common with regions further south.

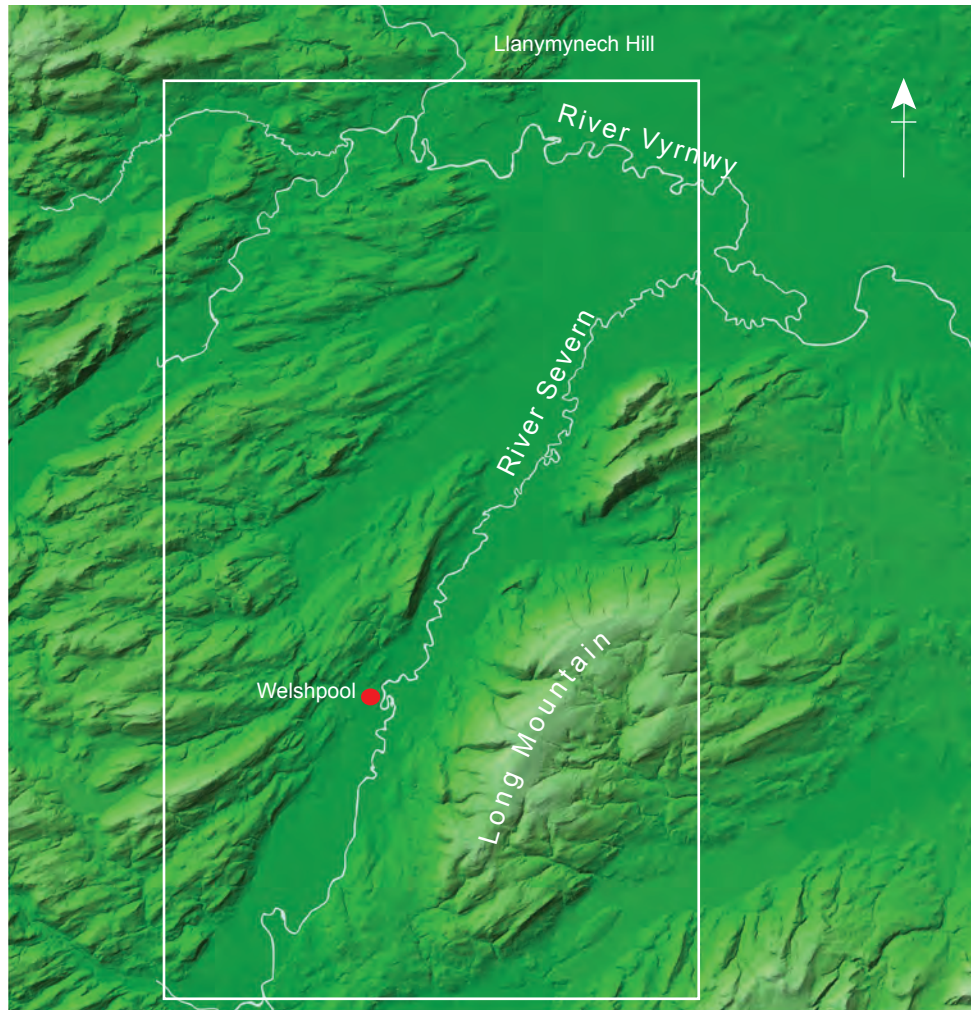
### **The physical environment and land use in the study area**

The study area is focussed upon the junction between the uplands of Wales and the broader midland plain to the east (Fig. 3). In north-east Powys, the upland massif of Wales gives way to hill-slopes forming the western side of the Severn valley in the vicinity of Welshpool which rise from c.90m above OD to over 300m. In the southern part of the study area prominent hill formations include the Long Mountain, with siltstones and thin acid soils (Britnell 1982, 133) extending up to 370m above OD and the Dolerite outcrop of the Breiddin hills rising to c.360m above OD (Fig. 4). The northern extent of the study area is marked by Llanymynech Hill, a limestone outcrop overlooking the Severn floodplain and Breiddin hills to the south. More broadly, upland formations extend into south-west Shropshire with the Clee Hills and Long Mynd for example, reaching heights of over 500m and 450m above OD respectively. The uplands receive higher rainfall and are characterised by podsolised soils and peats (RCAHMW 1986, 6; Rowley 1989, 12-13; Davies *et al.* 1997, 227) and generally equate with poor quality agricultural land (Jenkins 1991, 24), much of which is permanent pasture.

The River Severn emerges from a relatively constricted valley, into a broad floodplain extending from north-east Powys eastwards into Shropshire. In the northern part of the study area the River Tanat forms a confluence with the River Vyrnwy which flows eastward from the uplands and through the broad lowland plain where it forms a confluence with the River Severn to the east (Fig. 5).

The lowlands of the study area are characterised by a patchwork of glacial tills, glacio-lacustrine clays and silts and glacio-fluvial gravels (Fig. 6). Glacio-fluvial sands and gravels and river terrace gravel deposits occur at the margins of extensive floodplains which are associated with large expanses of alluvial silts, particularly in association with the River Severn. Areas of gravels are conducive to modern arable cultivation and often provide extensive crop-mark evidence indicating settlement and agriculture in the past. Extensive wetlands are also present in lowland regions to the east in areas of northern Shropshire (Leah *et al.* 1998).

The soils in the lowland study area demonstrate that there is great variety in localised conditions, making generalisations about the potential for agricultural production difficult. Soils have been mapped across the lowlands between the Rivers Severn and Vyrnwy and the hill-slopes to the west (Fig. 7; Thompson 1982). Modern agricultural land-use varies considerably across this area. The extensive Severn floodplain, up to 2.5km across, is characterised by “rush-infested meadow” where it is not drained (*ibid.*, 54). Small pockets of permanent wetlands also exist on the margins of the floodplain and are unsuited to any form of agriculture. Alluvial and seasonally flooded soils are most suited to grassland rather than crops, as are seasonally wet soils with limited agricultural capacity. Areas of brown earths across gravel ridges are, however,



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0 10km

Height above OD (m)

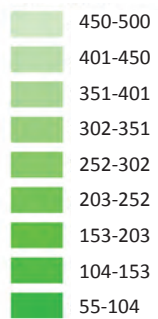


Fig.3 The study area and physical terrain

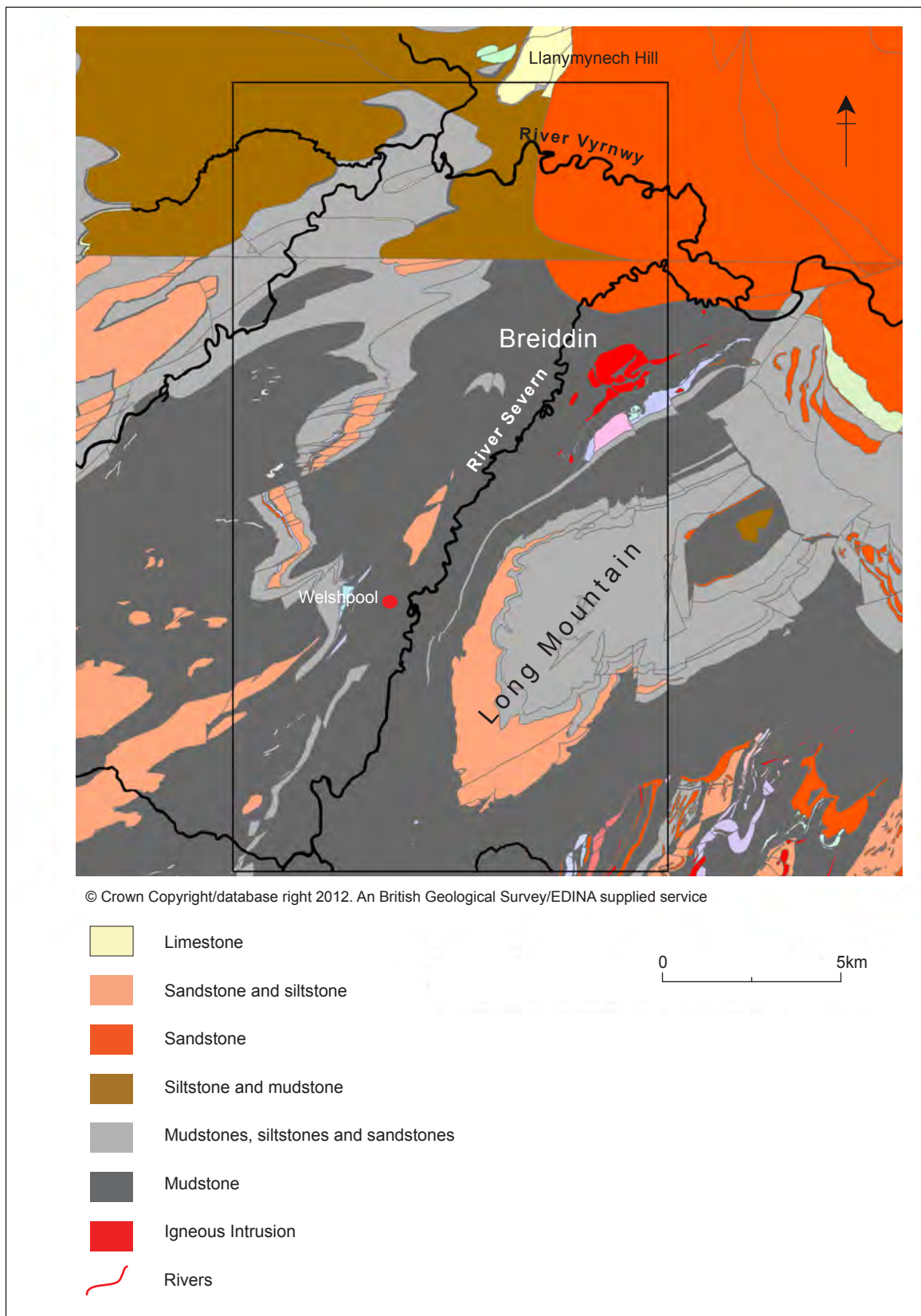
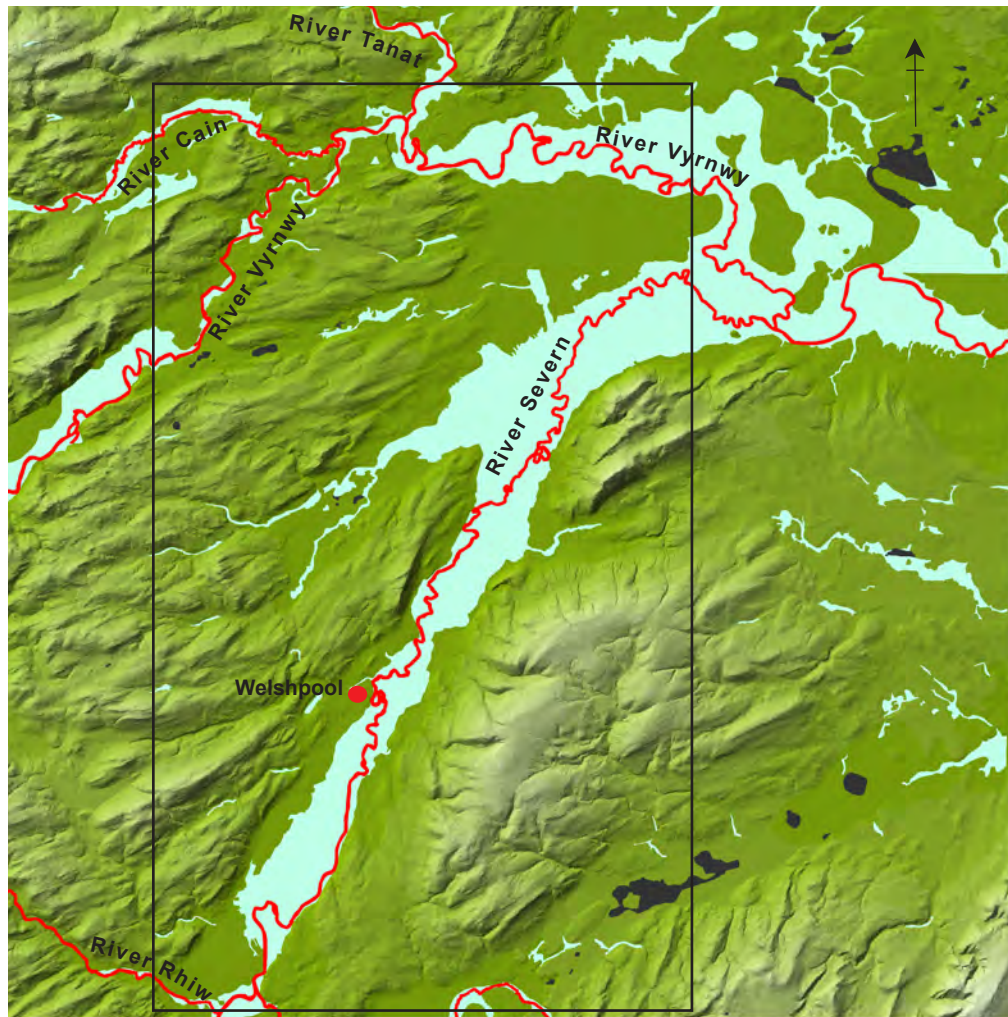


Fig. 4 Solid geology of the study area (Geological Map Data BGS © NERC 2012)





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- Rivers
- Alluvium
- Peat

Height above OD (m)

- 450-500
- 401-450
- 351-401
- 302-351
- 252-302
- 203-252
- 153-203
- 104-153
- 55-104

0 5km

Fig.5 Rivers, alluvial deposits and peat within the study area

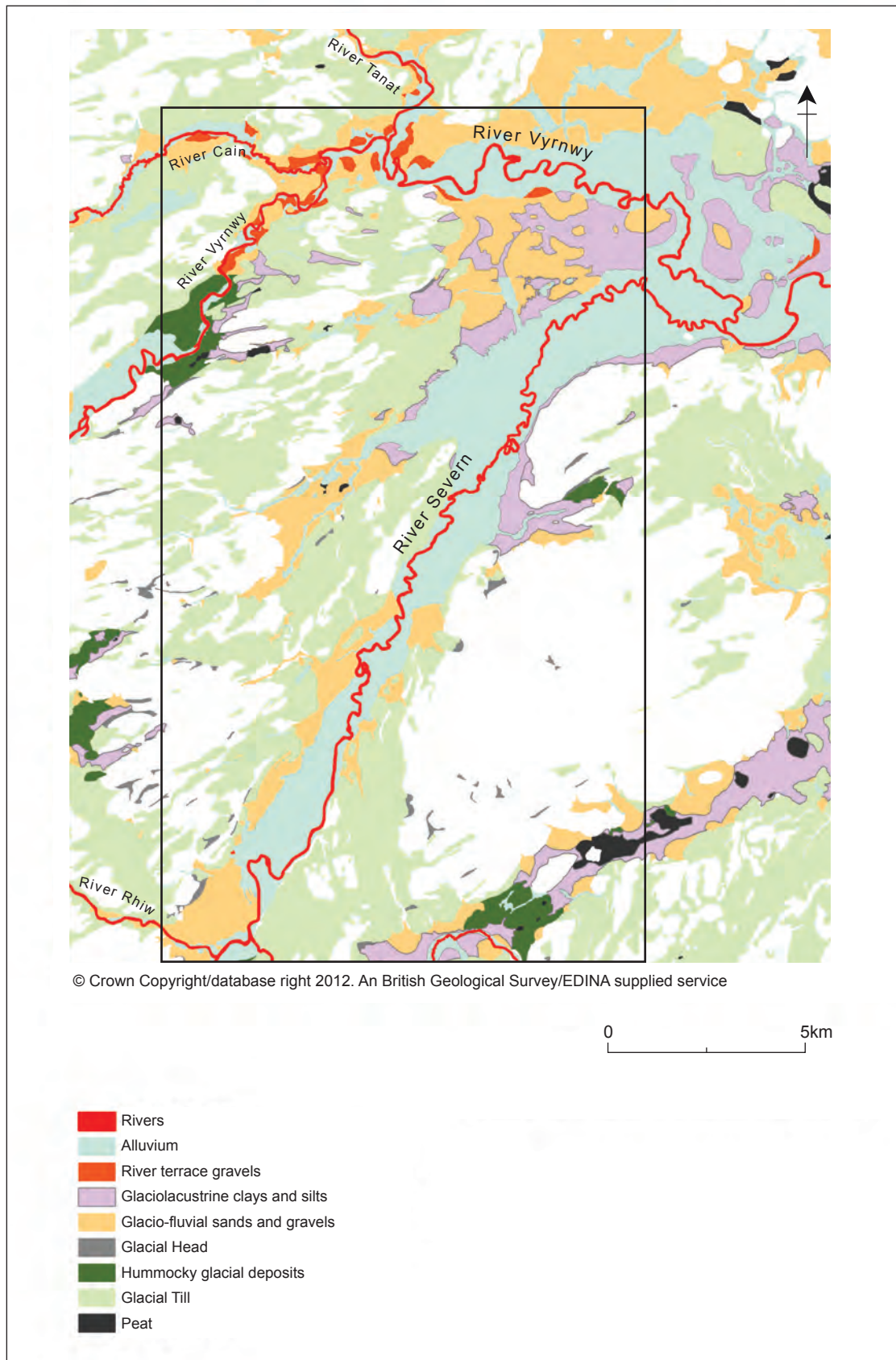


Fig.6 Superficial geology within the study area (Geological Map Data BGS © NERC 2012)



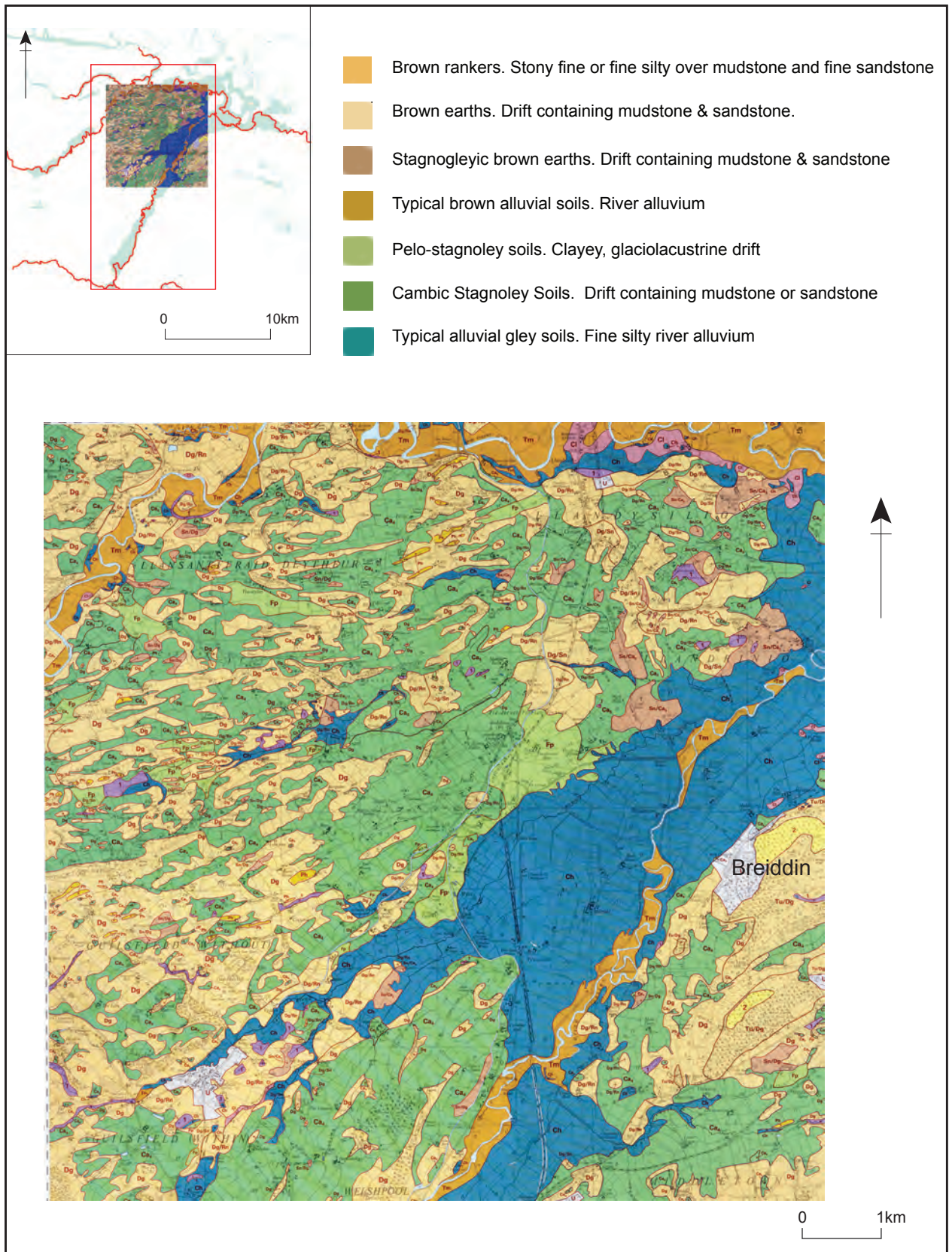


Fig.7 Soil types in the northern part of the study area between the Breiddin hills and the River Vyrnwy (after Thompson 1982, Soil Sheet SJ21, © Soil Survey of England and Wales)

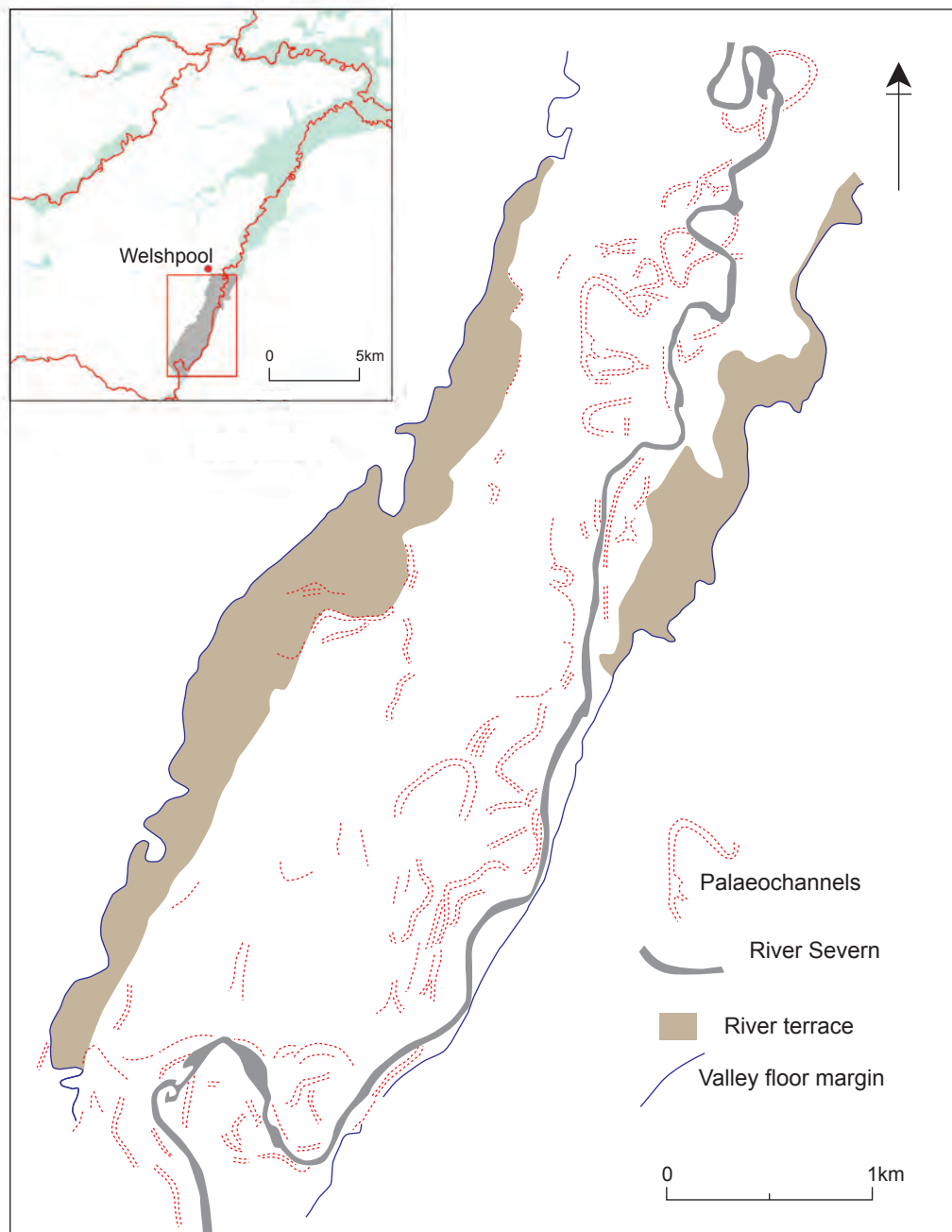


Fig.8 Palaeochannels at the River Severn, Welshpool (after Taylor and Lewin 1996)

relatively easily cultivated and are considered “the most adaptable land in the district for agriculture” (*ibid.*, 77). In contrast, higher ground and steeper hill-slopes around the Breiddin hills are characterised by woodland or permanent pasture of limited agricultural value (*ibid.*, 89, 101).

Detailed examination of the alluvial floodplain in the vicinity of the River Severn to the south of Welshpool has emphasised the complexity of deposits together with considerable variability in their age (Fig. 8; Taylor and Lewin 1996). Three distinct stratigraphic horizons have been suggested: the Welshpool Gravels of Late Devensian date overlain by the Leighton



Silts “deposited since the Bronze Age” succeeded by a third layer, the Trehelig Silts, deposited in the last 300 years (*ibid.*, 89). Significant depths of alluvium in the vicinity of the Severn essentially bury any archaeology and place ancient deposits beyond any reasonable sampling strategy (Fig. 5). It has also been shown that both young and old alluvial deposits can appear to be very similar (*ibid.*, 88) making archaeological differentiation difficult. Up to 4m of recent fine sediments have been demonstrated to have accumulated since the 17<sup>th</sup> century, within former channels close to the present course of the river (Fig. 8; *ibid.*, 77, 82). Towards the outer margins of the Severn floodplain, in contrast, palaeo-channels have been dated to the Late Bronze Age, suggesting the potential for the recognition of contemporary archaeology in similar locations (*ibid.*). Palaeo-channels dating to the Late Neolithic or Early Bronze Age have also been recorded at the Vyrnwy and Tanat confluence in the north of the study area (Taylor and Lewin 1997).

In general terms, past studies have suggested that the Early Bronze Age climate was characterised by short relatively hot summers, allowing occupation of higher altitudes, but with more severe winters (Taylor 1980, 123). During the Mid-Late Bronze Age a general climatic cooling is suggested to have led to more limited occupation of upland areas (*ibid.*, 125).

Evidence from individual sites can, however, provide a more specific picture of past land-use. Data from Powys and Shropshire suggest episodes of arable cultivation and tree clearance in lowland contexts in the Late Neolithic/ Early Bronze Age and Middle Bronze Age. Evidence for tree clearance in the Late Neolithic and Early Bronze Age has been recorded from pollen samples in lowland Shropshire (Leah *et al.* 1998, 53) and cultivation of cereals has been indicated by evidence from Late Neolithic and Early Bronze Age lowland ring-ditch sites (Warrilow *et al.* 1986, 60; Gibson 1994, 165) and one Middle Bronze Age settlement in the upper Severn Valley (Britnell *et al.* 1997). Pollen samples from the north Shropshire wetlands have also indicated cereal cultivation in the Middle Bronze Age (Leah *et al.* 1998, 67). Fluctuations of land use over time must also be considered, which evidence for the clearance and re-colonisation of woodland may indicate (Leah *et al.* 1998, 66-7).

Evidence for tree clearance in the uplands has also been recorded from beneath Early Bronze Age monuments (Walker 1993, 180; Gibson 1993, 34). The uplands in the Early Bronze Age may, however, have been characterised by a pastoral landscape (Keeley 1982). Pollen core samples from the uplands around Carneddau, in mid-Powys, have recorded a reduction in tree species in the Middle Bronze Age, which may indicate woodland clearance and pastoral agriculture (Walker 1993, 180-1). In the mid-first millennium BC the area of the Breiddin hillfort is considered to have been characterised by well-grazed grassland (Buckland *et al.* 2001, 68-70).

The environmental evidence suggests, therefore, a landscape where clearances and arable agriculture were taking place from the Late Neolithic and Early Bronze Age in lowland environments, potentially alongside tree clearances in the uplands which may have been associated with pastoral agriculture. The variety of the underlying geology and soils in the lowlands can be used to highlight certain areas with greater arable agricultural potential, although those areas which were seasonally flooded, for example, may indicate areas of high quality grassland which may have been equally important in terms of past land use. Gravel terraces at the edges of rivers may be characterised by better quality arable land, and may also be located in proximity to alluvial floodplains suited to grazing livestock. This suggests that lowland environments in river valleys may support a variety of environmental conditions conducive to agriculture and sustained settlement. The upland evidence suggests settlement through tree clearance and monument construction, but may have been more limited in terms of the variety of agricultural potential, having been consistently interpreted as supporting grassland. This may suggest that lowland river valley environments with a greater potential agricultural diversity may have been more suitable for sustained or repeated episodes of settlement.

Any attempt to identify prehistoric settlement locales may, as a result, focus upon lowland river valley contexts where good quality arable land and pasture may be prevalent. Such environmental conditions may have influenced the location of occupation across potentially long time periods. Settlement may have also focussed upon upland environments, although a more limited land-use potential and susceptibility to any periods of climatic deterioration, may suggest that settlement was comparatively short-lived. It must, however, be considered that social factors such as the significance of place as articulated through monument construction, communication routes or the negotiation and maintenance of territorial boundaries must also have influenced patterns of prehistoric settlement and may have transcended local environmental conditions. Similarly specific natural food resources or raw materials for artefact production may have existed in a variety of landscape contexts. It may not be possible, therefore, to solely equate patterns of settlement with better quality agricultural land, although this may have had an influence upon successive settlement patterns in prehistory.

It is clear that the physical environment of the study area will also influence methods chosen for the identification of settlement in the landscape. Where settlement locales cannot be identified through cropmarks or earthworks then sampling through either intrusive or non-intrusive methods is necessary. Areas of the Severn Valley are extensively covered with potentially deep deposits of alluvium, much of which may be post-Bronze Age in origin. Such deposits, therefore, mask archaeology and make ploughsoil sampling practically impossible. Intrusive sampling would require excavation through potentially deep and homogenous silt

deposits and are beyond the scope of anything other than major logistical exercises. Even where archaeological deposits could be located through excavation, these would also require specific and convincing dating evidence. For these reasons anything other than the margins of alluvial floodplains are essentially inaccessible to small scale survey and intrusive investigation.

Better quality agricultural lands on gravels and brown earths within the study area are generally suitable for fieldwalking within the cycles of the modern agricultural regime. In practice often a short window of time was available to field-walk many fields, which were ploughed and seeded within days. Relatively few fields were left in a roughly ploughed condition for any length of time.

Areas of grassland which predominate in much of the modern upland landscape are generally unploughed. In order to sample artefact frequencies in such landscapes, therefore, intrusive methods such as test pitting are necessary which are more limited in extent and sample intensity than fieldwalking in ploughed conditions. A detailed account of the methodology for field survey is presented below.

## **Research Aims**

Previous research has established the chronology, form and development of a number of sites and monuments in the central Welsh border region along with patterns in their broad distribution. These are interspersed with isolated finds of metal objects and thin scatters of lithics. It is necessary to examine more closely the relationship between monuments, known settlement sites and artefacts in the landscape, in order to understand patterns of settlement at smaller scales and to examine all evidence for activity in the landscape from the Late Neolithic to the Late Bronze Age in order to reveal potential changes in patterns of settlement over time.

The specific research aims of this study are to:

- Achieve a greater understanding of the location of settlement in the Late Neolithic and Early Bronze Age and the relationship between settlement and funerary monuments. There is little understanding of patterns of settlement beyond broad-scale distributions of monuments and the relationship between settlement and monuments remains ambiguous.
- Examine the frequency of interaction between settlement and monuments, in order to assess the extent of potential settlement mobility in this period.
- Understand more fully the location and form of Middle Bronze Age settlement, in order

to assess the extent of change with the earlier second millennium BC and to place the region into the context of settlement nucleation and enclosure recorded elsewhere.

- Assess the potential for Mid-to Late Bronze Age land division, as a means of placing the region into the context of relatively intensive systems of agricultural organisation that are apparent in comparable lowland landscape contexts in southern England.
- Achieve a greater understanding of lowland settlement patterns in the Mid-Late Bronze Age, as a means of assessing the varying intensities of activities in the landscape and their wider regional and national contexts.
- Examine the nature and context of Late Bronze Age settlement recorded on certain hill-tops in the region. Such sites are unlikely to have existed in isolation and it is necessary to consider them within the context of other activities that can be identified in the landscape which may enable a closer understanding of their context within broader patterns of occupation.
- To identify settlement change at a broad scale from the Late Neolithic to the Late Bronze Age.

## **Research Methodology**

A specific study area was defined in the upper Severn valley in north-east Powys (Figs. 1 & 2). Data was obtained for this study area from existing sources and new data was obtained through a programme of field survey and excavation (Appendices 1-3). When examining the distribution of metalwork, the study area was broadened to include a greater number of find-spots across the old county of Montgomeryshire, Powys and Shropshire.

Historic Environment Record information was attained from Clwyd Powys Archaeological Trust and Shropshire County Council (Appendix 4). Aerial Photographic plots were also obtained from the CPAT HER. Additional metalwork finds data was also obtained from the Portable Antiquities Scheme database, including detailed information on provenance (Appendix 5).

A fieldwalking and test-pitting programme was undertaken in order to answer questions regarding the location and intensity of Late Neolithic and Early Bronze Age settlement in the landscape as identified through the collection of lithics. The survey was relatively small in scale, yet has the potential to provide useful data for the understanding of settlement in this period. Fieldwalking and test-pitting in this study area provides new data in a region where such surveys have been limited.

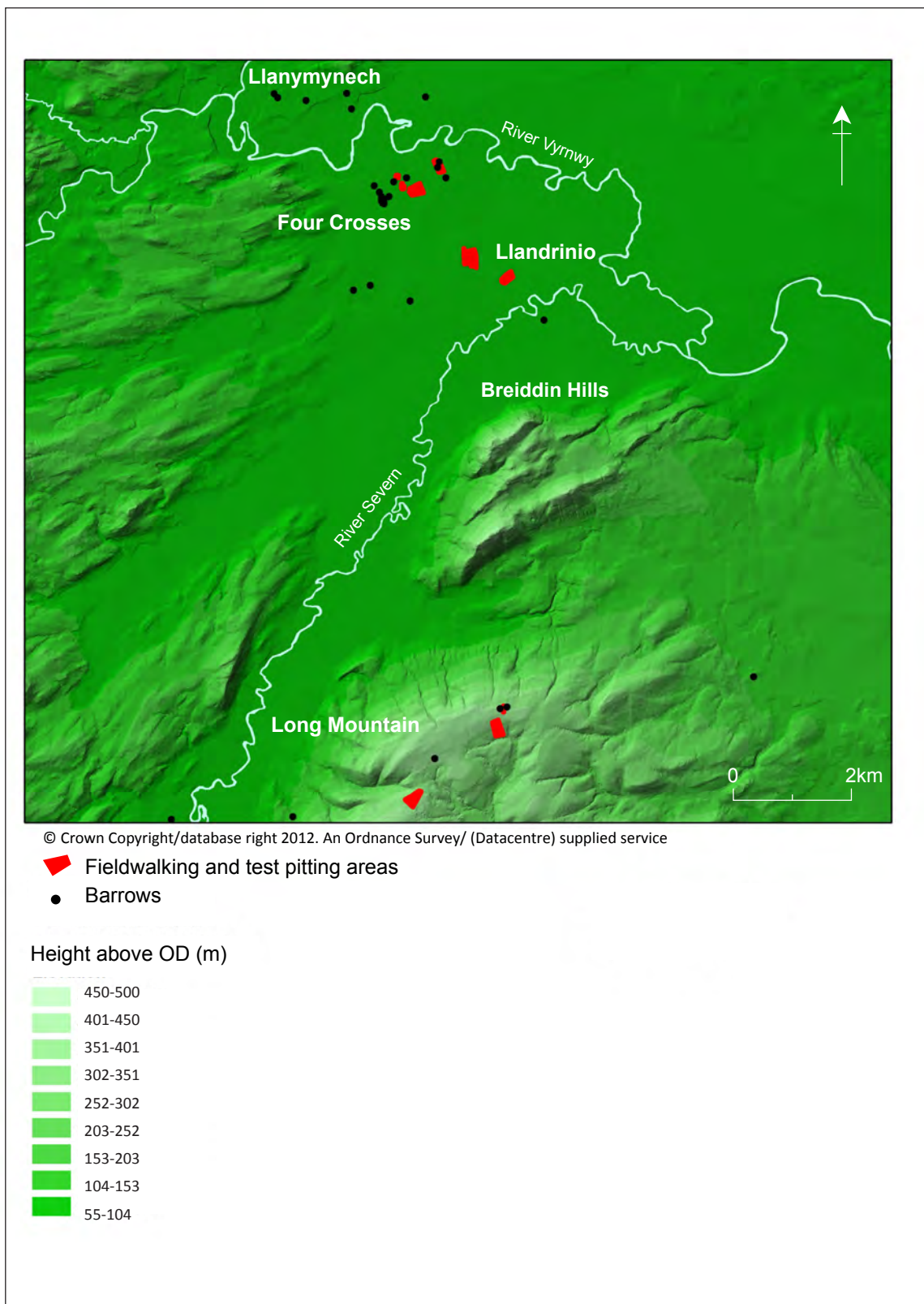


Fig.9 Location of fieldwalking sites and Bronze Age barrows

Six fieldwalking surveys were undertaken, together with four test pitting surveys (Fig. 9). These were located principally between the Rivers Severn and Vyrnwy and in areas of upland on the Long Mountain, Powys (Figs. 10 and 11). These were designed to examine the extent to which settlement clustered around monuments and the relative frequency of settlement activity across different and contrasting areas of the landscape. Both test-pitting and fieldwalking employed an intensive sampling strategy, in order to maximise data and methods are described in detail in the thesis (Chapter 3).

The first fieldwalking site was located on the margins of the Severn floodplain at Llandrinio (FW1; Fig. 10). This was designed to test the presence of settlement activities in close proximity to the river, where the current floodplain was less extensive than elsewhere. The fieldwalking was undertaken beyond the known extent of alluvium, in order to avoid masking deposits. The site was located on stagnogleyic brown earths over drift deposits (Thompson 1982).

The second fieldwalking site (FW2; Fig. 10) was located at Four Crosses in the vicinity of a group of Bronze Age ring ditches and c.300m to the south of a ring ditch centred on an earlier Neolithic pit grave (Warrilow *et al.* 1986). The site was, therefore, designed to test the relative intensity of activities in the vicinity of these monuments, in order to examine the extent to which monuments influenced settlement patterns. The site was located on brown earths over fluvio-glacial gravels, which have been considered better quality agricultural land (Thompson 1982). The fieldwalking therefore was designed to test the intensity of activities at a location which may have been more conducive to agricultural cultivation.

Fieldwalking at site FW3 (Fig. 10) was also located on the better quality agricultural land of brown earths over gravels, but at a distance from any known funerary monuments. The field was also on a gradual south-facing slope, which may also have been conducive to cultivation, and to the north and west of the expansive River Severn floodplain which may have been suitable for grazing (Thompson 1982). The fieldwalking was designed therefore to examine an area which may have been conducive to arable agriculture and settlement but which was not influenced by the location of monuments.

The fourth field (FW4) had to be abandoned due to issues of access and has been discounted. The fifth field (FW5; Fig. 10) was located over an area of two ring ditches at Four Crosses, which enabled a direct comparison with site FW2 which was located at a greater distance from the ring ditch group here. This location therefore provided an opportunity to examine the relative intensity of settlement activity adjacent to a ring ditch monument, in order to test the extent to which these sites influenced settlement patterns.

The sixth and seventh fieldwalking surveys (FW 6 and FW7; Fig. 11) were undertaken on higher ground on the Long Mountain, in order to provide a contrast with the lowland fieldwalking



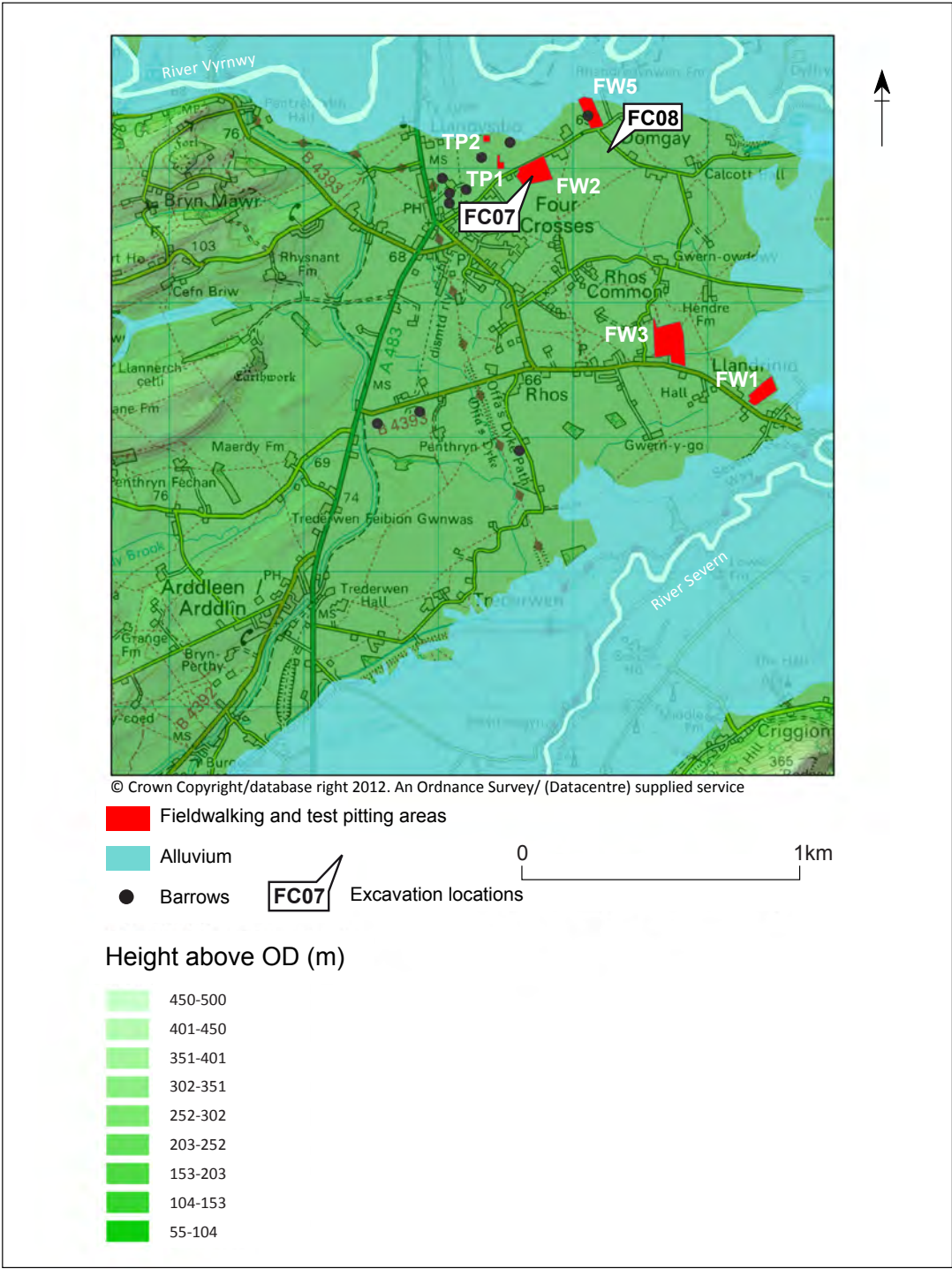


Fig.10 Test-pitting, fieldwalking and excavation locations, barrows and the extent of alluvium at Four Crosses

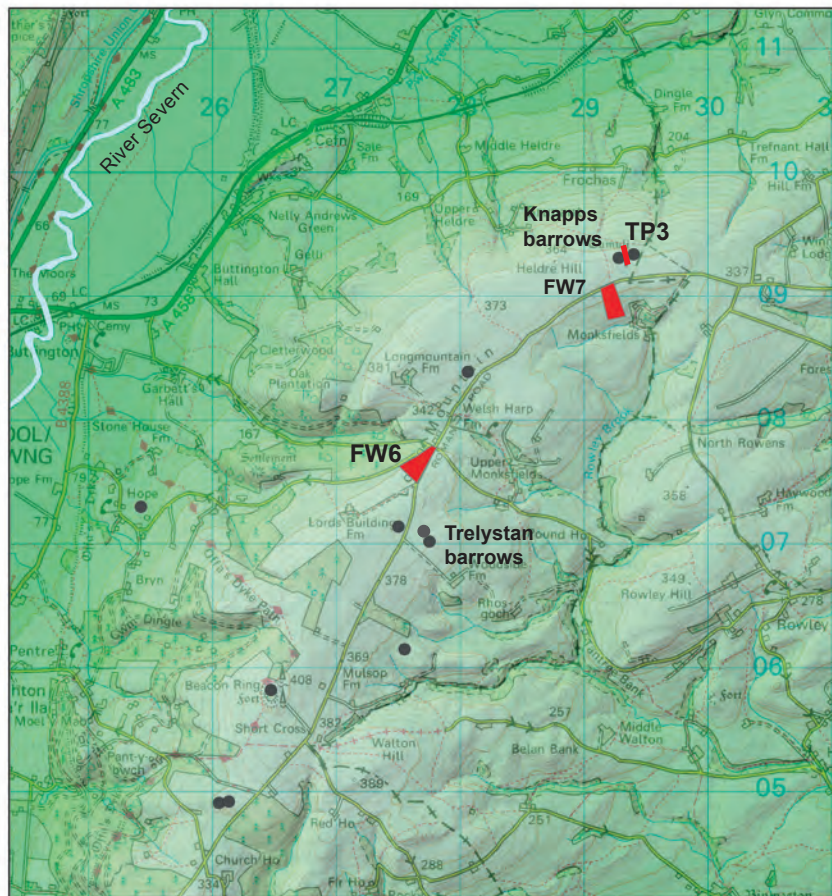
sites. This is a landscape where agricultural potential is relatively low and is characterised predominantly by grassland. Field FW6 was located on a north-facing slope at a distance of c. 600m from the known settlement and funerary monuments at Trelystan. The fieldwalking was designed therefore to examine an area in relatively close proximity to a known focus of Late Neolithic settlement and Bronze Age barrows (Britnell 1982), in order to test the extent of possible settlement activity in this area, as well as providing a comparison with lowland areas. A sixth area of fieldwalking (FW6) was undertaken in a field to the south of Knapps barrows (two upstanding scheduled round barrows). The fieldwalking was intended to test the level of activity in the vicinity of these monuments and provide a comparison for fieldwalked areas in the lowlands which were also in close proximity to ring ditch sites. The site was on a south facing slope, which may have been more conducive to agriculture, although as with many fields in this landscape was relatively steeply sloping.

Test pitting was undertaken in areas of pasture where fieldwalking was not possible. This method enabled a comparison to be made with fieldwalking for the efficiency of the identification of lithics in this landscape. Three test pitting surveys were undertaken for this purpose: two at Four Crosses and one on the Long Mountain (Figs. 10 and 11). The two Four Crosses surveys were designed to further sample the intensity of activities in the vicinity of the Early Bronze Age ring ditch group. An area of test pitting was also undertaken on the Long Mountain between the two round barrows at Knapps, which was designed to test the level of activity in close proximity to these monuments and provide a comparison with the evidence from the Trelystan barrows where lithics and Late Neolithic settlement have been recorded previously (*ibid.*). Test pitting was undertaken outside the scheduled area at Knapps, yet was limited by issues of access due to the farming regime.

Test pitting was also undertaken at the margins of the alluvial floodplain south-east of Welshpool, in an attempt to identify any potential activity between the known group of monuments at Sarn-y-bryn-caled and the River Severn (Gibson 1994). The area was also known to have Bronze Age palaeo-channels (Taylor and Lewin 1996). An auger survey was also undertaken in this area, in an attempt to identify any potentially buried organic deposits that may be suitable for dating. No positive results were achieved from test pitting or augering and this survey was not, as a result, taken any further.

Excavations were undertaken at part of a pit alignment at Four Crosses in an attempt to obtain dating evidence for a potentially early linear boundary (Site FC07). Pit alignments at Four Crosses have been highlighted as respecting Bronze Age ring ditches and therefore had the potential to reflect later Bronze Age land division (Owen and Britnell 1989; Wigley 2007a). A full report including methods is included in Appendix 1. A second excavation was undertaken at the site of a small ring ditch and linear boundary ditch at Four Crosses, in order to obtain





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■ Fieldwalking and test-pitting areas

● Barrows

0 1km

Height above OD (m)



Fig.11 Test pitting and field-walking locations on the Long Mountain, Powys

dating evidence for a potentially early ditched boundary and to assess the level of potential settlement activity in association with the monument (Site FC08). The full results of the excavation are presented in Appendix 2. The excavations were supervised by the author, post-graduate students and staff at Birmingham Archaeology and included undergraduates from the University of Birmingham as part of their field training module.

Geophysical surveys were undertaken prior to these excavations, in order to establish the location of archaeological features with greater accuracy than available aerial photographic plots, and as a means of providing any further archaeological data. At Site FC07 a Geoscan FM256 gradiometer was used by the author, collecting data at 0.25m intervals along 1m spaced transects within 20m grid squares. Data were downloaded into Geoplot software. At Site FC08 a more extensive survey was undertaken by Eamonn Baldwin and Henry Chapman (IBM Vista, University of Birmingham) using a Foerster Ferex gradiometer fitted with three probes and a GPS system and downloaded into ArcGIS software. Two surveys were undertaken with this instrument, the first covering a large expanse of the field, and the second comprising a more detailed survey with a greater intensity of readings across the area of the ring ditch (Appendix 2).

Attributes of flintwork from the survey and excavation were recorded by the author. All flintwork recorded from field survey and excavation was subsequently examined by Dr Hugo Lamdin-Whymark, in order to provide a definitive chronology for the artefacts (Appendix 3). Specialist consultation was made with Emily Edwards and Dr Ann Woodward (University of Birmingham) regarding the dating of pottery recorded through excavation. Cremated bone was examined by Dr Megan Brickley, University of Birmingham, charred wood by Steve Allen, University of York, and radiocarbon samples were submitted to the SUERC, Glasgow.

### **GIS methodology**

Much of the data used for this study relating to finds and monuments locations was plotted from source databases and displayed within ESRI Arc GIS 9.3 software over Digital Elevation Model base-maps. This provided contextual detail within the landscape topography of the study area. A number of different data products and methods were used as a basis for further analysis. All finds and monument locations from databases were plotted as XY points within ArcMap, from OS National Grid Reference coordinates within the source data. All mapping products were displayed within the GIS using the British National Grid (OS GB 1936) coordinate system.

### ***Base mapping data and conversion methods***

Mapping data was downloaded from Edina Digimap (<http://edina.ac.uk/digimap/>). The base maps used to visualise the study area were generated from 1:10,000 scale Ordnance Survey Landform Profile data. The contour data within this was used to generate a TIN (Triangular Irregular Network) for the principal study area, which provided a Digital Terrain Model. This was generated through the 3D Analyst extension within ArcMap, with OS contour lines triangulated as mass points, with a Z conversion factor of 1 and a 'hillshade' illumination effect selected.

A more extensive base map was created by generating a raster from 1:10,000 Landform Profile DTM data tiles which covered areas of both Powys, and Shropshire. Files were converted from the original NTF file format and then several 5km<sup>2</sup> tiles were combined using the Mosaic to New Raster tool within Arc Toolbox, selecting the OS GB National Grid coordinate system.

Where 3-D effect views were generated within ArcScene software, these were generated as 'hillshades' within the 3-D Analyst extension creating a contrasting visualisation, in order to provide maximum definition of landform. These 'hillshades' were generated from a source raster based on 1:10,000 scale contour data. A Z-conversion factor of 2 was used to exaggerate height and emphasise the distinctiveness of landforms such as hills. Such visualisations were used for display and illustration purposes rather than analytical calculations and measurements.

Where more detailed information including modern boundaries was required for surveying and fieldwork purposes, 1:2500 scale OS Landline Plus vector data (supplied as 1km<sup>2</sup> tiles) was used (<http://edina.ac.uk/digimap/description/products/landline.shtm>) in addition to 1:10,000 scale raster data. Aerial photographic plots obtained from HER sources and geophysical survey plots were geo-rectified where necessary within ArcGIS.

A field survey at Site FW5 was undertaken using a Leica 500 differential GPS system accurate to within 1cm, walking across the terrain in transects, in order to provide a more detailed digital terrain model for an area of relatively flat ground. The data was subsequently downloaded into ArcGis and plotted within the OS National Grid.

Two LiDAR tiles covering 1km<sup>2</sup> each (SJ2718 and SJ2719) were supplied for academic use by the Environment Agency. The data tiles were of 0.5m resolution, based on data collected by the Environment Agency in Nov-Dec 2006. Two types of data were provided as ASCII files (D ASCII and V ASCII). The data chosen for use (V ASCII) provided a 'bare-earth' Digital Elevation Model, with details of vegetation, buildings and modern boundaries stripped out in advance. The ASCII files were converted to raster files using conversion tools in ArcToolbox and then merged using the Mosaic to new raster tool, choosing the British National Grid coordinate

system. Within ArcScene data can be viewed as a '3-D' effect. The combined raster data were displayed with a Z factor of 0.01, in order to obtain the correct height setting, with other digitised map data such as cropmarks overlaid.

Geology map tiles were also downloaded from Edina Digimap (Geology Digimap, <http://digimap.edina.ac.uk/main/services.jsp?collection=bgs>) using British Geological Survey source data. Superficial and Bedrock data at 1:50,000 scale were used and imported into ArcGIS. Separate geological types were queried and selected within the GIS and assigned separate colour codes for illustration purposes.

Where historic maps were used as a reference these were obtained from Edina Historic Digimap (<http://digimap.edina.ac.uk/main/services.jsp?collection=historic>) and imported into Arc GIS software.

### ***Viewshed and other analyses***

'Viewsheds' were generated within ArcMap software as a means of calculating what is or is not theoretically visible from a specific point in the landscape, using the 3D Analyst extension. The viewsheds were based on an input surface TIN generated from 1:10,000 contour data described above, with observer points selected from within a monuments database, using a Z (height) factor of 1 and an output cell size of 10. No specific attempts were made to influence the results by estimating potential heights of individual viewers for example (Chapman 2006, 85). The degree of slope across the study area was also calculated through the 3D Analyst extension based on a TIN input surface a Z-height of 1 and an input cell size of 10. The aspect data were calculated in a similar way with a cell size of 5.9.

## **Thesis Structure**

The thesis is divided into five principal chapters and an overall discussion. The first of these chapters (Chapter 2) examines the evidence for settlement sites from the Late Neolithic to the Late Bronze Age in the study area and draws upon comparative data from other regions, in order to assess the extent to which the study area can be placed within existing interpretative schemes. This is followed by an examination of the distribution of flintwork in the study area (Chapter 3), through the results of field survey and comparative analyses with extensive fieldwalking surveys undertaken in neighbouring regions. The examination of flint distributions provides a means of assessing varying intensities of activity in the landscape. Chapter 4 examines the relationship between settlement and monuments through an examination of data from excavated contexts and attempts to assess the extent to which monuments formed

a foci for settlement in the Late Neolithic and Early Bronze Age. The topographic context of round barrows and morphology of barrow groups is also examined in this chapter, in order to examine the potential interaction between these monuments and settlement. Chapter 5 clarifies the relationship between metalwork and settlement by examining metalwork contexts from the study area and from a range of comparative settlement sites in southern England. The distributions of well-provenanced metal artefacts are then assessed for their potential relationship with settlement patterns and the potential location of settlement in the landscape. The evidence for landscape division in the study area is examined in Chapter 6 which uses field systems and pit alignments in other regions as a precedent for the dating and function of known cropmark boundaries in the study area. A detailed study of the morphology and chronology of pit alignments and field boundaries at Four Crosses follows, with an assessment of the potential for land division in this area in the Bronze Age.

## **Chapter 2: Identifying and interpreting settlement sites in the study area**

### **Introduction**

There is a lack of clearly definable settlement sites in the landscape across the whole of the period covered by this study. In common with much of the rest of Britain, there is little evidence for Late Neolithic and Early Bronze Age settlement locales, despite a profusion of funerary and ceremonial monuments. Where settlement evidence can be identified this is often in close association with monuments, although the relationship between domestic and funerary activity is ambiguous. Evidence for occupation is also rare in the Middle Bronze Age, at a time when nucleated settlement sites and enclosed settlements were developing in the south of England. This may suggest continuity with Early Bronze Age practices. In the broader Welsh border region burnt mounds may reflect a component of the settlement pattern in the Mid-Late Bronze Age, but are unlikely to reflect the location of any sustained periods of occupation. Evidence from hilltops suggests that they formed foci for occupation in the Late Bronze Age, yet their positions in the landscape must also be considered against potential broader patterns of settlement.

This chapter will aim to establish the nature of the evidence for settlement in the study area from the Late Neolithic and Early Bronze Age through to the Mid-Late Bronze Age. As a result of this analysis, it will be possible to assess potential patterns of settlement across a broad period of time whilst also placing the study area into a regional and national context. The chapter will, therefore, serve as a background for the interpretation of artefact and monument distributions and other evidence for the occupation and structuring of the landscape which will be discussed in subsequent chapters.

### **The Late Neolithic and Early Bronze Age (c.2500-1500 BC)**

#### **Background**

Clearly definable Late Neolithic and Early Bronze Age settlement sites are extremely rare throughout Britain. Where evidence for settlement activity has been recorded in much of England and Wales this has been in the form of ephemeral pits and postholes, which often do



not form coherent structures and which may be found in association with hearths and diffuse artefact scatters (e.g. Bamford 1982; Pollard 1998). Evidence for possible settlement structures has also been recorded beneath round barrows and interpreted as the fortuitous preservation of earlier phases of occupation (e.g. Gibson 1982, 35-8). Where structures, artefact scatters or deposits within pits have been recorded beneath barrows their interpretation is however ambiguous, particularly where formal deposits have been suggested (e.g. Barrett *et al.* 1991, 118-120). It is clear that pre-barrow activity cannot easily be separated from a potential association with contemporary monuments or subsequent funerary events (*ibid.*, 120; Thomas 1996, 7; Brück 1999a, 55). Significant midden deposits and house-structures recently recorded under the henge bank at Durrington Walls, dating to the earlier third millennium BC (Parker Pearson *et al.* 2007, 633), are likely to be related to the development of the site as a significant ceremonial centre. This interpretation is perhaps reinforced when 'houses', recorded centrally within circular ditched enclosures within the circuit of the henge, are taken into consideration (*ibid.*, 631). Indeed, the extent to which such structures and deposits represent 'houses' and occupation which is representative of activities in the wider landscape is open to debate. Any activity at monuments in the Late Neolithic or Early Bronze Age may, nevertheless, form a component of a broad and wide-ranging pattern of settlement (*cf.* Brück 1999a).

There is a significant lack of clearly definable settlement 'sites' in this period which can be distinguished from activity at monuments. Settlement evidence is, instead, dominated by diffuse lithic scatters and occasional pottery assemblages. This has resulted in a rejection of the concept of sedentary settlement sites for this period, in favour of settlement mobility (Thomas 1991; Thomas 1996; Whittle 1997; Brück 1999a). Whittle (1997) has, for example, explored a range of potential settlement modes involving different frequencies of mobility and varying levels of sedentism. Brück (1999a) has questioned the concept of spatially distinctive settlement sites for the Early Bronze Age and has emphasised potential relationships with monuments within a system of episodic settlement and residential mobility, incorporating a variety of locales.

Fleming highlighted transhumance as a mode of settlement in his study of the distribution of barrows in Wessex (1971) and this continues to be offered as an explanation for the association between settlement and monuments, especially in upland contexts (Pollard 1999, 81). The implication of transhumance, however, is the presence of a more permanent settlement base elsewhere in the landscape, which has been questioned as a result of a lack of evidence for any substantial settlement sites (Brück 1999a, 65).

The lack of settlement structures may be explained as the result of poor preservational conditions. It has been highlighted, however, that even where favourable circumstances of preservation may exist, beneath alluvium or colluvium, substantial settlement has not been

recorded and is similarly composed of ephemeral features and diffuse artefact assemblages as those in other landscape contexts (Brück 1999a, 54). Beaker pottery assemblages have, nevertheless, been shown to exist beneath colluvium at various locations on the chalk downs in southern England, indicating that a certain component of settlement activity for this period may lay undetected in similar contexts elsewhere (Allen 2005). Examples of relatively substantial assemblages have been recorded where development-led projects have resulted in open area excavations (*ibid.*, 232-3). Round-house structures in association with pits, postholes and artefact assemblages have been recorded in circumstances of exceptional preservation, (e.g. beneath wind-blown sands, as at Stackpole Warren, Dyfed; Benson *et al.* 1990, 185-9). Although it may be argued that settlement activity was short-lived and transient in the Late Neolithic and Early Bronze Age, settlement foci do nevertheless, appear to have existed.

### **The Welsh border region, English midlands and the north-west of England**

The lack of settlement sites and settlement structures recognised in southern England also extends to the evidence from Wales and the western counties of England. An examination of the data for roundhouses datable to the Late Neolithic or Bronze Age in Wales has recorded only 20 examples, with around half of these being under monuments and of uncertain domestic function (Ghey *et al.* 2007). Evidence for Late Neolithic and Early Bronze Age settlement sites across the border counties of Wales and England, is represented convincingly by only two sites in northern Cheshire (Garner 2007; Nevell 1988), and the evidence for structures and artefact scatters beneath round barrows at a further two sites (Britnell 1982, 139-143; Gibson 1999, 29-46).

There is thus a clear lack of evidence for settlement sites in the form of roundhouses and associated structures in the period, which appears to support interpretations of impermanent settlement locales and settlement mobility. Domestic structures must, nevertheless, have existed in the period, as a basic need for human shelter dictates (*cf.* Pope 2007, 212). The fact that so few settlement locales have been recorded, therefore, must be due to a lack of visibility or survival. A lack of substantial enclosures at ephemeral settlement sites also inhibits their identification by a number of archaeological methods. Individual stake-built roundhouses are, for example, unlikely to be identifiable as cropmarks from the air. Similarly, geophysical survey methods may not ordinarily identify such ephemeral features or be able to easily distinguish them from others of later periods.

Where evidence for Late Neolithic and Early Bronze Age settlement has been identified this has, unsurprisingly, been by chance. In northern Cheshire, evidence for Neolithic and Early Bronze Age settlement has been recorded at Arthill Heath Farm as part of the excavation of



a Romano-British site (Nevell 1988). At Rock Green Ludlow, in southern Shropshire, a hearth associated with a small amount of Beaker pottery and flintwork was identified as the result of targeting a cropmark enclosure of probable Romano-British date (Carver and Hummler 1991).

Large-scale landscape excavations and evaluations may be more likely to locate settlement sites and to provide a representative sample of the nature of activity in the landscape. Such large scale projects are also, however, influenced by the presence or absence of identifiable archaeological sites. Recording settlement evidence by targeting monuments, for example, may not necessarily be representative of activity elsewhere in the landscape, and may perpetuate existing interpretations of settlement based upon the excavation of similar contexts. At Llandegai, Gwynedd, for example, 23ha of land were stripped for archaeological excavation (Kenney 2005) on the basis of results from previous excavations in the 1960s which revealed henge monuments, a cursus and an early Neolithic house (Lynch and Musson 2001). The excavation of such a large area, nevertheless, provides the potential for placing monuments within a settlement context. Late Neolithic settlement identified at Llandegai was, however, represented by fairly ephemeral and dispersed groups of postholes, particularly when compared to the more substantial enclosed Late Iron Age / Romano-British settlement on the site (Kenney 2005). This appears to confirm Brück's observation that the nature of the settlement evidence in this period remains similar wherever it is identified (Brück 1999a, 54). It certainly suggests that settlement in the vicinity of monuments may have been transitory and insubstantial.

At Oversley Farm, Cheshire, evidence for Late Neolithic and Early Bronze Age settlement was recorded, during a programme of extensive trial trenching undertaken as part of the Manchester Airport second runway project (Garner 2007, 5). A variety of settlement features were identified which included circular and rectangular post-built structures and circular gully structures dating to the Early Bronze Age (*ibid.*, 35-49). This evidence was recorded alongside a hollow way containing numerous phases of silting, midden deposits and surfaces associated with significant quantities of ceramics and lithics (*ibid.*, 29-52; Allen 2007 53-76; Wenban-Smith 2007 76-94; Garner 2007, 94-97). It is notable that this site was identified as a result of trial trenching which had not targeted any known prehistoric monuments or later prehistoric settlement features. The site, therefore, has set a precedent for the identification of Neolithic and Bronze Age settlement archaeology in the landscape and has suggested that sustained or repeated activities as evidenced through rich midden deposits, may also have characterised settlement patterns elsewhere in the Late Neolithic and Early Bronze Age. As part of the same project, more characteristically ephemeral evidence for settlement was also recorded at Sugar Brook where burnt stone and Bronze Age pottery were recorded (Garner 2001, 45). This may suggest that short-lived episodes of settlement were taking place in the landscape alongside

more fixed locations which saw repeated activity in the form of artefact deposition.

This type of evidence for settlement, however, is rarely recorded even where large tracts of landscape are sampled. In the west midlands, extensive archaeological investigations as part of the M6 Toll road scheme (Powell *et al.* 2008) produced only isolated examples of settlement activity in the form of a Late Neolithic burnt stone deposit and an Early Bronze Age burnt mound, in addition to isolated Early and Middle Neolithic pit features (*ibid.*, 83, 191, 232 and 351). Again, much of this evidence was recorded by chance through the targeting of later Iron Age and Romano-British enclosures (*ibid.*, 83, 191, 230). It is notable that where an instance of individual Bronze Age activity was recognised beyond known later sites, this was in the form of a more readily visible burnt mound (*ibid.*, 351).

What these extensive programmes of excavation highlight is the difficult identification of Late Neolithic and Early Bronze Age settlement across the regions of north Wales, the north west of England and the English midlands. Much of the evidence is ephemeral even where it has been recorded, although it may be possible that some locations in the landscape may have been focal points for repeated or sustained activities, (e.g. at key points in the local terrain such as at Oversley Farm, sited above the River Bollin; Garner 2007). The evidence from Wales, the central and northern Welsh border counties and the west midlands, does suggest, however, that short lived phases of settlement, represented by insubstantial structures, characterise the settlement pattern. This does not, therefore, differ largely from the evidence in southern England. The settlement evidence from the study area of the upper Severn Valley reflects a similar pattern.

### **The upper Severn valley**

There is very little evidence for settlement locales within the study area for this period. Where evidence for settlement has been recorded it is most frequently in association with monuments, suggesting that areas of the landscape chosen for funerary and ceremonial activities were also a focus for occupation. The duration of that occupation and the nature of its relationship with monuments is, however, uncertain.

Two possible settlement structures have been recorded beneath later round barrows on the Long Mountain at Trelystan (Britnell 1982). The structures were small, sub-rectangular and stake-built, and both contained rectangular hearths placed centrally, together with associated pits (*ibid.*, 139-143; Fig. 12). Radiocarbon dates suggest the structures were contemporary, which is supported by their similarity of form (*ibid.*; Fig. 13).

The structures are insubstantial, although one has some evidence for rebuilding (*ibid.*, 140).

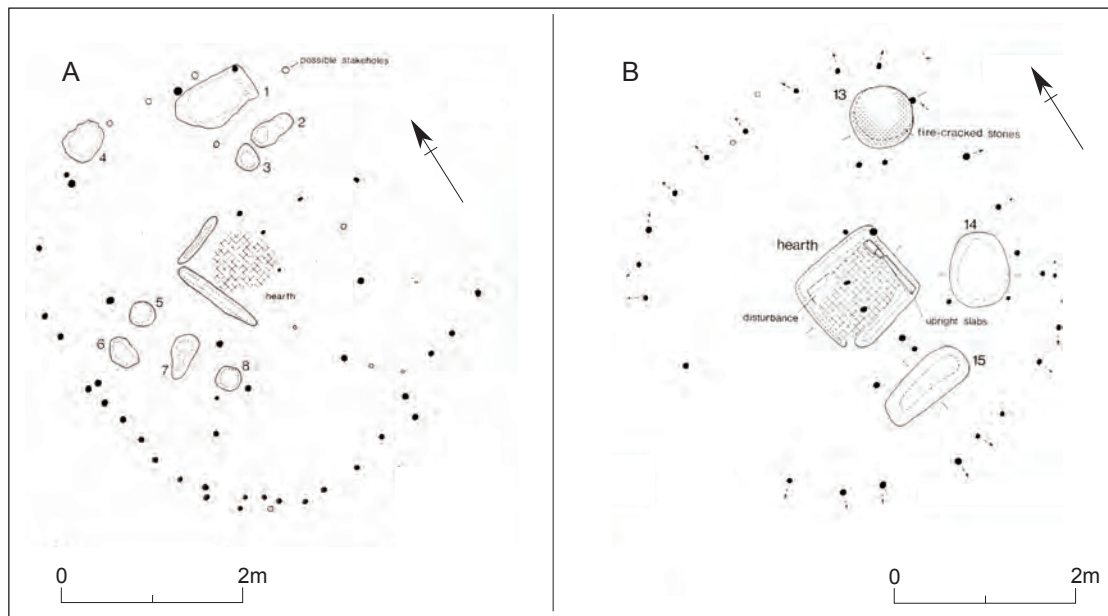


Fig.12 Structures A and B at Trelystan, Powys (after Britnell 1982)

It is difficult to suggest, however, that they represent anything other than a single phase of occupancy, especially in view of the lack of further settlement structures or other associated features as might be expected for a period of occupation of any significant duration. The structures were interpreted as short-lived by the excavator, possibly occupied for a single generation only (*ibid.*, 184-5). These structures may have been occupied for as little as a decade (Pollard 1999, 80). It is, however, difficult to estimate the duration of occupation at the site with any accuracy without a clear sequence of well-dated features. It must also be recognised that further settlement may have existed beyond the limits of excavation.

The artefactual assemblage may also contribute to an understanding of the duration of occupation at the site. It is perhaps significant that very few artefacts were recovered from features associated with the two structures, and none from Structure A at all (Britnell 1982, 140-1). This appears to support the idea of a very short-lived episode of occupancy. Nevertheless a relatively high quantity of flintwork from residual contexts at the site (Healey 1982), may indicate repeated pre-barrow activities. It is difficult to be certain that such flintwork is contemporary with the settlement structures but it may, nevertheless, suggest a more sustained interaction with the site in the Late Neolithic than the evidence from the structures indicates. The residual artefacts may be contemporary with a short-lived, but intensive occupation, or may represent successive activities over a longer period of time. It has been suggested on the basis of the distribution of residual finds that there may have been separate phases of pre-barrow occupation, represented by individual clusters of Grooved Ware and Beaker pottery (Britnell 1982, 145). It is possible, therefore, that the two structures

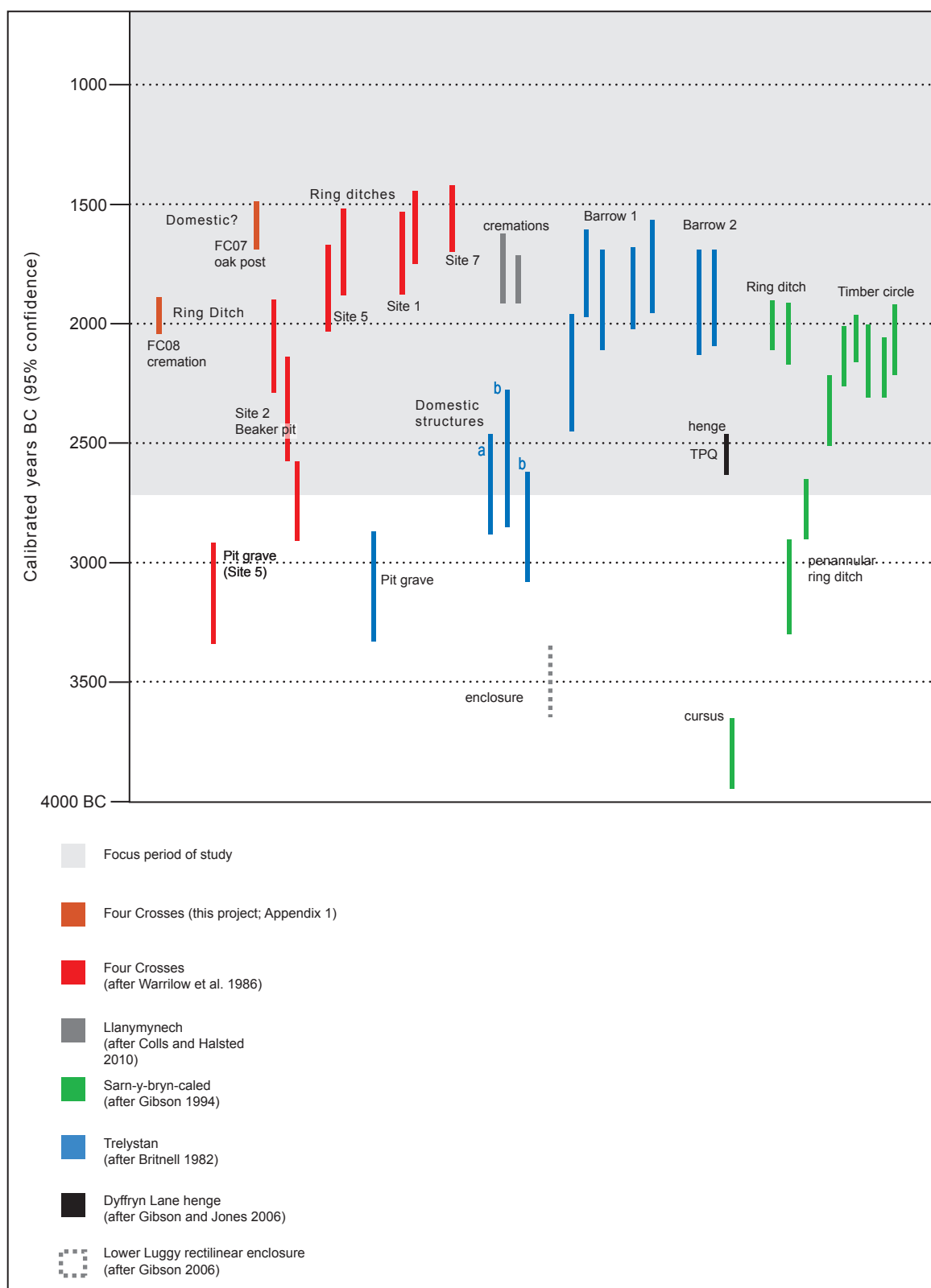


Fig.13 Calibrated radiocarbon dates from monuments and other features in the vicinity of monument complexes in the study area

Both the location and orientation of the structures indicate an awareness of the burial cairn at the site, suggesting that its presence influenced occupation practices. The structures are located to either side of the grave (Thomas 1996, 7), which may have been an intentional reference to its presence (Fig. 14). It may also be significant that neither structure faces the burial. It has been suggested that the entrance to Structure A must have faced east (Britnell 1982, 140) and the entrance to Structure B faced west (*ibid.*, 141). There may, therefore, have been some symbolic ordering to the layout of the structures at the site: the east and west orientations may have referenced sunrise and sunset, possibly symbolising life and death. The location of occupation may, therefore, have been directly influenced by concepts of place, life-cycles and ancestry.

The extent to which the site at Trelystan reflects settlement episodes elsewhere in the landscape is uncertain. Other round barrow and ring ditch sites in the study area have produced some evidence to suggest an association with settlement, either pre-dating or post-dating the construction of the monuments. The nature of the activity, however, is ambiguous and no convincing evidence for settlement structures has been recorded. The presence of Beaker sherds in a pit at Four Crosses ring ditch Site 2 may represent domestic activity pre-dating the monument (Warrilow *et al.* 1986, 59-60). Beaker pottery has also been recorded from residual contexts from other ring ditch sites at Four Crosses (*ibid.*, 72) which may indicate settlement activities as a precursor to later monument construction.

At Coed-y-dinas, part of the Sarn-y-bryn-caled complex, an assemblage of Beaker pottery was recorded from secondary fills of a ring ditch which may indicate the monument was a focus of settlement activity (Fig. 16; Gibson 1994, 173). A domestic origin for the assemblage has been suggested (*ibid.*, 176), on the basis of an association with hulled barley (*ibid.*, 165). This is consistent with the frequent and often secondary deposition of Beaker pottery in the ditch fills of a number of Neolithic and Early Bronze Age monuments in Britain (Gibson 1982, 27-38). Such activity suggests that deposits of domestic-related material were intentionally placed in the ditches of monuments. It is unlikely, however, that this was a consequence of casual discard in view of the significance of monuments in this period. Without evidence for settlement structures the nature of the association between settlement and monuments remains open to interpretation. A fuller discussion of the relationship between settlement patterns and monuments is presented in Chapter 4.

There are other locations in the landscape where possible settlement related features or artefact assemblages have been recorded. At Collfryn at the edge of the broad Severn Valley floodplain (Fig. 2), a single pit was associated with a small quantity of Beaker domestic pottery (Britnell 1989; Darvill 1989). A single pit can only reflect a very short-lived episode of occupation although it is possible that any further ephemeral features or deposits were truncated by subsequent

do not represent the only phase of settlement at Trelystan.

The function of the pre-barrow structures has also been questioned. The structures are located to either side of a pre-existing or broadly contemporary primary pit grave, possibly marked with an overlying cairn (Fig. 14; Britnell 1982, 183-184). Thomas has used this to suggest that the structures were purely associated with mortuary practice rather than settlement

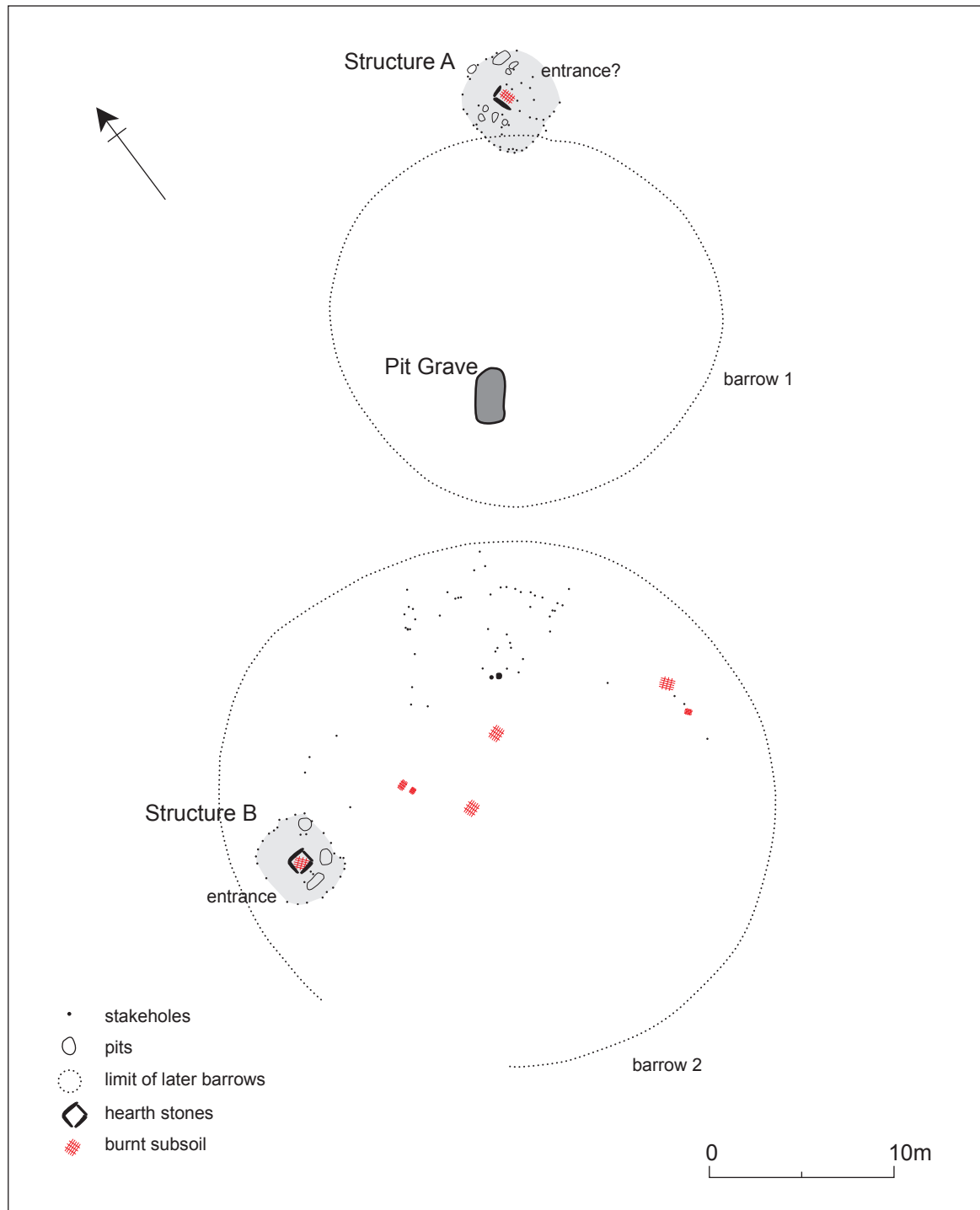


Fig.14 Pre-barrow structures and features at Trelystan, Powys (after Britnell 1982)

and questioned whether they represent dwellings at all (Thomas 1996, 7). Some convincing reconstructions of settlement structures for the site have, however, been suggested (Fig. 15; Britnell 1981; Britnell 1982, 184; Gibson 1996). An episode of occupation may, therefore, have focussed upon a marked burial in the landscape, suggesting a pattern of settlement in the Neolithic that was closely associated with small burial monuments.

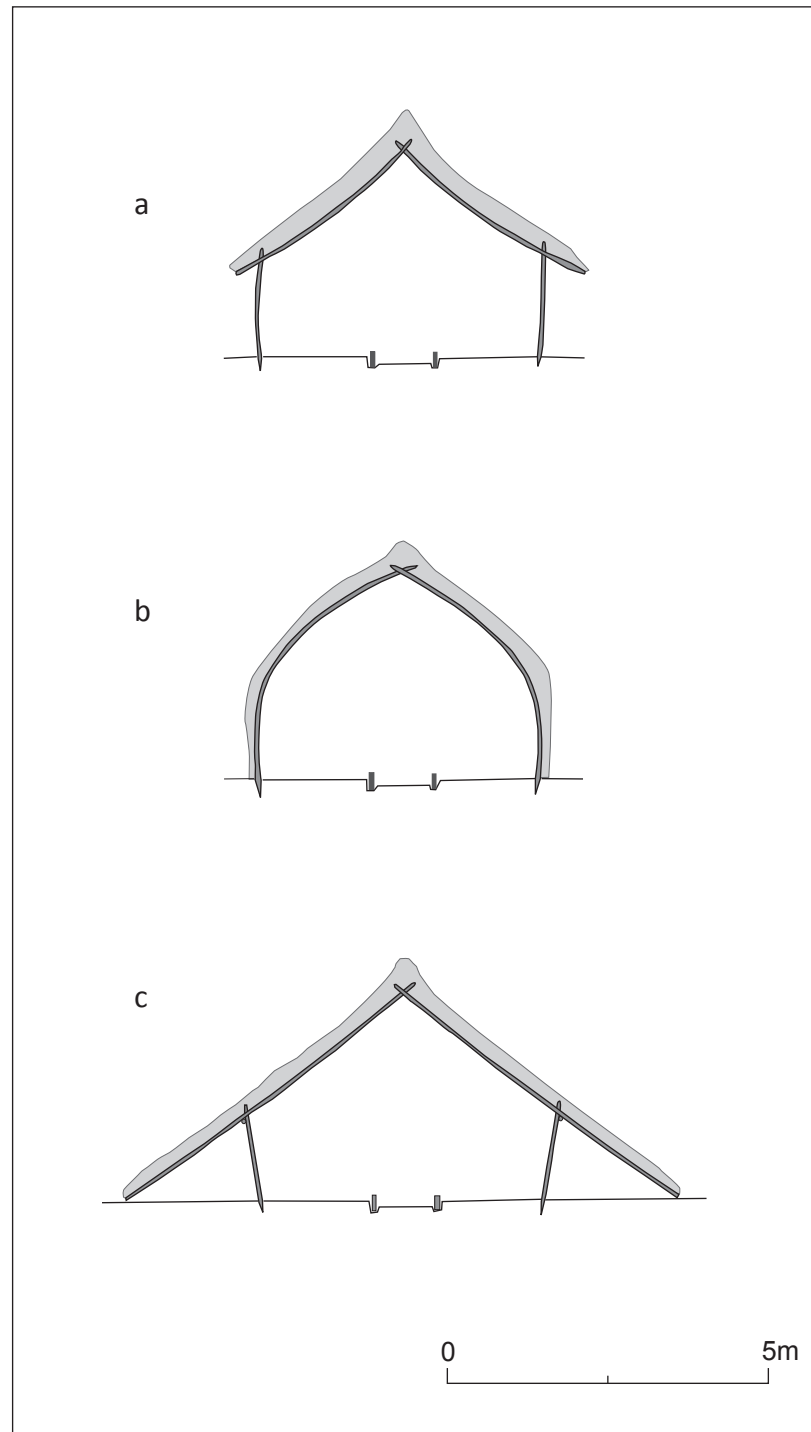


Fig.15 Reconstructions of domestic structures at Trelystan  
(after Gibson 1996 and Britnell 1981)

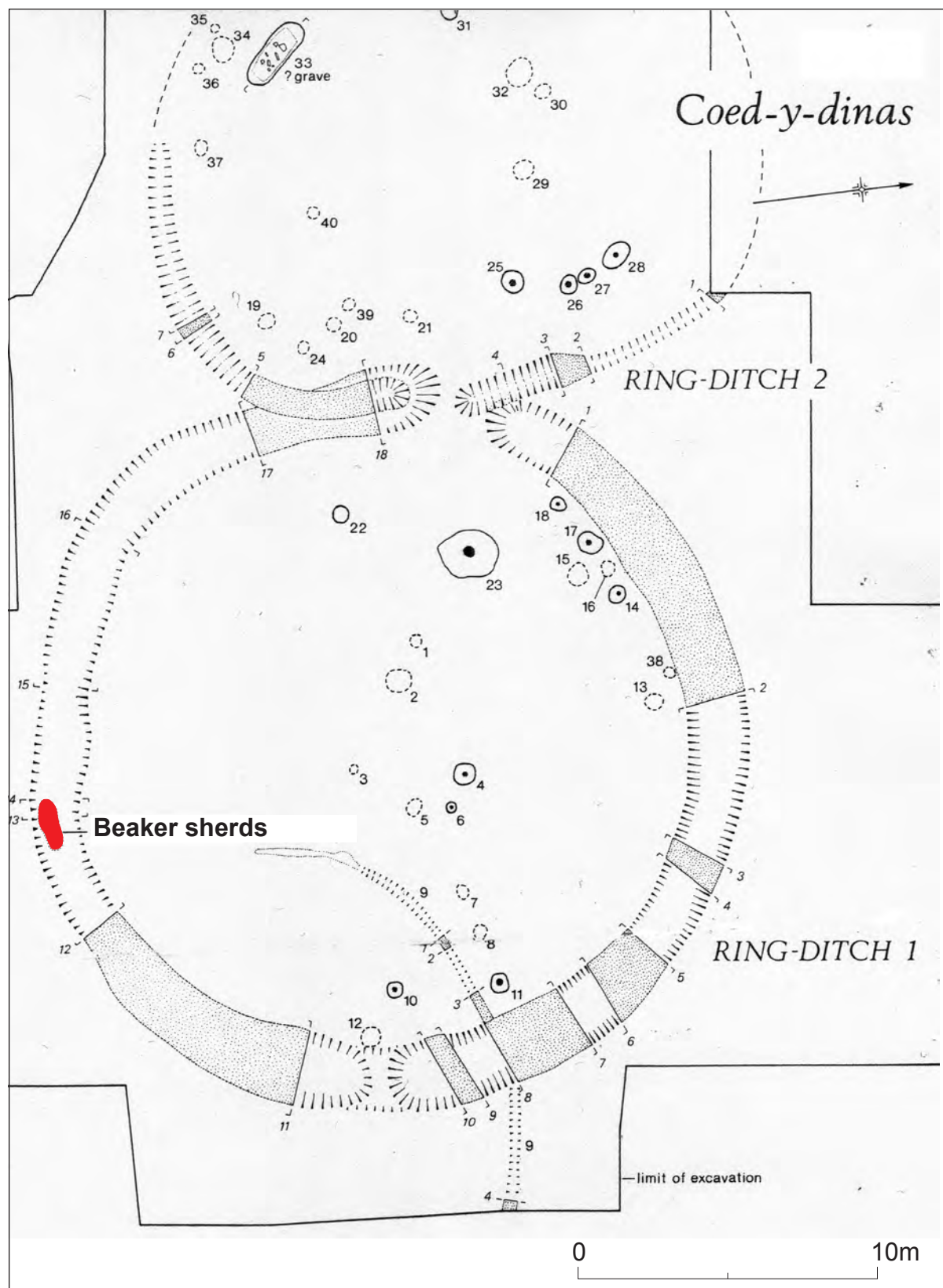


Fig.16 Beaker pottery deposit at the Coed-y-dinas ring ditches, Powys (after Gibson 1994)



Iron Age and Romano-British activity. At Arddleen to the south, excavations revealed a small Late Neolithic or Early Bronze Age lithic assemblage and three pottery sherds at the site of a later enclosure (Grant 2007). Despite the fact that some truncation of deposits may have taken place by later activities in both instances, these sites support Brück's interpretation that where settlement related features are found they are consistently ephemeral, representing short-lived activities (Brück 1999a, 54).

Late Neolithic and Early Bronze Age activity has also been recorded at excavations on the Breiddin hilltop. Here a group of pits was recorded, one of which provided a calibrated radiocarbon date of 3082-2501 BC at 95.4% confidence (Musson 1991, 76; HAR-1414; Oxcal 4.1, Bronk-Ramsey 2009), suggesting Mid-Late Neolithic activity. Apart from some charcoal flecks and a single flint flake, no other finds were recovered from the pits, although a small amount of flintwork was recorded in the vicinity (Musson 1991 74, Fig. 39b). Elsewhere on the hill a Late Neolithic/ Early Bronze Age hearth has been recorded, with a calibrated radiocarbon date of 2571-1976 BC at 95.4% confidence (*ibid.*, BM-882; Oxcal 4.1, Bronk-Ramsey 2009).

Pottery from the site supports these radiocarbon dates and includes Peterborough Ware, possible Beaker domestic ware, Food Vessel and other less diagnostic sherds (Lynch and Gibson 1991, 116-118). These were, however, recovered from residual contexts and it is difficult to discern the nature of this Mid-Late Neolithic and Early Bronze Age activity. The pottery suggests repeated episodes of activity on the hill, yet these may be separated by considerable periods of time and may not represent any form of settlement continuity. The evidence is again ephemeral and may not suggest anything more than transitory episodes of occupation across potentially widely separated periods of time. If it is accepted that the Beaker sherds at the Breiddin represent domestic activity then these may be compared with those from Collfryn. Yet, as the site at Coed-y-dinas in the Severn valley has shown, such assemblages of pottery may also be associated with monuments (Gibson 1994). It is possible, therefore, that the Beaker and Early Bronze Age sherds may have originally been associated with a funerary monument on the hill, although no evidence for such a monument has been recorded.

### ***The evidence for settlement at Four Crosses, Powys, and the size range of Early-Middle Bronze Age round-houses in Britain***

Excavation at Four Crosses, Powys, as part of this project recovered a small assemblage of Late Neolithic to Early Bronze Age flintwork and pottery, and part of a post-built structure (Fig. 10; Appendix 1). Five small postholes were recorded which may form part of the arc of a circle c. 11m in diameter (Fig. 17). This structure could, arguably, represent part of an

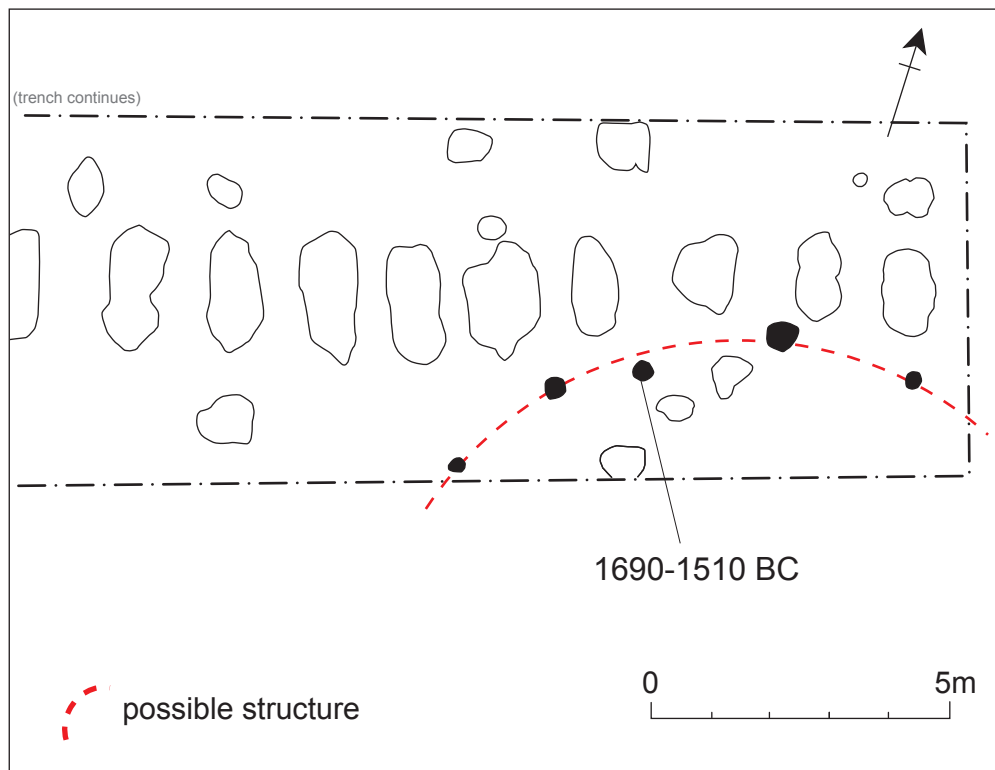


Fig.17 Possible post-built structure at excavation site FC07, showing radiocarbon dated post

ephemeral round-house. One post-hole retained the charred stump of an oak post which has been radiocarbon dated to 1690-1510 BC (at 95.4% confidence; SUERC-26659; Appendix 1). The date suggests activity towards the end of the Early Bronze Age at a time when the ring ditch group at Four Crosses was well-established (Warrilow *et al.* 1986).

It is possible that these postholes, together with other postholes and pits and the small assemblage of pottery and flintwork, relate to an area of settlement which may or may not be contemporary with a pit alignment at the site (Chapter 6). If it is to be argued that a circular domestic structure existed, however, this would be larger than the majority of 'round-house' examples from elsewhere in Britain. A sample of 74 individual structures from 24 different sites across Wales, England and Scotland have been examined for their size range and includes circular, oval and sub-rectangular post-built examples (Appendix 6). Examples have been included from the Late Neolithic structures at Trelystan, Powys (Britnell 1982), Early Bronze Age structures where these have been identified in England and Wales, through to the more numerous examples of Middle Bronze Age round-house structures largely belonging to settlement sites in the south of England.

It is clear that the majority of circular domestic structures from all periods have post-ring diameters ranging between 4m and 8m (Fig. 18). This is consistent with data from Ireland

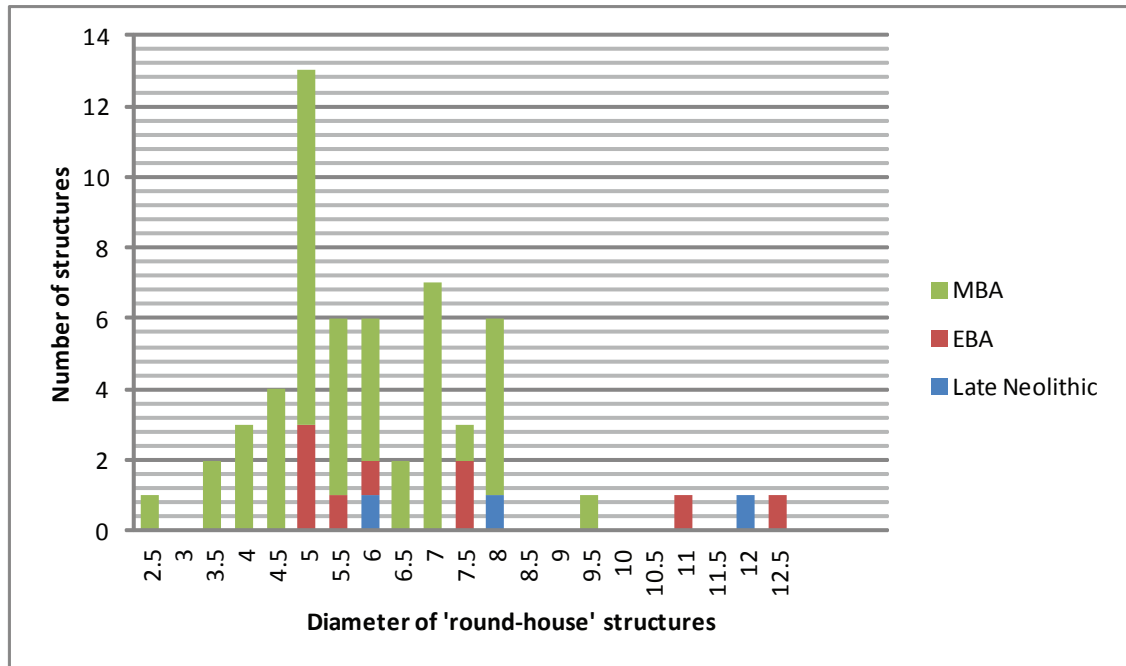


Fig.18 Diameters of selected circular post-built structures in Britain which may have a domestic function

where the majority of Bronze Age round-houses range between 5m and 9m in diameter, with some larger exceptions at Late Bronze Age sites (Doody 2000, 139). Where structures are not circular, their dimensions are best calculated in terms of area (Appendix 6). The areas of circular, oval and sub-rectangular structures range between 9.6 m<sup>2</sup> and 53 m<sup>2</sup> for the Late Neolithic, Early Bronze Age and Middle Bronze Age, with the majority ranging between c.20 m<sup>2</sup> and c.40 m<sup>2</sup> (Fig. 19). This is broadly consistent with previous studies of round-house structures in Wales, although some larger house areas have also been suggested (Ghey *et al.* 2007, Section 3, figure 17).

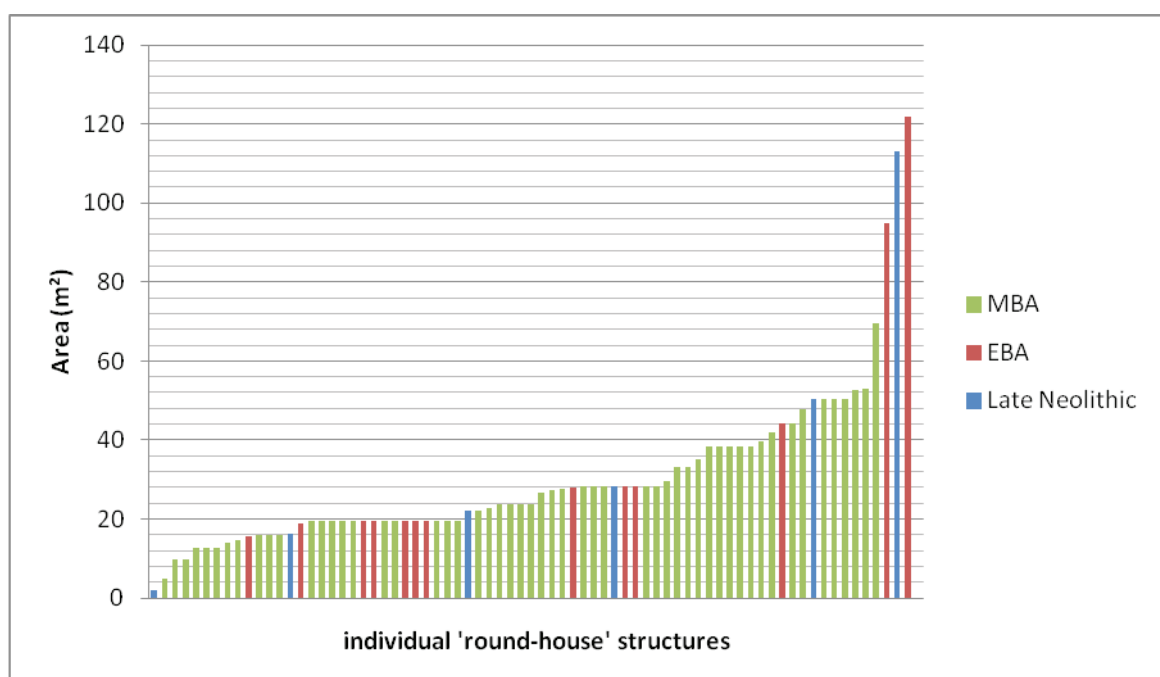


Fig.19 Areas (m<sup>2</sup>) of circular, sub-rectangular and oval post built domestic structures from selected sites in Britain

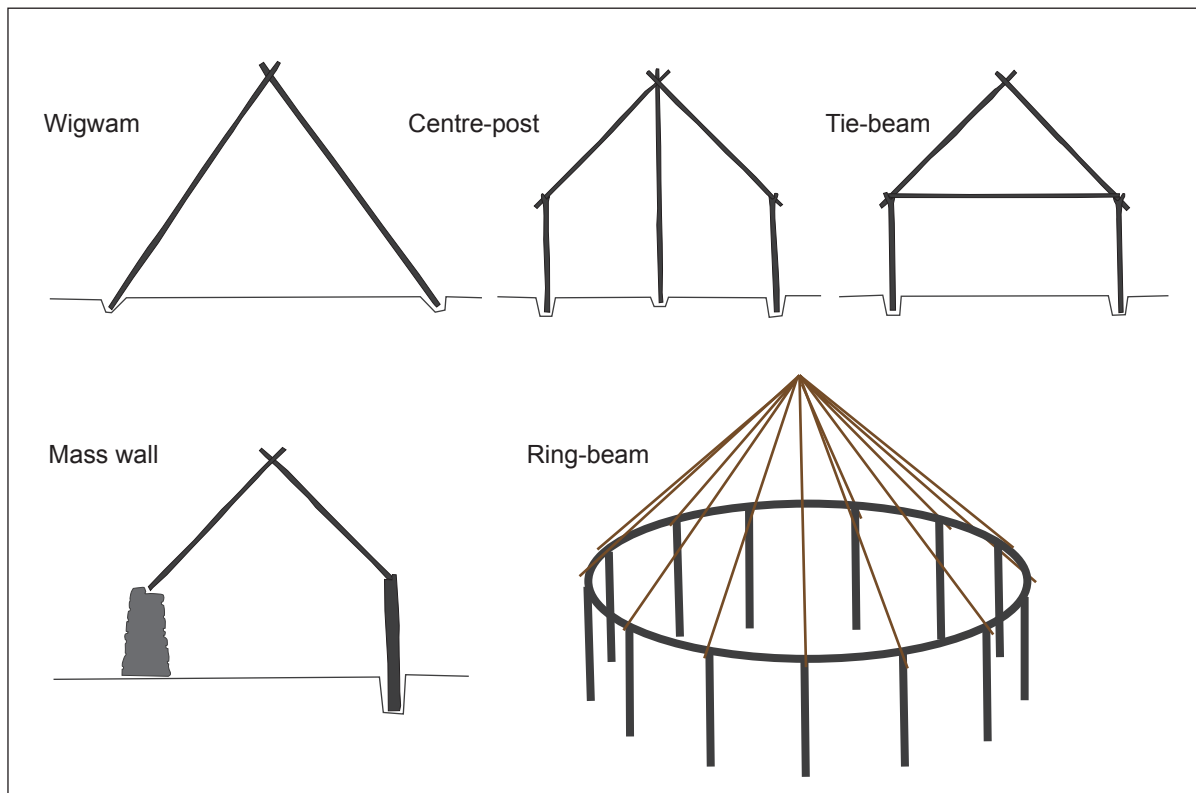


Fig.20 Possible roundhouse construction forms (after Musson 1970)

Whilst the data are largely represented by Middle Bronze Age structures, it is notable that Late Neolithic and Early Bronze Age structures are consistent with the size ranges from this period (Figs. 18 and 19). This may suggest that a common size range for domestic structures existed across broad periods of time from the mid-third millennium BC to the later 2<sup>nd</sup> millennium BC. It is clear that the actual area within any individual 'round-house' depends upon its specific constructional form, which may vary (Fig. 20; e.g. Burstow and Holleyman 1957; Musson 1970; Drewett 1982; Gibson 1996; Doody 2000). The most common interpretation is that post-rings of round-houses form part of an internal structure whose diameter is increased by projecting eaves of the roof line providing extra storage or sleeping space (e.g. Musson 1970, 269; Drewett 1982, 326-8; Gibson 1996, 134; Fig. 15c). This suggests that the diameters and areas of the majority of structures of this period were actually larger than the circuits of posts indicate.

The possible structure at Four Crosses is clearly larger than the majority of circular post-built domestic structures for the Late Neolithic, Early and Middle Bronze Age in Britain. If it is to be argued that a circular structure existed at the site then this may have been of ring-beam or tie-beam type construction (Fig. 20; Musson 1970, 274). There is no evidence for a porch structure, although the fact that the majority of later round-houses in Britain are oriented south or south-east (Brück 1999b 155; Ghey *et al.* 2007, Section 3.3) may suggest that any such entrance lay beyond the area of excavation.

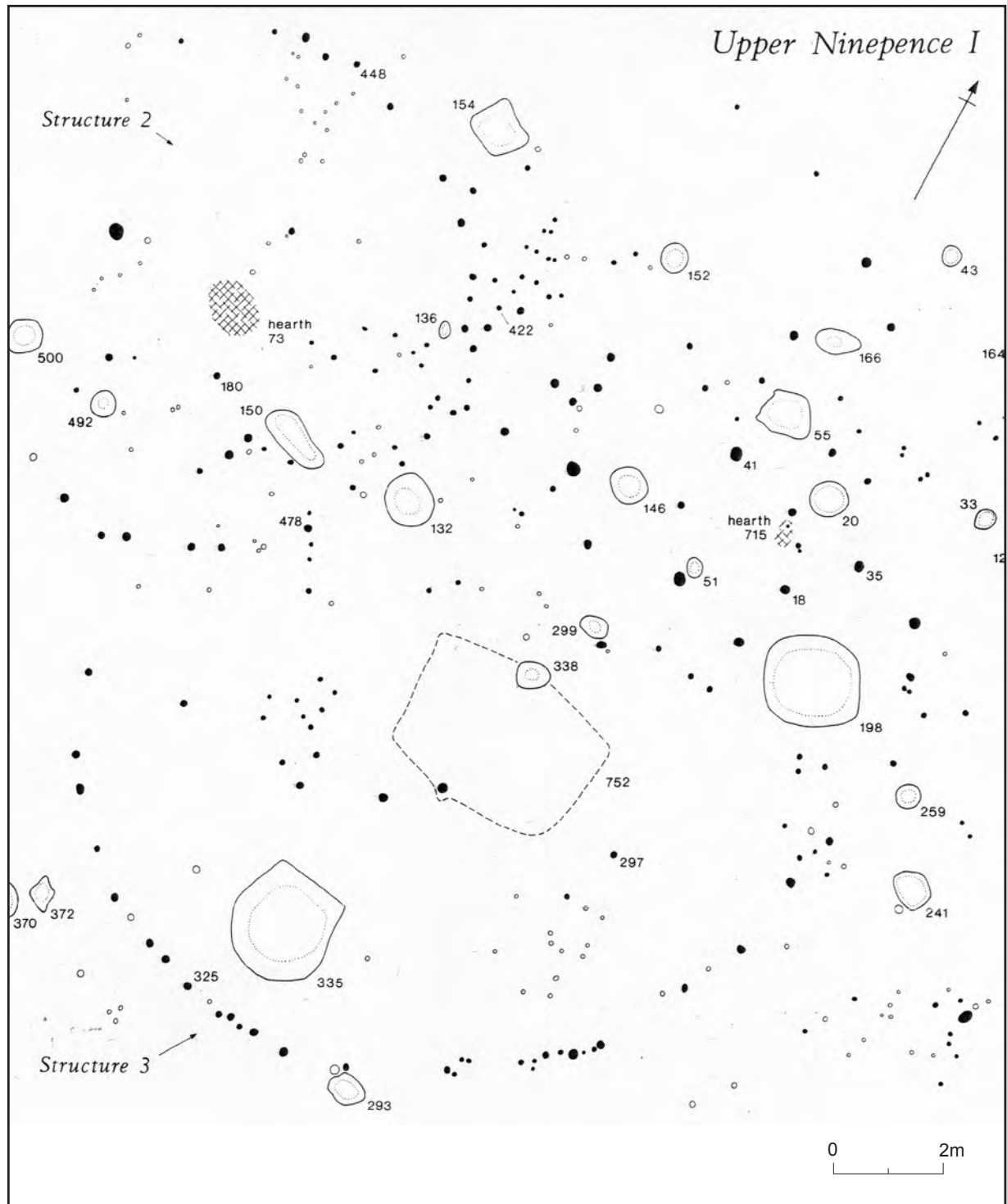


Fig.21 Upper Ninepence, Walton Basin, Powys, Late Neolithic Structures 2 and 3 (after Gibson 1999)

The closest parallels in terms of size to the possible Four Crosses structure are Structure 3, Upper Ninepence, Walton Basin, Powys (Fig. 21; Gibson 1999) and Structure 5 at Oversley Farm, Cheshire (Fig. 22; Garner 2007) dating to the Late Neolithic and Early Bronze Age respectively. The structure at Oversley Farm is of a different constructional technique to that apparent at Four Crosses. A curvilinear gully was associated with a low internal bank, into

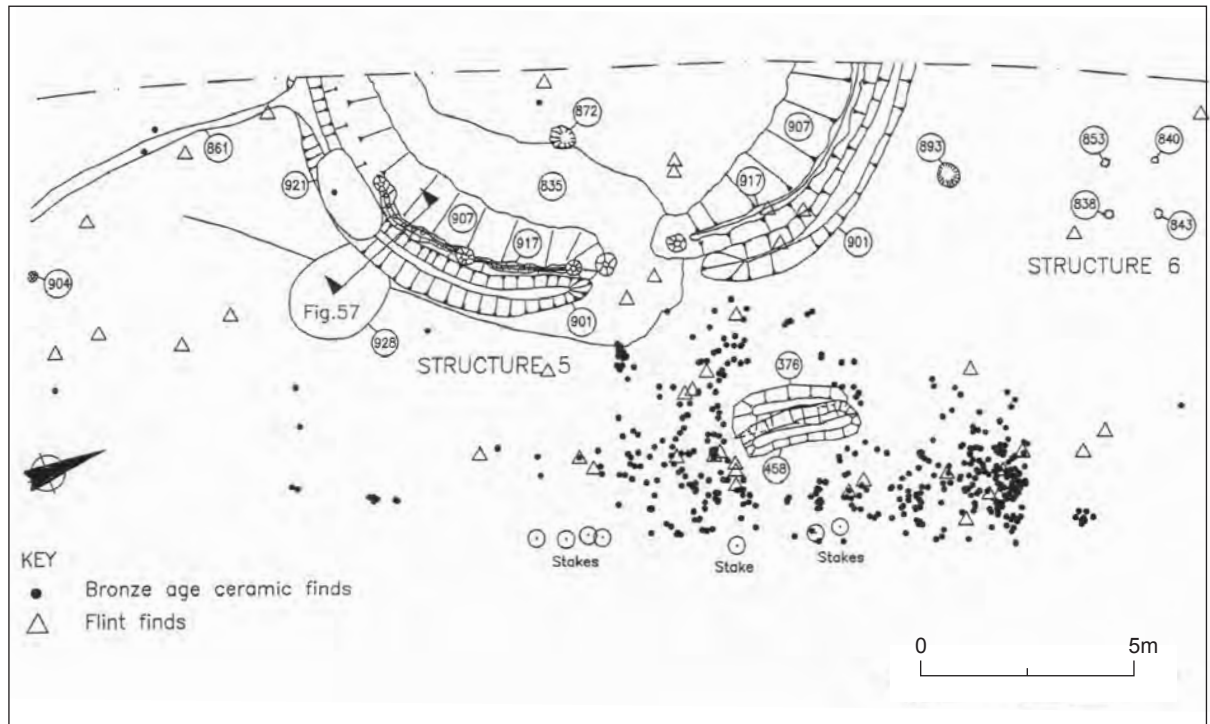


Fig.22 Early Bronze Age Structure 5, Oversley Farm, Cheshire (after Garner 2007)

which were cut post-holes and stake-holes forming a wall-line (*ibid.*, 41-3). The spacing of the posts (2.2m apart) is comparable with the spacing of at least four of the posts forming the possible structure at Four Crosses, which may suggest that the latter formed a structure of similar dimensions. Despite the fact that Structure 3 at Upper Ninepence is earlier in date than the Four Crosses example, it is also constructed in a different manner, with closely-set stake-holes having been recorded along much of the perimeter (Gibson 1999, 45-6). This may be more comparable with some pre-barrow structures, such as those recorded at Four Crosses (Fig. 23; Warrilow *et al.* 1986) and indeed the presence of a central pit has led the excavator to suggest that this may have been a funerary structure (Gibson 1999, 45-6). The structure at Oversley Farm, therefore, remains the closest parallel for the suggested round-house at Four Crosses. Although the Oversley Farm structure is larger than many other domestic structures of the Early and Middle Bronze Age, it is worth highlighting that the post-built Structure 4, with a porch entrance is comparable with many other Bronze Age round-house forms recorded in Britain, and the site suggests that a variety of structural forms may be present, alongside significant midden and artefactual deposits (Garner 2007). The large dimensions of the possible Four Crosses structure may not therefore necessarily exclude it from an association with settlement activity.

Large post-built circular structures have been recorded at Llandegai, Gwynedd, although these have been considered to be later prehistoric in date, despite no specifically associated dating evidence (Lynch and Musson 2004). A double-ring post structure has an outer diameter



of c.10m and a second round-house has a ring of posts c.8m diameter, with other possible examples with diameters of c.9m (*ibid.* 96-8). These examples demonstrate that larger circular structures existed at least in later periods. The fact that these structures were recorded within a Neolithic henge monument may allow for a potentially earlier date, although this cannot be demonstrated. At the Atlantic Trading Estate, Barry, South Glamorgan, a 'U'-shaped structure has been recorded c.10m across, although no specifically associated dating evidence was produced and the structure consisted of curvilinear gullies and stake-holes, unlike that at Four Crosses (Sell 1998).

The closest structures geographically to Four Crosses are the Late Neolithic sub-rectangular structures at Trelystan on the Long Mountain (Britnell 1982; Gibson 1996) and the Middle Bronze Age round-house at Glanfeinion in the upper Severn Valley (Britnell *et al.* 1997). The structures at Trelystan were stake-built and much smaller than the suggested structure at Four Crosses (Fig. 12), as well as being up to a millennium earlier in date. The circular structure at Glanfeinion bears closer comparison, although is smaller in diameter at 7.1m than the suggested Four Crosses structure and also has a penannular gully (Britnell *et al.* 1997, 180). Post packing was also recorded in some of the post-holes unlike the examples at Four Crosses.

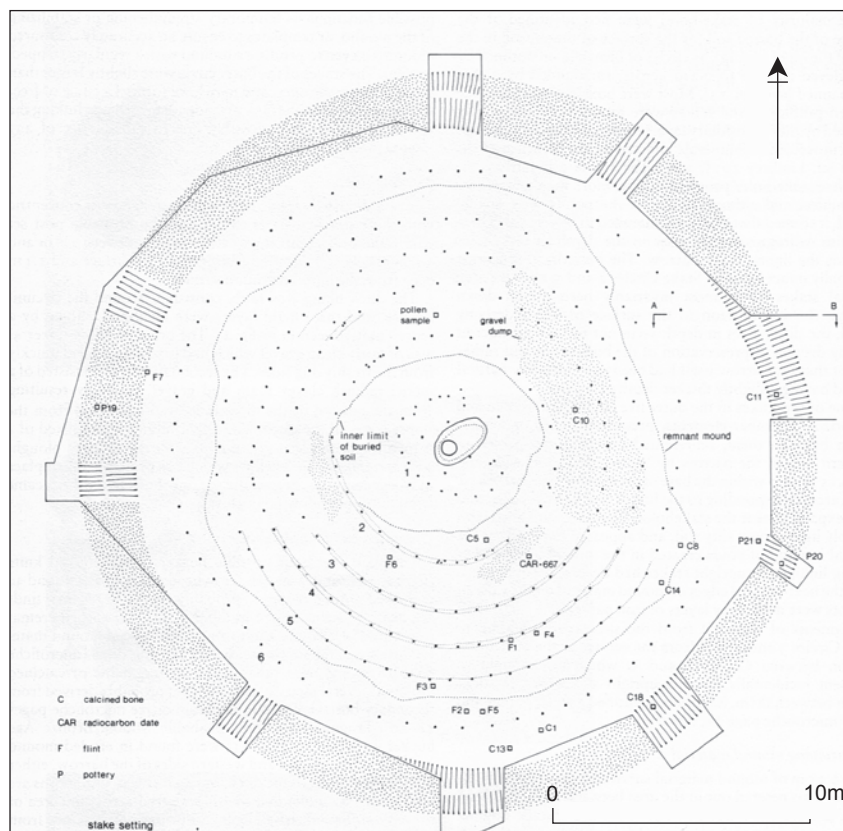


Fig.23 Stake circles at barrow Site 1, Four Crosses (after Warrilow *et al.* 1986)

One point of comparison is that some of the timbers are suggested to have been burnt and not replaced (*ibid.*, 182), as with the radiocarbon-dated post at Four Crosses (Appendix 1) which may suggest that both these structures met the end of their life by fire. The extent to which this was intentional, or part of a tradition involving the formal ending of the 'life' of certain structures, is uncertain. The only other circular post-built structure in the region belonging to the Bronze Age has been recorded at the Breiddin hillfort, with a diameter of c.6m and was possibly associated with furnaces and 'working hollows' (Musson 1991, 60-1). The structure is, however, likely to be Late Bronze Age in date, as well as being much smaller than the suggested structure at Four Crosses.

The suggested post-built structure at Four Crosses is, therefore, an exception to circular structures in the immediate region and would be larger than the size range of Late Neolithic, Early and Middle Bronze Age structures recorded more widely across Britain. It does, however, bear some comparison in terms of dimensions to a structure recorded at Oversley Farm, Cheshire, associated with extensive evidence for settlement related activity in the Early Bronze Age (Garner 2007). It is possible therefore that the group of postholes recorded at Four Crosses may be associated with settlement related activity and that artefacts from the site, recorded largely within a pit alignment, derive from such settlement activity (Appendix 1).

Alternative considerations are that the postholes at Four Crosses form part of the arc of a timber circle monument, or that they belong to a structure of alternative form. It seems unlikely that the small post recorded, together with the other shallow and essentially ephemeral post-holes would form part of a timber monument. The closest timber circle at Sarn-y-bryn-caled, Welshpool, had substantial postholes designed to hold very substantial timbers (Gibson 1994, 182). Although small timber circles have also been recorded in Britain (*ibid.*, 192-3), some with irregular post spacings (*ibid.* 197), these are often in association with relatively substantial monuments ranging from ring ditches and ring cairns to henges (*ibid.* 194-5; Lynch 1993, 119). A number of ring ditches at Four Crosses have evidence for stake-circles within phases of development at the monuments (Warrilow *et al.* 1986). These are, however, more closely spaced with stake-holes smaller in diameter than the post-holes recorded at the excavation site FC07 (*ibid.* 56). There is also no evidence, despite very good aerial photographic coverage and clear geophysical survey results, of a monument such as a ring ditch in close association with the excavation at Four Crosses site FC07 (Appendix 1). It seems unlikely, therefore, that the postholes and pits recorded at the site were associated with a monument in the Early Bronze Age.

Ephemeral pit and post-hole scatters recorded elsewhere may suggest temporary activities, often pre-dating the construction of monuments in the Early Bronze Age, such as at Hindwell Ash, Walton Basin, Powys (Gibson 1999, 20). Ephemeral stake-built circular structures have

also been recorded amongst widespread scatters of pits and postholes dating to the Late Neolithic at Upper Ninepence in the Walton Basin (*ibid.* 35-47). It is possible that such sites, whilst displaying longevity through associated ceramics, may reflect repeated yet temporary activities in the landscape in this period. It may be possible that the postholes, pits and artefacts recorded at Site FC07, reflect temporary and ephemeral settlement activity in proximity to a pit alignment boundary. It is possible that the artefactual assemblage may be residual within the pit alignment, relating to earlier episodes of settlement. Yet the boundary system may, nevertheless, have been influenced by concepts of settlement space formed through pre-existing patterns of settlement in the landscape. The relationship between settlement structures and the development of later boundaries has been highlighted at Dartmoor, for example (Johnston 2005, 13-15).

It seems likely, therefore, that the post-holes and pits recorded in the vicinity of the pit alignment at Four Crosses Site FC07 reflect a focus of Early Bronze Age settlement activity. The suggested arc of postholes may be too large for a 'round-house' on the basis of the evidence from Britain across wide periods of time and the features do not appear to conform to the arrangements associated with timber circles or stake-circles. The evidence is perhaps more likely to reflect the more ephemeral groupings of pits and postholes recorded elsewhere, representing perhaps more temporary activities in the Early Bronze Age. The postholes and shallow pits, taken together with the artefactual assemblage from the site does, however, suggest a focus of settlement at this location in the landscape, in the vicinity of ring-ditch monuments at Four Crosses, and potentially in association with or influencing the position of, a pit alignment boundary.

### **Interpreting modes of settlement in the Later Neolithic and Earlier Bronze Age**

The evidence from the study area has revealed consistently ephemeral settlement features, suggesting short-lived periods of occupation in the Late Neolithic and Early Bronze Age. Although some truncation of settlement features must have taken place, even where structures have been preserved, there is nothing to suggest the presence of anything more substantial than the stake-built buildings recorded at Trelystan or the ephemeral post built structure at Four Crosses, associated with small assemblages of pottery and flintwork. Monuments may have acted as foci for episodes of short-lived settlement, yet where features or artefact assemblages have been recorded at contexts beyond known monuments these are also consistently ephemeral and small scale. This supports Brück's interpretation that episodes of settlement activity regularly shifted across the landscape (1999a).

Although evidence for settlement sites in the landscape is limited, and the frequent excavation

of funerary monuments may create some bias in the data available, there does appear to be a relationship between settlement and monuments. Structures at Trelystan reference an earlier or contemporary burial, Beaker pits and associated deposits were placed at monuments in the case of Coed-y-dinas (Gibson 1994), and may pre-date certain ring ditches at Four Crosses (Warrilow et al 1986), where excavated evidence has also demonstrated small activity foci elsewhere in the landscape of this monument group. There remains the possibility that more sustained episodes of settlement or other foci for repeated episodes of activity existed within the landscape at locations that were not associated with monuments, but this remains to be demonstrated. At present all that can be suggested is that activity at monuments and in the vicinity of monument groups may have formed a component of a broader pattern of settlement, for which the limited evidence suggests was diffuse and represented by short lived episodes of activity.

## **Middle Bronze Age (c. 1500-1100 BC)**

### **Background**

The Middle Bronze Age marks a significant transition in southern England between a landscape dominated by funerary and ceremonial monuments, where settlement sites are sparse and difficult to define, to one where field systems, settlement structures and settlement enclosures can be clearly recognised (e.g. Barrett *et al.* 1991; McOmish *et al.* 2002). This change marks a transition between the earlier and later Bronze Age across much of southern England (Bradley 2007, 181) and the point from which settlement sites and landscape division become visible for much of later prehistory.

Middle Bronze Age settlement sites were identified in the early 20<sup>th</sup> century, and significant excavations and surveys were undertaken in Wessex and Sussex between the wars (e.g. Holleyman and Curwen 1935; Piggot 1942; Stone 1941). The settlements were recognised by these early excavators as marking a significant change in the occupation of the landscape, and indicating the first development of field systems (Holleyman and Curwen 1935, 37). Enclosures and hut platforms were identified where groups of buildings often clustered, set within systems of fields defined by lynchets formed by successive ploughing (e.g. Burstow and Holleyman 1957). These sites often survived as low earthworks in upland landscapes which in recent history were predominantly pastoral (Barrett *et al.* 1991, 143). It has been suggested that distinctive regional groups of settlement can be identified for the Middle Bronze Age and that such settlement patterns may not have characterised wider landscapes (Bradley *et al.* 1994, 4).

Middle Bronze Age settlements in southern England were the focus of renewed attention in the 1970s and early 1980s. Further fieldwork was undertaken as a response to the recognition of post-war plough erosion (Gingell 1992; Barrett *et al.* 1991) and a number of theoretical discussions were published (e.g. Barrett 1980; Bradley 1980). Ellison (1981) focussed upon Middle Bronze Age settlements at a number of scales, identifying both functional differentiation within round-house structures, varying status between settlement enclosures and the position of settlements within systems of production and exchange. In a similar way, Drewett's excavations at Black Patch, Sussex, focussed upon the economic context of the settlement (1982). This was thoroughly explored from the level of the spatial organisation of activities within round-house structures and the function of individual structures at a site level, to the context of settlement sites within wider economic systems of procurement and exchange. These settlements were essentially seen as the self-sufficient economic units of extended family groups (*ibid.*, 341)

More recently Brück has built upon these studies by examining the spatial organisation of settlement over time, focussing upon potential key points within the 'lifecycle' of the settlement (1999b). The organisation of settlement space is explored at the level of the round-house and of the site, within the context of the lives of its inhabitants. Many settlement sites are considered to have been occupied for a single generation only (*ibid.*, 149). Brück's study emphasises that settlement sites of the Middle Bronze Age were potentially dynamic places, where settlements were re-organised and were subject to regular constructional or depositional events associated with the lives of the inhabitants (*ibid.*, 149-50, 152-55). At the end of the 'life-span' of a settlement, social groups may have re-located to other parts of the landscape, suggesting that settlement may have shifted over larger time scales and that tenure over broader areas may have been regularly re-negotiated as a result. This suggests that Middle Bronze Age settlement sites were not necessarily 'permanent' and may explain why a number of enclosures have been recorded overlying existing field systems, suggesting reorganisations of settlement and agriculture (Piggot 1942, 48; Barrett *et al.* 1991, 149-151).

The process of transition between the dispersed settlement patterns of the Early Bronze Age and Middle Bronze Age nucleated settlements and field systems remains ambiguous. Barrett and Bradley (1980) highlighted that the later Bronze Age was a period of "agricultural intensification" and explored different social and economic processes which may have shifted attention away from monuments and towards settlement-related foci at the end of the Early Bronze Age (Bradley 1980; Barrett 1980). At Cranborne Chase, Dorset, earlier unenclosed phases of occupation have been recognised (Barrett *et al.* 1991, 224), which may suggest a sequence of development from unenclosed to enclosed settlements. Elsewhere, Middle Bronze Age houses have been shown to post-date a sequence of existing field systems (Ladle and

Woodward 2009, 361), suggesting that a shift to more fixed forms of residency may have been part of a process of development at certain locations. Others have suggested settlement and field systems in higher landscapes may have spread from lowland areas and that the transition to more fixed settlements and agriculture may have been a gradual process (Bradley *et al.* 1994, 4). Barrett has explained the shift towards fixed settlement and more intensive agriculture in terms of a process, whereby increased recognition of individual lineage, inheritance and identity resulted in the formation of multiple social groups with individual tenures over land and resources (Barrett 1994, 147-51).

Whatever the pace of change, there was nevertheless a shift towards more fixed, enclosed and physically defined patterns of settlement and agricultural practice which culminated in settlements associated with intensive areas of arable cultivation. It is clear that these Middle Bronze Age landscapes have been most readily identified on chalk downlands where later pastoral land-use facilitated their preservation (Barrett *et al.* 1991, 143), or in upland contexts such as Dartmoor where stone land divisions have largely survived later land use regimes (Fleming 1988; Johnston 2005). This does not, however, adequately explain the absence of similar extensive settlement and agriculture in landscapes elsewhere in central and northern Britain (Bradley 2007, 195-6). It is also notable that Early and Middle Bronze Age agricultural landscapes have been recently recorded in river valley contexts in the south of England (Ladle and Woodward 2009). It seems probable, therefore, that these developments, whilst taking place largely across the south of England, may also have had a regionally distinctive character, where uplands and lowlands may have had different histories of agricultural and settlement development.

The archaeological evidence from Dartmoor suggests a complex cumulative development of settlement structures, enclosures and boundaries (Johnston 2005). Individual substantial stone roundhouses have been recorded either pre-dating or integral with stone field boundaries (e.g. Fleming 1988, 86-7), suggesting permanent settlements with clear and fixed tenures over land (Johnston 2005, 11-15). Absolute dating evidence is, however, lacking for the majority of settlement sites on Dartmoor. Recent palaeo-environmental data does, however, support the archaeological evidence for the development of settlements in the Middle Bronze Age with evidence for improved grassland tied to radiocarbon dating sequences (Fyfe *et al.* 2008). Elsewhere on Dartmoor groups of roundhouses have been recorded within distinctive circular enclosures such as at Grimspound (Bradley 2007, 191; Fleming 1988, 14). This suggests nucleation within the settlement pattern, as with sites elsewhere in southern England, although it is not certain how such forms of settlement site relate chronologically to the broader field systems and associated round-houses.

Middle Bronze Age nucleated settlements have also been recorded beyond southern England.



At Corrstown, Portrush, Northern Ireland, a Middle Bronze Age settlement with an exceptional concentration of 52 stone-built circular structures has been recorded, in association with a substantial ceramic assemblage (Conway *et al.* 2005). This suggests relative permanency in the occupation of a clearly defined place in the landscape.

There appears, however, to be diversity in the form of settlement in the Middle Bronze Age across other regions of Britain, where there is little evidence for nucleated Middle Bronze Age settlement. A Mid-to Late Bronze Age settlement enclosure on the Llŷn peninsula, Gwynedd, with circular concentric ditches and circular round-house structures (Ward and Smith 2001), appears to be an exception within the archaeological record for Wales. Nucleated platform settlements in southern Scotland (Terry 1995, 380-389) appear to belong in the Early Bronze Age when radiocarbon dates are calibrated.

Where cropmarks have not revealed enclosed settlements, individual roundhouses have been recorded by chance during pipeline schemes as far apart as the East Midlands (Beamish 2005) and southwest Scotland (Ronan and Higgins 2005). Such sites may belong to dispersed and unenclosed patterns of settlement, which are otherwise difficult to identify. In south Wales several Middle Bronze Age rectangular structures have been found preserved in the Severn estuary at Redwick (Bell *et al.* 2000, 293-99). An almost complete absence of artefacts suggests that they related to temporary and specific activities as part of a broader pattern of settlement (*ibid.*, 341). Contemporary roundhouses recorded elsewhere on the Severn Levels at Rumney and Chapeltump, in association with pottery and burnt stone, may suggest that different forms and modes of settlement existed across relatively close geographical areas (*ibid.*, 291-2 and 300). More sustained settlement may be represented by the evidence for successive structures and field boundaries at the coastal site of Gwithian, Cornwall (Nowakowski *et al.* 2007).

In the English west midlands settlement sites are almost entirely absent. Occasional chance discoveries have, however, been made which may indicate settlement activity, such as a pit with several sherds of Middle Bronze Age pottery and charred cereal grains at Shugborough, Staffordshire (Halsted forthcoming). The west midlands is largely characterised by burnt mounds in this period (Hodder 1990) often recorded adjacent to streams or bogs. Burnt mounds have also been extensively recorded across south-west Wales (Ehrenberg 1991, 43-4), with further examples recorded in north-west Wales (Kelly 1992; Hughes 1999). Burnt mounds are also a characteristic of the period in Ireland, with up to 2500 examples having been recorded in Co. Cork alone by the early 1990s (Buckley 1991; O'Kelly 1954; Cherry 1990). The function of burnt mounds has been the subject of debate with their early interpretation as cooking sites (O'Kelly 1954) being questioned in favour of ritual or medicinal interpretations, such as their use as sweat lodges (Barfield and Hodder 1987). Alternative functional explanations have also been put forward, such as their use in the processing of textiles (Jeffrey 1991). Whatever



the function of burnt mounds, their role as a component of Middle Bronze Age settlement patterns, has received less attention than their early interpretations as the product of hunting forays (O'Kelly 1954).

Settlement in the Middle Bronze Age in Britain appears, therefore, to be regionally distinctive. Certain areas are characterised by nucleated, enclosed and sustained settlement sites, associated with intensive arable or pastoral systems of agriculture, others with apparently more isolated settlement structures and many areas having evidence for temporary activities in wetland locations.

### **The Welsh border region**

A lack of evidence for settlement sites in the landscape of the Welsh border region persists into the mid-to late second millennium BC. There is no substantial evidence to suggest a shift in the settlement pattern envisaged for southern England from a mobile form of residency to one where fixed and bounded settlement sites were established (Brück 1999b; Brück 2000). Whilst many small single-circuit enclosures exist in the region generally (Whimster 1989), these are considered to belong to the later Iron Age and Romano-British periods (Wigley 2007b).

The very limited evidence that does exist for Middle Bronze Age settlement is characterised by ephemeral pits and postholes as at Rhuddlan in north Wales (Quinnell and Blockley 1994, 132-9 ) and Oversley Farm in northern Cheshire (Garner 2007, 102-3). The location of this activity suggests continuity with Early Bronze Age activities at both of these sites (*ibid.*; Quinnell and Blockley 1994, 139). The ephemeral nature of such evidence may, however, suggest that episodes of occupation were short-lived.

The nearest later second millennium BC settlement site to the study area is located in the upper reaches of the Severn Valley at Glanfeinion, Llandinam, Powys (Britnell *et al.* 1997; Fig. 24). A post-built circular structure of c. 7m diameter ( Fig. 25; *ibid.*, 180) was located on a gravel terrace above the Severn floodplain (*ibid.*, 179). The roundhouse was associated with two pits, one of which produced a significant assemblage of charred plant remains (*ibid.*, 184-186). This appears to demonstrate that the site was associated with the consumption of barley and wheat, possibly being dried within the structure (*ibid.*, 184). The presence of a quern stone and rubbing stone confirms the use of the structure for the processing of cereals (*ibid.*, 193). The site was clearly associated with arable agriculture, although there is no evidence for cultivation lynchets like those recorded in southern England (e.g. Barrett *et al.* 1991, 149-151). This may suggest that the growing of cereals in the upper Severn valley was small-scale and dispersed. A small amount of animal bone, including cattle and sheep/ goat (*ibid.*, 188), suggest the presence of livestock, whilst wild resources may also have been being exploited

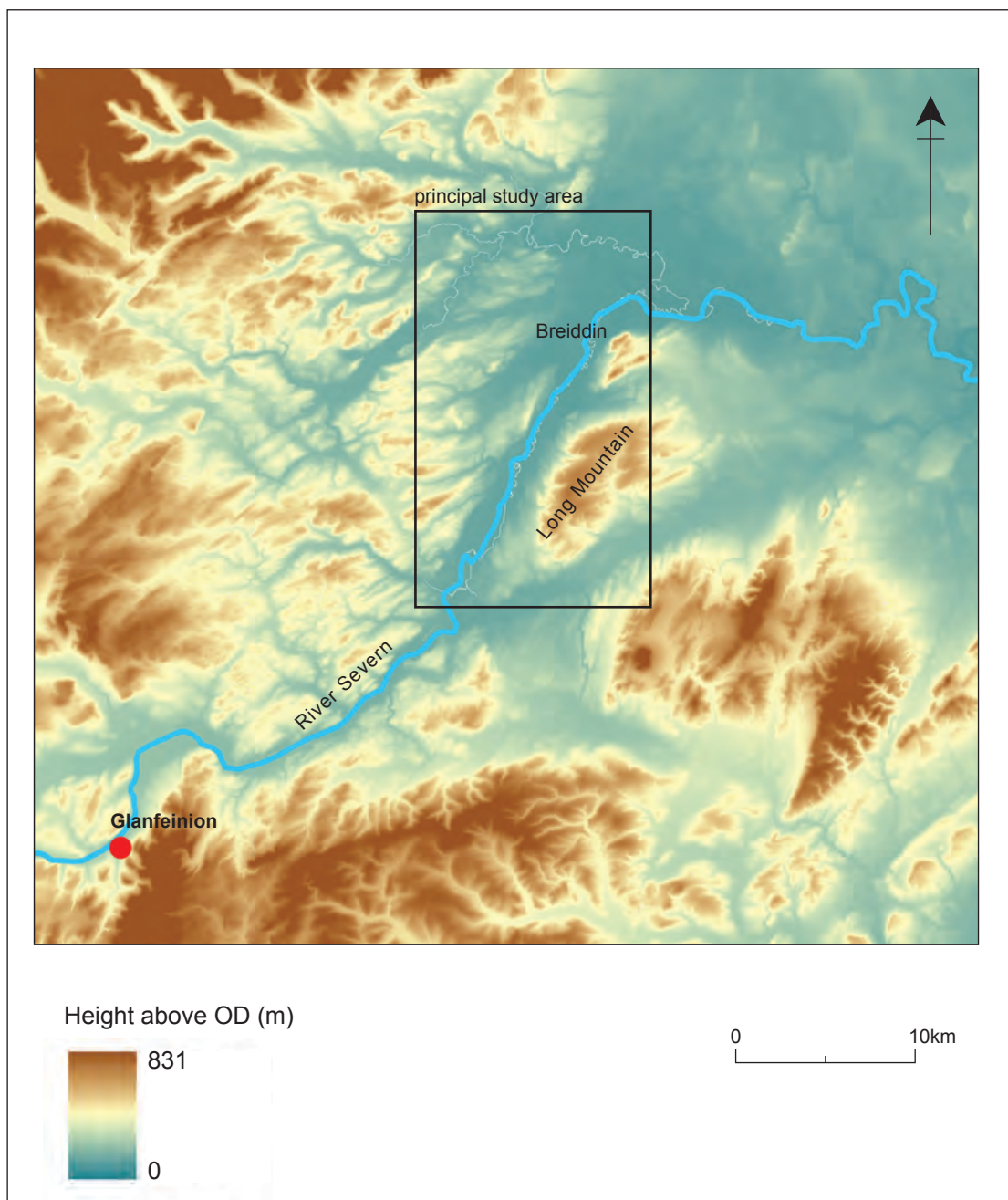


Fig.24 The location of the Glanfeinion round-house in the upper Severn valley

(*ibid.*, 186). The presence of pottery (*ibid.*, 188-193), fragmented within fills of the ring gully, postholes and pits, may indicate the discard of vessels originally used for the storage and consumption of foodstuffs as part of domestic activities at the site.

The site at Glanfeinion demonstrates that Middle Bronze Age settlement sites existed in the upper Severn Valley, alongside arable and pastoral farming. The site was identified by chance as part of a watching brief for pipeline construction (*ibid.*, 179) and demonstrates the difficulty in pinpointing the exact location of such activity. It does, nevertheless, set a precedent for the

potential location of Middle Bronze Age settlement locales elsewhere in the region, (although no others have been recorded, even where relatively extensive excavations have taken place in comparable contexts; e.g. Warrilow *et al.* 1986; Gibson 1994). Whilst large areas of the upper Severn valley may be masked by alluvium, this cannot explain a lack of evidence for similar sites beyond floodplains on gravel terraces. This may suggest that settlement sites were widely dispersed within a low density pattern of settlement. The presence of Middle Bronze Age pottery at two ring ditches on the gravel terrace at Four Crosses (*ibid.*, 74-75) may indicate continued use of funerary monuments in this period, although no settlement structures have been identified in close proximity.

What the evidence from Glanfeinion suggests is that roundhouse structures were present in the landscape on the margins of rivers, but that these may be particularly hard to detect. The structural evidence is fairly ephemeral and the lack of an enclosing ditch or field system, identifiable from the air or by other non-intrusive methods, may have inhibited the identification of further comparable sites.

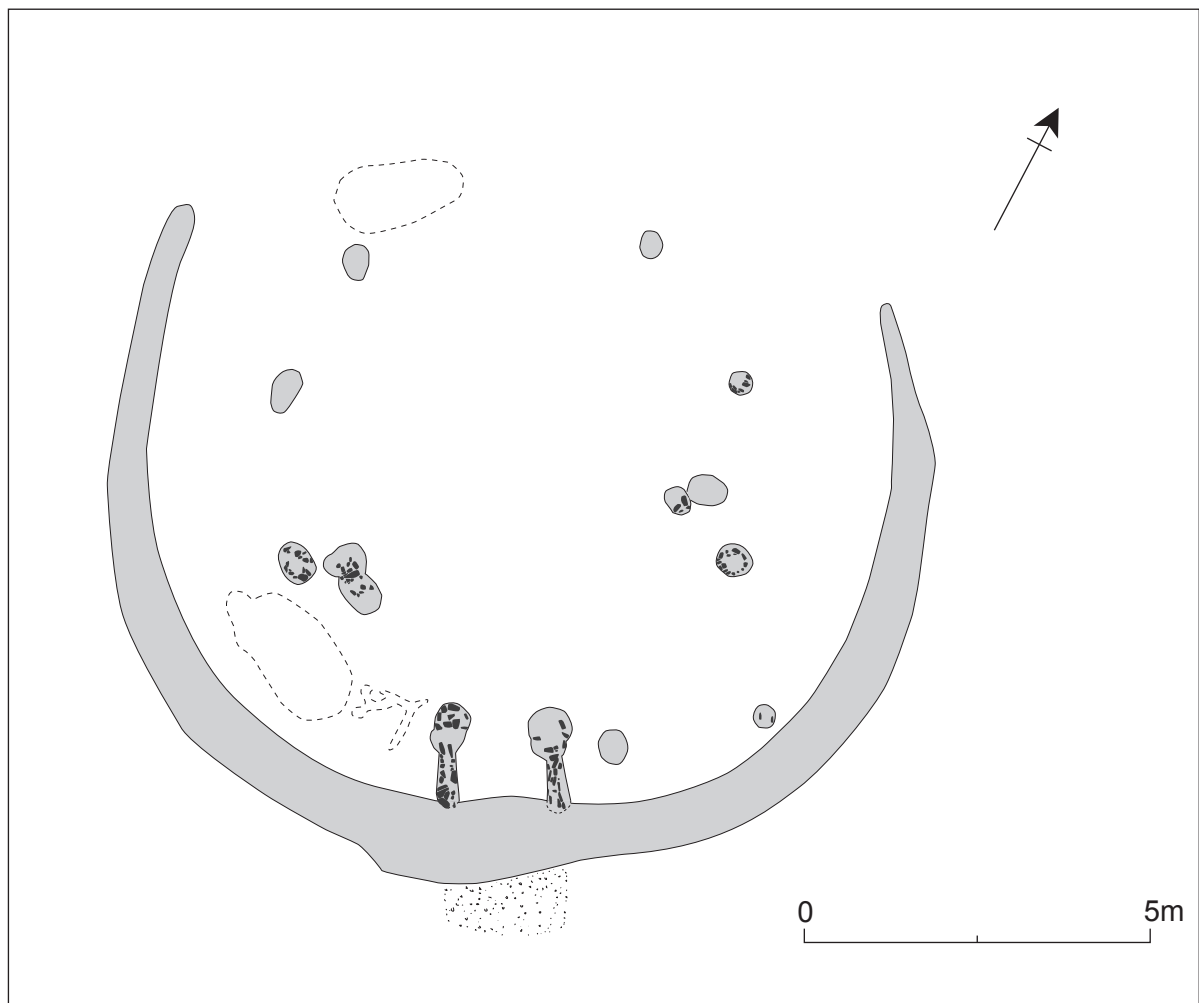


Fig.25 Middle Bronze Age roundhouse at Glanfeinion, Llandinam, Powys (after Britnell *et al.* 1997)



### Burnt Mounds in Wales and the west midlands regions

The most frequent evidence for Middle Bronze settlement in the broader region is in the form of burnt mounds, recorded in Shropshire (Ehrenberg 1991; Leah *et al.* 1998, 70) and the West Midlands (Hodder 1990). These sites have been consistently dated to the mid to late second millennium BC in the West Midlands (Hodder 1990, 106-7; Powell *et al.* 2008, 303-304) and in Shropshire (e.g. to between 1312 and 1168 BC; Hannaford 1999, 73).



Plate 1 The location of a burnt mound at Moseley Bog, Birmingham, West Midlands

Burnt mounds are relatively easily identifiable when compared to other ephemeral settlement features, and have been regularly located through excavation (e.g. Hannaford 1999; Hodder 1990), watching briefs (Powell *et al.* 2008, 303-4), field surveys (Hodder 1990) and geophysical surveys (Jones 1991). The relatively frequent identification of burnt mounds suggests that associated settlement activity would also be identified if present, yet this has not been convincingly demonstrated and the sites are often recorded in isolation.

Much debate has surrounded the function of these features, which usually centres on their potential use in cooking (e.g. O'Kelly 1954), or within social ritual as sweat lodges (Barfield and Hodder 1987). What is clear is that these sites represent distinctive activities, located adjacent to waterlogged bogs or streams (Plate 1), probably at a distance from settlement sites on

drier ground (Barfield 1991, 60). Examples of burnt mounds in Shropshire lie up to 500m away from potentially well-drained sand and gravel geology, which may have been more conducive to occupation (Halsted 2005, 41). There is nothing to suggest settlement and sustained occupation took place in close proximity to burnt mounds and very little artefactual evidence that may suggest closely associated settlement has been recorded at these sites (Barfield and Hodder 1987, 371). Activities at burnt mounds may, therefore, have been temporary within a broader pattern of settlement.

Burnt mounds are a distinctive site type, frequently recorded adjacent to permanent sources of water with a 'horseshoe-shaped' formation of burnt stone surrounding an associated pit or trough within which hot stones would have been placed to heat water (O'Kelly 1954; Jones 1991, 33; Dockrill 1991). Where burnt stone has been located at settlement sites this is often within pits or within middens and associated with varied artefactual assemblages, in contrast to the sparse artefactual assemblages often recorded at burnt mound sites. The use of burnt stone at settlement sites may not, therefore, have necessarily been associated with the same practices as at the more isolated and distinctive burnt mounds.

Burnt stone was recorded in association with the Late Neolithic settlement at Trelystan, Powys (Britnell 1982, 142), and at Oversley Farm, Cheshire, from earlier and later Neolithic hearths associated with structures (Garner 2007, 13-17), from an Early Bronze Age midden and pits (*ibid.*, 30-33, 47-48), together with postholes and hearths associated with contemporary structures (*ibid.*, 35-40). Burnt stone was also associated with postholes at Rhuddlan, north Wales (Quinnell and Blockley 1994, 57). Burnt stone is also a frequent feature of Middle and Late Bronze Age settlement sites in southern and south-western England, often associated with pottery and other artefacts recorded both within mounds, pit features and middens (Hearne and Heaton 1992, 29; Moore and Jennings 1992, 133; Lawson 2000; Ladle and Woodward 2003).

Burnt stone was, therefore, clearly a feature of settlement sites in the Late Neolithic and Bronze Age, where stones were being heated perhaps to boil water for a variety of purposes. In contrast, the fact that so few artefacts are recorded in association with burnt mounds (Hodder 1990) where they have been recorded in the West Midlands and Wales does, however, suggest that these sites may have been separated from more sustained areas of settlement activity and that they do, in fact, reflect very specific and isolated activities. This may in turn suggest that only a component of the community was engaged in activities at burnt mounds in wetland contexts, which may support Barfield and Hodder's interpretations for medicinal or social ritual at these sites (Barfield and Hodder 1987). Activity at burnt mounds may, therefore, have been temporary and reflect short lived episodes of activity associated with more sustained settlement locales elsewhere in the landscape.

The distribution of burnt mounds is patchy across the central and northern Welsh Marches and is likely to have been distorted by varying levels of survey and attention (as highlighted by Ehrenberg, 1991). No burnt mounds have been recorded in the broad upper Severn valley floodplain and the closest examples are recorded further upstream at Maesteg on a tributary of the Severn north of Llandinam, where the Severn valley becomes more constricted by surrounding uplands (Halsted 2005, 36). It is notable that settlement activity has been recorded at Llandinam on the margins of the River Severn, and it may be possible that the burnt mound at Maesteg had a close relationship with settlement locales in this area.

The fact that there is an extensive alluvial floodplain in the broad Severn valley east and northeast of Welshpool (Taylor and Lewin 1996) suggests that many locations suitable for the siting of burnt mounds may well be lost beneath masking deposits (Lewin 1992, 108-9). Systems of palaeo-channels have, however, been recorded associated with the River Severn (Taylor and Lewin 1996), and the Rivers Vyrnwy and Tanat (Taylor and Lewin 1997) to the north and northwest, some of which have provided Bronze Age radiocarbon dates (*ibid.*, 258; Taylor and Lewin 1996, 81). It is such stream channels that are likely to have formed a focus for burnt mounds in broader floodplain contexts (Hodder 1990; Barfield 1991), but no evidence for burnt mounds has yet been recorded in these valleys.

### **Conclusion: Middle Bronze Age settlement**

Settlement in the Middle Bronze Age in the upper Severn valley appears to have been present within river valleys, although has only rarely been detected, due in part to a lack of association with more visible enclosures or monuments. The evidence from Glanfeinion may indicate some degree of permanence in settlement location and an association with cereal production. There is nothing to suggest nucleation or enclosure in the study area and the lack of settlement sites, even in excavated areas where they may be expected, suggests a widely dispersed pattern of settlement.

Burnt mounds reflect temporary and specific activities at streams and bogs. These activities may have formed a component of the Middle Bronze Age settlement pattern in the broader region, reflecting mobility and repeated activities at specific places, but it is not possible to equate burnt mounds with the specific location of settlement locales. Instead, these sites may reflect distinctive practices which may have removed certain members of the community away from locations of occupation. It is notable that there are few burnt mounds in the study area of the upper Severn Valley. This may be a factor of identification and a lack of modern development, or may suggest that these sites clustered around wetlands in Shropshire and the west midlands rather than broader floodplain systems and narrow valleys to the west. If this is

correct, this may suggest that the use of burnt mounds and their relationships with settlement differed across the region, and that settlement patterns as a result may also have varied across relatively small areas.

The evidence from the study area suggests that Middle Bronze Age settlement was diffuse and non-intensive. It may not necessarily have been highly mobile, but a lack of enclosure suggests that settlement patterns may have been relatively fluid rather than fixed.

## **The Late Bronze Age (1100-800 BC)**

### **Background**

It has been argued that there is a greater diversity of settlement sites for the Late Bronze Age across Britain, when compared to earlier periods (Brück 2007). Settlement sites have been recorded from a number of contrasting landscape contexts, although it is largely uncertain how different forms of settlement relate to each other at a local or regional scale.

Unenclosed settlement has been recorded at the margins of rivers at various locations along the Thames Valley, for example (Yates 2001), and similar contexts elsewhere in southern England (e.g. Ladle and Woodward 2009). Settlements are characterised by roundhouses often found in association with large pits or waterholes, evidence for pastoralism and activities such as textile production (Moore and Jennings 1992; Hearne and Heaton 1994; Brossler 2001). The site at Reading Business Park revealed clusters of round-houses and other structures which reflect successive periods of settlement (Moore and Jennings 1992, 14). Extensive areas of Late Bronze Age settlement have been recorded at Shorncote Quarry, Gloucestershire, which probably reflect shifting and unenclosed areas of occupation (Hearne and Heaton 1994). This type of settlement activity extends into the midlands as far as Worcestershire. The extensive evidence for Late Bronze Age settlement at Kemerton, over an area of c. 7ha, has close parallels with sites such as Shorncote Quarry (Jackson and Napthan 1998).

Unenclosed forms of settlement may reflect changes in the organisation of agriculture and land tenure between the Middle and Late Bronze Ages. At Reading Business Park the settlement phase is considered to post date a rectilinear field system (Moore and Jennings 1992, 30). A similar sequence of activity with Late Bronze Age settlement post-dating a Middle Bronze Age field system has been recorded at Bestwall Quarry, Dorset (Ladle and Woodward 2009) and only occasional, ephemeral and ambiguously dated boundary features have been recorded at Shorncote Quarry (Hearne and Heaton 1994, 33). The impression this creates is of a succession of settlement foci within broad-scale systems of agricultural organisation and land division.



The evidence for landscape division in the Late Bronze Age in regions of southern England, suggests, nevertheless, that settlement was situated within defined systems of land tenure and agricultural organisation (Yates 2007). Large scale linear boundaries in Wessex have been considered to relate to pastoral systems of agriculture in the Late Bronze Age, post-dating smaller scale coaxial fields (Cunliffe 2004). There is, however, likely to be much regional variance in the relationship between settlement and systems of land division.

Further settlement foci may be represented by significant accumulations of artefacts at midden sites in southern England at sites such as Potterne and East Chisenbury in Wiltshire (Lawson 2000; Waddington 2008; McOmish 1996) and in the English midlands at Whitchurch, Warwickshire (Waddington and Sharples 2011). These locations indicate frequent, intentional and intensive deposition at specific locations within the landscape in the Late Bronze Age. These sites may have attained a conceptual identity and significance through their spatial relationship with settlement areas and repeated interactions with material remains (Needham and Spence 1997; Waddington 2008). Midden deposits at Runnymede Bridge (Needham and Longley 1980; Needham and Spence 1997) and at Wallingford, Oxfordshire (Cromarty *et al.* 2006), were located at sites adjacent to rivers. Both sites may have been entirely surrounded by water (*ibid.*; Needham 2000, 226-8 and 232-4) , suggesting very specific and restricted activities associated with occupation episodes and artefact deposition. Activity foci adjacent to water, therefore, potentially existed alongside more extensive systems of settlement across river terraces, as recorded at unenclosed and extensive settlement sites elsewhere in the Thames Valley for example (e.g. Moore and Jennings 1992).

A number of enclosed sites have also been recorded in Britain ranging from small settlements of similar form to those of the Middle Bronze Age, such as at Lofts Farm, Essex (Brown 1988; Brück 2007, 26), to potentially large enclosures at hill-top sites (e.g. Coombs and Thompson 1980; Savory 1971; Barrett *et al.* 2000, 155-156; Drewett and Hamilton 1999). Further sites in central southern England have evidence for phases of enclosure pre-dating Iron Age circuits, as at Danebury, Hampshire (Cunliffe 1995, 16). The enclosure at Rams Hill, Berkshire, which is unusually within the area of the later hillfort defences, dates from the later Middle Bronze Age and into the Late Bronze Age (Needham and Ambers 1994). Other forms of enclosed site include ring-works, such as Mucking North Ring, Essex (Bond 1988). Enclosed ring-work sites may have been associated with Late Bronze Age field systems in the south-east of England (Yates 2001, 73).

The evidence for Bronze Age settlement suggests that both open and extensive areas of settlement existed in certain regions, whilst settlement patterns may also have included small enclosed sites and activities upon prominent hill-tops. There may, in general terms, have been a contrast between shifting settlement locales which existed within broadly divided

landscapes, and more closely defined enclosed settlements. Middens may have been focal points of repeated activities for surrounding settlements, perhaps in the form of periodic feasting and ceremonial events.

### **The Welsh border region**

The principal evidence for Late Bronze Age settlement sites in the Welsh border has been recorded at hilltop sites. Evidence for circuits of enclosure pre-dating Iron Age defences have been recorded in a number of instances which at a small number of sites have been supported by Late Bronze Age radiocarbon dates. Varied assemblages of artefacts dating to this period support the interpretation that certain hilltops may have been defended settlements. The nature of settlement at such sites, its duration and frequency, is by no means certain, however, and the elevated context of prominent hills may to some extent have isolated them from surrounding settlement. It may be possible, therefore, that such locations were only occupied intermittently.

Where Late Bronze Age evidence has been recorded upon hilltops this is significant, since no Late Bronze Age settlement sites have been recorded in the surrounding landscapes of river valleys and floodplains in the central Welsh border region. This is despite a large number and wide variety of cropmark enclosure sites, some of which may potentially date to this period (Whimster 1989; Collens 1988). Where excavated evidence does exist, the more substantial rectilinear enclosures in the region date to the Late Iron Age and Romano-British periods (Britnell 1989; Grant 2007; Bain 2007).

It is possible that un-enclosed and shifting patterns of settlement were typical in low-lying landscapes and the fringes of river systems, as found in southern Gloucestershire (Hearne and Heaton 1994) and the southern midlands (Jackson and Napthan 1998). However, no such sites have yet been recorded in the central Welsh border region, despite some large-scale excavations in comparable contexts. Evidence from hillfort sites, therefore, remains the main focus for Late Bronze Age settlement studies. These are, however, unlikely to have existed in isolation and must have formed part of a broader pattern of settlement that has not yet been established in the archaeological record.

Radiocarbon dates from ramparts of excavated hillforts at Beeston Castle, Cheshire, Dinorben, Denbighshire, Llyn-bryn-dinas, Powys, and the Breiddin, Powys, suggest that these sites were enclosed in the Late Bronze Age (Ellis 1993, Savory 1971; Musson 1991; Musson *et al.* 1992). The most convincing evidence for Late Bronze Age settlement comes from the Breiddin Hillfort (Fig. 26) and Beeston Castle, where there is evidence for both palisades and early ramparts which pre-date Iron Age phases of enclosure (Musson 1991, 25-33; Ellis 1993, 21-

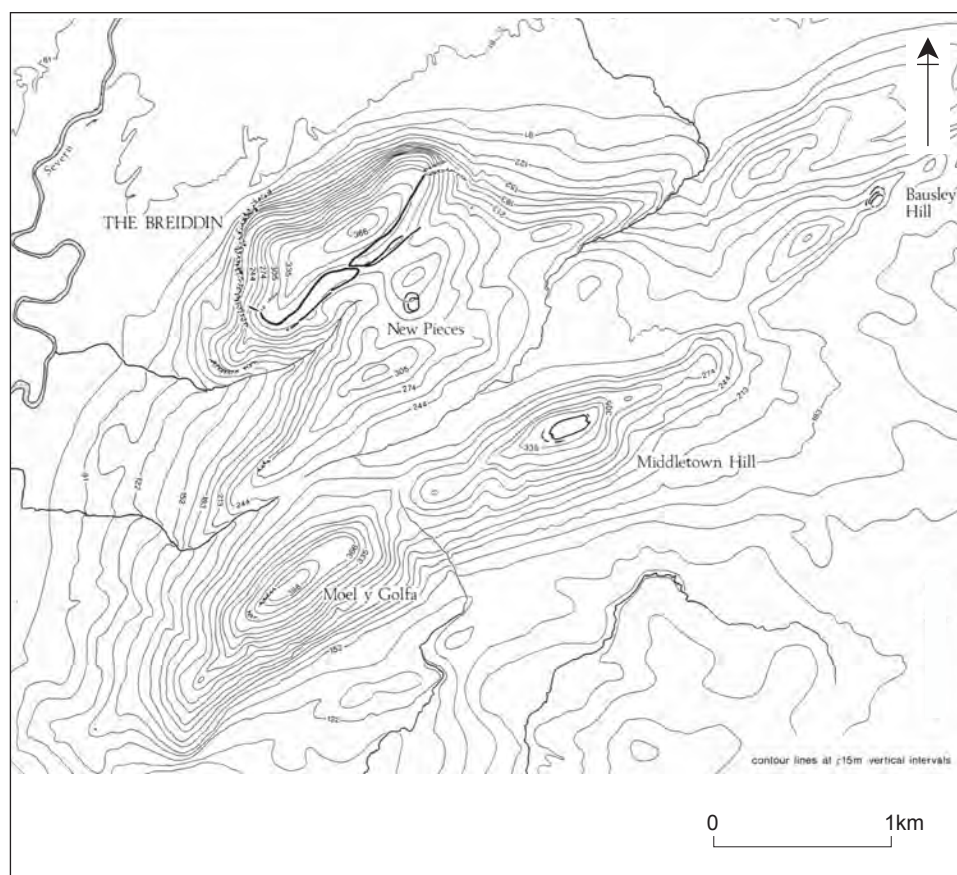


Fig.26 The Breiddin hillfort and nearby hilltop enclosures (after Musson 1991)

25). Metalwork and metalworking has been recorded at both sites, including two Late Bronze Age socketed axes at Beeston Castle which had been placed within an early phase of rampart (*ibid.*, 22). Assemblages of pottery and other artefacts at these sites also suggest occupation in this period.

There is some evidence to suggest that the Late Bronze Age occupation of hill-tops is more wide-ranging across the Welsh border region, although this is based upon relative dating sequences (Table 1; Halsted 2005). Pre-rampart palisade trenches at a number of sites, some of which were excavated in the earlier twentieth century, may, on the basis of subsequent radiocarbon dates elsewhere, indicate Late Bronze Age enclosure. Pottery assemblages may also support activity at a number of sites in the Late Bronze Age.

At Dinorben, Denbighshire, a significant Late Bronze Age hoard, found outside the north-west corner of the hillfort “at the foot of a crag” (Savory 1980, 119 and 187) may indicate the presence of a contemporary phase of occupation on the hilltop. Structures pre-dating the hillfort ramparts have also been recorded (Gardner and Savory 1964, 193) and a pre-rampart ‘occupation layer’ with animal bone and burnt stone has also produced a Late Bronze Age radiocarbon date (Savory 1971, 9-10).

Site name	C14 date	Metalwork	Pottery	Metal-working	Palisade (pre-rampart)	Early Rampart	Settlement structures	Comments
Beeston Castle, Cheshire (Ellis 1993)	●	●	●	●	●	●	●	LBA metalwork within rampart, postholes suggest possible structures
Maiden Castle, Cheshire (Forde-Johnston 1962)					●			Early palisade not demonstrably LBA
Eddisbury, Cheshire (Varley 1950)					●			Early palisade not demonstrably LBA
The Breiddin, Powys (Muson 1991)	●	●	●	●	●	●	●	Greatest variety of LBA finds. Evidence for settlement structures limited
Dinorben, Denbighshire (Savory 1971; 1980; Savory and Gardner 1964)	●	●			●			Hoard outside hillfort. Structures pre-dating the ramparts
Llywyn-bryn-dinas, Clwyd (Muson <i>et al.</i> 1992)	●		●			●		
Old Oswestry, Shropshire (Hughes 1994)					●			Early palisade not demonstrably LBA
Wrekin, Shropshire (Stanford 1984)			●					LBA/EIA pottery
Caynham Camp, Shropshire (Gelling 1959; Gelling and Peacock 1968)			●		●			Early palisade not demonstrably LBA
Titterstone Clee, Shropshire (O'Neil 1934)					●			Early palisade not demonstrably LBA
Fridd Faldwen, Mont. (Guilbert 1981)					●			Early palisade not demonstrably LBA
Crickley Hill, Gloucs (Dixon 1994)			●					Pottery compared with Breiddin assemblage (Dixon 1994, 216)

Table 1 Late Bronze Age dating evidence from hillfort sites in the Welsh border region

At the Wrekin, Shropshire, c.35km east of the Breiddin, a number of four-post structures may relate to occupation on the hilltop (Stanford 1984). These features have, however, been only loosely attributed to the Late Bronze Age to Early Iron Age on the basis of ceramic evidence (Morris 1984) while radiocarbon dates suggest origins in the earlier Iron Age. The presence of the Willow Moor hoard of metalwork (Chitty 1928a) in close proximity to the hill may, however, suggest that its dominant form in the landscape was being referenced in the Late Bronze Age, even if it cannot be demonstrated that the hill was occupied at this time.

It is also possible that different forms of settlement existed in upland contexts in the region. A possible circular hut structure, associated with a small circular enclosure, on the Denbigh Moors in north-east Wales, has provided radiocarbon dates in the Late Bronze Age for its construction (Manley 1990, 523-4). What appear to be associated field systems and enclosures in the locality are, however, undated. If the huts and enclosures are Late Bronze Age in date, the lack of any artefacts from the excavations (*ibid.*, 524) may suggest they were occupied on only a temporary basis and that other settlement foci existed elsewhere in the landscape.

### ***The evidence for settlement at Late Bronze Age hilltop sites***

The varied Late Bronze Age artefactual assemblages from the Breiddin hillfort and Beeston Castle suggest that they were the sites of occupation and settlement in this period (Musson 1991; Ellis 1993). The evidence for early palisades and rampart phases (Fig. 27) at these and other sites in the region may suggest that they were permanently occupied and defended settlements on prominent hills, similar to subsequent Iron Age hill-fort phases. The nature of occupation on these sites in the Late Bronze Age is, however, ambiguous (Bradley 2007, 222). There are few convincing settlement structures dating to the period at these sites, and their elevated and physically restricted positions in the landscape raises questions about the permanence of any occupation.

The nature of Late Bronze Age and Early Iron Age settlement at the Breiddin hillfort has recently been re-assessed on the basis of palaeo-environmental evidence (Buckland *et al.* 2001) from a waterlogged cistern within the hillfort. This has cast considerable doubt on interpretations that these sites were defended settlements, by suggesting that there was “nobody there” in the later first millennium BC (Buckland *et al.* 2001, 72).

Very low numbers of insect fauna species normally associated with human occupation were recorded from the sampled deposits (*ibid.*, 65). Instead a pastoral grazed and open landscape is indicated (*ibid.*, 68-70). In addition, the authors argue that the ‘Buckbean pond’ feature may have been the only water supply on the hill, and that this could not have sustained a large population (*ibid.*, 57). Whilst this re-analysis can only strictly be applied to the later first





millennium BC, it must also bring into question the potential level of sustained and permanent occupation on the hilltop in the Late Bronze Age.

In common with hillfort sites elsewhere in Britain (e.g. Barrett *et al.* 2000, 154-156), there is very little clear evidence for Late Bronze Age settlement structures at hillforts in the Welsh Marches. Subsequent Iron Age and later activities at these sites have, however, resulted in unclear dating sequences and it has been difficult to define clear settlement structures from the multitude of features encountered (Musson 1991, 28; Ellis 1993, 35-40).

At Beeston Castle, Cheshire, the artefactual assemblage from the site attests a Late Bronze Age presence, but no clearly defined settlement structures have been identified (*ibid.*). A number of pits recorded to the rear of the rampart and within the hillfort area, for example, form no coherent pattern (*ibid.*, 24-5 and Figure 22). Where circular post-built structures have been identified these have been placed into an Early Iron Age phase, although a complete Late Bronze Age vessel and metalworking debris suggest that at least two of these could belong to an earlier period of activity (*ibid.*, 23). Radiocarbon dates are inconclusive and may span the Late Bronze Age and earlier Iron Age. For example, a date of 2620  $\pm$  90 BP (HAR-4401) from a posthole (*ibid.*) calibrates to between 977-417 BC at 95.4% confidence. The evidence for Late Bronze Age settlement structures is, therefore, ambiguous and evidence for settlement in the period is largely reliant upon the artefacts recovered from the site.

The evidence from the Breiddin hillfort is similar to that from Beeston Castle. A relatively large and varied artefactual assemblage, including pottery and metalwork, suggests that the site was occupied in the Late Bronze Age, but there is very little structural evidence to elucidate the form of any such occupation. Post-holes, pits and hearths were recorded to the rear of the rampart together with cobbled surfaces, indicating occupation, yet settlement structures are not clearly identifiable (Fig. 27; Musson 1991, 28-33). A possible 'four-poster' may be attributable to the Late Bronze Age (*ibid.*, 32) but it seems more likely that this feature belongs to later phases of activity, in view of the number of well-dated four-post structures consistently attributed to the late first millennium BC elsewhere on the site (Musson 1991, 63). An ephemeral circular stake-built structure, associated with a number of pits, hearths and furnaces may be associated with Late Bronze Age metalworking (Fig. 28; *ibid.*, 60-61). A radiocarbon date from one of the pits in this cluster of features (HAR-1223; *ibid.*, 57) calibrates to between 918-772 BC at 68.2% confidence and 1013-544 BC at 95.4% confidence, spanning the Late Bronze Age and earlier Iron Age. A spread of Late Bronze Age pottery within a possible midden does, however, suggest at least a phase of occupation at this part of the site (*ibid.*, 61).

There is, therefore, little to suggest that any permanent or substantial domestic 'round-house' structures were constructed and occupied in the Late Bronze Age at these sites. If any



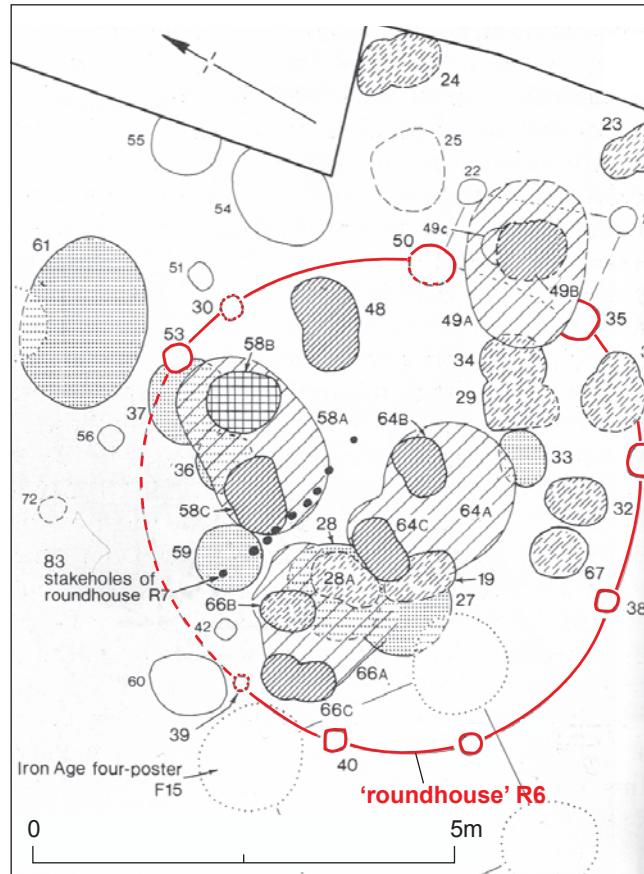


Fig.28 Possible Late Bronze Age round-house, pits, hearths, furnaces and working hollows at the Breiddin (Late Bronze Age features shaded; after Musson 1991)

significant numbers of people occupied these hilltops, for any significant period of time, it may be expected that not only individual round-houses would be encountered, but groups of such structures would have existed with evidence for re-building and spatial organisation. The truncation of any such features by later activities may not be able to entirely explain the absence of such evidence. It is possible therefore, that any occupation of hilltops was short-lived and related to specific events or activities which were regular enough to result in the deposition of pottery and metalwork.

### ***The function and landscape context of Late Bronze Age hilltop sites***

The evidence that enclosures in the form of palisades or early ramparts were constructed in the Late Bronze Age suggests that these sites were significant places and that considerable physical effort and organisation had been required to create them. An enclosed site serves to define space and to restrict access to that space. This is amplified in a hilltop context, whose natural terrain creates both an inherent barrier to casual access and an elevated topographic context which sets it apart from the surrounding landscape. Enclosing a hilltop, therefore, is a transformation which modifies its natural qualities and defines it both physically and

conceptually, as a significant place. An enclosed hilltop's physical presence in the landscape may also have been apparent through its prominent location.

These hilltops may have been recognisable from potentially great distances and may have acted as focal points for dispersed groups in the broader landscape (Figs. 29 and 30). The Breiddin hill is highly visible as part of a distinctive formation of hills (which also include Middletown Hill, Moel-y-Golfa and New Pieces; Fig. 26). The Breiddin is dominant when viewed from the Severn valley to its north and east (Plates 2 and 3; Musson 1991, 3), but also forms part of a visually striking group of hills when viewed from the south-west where the Severn valley opens out into a broader plain and where it forms an outlier of the Long-Mountain flanking the east side of the valley (Figs. 31-33). It is possible, therefore, that the significance of any activities at the Breiddin may have been heightened by a broad awareness of the presence of this site in the wider landscape and it is possible that the natural prominence of the hill also contributed to its significance as a place (*cf.* Bradley 2000).

Enclosed hilltop sites were, therefore, in prominent positions in the landscape, restricted in terms of access and were a focal point for what appears to have been episodes of settlement activity, although may not have been permanently occupied settlement sites. The evidence may suggest that hilltops were the focus of intermittent gatherings at sites which retained significance through their visibility and prominent natural formations. Selective access to a defensible enclosure appears to have been a prominent feature suggesting only certain social groups, or components of those groups were able to engage in activities on the hill. These groups may have been selected by kinship, territorial and political association or social hierarchy.

If these hilltops were prominent in the landscape, and were significant places, this may suggest that they structured the landscape at large scales. They may have formed distinctive places within territorial organisation which were recognised across wide areas of the landscape. Activities upon these hills may have conceptualised and actively referenced their position within both local landscapes and broader regions. It has been suggested for other regions that enclosed hilltop sites were significant for the control and observation of surrounding landscapes (Hamilton and Manley 1997). Activities at certain hilltops may, therefore, have played an active role in recognising territory and tenure at relatively large scales (Plate 4). These sites may have been a means of defining or negotiating broad landscape zones or territories between significant members of social groups.

Whilst it is possible that the prominent location of certain hilltop sites may have contributed to a broad perception of their significance and that they may have functioned at broad social and political scales, the evidence from the sites suggest that they were also a focus for activities

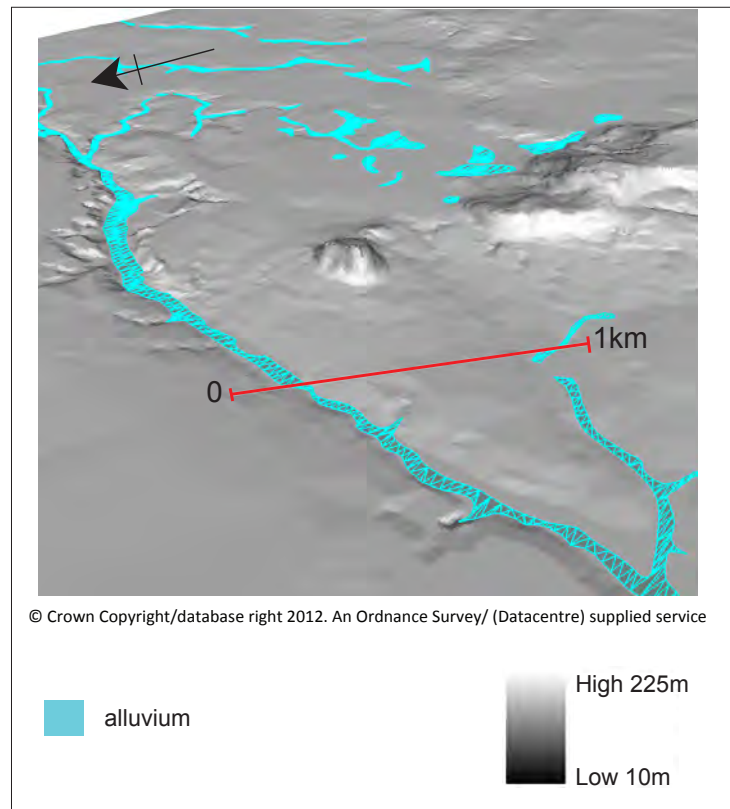


Fig.29 Digital Elevation Model showing the landscape context of Beeston Castle, Cheshire (z conversion factor x2).

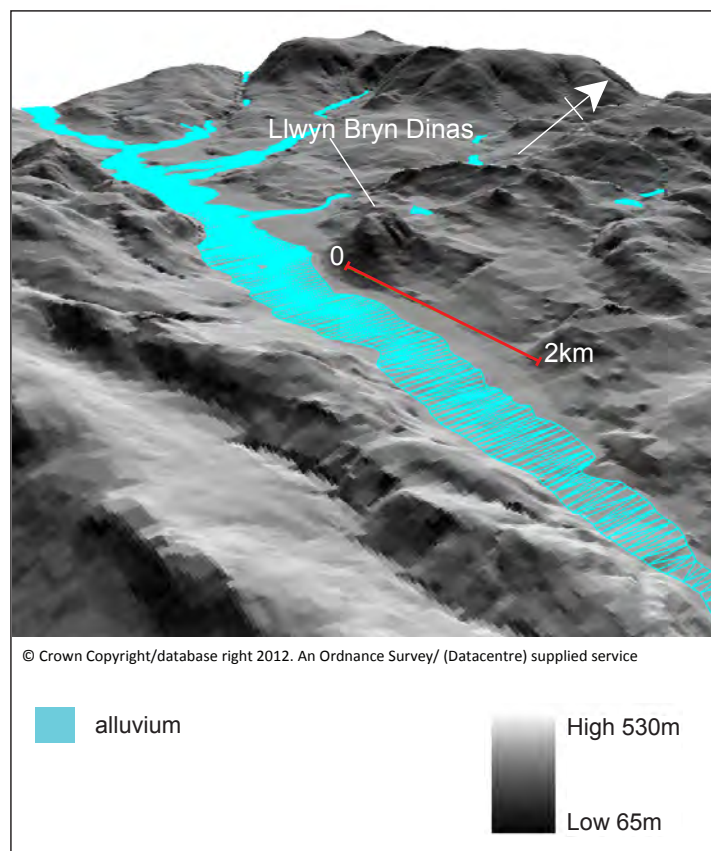


Fig.30 Digital Elevation Model showing the landscape context of Llwyn-bryn-dinas, Denbighshire (z conversion factor x2).

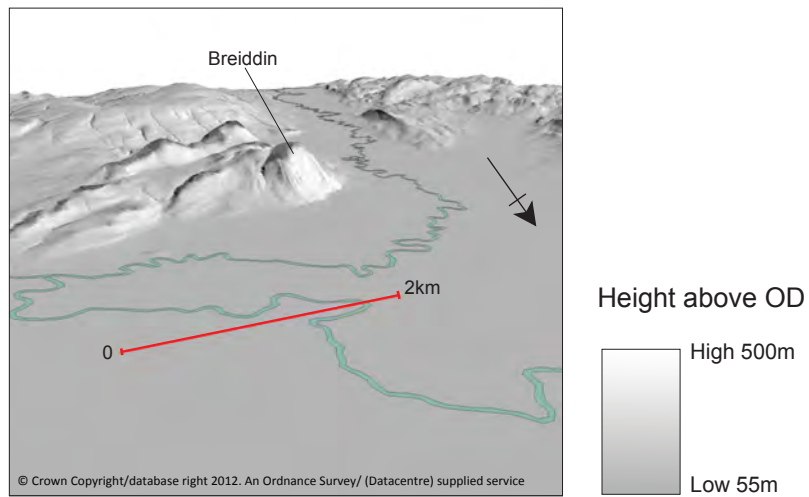


Fig.31 The Breiddin hills from the north-east

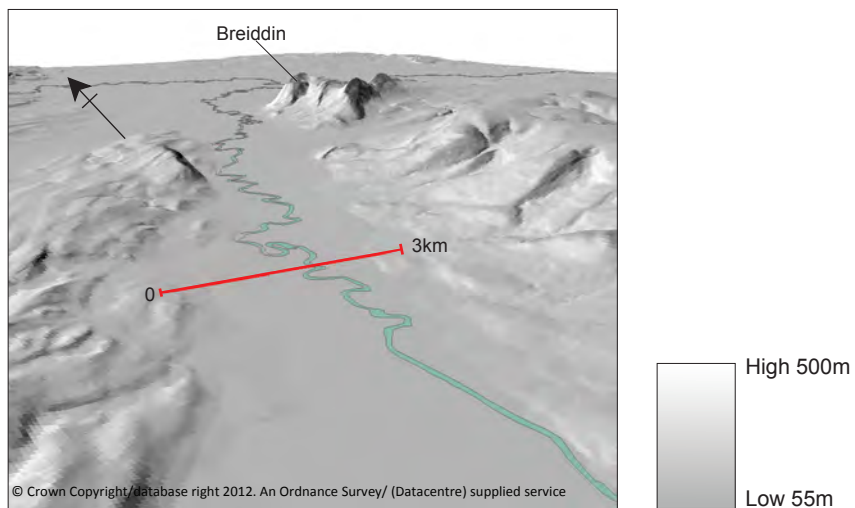


Fig.32 The Breiddin hills from the South-west

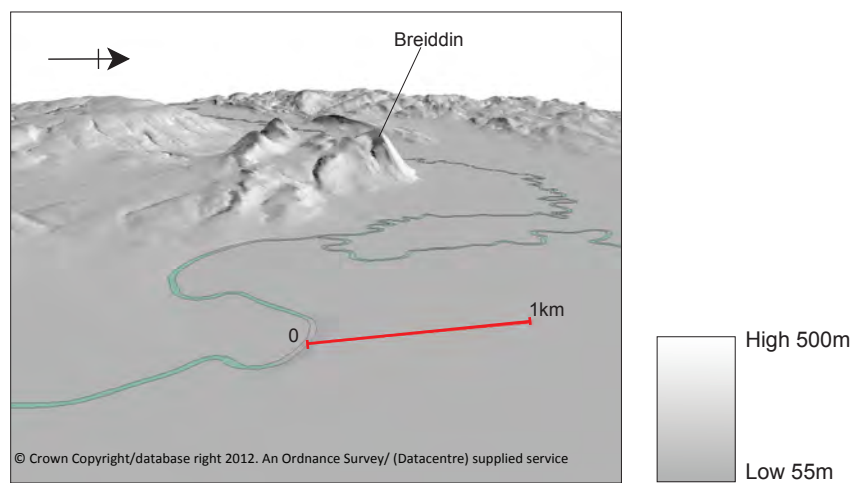


Fig.33 The Breiddin hills from the east





Plate 2 The Breiddin hillfort from the north, looking across field FW3



Plate 3 The Breiddin hills looking south-west

such as metalworking (Needham 1993; Tylecote and Biek 1991). Metalworking on hilltops may indicate that they were a focus of activities that were specialist and possibly associated with mysterious and dangerous procedures (Bradley 1998, xix). Such activities may have been taking place alongside other production and consumption associated with periods of occupation, and metalworking evidence has been recorded on settlement sites elsewhere (e.g. Hearne and Heaton 1994, 44-45). Metalworking may also have been accorded significant social status (Bradley 1998, xx) or been associated with activities that were considered different to the more everyday activities of food production or 'craft' activities. It may be possible that metalworking contributed to the special status and significance of certain hilltop sites in the landscape.



Plate 4 View from the Breiddin hillfort, looking north-east

If hilltop sites were the focus of specific and perhaps significant activities, potentially drawing upon specific components of social groups, and if these sites were not year-round settlements, then this suggests that other settlement foci existed elsewhere in the landscape which may have had other functions or have been the focus for a broader range of activities. There is, however, no evidence for settlement sites elsewhere in the landscape in this region. This must suggest that either hilltops were the sole focus for settlement activities, or that other settlement sites remain undetected. It is clear that river valleys, with a variety of natural resources and natural communication routes in the form of major rivers and valleys, could potentially have been a focus of settlement activity, yet this has not been demonstrated for this region. It can only be suggested that if such sites existed in alternative landscape contexts they were un-enclosed. Since unenclosed settlement has been recorded which is of a relatively intensive nature in other regions such as the Thames valley, with round-house structures, gullies, water-holes and

artefactual assemblages (e.g. Moore and Jennings 1992; Brossler 2001), this may imply that any Late Bronze Age settlement locales in the upper Severn Valley were dispersed, small-scale or only periodically occupied. Shifting settlement across extensive settlement sites has been suggested at Shorncote Quarry, Gloucestershire (Hearne and Heaton 1994) and at Kemerton, Worcestershire (Jackson and Napthan 1998), and it may be that settlement in river valley context in the central Welsh border region was shifting at larger scales and was non-intensive or episodic in nature.

## **Conclusion: settlement sites from the Late Neolithic to the Late Bronze Age**

In common with much of the rest of Britain there is very little evidence for settlement sites of the Late Neolithic and Early Bronze Age in the study area. The evidence that does exist suggests a relationship with funerary monuments and that these may to some extent have influenced the location of settlement. Any such settlement may, nevertheless, have been short lived and formed part of a more wide-ranging and possibly highly mobile pattern of occupation. There is some limited evidence to suggest that Middle Bronze Age settlement existed at the edges of river systems in the region, although this may have been part of a widely dispersed pattern. There is nothing at present to suggest processes of settlement nucleation or the enclosure of settlement sites in this period, although there does appear to have been an association with arable agriculture and the growing of cereals, which may suggest a degree of permanency. Although there is limited evidence for burnt mounds in the study area, the identification of these sites in the broader region suggests that fixed nodes in the landscape may have formed a component of settlement activity for the mid-second millennium BC. A lack of burnt mounds further west, where valleys emerge from the Welsh uplands, may suggest regional variation in patterns of settlement mobility.

A more dramatic change in the settlement pattern is apparent for the Late Bronze Age. The evidence for enclosed sites on certain hilltops, some of which have evidence for settlement in the form of artefactual assemblages, suggests the occupation of closely defined spaces in prominent locations. The presence of significant enclosures on defensible and prominent hills suggests access was restricted and selective. A lack of clear evidence for settlement structures may suggest that these sites were, however, occupied only intermittently. The selection of naturally prominent hills may suggest that they were recognised as significant at a broad scale. Periods of settlement activity on these hills may have been a means of contextualising social identity and territory, and may have been characterised by selected members of social groups. Such activity may have taken place as part of intermittent gatherings which, nevertheless, may



have represented only a component of settlement activity in the landscape, the evidence for which is, however, lacking.

As settlement evidence for the mid-Late Bronze Age in southern England has demonstrated, populations must have existed across broader areas of the landscape. It may only be possible to begin to understand patterns of settlement at a wider scale, however, through an examination of the full range of evidence for activity across the Late Neolithic and Early Bronze Age, the Middle Bronze Age and Late Bronze Age periods. Subsequent chapters will, therefore, examine patterns of artefact distribution in each period in order to assess the extent to which the deposition of objects may reflect patterns of occupation. The relationship between monuments and settlement will also be examined, together with the evidence for landscape enclosure. By examining all available strands of evidence for the location of activities in the landscape from the Late Neolithic to the Late Bronze Age, a clearer understanding of settlement patterns in the study area may be achieved.

## Chapter 3: The distribution of lithics in the landscape

### Introduction

In view of the limited evidence for settlement structures and activity foci for the Late Neolithic and Early Bronze Age in the study area, an examination of the distribution of lithics across the landscape has the potential to enhance our understanding of settlement patterns in this period. Much of the evidence for settlement in the form of artefact assemblages and occasional structures has been recorded through the excavation of monuments. Any concentrations of material in the broader landscape, recorded through systematic collection surveys such as fieldwalking, have the potential to indicate locations of sustained activities elsewhere. By examining the distribution of lithics, therefore, activity at monument sites can be placed in a broader context and a fuller understanding of their relationship with patterns of occupation in the landscape may be achieved.

Large scale fieldwalking surveys as part of the Wroxeter Hinterland Project, in neighbouring areas of Shropshire (White 1998; Gaffney and White 2007), has suggested a low density of flintwork across the lowland landscape (Barfield 1998). Where further large scale fieldwalking was undertaken in Shropshire as part of the North West Wetlands Survey (Leah *et al.* 1998), this also recorded low levels of flintwork. Where fieldwalking has been undertaken as part of commercial projects in lowland contexts in Shropshire, as with the Nescliffe Bypass, these have been unsuccessful in locating lithic material (Dingwall and Hughes 1993).

Very little previous fieldwalking in the study area had been undertaken prior to this study. The only significant surface collection survey, which identified an assemblage of flintwork surrounding the Early Bronze Age barrows at Trelystan, has yet to be published (Healey 1982, 183). The low visibility of artefacts from the ploughzone in this area has not given rise to traditions of fieldwalking such as those established in the Clun area of southern Shropshire (Barfield 2007, 99-102) or in the former county of Radnorshire (Gibson 1999, 48). Opportunities for fieldwalking in a region with large areas given over to pasture are also restricted, particularly in upland contexts (Silvester and Davies 1992, 32).

It was felt necessary, therefore, that further fieldwalking and test-pit sampling would significantly add to the understanding of settlement and the context of monuments in the study area. Despite an anticipated low level of lithic material in the landscape, variable densities of material may still, nevertheless, have the potential to indicate relative levels of activity which would be difficult to detect without more large scale and intrusive sampling methods. Fieldwalking and test pitting were, therefore, undertaken with a relatively intensive

sampling strategy at selected sites, in order to maximise potential data recovery.

The study of lithics in the landscape and the collection of new data have the potential to contribute to both small scale interpretations of settlement, monuments and landscape and provide the basis for comparison with assemblages from neighbouring regions of the Welsh border.

## Methodology

Field survey in the form of test pitting and fieldwalking was undertaken at lowland and upland locations in the landscape of the study area (Fig. 4). Locations for fieldwork were chosen in order to establish the degree of activity within certain topographic or geological contexts and to test the intensity of activity in the vicinity of ring ditches and round barrows.

The zones chosen for sampling included:

- areas within the vicinity of lowland ring ditches;
- areas distanced from lowland ring ditches;
- areas on the margin of river floodplains;
- areas on contrasting geologies and soils;
- areas adjacent to barrows in upland contexts and;
- areas with a greater distance from barrows in upland contexts.

The survey has aimed to address the question of the extent to which settlement clustered around areas of funerary and ceremonial activity in the landscape, and the extent to which monuments may have structured patterns of settlement in the period. In addition, fieldwalking over differing superficial geologies and topographic contexts assessed preferences for certain soil types relating to agriculture, which may or may not have influenced settlement location.

It is notable that many potential biases exist within any data collected through fieldwalking and the effects of these need to be considered in any interpretative analysis (Shennan 1985; Gaffney and Tingle 1989). Comparative analysis between surveys undertaken within different study regions must also take into account any methodological differences.

It is clear that flintwork from fieldwalking and shovel test pitting potentially represents a wide chronological range, from the Mesolithic to the Bronze Age (Leah *et al.* 1997, 148). Diagnostic artefact types will inevitably be accompanied by a significant amount of undiagnostic material

which may only be datable in very broad terms. Even in regions where lithic material has been recovered in large quantities, it has proved difficult to isolate anything other than a limited range of chronological indicators within assemblages (Richards 1990, 18). General attributions to the Neolithic or Bronze Age, for example, may be identifiable (Richards 1990, 16) and separated from Mesolithic material (*ibid.*, 16). A greater chronological resolution may, however, be difficult to achieve (Shennan 1985, 47).

It must be highlighted, therefore, that any concentrations of undiagnostic material in the landscape may not necessarily indicate contemporary activities. Yet where increased levels of material are identified, this may indicate cumulative activities relating to settlement over potentially long periods. Where little evidence for settlement sites exists, any concentration of activity that potentially relates to the Late Neolithic or Early Bronze Age, at least as a component of cumulative activities, provides a valuable basis for interpretation.

### **Test Pitting**

Test pitting in the study area was designed to sample the ploughsoil only, following methods of shovel test pitting undertaken by previous landscape surveys at Shapwick, Somerset, for example (Smith and Thorpe 1995). Test pitting was undertaken in the vicinity of ring ditch monuments at Four Crosses where two areas were sampled (Fig. 34) and between a pair of round barrows at Knapps on the upland ridge of the Long Mountain (Fig. 35). At Four Crosses an offset grid pattern was implemented, where the location of pits were staggered, in order to maximise data (Orton 2000, 90).

The test pitting at Four Crosses was intensive, with 25 test pits being excavated within a 2500m<sup>2</sup> area. Each test pit was excavated to a depth of 0.3m and contained approximately 75 litres of ploughsoil. In comparison, at Shapwick, Somerset, where an extensive programme of test pitting was undertaken, five shovel test pits were excavated within a 50 by 50m area, with each excavated to a depth of 0.2m (*ibid.*, 73). The Four Crosses sampling represented 0.25% of the total volume of soil within a 2500m<sup>2</sup> area (in comparison with 0.03% at Shapwick). Only eight test pits were excavated at the site of Knapps barrows, owing to difficulty of gaining access to the site.

### **Fieldwalking**

Fieldwalking at sites FW1, FW2, FW3 and FW5 was undertaken along transects spaced at 10m intervals with collection units at 10m intervals aligned N-S upon the national grid, and surveyed using measuring tapes and marker canes. All artefacts, including medieval and post-medieval pottery, brick and tile were collected. At the two upland sites field-walked time was

limited since it was not possible to walk fields once harrowed and seeded, at the request of the farmers. This, therefore, necessitated more rapid methods. At site FW6 transect spacing was measured using tapes, but the location of artefacts was recorded using a handheld GPS, accurate to 5m during the survey. At site FW7 transect positions were paced and finds marked using a handheld GPS accurate to 6m during the survey. At the latter two sites only lithic material was collected.

## Results

### Test pitting

A very low level of flintwork was recorded through the test pitting surveys in both lowland and upland contexts. This indicates that the use of lithic material in the survey areas was infrequent. This may reflect a lack of available resources, very specific discard patterns which focussed upon other locations, or a low level of activity generally.

The density of flintwork, with nine pieces having been collected from 4650 litres of soil at Four Crosses (75 litres x 62 test pits) is extremely low, despite a relatively intense sampling strategy. As a comparison an average of three flints were recovered per 150 litres of topsoil from an extensive test pitting survey at Shapwick, Somerset (Smith and Thorpe 1995, 75).

A retouched flake together with four flint chips, a broken flake and a small bladelet, were recorded from Four Crosses site TP1 (Appendix 3: No's 30-32 and 34-37). A further retouched flake and flint chip were recovered from Four Crosses site TP 2 (Appendix 3: 38 and 39). The material may indicate activity in the vicinity of ring ditch Sites 5 and 6 (Warrilow *et al.* 1986, 63-69), although it cannot be demonstrated that the flintwork and barrows are necessarily contemporary. The lack of tools and the generally low level of material may suggest that these locations did not witness sustained activities associated with settlement, which would support interpretations of a highly mobile pattern of residency (Brück 1999a).

No flintwork was recorded from the Knapps barrows site TP3, from 8 test pits and 500 litres of soil screened. Although less test pits were excavated than at Four Crosses, the lack of flintwork is marked when compared to the assemblage recorded from excavations at Trelystan, only 2.8km to the southwest. Here a total of 681 flints (Healy 1982, 175) were recorded through the excavation of two round barrows (Britnell 1982). Although the fieldwalking data is not published, additional flintwork was recorded, extending up to 200m from the site (Britnell 1982, 185). It may be expected, therefore, that the test pitting at Knapps would have produced an assemblage reflecting a similar level of activity.

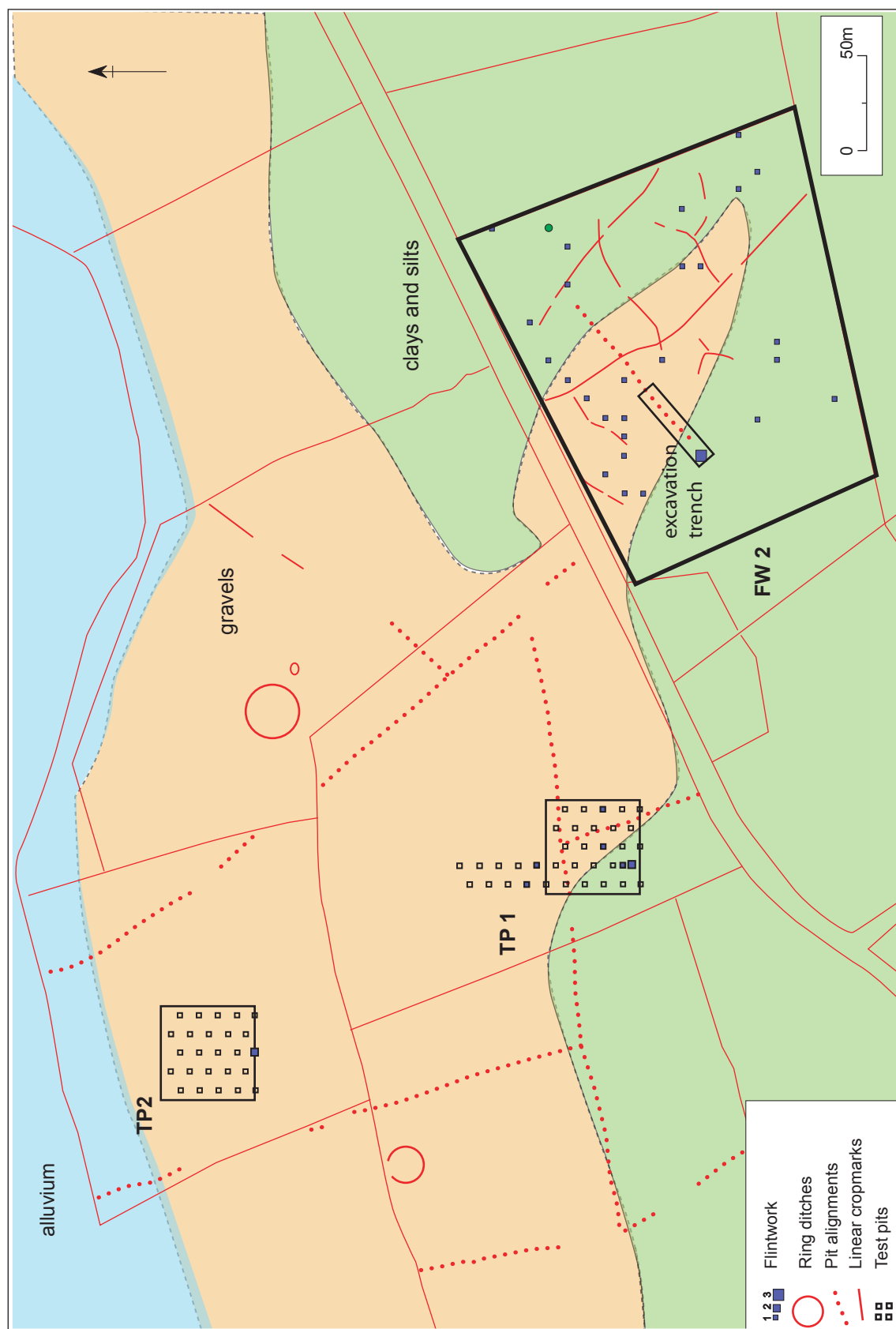
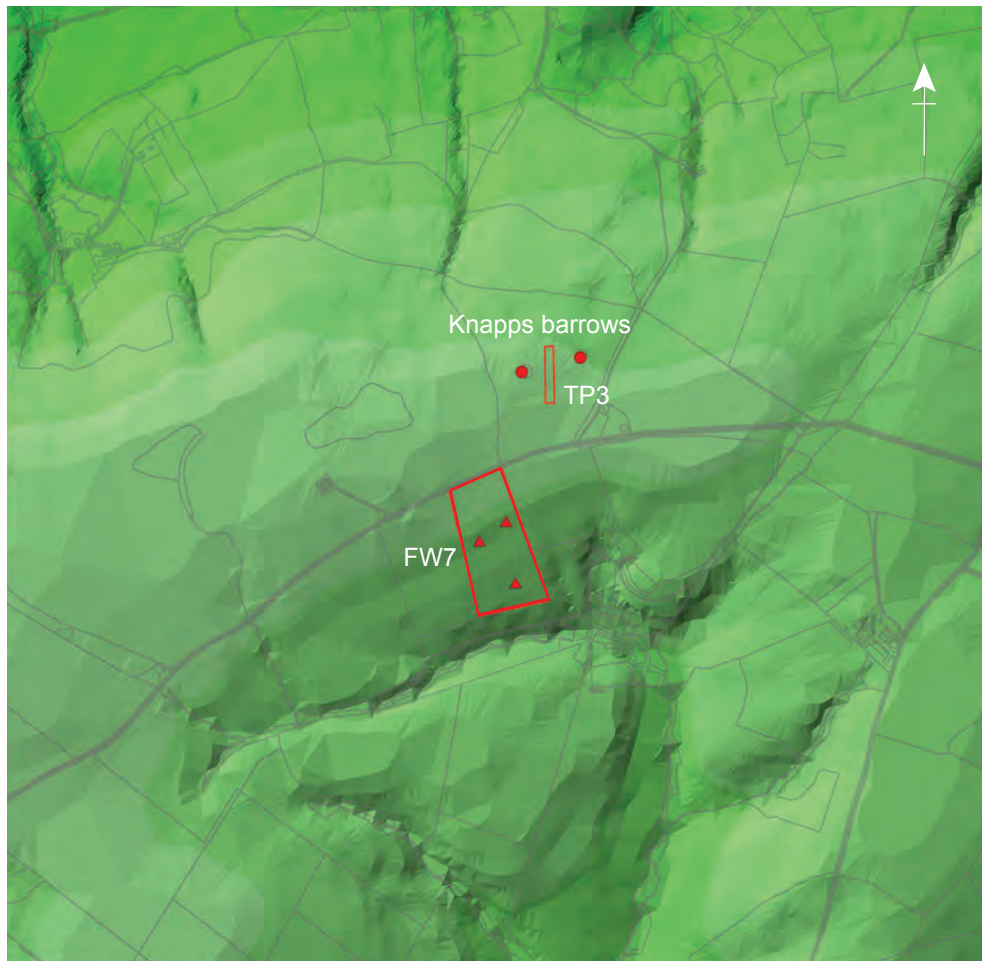


Fig.34 Test pitting and fieldwalking results at Four Crosses



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▲ Flintwork

0 500m

Height above OD (m)



Fig.35 Test pitting and fieldwalking results at Knapps barrows, Long Mountain, Powys.



Settlement activity and the deposition of artefacts was clearly not uniform across monument sites in upland contexts. Much of the flintwork from the site at Trelystan, recorded in residual contexts, is considered to have derived from Late Neolithic settlement activity pre-dating the Bronze Age barrows (Healey 1982). A lack of flintwork at Knapps suggests that significant settlement activity had not existed here prior to the construction of the monuments and that sequences of activity may have differed from those recorded at Trelystan.

The low level of flintwork from the more intensive Four Crosses survey also does not suggest that locations in close proximity to funerary monuments were the focus of sustained, regular or intensive settlement activities. Fieldwalking in the surrounding area has, however, produced a greater quantity of material, perhaps suggesting that the test pitting method in this region is not as efficient at identifying lithics. Intensive test pit sampling over small areas cannot identify the more extensive patterns that may be achievable through fieldwalking.

### **Fieldwalking**

A total of 73 flint artefacts were recovered from fieldwalking (Appendix 3) in the study area from a total of 21ha surveyed, which equates to a low density of around 3 flints per hectare. This is a particularly low density of lithics when compared with surveys in regions of southern England (e.g. Gaffney and Tingle 1989; Richards 1990). It does, however, compare well with the quantities and densities of flintwork recorded in both the Wroxeter Hinterland Survey (Barfield 1998) and the North West Wetlands Survey in Shropshire (Leah *et al.* 1998).

Despite a generally low level of lithic material, in common with data from Shropshire, flintwork densities do, nevertheless, vary across the areas surveyed suggesting relative differences in the levels of activity at certain locations in the landscape (Table 2).

The greatest quantities of flintwork were recorded from Four Crosses sites FW2 and FW5. These locations were chosen for their relative proximity to known ring ditches, and it may be this potential association which explains the greater quantities of material. Site FW5 produced the greatest density of flintwork and was located in the same field as two ring ditches (Warrilow *et al.* 1986, Site 7; Figs. 36 & 37). Site FW2 was located c.200-350m from the nearest known ring ditches (Sites 5 and 6, *ibid.*, 63-69). Fieldwalking here produced the greatest quantity of flintwork, although a slightly lower density of material than from site FW5. The levels of material from both sites is, nevertheless, closely comparable. The flint assemblages from these sites do, therefore, suggest that a relatively high level of lithic discard was taking place in similar contexts to those of ring ditches and funerary monuments. This has the potential to reflect contemporary settlement activity in the vicinity of these monuments.

Fieldwalking site	Area of survey m <sup>2</sup>	Total flintwork	Density Per ha
FW 1	25,000	1	0.4
FW2	35,000	28	8
FW3	57,700	14	2.4
FW5	23,500	22	9.3
FW6	36,000	3	0.83
FW7	33,000	3	0.90

Table 2 Total flint quantities per area field-walked

As a contrast, field FW3, at a greater distance (1.8-2km) from the barrow group at Four Crosses, produced a lower density of finds. To the east at FW1, only one flint was recorded in an area close to the current River Severn floodplain with no known monuments. This reinforces the impression that there may be a genuine association between locations of ring ditch monuments and the use and cumulative discard of flintwork in relatively close surrounding areas.

The data from upland fieldwalking in the vicinity of Knapps barrows and Trelystan barrows suggests that there was a low level of activity in areas surrounding these monuments. Earlier fieldwalking in the vicinity of Trelystan produced an assemblage of material which suggested activity in the surrounding areas up to 200m from the barrows (Healey 1982, 183). Further potential settlement activity in the vicinity is represented by a small assemblage of material collected at field FW6, c. 600m to the north-east of the site of the barrows. Here, a flint scraper was recorded, comparable to those recorded from Trelystan (Hugo-Lamdin-Whymark pers. comm.), along with two other pieces. At FW7 on a steep south-facing slope to the south of Knapps barrows, a similar low level of flintwork was recorded (Fig. 18). As with the flintwork from areas around the Trelystan barrows, this may indicate occupation in landscape contexts where Early Bronze Age monuments were constructed. It is, however, difficult to demonstrate that any settlement was necessarily contemporary with those monuments.

Where higher levels of flintwork have been recorded in the vicinity of monuments at the lowland site of FW5, it may be possible to examine the distribution of artefacts at a small spatial scale, in order to assess the extent to which the presence monuments influenced

their deposition and the location of settlement activities. Extensive fieldwalking as part of the Maddall Farm Project, Berkshire, however, demonstrated that distributions of flintwork can vary as a result of ploughing and differential land-use over successive seasons (Gaffney and Tingle 1989, 21).

Where two ring ditches have been recorded at field FW5 there appears to be a cluster of artefacts to the south of the larger ring ditch and to the north-west of the larger ring ditch. This may suggest different activity areas or phases of occupation, although may also be the result of differential plough dispersal (Fig. 36). The presence of two tools in the vicinity of the larger ring ditch, including a thumbnail scraper may, however, indicate a focus of settlement related activity (Fig. 36).

### **Topography and geology**

The topography of field FW5 was essentially flat, but subtle differences were measured through a differential GPS survey in order to evaluate the extent to which flintwork may have been deposited at specific locations favoured for settlement (Fig. 37). The terrain shelved off at the north end of the field where a stream marked a step in the topography at the junction with the Vyrnwy floodplain. The larger ring ditch occupied a subtly higher area of the field, which may reflect a ploughed out barrow, whilst another slightly higher area was recorded to its north-west. There does not appear, however, to be an exclusive relationship between higher areas of the field and the distribution of flintwork. This may suggest that very subtle differences in topography did not have an effect upon the location of activities, and differences in the relative distribution of flintwork are more productively examined at larger topographic scales.

At a slightly larger scale the topography of field FW2 has been determined through the availability of LiDAR data, enabling a detailed digital elevation model to be produced. This field produced the highest number of flint artefacts, and can be seen to occupy a rise in the local topography to the south of the Vyrnwy floodplain (Fig. 38). The distribution of flintwork appears to show a spread of material around the lower slopes of this rise in topography. This may suggest that settlement activities and the discard of flintwork were located in these areas, but it is more likely that the distribution reflects artefact movement down-slope from its original position on a local rise. Excavation on this rise in topography at site FC07, has produced a further small assemblage of Late Neolithic-Early Bronze Age flintwork and pottery, possibly associated with a timber structure and pit alignment (Appendix 1), indicating that the deposition of artefacts was taking place at this subtly higher point in the local landscape.

Although lower quantities of flintwork were recorded from test pitting to the north, the difference in method means that the two sets of data are not directly comparable, and it is not

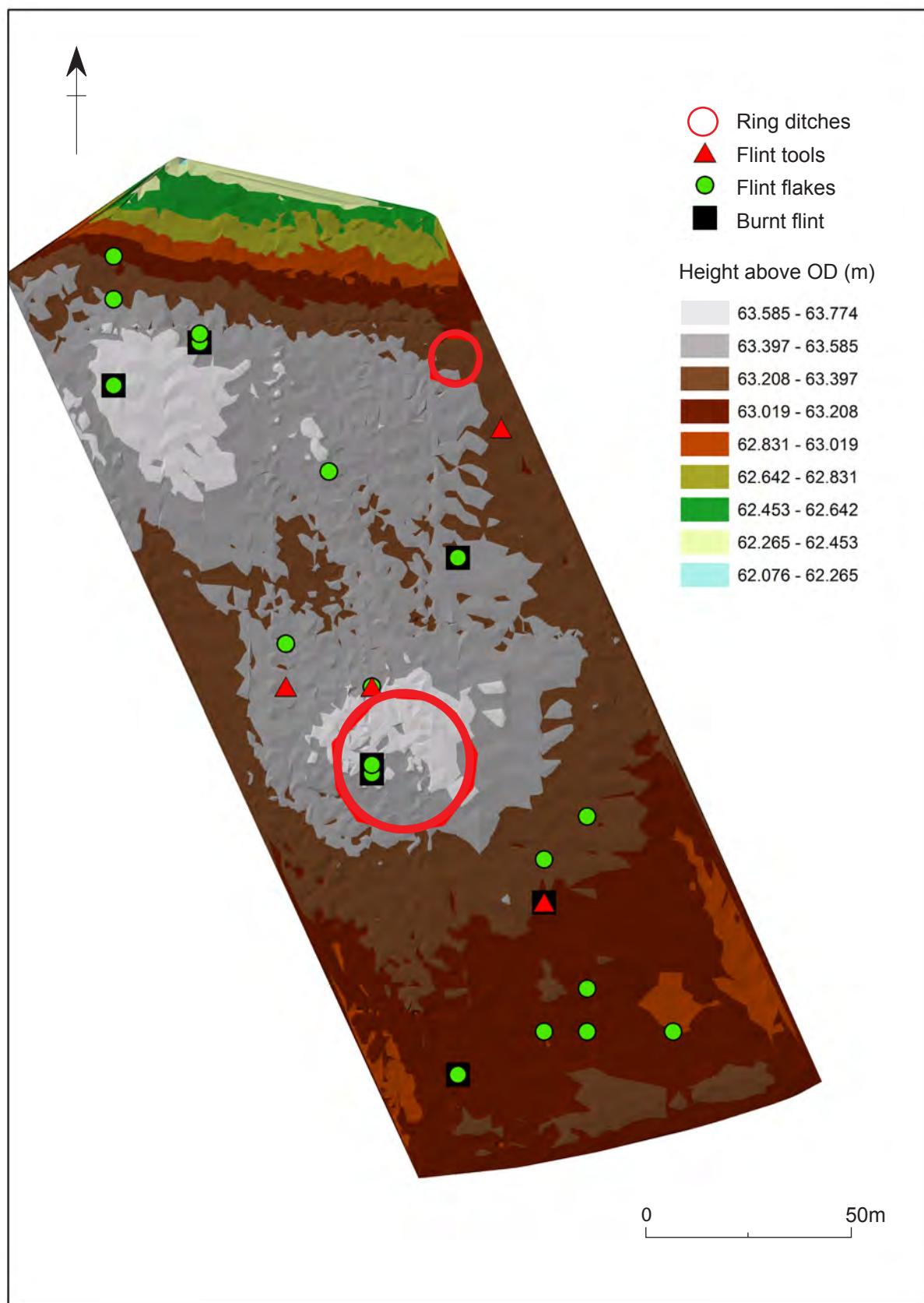


Fig.36 Flintwork distribution at site FW5, Four Crosses

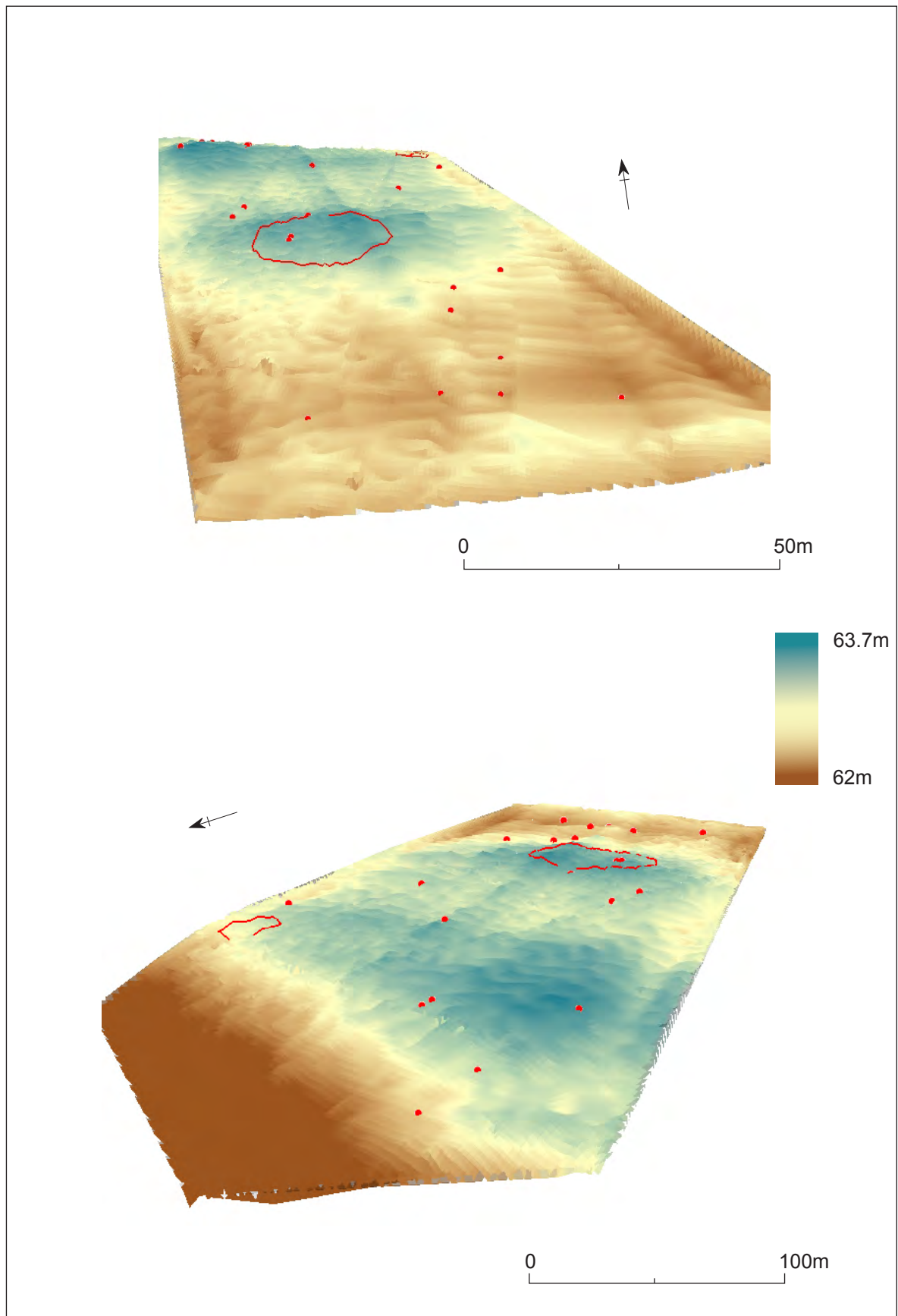


Fig.37 distributios of flintwork and ring ditch locations at site FW5, Four Crosses

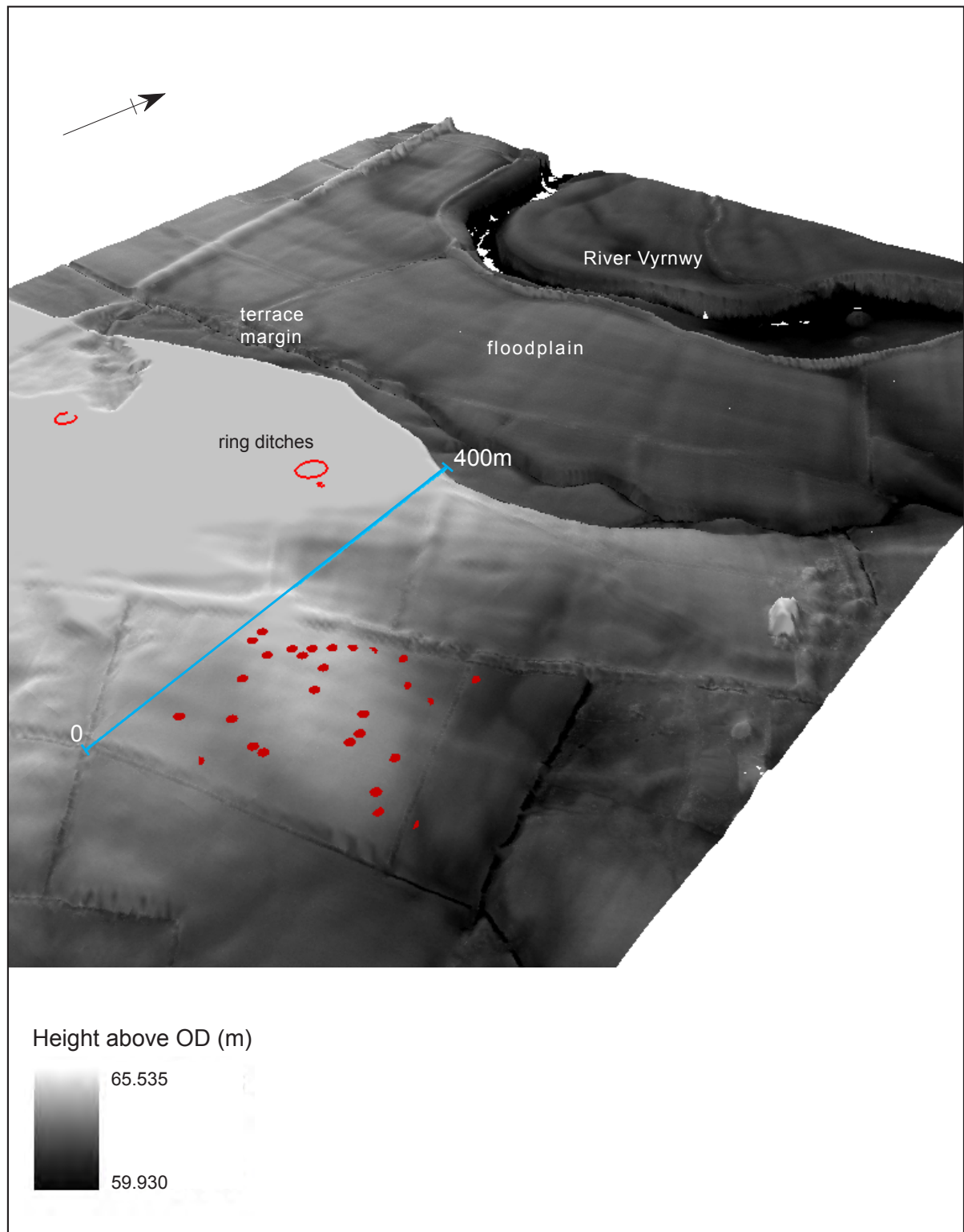


Fig.38 Flintwork distribution, ring ditches and topography at site FW2, over LiDAR elevation model  
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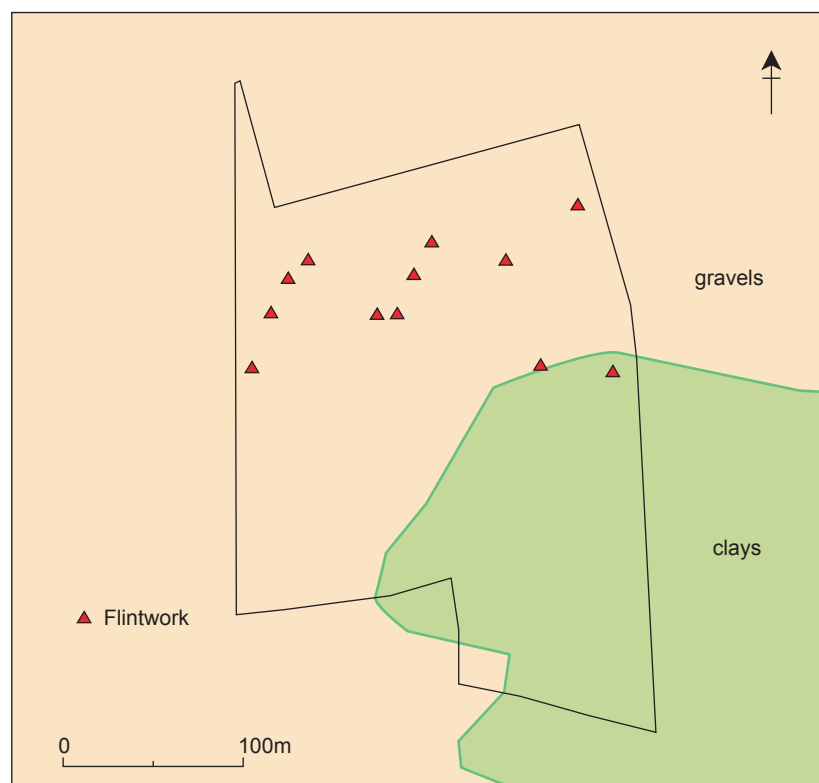
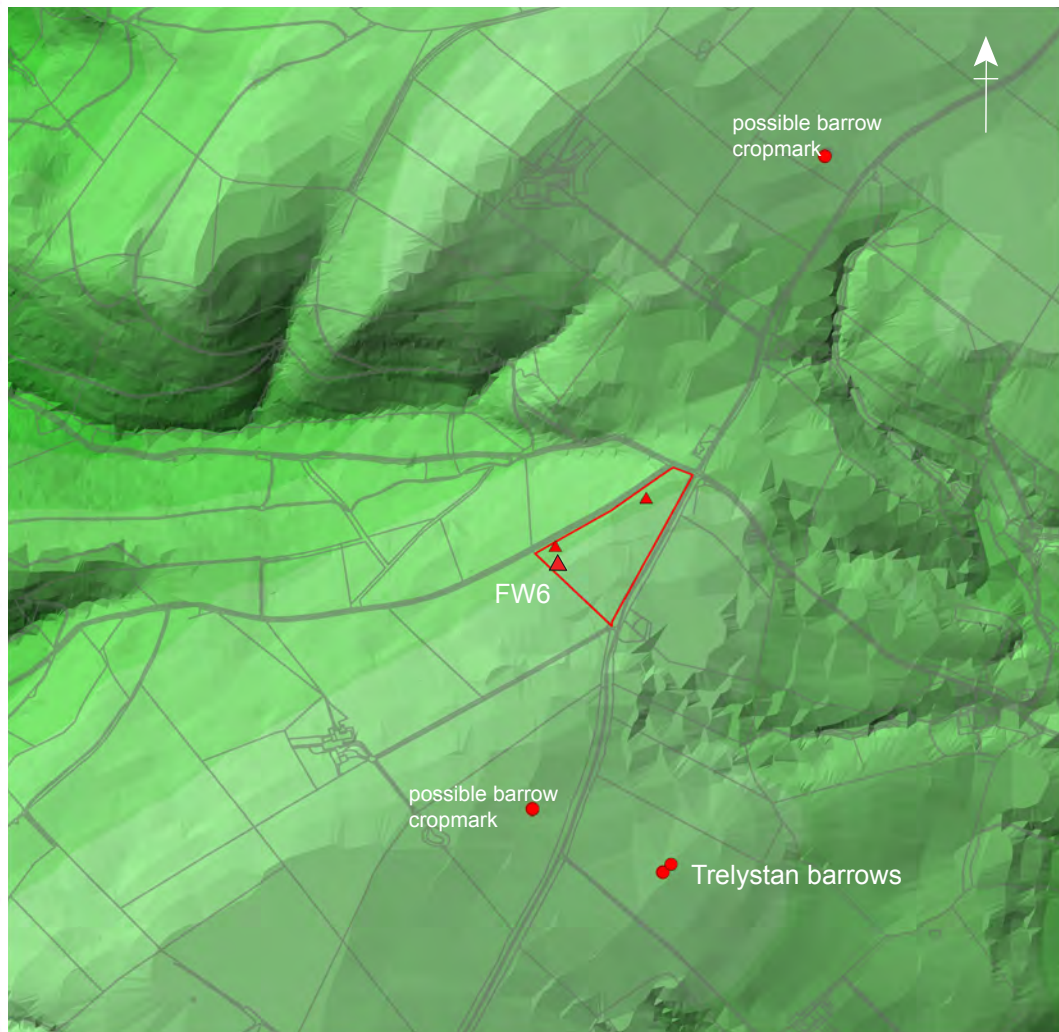


Fig.39 Fieldwalking results at site FW3 in relation to underlying geology

possible to suggest on this basis that other areas of this local landscape were less frequently occupied. Indeed, the fieldwalking from Site FW5 indicates that occupation and deposition of artefacts were taking place close to the edge of the Vyrnwy floodplain.

Further to the south, FW3 was located at a position where land began to slope southwards towards the Severn floodplain (Plate 2). It is notable that flintwork was recorded principally from the northern higher part of the field (Fig. 39). It is possible to suggest, therefore, that the elevated area marked a genuine preference for settlement activities and the deposition of material in prehistory. This is perhaps underlined by the fact that only one flint artefact was recorded close to the edge of the floodplain at site FW1, 700m to the east. It may also be significant that the flintwork from field FW3 was found almost exclusively on the areas of gravels rather than the clays present in the lower parts of the field. This may suggest a preference for certain soil conditions and it is notable that the areas of the survey with the highest densities of flintwork at Four Crosses were also in areas of underlying gravels.

No significant difference in the quantity of artefacts was recorded between the north-west-facing slope at FW6 (Fig. 40) and the south-east facing slope at FW7 (Fig. 35) on the Long Mountain. This does not, therefore, support suggestions that south-facing slopes were the preferred location of settlement activity, although the quantity of material collected is perhaps too low to generalise.



▲ Flintwork

0 500m

Height above OD (m)



Fig.40 Fieldwalking site FW6 and flintwork on the Long Mountain

The low levels of flintwork recorded at FW6 and FW7, in contrast to higher densities recorded in lowland areas, may suggest a relative preference for settlement generally across lowland landscapes at Four Crosses and Llandrinio. The assemblage of flintwork from excavations at Trelystan, however, indicates that certain locations in the upland landscape formed specific foci for episodes of occupation and the deposition of lithic material (Britnell 1982).

### **Potential biases in the data**

The distribution of flintwork from fieldwalking in the study area has indicated that there may be a general preference for activity in lowland contexts, on slightly elevated areas of terrain with relatively free-draining gravels and in the vicinity of ring ditches. There may, however, be a number of biases in the data which must be considered when evaluating the results of fieldwork.

There are greater densities of flintwork from fields walked in ploughed and seeded conditions, which noticeably aided the recognition of artefacts on the surface of the finely broken and harrowed soil (Table 2; FW2 & FW5). In contrast, lower densities of artefacts were recorded in fields that were walked in an initial ploughed condition (FW3, FW6, FW7).

The distinctive distribution of flintwork in FW3 may, however, suggest that this was representative of the distribution of artefacts, even if densities were lower than fields walked in better conditions. There were also greater densities of flintwork from roughly ploughed fields in a lowland context at FW3 than in the similar conditions walked at the upland locations of FW6 and FW7. This suggests, therefore, that a genuine difference in the levels of activity between the two areas existed.

Due to constraints of time owing to limited access necessitated by the farming regime, a different collection methodology was used for the upland sites. In order to speed up the fieldwalking process, fields in the uplands were walked along marked transects, collection points were not subdivided along transects and instead find spots were logged with a handheld GPS along each row. At the lowland sites, in contrast, finds were bagged along transects which were marked every 10m. Time spent fieldwalking at these locations may have been greater than at locations where collection points were not marked along transects and the impetus to walk faster along greater distances between marked points may have inadvertently increased as a consequence. This may have reduced the numbers of lithics recorded in these upland areas.

Another factor which may have affected the recovery of lithics at the upland locations was the relatively steep gradient present in the fields (FW6 and FW7). There is a difference in height of c.25m between the higher and lower parts of field FW6, and a difference of c.29m

between the higher and lower parts of field FW7. There is potential, therefore, for colluvial action to have masked the recognition of artefacts at these locations and to have distorted any spatial patterning. Flintwork was, however, recorded from the lower parts of both fields, which may be explained by artefact movement down-slope across the plough soil. The level of material from these locations was so low, however, to render this inconsequential, since there are arguably too few artefacts to attempt meaningful analysis of their distribution.

There are undoubtedly factors which may have affected the quantities of artefacts recovered from certain locations in the landscape of the study area. There are, nevertheless, useful observations that can be made about flintwork in the landscape. Artefacts were undoubtedly deposited in the vicinity of the ring-ditch group at Four Crosses and relatively close to the River Vyrnwy floodplain. Further south similar conditions of fieldwalking between sites FW3 and FW1, suggest that greater quantities of flintwork and arguably more frequent activity was undertaken on the higher ground at field FW3, when compared to the lower areas of that field and areas closer to the Severn floodplain at site FW1. Similar conditions of fieldwalking may suggest greater levels of activity in the lowland floodplain margins of field FW3 than at the two upland sites FW6 and FW7.

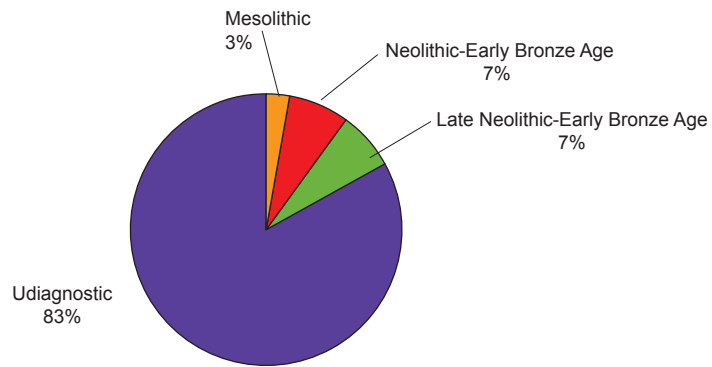
## **Comparative analysis**

Fieldwork in the study area produced a low number of flint artefacts. It may be possible to suggest some variation in distribution across certain areas of landscape and a possible association with the location of funerary monuments. In order to place the assemblage into a broader regional scale it is necessary to examine the results of other comparable surveys in the Welsh border area and further afield. By assessing the quantities of material recovered from other surveys it may be possible to evaluate varying intensities of settlement at a larger scale. It is first necessary to outline the dating evidence from the field survey and from fieldwalking assemblages elsewhere in the region, in order to assess the extent to which the data may reflect Late Neolithic and Early Bronze Age activity. Assemblages from excavations in the region are also examined as a means of placing the results of field survey into a wider context, and evaluating the relative intensities of activity at certain locations in the landscape.

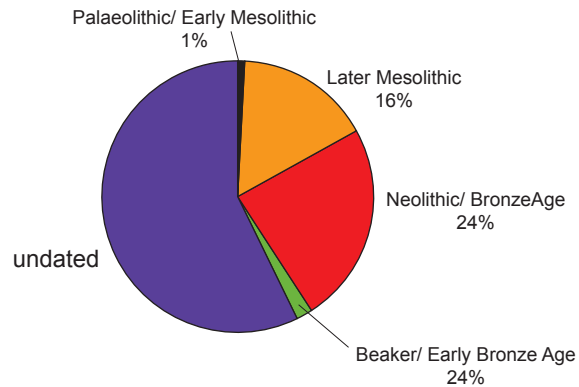
### **Dating of the assemblage**

Very few chronologically diagnostic pieces were recorded through fieldwalking and test pitting surveys as part of this study, with only a small proportion being specifically attributable to the Late Neolithic and Early Bronze Age (Fig. 41; H. Lamdin-Whymark, pers. comm.).

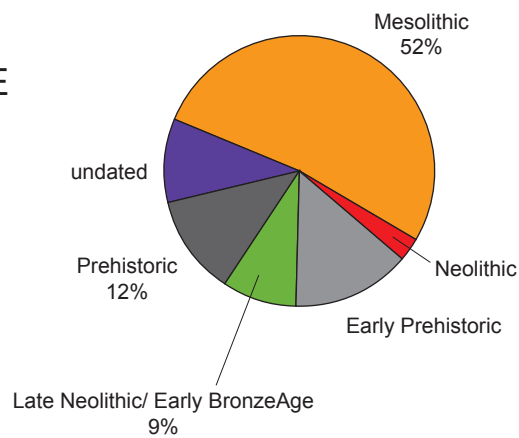
## STUDY AREA



## WROXETER HINTERLAND PROJECT



## NWWS SHROPSHIRE



## NWWS CHESHIRE

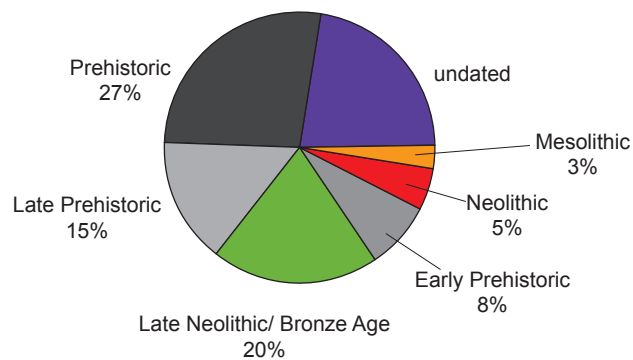


Fig.41 Comparative chronological attributes between field survey assemblages in the study area, the Wroxeter Hinterland Project and North West Wetlands Surveys in Shropshire and Cheshire

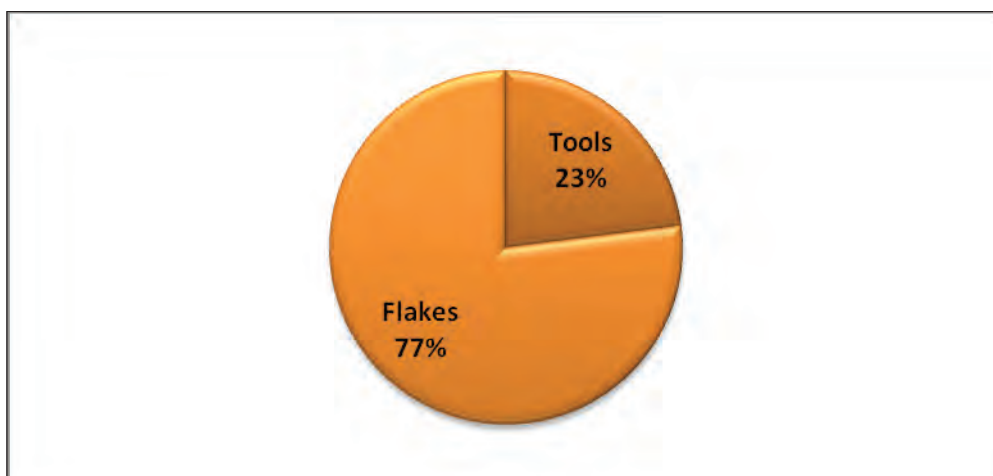


Fig.42 Flintwork assemblages from fieldwalking and test pitting in the study area

Greater quantities of identifiable Neolithic/ Bronze Age material were recovered during the neighbouring Wroxeter Hinterland fieldwalking survey (Fig. 41). This may suggest a greater intensity of occupation in this period to the east of the present study area. The chronological attribution of the material, however, is very broad and the bulk of the assemblage is undiagnostic. Despite this the differing level of diagnostic pieces may reflect varying intensities of activity across different periods of prehistory.

The proportion of identifiable Neolithic and Bronze Age flintwork from the NWWS survey for Shropshire (Leah *et al.* 1998, 137-151) is comparable to that from the present survey (Fig. 41). The variation between the proportion of identified Neolithic and Bronze Age material between the Wroxeter and NWWS survey for Shropshire may reflect less activity in this period at wetland edge locations than at other areas of the Shropshire landscape.

Further north, greater quantities of the assemblage from the NWWS Cheshire survey have been attributed to the Late Neolithic and Bronze Age (Fig. 41; Leah *et al.* 1997, 167-174) with a further 15% having been ascribed a 'late prehistoric date' which is broadly equated with the Late Neolithic and Bronze Age by the NWWS (Leah *et al.* 1997, 17). This may suggest regional differences in the intensity of landscape occupation in the Neolithic and Bronze Age generally.

The study area assemblage contained a relatively high percentage of tools (23%; Fig. 42). This is similar to the fieldwalking results at Myneddd Carreg-y-big, c.11km to the west of the study area, with 28% of worked material (Silvester and Davies 1992, 35-6).

In contrast, very low quantities of tools to waste flakes have been recorded in regions where lithics are prevalent in the landscape. For example a fieldwalking assemblage of c. 40,000 pieces recorded over an area of the Berkshire downs produced only c. 3% of tools (Gaffney



and Tingle 1989, 31, 68). This may suggest a greater utilisation of resources within the study area where flint was scarce and limited to secondary sources within river gravels, unlike areas where available flint resources were abundant. Waste material from flint reduction processes may perhaps have been less frequently discarded and more frequently re-used.

The high proportion of tools in the fieldwalking and test pitting assemblage is mirrored in excavated assemblages from the study area. At the Breiddin Hillfort, 38% of the flintwork from the site was classified as tools or utilised flakes (Green and Wainwright 1991, 113). At Trelystan a high percentage (20%) of tools was also recorded within the excavated assemblage and was used to suggest that some artefacts may have been imported (Healey 1982, 176).

### **Quantities of flintwork recorded across the Welsh border counties**

The quantity of flintwork recorded from the study area is comparable with that collected as part of more extensive surveys in neighbouring Shropshire and areas of Cheshire. In fact, the methodology employed within the study area resulted in higher densities of flintwork than from the neighbouring Wroxeter Hinterland Survey and the North West Wetlands Surveys in Shropshire and Cheshire. Far higher levels of lithic material have, however, been recorded in areas of southern Powys and south-west Shropshire. This suggests that there is significant regional diversity in the use of flintwork across relatively close geographical areas. The varying quantities of lithic material in the Welsh border region can be contrasted more generally with areas of southern England where flintwork was more readily available as a natural resource and where substantial artefact scatters are identifiable.

A total of 84 pieces of prehistoric flintwork were recovered from the surface surveys at Wroxeter (White 1998, 35), over 790ha, representing a general density of only 0.1 flints per ha. The fieldwalking method used 20m-spaced transects (*ibid.*, 62), compared with the 10m-spaced transects used as part of the present survey. In comparison, 71 pieces of flintwork were recorded from the present fieldwalking survey over only 21ha, representing a higher density of 3.3 flints per ha (over a surface survey area equivalent to 2.7 % of the Wroxeter survey). In terms of method it is likely that a more intensive sampling strategy of 10m-spaced transects in the present survey may have increased the recovery of flint artefacts. In addition, although the present survey collected all material from the lowland fields, as with the Wroxeter survey, the preconceived strategy to recover lithics is likely to have added to their recovery.

The Wroxeter Hinterland Survey covered far larger areas of varied geographical terrain, and as such is a more representative sample of the landscape than the present survey. Indeed, the selection of certain areas adjacent to ring ditch monuments at Four Crosses is likely to have added a bias to the data. The higher density of material in the present survey, therefore, may

be due to a more selective strategy in the location of fieldwork. As a result it is not possible to suggest that the present study area has a greater intensity in the use of flintwork or in occupation in prehistory.

Comparison with the Wroxeter survey data does, however, reinforce the impression that there is very little lithic material in the landscape of this region. This is underlined by the survey of wetlands in Shropshire and in Cheshire (Leah *et al.* 1997; Leah *et al.* 1998). These surveys used a comparable fieldwalking methodology to that employed for the present study, with transects set 10m apart. Areas directly over peat were surveyed more extensively with transects spaced 30m apart (*ibid.*, 3).

The density of flintwork of all periods collected by the NWWS for Shropshire was lower than lowland locations surveyed in the present project. A total of 106 pieces of flintwork, of all periods, was recorded during the entire survey which covered a far more extensive area than the present survey (although the specific size of the fieldwalked area is not stipulated; Leah *et al.* 1998). By examining published plans it can be calculated that 534 ha were fieldwalked by the NWWS in the Ellesmere Meres area of north Shropshire. Only 23 flints of all periods were recorded (*ibid.*, 137-151), representing a density of 0.04 flints per hectare. The density of material is far less than that recorded at Four Crosses in the study area (where site FW2 produced 28 flints from an area of only 3.5ha). This suggests that locations in the vicinity of monuments, or on gravel river terraces, were subject to far more frequent activities than wetland areas in the region.

In Cheshire, a total of 60 pieces of flintwork, of all periods, was recorded from the survey, mainly from wetland fringe locations (Leah *et al.* 1997, 24). At Oak Mere the highest density of flintwork of all periods amounted to 12 pieces from an area of 50ha, equating to a density of 0.24 flints per hectare. This can be compared with a total of 65 flints of all periods recorded over c.14ha surveyed across lowland areas of the present study, equating to a density of 4.6 flints per hectare. This suggests that wetland fringe locations were the subject of far less activity than the lowland areas surveyed in the study area which may reflect temporary and transient activities relating to the exploitation of specific resources. It is clear, however, that this may apply to a number of periods of prehistory.

The low level of flintwork in the landscape generally could be explained by a lack of natural resources. High quality lithics were, however, imported into the study area, or obtained from secondary gravel sources, at certain times in the Neolithic and Bronze Age (Hugo-Lamdin-Whymark pers. comm.; Healey 1982; Appendices 1, 2 and 3). There were, therefore, potentially periods when flintwork was available either through the exploitation of meagre resources or through exchange networks, potentially over relatively large distances.

In view of the low levels of flintwork generally, it is likely that the frequency of lithic procurement, either through natural sources, or through interaction and exchange with other groups, was particularly infrequent. This may, therefore, suggest a consistently low level of population in the study area and neighbouring regions of Shropshire. Alternatively it is possible that systems of exchange enabling the procurement of lithics were not well established and did not form a regular part of social interaction or settlement mobility. The importation of lithic material into this region may, instead, have been episodic and related to more exceptional events, population movements or varying systems of exchange over potentially broad time periods.

In contrast, far higher quantities of flintwork have been recovered in south-west Shropshire and south-eastern Powys (Barfield 2007; Gibson 1999). This may suggest that people in neighbouring geographic areas were engaged in more regular systems of exchange and material procurement. This could indicate higher population levels and a greater intensity of social interaction through population movement and settlement mobility. In areas of potentially lower population, any settlement mobility may have resulted in less frequent social interaction and a lower intensity of exchange.

Concentrations of flintwork around Clun in south-west Shropshire have been recently highlighted and contrasted with the regions surveyed to the north (Barfield 2007, 99-103). Amateur collections in this area comprise thousands of artefacts (*ibid.*, 101-2) largely Late Neolithic to Early Bronze Age in date (*ibid.*, 102). Although no systematically recorded data exists, it is clear that this area was one where the use of lithics was far more intense than regions of north-east Powys and northern Shropshire. The fact that this is a very distinctive regional phenomenon is highlighted when it is considered that the present survey area is only c. 35km away.

The data from the Walton Basin Project (Gibson 1999), in the old county of Radnorshire in southern Powys, reinforces the variation in spatial patterning of lithics highlighted for Shropshire, the west midlands (Barfield 2007) and northern Powys. There are clearly far greater quantities of lithics from this location, c. 17km south of Clun, than recorded from both the present survey, the Wroxeter Hinterland Survey and the Northwest Wetlands Surveys in Shropshire and Cheshire. Unfortunately, no fieldwalking methodologies have been published for the Walton Basin Project (Gibson 1997, 20-27; Gibson 1999, 5) preventing direct comparative analysis. Around 237 pieces of flintwork from 35 listed locations were recorded, with the greatest number of finds totalling 44 from a single location (Gibson 1999, 48). Although the extent of the survey is unspecified, the fact that over 6000 flints have been recorded from the immediate region from previous amateur surveys (*ibid.*) sharply contrasts with the assemblage of the current study area and is more akin to the data from Clun (Barfield 2007).

Although amateur collections from these regions may represent the product of numerous fieldwalking episodes, possibly repeated over the same areas, the high levels of flintwork present far outweigh those in areas of the Welsh border further north. Moreover, much of the field-walked material from the Walton Basin is datable to the Neolithic and Early Bronze Age (P. Bradley 1999, 51). This suggests a far more intensive use of lithic material here in this period than can be recognised in the present survey area and in areas of Shropshire and Cheshire.

The greater level of flintwork in certain areas of the southern Welsh border region, which is similarly lacking in natural flint resources to areas further north, must suggest that it was more firmly tied into exchange networks with flint-producing regions to the south-east. This suggests that areas further north were not engaged in similar levels of interaction and exchange with areas of the southern Welsh border. It is possible, therefore, that regional populations may, to some extent, have formed distinctive cultural identities.

### **Contrasting quantities of flintwork from southern England**

Placing these regions in a wider context, none of the survey data from the Welsh borders can be compared with the quantities of prehistoric flintwork which have been recorded in many counties of southern England, often where natural flint resources are present. Large-scale systematic surveys have produced lithic assemblages reaching into tens of thousands (e.g. Gaffney and Tingle 1989; Richards 1990). The Stonehenge environs project recorded over 100,000 pieces from a survey area of 750ha (Richards 1990, 15), which can be compared to the 84 flints recorded for the Wroxeter Hinterland Project over an area of 790ha. The density of material at the Stonehenge environs equates to around 2800 flints over an area of 21ha, as opposed to the 70 flints recorded through fieldwalking for the present survey, over a similar sized area.

It is questionable, however, as to whether the far greater quantities of utilised lithic material in regions such as Wessex necessarily provide a clearer understanding of settlement patterns. Even where large quantities of flintwork have been recorded, only a small percentage has been readily datable (Richards 1990, 18). Relative frequencies of activity between periods are, therefore, not necessarily easy to determine. Surveys dominated by large lithic assemblages have been able to define only broad zones of activity (Richards 1990, 19). Spatial patterning within large flintwork assemblages has, however, been used to explore relationships between monuments and topographic features (Gaffney and Tingle 1989, 69; Richards 1990, 19, 270). Where densities of flintwork are higher it may be possible to make firmer conclusions regarding levels of activity in the landscape, but even in areas of low density small levels of material may indicate relative differences in the intensity of activities across certain zones of landscape.

### **Flintwork from excavated sites in the region**

Surveys across the study area and across areas of northern Shropshire have indicated a low level of activity in the landscape across a potentially broad period of time (Barfield 1998; Leah *et al.* 1998). Flintwork assemblages from excavations at ring ditches and barrows may, however, indicate specific activity foci in the landscape in the Late Neolithic or Early Bronze Age.

The site at Trelystan demonstrates that concentrations of flint deposition can exist within the landscape of this region (Britnell 1982; Healey 1982). The two settlement structures excavated may not suggest repeated occupation over significant periods of time (Britnell 1982; Pollard 1999), but the quantity of flintwork totalling over 600 pieces (Healey 1982) may suggest repeated settlement activities.

Similar evidence has been recorded at the upland site of Carneddau, Powys, 30km to the south-west of Trelystan, where over 100 flints have been recorded from contexts pre-dating an Early Bronze Age burial cairn (Gibson 1993, 25-7). This may also reflect a relatively intense focus of deposition when compared with the 82 flints recorded through test pitting and fieldwalking over 21ha through the present study.

The evidence from Trelystan and Carneddau, therefore, suggests an association between the location of occupation and later funerary and ceremonial monuments. This may be supported by the greater quantities of flintwork recorded from fieldwalking sites FW2 and FW5 in the vicinity of ring ditches at Four Crosses (Table 2; Figs 34 and 36). Although the relationship between the deposition of flintwork, settlement, and later barrows is ambiguous, it is possible that activities pre-dating monuments reflect associations with places of significance in the landscape which were ultimately transformed into the sites of upstanding monuments.

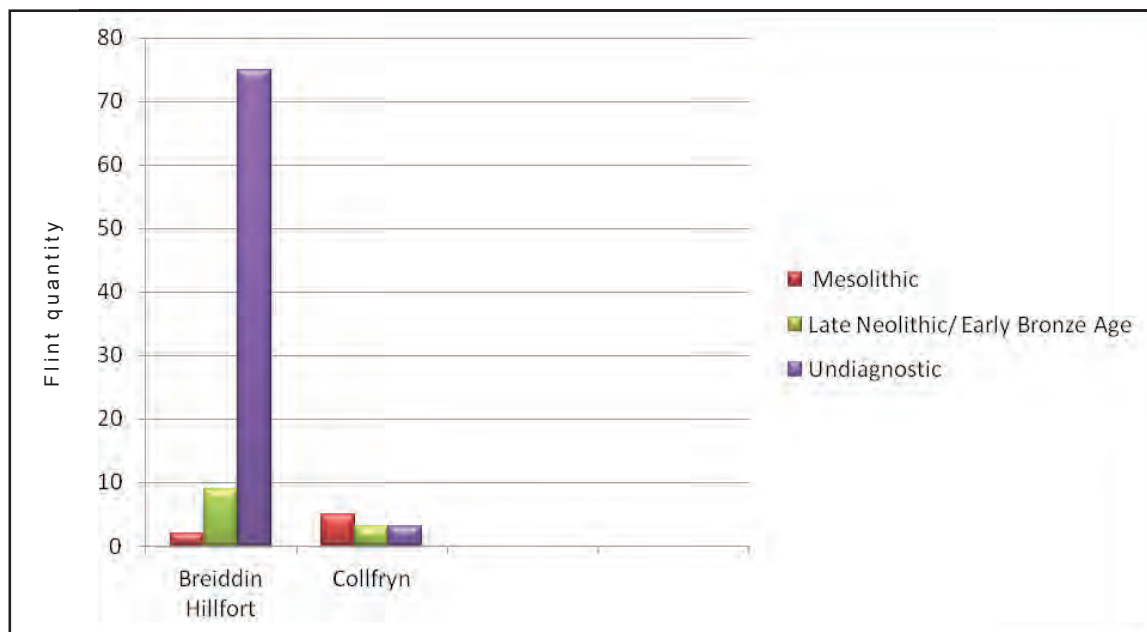


Fig.43 Quantities and date of flintwork at the excavated sites of the Breiddin and Collfryn

A relatively large assemblage of flintwork for the study area (87 pieces) has also been recovered from excavations at the Breiddin Hillfort (Fig. 43; Musson 1991; Green and Wainwright 1991, 113). Prolonged excavations over extensive areas and over many seasons (Musson 1991, 10) does, however, represent a more intensive sample of material than that recorded through fieldwalking or test pitting. The data from the Breiddin, nevertheless, suggests that this prominent hill was a potential focus of activity in the Late Neolithic and Early Bronze Age, which is supported by the presence of residual Late Neolithic and Early Bronze Age pottery (Lynch and Gibson 1991, 116-118). It is possible that this focus was upon funerary or ceremonial monuments since destroyed, but the site may still represent a focal point of repeated activity in the landscape. In comparison, far less flintwork was recovered from the excavation of a later enclosure at Collfryn, in a hillslope context above the Severn valley (Fig. 27; Britnell 1989; Healey 1989). This is despite the presence of a pit containing 'domestic' Beaker pottery (Darvill 1989). This suggests, therefore, that varying intensities of activity existed in differing landscape contexts, where the location of repeated activities may have contrasted with more transient activities elsewhere.

Data from fieldwalking suggest a higher quantity of lithics are present in areas where ring ditches have been recorded at Four Crosses, which may suggest an association between settlement and monuments. In common with sites elsewhere in the region, however, relatively few flint artefacts have been recorded from the excavation of the monuments themselves (Fig.



30). The majority of ring ditches have recorded less than 10 pieces of flintwork from each excavation (Fig. 44), a picture that was replicated in the excavation of a small ring ditch at Four Crosses in 2008 (Fig. 45; Appendix 2). This may suggest that any discard of flintwork associated with contemporary settlement activities was separated from the ring ditch monuments.

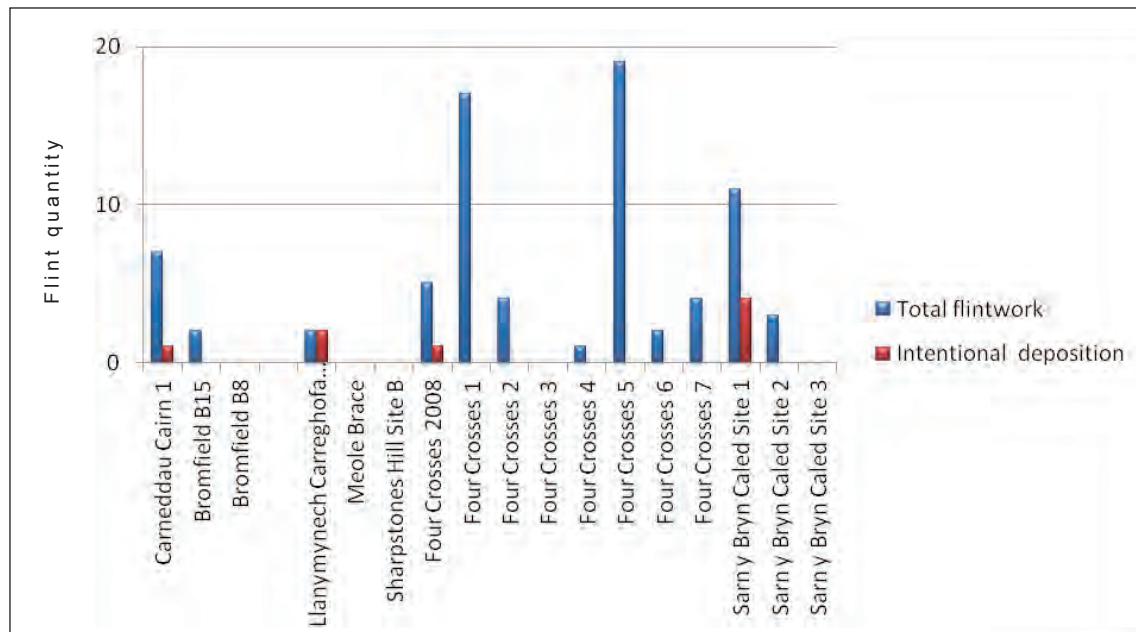


Fig.44 Flintwork recorded at excavated late Neolithic and Bronze Age ceremonial monuments in NE Powys and Shropshire

Ring ditches and monuments in lowland contexts were, however, subject to occasional depositional events which involved the deliberate incorporation of flint objects. Two flint knives were recorded with a cremation at Llanymynech c.2.4km to the north-west (Colls and Halsted 2010), a flint knife was also deliberately placed in a possible burial pit at Lower Luggly (Gibson 2006, 174-6), and a flint knife was recorded close to the centre of ring ditch Site 7 at Four Crosses (Warrilow *et al.* 1986, 78). At excavation site FC08, c.200m away in the field to the south, a high quality thumbnail scraper was recorded in a pit with cremation deposits (Fig. 45; Appendix 2) and four barbed and tanged arrowheads were also deposited in the central pit at the Sarn-y-bryn-caled at Welshpool (Fig. 46; Gibson 1994, 177-8). It may be possible to suggest, therefore, that the low quantities of flintwork at many ring ditch sites may be the result of infrequent selective deposition of artefacts. This may suggest that they were not the specific focus of more general settlement activity, where flintwork and debitage may have been discarded or deposited more frequently.

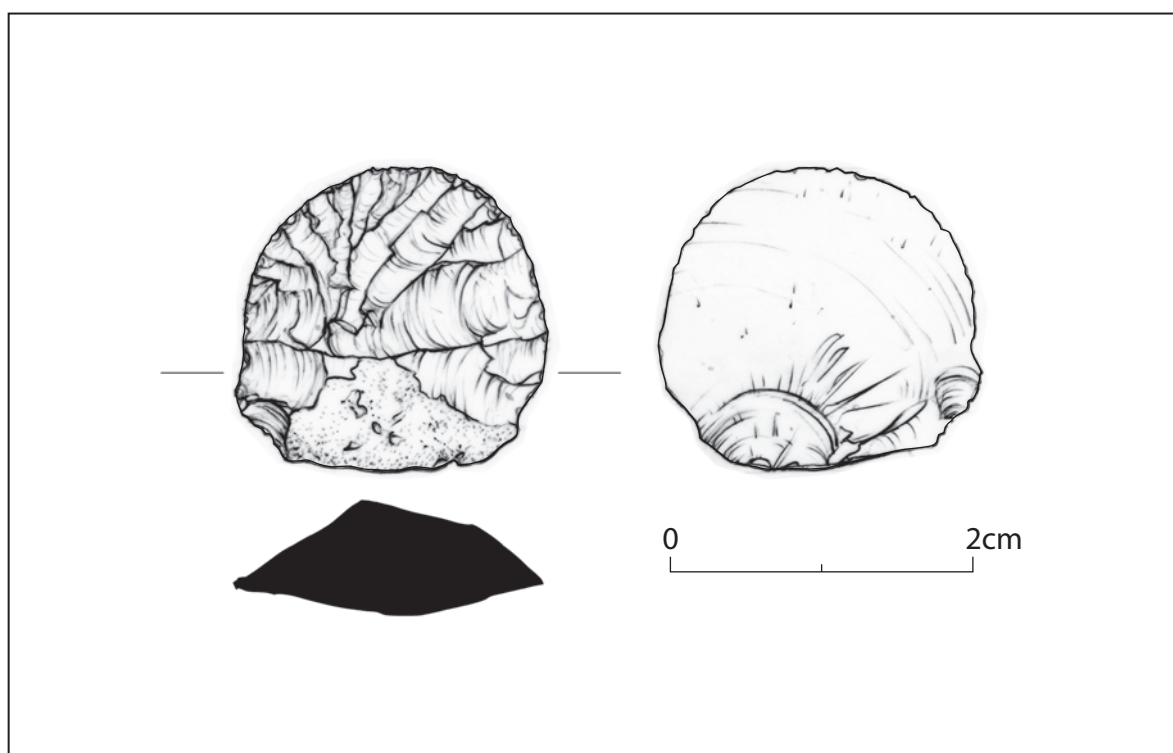


Fig.45 Thumbnail scraper from ring ditch excavation FC08 at Four Crosses, Powys

At Four Crosses excavation Site FC07 a small assemblage of flintwork (five pieces) and Late Neolithic/ Early Bronze Age pottery were recorded, some of which were in association with a pit alignment (Chapter 6). An ephemeral post-built structure dating to the Early Bronze Age was also recorded (Chapter 2; Appendix 1). The site was located 250m from the nearest known ring ditch.

The flintwork included two comparable high quality flint knives datable to the Late Neolithic to Early Bronze Age and a third knife of potentially similar date together with a small flake of unusually high quality red chert (Lamdin Whymark pers. comm.). The fact that there is a concentration of chronologically diagnostic tools, including knives and generally high quality pieces, recorded from a small excavation area (a 6m by 40m trench), appears to stand out when compared to the wider survey assemblage, despite the different methodology employed. This suggests a location that was a specific focus for activity. It is also notable that a greater quantity of flintwork was recorded than at the excavation of a small ring ditch to the east at site FC08, Four Crosses (Appendix 2) and that the same field produced the second highest density of flintwork in the survey (FW2; Table 2). It may be possible therefore that the flintwork recorded at site FC07 marks the location of a short-lived but specific focus of activity relating to an area of occupation.

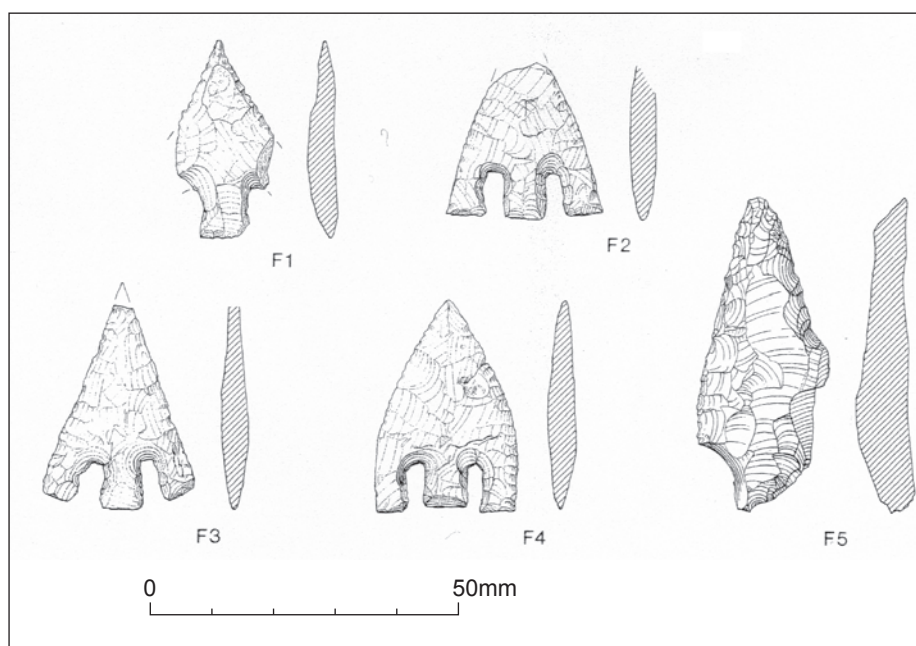


Fig.46 Flint arrowheads and flint knife from Sarn-y-bryn-caled timber circle, Powys (after Gibson 1994)

The site was located at a short distance from the nearest ring ditch monument, indicating a potential degree of separation between funerary and ceremonial activity and other foci in the landscape. The site was located on a low rise within the local topography (Fig. 38), which may reflect an area of better drainage favourable for the location of activities relating to occupation.

The data from excavated sites, therefore, suggests that certain upland locations may have been a focus for repeated settlement activities, some of which were transformed conceptually and physically into the location of monuments. The fieldwalking from the study area suggests a greater level of activity in the vicinity of lowland ring ditches than other lowland landscape contexts. Evidence from lowland monuments suggests, however, that flintwork was deposited in small quantities, in some cases as part of funerary rites. Occupation foci may nevertheless have existed in the vicinity of these monuments, where the intentional deposition of small quantities of flintwork may also have taken place

## Discussion

The assemblage of flintwork from the fieldwalking and test pitting survey has confirmed the low levels of material present in the landscape, as previously recorded in the wider region with the Wroxeter Hinterland Project (Gaffney and White 2007; White 1998) and the North West Wetlands Surveys in Shropshire (Leah *et al.* 1998) and Cheshire (Leah *et al.* 1997). This is in contrast to the higher levels of flintwork recorded further south in the Welsh border region at

Clun in south-west Shropshire (Barfield 2007) and the Walton Basin in Powys (Gibson 1999). This suggests that both the study area and a broader region of the northern Welsh borders had limited exchange networks with areas further south, where lithic material was being regularly procured and utilised as part of settlement activity across the landscape. This may be explained by low population levels which resulted in infrequent exchange with other regions. A degree of regional identity may be suggested, therefore, where a region characterised by dispersed and low-level populations contrasted sharply with more intensive settlement activity further south.

Much of the lithic material from the present study is undiagnostic, in common with neighbouring surveys, and only a small component may be attributable to the Late Neolithic and Early Bronze Age. The lithic assemblage from the study area, nevertheless, provides a useful indication of the relative intensity of activities across small landscape areas and broad geographical regions.

The field survey has suggested a greater intensity of activities in lowland locations of the study area particularly in areas of higher ground above river floodplains. This is in contrast to lower densities of material recorded in wetland edge locations as part of the neighbouring North West Wetland Surveys (Leah *et al.* 1997; Leah *et al.* 1998). This suggests that preferences existed within lowland landscapes for settlement at certain environmental and topographical locales and displays a variation in the levels of activity across the landscape.

There is also an apparent higher density of lithic material in the vicinity of lowland ring ditches in the study area at Four Crosses, which may suggest that monuments acted as foci for settlement activities in the landscape. Possible settlement activity in the vicinity of lowland monument groups is supported by the evidence from the FC07 excavation, with pottery, flintwork and a possible post-built structure dating to the Early Bronze Age (Appendix 1). This activity was, however, recorded at a distance from the nearest ring ditch, suggesting that there was a degree of separation between settlement and funerary activities in the landscape. This is supported by the data from the excavation of a number of lowland ring ditches which indicate low levels of flint deposition.

Low levels of flintwork were recorded from fieldwalking and test pitting from upland landscapes, which may suggest infrequent and dispersed activities. Settlement structures at Trelystan have been suggested to reflect short lived phases of occupation (Britnell 1982), yet relatively high levels of flintwork from the excavations may suggest repeated activities pre-dating the establishment of two round barrows. Focal points for occupation may therefore have existed in upland landscapes, at least in the Late Neolithic, which were otherwise characterised by a more dispersed or transitory pattern of settlement.

In general it is difficult to discern high concentrations of lithic material through field survey

which may represent spatially restricted and sustained settlement sites. This suggests that activity was generally dispersed, supporting theories of highly mobile modes of settlement in the Neolithic and Early Bronze Age (Brück 1999; Thomas 1991; 1999; Whittle 1997; McFadyen 2008).

## Chapter 4: Round barrows and the settlement pattern

### Introduction

The widespread and often dense distribution of funerary monuments across regional landscapes of Britain, contrasts markedly with the general absence of evidence for settlement locales in the Neolithic and Early Bronze Age. Clearly these landscapes were settled, yet funerary monuments often represent the only indication, at a broad scale, of this settlement. Other indications of activity in the form of lithic scatters and ephemeral structures provide the principal component of settlement evidence, but are subject to the bias of collection methodologies and the distribution of survey and excavation. Round barrows and other monument forms, such as stone circles, timber circles, henges and standing stones, potentially provide a more wide ranging insight into the presence of activity in landscapes of the Late Neolithic and Early Bronze Age.

Whilst monuments may provide an indication as to the presence of prehistoric communities in general terms and at broad scales it is necessary to consider the relationship between these sites and sites of settlement. Barrows were foci for ritual events, which are visible in the form of burials, artefact deposition and phases of architectural construction. These events must have taken place within a generalised pattern of settlement formed by locations of occupation, systems of agricultural production and a variety of potential social interactions between individuals and groups at various geographical scales. The frequency of events at monuments and the frequency with which monuments were encountered in the landscape may, therefore, have influenced both the mode and the location of settlement. Settlement may have been closely associated with monuments or groups of monuments, or settlement and monuments may have been mutually exclusive. Settlement may have been relatively permanent or it may have been episodic and mobile; either way the relationship between areas of occupation and significant ritual foci is likely to have been a conscious one. This potential association has been repeatedly recognised in the archaeological literature, with the relatively clear visibility of monuments in the landscape providing a framework onto which interpretations of settlement patterns can be placed.

Fleming (1971) in his paper *Territorial patterns in Bronze Age Wessex* discussed the distribution of round barrows as territorial markers and attempted to calculate both territorial extents and population sizes from the data. He considered monuments as markers integral to systems of seasonal population movements (*ibid.*, 157), which existed alongside more fixed residency patterns elsewhere in the landscape (*ibid.*, 162-3).



Whittle has highlighted that mobility in the settlement pattern need not necessarily be seasonal and may have taken place at a number of different frequencies, ranging from short repeated settlement episodes or 'residential mobility' to 'short term sedentism' and 'embedded sedentism', the latter involving the movement of individuals as part of an otherwise fixed settlement location (Whittle 1997, 21-22). Whittle's proposed residency patterns allow for the influence of monuments, whether as foci for ritual gatherings within systems of residential mobility or as more permanent 'anchors' (*ibid.*). Whittle recognised that many of his proposed mobile systems of residency envisaged for the Neolithic could also be applied to the Early Bronze Age (*ibid.*, 22). This has formed the basis for Brück's discussion of residential mobility for the Early Bronze Age of southern England, where a mobile system of episodic settlement drawing on a variety of resources, may have incorporated activity at monuments, as demonstrated by the presence of lithics and other potentially domestic related artefacts (Brück 1999a, 62-65). It is suggested that domestic sites may not have existed as a separate and clearly definable entity in the Early Bronze Age (*ibid.*, 55-64) and that settlement activity and monuments were not necessarily mutually exclusive (*ibid.*, 55).

Others have emphasised a more fixed form of residency. Field (1998) has suggested that barrows in specific geographical zones formed boundaries to territories and were peripheral to areas of settlement. Barnatt has suggested small barrows and barrow groups in the Peak district of Derbyshire may have been used by associated farming families to legitimise tenure over land, within a variety of topographic contexts, as part of a more 'sustained' pattern of settlement (Barnatt 2000). The argument for a more static mode of residency is, however, influenced by the widespread survival of field boundary systems, which may not necessarily be contemporary with Early Bronze Age round barrows and patterns of settlement in this period. Alternatively, at the other end of the scale, Kitchen (2001) has envisaged large scale mobility in the Peak District across broad terrains and has rejected the association of monuments with clearly defined tenure over land. Instead, he suggests that the same barrows may have been used by more than one social group in the course of large scale movements between different geographical regions (*ibid.*, 117).

Clearly events at monuments must have been at least an intermittent feature for populations in later Neolithic and Early Bronze Age landscapes, whether settlement was predominantly mobile or sedentary. The specific regularity and frequency of the interaction between monuments and people may, however, be difficult to reconstruct where relatively imprecise or infrequent chronological markers exist (Garwood 2007a, 141). It is also important to consider that the ways in which monuments were perceived may have changed over time. The cumulative development of monuments, potentially the product of a series of events, may itself have influenced the way in which they were integrated into patterns of settlement. Last (2007a)

has argued that round barrow mounds were only the final 'closure' of a potential succession of activities, many of which may have taken place when monuments were essentially open and accessible. This has implications for the way monuments may have been perceived by settled communities, with active engagement with open phases of monuments, contrasting with more distant relationships when these locations were covered by mounds (*ibid.*, 173).

The creation of monuments was clearly bound up with the perception of place in the landscape. Monuments may have drawn on earlier ceremonial sites for their significance, contributing to the perception of longevity and past histories (Garwood 2007a, 148). Alternatively, new monuments may have been actively used to legitimise belonging in particular social or political contexts (*ibid.*, 154). What is less clear is the relationship between the formation of new monuments and existing patterns of settlement. Prevailing settlement patterns must, however, have influenced the location of monuments, in as much as the 'biographies' of landscapes and perceptions of place were formed through the process of living in the landscape by successive generations (*cf.* Pollard 1999).

The presence of possible settlement structures and occupation deposits beneath round barrows has been repeatedly recognised through archaeological excavation (e.g. Gibson 1982, 35-8; Lynch 1993, 157-60; Peterson 2007). Bradley, in his recent discussion of the close relationships between ritual and domestic life, has suggested that houses may have influenced the siting of monuments, although his discussion of ritual ploughing in Europe appears to emphasise an intentional and conscious referencing prior to monument construction, which may leave the nature of 'houses' beneath barrows open to debate (Bradley 2005, 23-5). It may, therefore, be unlikely that houses or pre-barrow structures were preserved beneath certain round barrows in Britain by coincidence. The construction of barrows may have been consciously referencing the presence of earlier occupation, as argued by Peterson (2007, 133). The presence of a cremation burial within one of the 'houses' he has recently reinterpreted may, however, bring into question the domestic function of the pre-barrow structures (*ibid.*, 134). If ritual and domestic activities are closely associated (Bradley 2005, 28-36), then it may be possible to envisage the incorporation of domestic structures and artefacts, alongside their occupants, into barrows (Peterson 2007 134-8). It is possible, therefore, to suggest conscious referencing of the domestic sphere in the course of barrow construction, in a potential variety of forms, rather than the routine embodiment of former settlement structures into monuments.

## **Monuments and settlement in the Welsh border region: previous discussion and current interpretations**

Previous studies of monuments and settlement in the central Welsh border region have been largely focussed upon Shropshire, where the topographic distribution of monuments and their potential social significance have contributed to interpretations of settlement patterns (Watson 1991; Buteux and Hughes 1995; Halsted 2007). More recent discussions, focussed on the west midlands region, have also drawn on ring ditches in the upper Severn valley and other Shropshire barrow sites within a social and cultural contextualisation of monuments, including their potential relationship with patterns of settlement (Garwood 2007a; Garwood 2007b). Recent discussions of monuments in central Wales have provided a thorough assessment of monument types and their topographic distributions, largely placing their potential settlement contexts within existing interpretative schemes (Gibson 2002). The following section will review previous interpretations of monuments within the settlement pattern of the Welsh border region and go on to suggest further ways in which the data can be examined as a means of clarifying the relationship between monuments and settlement patterns.

Watson's review of ring ditches in the upper Severn valley of Shropshire highlights the problem of interpreting the relationship between settlement and monuments, when the evidence for settlement is largely invisible (Watson 1991). A solution is provided by examining the relationship between the distribution of ring ditches and the widespread cropmark evidence for field systems and enclosures which are generally regarded as later Iron Age or Romano-British in date (*ibid.*, 13; Whimster 1989). He uses the later settlement evidence to suggest that ring ditches may have been located on the margins of areas of agriculture and settlement (Watson 1991, 13). Whilst it may be true that certain areas of the landscape are more conducive to settlement and agriculture than others, it cannot necessarily be assumed that these locations retain a fixed relationship with settlement patterns across time. There may be any number of social, political or environmental factors influencing patterns of settlement and agricultural practice, and it cannot, therefore, be assumed that 'subsistence' strategies remained the same across widely separated periods of time. Therefore, whilst Watson's assessment of the distribution of ring ditches provides a useful contribution to the debate on the relationship between monuments and settlement in the region, it is ultimately necessary to consider different ways in which barrows and settlement are related.

Buteux and Hughes (1995) provided a greater social emphasis on the relationship between monuments and settlement in their research on the barrow group at Bromfield in southern Shropshire and the ring ditch at Meole Brace in the upper Severn Valley. Their discussion stresses themes of longevity through the evidence for the repeated use of the monuments at

Bromfield, possibly over millennia (*ibid.*, 160). They suggest that this monument group may have been of regional significance and may have been a focus for periodic gatherings within a dispersed settlement pattern (*ibid.*, 161). The potential social significance and variety of events at such monuments is highlighted and their role in reinforcing or creating social identities is considered (*ibid.*). The potential for fluctuating interpretations of monuments by social groups across large time periods has also been highlighted (*ibid.*) as has the possibility of a connection between earlier 'domestic' activity at Meole Brace and the later ring ditch (*ibid.*, 160).

These interpretations highlight the relative permanence of monuments in the landscape, and their potential long term social significance and influential effect on settlement. The lack of significant evidence for occupation, however, suggests that any association between monuments and settlement was essentially intermittent.

Several studies have focussed upon the broad ranging distribution of monuments across a wide variety of topographic contexts in Wales. These have the potential to provide an indirect assessment of settlement patterns. Roese has produced rigorous statistical analyses of monument distributions and their topographic positions (1980a; 1980b; 1981) arguing, for example, that a greater proportion of round barrows and round cairns are located in valleys as opposed to ridge-tops (Roese 1981, 578). Similar detailed studies are provided for the location of menhirs (1980a), henges and stone circles (1980b). Statistics are used to draw comparisons between barrows and modern population data (Roese 1981, 585), and it is assumed that barrows and settlement location are co-related (*ibid.*, 586). The discussion of settlement by Roese within these analyses is, however, limited. For example, the association of barrow location with modern farm land is highlighted (*ibid.*, 580), yet it cannot necessarily be assumed that this relates to a pattern of Bronze Age agriculture.

Gibson has examined the distribution of all known monument forms in the upper Severn valley in Montgomeryshire (Gibson 2002). He makes useful distinctions between the topographic locations of these monuments, which are clearly of significance to the interpretation of settlement patterns in prehistory. He considers the presence of barrows, cairns and stone circles on ridge-ways and suggests that monuments were designed to dominate natural and significant landforms in order to define territory (*ibid.*, 23; cf. Fleming 1971). It is suggested that monuments on ridge-ways may also define routes, and in a similar way to Chitty (1963), he uses modern or historic pathways to support this (Gibson 2002, 23-5) and argues that standing stones may have acted as route markers (*ibid.*, 19-20). He suggests that ring ditch groupings in lowland valleys represent larger populations (*ibid.*, 27), but that upland cairn fields may also relate to the margins of settlement areas (*ibid.*, 13). He identifies several potentially key points in the landscape such as river confluences which he suggests may have acted as focal points of communication and economic interaction (*ibid.*, 34-35). Gibson clearly attempts to

relate defined areas of landscape to varying intensities of monument distribution, on the basis of which he draws inferences about broad settlement patterns. Less emphasis, however, is placed upon the role of monuments as places of group activity and ritual events, and how this may have influenced settlement patterns at a smaller scale.

Recent discussion on the role of monuments in the west midlands to the east of the study area, including Shropshire and the upper Severn valley, has discussed the potential relationships between monuments and contemporary communities at a variety of scales (Garwood 2007a; Garwood 2007b). The potential for large numbers of ring ditches in the upper Severn valley to reflect longevity or intensity of occupation is highlighted (Garwood 2007a, 148), along with potential distinctions between lowland and upland modes of occupation, with uplands and routes along ridges associated with a more transient mode of settlement whilst also providing 'vistas' across associated landscapes (*ibid.*, 151-2). Settlement patterns are considered in terms of broad scale and fluid patterns of movement and social and economic activity (Garwood 2007b, 199).

Alongside broad interpretations of settlement patterns a more detailed consideration of the possible relationships between monuments and contemporary communities is provided, which may also be relevant to patterns of settlement. For example, the potentially varied tempo of interaction between people and monuments is considered (Garwood 2007a, 141), as is the referencing of past monuments and places (*ibid.*, 148) and possible contrasts between perceptions of areas with monuments and areas without (Garwood 2007b, 198). Also highlighted is the potential for different scales of interaction with monuments, where larger monument groups, for example, may have had a broader social or political influence (*ibid.*, 201-2). The interpretation generally stresses the potential cultural significance of monuments (Garwood 2007a, 153) which serves to remind us that they were not just static places separated from areas of settlement, or markers encountered along route-ways. These issues are clearly relevant to how monuments were treated and engaged with as part of a broader settlement pattern. Such interpretations cut across modern regional constructs (Garwood 2007b, 195-6), although the contrasting topographies of the Welsh border region alongside the variety of monument groups highlighted by Gibson (2002), arguably makes it especially important to consider the potential variety of ways in which monuments may have been engaged with by contemporary communities.

Previous studies of barrows in the Welsh borders and Shropshire have explored the potential relationship between these monuments and settlement by using the topographic and geological context of the few known settlement sites in the region as a precedent (Halsted 2005, Halsted 2007). The location of settlement may, however, have been more wide ranging both in terms of subsistence strategies, economic and social relations, and could have encompassed a wider

variety of environmental contexts. It may be possible, therefore, to use monuments across a broader spectrum of landscape contexts as a means of assessing the potential diversity of settlement location and the ways in which settlement may have engaged with the landscape.

This chapter will focus principally upon round barrows, since these represent the most numerous monument type within the study area, occupying a variety of topographic positions. The spatial distributions of round barrows will be examined in order to assess how they relate to landscape topography and how they relate to each other. These relationships will be considered specifically in terms of how they may have influenced the Bronze Age settlement pattern.

In order to do this it is first necessary to assess the relationship between monuments and settlement through an examination of the palaeo-environmental and archaeological data. The chapter will then go on to examine potential attachments to place through an evaluation of the chronology and development of monuments, followed by analyses of their positions in the landscape and ways in which these may reflect patterns of settlement.

## **Barrows and settlement evidence**

It is not possible to discuss the relationship between barrows and settlement in the landscape without first reviewing the evidence for associations between the two. The relationship between barrows and settlement is unlikely to have been mutually exclusive, since there are many ways in which funerary and ceremonial monuments may have been significant in terms of community identity, attachment to place and social relations. Recent discussions have emphasised that ritual and settlement activities may not have been spatially or conceptually distinct in prehistory (*cf.* Bradley 2005; Brück 1999a, 54-5). Clearly, however, there may have been a number of differing interrelationships between monuments, which are essentially fixed points in the landscape, and inherently fluid patterns of economic and social activity in the wider landscape. In order to assess the nature of this relationship, it is necessary to establish the extent to which barrows may have been located within areas of occupation.

### **The natural environment: influences on settlement and monument location**

It has been suggested that an association between monuments and specific geologies and soil types reflects a preference for agriculture and settlement. For example, freely draining sands and gravels in Cheshire may be preferable for arable agriculture as opposed to heavier boulder clays (Longley 1987, 61). Fleming's interpretation of barrows, territories and populations was influenced by concepts of agricultural production, contrasting optimum cereal growing



areas with more marginal lands suitable for seasonal pastoral activities and ‘barrow building’ (Fleming 1971, 163). There is, however, nothing in the settlement evidence for the Late Neolithic or Early Bronze Age in southern England to suggest rigidly organised agricultural systems, as the patterns of occupation envisaged by Fleming may require (Thomas 1999; Brück 1999a). Certain regions of Britain and Ireland have been argued to indicate a more sedentary pattern of settlement in the form of evidence for Neolithic field systems, cultivation and house structures (Cooney 1997), but this mode of residency does not appear to extend across much of lowland Britain. Monuments and agriculture may instead have existed within a more fluid pattern of settlement that was not necessarily tied to specific environmental zones.

Watson has highlighted the presence of the majority of ring ditches on gravels in Shropshire, although around a third have also been recorded on non-gravel geologies (Watson 1991, 12). Examinations of barrow distributions across a lowland area in north-east Wales and parts of Shropshire and Cheshire have also indicated that a majority of sites are located on gravels (Halsted 2005, 30; Halsted 2007, 173). This may be a product of cropmark identification on suitable free-draining geologies, yet it may also reflect a preference for particular soil types in prehistory. It may be no coincidence that the greatest known clusters of ring ditch monuments in the study area occur on similar gravel terraces adjacent to river floodplains, at Four Crosses (Warrilow *et al.* 1986), Sarn-y-bryn-caled (Gibson 1994) and Berriew (Gibson 1995). Further ring ditches are present on gravel terraces in the Llanymynech and Carreghofa area to the north of the River Vyrnwy (Gibson 1992; Colls and Halsted 2010).

Where detailed information on soils is available for the area between Four Crosses and Arddleen, Powys, this suggests that the location of ring ditch monuments equates with land better suited to cultivation (Thompson 1982). The Four Crosses ring ditches are located on Brown Earths, which are subdivided into two units. Three ring ditches are located on the Denbigh-Rheidol soil unit, which “forms the most adaptable land in the district for agriculture” (*ibid.*, 77), whilst the majority of the monument group is located on the Denbigh-Sannan unit with soils which are “moderately easy to cultivate” with restriction in wetter winter months (*ibid.*, 82). This moderate capability for cultivation contrasts with surrounding swathes of land, which are characterised by very stony subsoils with poor drainage and a restricted growing season (*ibid.*, 44). In addition, the alluvial floodplain of the Vyrnwy and the River Severn is inherently prone to flooding, but is otherwise characterised by high quality grassland (*ibid.*, 50-54, 94).

Therefore the location of ring ditches at Four Crosses appears to show a preference for better quality agricultural land on the margins of seasonally flooded but otherwise good quality pasture. This may suggest that the group of ring ditches here was located in close proximity to areas of agriculture and settlement. This may be supported by the fieldwalking data which

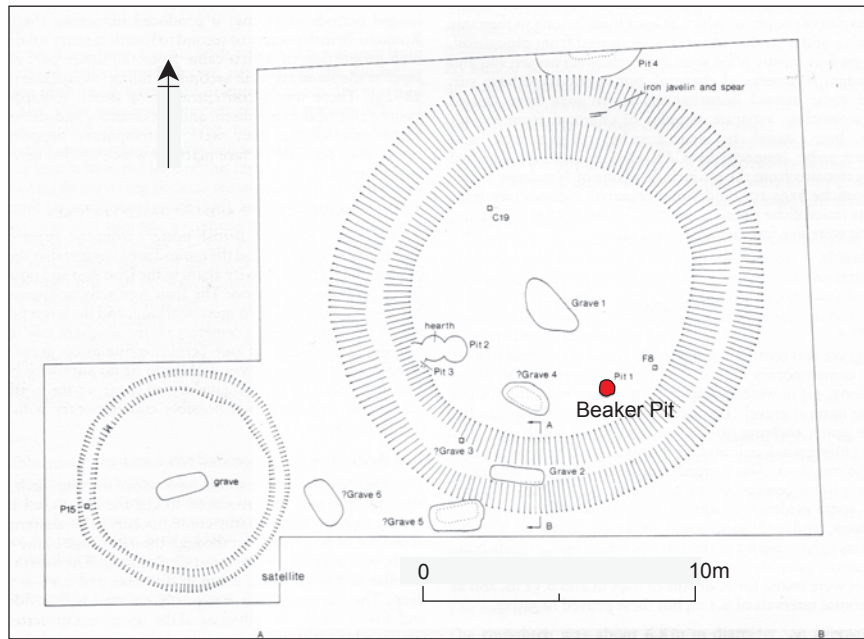


Fig.47 Beaker pit at ring ditch Site 2, Four Crosses, Powys (after Warrilow *et al.* 1986)

indicate a greater density of flintwork on the gravel terraces at Four Crosses than at other areas surveyed (Chapter 3), together with excavated evidence which may indicate an ephemeral area of settlement in the vicinity of the ring ditches (Chapter 2). Similar environments may also have existed where ring ditches and monuments cluster elsewhere on gravel terraces adjacent to floodplains, as at Sarn-y-bryn-caled, Berriew and Llanymynech. The fact that these locations are sited above flood-prone areas must also suggest a potential association with areas of occupation.

The palaeo-environmental data may also support an association between monuments and settlement in lowland river valley contexts. The presence of *Hordeum* barley from a Beaker pit pre-dating the ring ditch at Four Crosses Site 2 suggests possible arable agriculture in the vicinity (Fig. 47; Warrilow *et al.* 1986, 60). Pollen analysis from ring ditch Site 1 at Four Crosses indicated an open environment with evidence for clearance, crop cultivation and intensive grazing pre-dating the barrow (Wimble 1986). This suggests, therefore, that barrows at Four Crosses were constructed within an area that was associated with existing mixed agriculture and potentially settlement. At Sarn-y-bryn-caled, on the margins of the Severn floodplain near Welshpool, palaeo-environmental data from Coed-y-dinas Ring Ditch 1 also suggest open conditions while the presence of hulled barley suggests a link with arable agriculture and domestic activity in the early second millennium BC (Gibson 1994, 165). It is possible, therefore, that certain monuments and barrow groups in lowland river valley contexts were located in areas suitable for settlement and agriculture and that they may have been closely associated with areas of occupation.

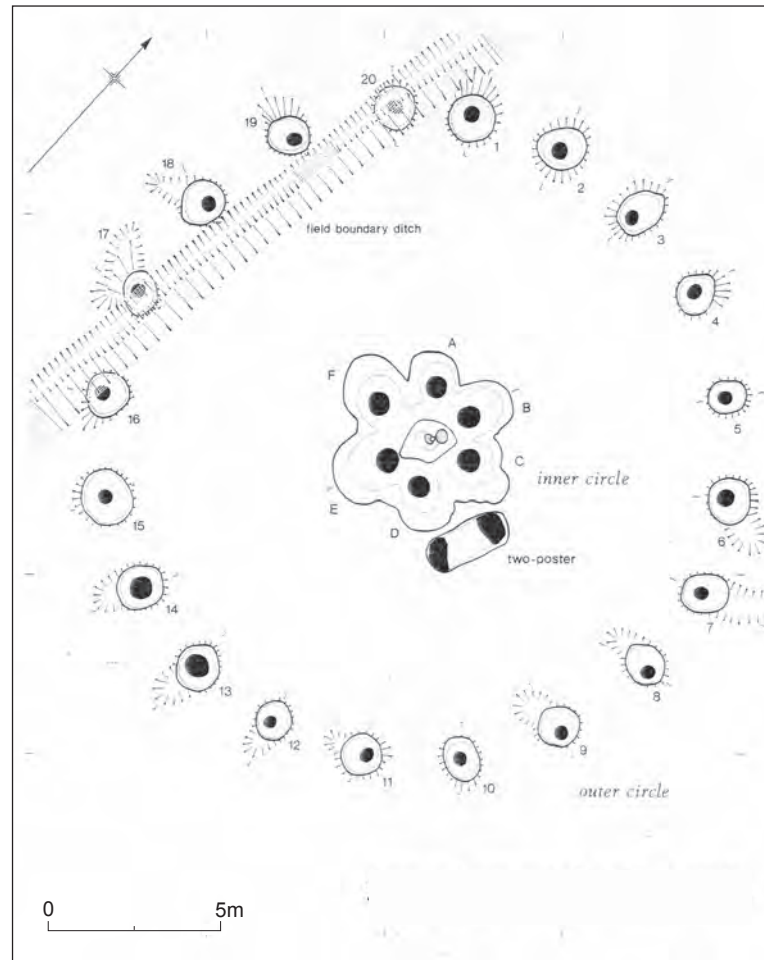


Fig.48 Early Bronze Age timber circle at Sarn-y-bryn-caled, Welshpool, Powys (after Gibson 1994)

The palaeo-environmental data does vary, however, in what it suggests about the contexts of lowland monuments. At Sarn-y-bryn-caled, charcoal from a Late Neolithic penannular ring ditch suggests it was located in cleared woodland (*ibid.*, 191), with no evidence for cultivation or agriculture. In the Early Bronze Age a similar picture is presented by data from the timber circle (*ibid.*; Fig. 48). Clearly, therefore, not all lowland monument groups were necessarily located in open grasslands with associated arable agriculture.

Higher ground above the river valleys is predominantly characterised by pasture at present and is generally exposed to higher rainfall and a shorter growing season in a modern climatic context (Thompson 1982, 111). Barrows in these locations are, therefore, perhaps less likely to have been associated with arable cultivation, even allowing for any differences in climatic conditions. In the uplands at Trelystan on the Long Mountain, there is no evidence for arable cultivation associated with the pre-barrow settlement structures or later monument contexts (Morgan 1982; Hillman 1982). Charred plant data associated with the Early Bronze Age burial mound is consistent with a pastoral landscape (*ibid.*, 200), and with the predominant modern day land use and soil capabilities here (Keeley 1982). Potential evidence for a brewed cereal-

based beverage has been suggested from one of the Food Vessels from the site (Hillman 1982, 200), which obviously suggests a link with arable agriculture, although does not necessarily suggest that this was taking place nearby.

It is necessary to consider the likelihood that a variety of agricultural practices were associated with settlement activity, both arable and pastoral, alongside other means of food procurement such as the exploitation of wild resources (Brück 1999a, 67). Social networks and systems of exchange may also have created connections between differing areas of occupation and land-use. Settlement and agriculture may also have existed within mobile systems of residency (*ibid.*).

Barrows and monuments existed within a variety of environmental contexts, but their location may not necessarily have been dictated by specific types of agricultural practice. The relationship between barrows and settlement could have been maintained within a number of different locations suited to different forms of agriculture or resource procurement. Barrows may have been located in areas suitable for arable agriculture and settlement, such as river terrace locations, but they were also located in a variety of other positions in the landscape inherently less suited to agriculture. There may be many other factors which influenced the location of monuments in the landscape. For example, monument groups may have developed along lines of communication such as rivers or ridge-ways (*cf.* Gibson 2002). Monuments may also have been sited in order to reference distant pasts through their proximity to existing monuments or significant landscape features (Garwood 2007a, Bradley 2000). Successive monuments may have been built as an active means of creating continuity with a perceived past (Bradley 2002, 11-13). Barrows may perhaps have been located in areas suitable for settlement on environmental or agricultural grounds, but these were not the only reasons for choosing particular locations in the landscape.

### **Settlement and occupation at barrows**

There are many instances where possible settlement related structures and artefacts have been recorded beneath round barrows in Britain (e.g. Gibson 1982, 35-8). This may suggest an intentional association between the two, and even that barrows were sometimes deliberately constructed over former houses (*cf.* Bradley 2002, 76). Architectural similarities between domestic structures, their associated deposits and later round barrows have been highlighted, suggesting a close conceptual link between monuments and domestic structures (Bradley 1998a, 147-57).

The most frequent interpretation of 'houses' or domestic material beneath barrows is that they are fortuitously preserved, protected from ploughing or other disturbance (e.g. Gibson

1999, 159). This can be interpreted in a number of different ways. A significant interval of time may have existed between settlement activity and the creation of a monument, and the location of the two may have been coincidental. The monument may have been constructed within an area of shifting settlement where the definitions and concepts of settlement space may have changed over time. Alternatively, it is possible that the transformation from domestic space to monumental architecture was intentional and that the construction of a monument was intentionally referencing past activities. Where previous settlement activity is recorded beneath barrows it also suggests a change in the organisation of settlement space. This may have been a conscious transformation, or it may have taken place over larger periods of time where knowledge of past activities was either unknown, uncertain or re-interpreted.

It may also be possible that domestic-related material and artefacts were intentionally deposited at a chosen location as part of the development of the monument, or prior to the construction of a mound (*cf.* Last 2007a). Such actions may have been intended to reinforce the connection between the domestic world of settlement sites and ritual events at monuments, where the living were brought together at events which included the burial of the dead. Any such references to the domestic world may also, however, have reinforced a degree of spatial separation between areas of occupation and monuments. Placing material resonant with the domestic sphere at monument sites may have made a distinction between two areas of activity.

In the broader Welsh border region there are several examples of settlement activity pre-dating the construction of monuments. At Upper Ninepence in the Walton Basin, southern Powys, pits, postholes and hearths dating to the Middle and Late Neolithic, were associated with two successive phases of activity associated with Peterborough Ware, Grooved Ware, flintwork and charred plant remains (Fig. 49; Gibson 1999, 29-47, 160-3). Both phases of activity are interpreted as domestic in character, with two stake-built structures dating to the Grooved Ware phase being compared with possible house sites elsewhere (*ibid.*, 162-3). Following this activity a round barrow was constructed which appears to date to the Early Bronze Age (*ibid.*, 33). A significant assemblage of flintwork collected from across the barrow suggests the area had been a significant focus of settlement (*ibid.*, 29), which may largely pre-date the barrow mound. It is possible, therefore, to suggest that a monument was placed at a long-standing focus of settlement. Repeated activity at the site, across long time periods, may have contributed to a definition of place which ultimately influenced the construction of a monument. Such monuments may subsequently have changed the relationship between landscape and settlement space.

Pits associated with Neolithic Peterborough Ware have been recorded in the vicinity of a possible barrow and ring ditch at Brompton and Meole Brace, Shropshire (Bevan *et al.* 1995; Hughes and Woodward 1995, 9-17), to the south-east and east of the study area. These





events were part of a sequence of related activities. It may be possible that formal deposits of material that could be related to a domestic context served to mark a location which was subsequently transformed by the construction of a burial monument. Such a sequence may reflect a transition between an area associated with settlement activity and one that was associated with funerary and ceremonial events.

At Coed-y-dinas, part of the Sarn-bryn-caled monument group near Welshpool, (Gibson 1994, 161-7) a scatter of ephemeral features within the areas defined by two ring ditches may indicate settlement activity pre-dating the monuments. However, a lack of dating evidence from the majority of these features and an Iron Age radiocarbon date from one (*ibid.*, 167), warns against any assumptions that the activity was earlier than or contemporary with two successive Early Bronze Age monuments.

At Trelystan, the pre-barrow settlement structures belong to a sequence of activity incorporating a Neolithic pit grave, settlement and subsequent Early Bronze Age round barrows (Britnell 1982; Thomas 1996). The construction of Early Bronze Age barrows at this location is unlikely to be coincidental and past settlement and funerary activities may have been referenced by later funerary architecture. The construction of monuments may, however, have involved a reinterpretation of existing remains in the landscape, rather than necessarily representing continuity of activities at one place (*cf.* Bradley 2002).

There is some evidence to suggest that activity at monuments intentionally referenced contemporary settlement and occupation in surrounding landscapes. A deposit of Beaker sherds, charred cereal grains and charcoal recorded in the ditch fill at Coed-y-dinas Ring Ditch 1 (Gibson 1994, 163-5), may suggest an intentional referencing of domestic material through deliberate deposition at a monument (*ibid.*, 181). Such practices reflect interactions with monuments evidenced elsewhere involving the placing of materials in ditches (Nowakowski 2007). Such activity indicates an interaction with monuments which may not necessarily have been precipitated by the death of an individual or a funerary event. This may indicate a more frequent relationship with settlement and occupation in surrounding areas.

From the evidence available it is suggested that there was a close relationship between barrows and settlement. In some cases there may have been conscious referencing of the domestic sphere prior to the construction of barrows, and episodes of settlement may have contributed to perceptions of place which ultimately culminated in the construction of monuments. The construction of a monument may have changed the relationship with settlement space, although there is also some limited evidence to suggest that settlement was referenced through intentional deposition at monument sites.

The cumulative development of barrows through phases of construction, interaction and

artefact deposition (*cf.* Last 2007a; *cf.* Nowakowski 2007) indicates regular connections being drawn between monuments and settlement. The frequency of this activity is more difficult to define, yet the longevity of activity at certain monument sites may suggest that they were repeatedly and consciously referenced through successive periods of settlement activity.

## **The longevity and frequency of activities at monuments**

The longevity of sequences of monument construction indicates that they remained significant to successive communities over considerable periods of time. Certain locations for monuments may also have been chosen in order to reference past histories (*cf.* Bradley 2002). Interpretations of the past may have changed over time (Garwood 2007c, 46-8), yet the physical presence of existing monuments may have provided a continuity which influenced subsequent activities. The creation of monuments and the formation of monument groups may have provided a long term structuring of the landscape which may have influenced patterns of settlement. Monuments may only have had an effect upon settlement, however, if they retained a relevance and significance maintained through regular funerary or ceremonial events and if they were regularly encountered as part of broader settlement routines.

There are several examples from the study area where Early Bronze Age monument groups had origins in the Neolithic. At Sarn-y-bryn-caled, Welshpool, it is argued that Late Neolithic ring ditches and an Early Bronze Age timber circle were influenced by the presence of an earlier cursus monument (Fig. 50; Gibson 1994), echoing sequences recorded elsewhere in the country such as at Cranborne Chase, Dorset (Barrett *et al.* 1991, 84). Similarly, at Dyffryn Lane, Berriew, a henge monument may have influenced the location of later ring ditches (Gibson 2002, 30), while the presence of an Early Neolithic long barrow at Lower Luggy (*ibid.*), only c.500m to the north-west, may also have influenced the siting of later monuments in the vicinity.

At Four Crosses, Llandysilio, the group of ring ditches extends over an area of c. 1.5km and can be dated broadly to the Early Bronze Age (Warrilow *et al.* 1986; Kenney 2003; Appendix 1). At Site 5, however, a longer chronology is suggested by the presence of a Neolithic pit grave which provided the focus for a succession of concentric ring ditches (Warrilow *et al.* 1986, 63-8). There appears, therefore, to be direct referencing of the past through subsequent monument formation and development of the monument group. Similarly, at Trelystan, two Early Bronze Age round barrows were constructed on the site of a Neolithic pit grave (Britnell 1982).

There were places in the landscape, therefore, that were repeatedly referenced and where communities appear to have been aware of past histories. These histories may have been

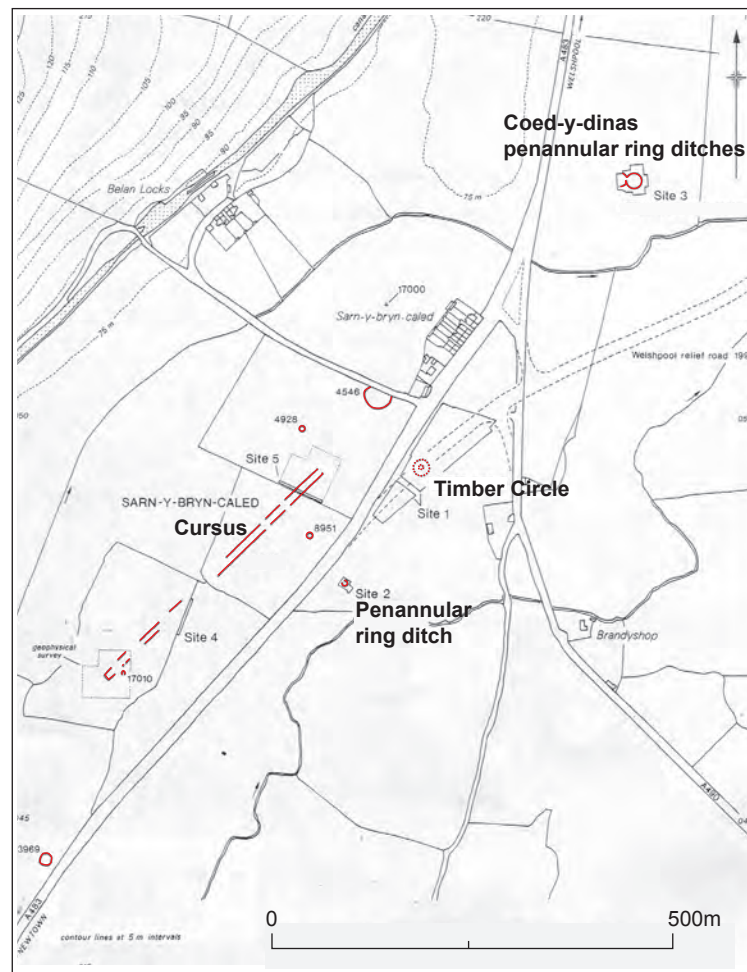


Fig.50 Excavated monuments and cropmarks at Sarn-y-bryn-caled (after Gibson 1994)

interpreted and re-interpreted, in order to project claims of ancestry as a means of creating new histories or identities and defining social relationships in the present. The presence of existing monuments may have been actively used to legitimise further funerary and ceremonial events. Groups of monuments may thus have held a collective significance across relatively extensive areas of landscape. The presence of such monument groups may have altered relationships between settlement and landscape across broad areas.

The creation of monuments at locations redolent of past histories may reflect a desire to legitimise tenure, define places or reinforce social identities in the Late Neolithic and Early Bronze Age (Barnatt 2000; *cf.* Pollard 1999, 80-81; *cf.* Garwood 2007b 201-2). Renewed associations with monuments or the creation of new monuments may reflect changes in settlement patterns at a broad chronological scale. Monuments were invested with a significance relevant to the definition and distribution of existing patterns of occupation.

In order to fully understand the influence monuments exerted upon settlement patterns it

would be necessary to establish the frequency with which activities at monuments took place. From existing data this can, however, only be recognised at a broad scale. The chronological resolution is not fine enough to determine the kinds of annual, seasonal or smaller time intervals required for a more detailed understanding of the relationship with monuments (*cf.* Garwood 2007a, 141). For example, significant periods of time, of c. 500 years or more, may have elapsed between the creation of the primary pit grave and small cairn at Trelystan, and the construction of the two round barrows (Fig. 8; Appendix 7; Britnell 1982). The intervening occupation is considered to have been short lived (*ibid.* 184-5) and the potential for significant breaks in activity at the site is clear. The presence of Grooved Ware and Beaker pottery and flintwork, (*ibid.*, 139-145), may allow for an extended period of settlement at the site, but it is difficult to suggest continuous or unbroken activity between phases of monument construction and it is difficult to establish the regularity of any occupation.

Activity at the Trelystan barrows clearly extends into the early second millennium BC. At least four phases of monument construction have been identified at Barrow 1 (*ibid.*, 144-152) and satellite cremations and secondary burials reflect further activities. A similar sequence of construction was recorded at the adjacent Barrow 2, culminating in the deposition of secondary cremations (*ibid.*, 158-160). The sequences of monument construction and burials may have changed the relationship with settlement, but further settlement activity alongside the process of monument formation cannot be ruled out. Much of the flintwork, for example, was recorded in residual contexts within the barrow mounds, together with material from fieldwalking in the vicinity (Healey 1982). Whilst this material may have derived largely from an earlier phase of settlement, it is possible that further episodes focussed upon the monuments at various stages in their formation, with associated flintwork and pottery becoming incorporated into the mounds through successive phases of construction.

In contrast, the sparseness of artefactual assemblages from many ring ditch sites in the upper Severn valley may argue for infrequent activities, yet there must have been regular activities at monuments in order to maintain their significance over long time periods. It may be possible that these monuments existed within a broad pattern of settlement, where they may have been referenced visually and physically, both in the course of specific events and during routines of settlement activity. This seems to contrast with the evidence from upland sites such as Trelystan where settlement may have been more specifically focussed upon individual monuments acting as nodes within patterns of occupation.

Evidence for Middle Bronze Age activity at monuments in the study area differs from the Early Bronze Age pattern, which may suggest a change in the relationship between barrows and settlement in this period. Although activity at Bromfield in the Teme valley, southern Shropshire, appears to extend into the mid-late Bronze Age (Stanford 1982; Hughes *et al.* 1995, 91-2) and

there are a few other examples of Middle Bronze age cremations from Shropshire and the west midlands (*ibid.*), there is generally limited evidence for Middle Bronze Age interaction with monuments, both at lowland ring ditches and upland barrows and cairns. A few Bucket Urn sherds at Four Crosses may indicate later insertions into since destroyed barrow mounds (Warrilow *et al.* 1986, 73-4), yet there was nothing to suggest Middle Bronze Age activity associated with other ring ditches here or in the local vicinity (e.g. Colls and Halsted 2010). At Trelystan, in the uplands, a Middle Bronze Age spearhead recovered from the vicinity of the barrows (Ehrenberg and Northover 1982) may indicate some later activity at the monuments, but this may have been of a different nature to previous funerary events. Other excavated upland barrow sites further south in Powys, however, such as Carneddau, do not have Middle Bronze Age phases of activity (Gibson 1993).

Whilst it is possible that Middle Bronze Age phases at monuments may have been lost to subsequent truncation, there certainly appears to be no significant monument elaboration and no evidence for monument construction in this period in the upper Severn valley. Activities at barrows from c.1500 BC can, therefore, be argued to have been significantly limited, in contrast to evidence from southern England (Woodward 2000, 43). This may suggest a changing relationship with monuments which had become less significant in relation to patterns of settlement. What limited evidence that exists for Middle Bronze Age activity at monuments suggests that they were only occasionally referenced. Stability in patterns of settlement in this period may not have required monument construction or funerary events at monuments in order to define place, identity or tenure over land.

Overall, there is evidence to suggest a close relationship between monuments and settlement in the Late Neolithic and Early Bronze Age. Monuments appear to have been an important means of perpetuating social relationships and identities which must, ultimately, have been woven into patterns of occupation in the landscape. Precise frequencies of interaction between settlement nodes, monuments and monument groups are difficult to discern, but it may be possible to suggest differences in the relationship between settlement and monuments in lowland and upland contexts.

A number of regional studies have emphasised patterns of settlement which are closely defined by distinctive landforms (e.g. Field 1998; Barnatt 2000). Through an examination of the distribution of monuments in the landscape it may be possible to provide a closer definition of where activities were taking place and how they may have influenced, or were influenced by, patterns of occupation and movement.

## **The distribution of monument groups and the settlement pattern**

The distribution of monuments in the landscape may closely reflect areas of settlement in the Late Neolithic and Early Bronze Age. Monuments were focal points for funerary and ceremonial activities and were closely associated with patterns of occupation. The location and distribution of monuments may have contributed to definitions of settlement space at a broad scale, influenced settlement location and defined or formalised patterns of movement through the landscape. The siting of monuments may have been designed to reference areas of associated settlement or to reinterpret past settlement histories. By closely assessing the topographic context along with the broader distribution of monuments, it may be possible to assess the extent to which they reflect patterns of settlement in the landscape.

### **Topographic position and relationships with settlement**

Assessment of the topographic location of monuments enables a closer understanding of their relationships with settlement locales. The few settlement locales that can be dated to the Early-Middle Bronze Age in the Welsh border region were either situated within valley locations above floodplains of associated rivers (Chapter 3), or were located at higher altitudes, such as Trelystan (Britnell 1982).

Barrows and ring ditches in the study area have been examined through ESRI ArcGIS software, using SMR data placed over a Digital Terrain Model based on Ordnance Survey contour data. This DTM has formed the basis for an assessment of monuments in relation to topographic aspect and slope calculated by the software.

Barrows and ring ditches in the study area are consistently sited on level ground. When the degree of slope is calculated, 77% are on ground with a slope of between 0 and 1° (Fig. 51). This suggests a preference for easily negotiable terrain within a landscape characterised by significant hill slopes (Fig. 52). Even where monuments are present on hills, they appear to favour the less steeply sloping locations. The preference for flat ground may help to facilitate various activities associated with settlement such as ploughing or other methods of food or craft production associated with occupation. The presence of monuments in locations of level ground does not, however, necessarily mean that these places were easily accessed. Level areas upon hilltops, for example, may require the negotiation of obstacles in the natural terrain such as steep slopes or woodland and monuments in lowland areas may have required routes negotiating a number of natural features such as rivers or woodland.

It has been argued that both flat ground and south-facing aspects were preferred criteria for settlement (e.g. Chapman 2006, 106), where increased sunlight hours may have aided arable



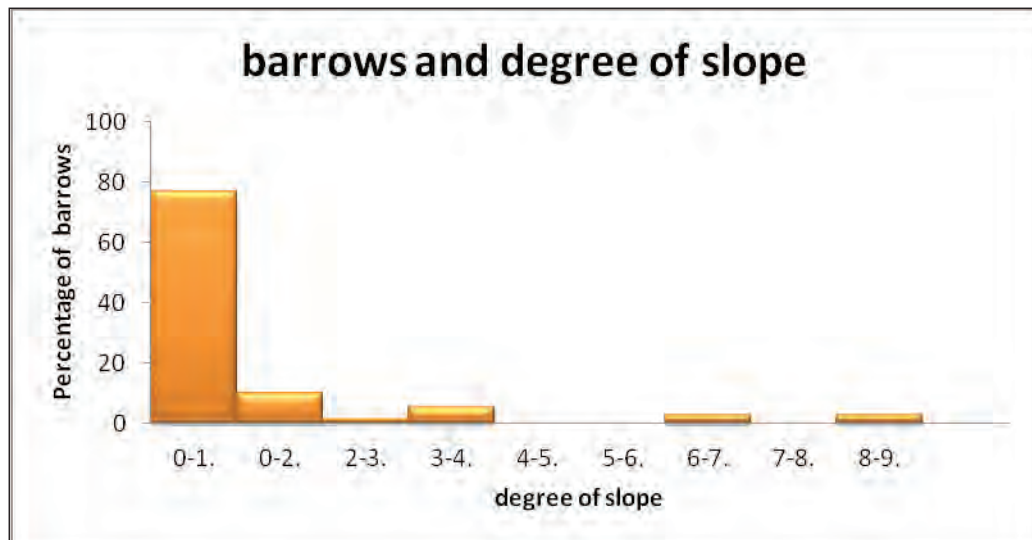


Fig.51 Barrows, ring ditches and degree of slope on associated land.

agriculture. Where a slope can be detected at barrow locations, the aspect of the land is predominantly east, and to a lesser extent north-east and south-east facing (Fig. 53). This siting appears to be intentional, since there are significantly fewer sites on land with south and south-west facing aspects. This suggests that barrows were not intentionally located in positions with optimum environmental conditions for arable agriculture. Even if settlement and monuments were broadly associated, this may indicate deliberate distancing of monuments from settlements, which may have been a means of emphasising their significance.

In contrast to the location of predominantly east-facing barrows, a study of roundhouses in Wales has demonstrated that an east-facing entrance orientation is the least frequent preference in structures dating to between 3000-2000BC (Ghey *et al.* 2007, Figure 21). Instead, these structures favour south-facing entrances, where this can be determined (*ibid.*). This suggests that there was a contrast between the aspect and vistas visible from within settlement structures and those emphasised by the siting of certain barrows. This may have emphasised conceptual distinctions between practices at settlement locations and those at funerary and ceremonial monuments. The eastward facing preference for certain barrows may reflect an intentional referencing of sunrise symbolising life, contrasting with the symbolism of death associated with the monument. Where barrows were specifically sited to reference such natural phenomena, there may have been a subtle spatial distinction with areas of contemporary settlement. It is notable in this respect that at Trelystan the buildings, which may be contemporary with an early grave, have entrances which do not face the grave, suggesting that a conceptual separation may have existed between funerary monuments and episodes of occupation (Britnell 1982; Thomas 1996). It is possible therefore that subtle distinctions were made between the location of settlement activities and monuments and that these were emphasised through the intentional siting of monuments in specific topographic positions and

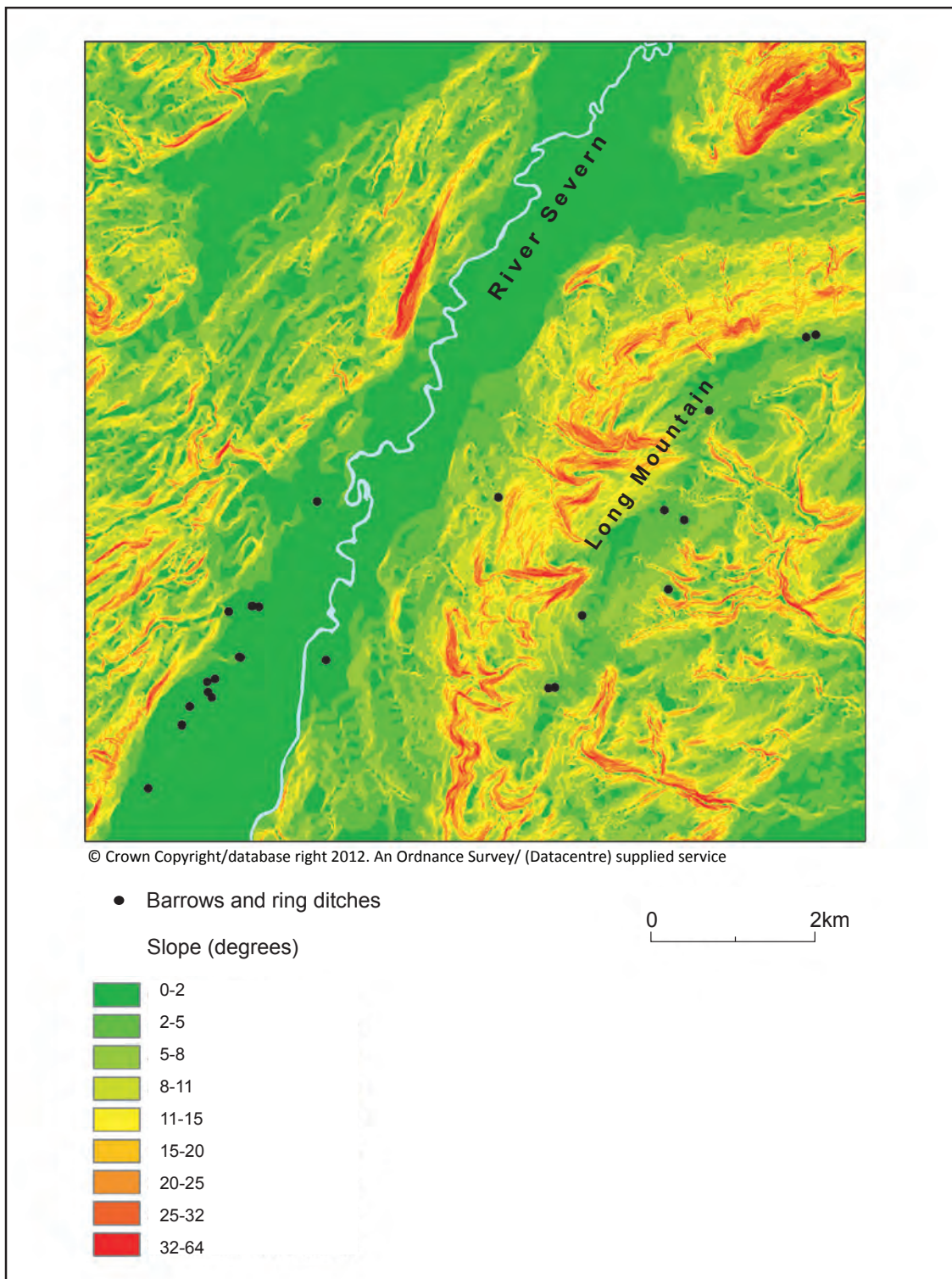


Fig.52 Degree of slope, barrows and ring ditches in the vicinity of the Long Mountain, Powys

the positioning of entrances at domestic structures.

Relationships between settlement and monuments also have the potential to change over time. Settlement sites may be transformed into barrow locations and the creation of new monuments may alter existing relationships with settlement patterns. Shifting patterns of settlement may also have had fluctuating relationships with monuments in the landscape.

The topographic data suggest that whilst the majority of barrows and ring ditches were located in areas which environmentally may have been suited to settlement, such as predominantly flat areas, the position of a number of monuments also suggest that their precise siting invoked different priorities. This may emphasise a degree of spatial separation and distinctiveness between areas of contrasting practice, but this need not be at the exclusion of settlement at a broader scale.

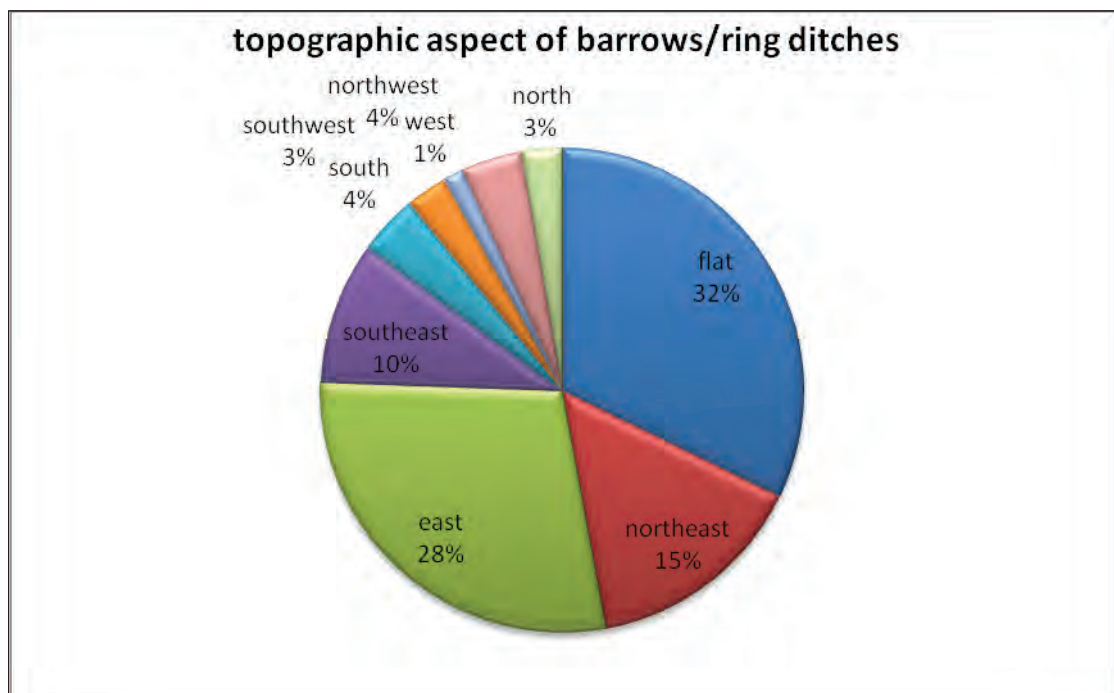


Fig.53 The aspect of round barrows and ring ditches in the study area

#### **Monument groups: linear patterns, clustering and potential relationships with settlement**

Barrows and ring ditches in the landscape of the study area show significant clustering in their distribution. Eighteen ring ditches have been identified at Four Crosses; fourteen at Dyffryn Lane, Berriew, and twelve in the vicinity of Sarn-y-bryn-caled. Such groups of monuments display patterns within their organisation which may serve to reveal a relationship with general patterns of settlement and axes of movement which may have existed within local landscapes.

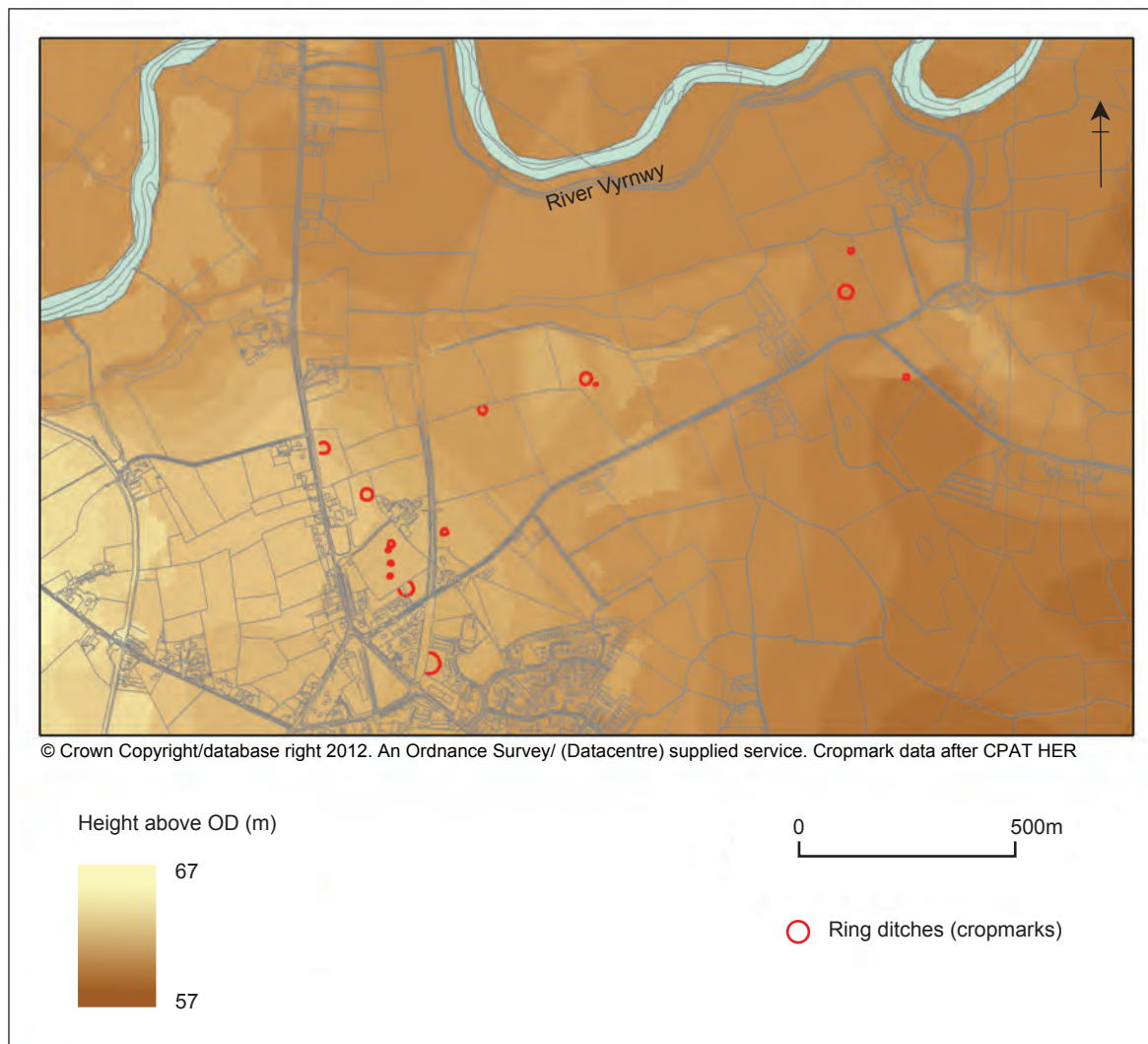


Fig. 54 Cropmark ring ditches at Four Crosses, Powys

The monument group at Four Crosses is located to the south of the River Vyrnwy (Warrilow *et al.* 1986). A linear group of ring ditches have been recorded over a distance of c. 1.3km east to west (Fig. 54). This layout includes elements which run both parallel with, and at right angles to, the axis of the River Vyrnwy floodplain. The ring ditches form linear arrangements which when examined at a large scale appear to combine to form an overall coaxial layout (Fig. 55). At the western end of the group there is a distinct coaxial north-west to south-east alignment. At the eastern end of the Four Crosses group there may be a further coaxial arrangement, perhaps marking the eastern limit of the group.

It is possible that the coaxial arrangement at the western end of the Four Crosses group may link with the ring ditches at Llanymynech on the northern side of the Vyrnwy (Fig. 33). This may suggest that the formation of monuments mirrors an axis of movement between the two areas in the form of a physical crossing point of the river. The distribution of monuments at



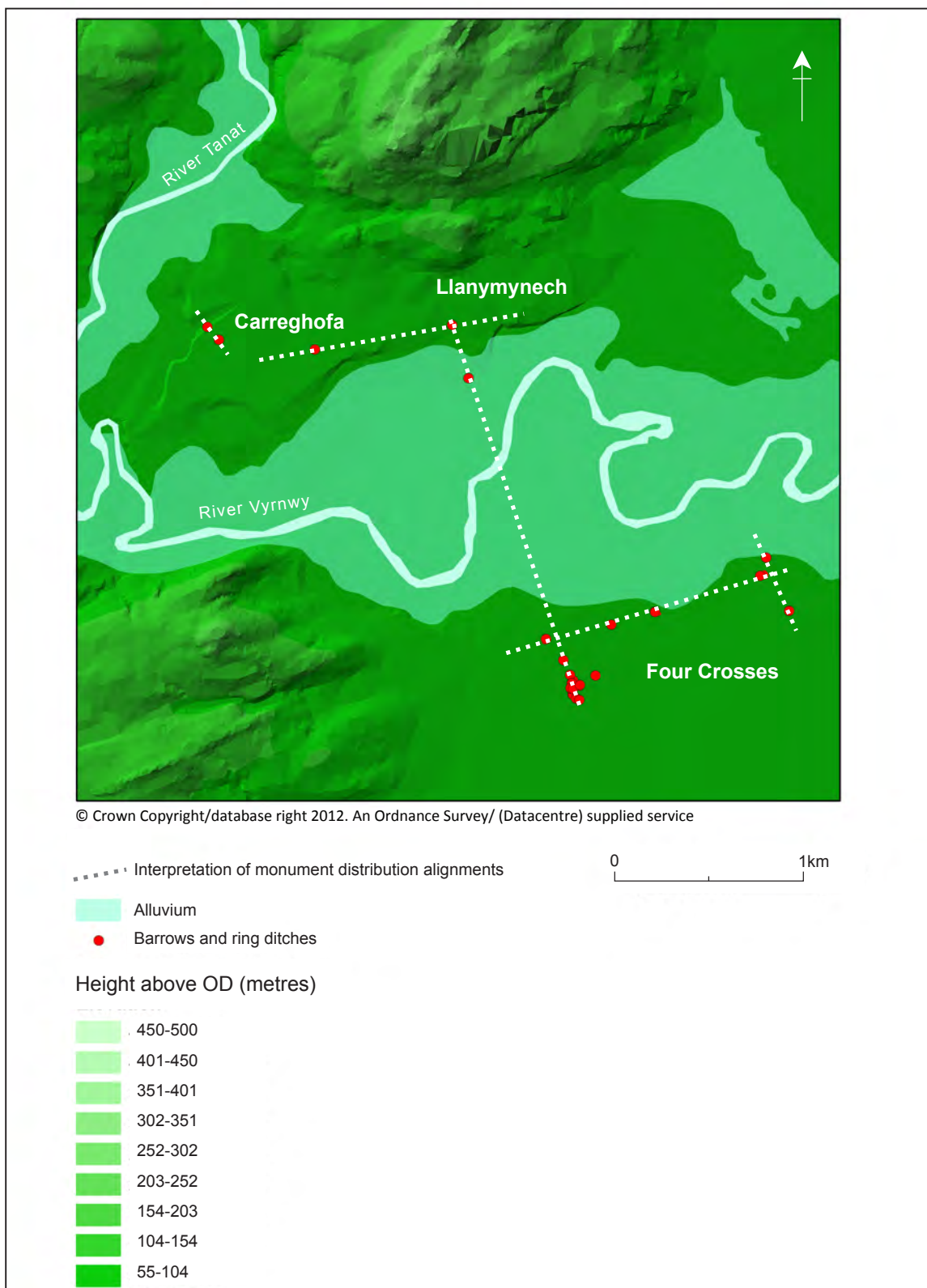


Fig.55 Ring ditches, barrows at Four Crosses, Llanymynech and Craeghafa, with interpretations of distribution patterns.

Llanymynech shares a comparable alignment with those at Four Crosses and shares a similar relationship with the River Vyrnwy to its south, lying above its floodplain. The group also occupies a similar area of around 1.3km east to west. The two areas are therefore directly comparable, suggesting a very similar relationship with settlement activity in the landscape.

The intentional linear arrangement of monuments could not have acted as a physical barrier in the landscape. Yet they may have been sited in positions where they were designed to be encountered during movement as part of routine settlement activities. Once developed, the barrow alignments may have been located in positions designed to cut across axes of regular movement, or to mirror axes of movement through the landscape. It is also possible that the formation of the ring ditches reflect pathways leading to and from the river and axes of movement along the floodplain margins. This may suggest that the frequency of movement and activity on the margins of the river and its floodplain were regular and defined. It can be argued, therefore, that these linear groups of monuments were closely associated with a pattern of settlement on the edges of the River Vyrnwy.

The cluster of ring ditches in the vicinity of Sarn-y-bryn-caled echoes the axis of the Severn valley from south-west to north-east (Fig. 56). The ring ditches and monuments here are distributed over a distance of around 4.2km through the valley. There is a notable lack of monuments present on the immediate hill slopes to the west, suggesting that the valley and river margin location was actively preferred. Only isolated monuments have been recorded to the east of the river, where the present channel hugs the base of the adjacent hills more closely. The presence of the monuments along the western edge of the Severn valley may, therefore, reflect a frequent axis of movement through the landscape, where steep inclines did not have to be negotiated. Monuments may have been encountered through movement along the valley or through lateral movements between the river and land to its west. It may, therefore, have been the river's significance to the settlement pattern that influenced the location of monuments here.

A possible short east-west alignment to the north of the principal group extends the line of a stream gully running through the hills to the west (Fig 56), linking the hilltops with the river. A similar pattern may be seen with the Maerdy Brook group of ring ditches (Fig. 57). The monuments are located at a transitional point where a valley through the uplands to the west meets the broad Severn floodplain. The location of the monuments may have replicated axes of movement between these landscape zones and marked a point of transition between an upland and lowland environment. Again the monuments may be seen as reflecting axes of movement established through defined patterns of settlement and social interaction in the landscape.



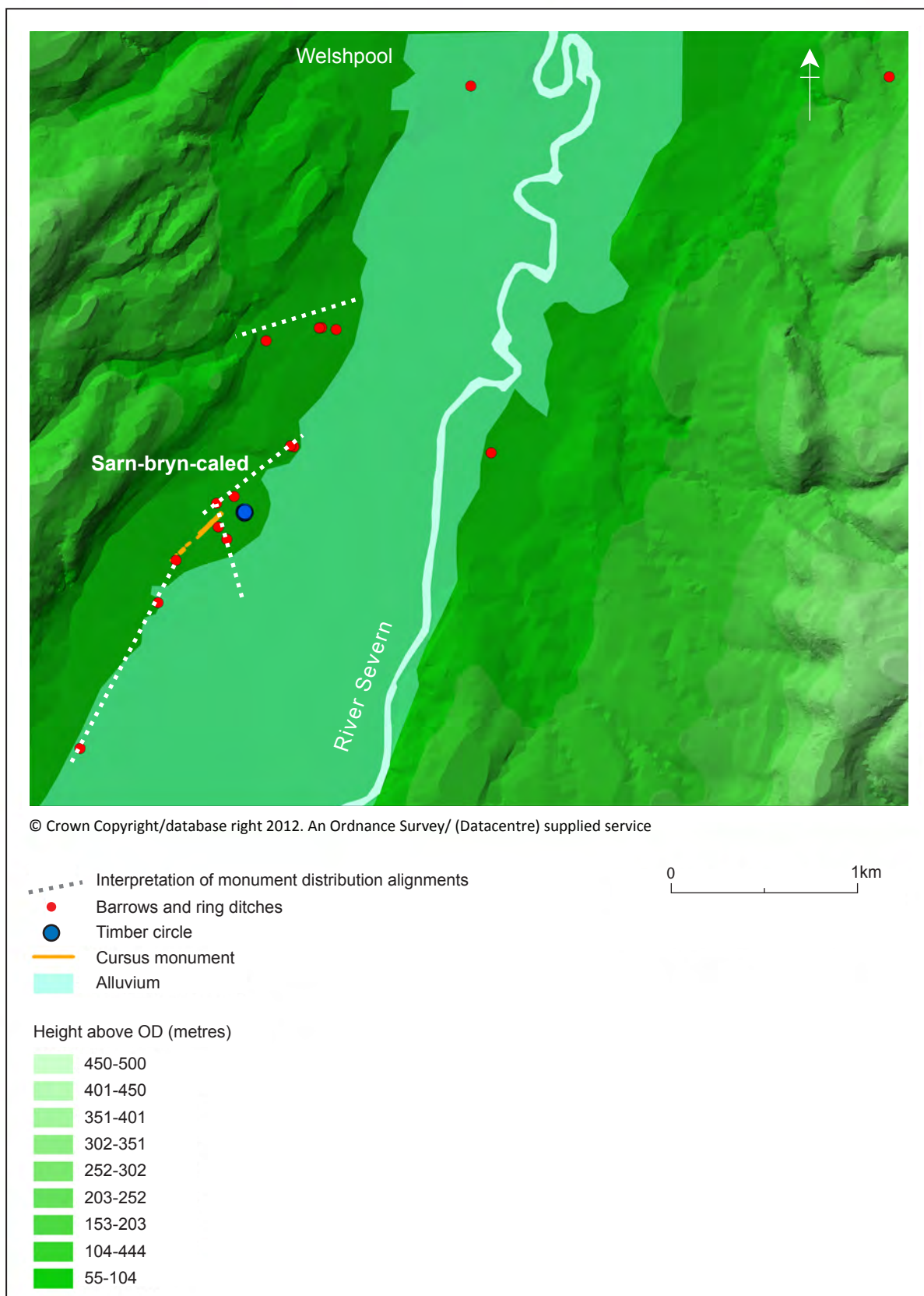


Fig.56 Ring ditches, round barrows and other monuments in the vicinity of Sarn-y-bryn-caled

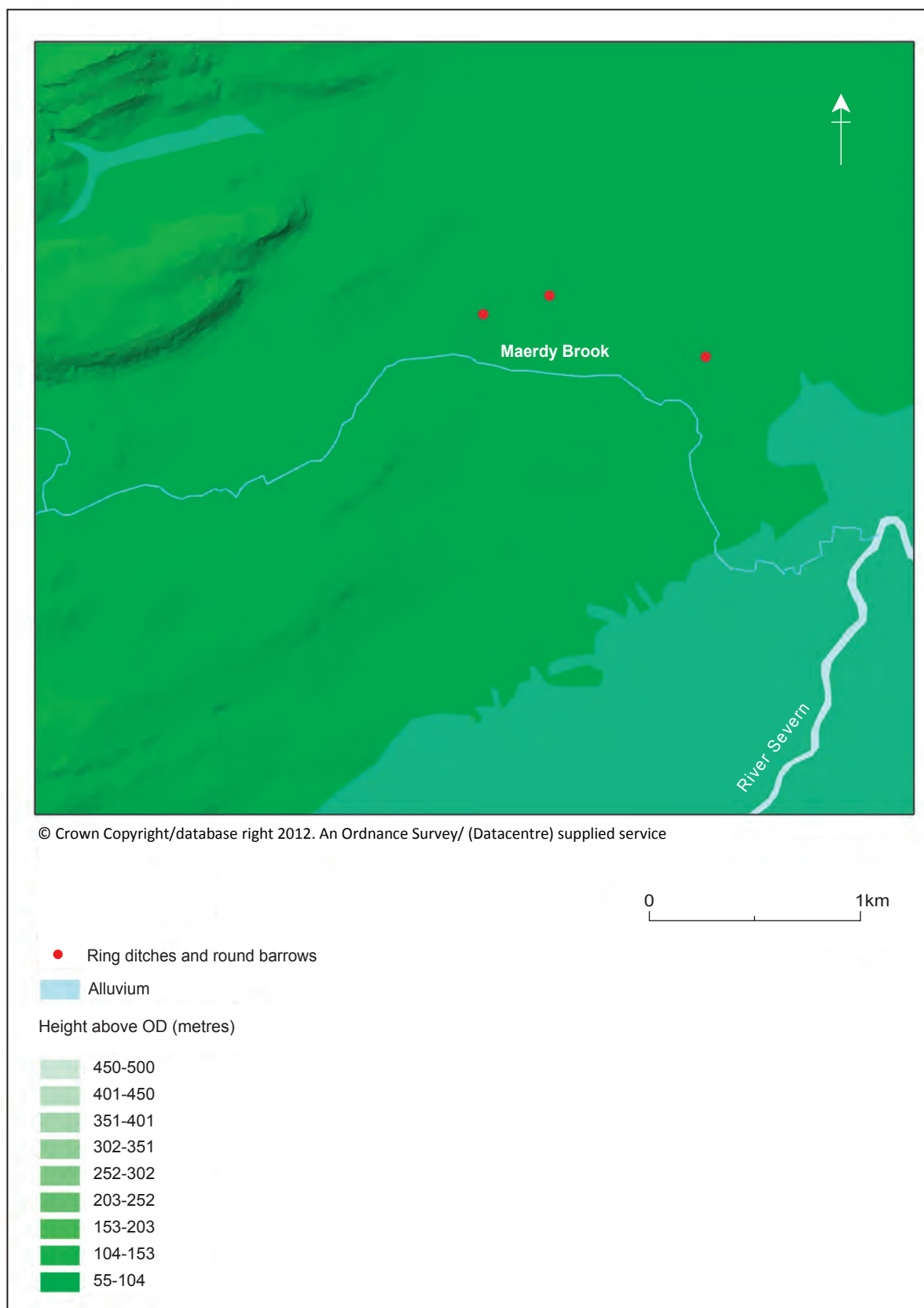


Fig.57 The distribution of Round barrows in the vicinity of Maerdy Brook

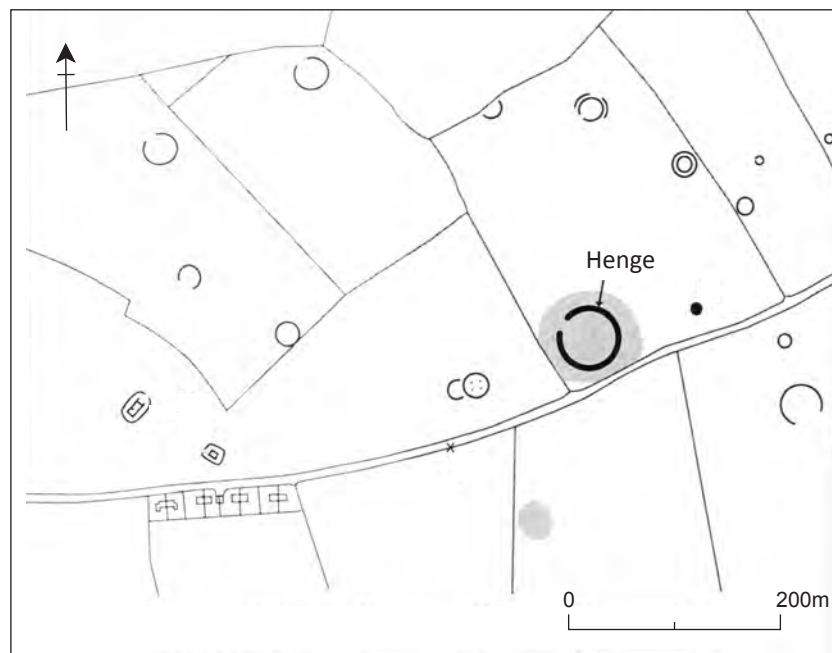


Fig. 58 Monuments and cropmarks at Dyffryn Lane, Berriew, Powys (after Gibson 2006)

There is a generally east-west orientation within the monument group at Dyffryn Lane (Fig. 58; Gibson 2006) which cuts across the axis of the Severn valley (Fig. 59). This applies to the principal monument group and to a group of three ring ditches to the south, which may form a linear arrangement linking both sides of the River Severn and define a crossing point and movement between the valley and the river margins.

Monuments may, therefore, echo movements through the landscape that took place as part of the routines of settlement activity. In this way, the location of barrow mounds may reflect patterns of settlement and their development may be influenced by them. As a consequence, patterns of movement referencing the location of monuments may have become formalised or more closely defined. The development of monuments, therefore, whilst reflecting broad patterns of movement through the landscape may as part of this process also influence ways in which the landscape was negotiated. Settlement and monuments may, in effect, have influenced each other.

The elliptical arrangement of monuments at the Dyffryn Lane group defines a central space which may reflect the way in which the monuments were experienced through funerary and ceremonial events. In effect, this may have ultimately formed a larger-scale experience comparable to movements undertaken within the earlier henge monument. At a broader scale the elliptical monument group may draw upon its position within a loop in the river system, bordered by hills to the west (Fig. 59). The monument group may, therefore, form a central

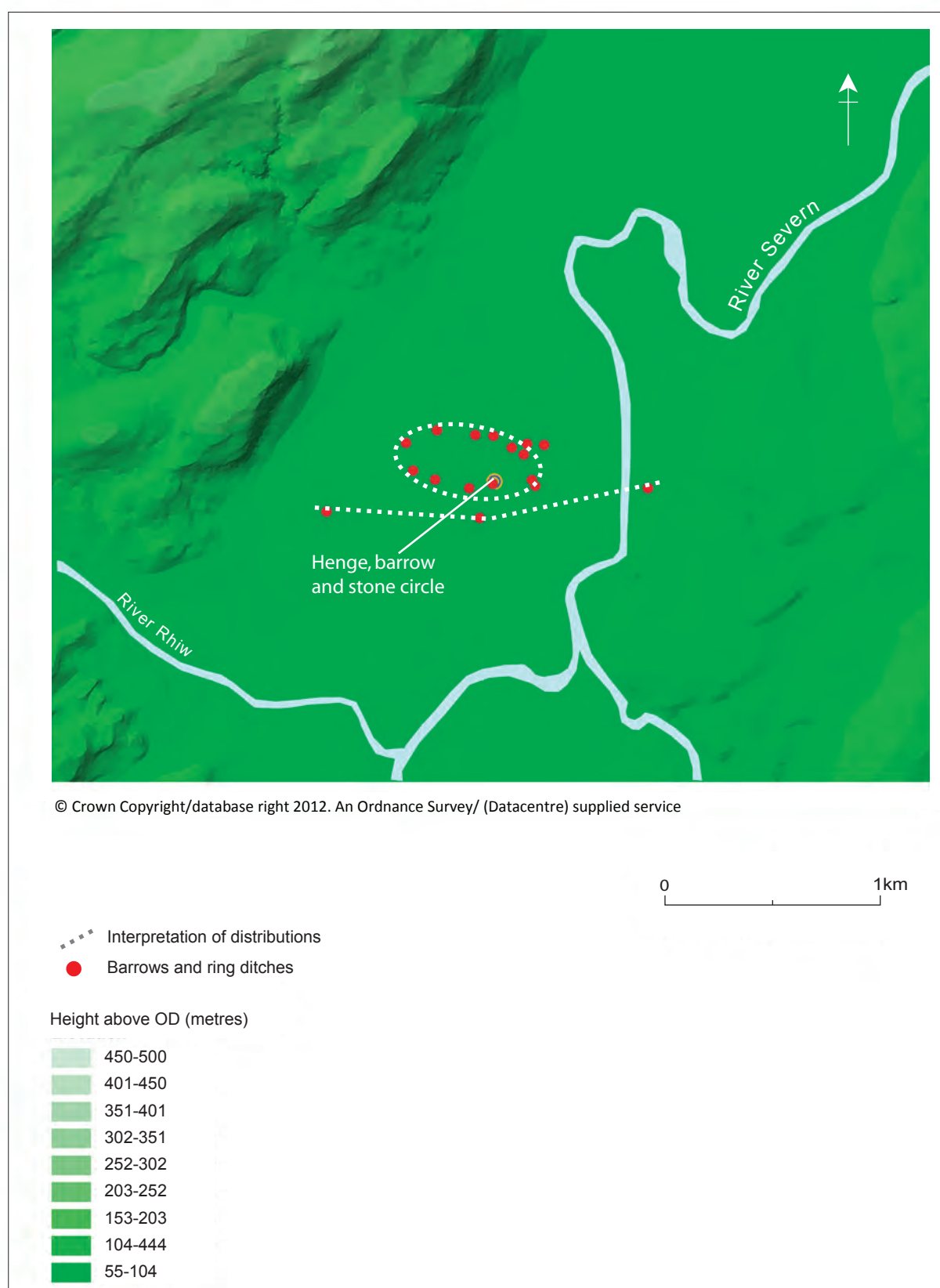


Fig.59 Distribution of barrows, ring ditches and other monuments in the vicinity of Dyffryn Lane, Berriew

position within a spatially defined area of the landscape. This area may have contributed to the definition of any associated settlement at a broad scale, which was echoed and reiterated by the formation of monuments.

The confluence of rivers may have facilitated contact between groups from different locations in the Dyffryn Lane area by movement via river systems (Gibson 2002, 23). Clusters of ceremonial monuments at river confluences are known elsewhere in the Welsh border region and west midlands, such as at the barrow group at Bromfield, Shropshire (Hughes *et al.* 1995), and the monument group at Catholme, Staffordshire (Buteux and Chapman 2009; Chapman *et al.* 2010). It is possible, therefore, that certain points in the landscape created foci for funerary and ceremonial activity. These foci may have drawn communities together from greater distances. The monument group at Bromfield, for example, has been considered as a regional 'cult centre' (Buteux and Hughes 1995, 161). The same argument could be applied to any group of monuments which stands out from what may be a generally more dispersed pattern. This may suggest that certain lowland monument groups had a greater influence on settlement patterns at larger scales. At Four Crosses, for example, a general broad distribution of monuments along the gravel terrace south of the River Vyrnwy, also appears to have clusters of monuments within its distribution, particularly at its western end (Fig. 55). There appear, therefore, to be focal areas of activity which reflect cumulative monument construction events. These clusters of monuments may reflect focal points within broader axes of movement, where more than one social group may have expressed identity or lineage through events at barrows and ring ditches. Any such activities may have formed a focus for periodic gatherings at a larger scale than those at individual monuments and may reflect periodic and potentially intensive settlement activities which formed a component of a more general pattern of settlement in the landscape (*cf.* Whittle 1997).

### **Upland monument distributions and landscape contexts**

Barrows in upland landscapes are more dispersed than those recorded in the upper Severn valley or along the River Vyrnwy. Distributions are arguably more extensive and characterised by smaller groups or pairs of monuments. This suggests less intensive funerary and ceremonial activities across these landscapes, which appears in turn to suggest lower population levels. It could be suggested, therefore, that activities at monuments may have been less frequent. Sites like Trelystan, however, have produced flintwork assemblages which may show a greater intensity of settlement activity than sites in lowland contexts. Procurement of such flintwork suggests a place within a broad system of contacts with other regions, whilst monumental and funerary traditions reflect a still broader social context. It is not, therefore, necessarily true to say that upland locations were isolated. A close examination of the topographic position of

certain upland monuments may enable a better understanding of their relationship with social groups occupying upland environments and their context within broader landscapes.

Ten barrows or ring ditches have been identified on the Long Mountain, spread over a distance of c. 6km (Fig. 60). The mountain forms a northeast to southwest orientated ridge. The barrows are located on the upper slopes of the mountain and their distribution broadly echoes the orientation of the ridge. The barrows can be divided into pairs or individual monuments, which appear to be relatively evenly spaced along the ridge. Pairs of barrows are present at Knapps, Trelystan, and at Trelystan Church House. The distance between pairs of barrows and other barrows on the Long Mountain ranges between c.1km and 1.5km. This is a distinctive distribution pattern, which contrasts with more intensely clustered and sometimes linear monument formations associated with rivers in lowland locations.

Movement along the ridge top may have facilitated interaction between these sites and may have influenced their location (*cf.* Gibson 2002). Yet the spacing in their distribution across the ridge appears to emphasise the significance of particular locales and suggests a degree of separation between activities. This may, in turn, suggest a separation between social groups on the mountain and that distinctive identities were maintained. The pairing of monuments may indicate the cumulative development of these locales over time and the development of distinctive focal points within upland landscapes. It may be suggested that such locations formed a focus for at least intermittent settlement activities.

The siting of barrows in upland contexts enables long distance views which may have helped to contextualise the immediate local environments of the monuments. Such vistas may have provided a visual or conceptual link with occupation in river valley locations below. Upland and lowland zones of the landscape may be linked within seasonal or other systems of movement (Fleming 1971; Whittle 1997) or exist as independently settled localities. The extent to which upland and lowland landscapes were connected within patterns of settlement may be explored through examining the location of monuments, using the Long Mountain group as an example.

Viewsheds were generated within ArcGIS software in order to calculate what is theoretically visible from specific points in the landscape, based on 1:10,000 scale topographic data (for detailed GIS methodology see Chapter 1). Individual barrows were, therefore, selected within the database as input observer points, in order to examine what areas of landscape may have been visible from these monuments. Where monuments were located close together, as at Knapps barrows, viewsheds from both monuments have been overlapped to create a 'cumulative' viewshed. Variables relating to the potential height of the observer were not used within the GIS calculations (Chapman 2006, 85).

At Knapps barrows, the views are emphasised to the northeast and north across broad



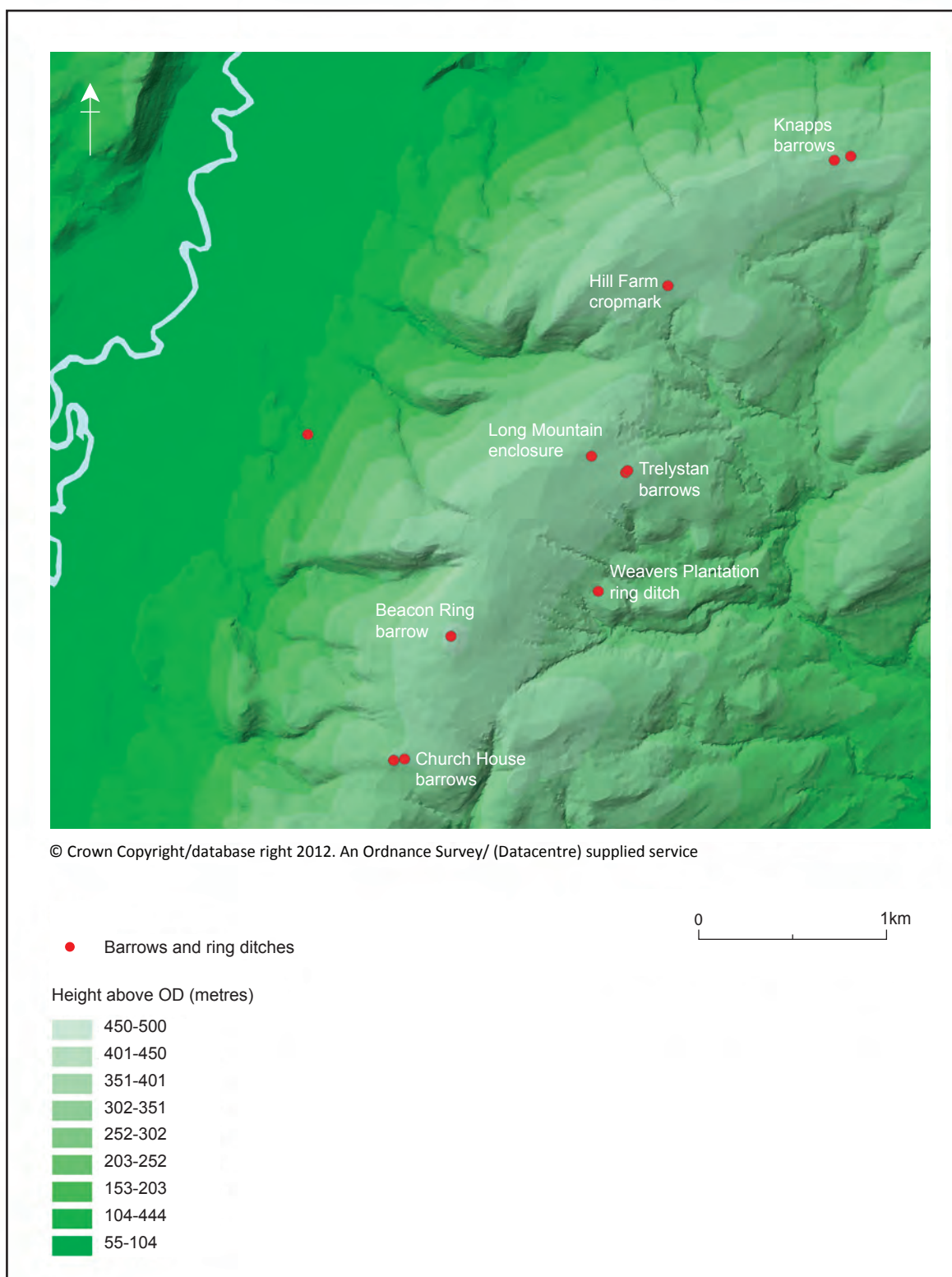


Fig.60 Distribution of barrows, ring ditches and possible barrow cropmarks on the Long Mountain, Powys

areas of lowland landscape (Fig. 61). The position of the two barrows gives an impression of being on the edge of the mountain, whilst also emphasising the Breiddin Hills directly to the north (Plates 5 & 6). Essentially the upland context of the monuments is contrasted with distant landscapes. Inter-visibility with the 'interior' of the Long Mountain is virtually non-existent, excepting a small area immediately around the barrows. This may suggest that their location was concealed locally and that prior knowledge was required to engage with these sites. Certain upland barrows may, therefore, have been closely associated with individual groups whose activities were contextualised by referencing more distant lowland landscapes and broader communities. This may reflect a regular association with lowland landscapes reflecting patterns of mobility between the two.

A number of other barrows command views across distant landscapes. The barrow at Church House 1 has extensive views across the Severn valley (Fig. 62). The barrow on Beacon Ring commands views to the hills on the other side of the Severn valley to the west (Fig. 63). In emphasising distant views a contrast may be being made between different landscapes and the context of the upland location. The position of the community within more wide-ranging systems of settlement may have been highlighted by the position of certain barrows. Views from monuments may emphasise links with distant places and may have served to visualise concepts of movement between places in the landscape. By locating monuments on the 'edge' of a hill, participants in events at these barrows were very much aware of their relationship with other places, whether these were immediately familiar or not. This may also have had a cohesive effect upon those engaged in activities at these monuments and contributed to the formation of group identities.

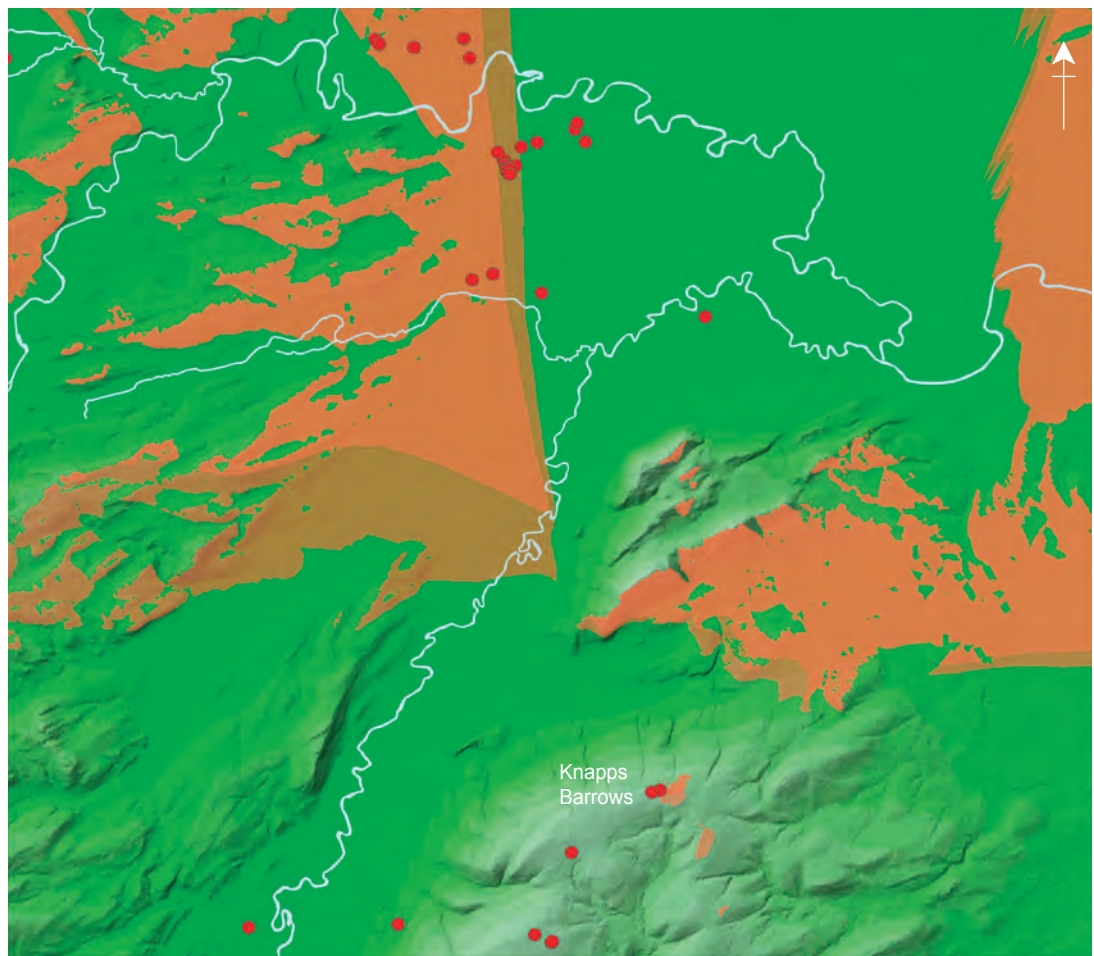
In contrast, the two barrows at Trelystan are located in a position where greater expanses of the Long Mountain are visible (Fig. 64). This may in effect create the perception of a monument within an arena of hills and reinforce its significance at a local level. This may suggest that groups associated with these barrows may have expressed identity more closely with the upland landscape of the Long Mountain than those associated with barrows whose location more readily referenced distant landscapes. This may suggest that associated settlement may not have been part of frequent movements between upland and lowland areas. Attention at Trelystan may, nevertheless, have been drawn to the contrasting distant views to the south-east, serving to contextualise the local environment. Any emphasis placed on the local environment by the siting of monuments at Trelystan or any other barrow site does not suggest that these places were isolated from communities in other areas of the landscape. Artefactual assemblages from the site, for instance, demonstrate that exchange systems must have been in place for the procurement of lithics, for example (Britnell 1982). Whilst certain monuments may not have emphasised distant places through visual referencing, there may have been



Plate 5 Knapps barrow 1, Long Mountain, Powys



Plate 6 Knapps Barrow 2 at the 'edge' of the Long Mountain, looking north towards the Breiddin hills



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- Visible areas
- Barrows and ring ditches

0 2km

Height above OD (metres)

- 450-500
- 401-450
- 351-401
- 302-351
- 252-302
- 203-252
- 153-203
- 104-144
- 55-104

Fig.61 Cumulative viewshed from Knapps Barrows 1 and 2



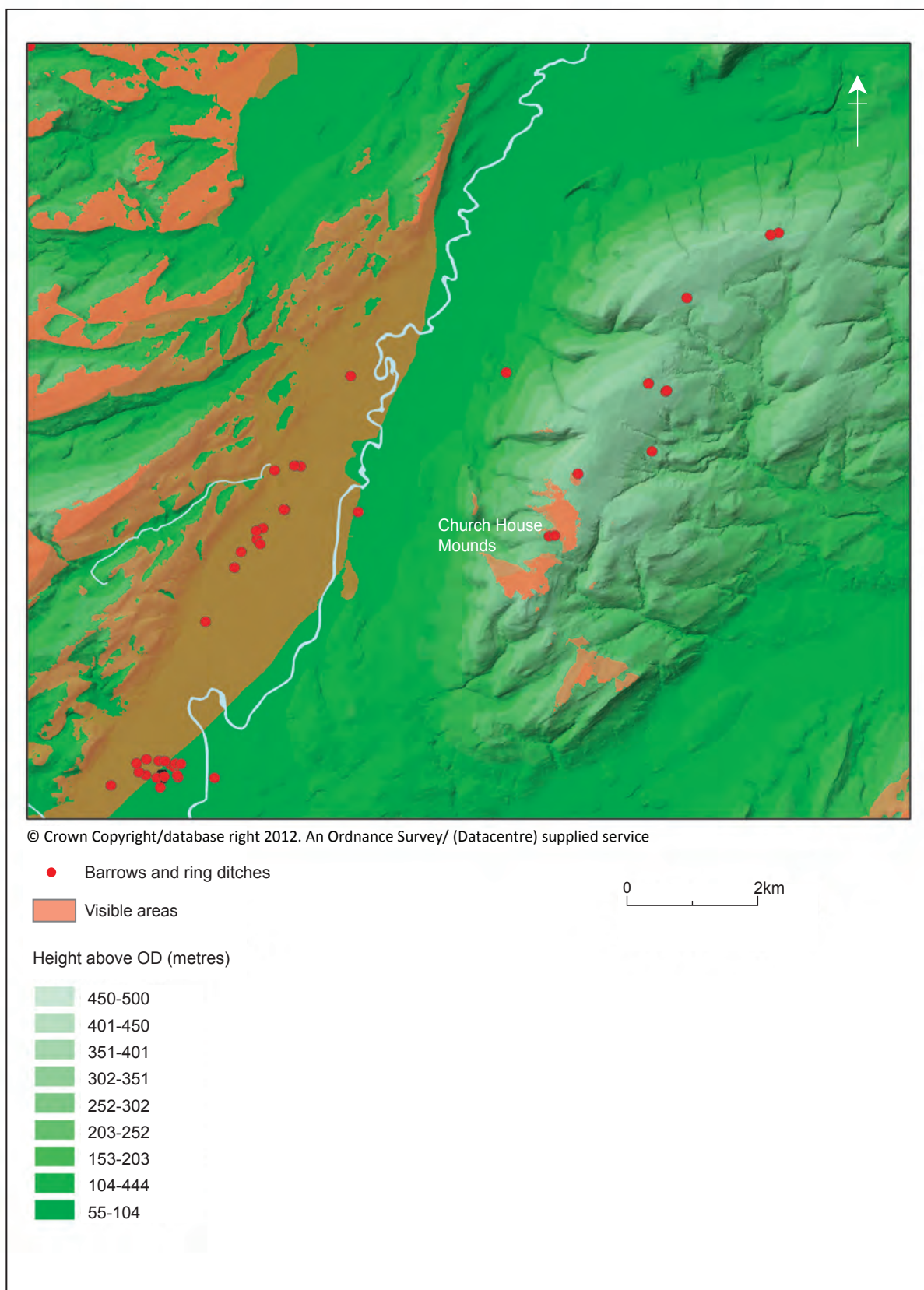


Fig.62 Cumulative viewsheds from Church House Mounds, Long Mountain

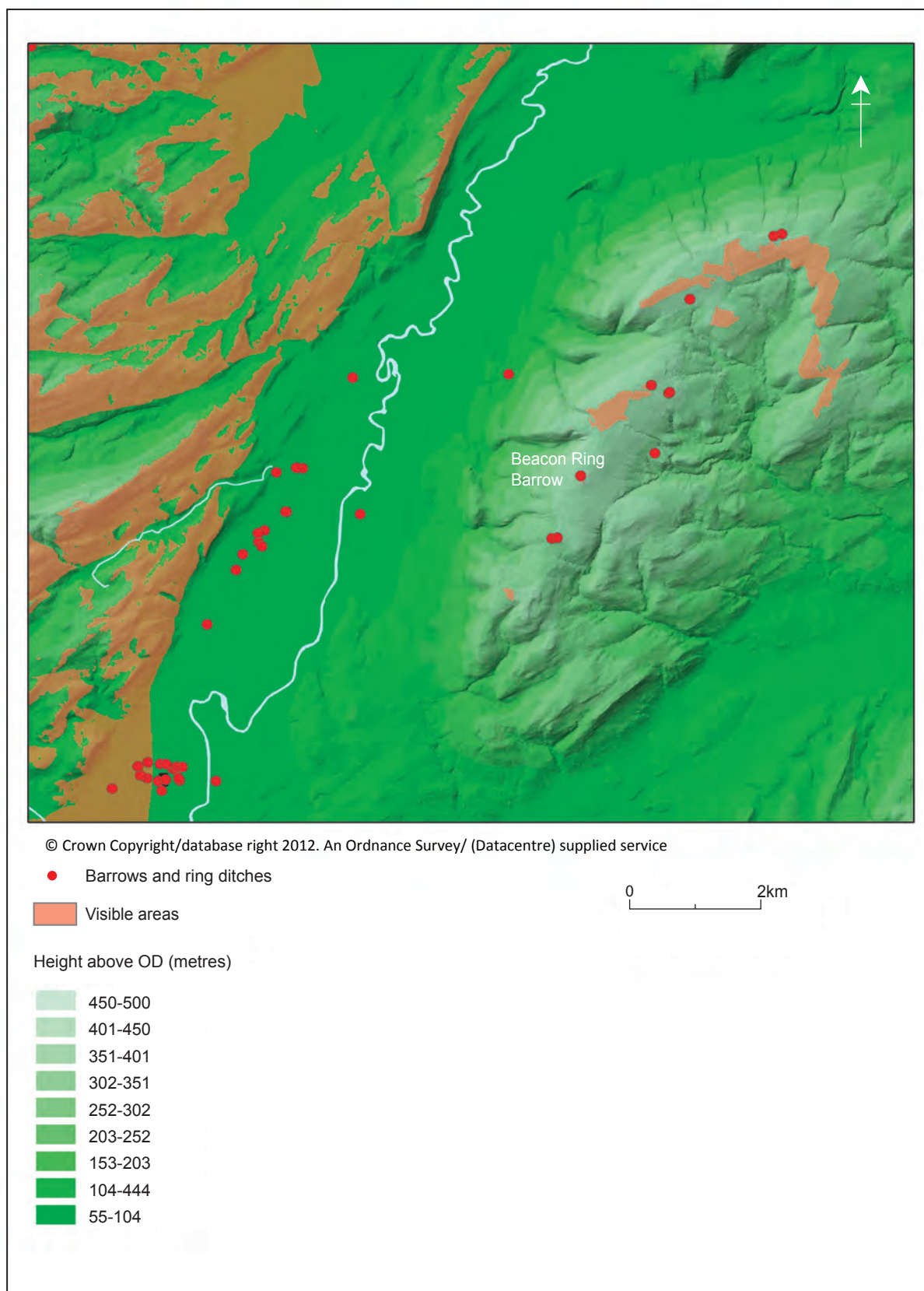


Fig.63 Viewshed from Beacon Ring barrow, Long Mountain



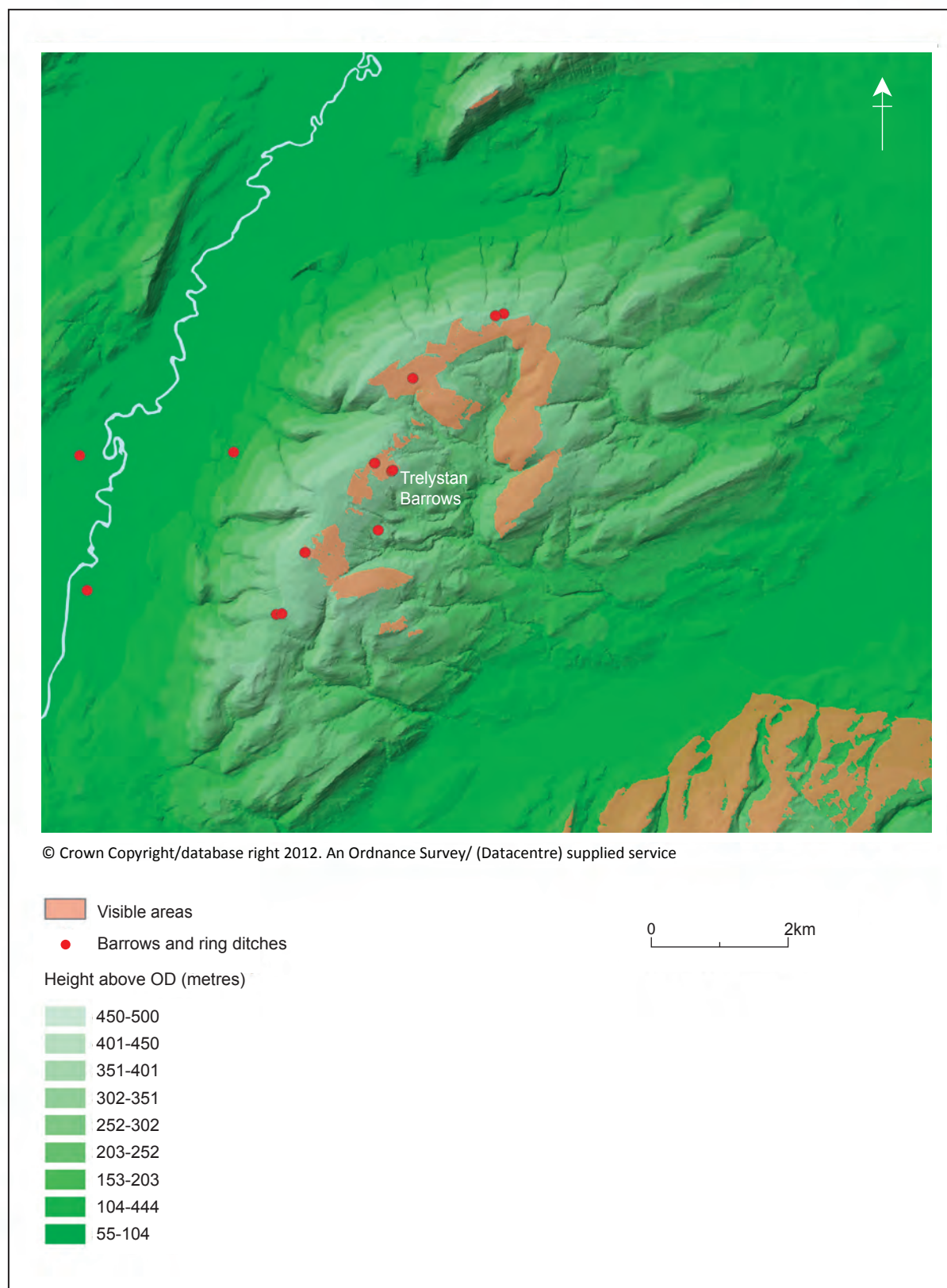


Fig.64 Viewshed from Trelystan Barrows, Long Mountain

many other ways of invoking relationships with distant landscapes.

## Conclusion

Monuments and settlement activity appear to be closely related in the landscape of the study area. Certain monuments were constructed in locations of previous settlement activity and it is possible that this activity contributed to definitions of place which culminated in the construction of monuments.

Where deposits of settlement-related material have been recorded at barrows they may either pre-date or post-date the monument. Monuments constructed over the remains of occupation deposits may have deliberately referenced past activities through their chosen siting. Where settlement related material was placed at monuments this may have been referencing activity in the wider landscape. The fact that few excavated ring ditch sites in the study area have produced significant assemblages of flintwork (Chapter 3), may suggest a degree of separation between the location of settlement activities and the location of monuments. Monuments may have been sited in east facing positions in order to reference the rising sun, or in upland locations to reference distant lowland landscapes. The positioning of monuments may also have referenced places resonant with past histories and social identity, including past settlement activity, yet contemporary settlement may have occupied locales that were to some extent spatially distanced or conceptually separated. The location of lowland barrows upon generally favourable agricultural land suggests, however, that barrows and settlement shared similar areas of the landscape.

The development of monuments and monument groups through successive ritual and funerary events and phases of monument construction must have created focal places in the landscape that were integral with patterns of settlement. The longevity of individual monuments and groups of monuments suggests that they were used successively and may have been repeatedly re-interpreted as a means of legitimising associations with place and negotiating social relationships.

The distribution of monuments, at a broad scale, suggests that they were regularly encountered through patterns of movement in lowland landscapes. Monuments may have formalised routes through the landscape that were negotiated as part of routine settlement activities. Where clusters of monuments exist in lowland landscapes these must have acted as focal points in the landscape which may, potentially, have attracted groups from both local landscapes and potentially further afield (*cf.* Buteux and Hughes 1995), perhaps as part of broader systems of settlement mobility. Activity at such monument groups may have enabled a coalescence of

social identities, reflecting broader networks and alliances.

In the uplands the location of certain monuments may reflect activity foci that actively referenced broader and more distant landscapes. This may suggest a frequent relationship with lowland landscapes and suggest mobility between the two landscape zones within the settlement pattern.

In contrast with the Late Neolithic and Early Bronze Age, there is very limited evidence from the study area to suggest that monuments formed part of the Middle Bronze Age settlement pattern, and there is nothing to suggest that new monuments were constructed or existing ones substantially elaborated in this period. This suggests a changing relationship between monuments and settlement by the mid-second millennium BC, and an alternative focus for funerary and ceremonial activity and the maintenance of social relations and the definition of settlement space.

## Chapter 5: Metalwork, settlement sites and the landscape

### Introduction

Metalwork dating from the Early, Middle and Late Bronze Age is frequently recorded in the Welsh border region, and chance discoveries have been regularly reported since the nineteenth century (Fig. 65). Metalwork has also been recorded alongside evidence for enclosed settlement sites dating to the Late Bronze Age on hilltops in the region. These sites are, however, few and far between and the vast majority of metalwork finds have been recorded in isolated contexts. In southern England, in contrast, metalwork has been regularly recovered from the far more common settlement sites in this region. There is, therefore, the potential for a relationship between metalwork in the landscape and the location of settlement in the study area.

Late Bronze Age metalwork has been recorded on the hilltop enclosure at the Breiddin hillfort, Powys (Musson 1991), alongside other evidence for occupation, as well as at Beeston Castle, Cheshire (Ellis 1993). These sites, however, remain the only locations with convincing evidence for Late Bronze Age settlement and metalwork in the central and northern Welsh Marches region. Middle Bronze Age settlement has been very rarely recorded in this area (Britnell *et al.* 1997; Quinell and Blockley 1994, 138) and these have no known associations with metal objects. It is clearly necessary, therefore, to achieve a greater understanding of the landscape contexts of recorded metal objects in order to contribute to the understanding of potential settlement location.

In the Welsh border region, in common with other regions of Britain, metalwork has been most frequently encountered as isolated finds of single objects or large hoards. These hoards often comprise a significant component of weaponry and were often deposited in wet places (Yates and Bradley 2010). The deposition of hoards as a phenomenon has been extensively discussed and the prevailing interpretation is one of votive deposition within the context of competitive consumption, particularly for the Late Bronze Age (Barrett and Needham 1988; Bradley 1990; Bradley 1998). The relationship between the location of metalwork in the landscape and the location of settlement has, however, been discussed far less frequently. Recent studies have, however, highlighted potential relationships with settled areas and have suggested a differentiation in the context of deposition for different metalwork types in the Middle and Late Bronze Age (Yates and Bradley 2010).

The deposition of hoards and single finds in wet places suggests that they were intentionally distanced from settlement sites located on dry ground. The extent of this separation and the relationship between locations of metalwork deposition and occupation is not, however,

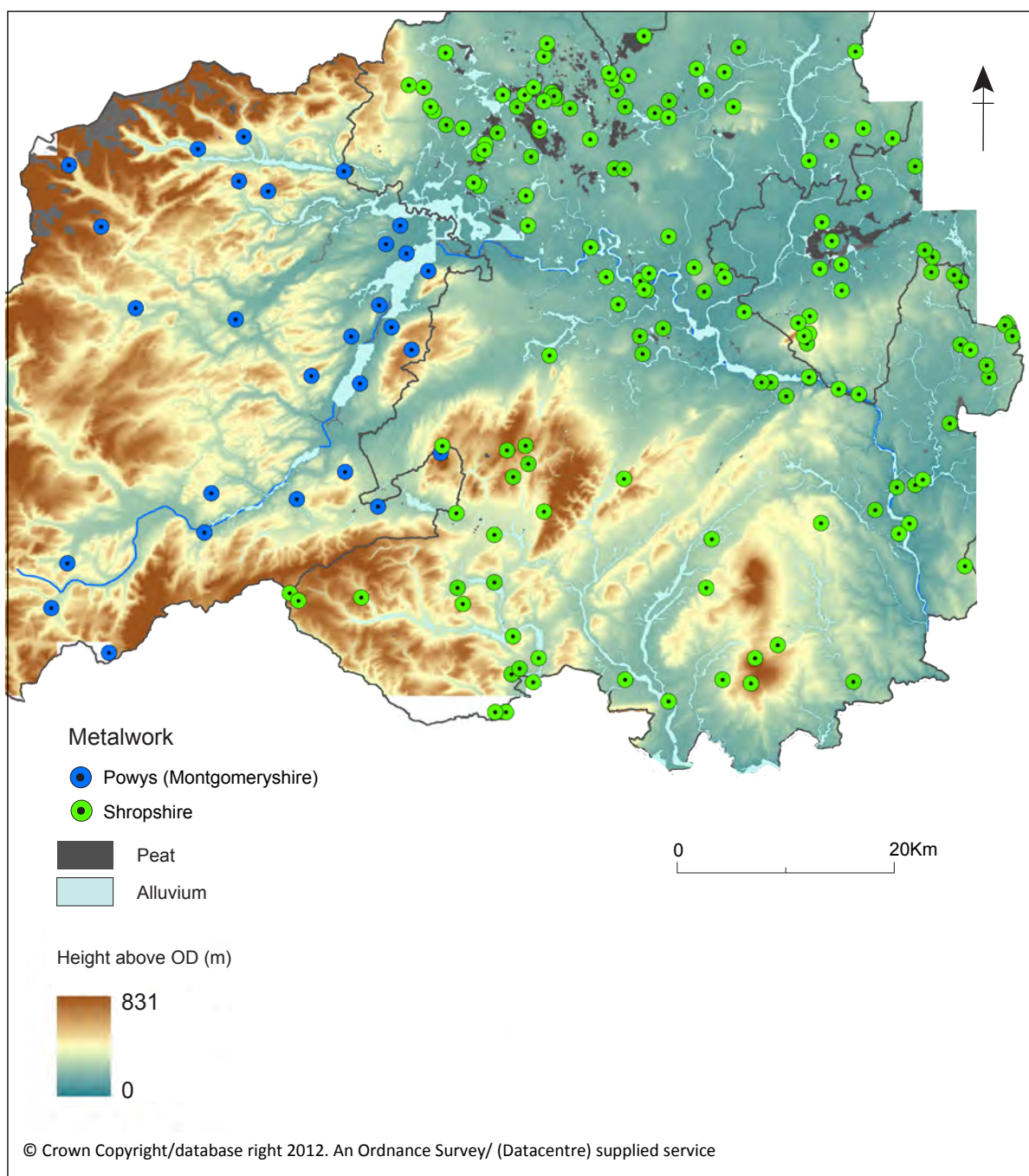


Fig.65 The distribution of metalwork finds in Montgomeryshire and Shropshire



clearly understood. Previous studies have examined the relationship between metalwork and burnt mounds in Shropshire (Ehrenberg 1991; Halsted 2007, 176), although these sites, often adjacent to streams or wetlands, may also be separated from other areas of settlement. Examinations of metalwork and superficial geology have also been made as a means of establishing a potential relationship with settlement, using the context of known settlement sites as a precedent (Halsted 2005; Halsted 2007). Patterns of settlement may, however, be more complex and it is unlikely that they were confined to certain geological zones.

The location of metalwork deposition in the landscape may have taken place both within settlement contexts and in locations intentionally separated from these areas. The distribution of metalwork, therefore, has the potential to signify the presence and distribution of settlement in the landscape at a broad scale. It may be possible to use the distribution of metalwork in the study area as a means of establishing the location of settlement activity, or the potential frequency of settlement activity in certain landscape zones.

The most frequent metalwork types recorded within the study area belong to the Middle and Late Bronze Age, when settlement sites in southern England become visible in the archaeological record. By examining the types of metalwork recovered from these settlement sites it may be possible to assess the potential association between metalwork and settlement in the central Welsh border region. The following section will, therefore, examine a selected group of settlement sites from southern England where metalwork has been recorded, in order to highlight the potential relationship between metalwork types, metalwork deposition and settlement. This will be followed by an examination of the topographic context of metalwork in the landscapes of Shropshire and Montgomeryshire, Powys, and an assessment of the potential relationship between metalwork and settlement patterns in these areas.

## **Background: metalwork and settlement sites in southern England**

The most prolific evidence for Middle and Late Bronze Age settlement sites has been recorded generally across the south of England, including the south-east, central southern England and the south-west. These sites set a precedent for the relationship between locations of occupation and the deposition of metal objects. They may, therefore, provide an insight into the potential relationship between metalwork and settlement in other regions such as the Welsh borders. A review of metalwork from fifteen Middle Bronze Age and fifteen Late Bronze Age settlement sites in southern England has therefore been undertaken (Tables 3 & 4). All sites reviewed have structural and artefactual evidence to indicate settlement and occupation. The majority of sites have evidence of roundhouses or scattered pits and postholes, either within field systems or settlement enclosures (e.g. Barrett *et al.* 1991 148-67; Ladle and



Woodward 2009; Brown 1988). Pottery is present on all the sites reviewed, together with varied evidence for animal husbandry, cereal cultivation or processing and textile production. In contrast, large middens are likely to represent a distinct type of site where domestic material was deliberately deposited, removed from its original context of use (e.g. McOmish 1996; Lawson 2000; Needham and Spence 1997). Middens have, nevertheless, been included for their potential close relationship with locations of settlement. The settlement sites examined have been recorded in a wide variety of landscape contexts including chalk downlands (e.g. Gingell 1992; Drewett 1982), river valleys (e.g. Moore and Jennings 1992), hilltops (Barrett *et al.* 2000) and locations adjacent to rivers or the coast (e.g. Needham and Longley 1980; Nowakowski *et al.* 2007).

### Middle Bronze Age settlement sites and metalwork in southern England

Finds assemblages from Middle Bronze Age settlement sites in southern England often include small tools such as awls, as well as personal ornaments such as bracelets (Table 3). Weapons are the third most frequent type and axes (palstaves) are the least frequent occurrence (Table 3). The extent and sample size of excavations clearly affect the quantities of artefacts recovered, but nevertheless it is notable that none of the sites examined has greater than eight metal objects (Fig. 66). These artefacts appear to occur as individual items rather than hoards and it is clear that metalwork was not deposited in significant quantities on these sites.

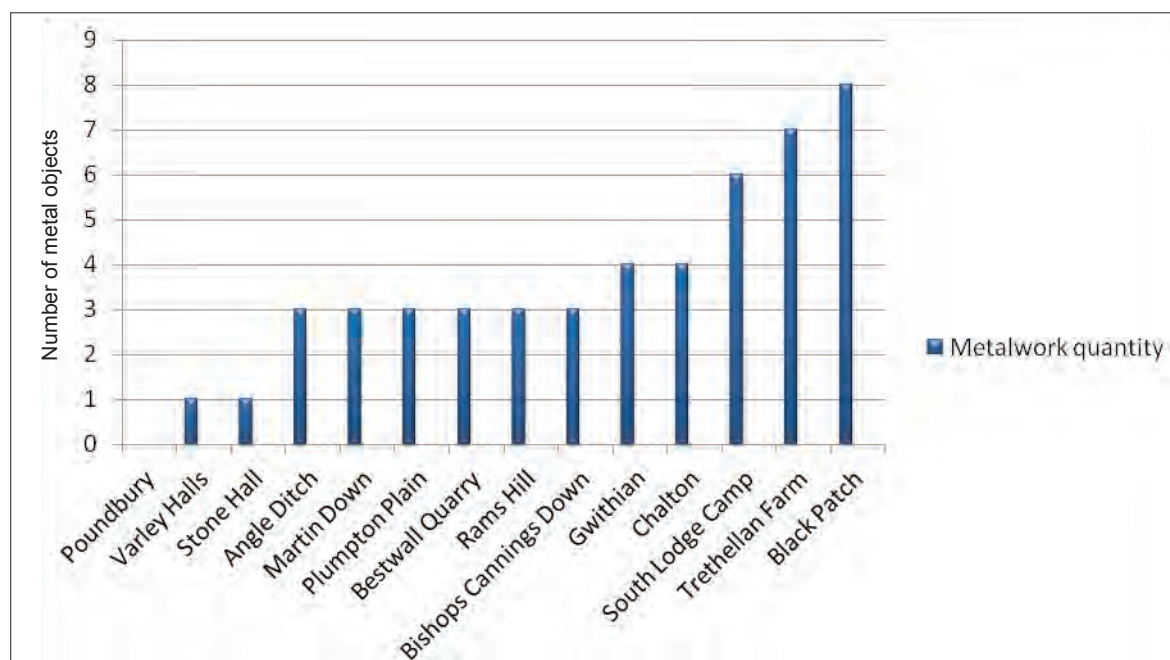


Fig.66 The quantity of metal objects recorded on selected Middle Bronze Age settlement sites in southern England

Site name	Metalwork types						Settlement contexts			
	Axe	Small tool	Weapon	Ornament	Frag-ments	Metal-working	Ditch	House	Pit	
Bestwall Quarry, Dorset (Ladle and Woodward 2009)				●				●	●	
Black Patch, Sussex (Drewett 1982)		●	●	●				● ● ●	●	
South Plumpton Down, Kent (Bruck 1999b; Barber 2001)	●			●			●		●	
Rams Hill, Berkshire (Bradley and Ellison 1975)	●	●			●					
Strood Hall, Essex (Timby <i>et al.</i> 2007)					●				●	
Bishops Cannings Down, Wilts. (Gingell 1992)		●	●	●		●				
Thorny Down, Wilts (Ellison 1987)			●	●				●		
South Lodge Camp, Dorset (Barrett <i>et al.</i> 1991)		●	●	●		●	● ● ●			
Martin Down, Dorset (Barrett <i>et al.</i> 1991)		●					●			
Angle Ditch, Dorset (Barrett <i>et al.</i> 1991)	●	●			●		● ●			
Gwithian, Cornwall (Nowakowski <i>et al.</i> 2007)			●	●	●	●		● ●		
Trethellan Farm, Cornwall (Nowakowski 1991)		●	●	●		●		●		
Poundbury, Dorset (Spacey Green 1987)						●				
Chalton, Hants (Cunliffe 1970)	●	●		●				● ● ●		
Coldean Lane, Brighton, E. Sussex (Greig 1997)		●						●		

Table 3 Middle Bronze Age metalwork and its context on selected settlement sites in southern England

Brück argues that artefacts including metalwork may have been selectively deposited at settlement sites, in liminal contexts such as doorways or boundary ditches (Brück 1999b). From the sites examined most metal objects, particularly ornaments, are associated with roundhouse contexts, either from within roundhouse floor areas or from postholes (Table 3). A variety of metalwork, including small tools and ornaments has also been recorded from enclosure ditches and to a lesser extent pits (Table 3). This supports the interpretation that metal objects were selectively deposited and that the types of artefact and context of deposition were chosen carefully.

A preference for small tools and ornaments for deposition at settlement sites, closely followed by weapons, suggests that other artefact types, such as axes, were more frequently deposited in alternative contexts. The lack of larger tools such as palstaves on settlement sites is in direct contrast with the composition of Middle Bronze Age hoards from southern England. In Rowlands' study of Middle Bronze Age metalwork, 64 out of 124 hoards (51%) were comprised of tools only, with 96 hoards (77%) containing tools with other objects (Rowlands 1976, 104).

There was, therefore, a clear differentiation in the location of metalwork deposition in this period and a preference for certain types to be deposited at settlement sites. It may be possible, therefore, using the southern English evidence as a precedent, to examine metalwork finds in the region of the study area and assess the extent to which Middle Bronze Age metalwork may have been associated with settlement.

### **Late Bronze Age settlement sites and metalwork in southern England**

Metalwork is frequently recorded on Late Bronze Age settlement sites, where the presence of small tools, ornaments and pins predominate (Table 4). These small objects are similar in character to those from Middle Bronze Age settlements, indicating continuity in the deposition of metal objects at such sites. A strong relationship between Late Bronze Age settlement sites and metalwork is also suggested by the incidence of metalworking evidence (Table 4), which was also apparent on Middle Bronze Age sites (Table 3). This includes moulds and crucible fragments and fragmentary metalwork which may have been used for recycling (Needham and Longley 1980; Northover 1980, 234-5). Settlement sites, therefore, appear to have played a part in the production of metal objects which may, potentially, have been redistributed from these sites within systems of exchange (*cf.* Needham 1993a).

The quantity of artefacts recorded is often small, as in the case of Middle Bronze Age sites (Fig. 67). Greater quantities of metalwork have been recorded at middens such as at Potterne, Wiltshire (Lawson 2000), the river island settlement at Wallingford, Oxfordshire (Cromarty *et al.* 2006), and at certain hilltop sites such as South Cadbury, Somerset (Barrett *et al.* 2000).

This suggests that there was a differentiation between certain sites in the landscape and that an increased frequency of metalwork deposition was taking place alongside other activities at certain locations.

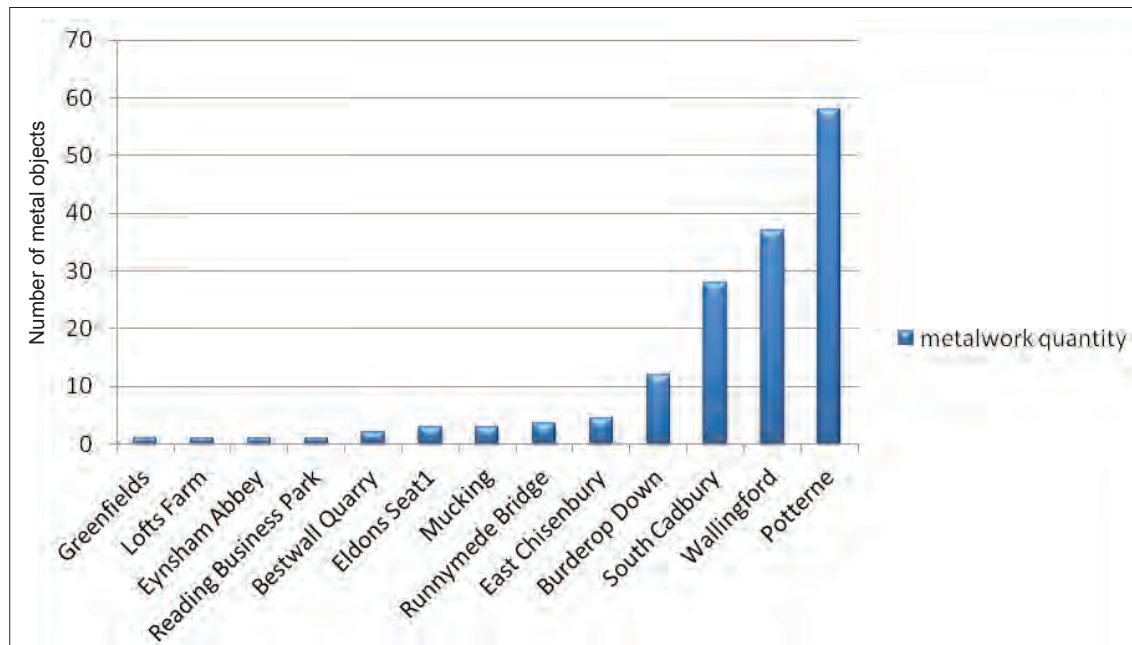


Fig.67 Quantities of metalwork from Late Bronze Age sites and middens in Southern England

The greatest variety of objects has been recorded at midden sites such as Potterne, Wiltshire, Runnymede Bridge, Surrey, and Wallingford, Oxfordshire (Lawson 2000; Needham and Longley 1980; Cromarty *et al.* 2006). It is notable that the assemblage at Potterne is comparable to the range of material recorded at settlement sites (Table 4), which suggests that the incorporation of metalwork in middens parallels depositional practices at other settlement contexts. The relationship between middens and settlement is, however, ambiguous with middens likely to have formed a spatially and conceptually distinct area (Needham and Spence 1997; Waddington 2008). Exceptionally large middens such as Potterne (Lawson 2000) or East Chisenbury (McOmish 1996) may also suggest materials were brought together from settlements across broad areas of the landscape and that they represent an accumulation of materials whose use-lives may have included settlement locations elsewhere.

From the settlement sites examined, axes and weapons are the least frequently deposited type of metal artefact, suggesting that these types of object were being deposited away from settlement areas. Weapons and tools are, however, frequently recorded within hoards of the period, reflecting continuity with Middle Bronze Age practices. Socketed axes predominate in the hoards from south-eastern regions of England (Turner 2010, 54), whilst weapons and weapons fragments also regularly occur in hoards across southern and eastern England,

Metalwork types										Settlement contexts				
Site name	Axe	Small tool (e.g. Knife, gauge awl, chisel etc.)	Pin	Ornament (e.g. bracelet)	Weapon	Vessels/ sheet metal	Frag- ments	Metal- working	House	Ditch	Pit	Midden or 'occupation deposit'	Cremation	
Bestwall Quarry, Dorset (Ladle and Woodward 2009)	●	●					●	●	●		● ●			
Lofts Farm, Essex (Brown 1988)	●						●			●				
Eynsham Abbey, Oxfordshire (Barclay <i>et al.</i> 2001)			●				●							
Burderop Down, Marlborough Downs, Wiltshire (Gingell 1992)		●	●	●				●						
South Cadbury hillfort, Somerset (Barrett <i>et al.</i> 2000)		●	●	●	●	●	●							
Runnymede Bridge, Surrey (Needham and Longley 1980)		●	●	●	●		●	●				● ● ● ●		
Reading Business Park, Berkshire (Moore and Jennings 1992)			●				●	●			●			
Kemerton, Worcestershire (Jackson and Napthan 1998)								●			●			
Shorncliffe Quarry, Gloucs. (Hearne and Heaton 1994)								●						
Whirecross Farm, Wallingford, Oxfordshire (Cromarty <i>et al.</i> 2006)		●	●		●	●	●	●				● ● ●		
Potterne, Wiltshire (Lawson 2000)		●	●	●		●	●	●				● ● ● ● ●		
East Chisenbury, Wilts. (McOmish 1996)	●	●					●							
North Ring, Mucking, Essex (Bond 1988)	●			●			●	●		●			●	
Springfield Lyons, Essex								●						
Eldon's Seat, Dorset (Cunliffe and Philipson 1968)		●	●			●								

Table 4 Late Bronze Age metalwork and its context on Late Bronze Age settlement sites in southern England

alongside axes and smaller tools (*ibid.*; Burgess and Coombs 1979). The distinction between settlement assemblages and hoards has been frequently highlighted, with settlements characterised by small tools and personal objects and hoards by larger tools and weapons (Needham and Longley 1980, 409; Coombs 1991, 133; Needham 1993, 47-8; Barrett *et al.* 2000, 296; Lawson 2000, 193, Northover 2006, 57). It is worth noting that small tools and personal ornaments can also occur within hoards, suggesting that they are not exclusive to settlement sites, although with hoards they may be part of much larger bodies of material (Turner 2010, 54; Burgess and Coombs 1979).

Although the contents of hoards and the practice of hoard deposition may be distinctive, and in part separated from the deposition of small tools and ornaments within settlement areas, the two practices of deposition may not necessarily be mutually exclusive. The hoard at Petters Sports Field, Surrey, contained socketed axes and weapon fragments and was deposited in a ditch terminal close to a settlement area and sealed by deposits of pottery, bone and further metalwork (O'Connell 1986, 13-14). The metalwork assemblage from the river island settlement at Wallingford, Oxfordshire, includes both settlement-related material and objects from hoard deposition into the river (Northover 2006, 56-7). It has also been suggested that the Runnymede Bride riverside settlement may also have a hoard component within the metalwork assemblage (Needham and Longley 1980, 409). There is the possibility, therefore, that settlement and hoard deposition may have a closer relationship than the deposition of large groups of metalwork in wetland contexts may at first suggest.

Where metalwork was clearly deposited in wet contexts, it is possible that these were closely related to areas of settlement on dry land. At Flag Fen, Cambridgeshire, the deposition of metalwork in association with a post alignment extending from dry-land through the wet fens, was clearly intentional (Pryor 2001). The post-alignment, however, was directly influenced by the layout of a pre-existing field and driveway system, which suggests that the site chosen for metalwork deposition was in part defined by existing areas of settlement (Pryor 1992, 449). The degree to which settlement and agriculture were contemporary with phases of metalwork deposition is less clear, yet the assemblage from Flag Fen contained a number of objects such as awls and other small tools, personal ornaments and dress accessories such as pins and bracelets which are all frequently recorded on settlement sites elsewhere (Coombs 2001, 287-291). The presence of a small pottery assemblage may also suggest a relatively close association between settlement space and the wetland margin (Barrett 2001, 249). Excavations at the nearby site of Whittlesey have recorded both metalwork and domestic material in a wet context, which also suggests a close relationship between settlement and the deposition of artefacts in wet places (Knight 2009).



### **Metalwork and settlement in southern England: implications for other regions**

Metalwork deposition on Middle and Late Bronze Age settlement sites in southern England was clearly selective. In Middle Bronze Age contexts, small tools, ornaments, weapons and evidence for metalworking occur with the greatest frequency on settlement sites. In Late Bronze Age contexts, ornaments and pins occur with the greatest frequency, together with evidence for metalworking and small tools. Overall, small objects and personal items predominate, whereas axes and weapons, particularly in the Late Bronze Age, appear to have been deposited elsewhere.

### **Metalwork and settlement in the Welsh border region**

The two principal sites that have evidence for Late Bronze Age settlement, metalwork and metalworking are the Breiddin, Powys (Musson 1991) and Beeston Castle, Cheshire (Ellis 1993), both of which are recorded on prominent hilltops. There may be doubt as to whether the Breiddin was occupied on a permanent basis (*cf.* Buckland *et al.* 2001), but nevertheless both sites have pottery and structural evidence which suggests at least intermittent occupation. It has been suggested above that enclosed hilltop sites may have been the focus of episodes of settlement associated with selected components of social groups from the surrounding landscape (Chapter 2). Even if these sites were occupied only periodically, they do nevertheless form a component of the settlement pattern. The fact that no other settlement locales have been recorded in the region for this period stresses that the metalwork assemblages from these sites set a precedent for the association between metalwork and settlement.

The metalwork assemblage from the Breiddin has a significant component of small personal objects, including pins, tweezers, and belt attachment rings (Fig. 68; Coombs 1991). These are types which are frequently found on settlement sites in southern England and support the interpretation that the hilltop was occupied (Needham 1993b, 47). A bronze penannular bracelet fragment from the Breiddin (Musson 1991, 137), is also consistent with ornaments recovered from Late Bronze Age settlement sites in southern England (Fig. 48). The Breiddin and Beeston also have evidence for metalworking in the Late Bronze Age, which can also be compared with evidence from settlement sites in southern England (Table 4; Tylecote and Biek 1991; Needham 1993b).

The socketed axes at Beeston Castle are less common finds on Late Bronze Age settlement sites elsewhere (Table 4). These were placed at similar positions within the earliest rampart and have been interpreted as intentional deposits (Needham 1993b, 48). It may be possible that these axes reflect practices of placing metalwork into liminal features such as boundaries

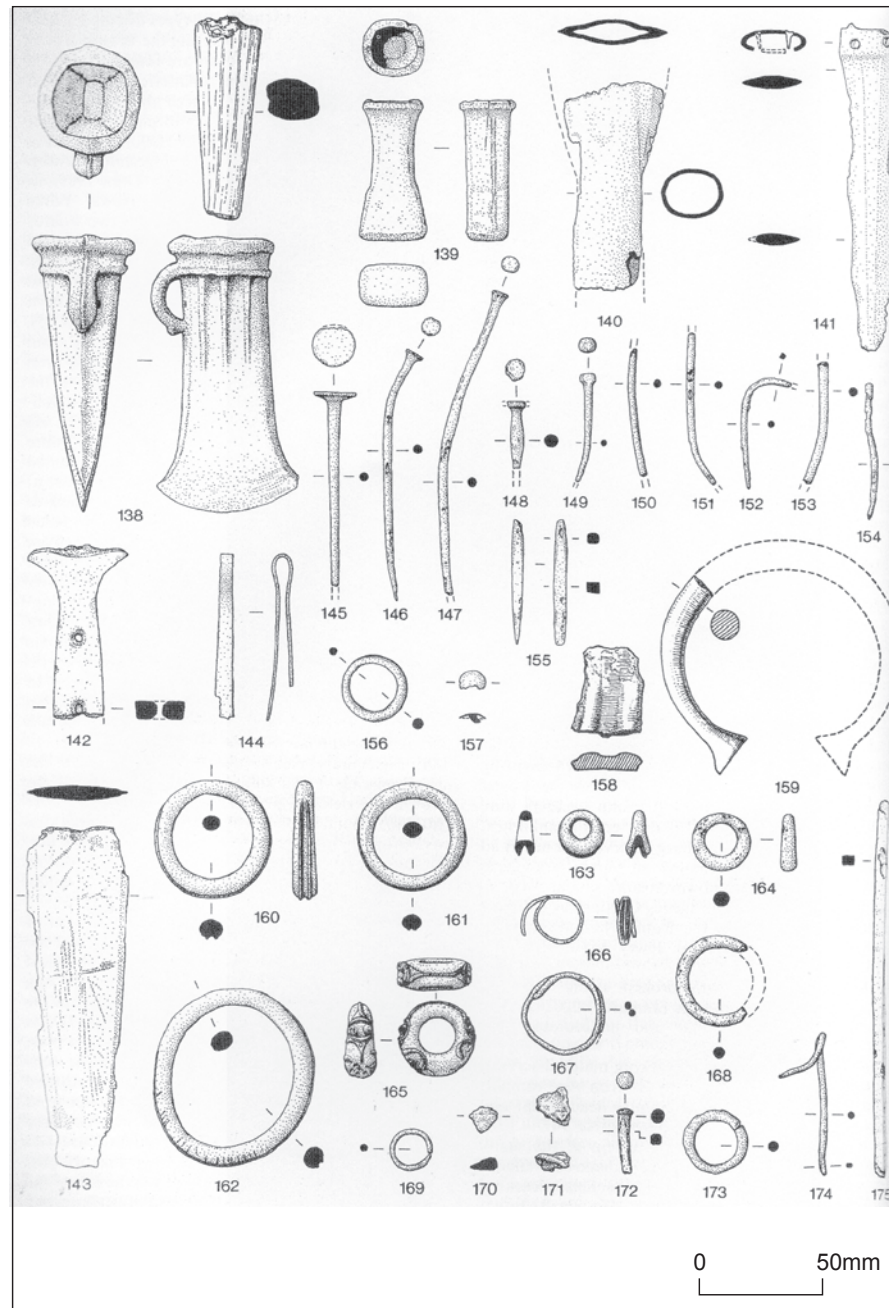


Fig.68 Metalwork from the Breiddin hillfort, Powys: axes, weapons fragments, pins, ornaments and other personal objects (after Musson 1991)

which have been highlighted for Middle Bronze Age settlements in southern England (Brück 1999b), and have been recorded on Late Bronze Age settlement sites such as Lofts Farm, Essex (Brown 1988) and within a boundary ditch at Petter's Sports Field, Surrey (O'Connell 1986). The penannular bracelet fragment at the Breiddin (Fig. 68, 159) was found close to the later hillfort boundary and entrance which may indicate that this was also an intentional deposition at a liminal place at the edge the Late Bronze Age settlement (Musson 1991, 137). It is also notable that all the typically settlement-related pins and personal objects from the Breiddin

appear to have been recorded from the edges of the hill, close to or within the ramparts of the hillfort (Coombs 1991; Musson 1991, 137). Placing objects at these locations may have been a means of reiterating the significance of the enclosed space and contrasting it with the landscape beyond and may also have served to define the identity of the social group involved.

Other metalwork finds at the Breiddin, including a small number of weapons and large socketed tools, more often associated with hoards, have been recorded elsewhere on the hill in close proximity to hearths and furnaces associated with metalworking (Musson 1991, 57-61; Coombs 1991). Practices such as the creation of metal objects may have been considered significant and distinct from other activities (Bradley 1998, xix). This may suggest that specific and distinctive activities were taking place on the hill-top alongside occupation, or as part of distinctive episodes of activity separated from settlement elsewhere in the landscape.

There are other indications that the metalwork on the hill-top was treated specifically, and that deposition was not casual. The weapons from the Breiddin were fragmentary and broken, with a sword blade being “scored, bent and badly damaged” (Coombs 1991, 134). This may suggest that certain metalwork was intentionally destroyed prior to deposition, as evidenced elsewhere at sites such as Flag Fen, Cambridgeshire (Coombs 2001). It is possible that other metalwork at the Breiddin, such as fragmentary pins and ornaments, may also have been intentionally broken prior to deposition (*cf.* Brück 2006; Coombs 1991). It is notable that a number of socketed implements from the Breiddin contained the remains of charred wooden hafts (Coombs 1991, 134) which may suggest intentional burning. This can be compared with charred material recorded from the sockets of implements in weapons hoards from elsewhere in the region, such as the Willow Moor Hoard, Shropshire (Chitty 1928a). A socketed axe at the Breiddin was also recorded “standing upright” (*ibid.*, 133) which may suggest it had been deliberately placed. This can be compared to a hoard of axes recorded placed in an upright position, at Town Hill, Montgomery (HER 4496; Appendix 4). There is a possibility, therefore, that objects deposited at the Breiddin may have been treated in a way that formalised their deposition. This can be compared both with hoarding practices and the deposition of objects into wet places, as well as the specific deposition of metalwork in settlement contexts (*cf.* Brück 1999b; Tables 3 & 4). It is possible, therefore, that deliberate depositions could have been taking place alongside settlement episodes, and that settlement and metalwork deposition in the wider landscape were not necessarily mutually exclusive.

## **Metalwork finds in the landscape of the study area**

Hilltop sites in the Welsh border regions and settlement sites in the south of England set a precedent for the association between metalwork and settlement. The landscape context of

‘stray’ metalwork finds may, therefore, be able to be explored in the light of these associations, in order to provide a broader picture of potential settlement in the landscape. Where increased frequencies of metalwork deposition have been recorded this may reflect, at a broad scale, locations of more frequent activity and potentially areas of occupation.

An association between metalwork and settlement has been demonstrated for the Middle and Late Bronze Age. The relationship between Early Bronze Age metalwork and settlement is less certain due to the paucity of identifiable settlement sites for this period. It may, nevertheless, be valuable to examine the location of Early Bronze Age metal finds, in order to broaden our understanding of the location of activity in the landscape and to provide comparative data for later periods.

A data set was received from the Clwyd-Powys and Shropshire Sites and Monuments Records (SMR) in 2009 and 2010 respectively. Data requested was for Bronze Age metalwork finds and new find-spots were added to an existing database. In addition, data from the Portable Antiquities Scheme (PAS) was received in 2010 which identifies specific, largely metal-detector find-spots from Powys and Shropshire dating from the inception of the scheme in 1997 to the present.

Specifically provenanced find-spots were selected from SMR and PAS data where grid-references were accurate to within 10m<sup>2</sup> (Appendices 4 & 5). Original accounts of metalwork discoveries or subsequent analyses of the historic find-spots were also examined in regional and national journals where available. Where the find-spots of certain artefact types are less accurate, but are necessary for an assessment of the data, these are noted in the text. In order to maximise the data available, find-spots were examined from Shropshire and the old county of Montgomeryshire, a geographical area which also comprises a diverse range of upland and valley contexts.

### **The distribution of metalwork: general patterns**

General patterns of metalwork distributions may enable an appreciation of the relative intensity of activities at a large scale. By comparing Early, Middle and Late Bronze Age finds data, similarities and contrasts in the location of metalwork deposition may be drawn out. It is possible that these locations may reflect areas of more frequent settlement activity, although it is clear that metalwork does not necessarily equate with the location of settlement sites.

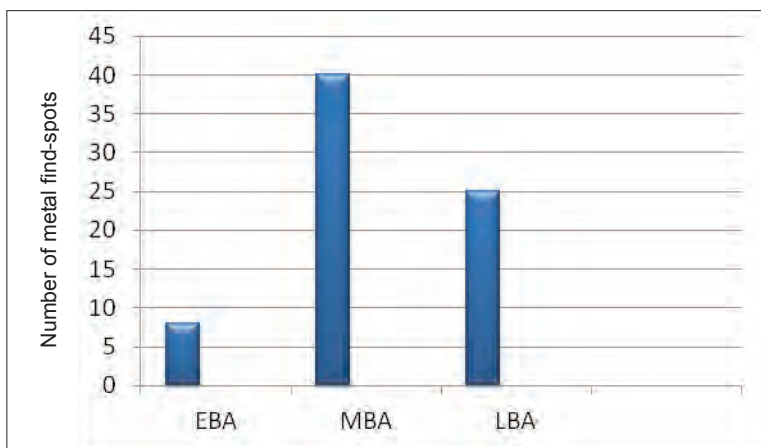


Fig.69 The quantity of metal find-spots by period in Montgomeryshire and Shropshire

The greater number of Middle and Late Bronze Age find spots indicates that these periods may be the most productive when examining the topographic context of finds in the landscape (Fig. 69). The majority of finds consist of larger tools and weapons, with a greater proportion of tool finds being recorded for the Middle Bronze Age and almost equal numbers of tool and weapon find spots for the Late Bronze Age (Fig. 70). Weapons have been recorded on Middle Bronze Age settlement sites in the south of England, and larger tools have been recorded at the Late Bronze Age hilltop sites of the Breiddin and Beeston Castle, along with weapon fragments at the Breiddin (Musson 1991; Ellis 1993). Larger tools and weapons are, however, the least frequent association for the wider range of settlement sites examined for the Late Bronze Age in southern England. It cannot, therefore, be assumed that the distribution of these objects reflect the distribution of settlement directly.

Although there are few Early Bronze Age metalwork finds from the region, axes have been recorded from the lower altitudes within the study area as well as some of the highest upland areas (Fig. 71). This indicates activities in significantly contrasting landscapes, in a similar way to the distribution of funerary monuments. In this sense metalwork may reflect settlement in the landscape at a very broad scale. Lowland contexts for metalwork may reflect Early Bronze Age settlement sites such as Oversley Farm, Cheshire (Garner 2007). The fact that metalwork finds in the study area were not located at known barrow sites or funerary contexts allows for the possibility of an association with settlement. There is, however, no evidence to suggest that the location of Early Bronze Age metalwork deposition was necessarily associated with settlement sites. It is significant that no metalwork was recovered at Oversley Farm, for example, despite a significant quantity of other artefacts being found (*ibid.*). Finds such as the Titterstone Clee hoard, for example, recorded on a very prominent hill in Shropshire with wide vistas (Chitty 1926, 235-6), may equally have been referencing natural features in the landscape (Bradley 2000).

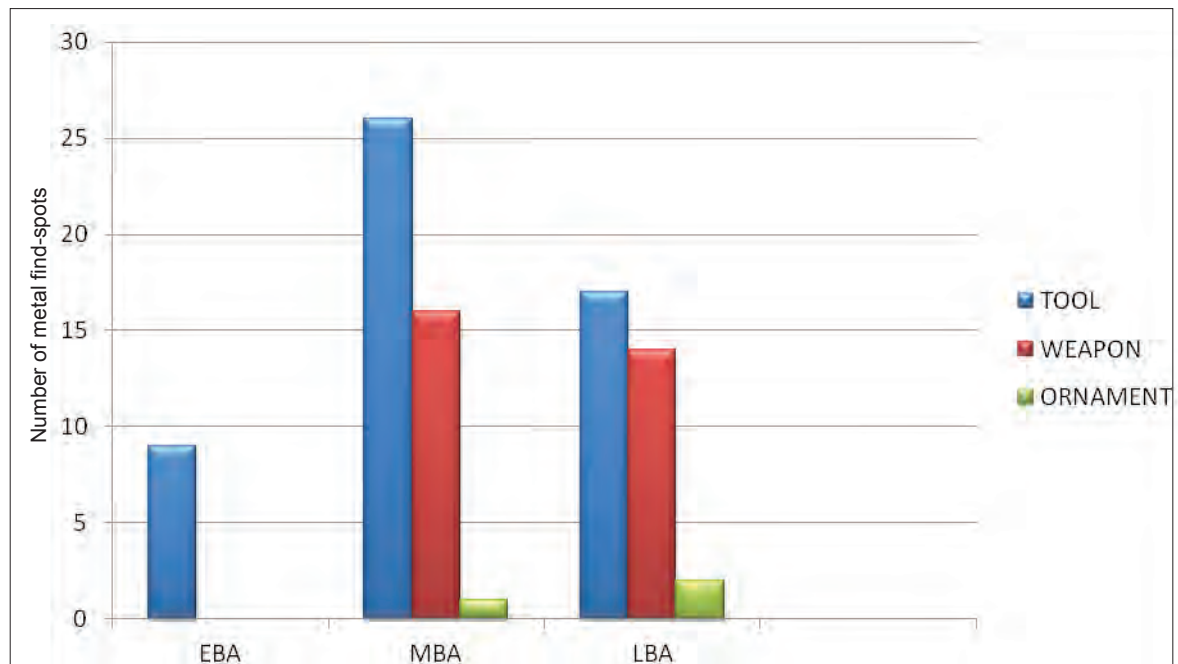


Fig.70 The quantity of tool, weapon and ornament find-spots in Montgomeryshire and Shropshire

For the Middle Bronze Age there is a greater frequency of metal artefacts on the lower ground between 50 and 100m above OD, suggesting a concentration of activity in this part of the landscape which may reflect regular occupation and settlement (Fig. 71). It is notable that the only recorded Middle Bronze Age settlement at Glanfeinion, Llandinam, Powys (Britnell *et al.* 1997) was recorded at a height of 160m above OD. There was, therefore, a significant frequency of activities at lower levels of the landscape. There is also a regular but less frequent, occurrence of objects at higher altitudes up to 470m, which indicates further activities in upland environments, as with the Early Bronze Age.

The distribution of Late Bronze Age metalwork finds share a similar pattern to those from the Middle Bronze Age and appear consistently from below 50m to around 150m above OD. It may be notable that there are a greater frequency of artefacts between 100m and 150m OD, which may indicate a shift of activities to slightly higher ground (Fig. 71). There are, however, less frequent metalwork finds at higher altitudes. This also shows that the bulk of metalwork was being deposited in landscapes below the level of sites such as the Breiddin, which may suggest that alternative foci for settlement activities existed.

When the terrain is examined specifically, the greatest numbers of finds from all periods have been recorded in valley contexts, with hill-slopes and hill-tops showing a dramatic reduction in the numbers of metalwork finds (Fig. 72). Find-spots also decrease with the steepness of slope, suggesting a potential preference for more easily negotiable terrain, with metalwork on flat ground predominating in the data (Fig. 73).



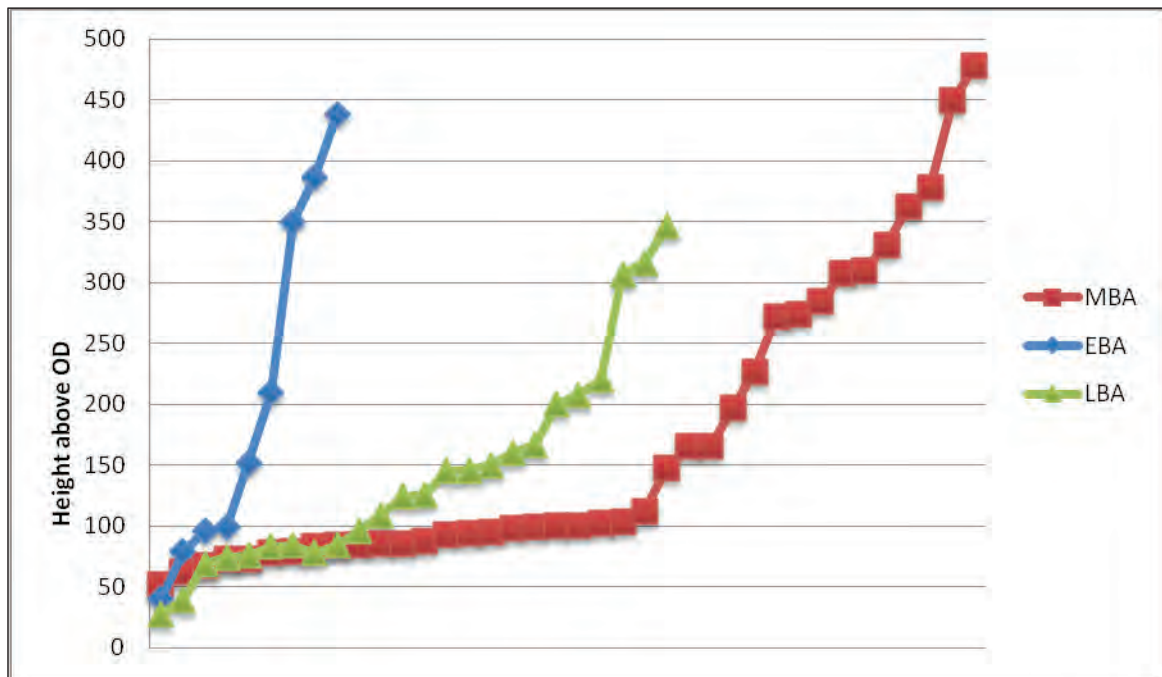


Fig.71 The altitude of metalwork finds in Montgomeryshire and Shropshire

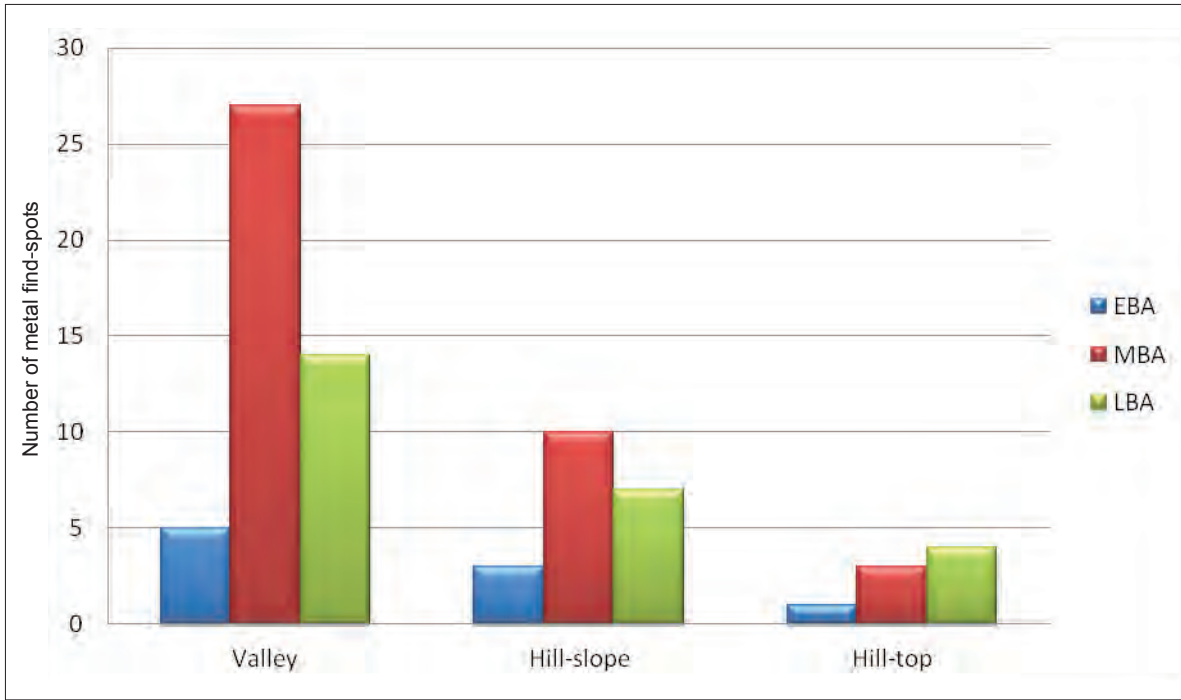


Fig.72 An interpretation of the topographic context of metalwork finds from Montgomeryshire and Shropshire

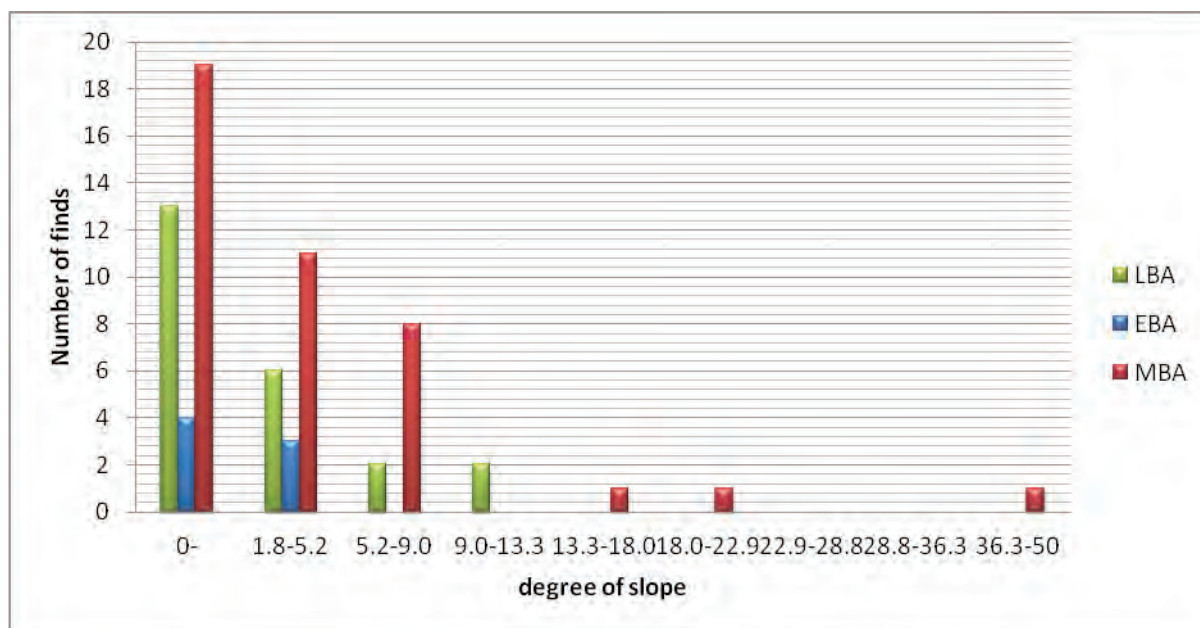


Fig.73 The degree of slope for metalwork find locations in Montgomeryshire and Shropshire

There appears to be no significant preference for any particular topographic aspect in the locations chosen for metalwork deposition (Fig. 74), which suggests that metalwork was deposited in many landscape contexts, not all of which may have been favoured for the siting of settlements. It cannot necessarily be assumed, however, that topographic aspect was a primary consideration in the location of areas of occupation.

Although the data suggests a preference for lowland landscapes, the effect of potential recovery bias in the data must also be considered. Upland areas characterised largely by permanent pasture, which may be exposed to less intensive agricultural disturbance and hence finds recovery. This appears to be borne out by the fact that 57 % of metal detector finds from Shropshire have been recorded from below 100m OD, 33% between 100 and 150m OD and only 9% from above 150m.

Chance finds have, nevertheless been recorded in upland landscapes, whether by metal detector (Appendix 5), historic excavation or drainage operations (e.g. Barnwell 1864) or excavation (e.g. Musson 1991) and settlement evidence has been recorded in association with field systems in the broader region of north-east Wales (Manley 1990). It is likely, therefore, that finds from higher altitudes are under-represented in the data, which favour regularly cultivated ground in closer association with the more intensive activities of modern populations. The concentration of artefacts in lowland environments does, nevertheless, indicate significant activity in areas where settlement sites remain scarce in this region. For both the Middle and Later Bronze Age the majority of finds recorded appear to be at lower altitudes than the small number of known settlement locales for these periods, which suggests alternative landscape contexts for settlement.

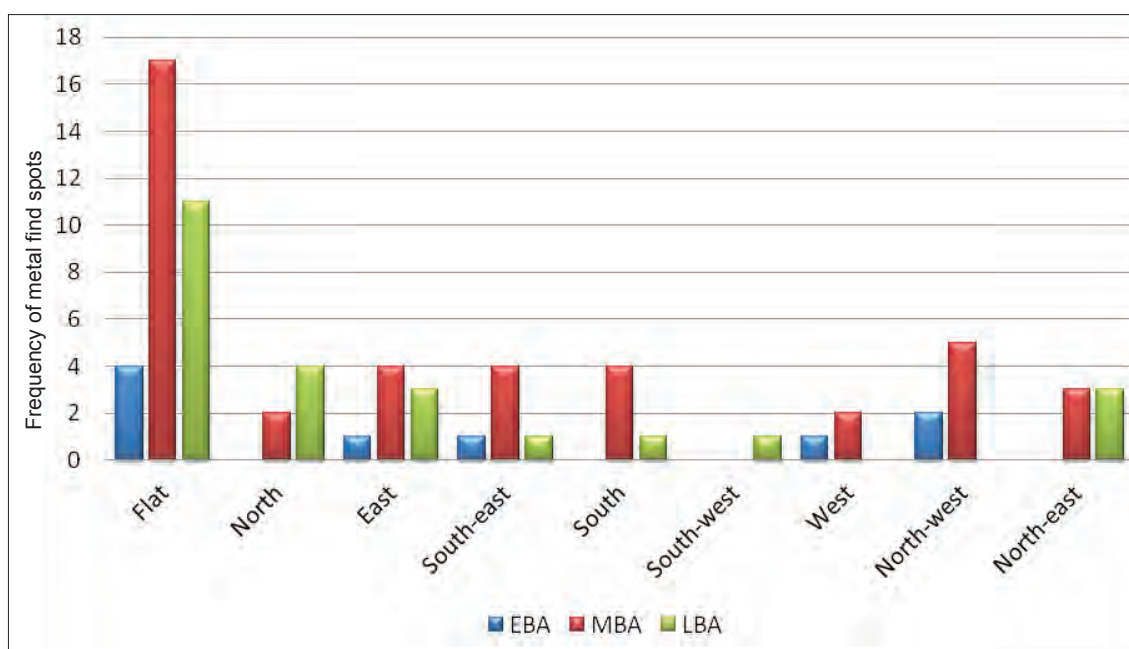


Fig.74 The aspect of Bronze Age metalwork locations in Montgomeryshire and Shropshire

### The distribution and context of small tools and ornaments

The evidence from southern England suggests that where metalwork is recovered from settlement sites it is largely composed of small tools and ornaments, together with evidence for metalworking (Tables 3 & 4). This is supported by the excavated metalwork assemblage from the Breiddin hillfort, Powys (Coombs 1991). Where these types of artefact are recorded as isolated finds in the landscape they may, therefore, represent the location of settlement sites. Unfortunately, these metalwork types are present in very small numbers across the area studied and not all have specific find coordinates. Those that can be identified to at least 100m<sup>2</sup>, or to a specific location such as a farm, have been examined further, in order to characterise their general landscape context.

Small tools in the form of chisels, socketed knives and socketed gauges have been found in almost equal numbers as single finds or within hoards (Fig. 75; Table 5). Tools found as single finds or within small hoards may be more likely to have an association with settlement, in view of the generally small number of such finds recorded at settlement sites (Coombs 1991, 135-7; Ellison 1987; Gingell 1992). It is not possible, however, to necessarily equate either hoards or single finds with settlement without examining in detail the individual contexts of finds.

The majority of small tools are from valley contexts, in common with other metalwork types (Table 5). This may suggest that these finds represent the location of more frequent settlement activity. A Late Bronze Age socketed knife found at Craig Fryn Farm, Llandinam, in the upper Severn Valley, is in a broadly similar context to the Middle Bronze Age roundhouse

Name and location	Object type, quantity and date	Height above OD	Landscape context	Distance to river or wetland
Sheinton, Shropshire PAS (HESH-989CD3)	Chisel (MBA)	100m	River valley	840m brook, 1.4km River Severn
Boscobel, Shropshire PAS (Wmid-59E8F7)	Chisel (MBA-LBA)	c.140m	Uncertain.	Uncertain
Holgate, Shropshire (HER 03210)	Gauge (LBA)	c.140m	River valley	200m brook, 900m River Corve
Grange Farm, Hordley, Shropshire (HER 02648)	Socketed Knife (LBA)	c. 80m	"Sandy free draining field", surrounded by wetlands	Farm less than 500m from peats
Craig Fryn Farm, Llandinam, Powys	Socketed Knife (LBA)	c.150m	River valley	Farm location 120m from River Severn
Tomen yr Cefn Lle Oer hoard, Powys (HER 1482)	Socketed gauges x2 (LBA)	300m	Hillside	100m from stream
Buttington Hall hoard, Powys (HER 70307)	Chisel, spearhead and palstave (LBA)	c.90m	River valley	Hall adjacent to Severn floodplain
Eardington hoard, Shropshire (HER 03218)	Socketed gauge and chisel (LBA).	c.40m	River valley, close to floodplain and confluence. Gravel pit.	Uncertain. General location close to Severn floodplain and confluence.
Meole Brace hoard, Shropshire (HER 00122)	Chisel and palstaves x2 (MBA)	80m	River valley found in a brick clay pit	c. 2km to Severn and 1.5km to tributary
Broadward hoard, Shropshire (HER 00746)	At least 70 objects including a single chisel with 50 spearhead fragments and 11 sword fragments (Burgess 1972), LBA.	130m	River valley, pit dug into gravel, in a marshy field	Adjacent to floodplain of the River Clun.
Guilsfield Hoard, Powys. (HER 96)	Over 60 objects, inc. two socketed gauges, together with spear heads, spear ferrules, swords, sword chapes, palstaves and socketed axes. (Savory 1966; 1980), LBA.	150m	Hilltop	Overlooking Severn valley
Breiddin Hillfort, Powys.	Tweezers, socketed knife, chisel/awl, also large tools, weapons and ornaments (Coombs 1991)	365m	Hilltop	Overlooking Severn valley

Table 5 Types of small tools in the study area: their location and landscape context

at Glanfeinion, Llandinam (Britnell *et al.* 1997), recorded on the opposite side of the river. This may suggest further settlement above the floodplain of the River Severn in this area. There are also examples of single artefacts set back from rivers and streams, which may reflect Middle and Late Bronze Age occupation in well-drained or non-flood-prone locations such as at Sheinton, Holgate and Grange Farm, Hordley, Shropshire (Table 5). Two small Late Bronze Age hoards, have also been recorded close to the River Severn at Buttington Hall, Powys (Fig. 76; Table 5), and at Eardington, Shropshire (Table 5; Dodd 1960) and it may be possible that these also reflect settlement at the edges of the river system.

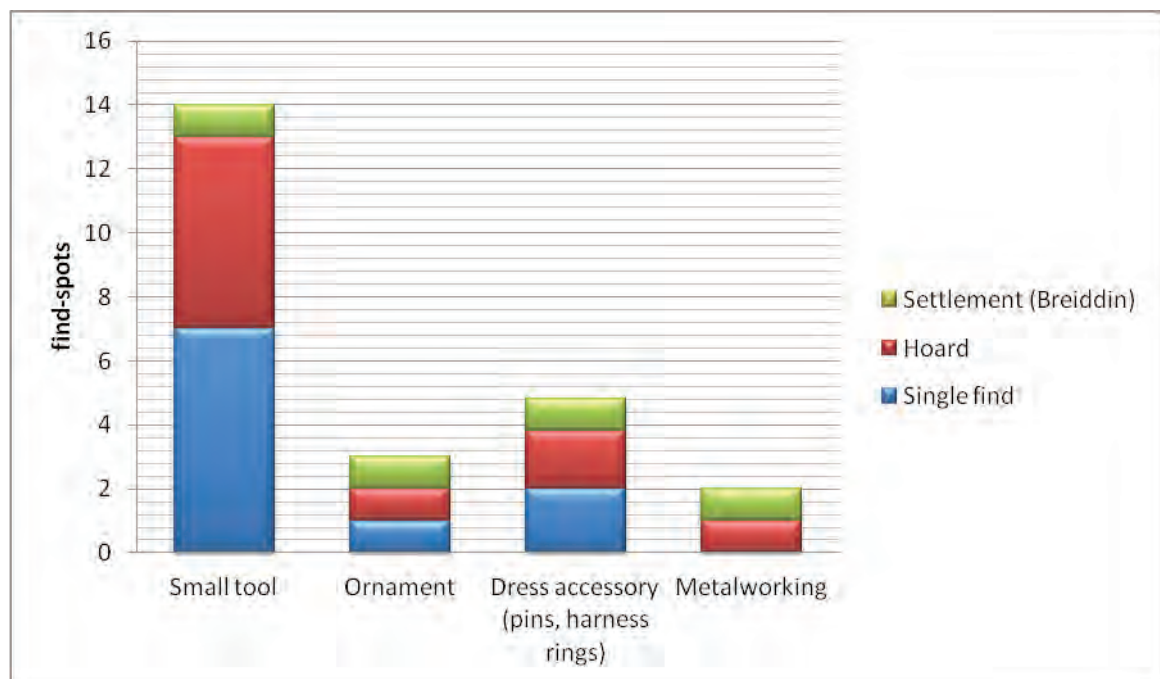


Fig.75 All recorded find spots of small tools, personal objects and metalworking finds of Middle and Late Bronze Age date in Montgomeryshire and Shropshire

Where small tools are included within large Late Bronze Age weapons hoards such as at Broadward, Shropshire, from a marshy field close to the Severn (Burgess 1972, 211) and Guilsfield, Powys, on a hilltop (Savory 1966; Savory 1980), they may reflect very significant depositional events. Such large hoards do not reflect the much smaller and more dispersed assemblages recorded in association with settlement activity at Middle Bronze Age settlements elsewhere (Brück 1999b) and at sites such as the Breiddin, Powys (Coombs 1991). It seems unlikely, therefore, that such deposits relate to locations of settlement.

Ornaments are regularly associated with Middle and Late Bronze Age settlement contexts in southern England (Tables 3 & 4), although other contexts of deposition clearly may occur (*cf.* Roberts 2007, 146-8). The presence of ornaments and personal objects at the Breiddin hillfort, Powys (Coombs 1991), supports an association with settlement for this region. Very few such artefacts have, however, been recorded in the study area, and only three Late Bronze Age

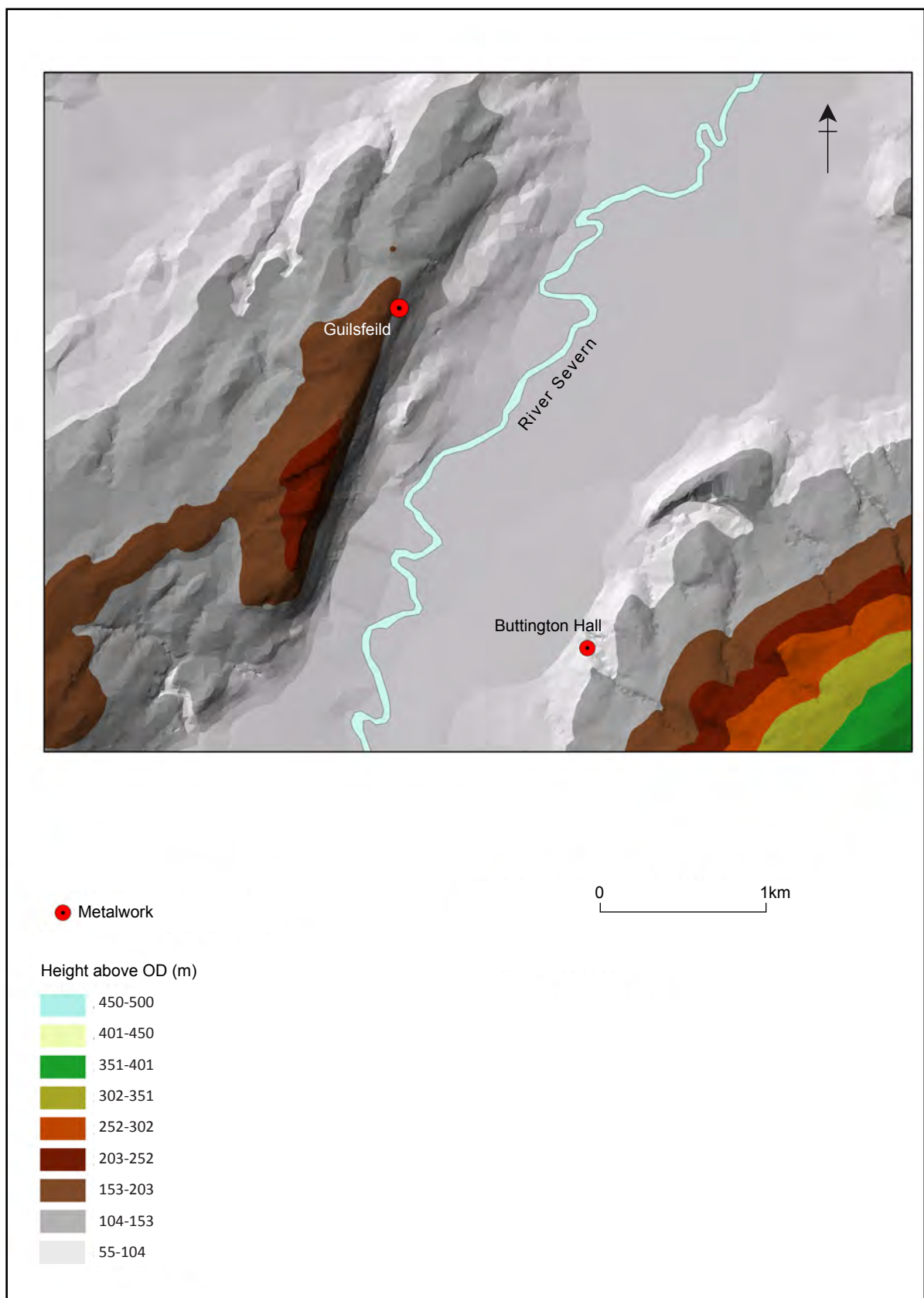


Fig.76 location of hoards at Guilsfield and Buttington Hall, Powys.



ornaments beyond the Breiddin have any detail regarding provenance. All three were found close to rivers and on the margins of river floodplains (Table 6) which may suggest that these finds reflect settlement along the edges of river floodplains. It is also possible, however, that they represent votive deposits in wet environments at the margins of settled areas (*cf.* Bradley 2007, 214-5; Yates 2007, 91).

A gold bracelet recorded on the margins of wetlands at Hordley, Shropshire (Table 6) represents the only Middle Bronze Age ornament from the study area. This is one of a number of finds which appear to cluster in this area. A rapier, dirk and dagger have been recorded, as well as a bronze shield, a socketed knife and two socketed axeheads, within 25km<sup>2</sup> around Baggy Moor, Shropshire (Fig. 77). It seems, therefore, that this area of wetland was a focus for the deposition of metal artefacts during the Middle and Late Bronze Ages. It seems unlikely that a wetland environment would be a focus for any form of sustained settlement, and such metalwork deposition is likely to have been located at the margins of settled areas. Burnt mounds have also been recorded around Baggy Moor (Halsted 2007, 177, Figure 11.8), and these may form a component of settlement activities. It has been suggested that there may be a relationship between metalwork and burnt mounds (Ehrenberg 1991, 48-53; Dunkin 2001; Yates and Bradley 2010, 411) and that weapons show a stronger relationship (Halsted 2007, 176). Dunkin has suggested that metalwork may have been deposited between locations of burnt mounds and settled areas on slightly higher ground in West Sussex (Dunkin 2001, 262). Yet where metalwork has been recorded in the vicinity of burnt mounds in Shropshire, it ranges between 300m to 1km away from these sites, suggesting that activities were separated (Halsted 2007, 176).

Whilst deposits of ornaments, weapons and other artefacts in wetland locations may suggest votive deposition, this does exclude the possibility that settlement locales existed in close vicinity in alternative landscape contexts. There are depositions into the River Severn at Buildwas Bridge where a hoard consisting of a Late Bronze Age sword and socketed axe was recovered and a Late Bronze Age sword was recovered on an island in the river in the Ironbridge Gorge area (Appendix 4). On the edges of the floodplain and between 200 and 700m from the river are a bronze ring and an axe fragment, with a chisel recorded at greater distance of 1.3km from the river floodplain (Fig. 78; Tables 5 & 6). It may be possible that these smaller tools and fragmentary objects reflect settlement locales on the margins of the River Severn. It has been suggested elsewhere that objects associated with settlement are often more fragmentary or smaller than those deposited in water (Bradley 1998, 24; Roberts 2007, 147).

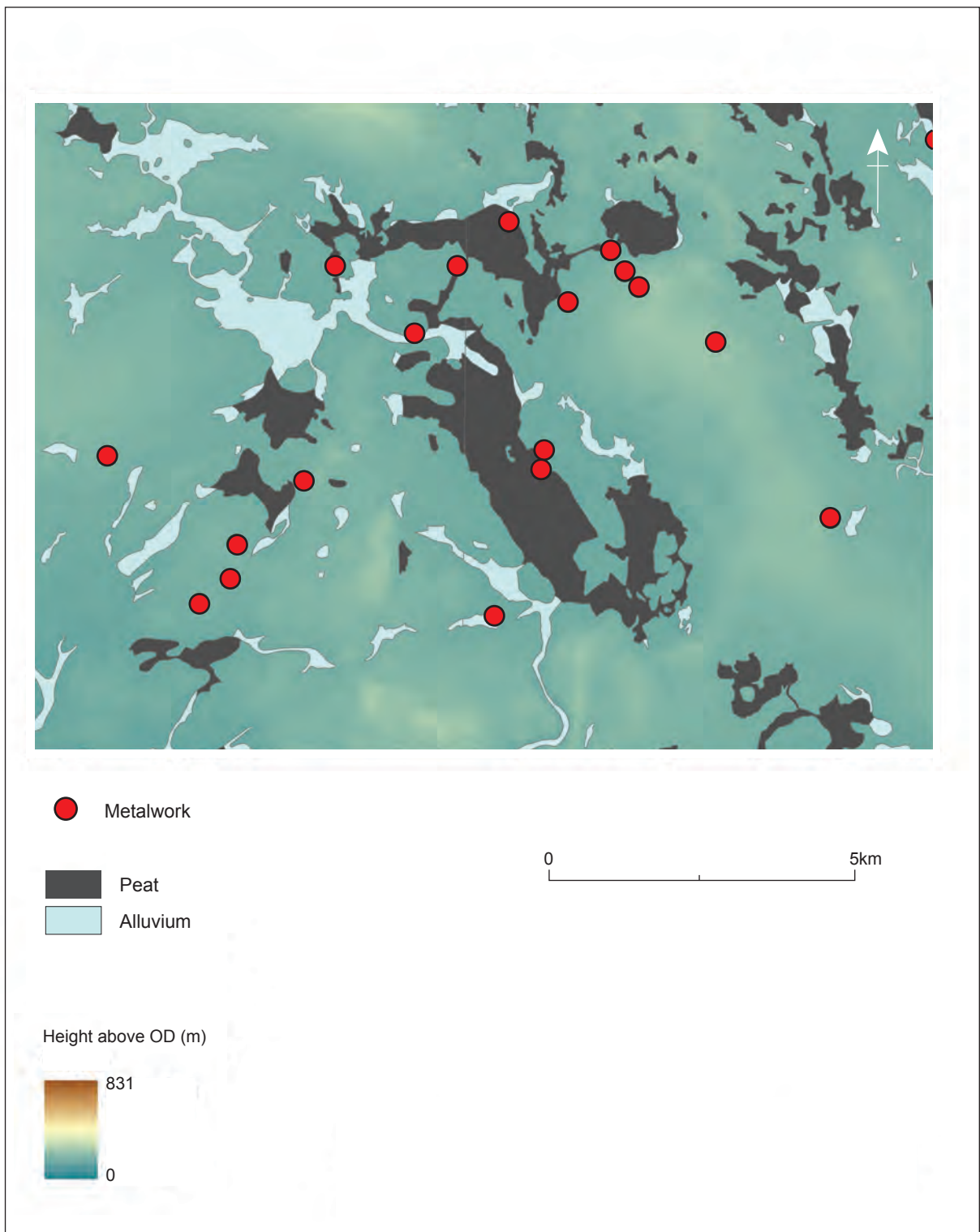


Fig.77 Metalwork distribution around Baggy Moor, Shropshire

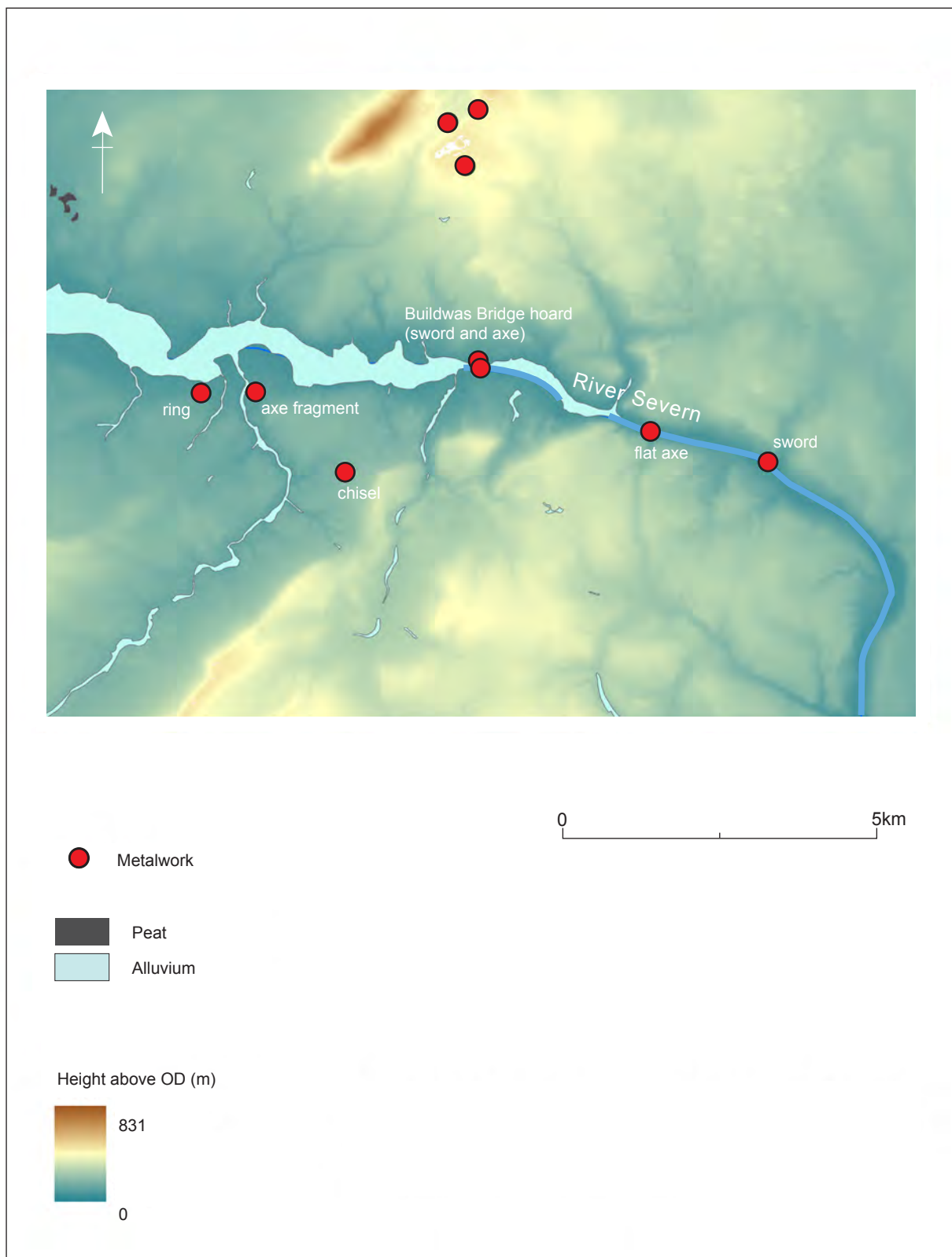


Fig.78 Metalwork finds in the vicinity of the River Sever near Ironbridge

Name and location	Object type	Height above OD	Landscape context	Distance to river or wetland
Bryndreiniog hoard, Glanhafon, Powys HER 6053	Nine penannular bronze bracelets (LBA)	uncertain	Brynderiniog Farm is in the Tanat Valley.	Exact provenance unknown.
Shropshire PAS (HESH-AFC074)	Gold bracelet (MBA)	80m	Wetland margins	Within 100m of the river and within 200m of peat deposits.
Breiddin, Powys	Penannular bronze bracelet fragment, pins and pin fragments, bronze ring (LBA; Coombs 1991).	c.365m	hilltop	Overlooking Severn valley
Cressage, Shrops. PAS (HESH C28C38)	Bronze ring (LBA)	60m	River valley floodplain margins	Within 200m of the floodplain of the River Severn
Bridgnorth, Shropshire PAS (HESH 4B9AC5)	Bronze ring (LBA)	No details	No details	No details

Table 6. Find-spots of Middle and Late Bronze Age ornaments and personal objects in Montgomeryshire and Shropshire

## **Metalworking**

Evidence for metalworking has been recorded at the Breiddin hillfort, Powys, and Beeston Castle, Cheshire, in common with a number of settlements in southern England (Tables 3 & 4; Tylecote and Biek 1991; Needham 1993). There is, however, very little evidence for metalworking from the wider landscape of the study area. A socketed axe and axe mould from Sellatyn and Gobowen district in northern Shropshire (Appendix 4) may reflect metalworking and therefore potential settlement. The presence of the two items together may, however, indicate that they were part of a hoard.

The fragmentary material and casting waste in larger Late Bronze Age hoards may also reflect metalworking (e.g. at Guilsfield, Powys, Gareth-Davis 1967; Savory 1966), yet it cannot be assumed these objects were deposited in locations where metalworking was being undertaken. Other artefacts associated with metalworking, such as crucibles, are unlikely to be recovered other than through archaeological excavation.

## **Larger tools and weapons**

If weapons have a more frequent association with settlement sites in the Middle Bronze Age, as the data from southern England suggest (Table 4), then weapons in lowland landscapes may reflect a greater frequency of settlement activity here (Fig. 79). The fact that there are a greater number of Middle Bronze Age tool find-spots in these landscapes may suggest that the bulk of metalwork deposition was, however, associated with other activities set apart from settlement sites (Fig. 79). A proportional increase in the numbers of weapons from hillslope and hilltop contexts may indicate that these areas were preferred for settlement (Fig. 79). Weapons may not necessarily have had an exclusive relationship with settlement, however, and it is necessary to examine the contexts of all find-spots in greater detail in order to assess their potential relationship with settlement.

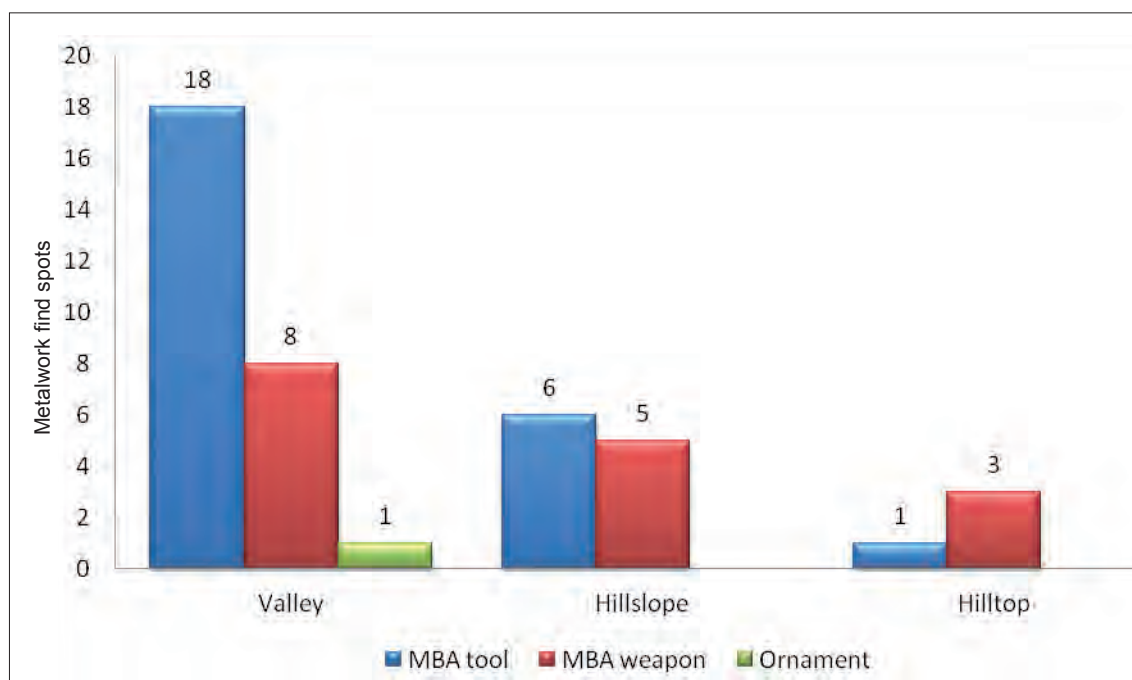


Fig.79 The topographic context of Middle Bronze Age tools, weapons and ornaments

The Shropshire data suggest that slightly greater numbers of Middle Bronze Age palstaves have been recorded from rivers and wetlands (12 find-spots; Table 7), than from contexts which do not have evidence for wet conditions (9 find-spots). This may suggest a split in the distribution of larger tools between wetland (possibly votive) deposits, and areas of the landscape which may have been more suited to settlement. There is clearly a possibility, therefore, that some tools may reflect the presence of settlement locales, although this has not been demonstrated where small excavations of find-spots have taken place (Appendix 4 Powys HER 85580) Where tools are recorded from non-wetland contexts, six are from valleys, two from hill-slopes and only one from a hill-top, which supports the general data in suggesting that valleys were a focus for activity.

Where weapons have been recorded in Shropshire, these also show a slight preference for wetland environments (6 find-spots, Table 7) than from other contexts (4 find-spots). This suggests that at least half of the weapon finds were unlikely to be associated with settlement sites. In areas away from wetlands three weapon finds are from valley contexts and one from a prominent hilltop at Caer Caradoc. Both weapons and tools, therefore, are at least as likely to be deposited in wetland environments as elsewhere. A similar picture can be seen in Montgomeryshire (Table 8). There can be no clear distinction, therefore, between the context of weapons and tools and neither show a distinct pattern of association with contexts suited for settlement. The general pattern of distribution for Late Bronze Age tools and weapons reflects data for other types of metalwork in the Middle and Late Bronze Age and indicates a preference for valley contexts (Fig. 80). There are less weapons recorded from hillslopes



Find name/location	Type	Context
Wilcot Moors (HER 00541)	Palstave	General area of marsh and alluvium
Dayhouse Moor (HER 00775)	Spearhead	Moorland: area of peat and alluvium
Petton Moat (HER 00844)	Spearhead	Moat suggests impermeable geology
Whixall Moss (HER 01572)	Palstave	Peat
Preeswood Farm (HER 01660)	Palstave	Found "...6ft deep, when draining the moors"
Wrekin Farm (HER 01789)	Palstave and flat axe	Found from a "boggy meadow"
Asterton Prolly Moor (HER 01883)	Palstave and flat axe	Area of moorland from "Moor field"
Eyton Hall (HER 02596)	Palstave	In the vicinity of Eyton on the Weald Moors
Knockin Castle (HER 02604)	Palstave	Extensive areas of alluvium and peat here
Church Farm, Hordley (HER 02647)	Rapier	Found on "black peaty surface", area of peat
Rookery Meadow, Wem (HER 02660)	Palstave	Area of peat/ possibly from dredging the River Roden
Brades Farm, Prees (HER 02684)	Palstave	Alluvial deposits
Ollerton (HER 03731)	Palstave	"found in land being drained", alluvial deposits
Albrighton (PAS WMID-6FA0F8)	Palstave	Close to a stream (c. 50m)
Ellesmere (PAS HESH-2A1A85)	spear MBA-LBA	Peat
Shrewsbury and Atcham (PAS HESH-D46BC8)	Palstave	"discovered next to a drainage ditch", alluvium
Kenwick Park, Cockshutt (PAS CPAT-3A15F5)	Dagger	500m from a broad expanse of current peats
Cockshutt PAS (HESH-096835)	Dirk	300m from a broad expanse of current peats

Table 7 Middle Bronze Age metalwork finds from potential wetland contexts in Shropshire (excluding large hoards).

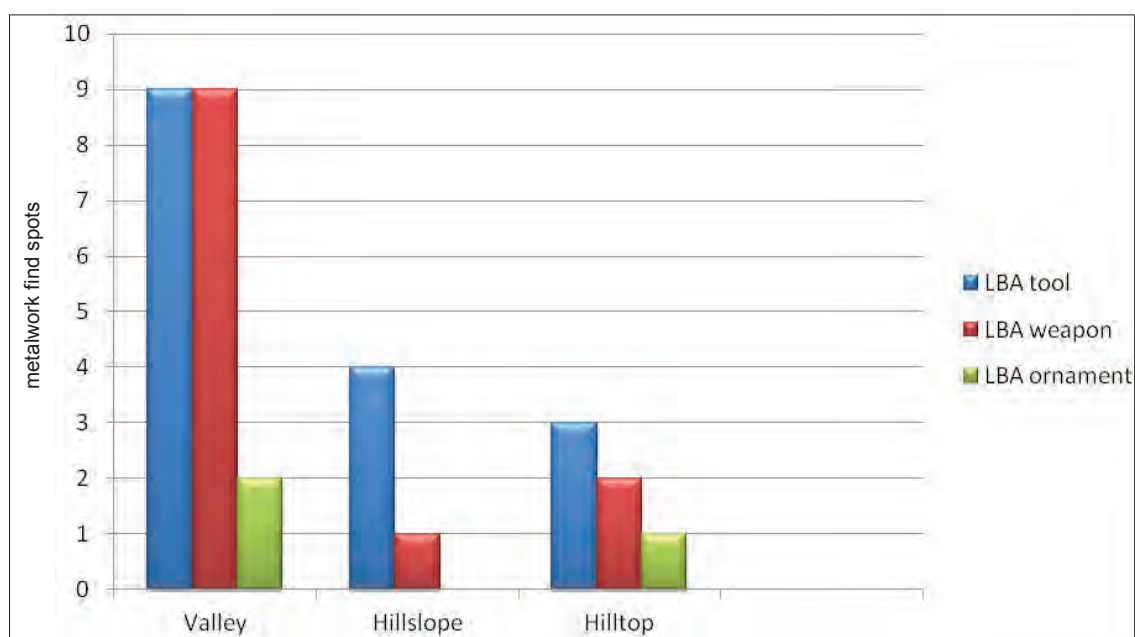


Fig.80 Late Bronze Age tool and weapon contexts

and hilltops than tools which may suggest that activities associated with the deposition of weapons preferred lowland contexts, perhaps in association with the deposition of objects into water. This also suggests that tools have a more general distribution across a variety of contexts and areas of activity than weapons. The presence of both weapons and tools at the Breiddin, Powys, (Coombs 1991) and tools at Beeston Castle, Cheshire, (Needham 1993), however, means that it is not possible to separate their potential association with settlement. It is necessary, therefore, to examine specific contexts of deposition, in order to suggest potential associations with areas of occupation.

Find name/location	Type	Context
Penybont (CPAT 100000)	Palstave	Close to River Tanat
Maes y Carneddau (CPAT 1200)	Rapier	Close to River Cownwy
Trederwen (CPAT 1247)	Palstave	Edge of River Severn floodplain
Churchstoke	Rapier	Close to 'The Marsh'
Waun Goch (CPAT 70322)	Spearhead	At head of a stream
Llangurig (Briggs 1977, 327)	Palstave	"on a slight spur", between rivers
Four Crosses (PAS- CPAT-765380)	Palstave	c.700m south of the River Vyrnwy floodplain
Maerdy Farm, Llandrinio (PAS-CPAT-D57467)	Palstave	c.2km away from the Severn floodplain

Table.8 Middle Bronze Age metalwork finds from Montgomeryshire (excluding hoards).

Find name/location	Type	Context
Ellesmere (HER 01570)	Socketed axe	Close to Ellesmere Mere
Broomhall Grange Farm (HER 01671)	Socketed axe	Alluvium, drain digging
Kynnersley (HER 01385)	Axe	Land surrounded by peat
Silvington (HER 02597)	Socketed axe	Close to stream
Shrewsbury (HER 02619)	Socketed axe	Alluvium. Haft contained wood
Bicton (HER 02676)	Axe	“found by a boy whilst bathing in the River Severn...”
Castle fields (HER 02912)	Socketed axe	Close to alluvium
Tetchill Moor, Ellesmere (HER 03600)	Socketed axe	Peat
Bagley Moor (HER 00902)	Socketed axe	Close to peat
Knockin (PAS: LVPL 106)	Socketed axe	Alluvium
Tong (PAS: WMID 0B7964)	Axe	Close to stream
Tong PAS: WMID 0BA3F4)	Axe	Close to stream
West Felton PAS: LVPL-9285F7)	Socketed axe	Moors and peats in vicinity
Badger PAS: HESH 07A7E3)	Socketed axe	Moors and peats in vicinity
Bagley Moor (HER 00900)	Shield (Yetholm)	Peat. “found in an upright or sloping position while digging...a drain”
Quatford (HER 00398)	Sword	From the River Severn
Lower Berghill (HER 02797)	Sword	Surrounded by peat and alluvium
Jackfield, Ironbridge (HER 04120)	Sword	Found on an island in the Severn
Lyneal Wood Farm (HER 00889)	Sword	Alluvium, “found by drainage contractor within 5 or 6 yards of the brook”
West Felton (PAS: LVPL 91C9A3)	Sword fragment	Area of peats in vicinity

Table 9 Late Bronze Age single finds and potential wet contexts in Shropshire

There appears to be a wetland preference for the deposition of single Late Bronze Age metal axes in Shropshire, suggesting that they were not associated with areas suitable for settlement (Table 9). The majority of well-provenanced socketed axes (21 finds) have been recorded from either alluvial floodplains or peat bog contexts, with only three finds deposited away from rivers, streams or bogs. There are fewer well-provenanced single finds from Montgomeryshire and these have been recorded from valley or hill-slope contexts.

Late Bronze Age Weapons found in Shropshire also have a strong association with water deposition (Table 9). All swords (5 examples) have been recorded from rivers or streams and a shield has been recorded in Bagley Marsh. It appears, therefore, that weapons in the Late Bronze Age do not predominantly indicate the location of settlement activities and that they are more firmly associated with possible votive deposition into watery places. The only exceptions are a spearhead found in a garden at Hunkington Farm, which is c. 400m from a stream and in Montgomeryshire where a barbed spearhead at Crow Wood, Churchstoke, was also recorded c. 400m away from a stream.

### **Hoard and settlement**

The deposition of hoards was a distinctive practice, particularly where large quantities of metalwork were deposited. Many hoards have been recorded from wetland contexts in Britain which indicate that they were separated from areas of occupation (e.g. Britton 1960; Evans 1885) whilst others have been recorded in contrasting environments on hills. Hoards were deposited in specific locations such as rivers or bogs, yet there is also the potential for the location of these hoards to have a close relationship with areas of settlement.

A number of large hoards, often containing a significant weapon component, have been recorded in the central Welsh border region. Typical is the account of the Willow Moor hoard (Fig. 81), Shropshire: "...whilst a labourer was cutting a drain about a hundred yards from the left hand side of the road...he suddenly came upon a heap of broken spears. They lay piled up together, and were two or three hundred at least..." (Hartshorne 1841, 95).

The Guilsfield hoard, Powys, (Fig. 82) contained weapons and tools that "had been carefully deposited, and probably were once contained in some box or vessel...which...left the contents almost in the same position as when secured in their case" (Barnwell 1864). Objects of different age were included within the hoard (Gareth-Davis 1967), suggesting that this was a carefully curated group of material. In addition, the treatment of the objects prior to deposition appears to have been conscious and selective. It has been observed that spearhead fragments had been pushed into the sockets of others; a sword chape had a spearhead "forced inside" and two spear ferrules were present with "one pushed as far as possible into the other" (Savory

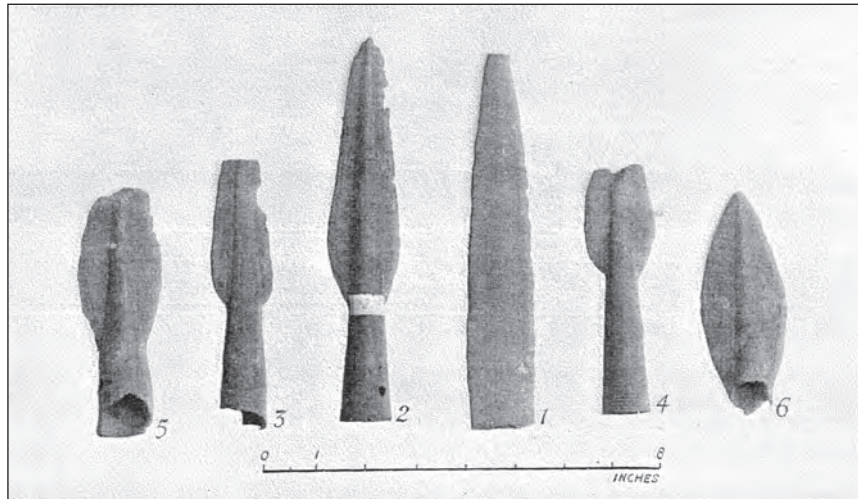


Fig.81 Spearhead and sword fragments from the Willow Moor hoard, Shropshire (after Chitty 1928a)

1966, 193-195). Such acts may have echoed the violent ‘biographies’ of the objects in the hoard (*cf.* Osgood 1998). Further afield at Trevalyn, Rossett, in north-east Wales, a group of penannular gold bracelet fragments had been inserted into a socketed axe, highlighting the very deliberate treatment of objects prior to deposition (Gwilt *et al.* 2005). It may be expected, therefore, that the location of hoards in the landscape was equally carefully selected and that their relationship with areas of settlement was carefully considered.

It is clear that weapons-related hoards were often placed in wet contexts, often considered part of votive acts (Bradley 1998, 97), and that by their very nature these locations are likely to be separated from areas of occupation. There is no evidence from the region, for example, of crannog-like lake settlements or platforms which were occupied in this period. As such, deposition in water must be seen as being intentionally separated from settled areas and occupation practices. A sword and socketed axe were recorded from the River Severn at Buildwas Bridge, Shropshire (Chitty 1928b; Appendix 4). The Middle Bronze Age hoard of palstaves in the vicinity of Preston-on-the-Weald Moors, Shropshire, was found in an area surrounded by peats and alluvial deposits (Appendix 4). The hoard of spearheads at Willow Moor, Shropshire, was recovered whilst digging a field drain within a ‘morass’ (Hartshorne 1841, 95; Chitty 1928a, 43). The Broadward Hoard, Shropshire, was also deposited in a marshy field (Burgess 1972, 211) and the large hoard of spearheads and sword fragments at ‘Bloody Romans Field’, near Bishops Castle, Shropshire, was deposited at the site of a former pool (*ibid.*, 240). Burgess highlighted the fact that Broadward type spearheads recorded in hoards in Britain were frequently associated with wet places (*ibid.*, 222).

The context of a number of other hoards is more ambiguous, although many have a close relationship with rivers, streams and wet places. At Snead, Shropshire, a hoard of spearheads were discovered in a field near the River Camlad (Appendix 4). The Bryndreiniog hoard of Late



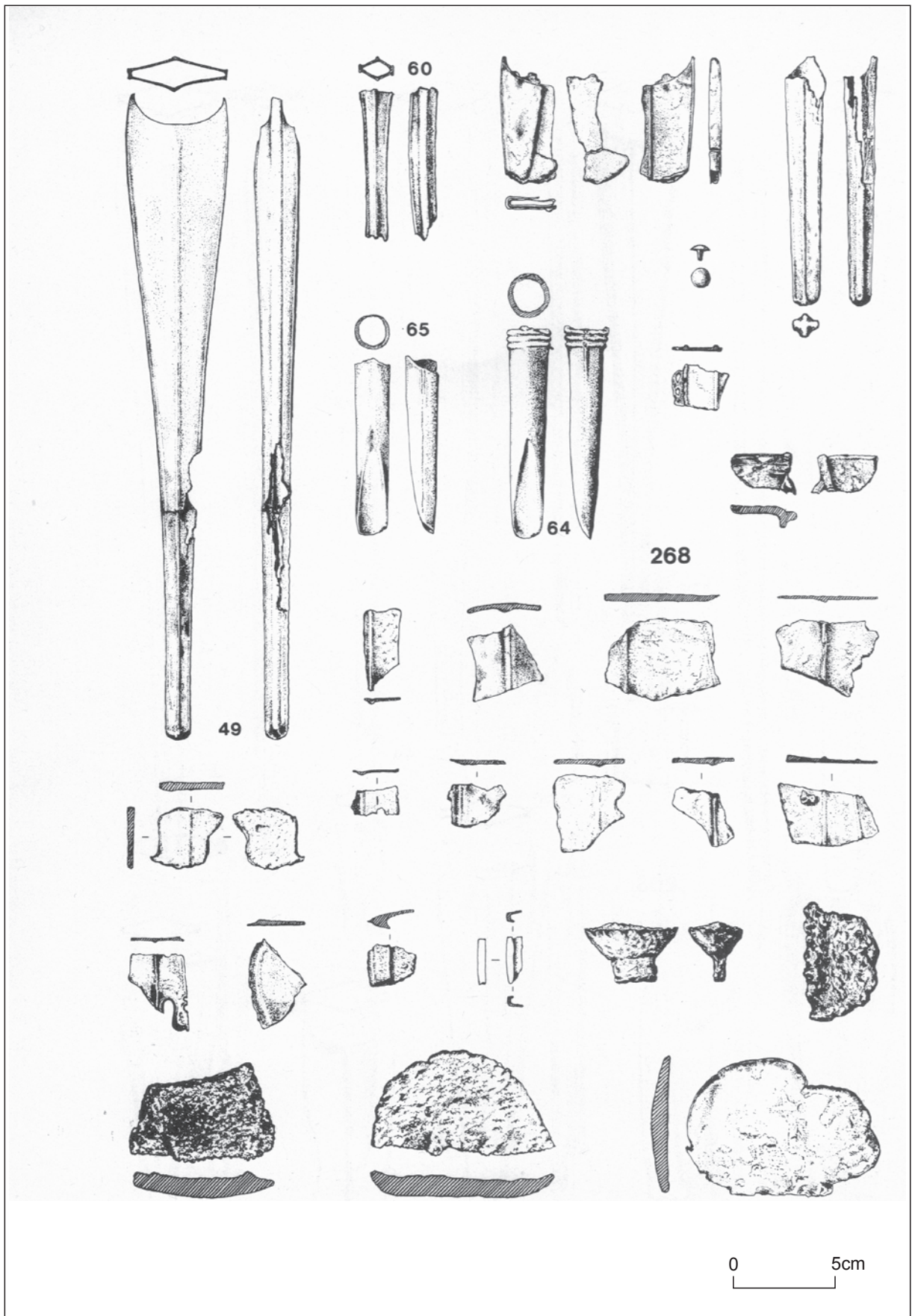


Fig. 82 Sword chapes, small tools, copper and other fragments from the Guilsfield hoard, Powys (after Savory 1980)



Bronze Age bracelets was recorded close to the River Tanat, Powys (Table 6). A hoard of socketed axes from Cherry Tree Bank, Welshpool, Powys, was recorded close to the head of a stream (Appendix 4). The Meole Brace hoard, Shrewsbury, was recovered from the vicinity of alluvial areas west of the River Severn (Table 5) and the Early Bronze Age Ebnal hoard, Shropshire, was recorded close to areas of alluvium and peat (Appendix 4). Whilst it is probable that these finds were deposited into watery contexts as part of votive depositions, they may also have been located in the vicinity of settlement sites located at the margins of river systems (Bradley 2007, 214; Yates 2001, 67-8; Yates 2007, 91).

Where hoards were not deposited on the margins of rivers or lowland wetlands, they were deposited on hilltops. Hilltop hoard deposition had been taking place since the Early Bronze Age, the most notable being the two axes recorded at Titterstone Clee, at over 400m above OD. These places may have been equally liminal and separated from settled areas. A Middle Bronze Age hilltop hoard may have been found at Bury Ditches hillfort, Shropshire (Appendix 4). A hoard of Late Bronze Age axes “set vertically and in contact with each other” was recovered at Town Hill, Montgomery, Powys (Powys HER 4496). There are also examples of hilltop hoards which may also have been associated with wet places. At Cemmaes, Powys, a large hoard of Middle Bronze Age palstaves was recorded in a “turf bog” on a mountain (Davies 1935, 334; Savory 1980, 116). The Guilsfield hoard of Late Bronze Age weapons and tools from a hilltop in Powys (*ibid.*, 117-8) was recorded whilst digging a field drain (Barnwell 1864, 212), which may suggest this was originally a wet location.

It is possible that Late Bronze Age hoards on hilltops may reflect places of settlement, in view of the evidence for settlement from the Breiddin (Muson 1991). Whilst this remains a possibility, it cannot be demonstrated without further evidence. It is equally possible, however, that hoards on hilltops were deposited in order to mark isolated and restricted places which were separated from other settlement locales in the landscape. They may, therefore, reflect a separation of activities as part of votive acts in a similar way to the suggested spatial separation between settlement and depositional acts in lowland wet contexts. If settlement activities on hilltop enclosures were episodic, then this may also suggest a separation from a more general settlement pattern in lowland environments.

In addition to the evidence for hoards, single finds of Middle Bronze Age weapons have also been recorded from hilltops and mountains in the region. The hilt of a “dagger or rapier” has been recorded on the hill-slopes of Caer Caradoc hillfort, Shropshire, which is a prominent hill in the landscape (Appendix 4). A spearhead from Allt-y- gribin was also recorded from an unusually high altitude and steep slope, close to the source of the River Vyrnwy in Powys (Britnell 1979). It is possible that such finds deposited in exposed and potentially isolated positions were separated from any settlement in surrounding landscapes and that the deposition of weapons

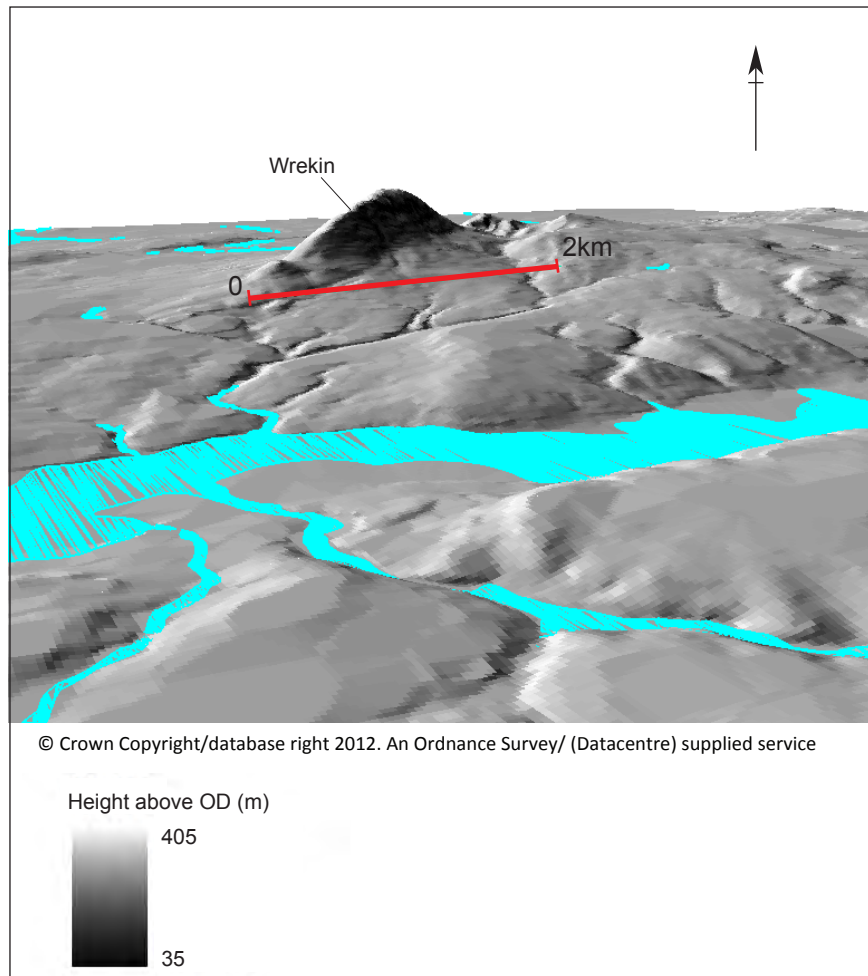


Fig.83 Digital Elevation Model showing the landscape context of the Wrekin, Shropshire with alluvial deposits (z conversion factor x2).

may reflect specific practices of votive deposition or competitive consumption (Bradley 1998).

Deposition of metalwork at hilltops may also reflect recognition of the significance of these places as natural features in the landscape (*cf.* Bradley 2000). Prominent hilltops such as the Breiddin, Powys, the Wrekin (Fig. 83) and Titterstone Clee in Shropshire, for example, may have contributed to the structure of settlement patterns by acting as important natural reference points in the landscape. Some of these hill-tops may have become the focus of settlement in the Late Bronze Age, whilst others may have been the places of votive deposition. The Willow Moor hoard, Shropshire, for example, may have been intentionally deposited against the backdrop of the prominent hill at the Wrekin (Chitty 1928a). The deposition of artefacts which referenced such places may have been taking place at locations where landscapes and territories could be placed in a larger perspective through an association with dominant landscape features, or in the case of hilltops, where landscapes could be viewed at a large scale. Deposits at these locations may have been a means of framing votive acts or competitive consumption and associated social negotiations (Bradley 1998) within settled landscapes and territories. The deposition of weapons, in particular, may have taken place at locations redolent

with conflict and territorial dispute, such as prominent hills or other natural boundaries such as rivers, all of which may have been significant in structuring patterns of settlement at a large scale.

### **Metalwork and monuments**

A small number of Mid-Late Bronze Age metalwork finds have been recorded in close association with Early Bronze Age barrows in the region. These are further instances of selective deposition which may have been intended to emphasise locations which were resonant with concepts of ancestry and place. The fact that the finds are weapons, whose use-life may have been associated with dispute and conflict, suggest that the deposition of weaponry at monuments may have been designed to legitimise territorial claims. The extent to which monuments structured patterns of settlement in the mid-late Bronze Age is, however, open to question in view of the fact that very few appear to have been the focus of funerary activity. The deposition of metalwork at these locations may, therefore, as with wetland and hilltop contexts, have been at the periphery of sites of occupation.

A Middle Bronze Age spearhead was recorded adjacent to a round barrow at Trelystan, Powys (Britnell 1982, 147; Ehrenberg and Northover 1982). A rapier at Whetstone, Churchstoke, Powys, has been recorded within a 100m of a cairn and a rapier has been found at a possible Early Bronze Age barrow site monuments at Maes-y-carneddau (meaning “field of the cairns”; Powys SMR 1200). It may be significant that the Late Bronze Age hoard of barbed spearheads at Broadward, Shropshire, was recorded close to a ‘tumulus’ which had been “previously levelled” (Burgess 1972, 212). The hoard of Late Bronze Age spearheads at Willow Moor, Shropshire, is also located at c.120m from the site of a barrow (Chitty 1928a).

The deposition of weapons at or near to monuments in the Middle and Late Bronze Age must, however, be seen in a cultural context where barrows were rarely referenced through burial and other ceremonial activities. The Middle Bronze Age deposition of metalwork may be seen as reflecting some limited continuity in the use of monuments as a means of structuring patterns of settlement. Barrows and other standing monuments in the landscape are likely, however, to have been interpreted as ancient by the Late Bronze Age. Any intended association between metalwork deposition and monuments from the mid-second millennium BC must, therefore, have reinterpreted the significance of monuments in the landscape. In this period monuments may have been selectively appropriated as significant places of deposition at locations that may have had other kinds of significance. Unlike in the Early Bronze Age, monuments may have been less integral to patterns of settlement, but may nevertheless have retained a degree of significance which could be manipulated in order to legitimise certain activities at specific

places. In this sense, the deposition of metalwork at monuments in the Mid-Late Bronze Age may be seen within the context of metalwork placed at selected natural features in the landscape. Metalwork deposited at or near monuments may, therefore, have been another means of defining the limits of a settled landscape through formal acts of consumption.

## **Conclusion**

Where metalwork has been recorded on Middle and Late Bronze Age settlement sites in other regions, this has set a precedent for the potential association of metal objects and settlement locales elsewhere. Middle and Late Bronze Age Settlement sites in southern England are largely associated with small tools, ornaments and other personal objects (and to a lesser extent weapons in the Middle Bronze Age). Comparable assemblages of metalwork have been recorded at the Breiddin hillfort, Powys, alongside other evidence for Late Bronze Age occupation, which supports these observations (Musson 1991).

Very few Mid-Late Bronze Age small tools, ornaments and personal metalwork have, however, been found in the landscape of the study area. Where these have been recorded they show a strong association with river valleys and wetlands. At least 50% of these types of objects have been recorded in hoards, which may suggest that they were part of votive deposits, and many of the single finds may also have been deliberately deposited into wet contexts. There are also a number of examples from the margins of wetlands and river floodplains, however, which suggest that settlement may have existed along the edges of river systems and to a lesser extent there are similar finds from hilltops.

Larger tools and weapons in the Middle Bronze Age show a very similar distribution pattern to smaller metal objects, with some clear examples of wetland deposition, alongside a number of finds apparently beyond the margins of rivers or wetlands. In the Late Bronze Age, single axe finds and weapons are almost exclusively recorded from wetland environments which suggests that they were not deposited at settlement sites. Hoards have also been regularly recorded from wet contexts, and are frequently characterised by large accumulations of weapons, which have also been recorded on hilltops. Single finds of weapons also share very similar distribution patterns in the Middle and Late Bronze Age. It seems, therefore, that wetlands and hilltops were the focus of similar activities, which may, potentially have been isolated from settlement locales. This brings into question the nature of any settlement activity on hilltops, which may have been the focus of intermittent and specific events, as with the deposition of hoards, rather than long-term occupation.

The broad pattern of metalwork deposition for the Middle and Late Bronze Age suggests a

focus of activity in lowland areas of the landscape. If this is indicative of a general pattern of settlement, then the location of metalwork in and around wetland contexts, on hilltops or at existing monuments, may have marked the limits of settlement space. These may have been places where votive deposition and competitive consumption (Bradley 1998, 38-9) was intentionally separated from more general activity areas and settlement, and may have performed a specific social role for certain components of a community or communities (*ibid.*, 10). The very specific treatment of hoards and certain single finds of metalwork placed settled landscapes into a broader context, where objects were located on hills with wide vistas and at natural physical boundaries in the landscape which may include prominent hills, rivers or expanses of wetland. In this way the deposition of metalwork may have served to structure the landscape in this period.

Where metal objects have been recorded from apparently non-wetland contexts they have the potential to indicate the location of settlement sites, although this cannot be demonstrated without further evidence for occupation. It is also possible that the focus of deposition at rivers and streams may suggest that settlement existed in close proximity on the drier margins of such contexts or that areas such as floodplains were occupied on a seasonal basis (*cf.* Yates 2001; Yates 2007; Bradley 2007, 214).

Where metalwork is not recorded from settlement contexts, this may nevertheless help to provide a useful indication as to the frequency of activity in different areas of the landscape, which in this region places an emphasis upon river valleys, wetland edges, and less frequent activities in hilltop contexts. Whilst it may not be possible to equate the presence of individual metalwork deposits directly with the location of settlement sites, the examination of metalwork has clearly shown that activity in lowland contexts was frequent and specific. This may suggest that enclosed hilltops such as the Breiddin were in fact relatively isolated from the broader pattern of settlement in the lowlands of the surrounding landscape.

## Chapter 6: Dividing the landscape

### Introduction

Land division is a recurrent theme in discussions of the mid-late 2<sup>nd</sup> millennium BC in Britain, when landscapes begin to be extensively divided into systems of fields and larger scale land boundaries and have been equated with an intensification of agricultural production (Barrett and Bradley 1980). Themes of landscape division and agricultural intensification have seen a resurgence in recent years (Yates 1999; 2001; 2007) in tandem with discussions of the settlement archaeology of the mid-late 2<sup>nd</sup> millennium BC (e.g. Brück 2001). A number of regional chronologies and interpretative narratives have been constructed, many of which emphasise rapid and planned impacts of field systems on the landscape and complex sequences of landscape division (Yates 2001; Cunliffe 2004). Others have emphasised cumulative, piecemeal processes of land division that developed from former systems of tenure and localised occupancies (Johnston 2005).

Where systems of land division were created they potentially had a fundamental effect upon perceptions of the landscape, its tenure and occupancy. Systems of land division may have represented a formalisation of pre-existing understandings of settled localities (*cf.* Johnston 2005), yet the underlying stimuli for large-scale landscape division may also suggest changes in social relations in the period (Bradley 1980; Barrett 1994; Brück 2000).

It is clear, however, that the distribution of field systems and land divisions dating to the Mid-Late Bronze Age is a phenomenon of southern and south-eastern England (Bradley and Yates 2007, 95). In other regions of Britain pit alignments and upland linear earthworks may reflect different approaches to landscape division. These boundaries are, however, ambiguous in both their date and function. The following chapter reviews the evidence for landscape division in the Welsh border region in its wider British context particularly through an examination of southern English field systems and, and the form, date and function of pit alignments recorded across the country. The potential for the presence of later prehistoric field boundaries within the study area is considered and the presence of co-axial pit alignment systems and ditched boundaries at Four Crosses, Llandysilio, Powys, is examined specifically.



## Background

### Field systems and linear boundaries: regional chronologies

A complex system of agricultural field systems and land division has been recorded on Salisbury Plain (McOmish *et al.* 2002). A relative chronology has been suggested for these systems largely through an examination of their morphology and relationships with recorded settlement enclosures. Extensive groups of co-axial fields, formed by cultivation lynchets, indicate organised systems of arable agriculture, and are suggested to date to the Middle Bronze Age c. 1500-1000 BC (*ibid.*, 53) on the basis of their position within a broader relative sequence. It is suggested that the systems were created with comparable axial alignments, over extensive areas (up to 15 sq km), regardless of prevailing topographical features (*ibid.*). This has suggested that they were laid out as a series of cumulative and rapid actions (*ibid.*). Less uniform clusters of aggregate fields consistently appear to post-date coaxial systems (*ibid.*, 56). These field systems also have evidence for integrated settlement enclosures (*ibid.*). Substantial linear earthworks, in the form of ditches flanked by banks of between c.500m and c.15km long, have also been recorded cutting across the landscape (*ibid.*; Bradley *et al.* 1994.). These appear to post date the earliest phases of field systems in the area (McOmish *et al.* 2002, 53). A primary phase of linear ditches has been dated to between 1200 and 1000 BC, on the basis of relative association with settlements containing post-Deverel-Rimbury ceramics, with a second phase of re-cutting and construction around 800-600 BC (*ibid.*, 56).

Cunliffe (2004) has produced a more interpretative chronological scheme for the field systems and linear ditches in Wessex, linking their development with new economic systems, tenure and social hierarchies. A relative sequence comparable with that outlined by McOmish *et al.* (2002) is discussed, with the suggestion that large areas of coaxial fields formed a primary structure of land division. Such large-scale action is seen within the context of a “social authority able to coerce the people into forward-planned communal activity” (Cunliffe 2004, 73). This activity is considered to date to between 1400 and 1100 BC (*ibid.*). These field systems are considered to continue into the later Bronze Age until c.850BC, alongside the development of enclosed settlements (*ibid.*, 70) and substantial midden sites (*ibid.*, 69). The latter may relate to the episodic corralling of livestock (*ibid.*, 70- 73) at specific settlement nodes. The creation of substantial linear ditches (McOmish *et al.* 2002; Bradley *et al.* 1994) are seen in terms of a “regional event” (Cunliffe 2004, 63) dating to between c. 850 and 750 BC (*ibid.*, 73). These are recorded cutting across existing field systems, and are considered to reflect a shift from arable to pastoral agriculture (*ibid.*, 74), suggesting that established land tenure may have been substantially altered in the process. Cunliffe suggests that these radical changes to the landscape are contemporary with early hilltop enclosures (*ibid.*, 73) also associated with

pastoralism and animal corralling (*ibid.*, 69).

These interpretations are, however, at odds with those proposed by Bradley *et al.* (1994). Who argued that the 'celtic' field systems are later than the linear ditches (*ibid.*, 137-8) which were a formalisation of earlier systems of landholding structured by barrows and landscape features (*ibid.*, 137-141) rather than representing a uniform 'event'. A radical shift from an arable-dominated to a pastoral agricultural economy is rejected, and instead the linear ditches are seen in terms of territorial boundaries marking settled zones of mixed agriculture (*ibid.*, 137). What this demonstrates is that differing conclusions can be drawn from the same region, even where the archaeological record is well preserved, and contains multiple components of a settled landscape.

The extensive landscape of the Thames valley and estuary has been examined in detail by Yates (1999; 2001). Increasing agricultural intensification within a closely controlled landscape (Yates 2001, 65) is seen in terms of a radical shift away from previous patterns of landholding, although some elements of continuity may be hinted at by evidence for field systems having been structured by alignments of existing monument groups (Yates 1999, 159). Distinct zones of Late Bronze Age activity recognised within the region may have been associated with the emergence of regional power bases (*ibid.*, 160): for example, at sites such as Runnymede Bridge (Needham and Longley 1980) and Petters Sports Field (O'Connell 1986). An emphasis has been placed on pastoralism for the period, with co-axial field systems, trackways and water holes reflecting contemporary stock-control and management (Yates 1999, 165-167). It must be noted, however, that some evidence for cereal production has been recognised from certain sites (*ibid.*, 163), and other processes such as textile production have been highlighted at sites such as Reading Business Park (*ibid.*, 163; Moore and Jennings 1992) and at sites on the Thames estuary (Yates 2001, 73). Such activities are, nevertheless, considered to be contained within a process of agricultural intensification in the region (Yates 2001, 66) upon the gravel terraces of the Thames and its floodplains, in association with settlement foci and areas of significant metalwork deposition (*ibid.*, 67).

The study of the Thames valley has more recently been broadened out to include further regions of England by Yates (2007). An examination of the results from developer-funded projects has resulted in a comprehensive synthesis of the evidence for land division in the lowlands of England. Field systems have been placed within the context of settlement sites where they have been recorded, and areas of metalwork deposition are highlighted as a means of contextualising, at a broad scale, practices observed in the Thames valley (*ibid.* 85). Regions of study have included the upper and lower Thames valley alongside south-western England, the Severn valley and eastern England including the Fens and the North Sea coastal regions of Essex and Norfolk. Regions such as the south-west and south-east of England are compared at

a broad scale, while distinctive differences in the chronological development of land division and settlement are made at smaller scales highlighting distinctions between the upper and lower Severn valley for instance (*ibid.* 101-106) the extreme upper reaches of the Thames with the Middle Thames (*ibid.* 42). The study repeatedly highlights the landscape contexts of settlement sites and highlights similarities and differences in the chronological development of land division across these regions.

Recent re-interpretation of the coaxial field systems on Dartmoor (Johnston 2005) has seen these stone-built land divisions emerge from a complex series of cumulative interactions with existing landscape components. This is at odds with earlier interpretations of the Dartmoor reaves, which were seen as the product of rapid, large-scale and pre-conceived episodes of enclosure (*ibid.*, 1; Fleming 1988). The land divisions are, instead, considered to have emerged as a series of piecemeal, localised developments, influenced by pre-existing landscape features. Boundaries may have emerged from existing trackways or fencelines in the landscape, for example (Johnston 2005, 6-7). It is also suggested that conceptual boundaries at a local scale became successively formalised within a series of cumulative actions across the moors. Co-axial alignments were also influenced by prominent natural landscape features such as rivers or tors (*ibid.*, 15). Monuments such as stone rows and cairns may have structured earlier modes of settlement within the landscape (*ibid.*, 10). The extent to which the location of monuments directly influenced stone boundaries is, however, less clear. Substantial stone round house structures (*ibid.*, 11) present on Dartmoor were, however, integral to the layout of certain stone field boundaries, with evidence to suggest the relationship between the two was often intentionally emphasised (*ibid.*, 11-15).

Francis Pryor (1996) has interpreted droveways and coaxial field systems excavated in a low-lying context at Fengate, Cambridgeshire, as representing a complex system of livestock management. The field systems and boundaries are located upon gravels above the level of the fenland floodplain (*ibid.*, 314) and he sees this as being used between autumn and spring for the gathering and grazing of livestock which spent the summer months on the fens (*ibid.*). This transhumance system was interlinked by a series of linear droveways aligned at a right angle to the fen edge. Complex systems of rectilinear stockyards, with interlinking entrances are considered in terms of functional livestock management systems. These 'community stockyards' are seen not only in terms of the seasonal gathering of livestock, but also for the gathering of people where social groups would coalesce to engage in economic and social systems of exchange (*ibid.*, 317). Deliberate depositions and an inhumation burial in close association with the terminal of a droveway (*ibid.*) are highlighted to emphasise that otherwise utilitarian agricultural systems were embedded within wider systems of social interaction.

Late Bronze Age or earlier Iron Age systems of land division in the Welland Valley, in the east

midlands, are also discussed by Pryor (*ibid.*, 319), and it is notable here that these appear to have a relationship with earlier ring ditch monuments. The extent to which monuments structured the later systems of land division, is, however, uncertain.

Field systems in the Trent Valley, particularly in the east midlands region, are regarded as having originated in the Late Bronze Age or Early Iron Age (Knight and Howard 2004, 100-101). Palaeo-environmental data has suggested arable cultivation from the early second millennium BC (*ibid.*, 83-85). The majority of field systems, however, are thought to belong in the Late Iron Age, contemporary with settlement enclosures of this date (*ibid.*, 100-102). In the Peak District, recent palaeo-environmental data has been highlighted to suggest arable cultivation in the Late Bronze Age and Early Iron Age may be contemporary with field boundaries, in a period which had been previously characterised as one of upland abandonment (Bevan 2007, 251).

A number of regional studies focussing on southern England have suggested dislocation in the pattern of settlements and field systems in the Late Bronze Age and Early Iron Age (Cunliffe 2004, 63; Yates 1999, 167). Field systems and boundaries of the mid-Late Bronze Age do not appear to be maintained into the Early and Middle Iron Age, and it has been suggested that linear ditches and pit alignments may have replaced 'celtic' fields as subdivisions in the landscape in the early to mid-first millennium BC (Bradley and Yates 2007, 97-98).

It is clear that landscapes were extensively divided, closely organised and re-organised across a variety of regions in southern England during the Middle and Late Bronze Age, before more open systems of land-use returned in the Early Iron Age. Land division marked a radical departure from systems of land-use and occupation during the Early Bronze Age and may have influenced modes and forms of settlement in the landscape. It is important, however, to consider the extent to which landscapes were enclosed in similar ways in regions beyond the south of England, such as the Welsh borders, in order to assess the extent to which settlement patterns may have altered from the mid-second millennium BC.

## **The Welsh Border region**

Whereas groups of field systems and sequences of land division have been established for southern, south-western and south-eastern England from the Mid-Late Bronze Age, evidence for land division in this period from the Welsh border region and the English Midlands is sparse, which may suggest entirely different agricultural regimes and systems of land tenure.

Evidence from Sharpstones Hill in northern Shropshire suggests the presence of Late Bronze

Age landscape division (Barker *et al.* 1991) and possible settlement (Wigley 2007b, 181-2), although similar evidence has not been recorded more widely in this region.

A number of linear earthworks have been recorded on the uplands of the Long Mynd in south-west Shropshire region (*ibid.*), which may date to the Late Bronze Age. The Devil's Mouth dyke has produced radiocarbon dates from beneath the bank which provide a *terminus post quem* of 1520-1320 BC and 1510-1260 BC (*ibid.* and Wigley 2007b, 179: 3155+/- 45 BP, OxA-5082; 3105+/-45BP, OxA-5083). This dyke extends to the limit of a sharp break of slope, suggesting that it was intended as a physical obstacle to block passage along the ridge (Plate 7 and 8). The feature would not, however, form a physical barrier unless it was originally elaborated with a substantial fence line or posts. Whilst this remains possible, cross-ridge dykes may also have acted as conceptual barriers dividing upland landscapes, tenures or territories, potentially at large scales.

In north-east Wales there may be evidence for upland enclosure in the Late Bronze Age (Figs. 84 & 85). At Graig Fechan, a small stone hut and associated circular enclosure has produced Late Bronze Age radiocarbon dates (Manley 1990). Stone field boundaries recorded in the vicinity and adjacent hills may potentially, therefore, also date to the Late Bronze Age. In the uplands of the central Welsh Marches more generally there are, however, few examples of field systems that can be confidently ascribed a later prehistoric date (Dinn and Edwards 2006, 28). Examples associated with hillforts such as at Caer Caradoc in south-west Shropshire may potentially belong to the later Iron Age (*ibid.*).

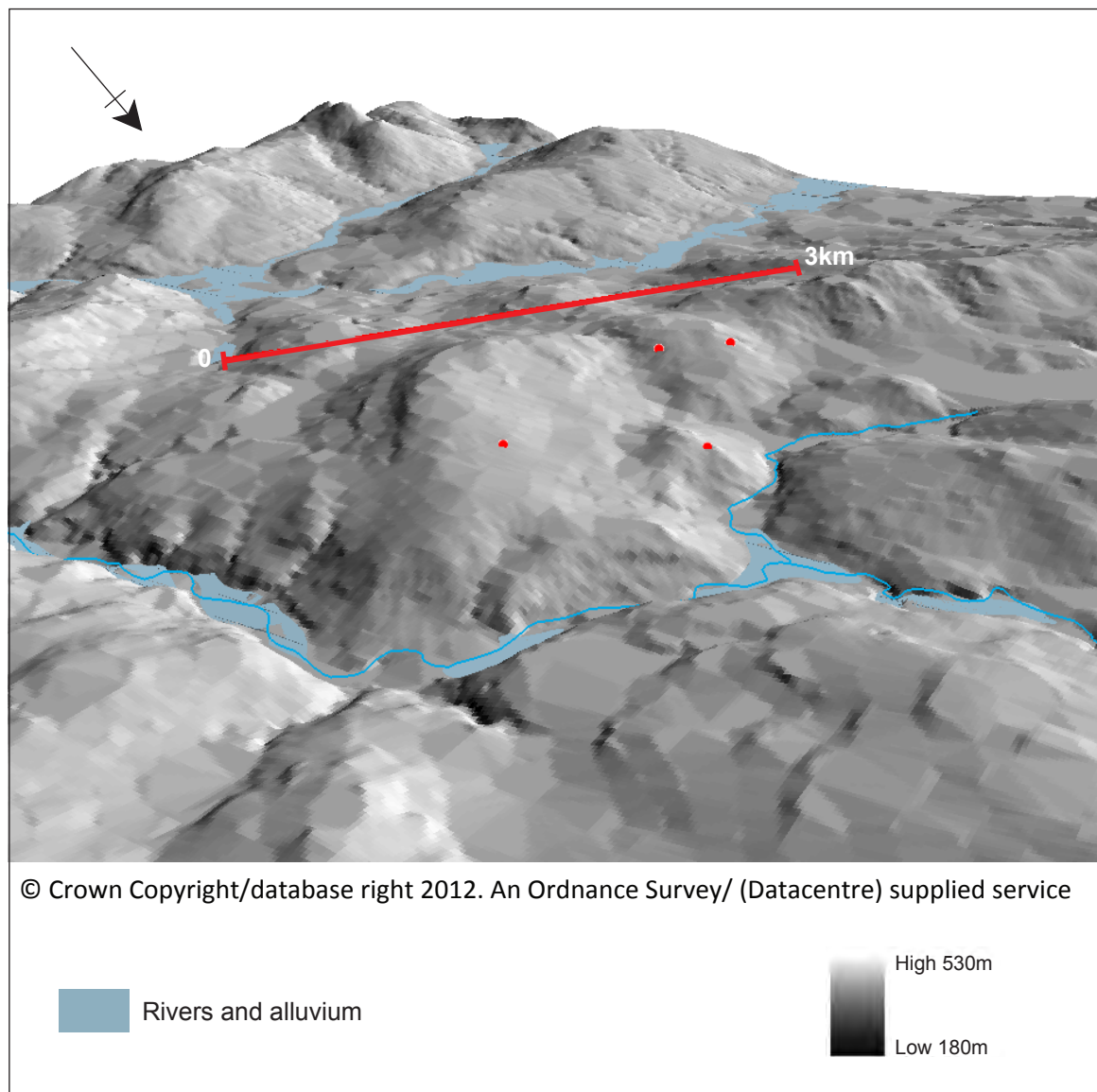


Fig.84 Digital Elevation Model showing the landscape context of enclosures and field systems at Graig Fechan, Denbighshire (shown as points in the landscape; z conversion factor x2).

The evidence for landscape division in the central and northern Welsh border region suggests that it was confined to upland landscapes. This land division may, however, vary greatly between systems of field enclosures in north Wales and linear boundaries potentially dividing extensive landscapes in southern Shropshire. Land division may, therefore have had very regional characteristics, and there is nothing to suggest that later Bronze Age field systems were characteristic of the Welsh borders generally. This is in contrast with the evidence for intensive landscape division even on the relatively higher areas of chalk downland in southern England (McOmish *et al.* 2002; Bradley *et al.* 1994).



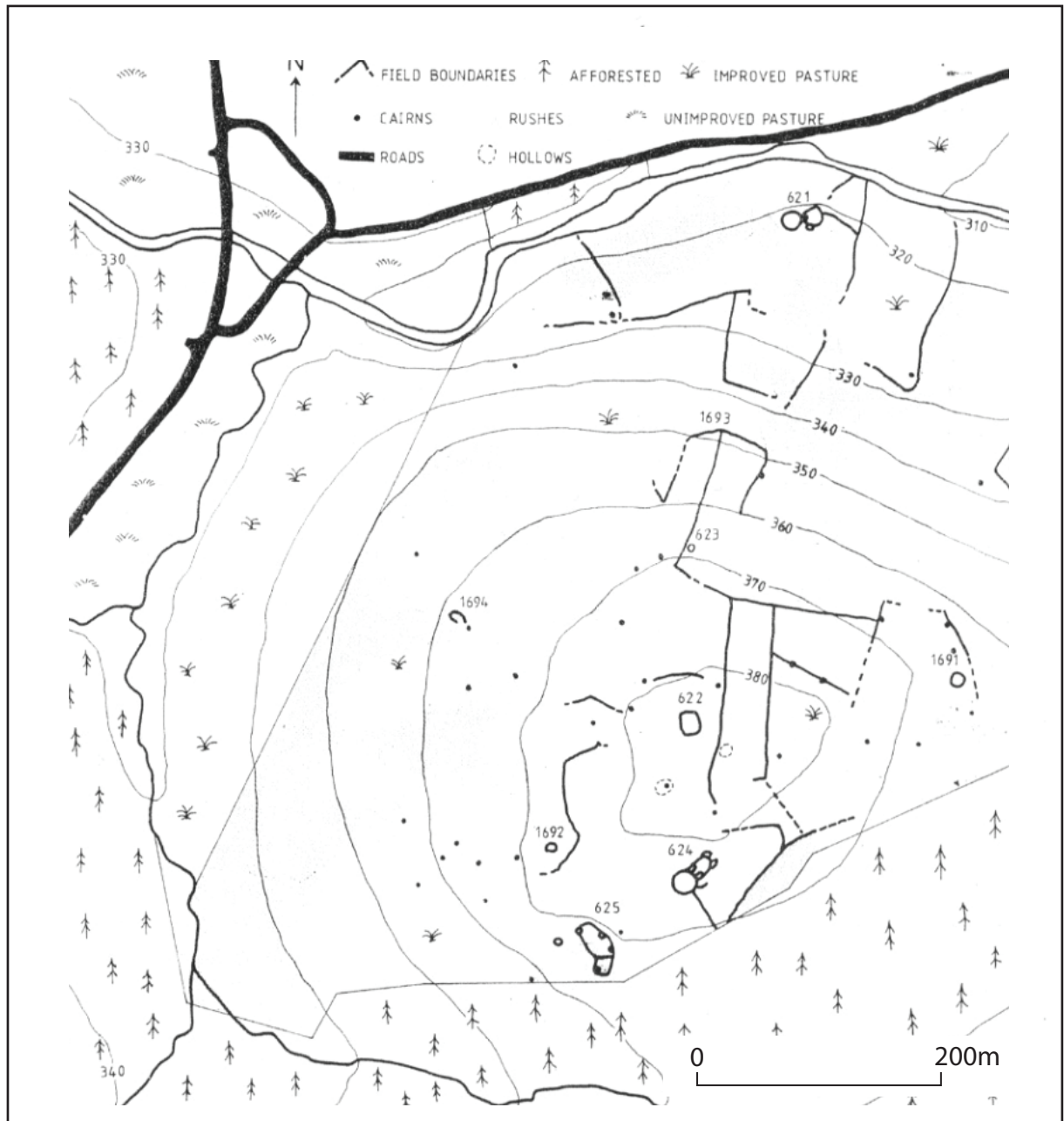


Fig.85 Field systems on the Denbigh moors (after Manley 1990)



Plate 7 Devil's Mouth cross ridge dyke, Long Mynd, Shropshire, looking south



Plate 8 Devil's Mouth cross ridge dyke, Long Mynd, Shropshire, looking west

## **The evidence for field systems in the study area: previous research**

Many cropmarks have been recorded within the study area, which have the potential to belong to prehistoric systems of land division. A number of field systems and linear boundaries have been recorded as cropmarks largely on the gravel terraces on the edges of the River Vyrnwy and River Severn floodplains (Fig. 86). The cropmarks largely concentrate to the south of the Vyrnwy at Four Crosses and between Four Crosses and the Severn floodplain margin at Llandrinio. Other cropmarks exist to the northwest at Llanymynech, and on the western Severn floodplain margins at Guilsfield to the west of the Breiddin hills, and Berriew to the south-west of the Long Mountain.

Collens (1988) in her study of Iron Age and Romano-British settlement in the upper Severn valley, recorded 24 examples of linear features (*ibid.*, 149-150) and highlighted the difficulty in placing them into a morphological and chronological scheme (*ibid.*). The presence of a number of cropmark enclosures within the study area and the region generally (e.g. Whimster 1989) suggests that many of the linear boundaries and possible field systems may be contemporary. Recent reviews of the evidence have suggested that the majority of cropmark enclosures in the central Welsh Marches region are later Iron Age and Romano-British in date (Wigley 2007b, 181), which has been borne out by the excavation of rectilinear examples (e.g. Britnell 1989; Grant 2007; Bain 2007), and reiterated in discussions of the upland data (Dinn and Edwards 2006, 29).

An earthwork field system has been recorded at New Pieces on the higher ground of the Breiddin hills, Powys, below the site of the hillfort (Fig. 87; Musson 1991, 5-7). Dating evidence was absent when this was examined in the 1930s (O'Neil 1937), and the field system was considered to be Romano-British on the basis of its association with a small 'D'-shaped enclosure (*ibid.*; Musson 1991, 5). More recently, both Collens (1988, 265) and Musson (1991) have highlighted the potential for both the enclosure (*ibid.*, 6) and the field system (*ibid.*, 7) to have pre-Roman origins. There is at present nothing to suggest, however, that the field system was necessarily contemporary with Late Bronze Age activity on the hilltop at the Breiddin.

Whilst there is potential for certain boundaries and field systems to belong to the Late Bronze Age within the study area, the weight of the existing evidence suggests that they are more likely to belong in a later Iron Age or Romano-British context in common with the dating evidence for settlement enclosures in the central Welsh border region. It may be possible, however, that other forms of boundary, as with the evidence for cross ridge dykes in upland

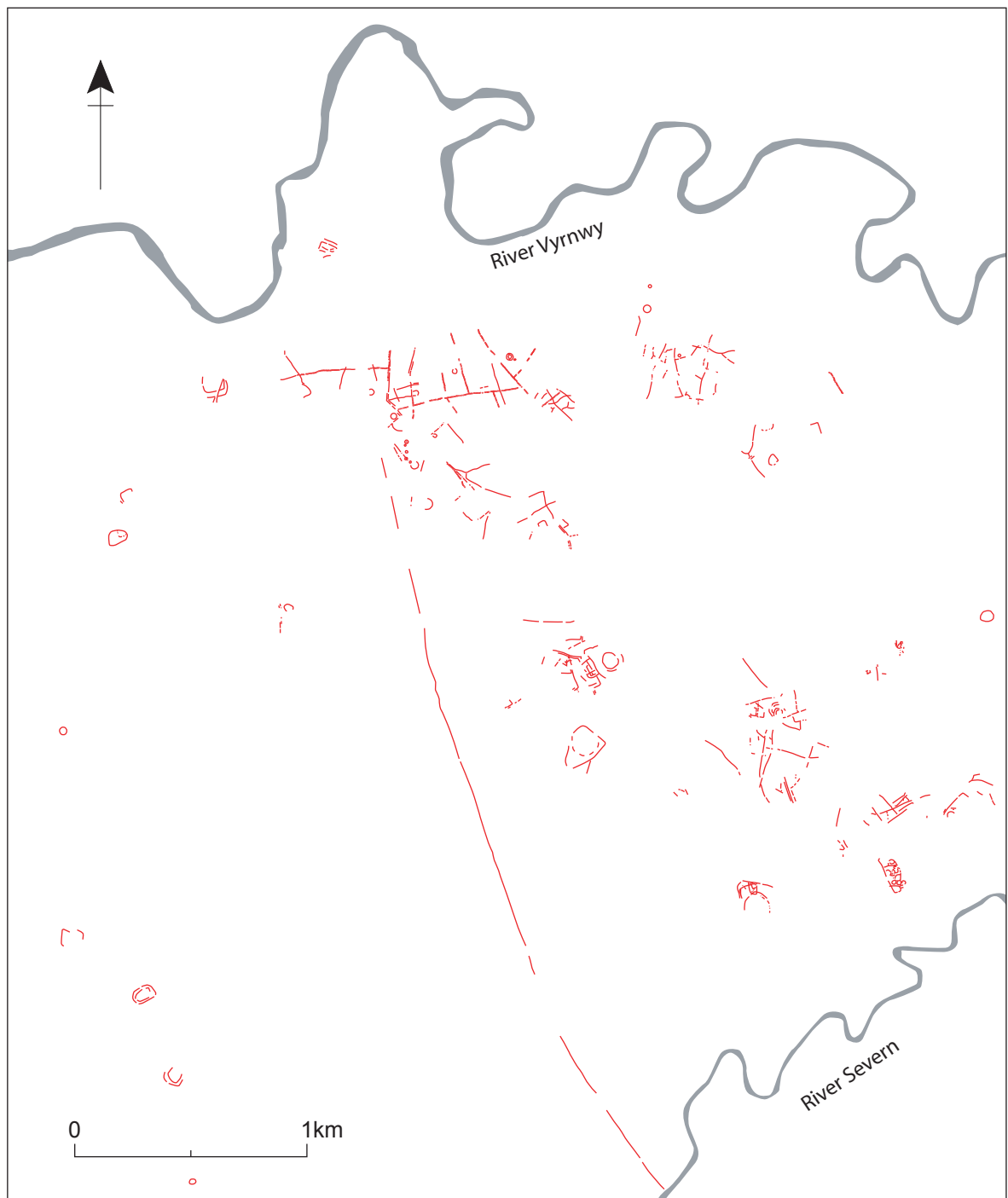


Fig.86 Cropmarks at Four Crosses and Llandrinio (after Clwyd-Powys Archaeological Trust HER)

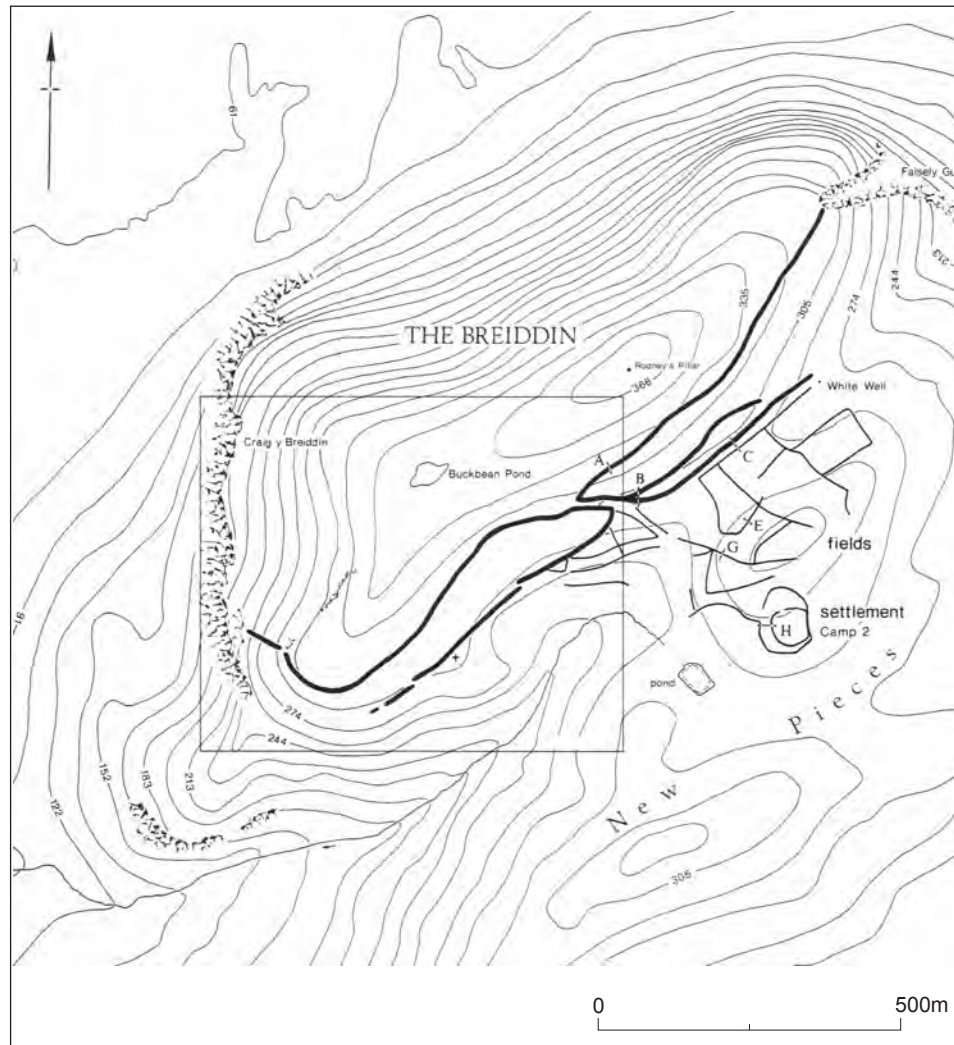


Fig.87 The Breiddin hillfort earthworks, nearby field systems and settlement enclosure (Musson 1991)

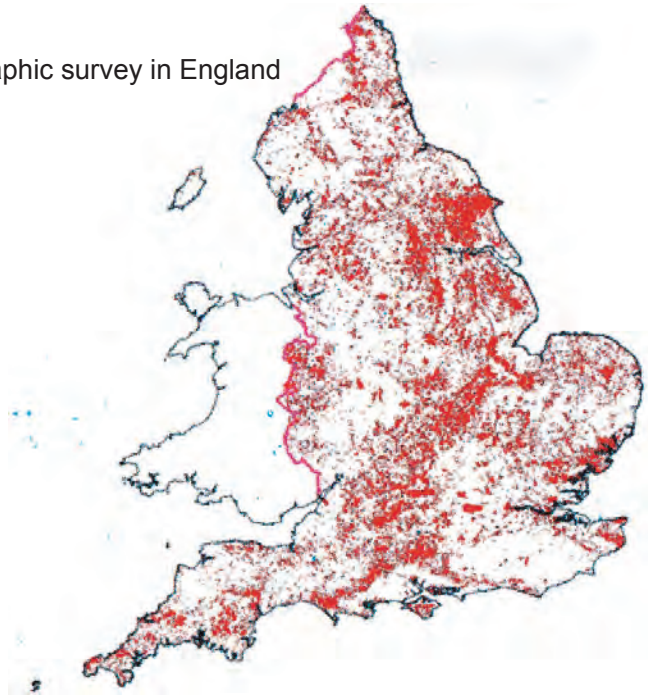
Shropshire, may represent the earliest forms of land division in the study area. Systems of pit alignments have been recorded within the study area either side of the River Vyrnwy at Four Crosses (Owen and Britnell 1989) and Llanymynech, Powys, which appear to respect existing monuments (*ibid.*; Wigley 2007a). It is necessary, therefore, to evaluate the evidence for the date of pit alignments and their potential function as systems of land division, in order to place them into the context of later Bronze Age land division.

## Pit Alignments in Britain: a review of available data and research themes

The distribution of pit alignments occurs largely beyond southern England, and many have been recorded in the midlands extending westwards to the Welsh border area. The dating and function of these boundaries is far from resolved, yet it is possible that they represent an



Distribution of  
aerial photographic survey in England  
(after NMR)



Distribution of pit alignments  
in England , Scotland and Wales  
(Data source: ADS)

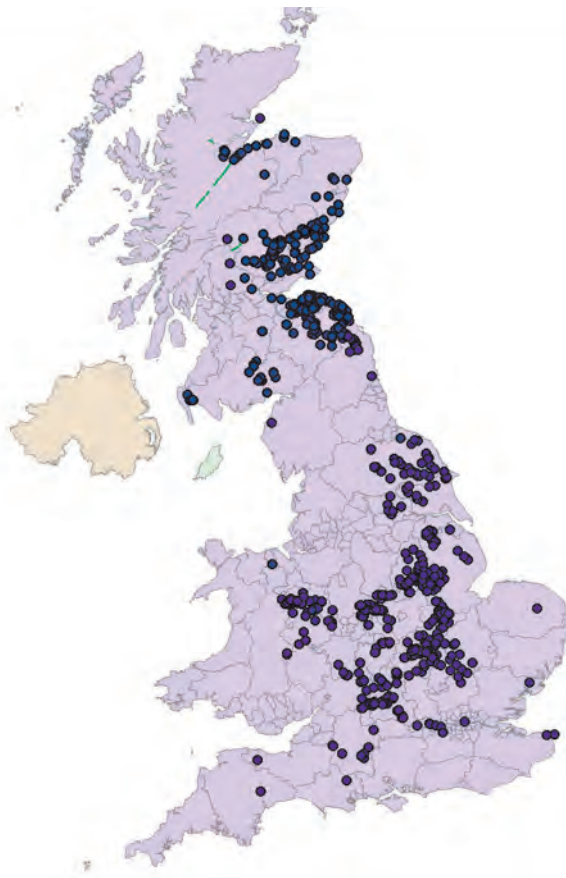


Fig.88 The coverage of Aerial photographic survey in England and the distribution of pit alignments in England, Wales and Scotland



early form of land division, potentially dating from the Late Bronze Age, in regions where other forms of ditched boundary and field systems are absent.

Pit alignments in Britain are a relatively ubiquitous feature of the archaeological record with over 950 recorded examples in England, Scotland and the Welsh Border. These landscape features have largely been recorded as cropmarks from aerial photography and only a relatively small number have been excavated. Dating evidence is consistently sparse and a wide range of dates from the Late Neolithic to the post-medieval period have been proposed. The most convincing dating evidence has been argued for the Late Neolithic and the Later Bronze Age and Iron Age on the basis of published examples. Despite the fact that pit alignments appear to represent a relatively common feature of the landscape, their function remains ambiguous. The very fact that pit alignments have regularly spaced intervals or causeways appears to negate a function as practical landscape boundaries, although their association with ditched enclosure systems appears to have been a close one in a number of instances. Excavations in the 1970s and 1980s appear to have focussed upon resolving the issue of the form of these alignments as physical boundaries, whereas more recent discussion in the 1990s began to explore these features within a social and conceptual framework.

### **Distribution in Britain**

It is clear that a large number of pit alignments have been recorded in lowland river valleys on fluvio-glacial gravels, particularly in the English Midlands. Examples include: Whitemoor Haye, Staffordshire (Coates 2002), Church Lawford, Warwickshire (Palmer 2001), Tallington, Lincolnshire (French *et al.* 1993), Milton Keynes, Buckinghamshire (Ford and Taylor 2001), sites in Northamptonshire (Jackson 1974), on the border of Wales at Four Crosses, Powys (Britnell and Owen 1989), and in the Vale of Clwyd at Tandderwen, Denbighshire (Brassil *et al.* 1991). The presence of pit alignments in comparable river gravel locations extends into the north-east of England at Eskbank Nurseries, North Yorkshire (Barber 1985), and in the Milfield Basin, Northumberland (Miket 1981). The national distribution map (Fig. 88) also suggests that there are some examples on the Thames gravels.

To the south of the Thames pit alignments appear to be far less frequent, with relatively few examples recorded in Wiltshire, and almost entirely absent in the West Country, East Anglia and the southernmost English counties. Other areas with notable absences include the lowland Cheshire basin and the north west of England more generally. A great number of pit alignments have been recorded in the Scottish Borders and eastern Scottish counties of Midlothian and Perth and Kinross. No data were available for south and west Wales and none examined for Northern Ireland.

It is important to recognise, however, that the concentrations of pit alignments on gravel terraces appear to relate to their clear visibility as cropmarks on air photographs in these areas. Moreover, there is a clear correlation between the distribution of pit alignments in England with the distribution of aerial photography as published by the NMR (Fig. 88). This suggests that the majority of pit alignments on the NMR database have been recorded by this method. Individual county SMR datasets may deviate from this to a certain extent, but have not been examined here. The fact that so many published pit alignment sites have been recorded in gravel contexts is also doubtless related to excavations responding to a threat from aggregate extraction. There may be a bias, therefore, in the distribution of pit alignments which could also have been created in non-gravel geologies and other landscape contexts.

Examples of pit alignments on non-gravel geologies have been recorded at Aston Hill, Derbyshire (Garton and Abbott 1998), and Swarkestone Lowes, Derbyshire (Elliot and Knight 1999). Both of these examples are, nevertheless, located close to, and overlooking the River Trent which suggests a close association between river systems and pit alignments as with many examples recorded on gravel terraces. Where pit alignments have been recorded in different landscape contexts these include a chalk ridge-top location above a dry valley at Ganton in North Yorkshire (Cardwell 1989), on the North Yorkshire Moors (Lofthouse 1993) and on the chalks of the Yorkshire Wolds (Stoertz 1997, 40-41). It is clear, therefore, that pit alignments were not necessarily exclusively created on gravel geologies adjacent to rivers and may have divided other areas of landscape.

### **Dating Evidence**

Dating evidence for pit alignments is scarce. Frequently only a small proportion of any one alignment is ever excavated, often producing minimal and inconclusive data. The incorporation of pit alignments into later boundary systems, together with their frequent presence in landscapes characterised by Late Neolithic and Early Bronze Age ceremonial monuments, has clearly contributed to an ambiguous body of evidence, clouded by issues of residual and intrusive material.

### ***Late Neolithic***

The earliest dating evidence proposed for pit alignments places them within the Late Neolithic. Six pits were excavated at the Ewart 1 alignment in the Milfield Basin, Northumberland (Miket 1981, 139), five of which contained pot sherds considered to belong to the 'Clacton sub-style of the Grooved Ware tradition' (*ibid.*, 145). It is suggested that the unweathered nature of the sherds argues against them being residual. Approximately 4km to the north-west, the site at Milfield North (Harding 1981) has provided a broader context for the presence of Grooved

Ware in pit alignments in this area. The excavated pit alignment here lies to the north, and at right angles to, a linear group of henge monuments to the west of the River Till (*ibid.*, 90 & 102). Only two pits were excavated in this alignment (*ibid.*, 116). Grooved Ware was recovered from a middle fill of one of these pits, “together with charcoal and calcined bone” (*ibid.*), which may suggest an association with funerary activity, or the remains of such activity. Radiocarbon dates were apparently obtained from samples derived from the same context as the pottery (though this is not specifically clear). These calibrate to 2300-2010 BC (BM-1650), 2350-2030 BC (BM-1652) and 2150-1740 BC (BM-1653), at 95.4% probability using OxCal v.3.9 (Bronk Ramsey 2003).

Whilst the pottery and radiocarbon dates appear to be consistent with a Late Neolithic date, bolstered by pot sherds from the Ewart pit alignment (Miket 1981), there remains the potential for the finds to be residual, having derived from features (or more ephemeral deposits related to settlement), associated with the henge monuments, especially at Milfield North. Indeed such a concentration of ritual monuments, in a linear arrangement spanning at least 5km (Harding 1981, 87), may have engendered a considerable degree of attendant contemporary activity. The argument that the pit alignment is associated with the henge at Milfield North may indeed be valid, but whether it was contemporary with the primary use of the monument is open to debate.

Waddington (1997), in a review of pit alignments, has again argued that early examples were created in the Late Neolithic. A radiocarbon date (OxA-5577) from Dishforth, in the Vale of York, which calibrates to between 2630 and 2300 BC at 95.4% probability, may add weight to Harding’s suggestion of a Late Neolithic date for pit alignments, although the specific context is uncertain. Other examples cited by Waddington appear to represent less than secure dating evidence, which can be readily interpreted as representing residual material. At Thornborough South the pit alignment has been suggested to belong to the Late Neolithic on the basis of flints recovered (*ibid.*, 29). At Northampton 9, “a small quantity of weathered Beaker sherds” have been used to suggest a Late Neolithic date (*ibid.*). The dating evidence from these sites may be enlightened further by a critical examination of each individual site in relation to the proximity of Late Neolithic ceremonial monuments, and the potential for the incorporation of residual material. This, however, is beyond the scope of the present summary.

The spatial relationship of pit alignments with monuments has also been presented as evidence for a Late Neolithic date by Waddington. At Ogden Down a pit alignment “connected two ring ditches” (*ibid.*), and at Monkton an association with a ring ditch is highlighted, together with two Late Neolithic burials located on a “cardinal point on its route” (*ibid.*). Clearly these examples do not demonstrate a date for the pit alignments. It is equally possible that the alignments refer to and respect existing monuments in the landscape. Even where burials may

appear unmarked, this may not always have been the case.

### ***Late Bronze Age and Early Iron Age***

Several sites appear to have relative dates provided by pottery from pit alignments which may place them in the Late Bronze Age and Early Iron Age. At Tallington, Lincolnshire, Late Bronze Age and Iron Age sherds were recovered from four pits (French *et al.* 1993, 40-42), although details of the contexts are vague other than the fact that they are described as “well down in the fillings of the pit alignment pits” (*ibid.*). A radiocarbon date obtained at Tallington from a pit with a preserved post (*ibid.*, 42), calibrates to between 850 and 200 BC (UB-452), at 95.4% confidence, placing the feature in the Early-Middle Iron Age. This date has been quoted by both Waddington (1997, 30) and Pollard (1996, 110) in their discussions on pit alignment chronology. However, the original report actually questions whether the date derives from the pit alignment at all, the post not having been discovered as part of the excavation of the pit alignment here, but at a later date as a chance discovery (French *et al.* 1993, 42). It appears, therefore, not to be reliable.

In Northamptonshire, two sites produced Late Bronze Age to Early Iron Age pottery. At Ringstead an apparently complete pot was recorded from the pit alignment (Jackson, 1978), which may provide a reliable date within the limitations of the accuracy of the typology. At Briar Hill Farm, 240 sherds from the pit alignment appears to represent an unusually large assemblage. Details of the contexts are not clear and the finds, tentatively attributed to the Late Bronze Age or Early Iron Age, are regarded as residual, although it is not clear on what basis (Jackson 1974, 24-26). At Gretton, Northamptonshire, a hoard of 35 Iron Age currency bars were recorded partially overlying the edge a pit fill (*ibid.*, 40-41), providing a *terminus ante quem* for the feature.

At Aston Hill, Derbyshire (Garton and Abbott 1998), Late Bronze Age/Early Iron Age pottery recovered from a pit alignment and a ditch, were regarded as residual within the pit alignment, though no specific reason for this was presented. At Swarkestone Lowes, Derbyshire, Iron Age pot sherds were obtained from the upper fills of a pit alignment, “varying in condition from unabraded to moderately abraded” (Elliot and Knight 1999, 101), although no further details are given regarding chronology or context.

### ***Mid-Late Iron Age***

Radiocarbon dates obtained from roundwood samples from waterlogged contexts at St. Ives, Cambridgeshire (Pollard 1996, 100), appear to provide reliable dates for the pit alignment. This is underlined by the fact that the wood was regarded as being in a “fresh condition”,

having been deposited in a single, rapid event (*ibid.*). The dates calibrate to between 770 to 400 BC (Beta-77757) and 550 to 150 BC (Beta-77756), and can therefore be placed at least within the Middle Iron Age. The differences in the date ranges do, however, make the dating of the feature ambiguous.

At Whitmoore Haye, Staffordshire (Coates 2002, 15) pottery forms from the pit alignment here may date to between the Late Bronze Age and the “full Iron Age” (Woodward 2002b, 48-50). The sherds from the pit alignment, in the form of large, apparently unabraded chunks, are considered to represent deliberate structured deposition (*ibid.*, 48). A radiocarbon date from a primary pit fill calibrates to between 420 and 200 BC (Beta-135226), and a secondary pit fill or re-cut at between 410 and 160 BC (Beta-135227) at 95.4% confidence. The latter context also contained Iron Age pot sherds. The dates are comparable, and perhaps slightly later, than those obtained at St. Ives, Cambridgeshire, from reliable samples (Pollard 1996).

At Fenny Lock, Milton Keynes (Ford and Taylor 2001), 14 pits were excavated, with pottery recovered “from several of the pits”, dating to the Late Bronze Age and Early Iron Age being regarded as residual (*ibid.*, 84). The Mid-Late Iron Age pottery finds were instead regarded as representing the true date of the features (*ibid.*), on the basis that there was no evidence for re-cutting and that the alignment influenced the siting of a later Romano-British boundary (*ibid.*). This may be questioned if the pit alignment could be argued to have remained open from its initial formation. The degree of longevity of such features, is however, uncertain.

At Eskbank nurseries, North Yorkshire (Barber 1985), a radiocarbon date (GU-1632) was obtained from charcoal of “carbonised wood of alder hazel and prunus” (*ibid.*, 151) from a lower fill of a pit. The date calibrates to between 240BC and 90AD at 95.4% confidence, placing it within the Mid-Late Iron age. The fact that the date was not derived from oak, may eliminate the potential for old wood influencing the radiocarbon date.

### ***Romano-British***

At Cat Babbleton Farm, Ganton, also in North Yorkshire, both Late Iron Age and Romano-British sherds were recovered from pit fills (Cardwell 1989, 22). No detail is given regarding the contexts of the Late Iron Age sherds. A second century AD vessel was obtained from a middle pit fill, and mid-late fourth century AD sherds from a secondary pit fill, (with sherds argued to be from the same vessel from an upper fill of a separate pit). This is suggested to represent a “rapid silting up of the pit alignment in the latter half of the fourth century” (*ibid.*). This could, therefore, suggest a particularly late date for a pit alignment.

However, there are a number of questions about the form of these features which leave this interpretation open to considerable doubt. The pits appear, at best, to be of elongated

sub-rectangular form, joined together by recutting (*ibid.*, 20). It is notable that no gaps were apparent (apart from a single 1m wide example) between the pits, and a shallow ditch is argued to have represented a “superficial re-cutting or cleaning of the pit alignment” (*ibid.*, 25). It remains possible, therefore, that the feature represents a Romano-British boundary feature, or a pit alignment re-cut in the Romano-British period, with material of this date being intrusive in Late Iron Age features.

A close relationship between pit alignments and later Romano-British boundaries have been noted at Milton Keynes, Buckinghamshire (Ford and Taylor 2001), and at St. Ives, Cambridgeshire, where an Early to Middle Iron Age pit alignment is argued to have influenced the location of successive boundaries up to the fourth century AD (Pollard 1996, 105). This suggests that pit alignments had a significant longevity within the landscape.

### **Morphology and landscape context**

Pit alignments are generally defined as linear features in the landscape, with consistently spaced features, often spanning several hundred metres in length, and belonging often to a complex group within a specific area (Waddington 1997, 22). They are usually divided into single or double types, with single pit alignments being the most common (*ibid.*). It has been recognised that this definition may be an over-simplification of the data and that a great degree of variation exists within these landscape features (*ibid.*). The function of pit alignments, and their potential role in structuring movement through the landscape, cannot be interpreted fully without an appreciation of their morphology and landscape contexts.

Clearly spaced, regular pit alignments can be found as both single rows of pits as at Gretton, Northamptonshire (Fig. 89; Jackson 1974) and as double rows as at Barford, Warwickshire (Fig. 90; Loveday 1989). Regularly spaced oval examples were recorded as a single pit alignment at Eskbank Nurseries, north Yorkshire (Barber 1985). At Wollaston, Northamptonshire, the pits are described as “sub-square in plan... regularly spaced at 3m centre to centre vertically sided and c. 1m deep” (Chapman and Jackson 1992, 69).

With such examples it is easy to imagine that all pit alignments have such regular forms, particularly when they are presented as lines of dots on large-scale plans. This is, however, not necessarily the case, and variations of form can be seen within pit alignments. Both sub-square and circular, regularly spaced pits, formed two separate parallel alignments at St. Ives, Cambridgeshire (Pollard 1996). Double elongated and irregular pits were recorded within the alignment at Ewart in the Milfield Basin, Northumberland (Fig. 91; Miket 1981, 143). Similarly irregular and conjoined pits have been recorded at Fenny Lock, Milton Keynes (Ford and Taylor 2001, 84). The elongated pits at Cat Babbleton, north Yorkshire (Cardwell 1989) did not show



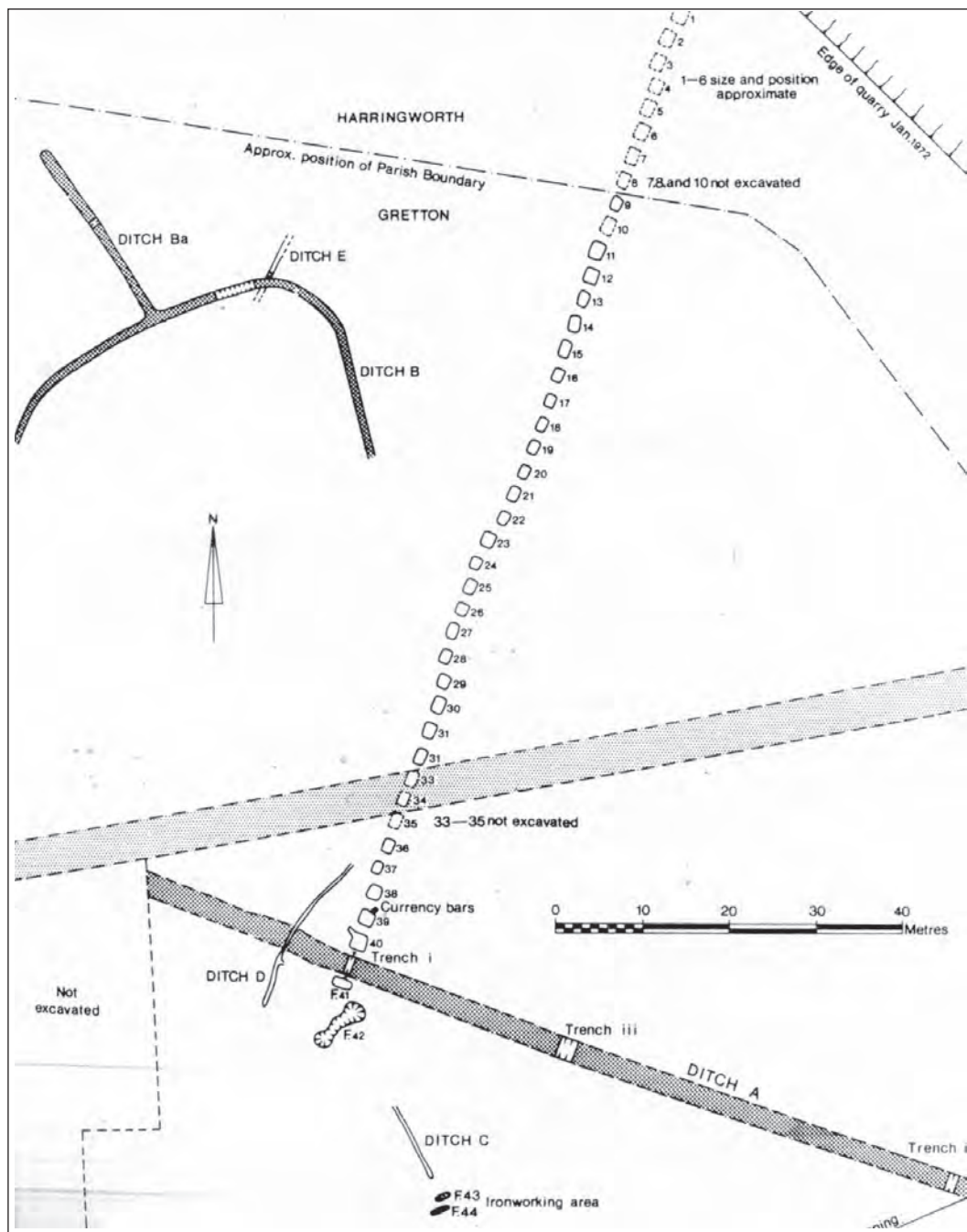


Fig.89 Pit alignment at Gretton, Northamptonshire (after Jackson 1974)

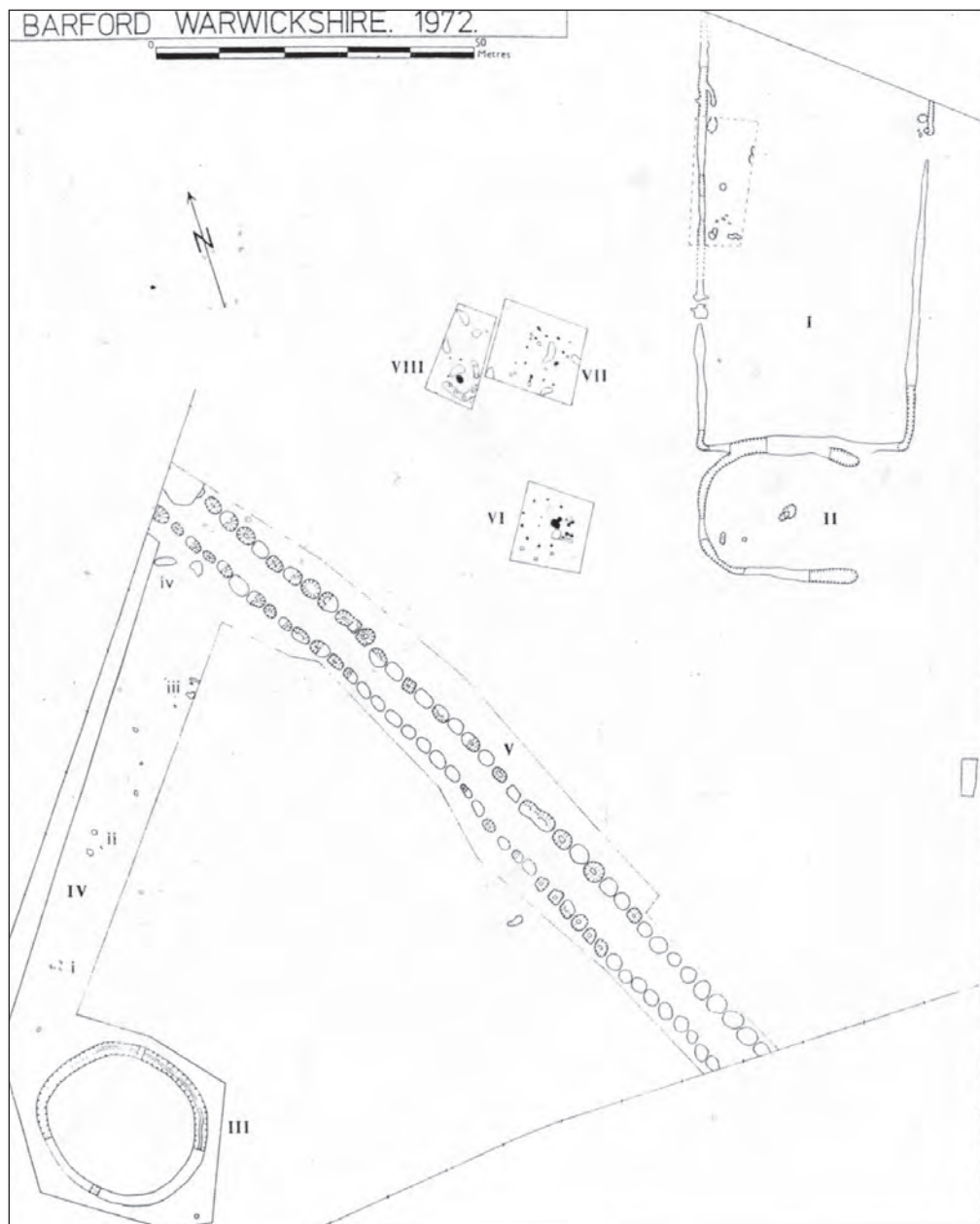


Fig.90 Double pit alignment at Barford,Warwickshire (after Loveday 1989)

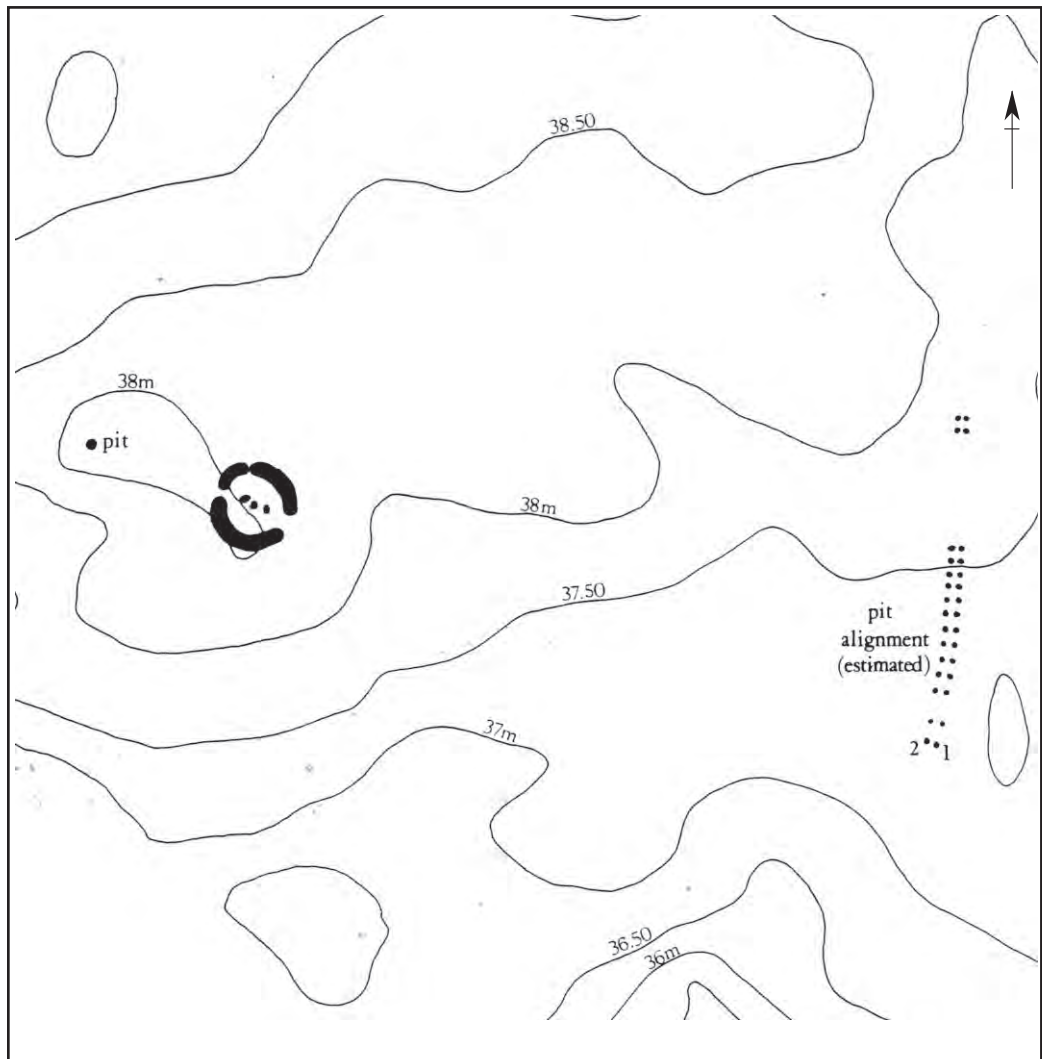


Fig.91 Double pit alignment and henge at the Milfield Basin, Northumberland (Miket 1981)

any evidence for any perceptible breaks. However, it is possible that this alignment was re-worked in the Romano-British period.

Other examples of differing pit alignment forms may show regional differences, with pits and external segmented banks on the North Yorkshire Moors being the clearest example (Fig. 92, Lofthouse 1993). Other examples of pit alignments may not actually belong to the same class of feature as those described largely in lowland England. At Marygoldhill Plantation, Berwickshire, a 'pit alignment' of regular circular pits were interspersed with elongated ditch segments flanked by banks with apparent entrances or causeways (Strong 1988, 121). These features were clearly associated with a rectilinear defensive enclosure and further dyke features. It may be the case that these features were acting as physical boundaries in a closely controlled landscape associated with an Iron Age 'fort'. This appears to differ from the evidence for lowland pit alignments in England, where any form of rectilinear settlement enclosures appear to be later. It is important to consider, therefore, that the blanket term 'pit alignment' may actually represent distinctive regional variations in both form and potentially function. The most frequently discussed form of pit alignment, at least in the literature relating to England, is that of alignments on lowland gravel terraces, and these inevitably dominate the discussion here.

Pit alignments appear frequently to divide significant tracts of landscape, with examples of alignments having been recorded for distances of several hundred metres (e.g. Miket 1981, 137-138; Owen and Britnell 1989). In contrast, there are shorter examples, for example at Milfield North, c.60m long (Harding 1981). Certain examples may, however be longer than the aerial photographic evidence suggests. Geophysical survey can, for example, demonstrate the continuation of these features through land not conducive to cropmarks (e.g. Kenney 2003).

It is perhaps not the length of pit alignments that is significant, but the way in which they divide up the landscape. At South Muskham, Newark, Nottinghamshire, pit alignments are arranged in co-axial formations (Knight and Howard 2004, 102-103). A comparable arrangement has also been noted at Kings Bromley, Staffordshire (*ibid.*, 102), c.10km west of the more extensive group at Whitemoor Haye (SMR PRN 1506; Plates 9 & 10). This demonstrates that different pit alignment morphologies may be present within regional landscapes. This could reflect a chronological development in the use and division of land with pit alignments, or alternatively may suggest that different landscape zones were treated in different ways by different boundary arrangements.

Co-axial pit alignments have also been recorded through aerial photography at Kempsey, Worcestershire (Worcestershire Historic Environment Record: WSM 02118; Fig. 93), adjacent to the River Severn. At Church Lawford, Warwickshire (Palmer 2007) pit alignments form a

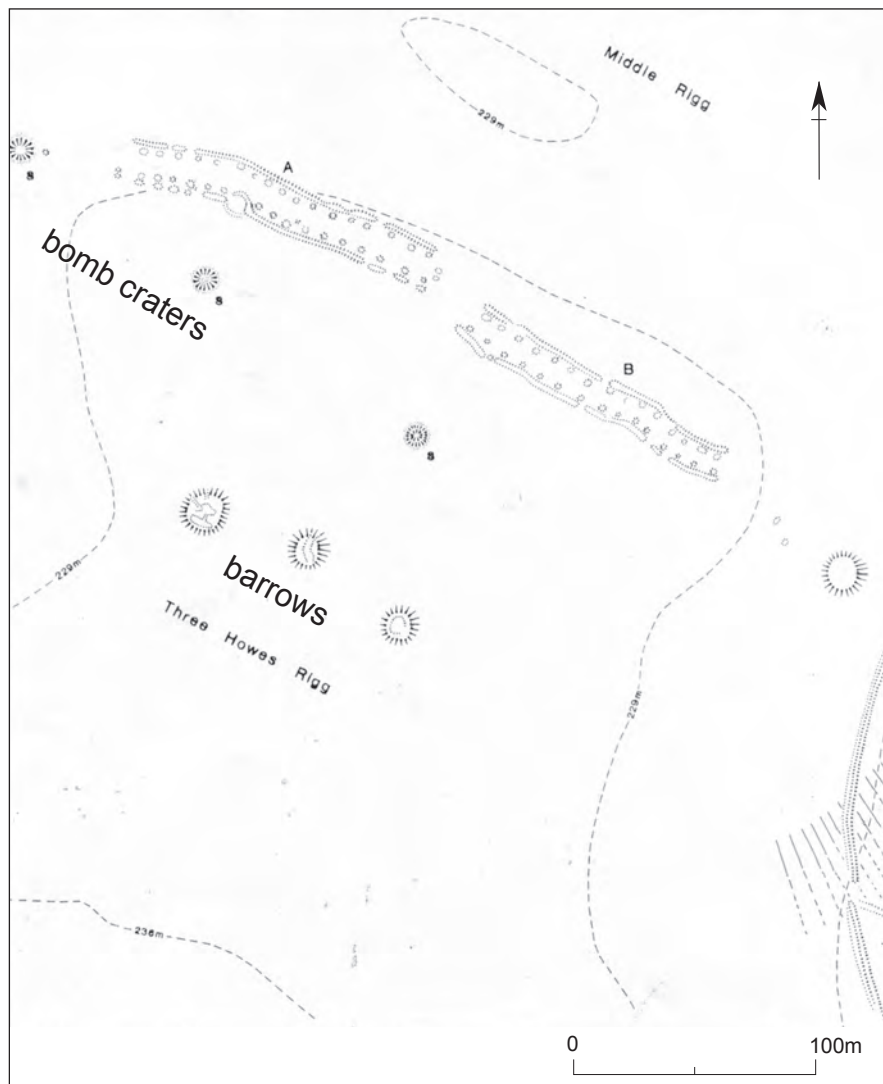


Fig.92 Segmented embanked pit alignments, North Yorkshire (after Lofthouse1993)



Fig.93 Kempsey, Worcestershire, showing co-axial pit alignments ditch systems, possible ring ditches and pit clusters (Worcestershire County Council, plotted from aerial photographs by Mike Glyde)





Plate 9 Co-axial pit alignments and possible ring ditches at Kings Bromley, Staffordshire  
(©English Heritage NMR (Jim Pickering Collection); JAP 1394/32; SK 1316/ 21; Date: 05 July 1975)



Plate 10 Co-axial and double pit alignments and possible ring ditches at Kings Bromley, Staffordshire  
(©English Heritage NMR (Jim Pickering Collection); JAP 1394/32; SK 1316/ 21; 28 Jun 1975)

more irregular co-axial group. Here an axial alignment is abutted by one double and one single pit alignment (*ibid.*).

A relationship with later boundaries, and the potential to demonstrate continuity in the division of the landscape, has also been highlighted at South Muskham (*ibid.*, 102). It seems possible here that pit alignments were subsumed within later ditched boundaries. A similar relationship has also been recorded at Swarkestone Lowes, Derbyshire (Elliot and Knight 1999), where a double pit alignment appears to form an integral part of a double ditch feature. Wilson in his early assessment of pit alignments recorded by aerial survey in Britain noted that “pits and ditches seem interchangeable, and sometimes a line of pits is continued by a ditch” (Wilson 1978, 5).

A sequence of landscape enclosure associated with pit alignments has been identified at Ling Hall Quarry, Church Lawford, Warwickshire (Palmer 2001), where it is suggested that a network of Early to Middle Iron Age pit alignments formed ‘estates’ (*ibid.*, 94). The pit alignment ‘estates’ appear to have been foci for Mid- Late Iron Age ‘clothesline’ enclosures and associated settlement structures (*ibid.*).

The extent to which pit alignments themselves were influenced by existing territorial boundaries is not easily demonstrated. They appear to represent the first physical demarcation of territories in the landscape, and pit alignments do not appear to characterise areas of the country such as Wessex or the Sussex Downs, where mid-Late Bronze Age land divisions have been recorded. Elsewhere it appears that pit alignments are often loosely associated with Bronze Age ring ditches in gravel river terrace contexts.

On the North Yorkshire Moors segmented embanked pit alignments (Lofthouse 1993) have been suggested to follow the alignment of adjacent barrows (Fig. 92). In the Milfield Basin a pit alignment and henge may also be related (Harding 1981). At Whitemoor Haye, Staffordshire, it has been argued that pit alignments consciously reference and divide up a ritual landscape (Woodward 2007).

There is clearly a relationship between pit alignments and rivers, with examples running parallel (Jackson 1974) and at right angles (Barber 1985) to their major axes. However, this could be undermined by the fact that gravel river terraces have traditionally produced the best aerial photographic data leading to their recognition. Nevertheless, Pollard’s discovery of two pit alignments either side of a palaeochannel (active during their creation), seems to strongly emphasise the symbolic association of the pit alignment and this natural boundary (Pollard 1996). Further pit alignments may remain undiscovered beneath alluvium close to palaeochannels and rivers across the country.

## The function of pit alignments

Discussions on pit alignments have largely been concerned with elucidating a practical function for these boundaries. It is clear that these linear features divide the landscape at a number of different scales, yet the fact that they are made up of apparently regular, and intermittent rows of pits, often with gaps of 1-2m between, contradicts a functional explanation for these boundaries as physical barriers.

The most frequent debate has been whether these features acted as quarry pits in order to produce an attendant bank, or whether they were designed to hold posts (Barber 1985). No clearly demonstrable evidence for posts has been recorded, (the example at Tallington, Lincolnshire, being of dubious origin; French *et al.* 1993). The waterlogged pits at St. Ives, Cambridgeshire, produced no evidence for posts, even though preserved wood in the form of twigs did survive (Pollard 1996, 100). The presence of posts may be indicated through the recording of stone concentrations (Miket 1981, 145) relating to post packing, but this cannot be absolutely certain. Soil chemical analysis has also been presented as confirmation that pits did not hold posts (Barber 1985, 153).

There has been little convincing evidence to suggest that pit alignments were associated with banks, at least in a lowland context, though this has often been cited as the only possible functional explanation, even where direct evidence is lacking (e.g. Owen and Britnell 1989, 36). The presence of banks has been dismissed on the basis of the nature of pit fills, showing no obvious signs of tipping from one side or another (Miket 1981, 143; Elliot and Knight 1999). Miket also argued that where pit alignments meet in a T-junction, the presence of a bank would necessitate a larger break in the pit alignment where the banks would have supposedly met (Miket 1981, 143-145), although the nature of pit alignments with regular interruptions may make this difficult to observe conclusively. Waddington, in a more recent review has argued that the neat square regular nature of certain pits, and their apparent even spacing would not have been necessary if they were simply quarry scoops, and that larger shallower holes would have been more practical (Waddington 1997, 23).

Banks have, however, been recorded as earthworks in association with pit alignments on the North Yorkshire moors (Lofthouse 1993; Fig. 92). The fact that these are segmented and not continuous seriously undermines the interpretation that banks provided a practical barrier. Lofthouse has stressed the location of segmented embanked pit alignments at right angles to a marshy valley (Lofthouse 1993, 384), where they may have symbolically cut off access through it.

Pryor has argued against the presence of banks beside pit alignments, and instead has preferred

to see pit alignments as marking “generally agreed major divisions of the landscape”, acting as markers rather than barriers (Pryor 1993, 142). Such a point is taken one step further by Pollard (1996). At St Ives, Cambridgeshire, two pit alignments run either side of a palaeochannel which served to seal the pits under alluvial silts, thereby demonstrating that it was an active channel when the pit alignment was conceived. Pollard emphasises the fact that the channel itself acted as a natural boundary (*ibid.*, 98) and that the pit alignments here must be viewed within the social context of the Late Bronze Age and Iron Age, if they are to be understood, rather than attempting to seek practical functional explanations (*ibid.*, 93). He suggests that wood placed in the pits, possibly from hedging, may reflect an intentional desire to reference other boundary features in the landscape through symbolic metaphorical deposition (*ibid.*, 111). Other ‘odd deposits’ from pit alignments elsewhere are highlighted by Pollard, including an incised stone plaque from Gretton, Northamptonshire (Jackson 1974), human skull fragments and right cattle limb bones from pits at Tallington, Lincolnshire (Pollard 1996, 111; French *et al.* 1993), in addition to examples of complete pots (Jackson 1978). Added to this could be the 35 Iron Age currency bars partially overlying a pit at Gretton, Northamptonshire (Jackson 1974).

It is clear that there is little weight behind the suggestion that pit alignments formed physical barriers within the landscape. Even where rare instances of banks have been recorded these are segmented and interrupted. No convincing evidence for posts have been produced and these would not have provided a barrier where pits are separated by up to 3m, and would not have required such large pits. Very large posts would have required very large packing stones, particularly in loose gravelly subsoils, and these are not present.

Pit alignments instead appear to represent symbolic rather than physical boundaries. They appear to date most consistently from the Late Bronze Age through to the Later Iron Age, while often respecting or referencing earlier Late Neolithic and Early Bronze Age monuments in the landscape. Their location in the vicinity of funerary and ceremonial monuments may have actively contributed to their potency as symbolic boundaries.

Pit alignments do not appear to have existed in close proximity to settlement sites, since a lack of finds such as pottery is a consistent feature. Where finds are not residual within their fill, these may be seen as intentional deposits. It may even be argued that items readily interpreted as residual may themselves represent an intentional reference to nearby monuments or past activities, in a way that intentionally engaged with the past (*cf.* Bradley 2002).



## The study area: cropmark morphology and the dating evidence for boundary features at Four Crosses, Llandysilio, Powys.

### Introduction

A number of pit alignments and field boundaries have been recorded at Four Crosses, across an area interspersed with a group of Bronze Age ring ditches (Fig. 94). In view of the evidence for land division in the mid-Late Bronze age in regions such as the Thames Valley (Yates 2001) it was considered that some of the boundary systems here may have originated in the Late Bronze Age.

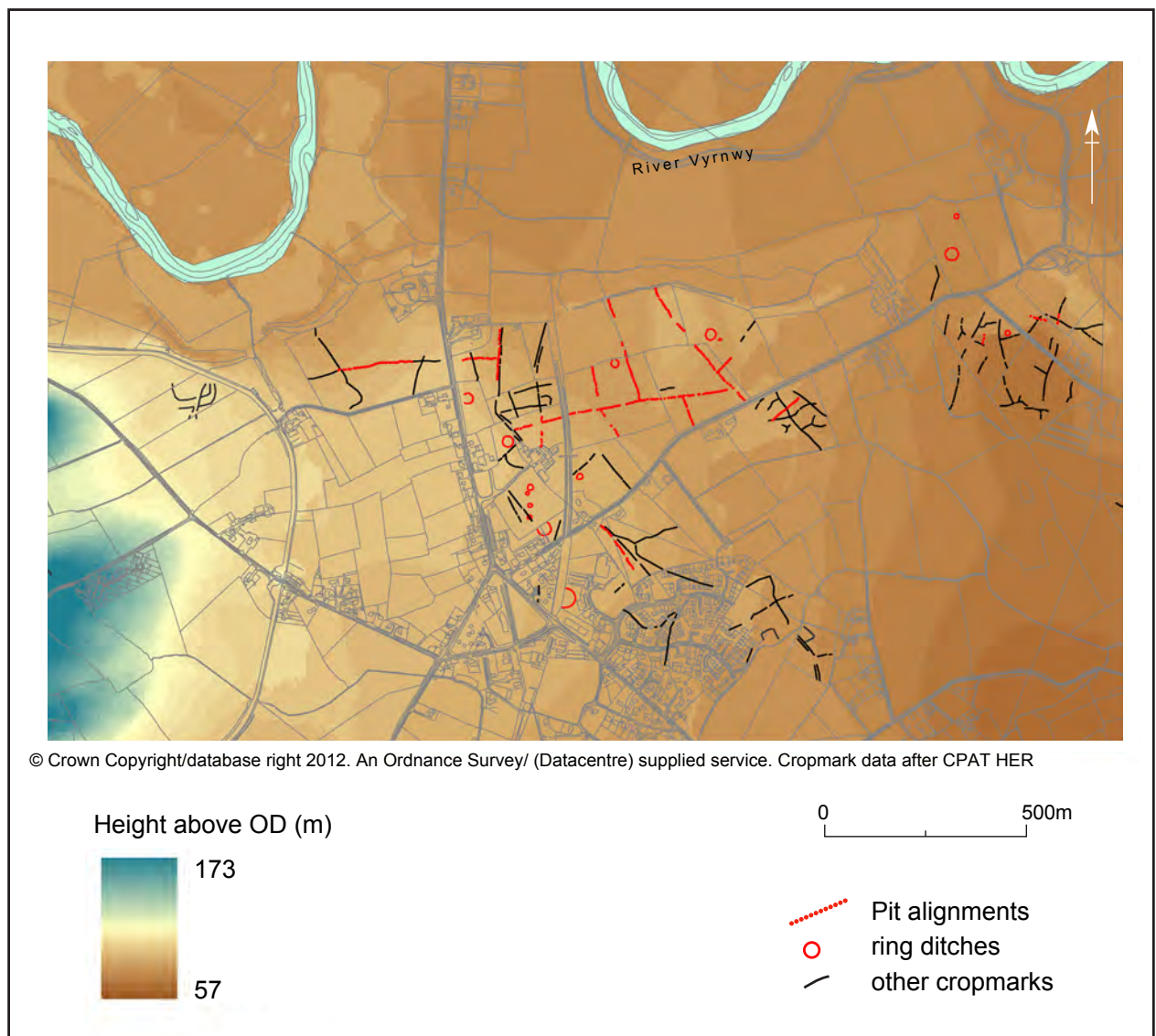


Fig.94 Pit alignments, ring ditches and other cropmarks at Four Crosses, Powys

There is some evidence to suggest that some of the ditched boundaries may be contemporary with Romano-British activity. Recent excavations to the west of the Four Crosses cropmark group have produced Romano-British settlement evidence along with contemporary ditches and post-medieval boundary systems (Watts and Holbrook 2005). Some sherds of Romano-British pottery at the previously excavated ring ditch Site 7, towards the east of the cropmark group at Four Crosses (Warrilow *et al.* 1986, 69), indicate activity which may potentially be associated with field systems. Several of field boundary systems identified from the air, however, have with different alignments and morphologies, which suggests a sequence of activity at Four Crosses which may extend over considerable periods of time. It should not, therefore, be assumed that all ditched boundaries necessarily relate to a Romano-British or post-medieval phase of activity.

Pit alignments appear to respect the ring ditches at Four Crosses, which suggests that these Early Bronze Age monuments were visible features in the landscape when the boundaries were laid out. This indicates that the pit alignments were either contemporary with or later than the monuments visible in the landscape. If the alignments were later, then they may have been created at any time from the end of the Early Bronze Age. Despite this, a lack of dating evidence and a similar alignment to modern boundaries, has given rise to the interpretation that they may be post-medieval in date (Owen and Britnell 1989, 38). Others have considered the pit alignments at Four Crosses in an Early Iron Age context (Wigley 2007a). Recent excavations to the west of the group of cropmarks at Four Crosses have produced a later Iron Age cremation from a pit feature (Kenney 2003, 28), although this may post-date the pit alignment (*ibid.*, 15).

In an attempt to clarify the sequence and phasing of the boundaries, a study of the morphology of the cropmark features at Four Crosses was undertaken, together with excavations in an attempt to provide direct dating evidence for boundary ditch and pit alignment features in this area.

### **Ditched boundaries**

The boundary ditches in the area of Four Crosses have been identified through aerial photography undertaken over a number of years by the Clwyd-Powys Archaeological Trust. The positions of these boundaries have been further identified by geophysics at two sites investigated as part of this project: field FW2/excavation site FC07, and site FC08 (Figs 95 & 96). A study of the morphology and alignment of these ditch systems has enabled them to be separated into groups, which may relate to separate phases of activity.

AtIn the vicinity of the ring ditch group at Four Crosses the cropmark field systems can be split into four phases (Fig. 97). The first group of ditches (System 1) shares a comparable co-axial



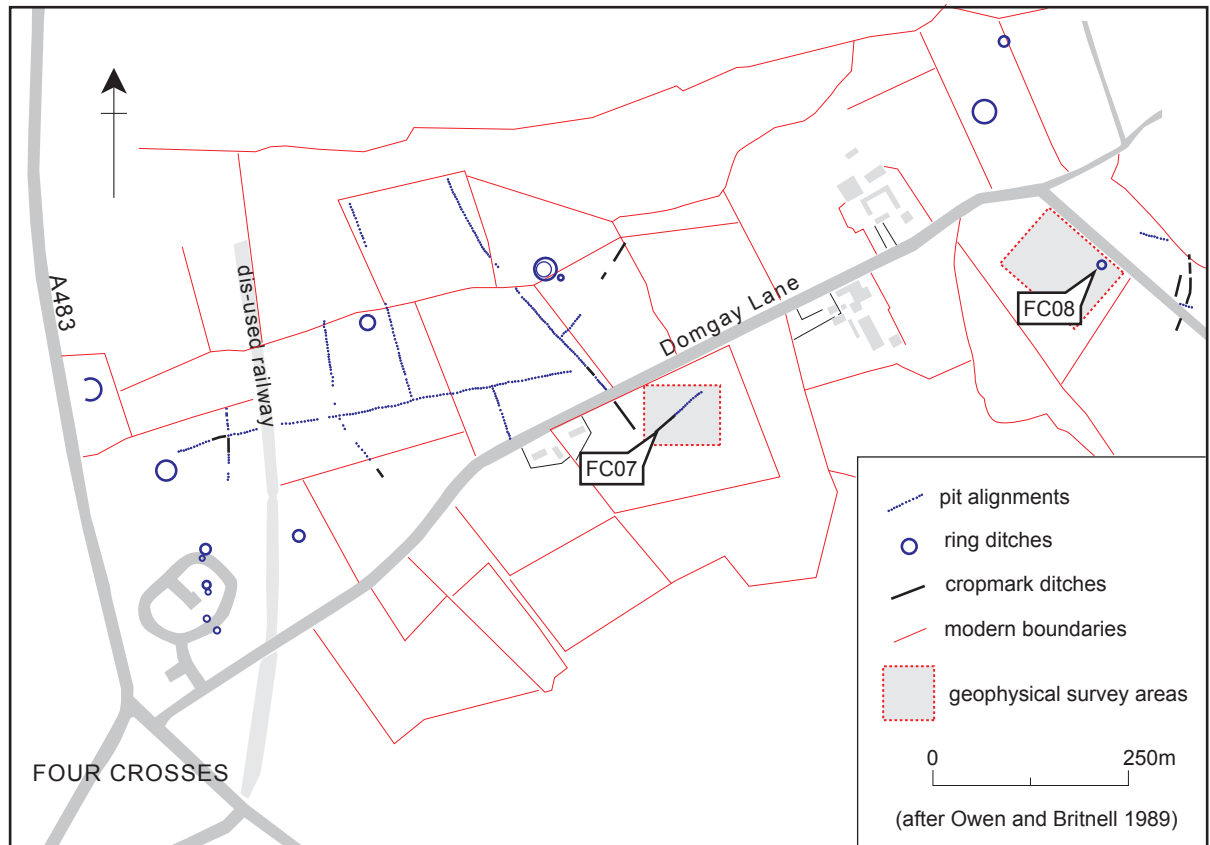


Fig.95 Location of site FC07 and FC08 with cropmark boundaries and existing boundaries

alignment to that of the pit alignments, and may form a part of this system. A second group (System 2) appears to cut across the pit alignment suggesting it is later. 'Y'-shaped gullies leading off a north-south ditch appear to be associated and probably relate to drainage. System 2 may have formed a land parcel similar to that currently present to the east, and also appears to respect the position of the current lane where in contrast, the pit alignment cropmarks extend across it. It seems likely, therefore, that ditch System 2 is post-medieval in date, forming smaller parcels of land extending from the current Domgay Lane. An east-west ditch appears to cut across the pit alignment and ditch systems 1 and 2, suggesting it is also post-medieval.

To the east, two further ditch systems and a group of pit alignments can be recognised (Fig. 97). Ditch System 3 is co-axial and shares a similar alignment with the pit alignments in this area. The ditch system, however, is also broadly co-axial with the north-west to south-east aligned current lane here, which may suggest a late date. The cropmark boundaries do not, however, correspond with those on historic maps, including where they extend into the area covered by the 1788 Carnbwl Estate map to the east (not illustrated; Appendix 2). A ditch which appears to respect one of the current boundaries to the north of Domgay Lane may be post-medieval in date. It is, however, worth noting that it may be the continuation of an existing sinuous boundary present to the south of the lane, which may echo the line of a former, undated, but

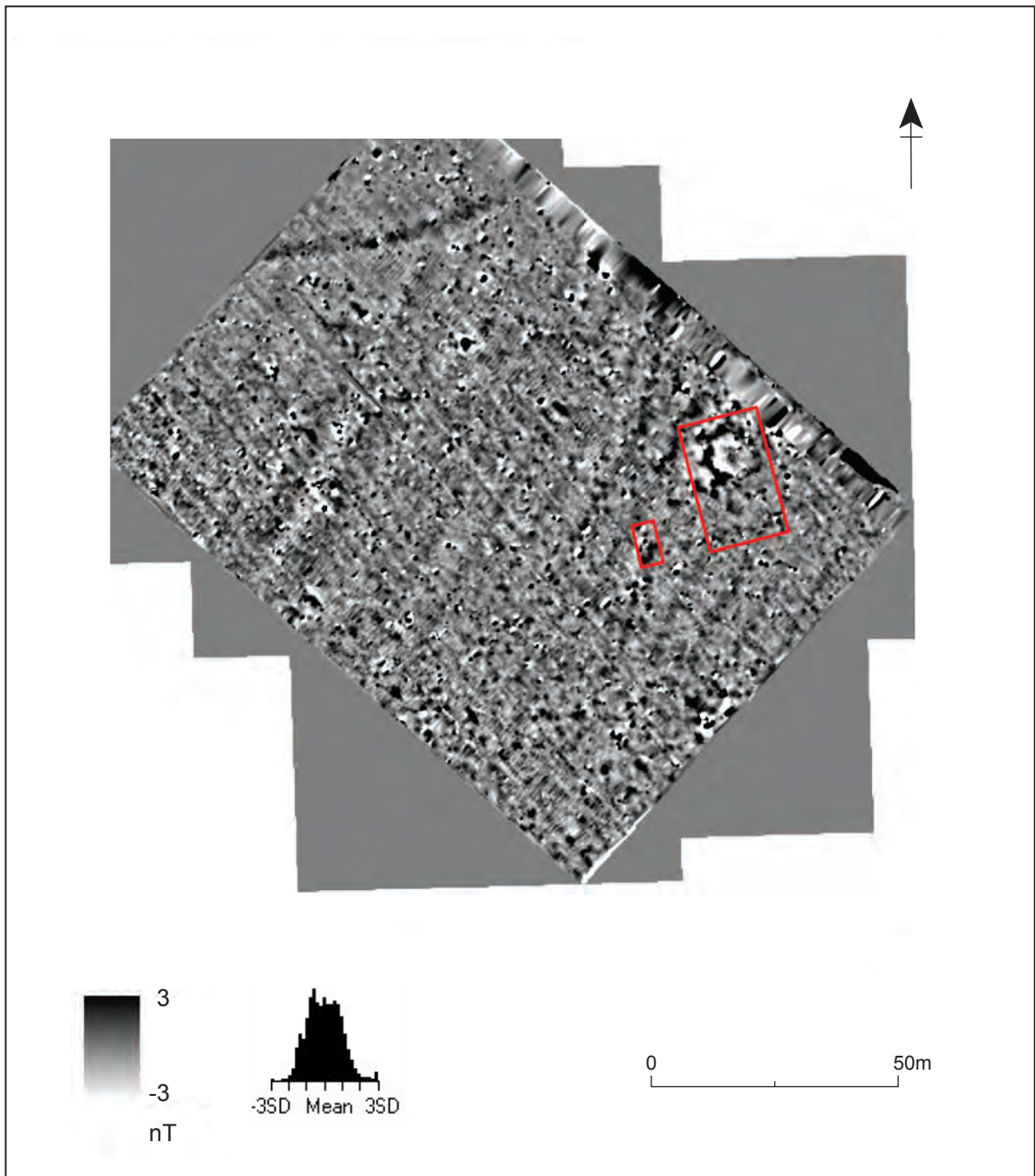


Fig.96 Geophysical survey (magnetometry) at site FC08 (H. Chapman and E. Baldwin)

potentially ancient stream channel.

Ditch System 4 is on a different orientation and is generally aligned north-south, with some co-axial elements. The system also does not share a common alignment with the pit alignments here. Part of ditch System 4 may respect the position of a small ring ditch (Fig. 97). Part of the ditch is aligned east-west to the south of the ring ditch and may form a co-axial arrangement with a further linear ditch to the west of the ring ditch. This may suggest that the ditch system was laid out at a time when the small monument was still a visible feature, potentially at any time since the Early Bronze Age.

A slightly curving linear feature was recorded in a geophysical survey of the field site FC 08, at the northern end of the field (Fig. 96). This feature had not previously been identified through

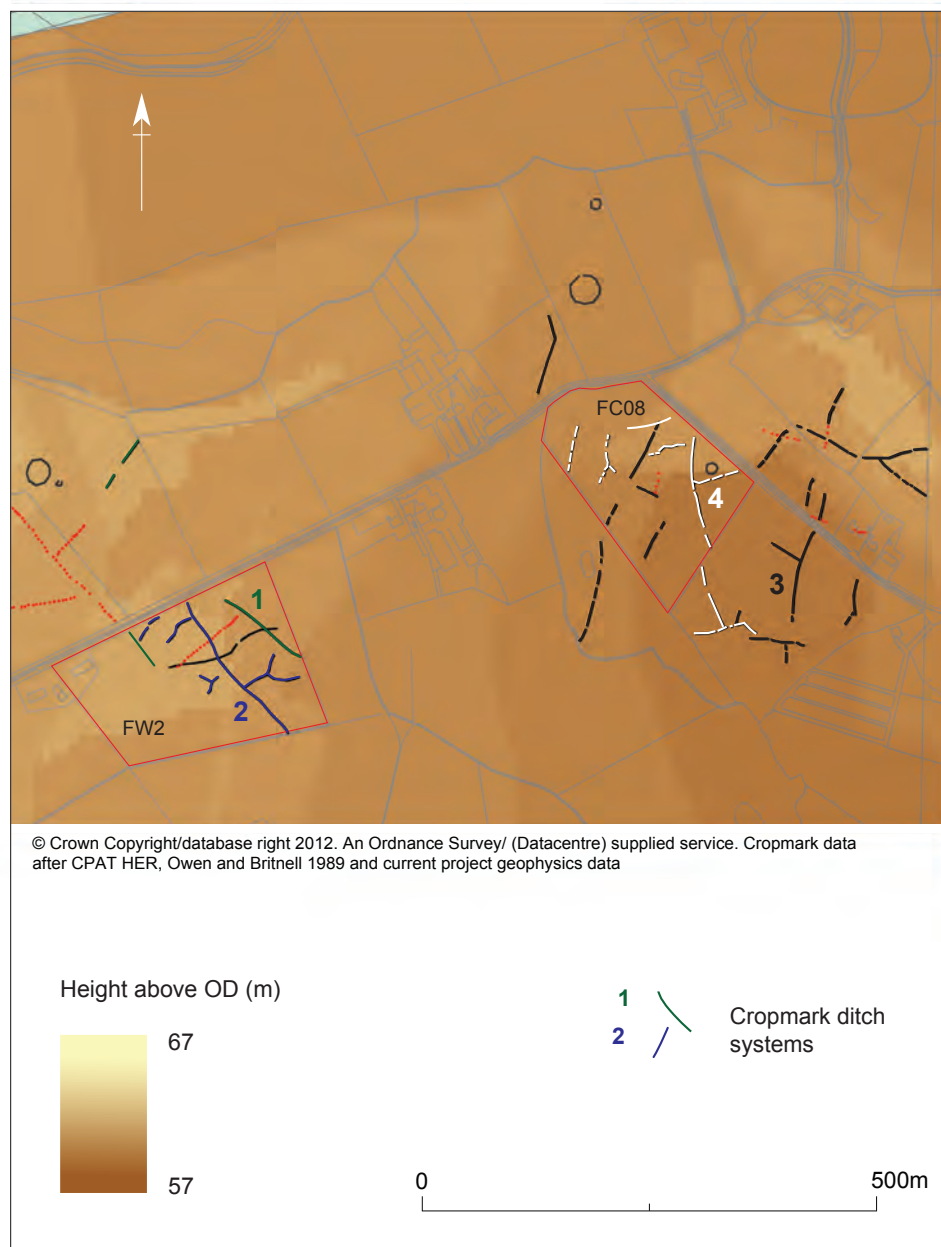


Fig.97 Suggested development of selected cropmark ditch systems at Four Crosses, Powys



Plate 11 The excavation of a linear boundary and ring ditch at Four Crosses, looking north-east aerial survey. This ditch feature is on broadly the same co-axial alignment as others in ditch System 4 and may be contemporary

Ditch System 4 was sample-excavated to the south of the small ring ditch (Plate 11; Appendix 2). Sections were excavated along the length of an approximately east-west section of ditch. Dating evidence, however, suggests that the feature is post-medieval as a piece of brick/tile was retrieved from its fill (Appendix 2), though it remains possible that the find was intrusive. The ditch system does not compare in alignment with either recent or historic boundaries which may suggest it is earlier (Appendix 2). It is also on a different alignment to ridge and furrow identifiable in the geophysical survey, which may also suggest it is not contemporary with what may be medieval or post-medieval agriculture (Fig. 96).

Of the four ditched boundary systems examined at Four Crosses it appears that System 1 may have been an extension of the pit alignment system (Fig. 97). It may, therefore, have later prehistoric origins. Linear ditches are a common association with pit alignments, with many examples of the two boundary types converging (Knight and Howard 2004, 102), it has also been demonstrated that at least one section of pit alignment at Four Crosses, originally plotted as a ditch (Owen and Britnell 1989), was in fact a continuation of a pit alignment (see below).

The ditched boundary cropmarks in the Four Crosses area, therefore, do not seem to represent field systems belonging to a later prehistoric phase of activity. It is probable that certain ditches may be an extension of the pit alignment systems, which allows for a prehistoric date, yet



separate phases of field systems may belong to the post-medieval period. The pits alignments, therefore, have the highest potential to belong to the period of study. A morphological study of these indicates that they may also have separate phases of development.

## **Pit alignments**

### ***Location and morphology at Four Crosses***

Pit alignments have been recorded in the vicinity of the River Vyrnwy at Four Crosses and Llanymynech, identified largely through aerial photography (Owen and Britnell 1989). They are located upon brown earths (Soil Sheet SJ 21.) at c. 65m above OD, within a generally flat plain east of where the river systems emerge from the uplands. The area is characterised by fluvio-glacial gravels along the river valley margin and floodplain (Taylor and Lewin 1997, 254).

The pit alignment group has been identified over a length of c.2km along the gravel ridge (Fig. 94). The main group forms a system of co-axial alignments. A second area of pit alignments has been recorded to the east, which forms a less well-defined group of shorter alignments, separated from the main group by c.500m. This smaller, second group also appears to define a co-axial arrangement.

Three systems of alignment can be defined within the Four Crosses group (Fig. 98). The first group 'a' is associated with an east-west 'spine', a second group 'b' forms a second alignment essentially cutting across the spine of group a, and a third group 'c', present to the east of groups a and b, is aligned upon yet another axis. Therefore there appear to have been three phases of broad-scale landscape division, two of which (a and b) appear to have combined within a cumulative process to form a secondary larger co-axial system.

The east-west axis within pit alignment group a has been recorded over a length of 500m, aligned broadly parallel with the River Vyrnwy floodplain which is situated 230m to its north. The east-west axial pit alignment of group a is paralleled by a further east-west alignment c. 300m to its northwest, and these have therefore been grouped together.

A number of Late Neolithic-Early Bronze Age ring ditches (Warrilow *et al.* 1986) occur in close proximity to the Four Crosses pit alignment group (Owen and Britnell 1989). It has been suggested that one of the pit alignments at Four Crosses is aligned on a ring ditch associated with a central post (Site 1; Wigley 2007a, 122). Indeed a slight kink towards the south-west of the east-west axial spine in group a, (Fig. 98), does support the suggestion that ring ditch Site 1 may have influenced the orientation of this pit alignment. It must be noted, however, that the central axis of pit alignment group a actually passes to the north of the ring ditch, rather

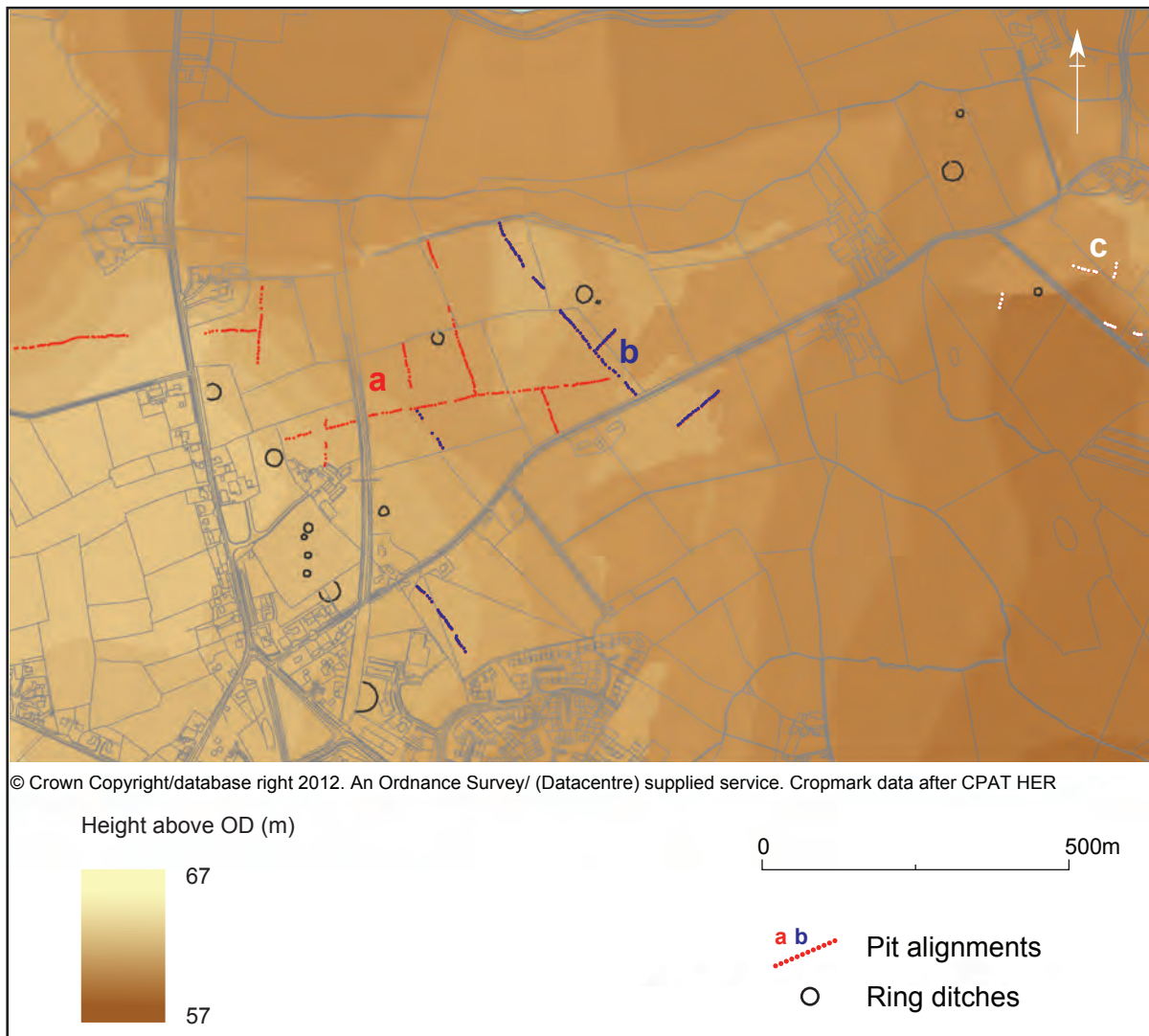


Fig.98 Suggested development of Pit alignment systems and ring ditches at Four Crosses, Powys

than being deliberately orientated on a central post (*ibid.*). It is significant that that when all the pit alignments at Four Crosses are projected, they do not intersect with any of the ring ditches (Fig. 74), suggesting that they intentionally avoid the group of pre-existing, visible, monuments. This suggests that the pit alignments are later than, or contemporary with, the ring ditches (*ibid.*).

Other examples of pit alignments have been recorded which appear to have a close relationship with Late Neolithic and Early Bronze Age funerary and ceremonial monuments. It is notable that the co-axial system of pit alignments at Kempsey, Worcestershire, is associated with circular enclosures and a 'possible woodhenge', (Worcestershire Historic Environment Record: WSM 02118). At Catholme, Staffordshire, pit alignments appear to respect the location of a 'woodhenge' and a ring ditch with radiating pits (Woodward 2007, 189; Buteux and Chapman 2009; Chapman *et al.* 2010, 136, Figure 1). At Kings Bromley, c.10km to the west of Catholme,



pit alignments appear to be associated with ring ditches, and also appear to intersect them (Plates 8 and 9).

Whilst the ring ditches at Four Crosses may have influenced the siting of the pit alignments, the local topography also influenced the specific axes of these linear boundaries. The alignment of group *a* undoubtedly reflects the local topography in that it runs parallel with the floodplain margin and the axis of the gravel terrace (Fig. 99). In addition pit groups *a*, *b*, and possibly *c*, have alignments which extend northwards towards the Vyrnwy floodplain (Fig. 99). At least two of the alignments within groups *a* and *b* essentially terminate at the junction with the alluvial floodplain (Fig. 99). To what extent the pit alignments originally extended further towards the river is, however, unknown, since they would be masked by alluvial deposits. The River Vyrnwy and associated watercourses and floodplain may have provided a natural junction for the pit alignments to the north of the gravel ridge, and it is notable that a physical terrace margin, creating a natural step onto the area of the floodplain, is currently present (Fig. 99). It may be possible that the pit alignments were confined to the gravel ridge south of the floodplain, distinguishing land-use and organisation specific soil types in this area. This may indicate that land suited to particular forms of agriculture was being divided (Wigley 2007a).

The pit alignments do not extend into the areas of glacio-lacustrine clays and silts (BGS data tile 137) and stoney stagnogley soils (Thompson 1982, Soil Sheet SJ21) to the south (Fig. 100). This may also indicate that the pits divide areas on gravels and soils which may reflect better quality agricultural land (*ibid.*; cf. Yates 2007). As with the floodplain to the north, however, it is possible that the pit alignments are not recognisable on aerial photographs, allowing for the possibility that these systems of land division extended into other areas of the landscape.

Recent excavations at Ripple, Worcestershire (Miller *et al.* 2004), suggest that a pit alignment that cuts across a gravel ridge also extended into the River Severn floodplain. A number of broad shallow pits were excavated masked by deposits of alluvial silt. The excavation evidence appears ambiguous, however. Small-scale excavations do not demonstrate that the pits on the floodplain form a convincing alignment and the form of the pits varies, which may suggest they are not contemporary. Without excavation of the pits on the gravel terrace, the pit alignments cannot be compared conclusively with features recorded on the floodplain.

The co-axial boundaries at Four Crosses are more closely grouped than pit alignments recorded elsewhere such as at Whitemoor Haye, Staffordshire, where broader zones of landscape and monuments are divided (Coates 2002, 82; Woodward 2007, 191). The co-axial arrangement of pits at Four Crosses instead appears to define relatively small land parcels (Wigley 2007a, 125-126). They may, therefore, form system of 'fields' and represent agricultural organisation (*ibid.*).

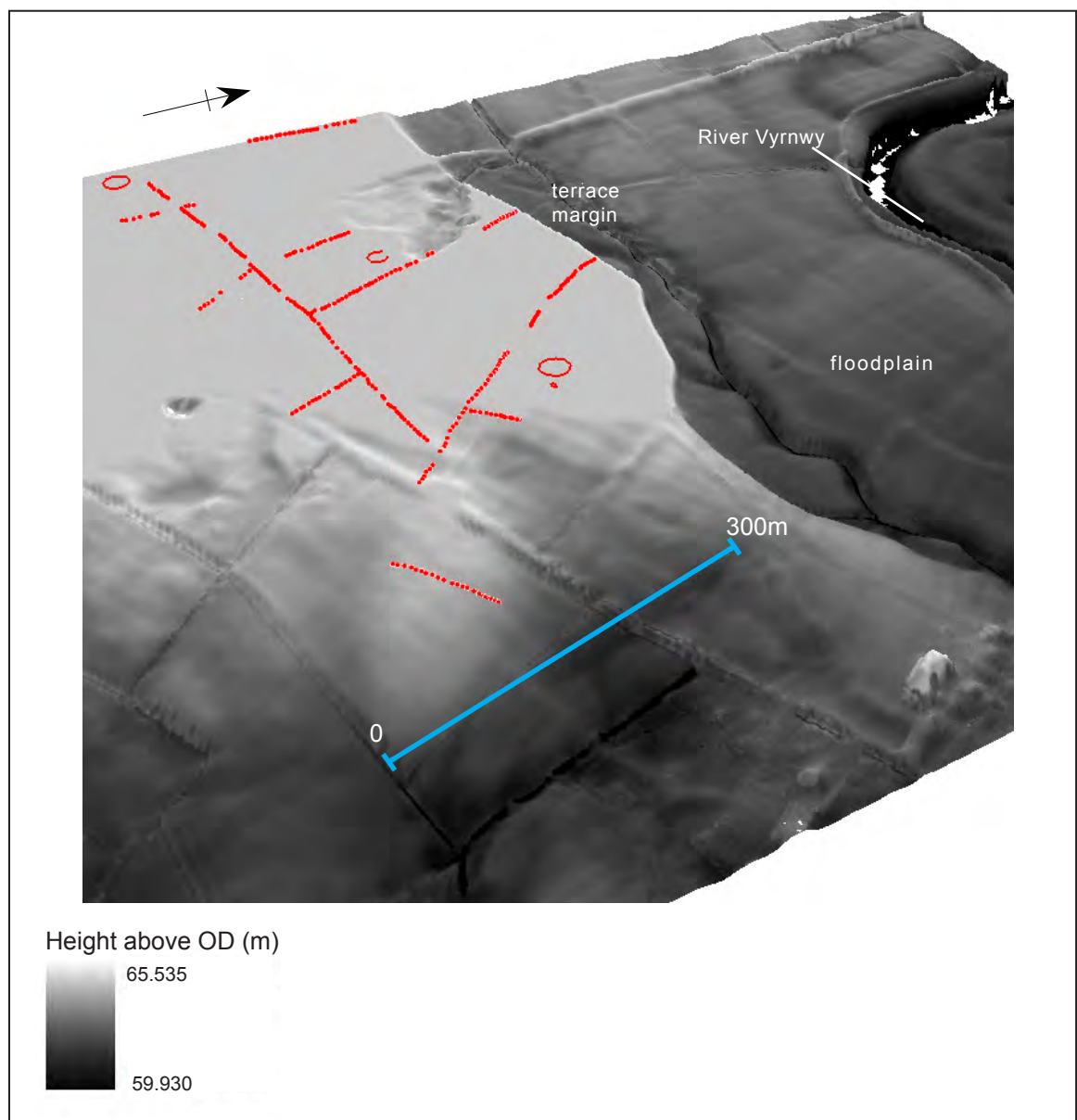


Fig.99 LiDAR digital elevation model with a detail of pit alignments and ring ditches at Four Crosses  
 ( © Environment Agency copyright and/or database right 2007. All rights reserved)

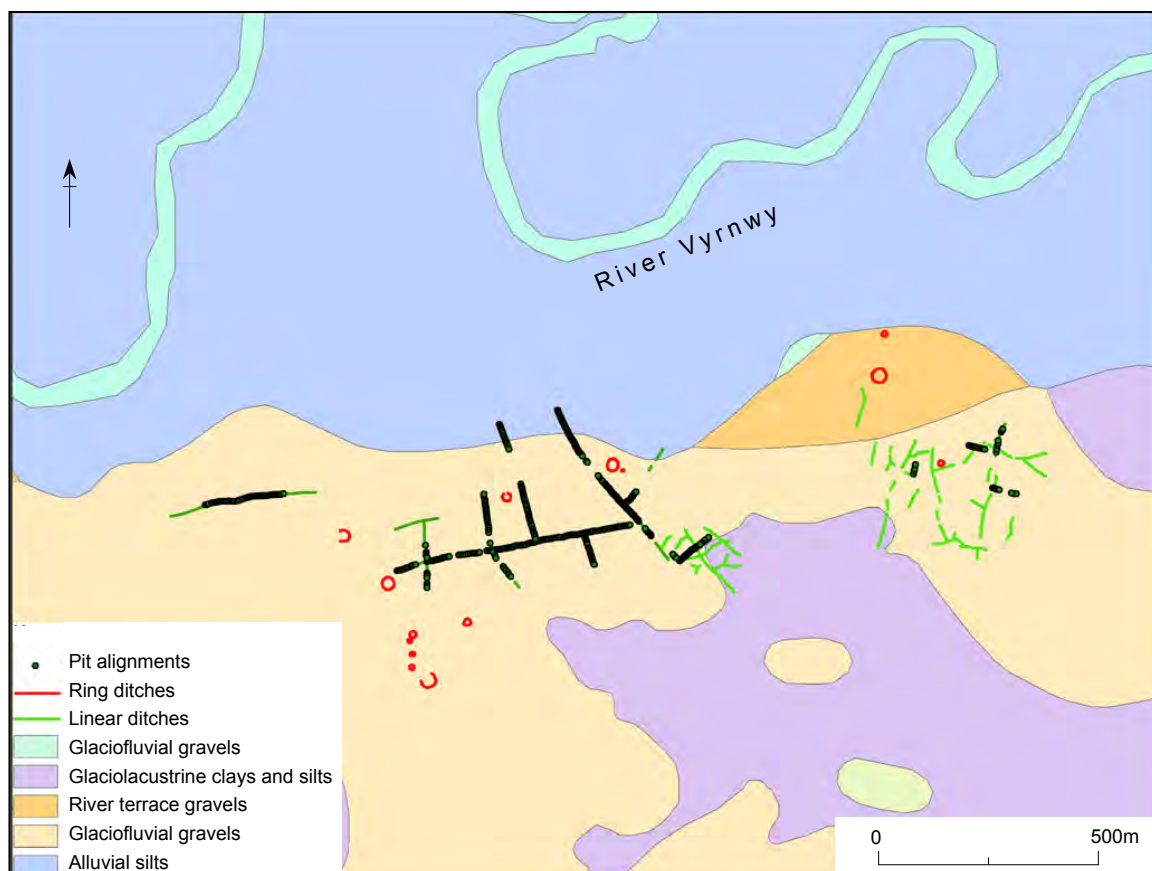


Fig.100 Showing superficial geology, pit alignments, linear ditches and ring ditches at Four Crosses (based on aerial photograph plots at CPAT SMR)

### **The excavation of a pit alignment at Four Crosses**

A targeted excavation of a stretch of pit alignment (previously identified as alignment *K* by Owen and Britnell 1989) was undertaken as part of this project in an attempt to retrieve dating evidence (Plate 12; Appendix 1). The pits were first accurately located through geophysical survey (Fig. 101) followed by the excavation of a trench along the length of part of the alignment. A total of 23 pits were recorded within the trench, forming part of a pit alignment, orientated southwest to northeast (Fig. 102). A number of other smaller pits and postholes were also recorded during the excavation.



Plate 12 The excavation of a pit alignment at Four Crosses, looking north-east

### ***Form of the pit alignment***

The pit alignment can be separated into two parts. In the north-eastern half of the trench the pits were regularly spaced and elongated or oval in plan, with their long axis at a right angle to the general orientation of the pit alignment (Fig. 102). The pits had moderately sloping sides with flat bases. The pits were up to 2.2m long, 1.2m wide and 0.54m deep, with pit 1002 being 0.75m deep with relatively steep sides (Figs. 103-104). The pits were separated by narrow gaps of between 0.5m and 1.2m. Two similar sized pits were recorded at the western end of the

trench.

Between these regularly sized pits, in the south-western half of the trench, the pits were far more closely grouped and near contiguous. Certain pits in this part of the pit group were larger and more rounded in plan and were flat based with moderately sloping sides, up to 2.5m long, 1.9m wide and 0.74m deep. It is notable that a relatively large gap of 1.3m existed between pits 1093 and 1113, towards the southwest end of the trench, which may have formed a narrow entrance break (Fig. 102).

It is notable that previous excavations to the north on an approximately parallel section of the pit alignment system (*b*), also recognised similar pits at a right angle to the overall alignment, which were recorded between pits of a larger size (Owen and Britnell 1989, 32, excavation Site 11; Fig. 105).

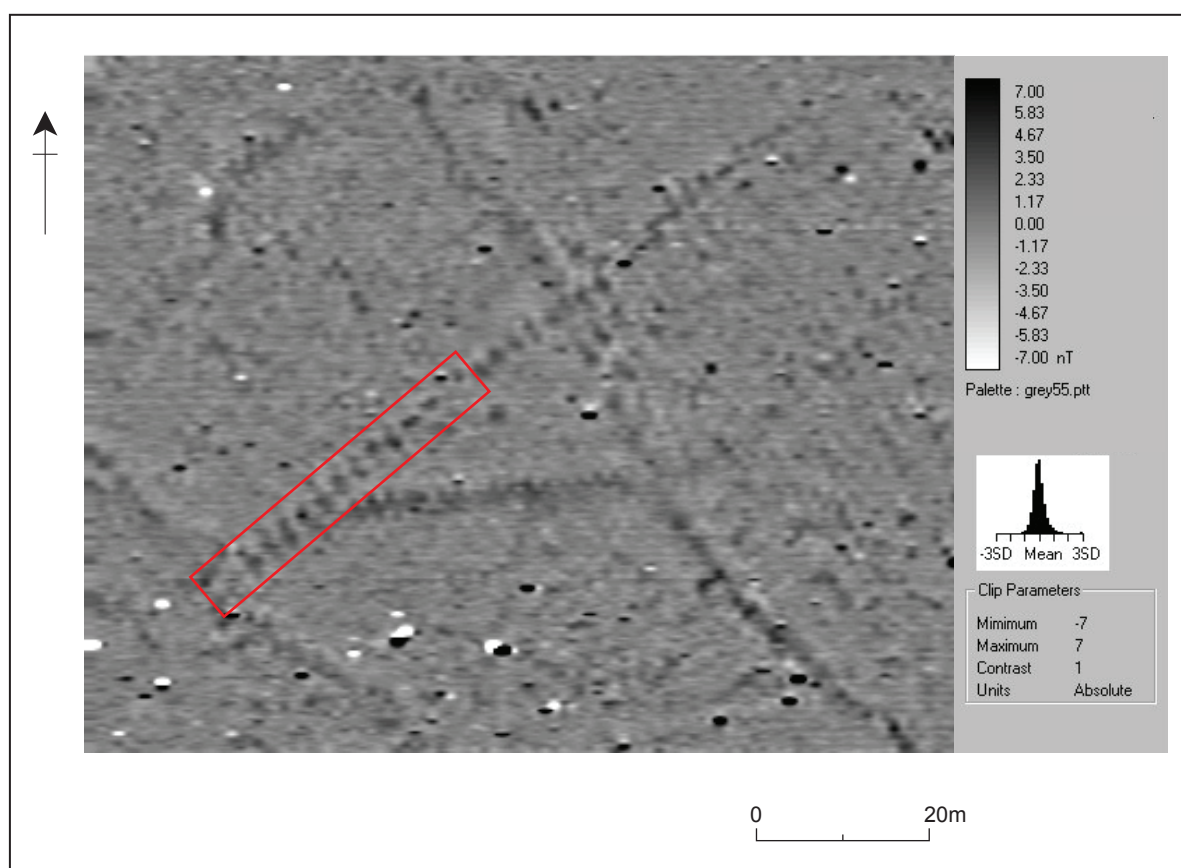


Fig.101 Geophysical survey (magnetometry) results at site FC07, Four Crosses, showing pit alignment and excavation trench location



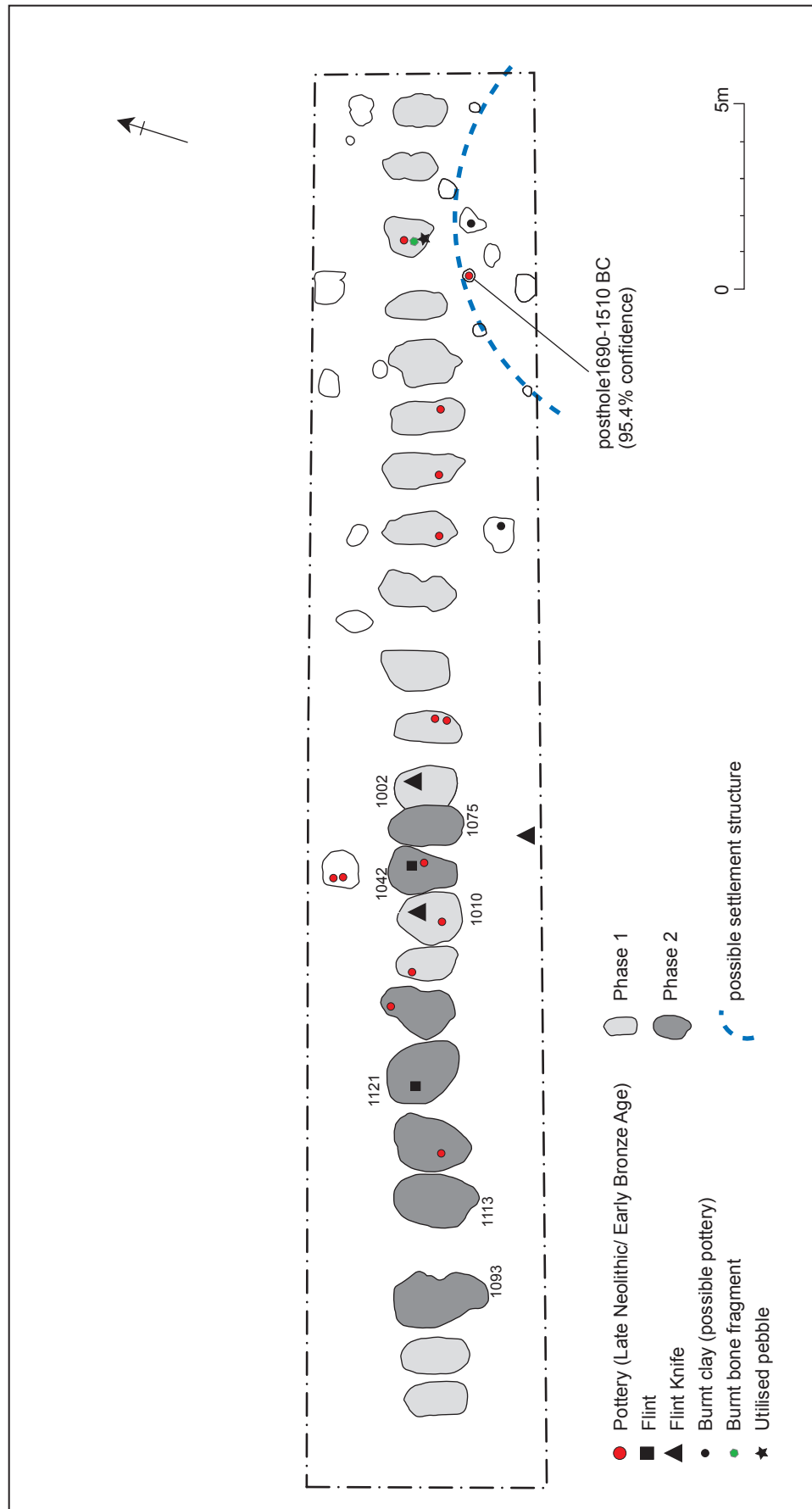


Fig. 102 Pit alignment features, find-spots and suggested phases at excavation site FC07, Four Crosses, Powys (Appendix 1)



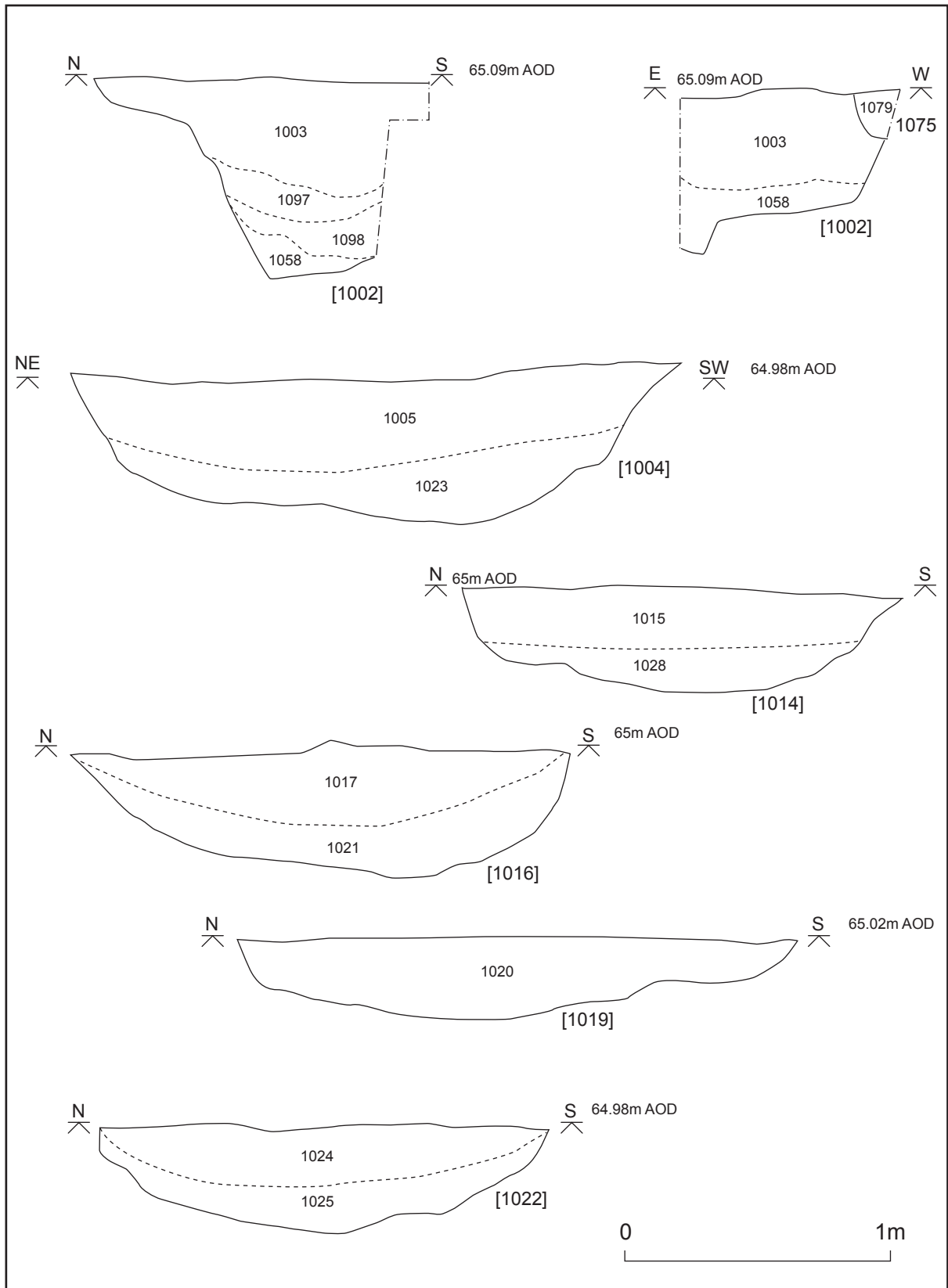


Fig.103 Selected sections through pit alignment pits at site FC07, Four Crosses, Powys

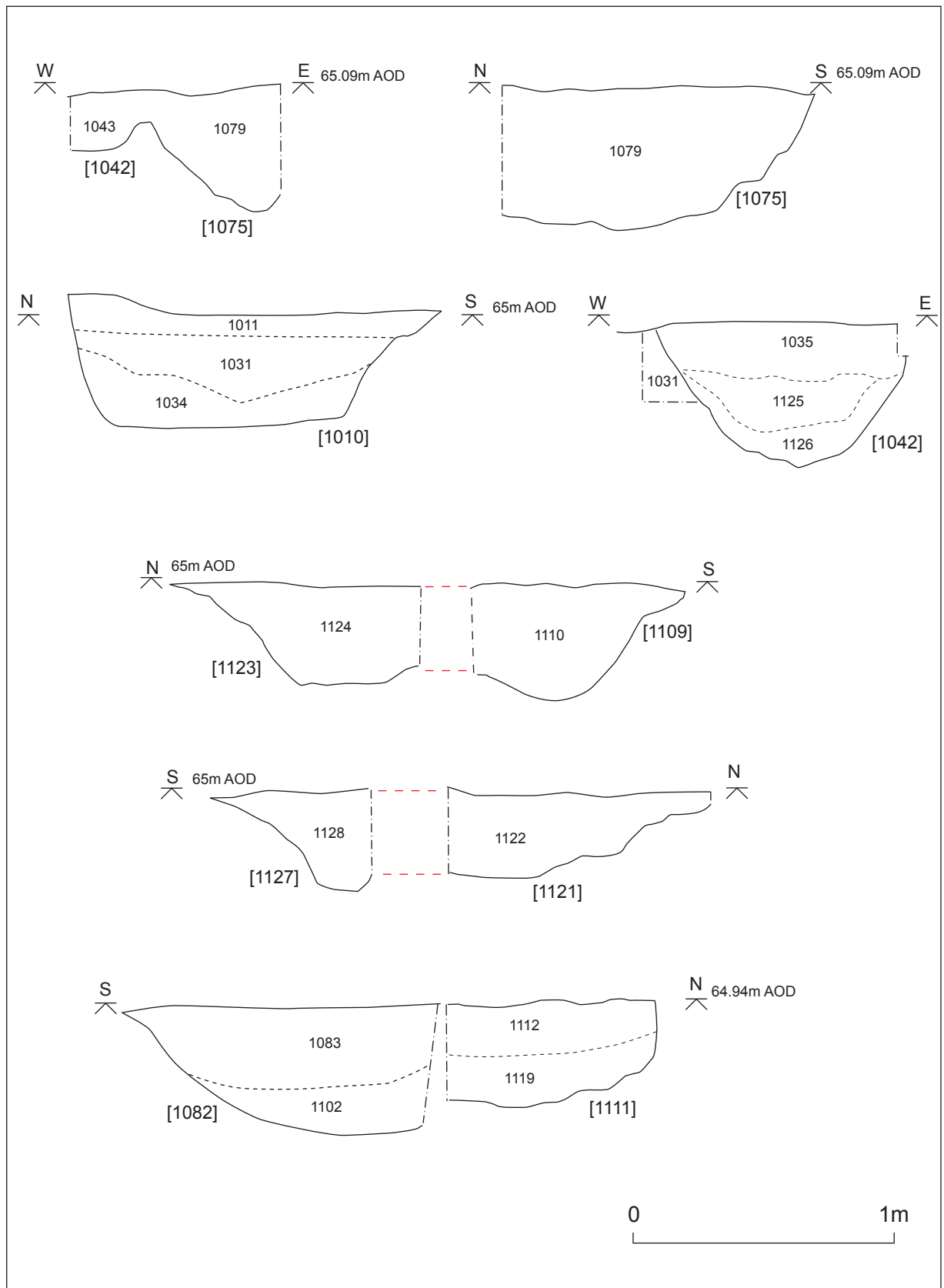


Fig.104 Selected sections through pit alignment pits at site FC07, Four Crosses, Powys



Fig.105 A previous pit alignment excavation area at Four Crosses, Powys (after Owen and Britnell 1989)

### ***Possible Phasing***

It was noted during excavation that pit 1075 appeared to cut the upper fill of pit 1002 (Fig. 103) and that in section Pit 1042 appeared to cut through the fill (1031) of pit 1010 (Fig. 104). This has led to the interpretation that there may have been two phases of pit-digging. Certain pits to the west were also larger than those to the east and the two pits at the western end of the excavation, and based on morphology alone, may have been part of a second phase of pit digging. No chronological distinction within the finds assemblage can be made, however, between these two possible phases of activity. If two phases are argued within the pit alignment, this has the implication that the pits may have silted fairly rapidly, with a secondary phase of pit digging recognising the existence of the earlier silted features and the presence of a boundary on the same alignment. There may, therefore, have been cumulative episodes of pit digging, which served as a means of emphasising the significance of the boundary to those involved.

### ***Dating evidence***

Sixteen sherds of pottery and five pieces of flintwork were recovered from the pit alignment excavation at Four Crosses which have suggested a Late Neolithic or Early Bronze Age date for the features (Figs. 106 & 107; Appendix 1). Further activity in this period has been demonstrated by the presence of a nearby posthole with the remnants of a charred post stump radiocarbon

dated to 1690-1510 BC (95.4% confidence; Chapter 2; Appendix 1). The post is not, however, associated with the pit alignment.

Eleven pottery sherds were recorded from pits within the pit alignment, two from a further small pit to the north, one from a posthole to the south of the pit alignment and two sherds were unstratified (Fig. 102). A possible Early Bronze Age date has been suggested for seven of the sherds on the basis of a macroscopic examination of the fabrics and traces of incised and fingernail decoration, including a possible Food Vessel rim sherd (Fig. 106; Appendix 1). In addition two possible undecorated Beaker rim sherds were identified. The pottery assemblage was largely made up of small body sherds, the small size of which does not allow for any more specific interpretations of form or type.

Where an upper and lower fill could be determined within the pit alignment pits, four sherds were from upper fills and only one (a possible Food Vessel rim) was recorded from a lower fill at the base of a pit. This suggests that at least one sherd entered a pit relatively soon after it was excavated, whilst others may have entered the pits as they silted naturally.

The pottery sherds are distributed fairly evenly along the length of the pit alignment excavated, although there may be a greater concentration of sherds within pits towards the central part of the excavation, including a further pit to the north of the alignment. This is also the area in which the flintwork appears to cluster (Fig. 102). No pottery or other finds were recorded in the four pits at the western end of the excavation trench. This patterning in the distribution of finds may indicate a localised area of finds deposition which may be the result of associated activity nearby, either contemporary with or earlier than the creation of the pit alignment.

Three high quality flint knives were recorded of Neolithic to Early Bronze Age date (Fig 107 Nos 1, 5 and 6). Two were recovered from the upper fills of pits 1002 and 1010 and are considered similar to plano-convex knives of the Late Neolithic and Early Bronze Age. A further flint knife of Neolithic to Early Bronze Age date was recorded unstratified but was located nearby to the south of the pit alignment whilst hand cleaning the trench. All three knives were, therefore, recorded in relative close proximity within the excavation. It is notable that the knife from the upper fill of pit 1010 was from the same feature as the possible Food Vessel rim sherd from the lower fill of the pit. The flint knives are of relative high quality when compared with the general fieldwalking assemblage from the project (Appendix 3), and it is notable that a small flake of distinctive high quality raw material was also recorded from pit 1121. A Mesolithic/ Early Neolithic bladelet from pit 1042 is clearly residual.

The presence of a possible Food Vessel rim of Early Bronze Age date from the base of one of the pits indicates that the pit was open when the sherd was deposited. The other pottery sherds from the upper fills of the pits may also have been deposited when the partially silted

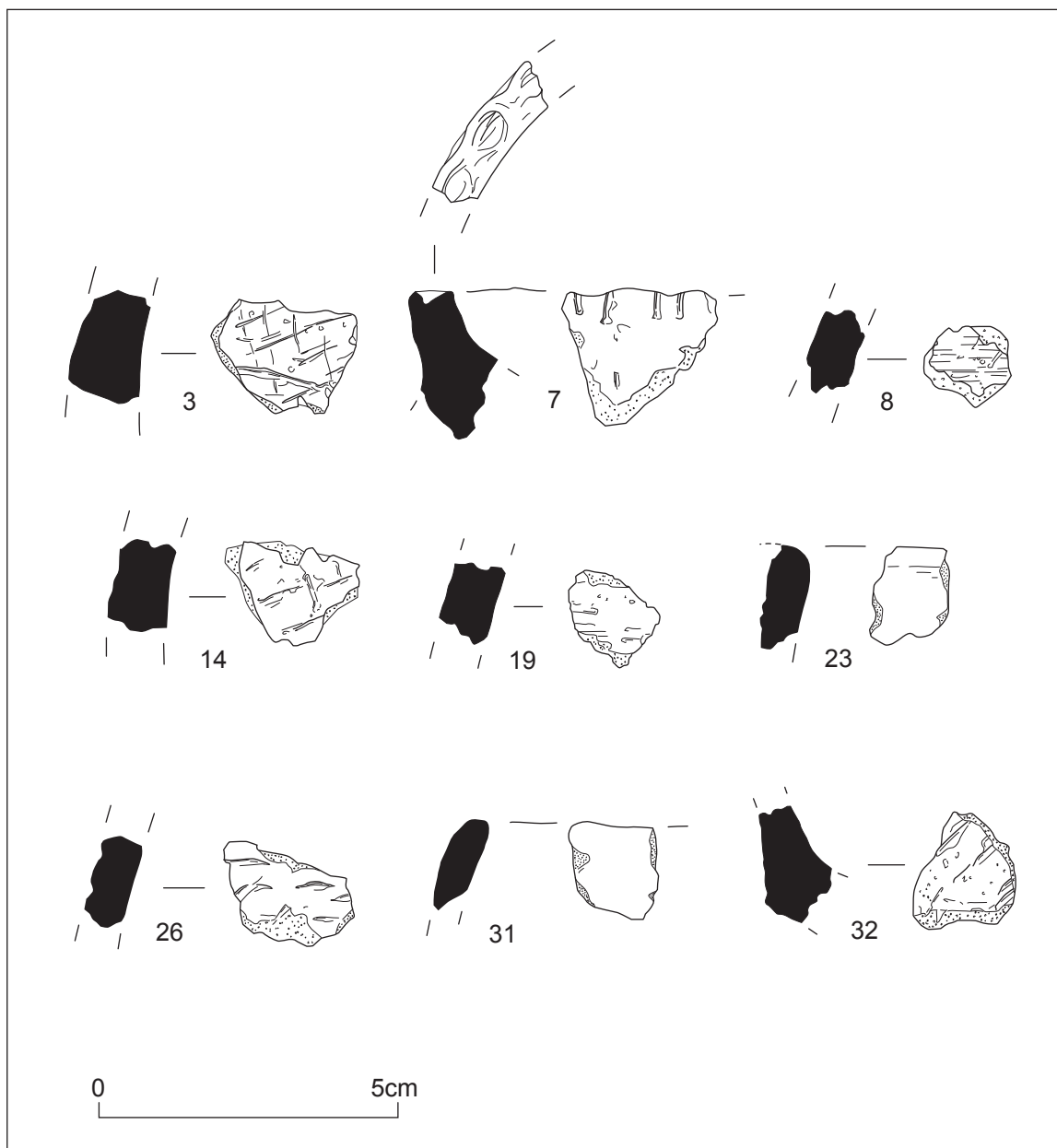


Fig. 106 Pottery sherds from pit alignment excavation at Four Crosses, Powys (Appendix 1)

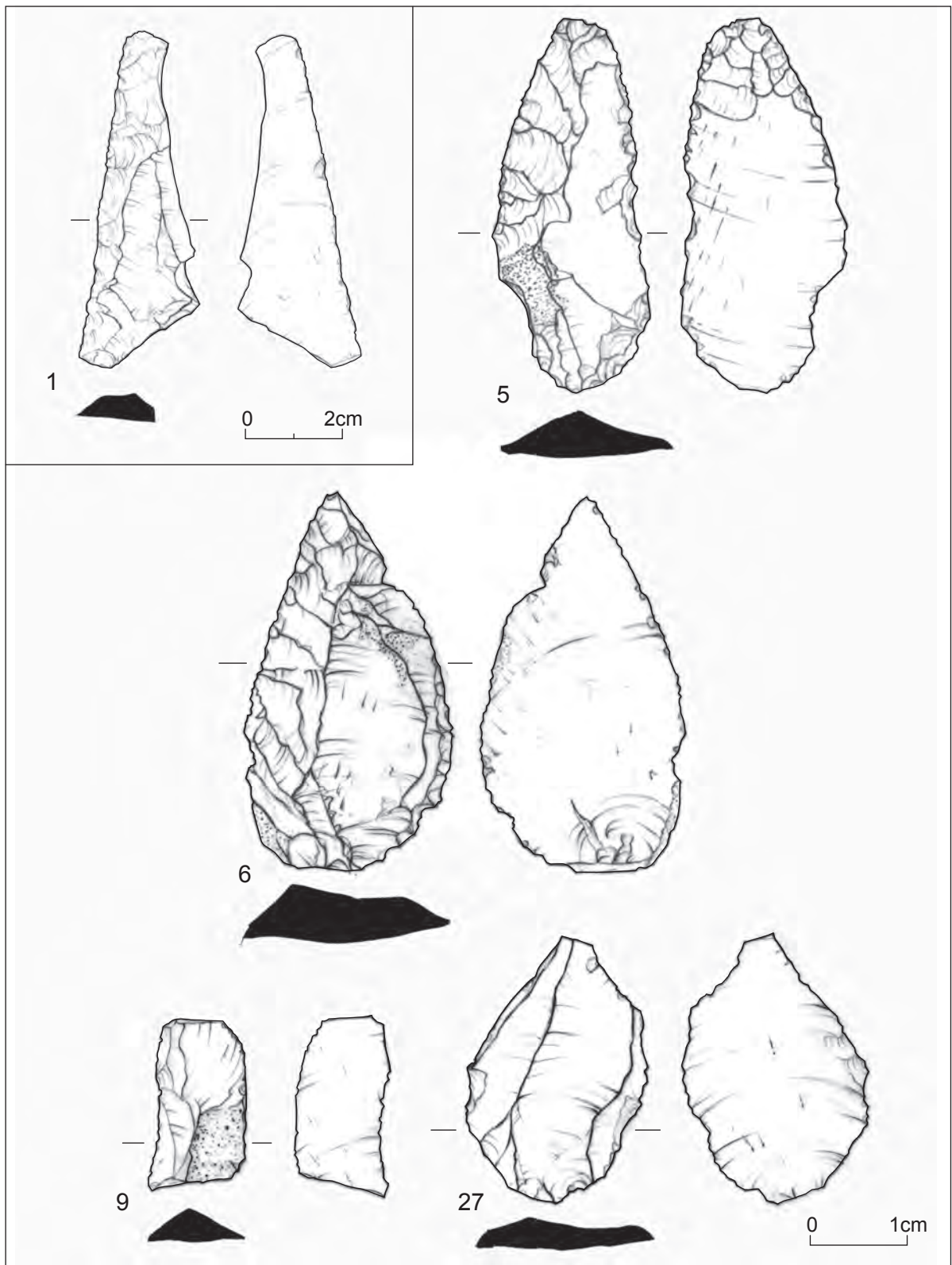


Fig.107 Flint finds from pit alignment excavation at Four Crosses (Appendix 1)



pits were part of a recognisable feature in the landscape. The presence of the pottery sherds, can, however, only provide a *terminus post quem* for the pit alignment. The discard of the sherds may be contemporary with the pit alignment, or they could equally be residual from earlier activity in the area such as a settlement phase associated with the radiocarbon-dated post-built structure (Chapter 2; Appendix 1). It is possible, therefore, that the pit alignment was contemporary with Early Bronze Age activity at Four Crosses, but the potential for residuality means that the dating evidence remains ambiguous.

The presence of three flint knives in relative close proximity may not, however, be coincidental. These finds represent a concentration of flintwork of this type and no comparable artefacts were recorded fieldwalking across a wider area in this field or at other locations in the survey (Chapter 3; Appendix 3). Two flint knives of Late Neolithic/ Early Bronze Age plano-convex type were recorded within upper fills of pits in the alignment and it may be possible to suggest that they were intentionally placed. A third unstratified knife of Neolithic/ Bronze Age date was recorded close by. It is significant that two plano-convex flint knives were placed with a cremation at Llanymynech, 2.4km to the north-west (Colls and Halsted 2010) and a thumbnail scraper was placed in a cremation pit at the centre of the ring ditch at site FC08 at Four Crosses (Appendix 2). It has been mentioned above (Chapter 2) that flint knives have been recorded close to the centre of ring ditch Site 7 at Four Crosses (Warrilow *et al.* 1986, 78) and in a possible burial pit at Lower Luggy in the Severn valley south of Welshpool (Gibson 2006, 174-6). It is also notable that four barbed and tanged arrowheads were recorded in the central pit at the Sarn-y-bryn-caled timber circle in addition to a flint knife which was unstratified (Gibson 1994, 177-8). It is clear, therefore, that elsewhere in the study area similar flint artefacts were deliberately deposited with funerary and ceremonial monuments. It may be possible, therefore, that distinctive flint tools were similarly deposited into pits at a pit alignment boundary at Four Crosses.

## **Conclusion: Interpreting pit alignments and land division**

The study area has been placed within the wider context of Bronze Age land division in Britain by an attempt to establish more closely the date of potentially early land divisions. This has been achieved through a close morphological study of the cropmark evidence followed by targeted test excavations of two boundary features at Four Crosses. The evidence suggests that pit alignments have the greatest potential to reflect early land division and this may set a precedent for the chronology of land division in other regions.

A morphological study of the ditched boundaries within the study area indicates that they represent at least four phases of land division. Whilst certain ditches may represent extensions

to the pit alignment system, and may indicate further closely set pit alignment features, it is not possible to demonstrate that other cropmark boundaries relate to prehistoric land division. Despite the fact that certain ditch systems do not appear on historic mapping there is, however, no positive evidence to suggest that they necessarily relate to prehistoric phases of land division. Where a ditch system appeared to respect a small ring ditch there was no specific dating evidence recorded during excavation to suggest it closely post-dated the Early Bronze Age monument.

Pit alignments were laid out in some cases over distances of hundreds of metres. They appear, therefore, to have been conceived to divide relatively large areas of land, but through successive episodes of elaboration they appear to have formed co-axial divisions which served to define smaller land parcels.

Within these broad systems of landscape division, there appear to have been sequences of smaller-scale actions which may have subtly altered particular areas of the wider boundary scheme. An area of 'blocking' has been identified within sections of a pit alignment previously excavated (Owen and Britnell 1989) and two phases have been suggested for the pit alignment excavated as part of this project.

The contiguous nature of part of the pit alignment excavated may suggest that a continuous boundary was presented, though the extent to which this created a physical barrier is questionable. There is no convincing evidence from the Four Crosses excavations that these pits ever held posts, or were associated with banks. Where the pits were not contiguous they were oval in shape and excavated with their long axis at a right angle to the overall alignment. This suggests that they were not excavated purely to form a linear ditch-like boundary, and that their purpose may not have been wholly practical. Instead the pits may have created a continuous conceptual barrier. It is possible that the subtle re-modelling and re-excavation of the broader systems of alignment at Four Crosses served to re-emphasise conceptual boundaries and that as a result, physical barriers may not have been necessary.

Evidence for re-cutting of the excavated pit alignment was, however, limited and the frequency with which these boundaries were re-visited and re-emphasised by contemporary communities may not have been high. Re-cutting, infilling or extending the alignments may conceivably have been single events that once achieved were not required to be replicated.

The excavation of the pit alignment at Four Crosses has suggested that it may date from the Early Bronze Age. Whilst the dating evidence may be ambiguous, it does, nevertheless allow for the possibility that these systems are either contemporary with or closely post-date the ring ditch group. The fact that the pit alignments appear to respect the ring ditches at Four Crosses does, however, indicate that these were in existence prior to the formation of these

boundaries. Although the pit alignments appear to physically respect the pre-existing ring ditches, the monuments do not appear to have been nodal points within the coaxial system. Instead ring ditches were incorporated within broad land parcels. This may have served to create a resonance with the past and served to legitimise any newly formed divisions of the local landscape.

The fact that the pit alignments at Four Crosses divide a localised area of gravels and brown earths located between the Vyrnwy floodplain to the north, and the extensive River Severn floodplain to the south, suggests that they relate to systems of agricultural land-use (*cf.* Wigley 2007a, 125-126). Zones of landscape may not, however, have been solely defined in terms of economic resources, as the relationship between pit alignments and funerary and ceremonial monuments elsewhere may suggest (Woodward 2007).

It can be suggested that the pit alignment at Four Crosses was created following a period of Early Bronze Age settlement activity, and respected a group of existing Early Bronze Age monuments (*cf.* Wigley 2007a; Owen and Britnell 1989). The creation of pit alignments may have marked a radical transition from more open systems of land-use and organisation (*cf.* Wigley 2007a) and they may have represented the first non-natural, extensive linear landscape boundaries in the region. Such land division may be akin to processes of landscape enclosure and the creation of field systems taking place at varying scales and in various forms largely in southern England from the mid-second millennium BC.

The dating evidence from the pit alignment at Four Crosses sets a precedent for other similar boundary features elsewhere in the wider region. It contributes to a debate on the chronology of these systems of land division in Britain and adds to the evidence for early pit alignments recorded elsewhere (e.g. Milet 1981). It suggests a close relationship between monuments and the development of systems of land division which provides a basis for comparison with narratives of settlement change in regions of the south of England. It has been highlighted that pit alignments occupy regions beyond the known extent of early field systems, yet it is possible that these reflect different forms of land division which follow a similar chronology (*cf.* Bradley and Yates 2007). Dating evidence from Britain suggests that pit alignments were created from the Late Neolithic and into the Late Bronze Age and early Iron Age. This can be used to scrutinise the contexts of associated artefacts, yet it may be possible that pit alignments developed at different times in different regions. It is clearly possible that these features form the earliest forms of land boundary within the study area and that this may be applicable at a broader scale within other regions of Britain.

## **Chapter 7: DISCUSSION AND CONCLUSIONS**

The thesis has focussed specifically on the evidence for the location of settlement from the Late Neolithic and Early Bronze Age to the Mid-Late Bronze Age. It has aimed to place existing monuments and settlement site evidence into a broader context through the examination of artefacts in the landscape. This has been achieved by examining existing data and through obtaining new data through targeted field survey and excavation. In so doing a broader chronological narrative for settlement patterns in the region can be formed as a means of contributing to wider narratives of settlement change and diversity in Britain.

The principal conclusions drawn in the preceding chapters are summarised below, followed by an evaluation of the original research aims. An interpretation of the principal chronological developments within the study area are presented, followed by potential future directions for research.

### **Settlement sites**

Very few settlement sites have been recorded from the study area for all periods examined as part of this study. Where settlement has been recorded for the Late Neolithic and Early Bronze Age it is often in the vicinity of funerary monuments and the evidence from Trelystan suggests a small grave and cairn was a specific focus for settlement activity (Britnell 1982). The excavated evidence from Four Crosses also supports the interpretation that settlement foci existed in the vicinity of monuments in the Late Neolithic and Early Bronze Age. The evidence elsewhere in the study area is generally sparse and is characterised by isolated pits, postholes or residual artefacts, all of which suggest short-lived activities. The pattern of settlement is, therefore, very similar to that recorded in the broader Welsh border region (e.g. Gibson 1999) and elsewhere in Britain for this period, and supports interpretations of mobile patterns of occupation in the landscape (Brück 1999a).

Whilst evidence for more sustained settlement may have been recorded in the wider region (Garner 2007) this remains exceptional, even where large scale commercially funded excavation programmes have taken place. It is possible that certain significant points in the landscape were a focus for repeated episodes of occupation, yet the evidence from the study area and Welsh border region generally, suggests that settlement and occupation at specific locales were generally short-lived.

There is little evidence for Middle Bronze Age settlement sites in the study area, with the site at Glanfeinion, Llandinam, providing a precedent for settlement at the margins of the River

Severn floodplain (Britnell *et al.* 1997). No settlement sites have been recorded elsewhere in the study area, even in comparable contexts or as part of extensive excavations. This may suggest that settlement sites were widely dispersed or that they are particularly difficult to identify. No settlement has been recorded within enclosures or as nucleated groups of structures, unlike in the south of England, and it is likely that this has inhibited the recognition of settlement sites of this period in the central Welsh border region. If settlement sites exist elsewhere in the study area they are therefore likely to be isolated, as with examples recorded in the midlands, south Wales and south-west Scotland (Beamish 2005; Bell *et al.* 2000; Ronan and Higgins 2005).

Burnt mounds represent specific activities at streams and wetlands and may form a component of the settlement pattern, rather than marking the location of more sustained areas of occupation. Variation in the distribution of burnt mounds may suggest differences in patterns of settlement, between wetlands in northern Shropshire and the areas bordering the Rivers Severn or and its tributaries further upstream in Powys. This may be a question of identification, however, and the potential exists for the discovery of further burnt mounds at palaeo-channels or beneath alluvial floodplains in this region.

The principal evidence for Late Bronze Age settlement in the Welsh border region is from activity at hillfort sites, where artefacts including pottery and metalwork suggest phases of occupation and where there is evidence for enclosure by palisades and ramparts. The evidence is not uniform across the region, however, and some sites have evidence for Late Bronze Age enclosure without further indications of occupation. It may be possible that Late Bronze Age metalwork hoards at other hill-tops reflect similar activities, but without further excavated evidence this cannot be demonstrated. The best evidence for settlement has been recorded from the Breiddin hillfort, Powys, and from Beeston Castle, Cheshire, yet even at these sites the nature of occupation remains ambiguous (Muson 1991; Ellis 1993; Bradley 2007, 222). It has been suggested that these prominent hills were the focus of intermittent activities by selected members of communities and that activities upon them may have actively referenced landscapes and territories beyond. The presence of enclosed sites on notably prominent natural locations may have been recognised widely in surrounding landscapes. No alternative locations of settlement have, however, been recorded within these lowland landscapes in the region. It is possible that contexts comparable with settlement location elsewhere may have been masked by extensive areas of alluvium or destroyed by shifting river channels (*cf.* Taylor and Lewin 1996; 1997), yet this does not fully explain the lack of evidence for settlement on river gravel terraces, for example.

## **Lithics**

The distribution of flintwork in the study area has indicated that settlement activity may have been more frequent in the vicinity of lowland ring ditches than in other areas of the landscape. Flintwork was also recorded above the River Severn floodplain beyond known monument groups, which suggests that other areas also acted as foci for occupation. Very little flintwork was recorded from upland areas as part of the survey which may suggest that settlement was less frequent. This contrasts with the evidence from previous excavations at Trelystan, which indicates a significant focal point for occupation (Britnell 1982). Flintwork recorded in other areas of the Long Mountain may, nevertheless, indicate further settlement activity in the vicinity of upland monuments.

Despite a possible association with lowland ring ditches and flintwork in the landscape, it is clear that most excavated ring ditches from the study area and wider region have small quantities of flintwork in association. This may indicate a degree of spatial separation between the location of settlement and activities at monuments, or that monuments were the focus of infrequent and short lived activities.

There are greater levels of flintwork on the river terraces and areas above the major floodplains in the study area than in areas of wetlands in Shropshire (Leah *et al.* 1998). This may suggest genuine differences in the levels of activity at a broad landscape scale. There are, however, far less quantities of lithics in the study area and areas of northern Shropshire (Barfield 1998; Leah *et al.* 1998) than in areas of south-west Shropshire and south-eastern Powys (Barfield 2007; Gibson 1999), suggesting distinctive regions existed in prehistory which may have had limited contact with each other. It may also suggest that north-eastern Powys and Shropshire were less intensively occupied than areas to the south.

## **Monuments and settlement**

Monuments were located in landscapes where there is evidence, albeit limited, for past settlement activities and occasionally barrows were positioned directly over the remains of previous phases of settlement activity. The location of earlier phases of settlement may, therefore, have contributed to definitions of place which influenced the siting of later monuments. The location of round barrows and ring ditches may also have been influenced by the proximity of earlier monuments (Garwood 2007c). The location of monuments may, therefore, have been defined by referencing places in the landscape which were resonant with past histories (Bradley 2002). This definition of place in the landscape may also have structured subsequent patterns of settlement.



The extent of association between settlement and monuments is, however, unclear from the distribution of monuments alone. There is in fact evidence to suggest that the topographic position of monuments and the favoured orientation of roundhouse structures where they have been identified (Ghey *et al.* 2007; Britnell 1982) indicate a subtle spatial distinction between the siting of the two.

Axes of movement through the landscape may be reflected in the distribution of monuments which may have developed as a means of formalising and structuring existing paths and prevailing movements within patterns of settlement. The location of monuments in the uplands may, in certain instances, have been located in positions from which lowland landscapes could be referenced, thereby drawing distinctions between upland and lowland landscapes and possibly reflecting connections between the two. This may indicate mobility in settlement patterns between these landscape zones. The frequency of any such mobility is, however, difficult to discern. It may also be possible that contrasts made between upland and lowland locations are a means of reinforcing distinctions between communities in upland locations and were a means of reinforcing distinct identities.

## **Metalwork and settlement**

The majority of Middle and Late Bronze Age metalwork has been recorded in lowland river valley contexts or wetland environments and most appears to have been deposited in watery contexts which indicate that it was separated from areas of settlement. Small tools and ornaments have been shown to have a greater association with settlement on Middle and Late Bronze Age sites recorded in southern England, yet these have been recorded in small numbers in the study area and are also often associated with rivers or wetlands.

The distribution of metalwork suggests that finds of all types were primarily deposited away from settlement sites, or at the margins of settlement space. It is possible, however, that certain metal finds set back from river floodplains and in non-wetland contexts may reflect locations of settlement. Small tools and ornaments of the Middle and Late Bronze Age may reflect settlement set back from rivers or streams and Middle Bronze Age weapons may reflect settlement in hill-slope and hill-top contexts. However, it is very difficult to equate metalwork finds with settlement sites specifically when they may also be associated with other contexts of deposition such as wetlands in the Middle and Late Bronze Age.

Whilst it cannot be certain that metalwork in the landscape necessarily indicates the specific location of settlement locales it may, nevertheless, indicate broad patterns of occupation in lowland landscapes. This places the Middle Bronze Age site at Glanfeinion, at the edge of

the upper Severn Valley (Britnell *et al.* 1997), into a broader context and further suggests that metalwork at the edges of floodplains may indicate the broad location of settlement elsewhere in the region. For the Late Bronze Age the apparent lowland concentration of metalwork places the Breiddin hillfort into a wider context and indicates that activity here was separated from that elsewhere in the landscape.

A number of Late Bronze Age hoards have been recorded on hilltops or in locations which appear to reference significant or prominent hills in the landscape, and this has been shown for the Early, Middle and Late Bronze Ages. It appears, therefore, that as with wetlands, prominent hills in the landscape may have been significant natural features (*cf.* Bradley 2000). It cannot be demonstrated that all these hills were necessarily occupied, but they may have acted as a significant means of structuring and contextualising broader settled landscapes, through acts of metalwork deposition. Some of these sites may, in turn, have become significant places for activities such as metalworking or social negotiations associated with phases of occupation.

## **Landscape division**

A study of cropmark morphology within a localised area at Four Crosses, Llandysilio Powys, suggested that whilst a number of field system groups may have been post-medieval in date, others may have either been contemporary with pit alignment systems or may have respected Bronze Age ring ditches. Pit alignments at Four Crosses were known to respect existing ring ditches, but previous excavations had failed to recover any dating evidence, in common with many other pit alignment excavations elsewhere (Owen and Britnell 1989). Excavated evidence from a pit alignment at Four Crosses has produced a small assemblage of Late Neolithic/ Early Bronze Age pottery and flintwork. Whilst this may be residual from earlier activity it highlights the potential for this system of land division to date to this period or closely post-date the Early Bronze Age ring ditches at Four Crosses. There is clearly the potential for pit alignments within the study area to reflect the earliest forms of landscape division. Such division of the landscape may have had a significant effect upon the organisation of settlement and agriculture within the period of study.

Pit alignments at Four Crosses are a cumulative development representing phases of landscape division across a gravel ridge. These may have marked out boundaries relating to agricultural practice (*cf.* Wigley 2007), yet may also have been conceptual boundaries rather than physical barriers. No evidence for associated banks or postholes within the pits was recorded and the formation of the pits appears to represent a non-practical means of creating a linear boundary.

It is clear that the evidence for landscape division is limited within the study area and that

pit alignments have the greatest potential to reflect localised areas of landscape division. The extent to which these were contemporary with systems of ditched boundaries elsewhere in the landscape is uncertain. The evidence does, nevertheless, suggest that land division may have been taking place by the mid-second millennium BC, which may indicate that developments in this region mirrored those in regions of the south of England, albeit through systems which varied in form and may have been more limited in extent. If the pit alignments do reflect activity at the end of the Early Bronze Age or Middle Bronze Age then this has implications for the understanding of pit alignments elsewhere in other regions, particularly where they can be shown to exist within the vicinity of ring ditches or other Early Bronze Age monument forms. It may be possible that pit alignments mark a further structuring of the landscape which may be more closely related to these monuments and may expand the distribution of landscape division beyond regions of the south of England. It is clear that not all pit alignments from the English midlands and north of England date to this period, however, yet pit alignments as a form of landscape division may, potentially have earlier origins in certain areas of Britain.

## **Addressing the research aims**

The thesis set out to address several specific research themes for the Late Neolithic and Bronze Age of the central Welsh border region. The study of the evidence for settlement sites, artefact and monument distributions and the evidence for landscape divisions have all contributed towards a greater understanding of these themes. It is necessary, however, to evaluate the extent to which these themes have been able to be addressed from the available evidence.

### **The Location of settlement in the Late Neolithic and Early Bronze Age**

The identification of a focus of Late Neolithic/Early Bronze Age activity as part of the excavation at site FC07 was unexpected and provides a significant contribution to the understanding of the location of settlement and its relationship with contemporary monuments. This focus of activity indicates that there may be a spatial separation between locations of settlement and monuments.

There is, however, very little evidence for settlement locales elsewhere in the landscape and minimal evidence for settlement at ring ditch sites. The settlement structures at Trelystan are exceptional (Britnell 1982) in the region and whilst they may indicate fortuitous circumstances of preservation, they may also reflect the relationship between settlement and monuments in the Late Neolithic. The evidence from elsewhere does not suggest that settlement and Early Bronze Age monuments were as closely related.

The fieldwalking and test pitting survey has been able to suggest varying intensities of activity in the landscape at a local level, between areas of upland and lowland, river terrace and floodplain and in the vicinity of monuments. There are clearly potential biases in the data owing largely to varying field conditions, but it can be argued that there are genuine distinctions visible between certain landscape contexts and that the data represent a relative intensity of activities. At a larger scale the survey provides a contrast with data from the wetland surveys (Leah *et al.* 1997; Leah *et al.* 1998), which suggest that certain contexts such as gravel terraces and areas above major river floodplains may have been more frequently occupied in prehistory than wetlands and wetland margins.

At a smaller scale it is difficult to pinpoint individual settlement locales from fieldwalking and test-pitting data. Even where greater quantities of lithics were recorded their distribution was largely diffuse. Clearly post-depositional processes such as plough action or colluviation could have affected flint distributions which may have diluted or altered completely any original spatial patterns (*cf.* Gaffney and Tingle 1989). Therefore it is difficult, for instance, to be certain about detailed spatial relationships between flintwork, monuments, or other landscape features at a small scale. It is, therefore, relative differences in lithic densities across local and regional landscapes that may provide the most reliable indications of settlement location.

The chronological resolution of the flintwork assemblage is also clearly an issue in the identification of settlement location, with very few artefacts being able to be specifically dated. This is true of assemblages in other regions, although less so than in the present survey. It is, therefore, not possible to identify changing activity areas over time. Flintwork distributions in the landscape may reflect activity over significant periods of the Neolithic and Bronze Age, and it is only possible to make distinctions between the relative intensities of activity which are represented by cumulative flintwork deposition in the landscape.

If settlement focussed in the vicinity of monument groups, as the distribution of flintwork may suggest, then the pattern of monument distribution may reflect the location of settlement. This may be supported by evidence pre-dating monuments and deposits of possible settlement related material at certain ring ditches. It is clear from the field survey data, however, that other areas of the landscape may also have formed a focus for settlement activity and it may not be possible simply to equate monuments and settlement at a large scale. A lack of flintwork from lowland ring ditches may suggest infrequent activity beyond specific funerary and ceremonial events.

There are so few recorded Early Bronze Age metalwork finds in the landscape of the study area, which mark vastly contrasting landscape contexts, that they cannot reflect a general pattern of occupation in the landscape. What is clear is that activity was being undertaken

on prominent hilltops as well as at the margins of river systems, indicating a diversity in the range of landscape contexts that may have been occupied, in a similar way to the distribution of barrows. Unlike for Middle and Late Bronze Age it is difficult to establish a precedent for the association between metalwork and settlement. It may be possible that these objects were deposited as part of votive acts (Bradley 1998) separated from settled areas, as may be the case for later periods. Such activity may, nevertheless, indicate a component of the settlement pattern. The relationship between metalwork and settlement in the Early Bronze Age, therefore, remains ambiguous.

### **Settlement mobility in the Late Neolithic and Early Bronze Age**

Diffuse distributions of flintwork across the study area may suggest that spatially defined and fixed settlement locales did not exist, supporting models of settlement mobility for the Neolithic and Bronze Age (Thomas 1991; Whittle 1997; Brück 1999a). Yet this may also reflect the difficulty in interpreting the data from ploughsoil assemblages, where nodes of settlement activity are difficult to identify (e.g. Richards 1990). Even if nodes of activity could be identified within artefact distributions, however, this does not necessarily preclude their presence within mobile patterns of residency (Whittle 1997; Brück 1999).

Patterns in the distribution of monuments have suggested that they may reflect principal lines of movement, particularly along gravel terraces and across river valleys of the upper Severn and Vyrnwy. If monuments formalised existing patterns of movement then this suggests that these were already well-defined. The frequency of such movement is, however, difficult to discern. Patterns of movement may have taken place at a number of scales and frequencies as part of settlement shifts, agricultural or other subsistence strategies, activities at monuments or within systems of exchange (Whittle 1997; Brück 1999a). A relative lack of flintwork recorded at lowland ring ditches may suggest that activities outside specific funerary and ceremonial events may have been infrequent. This suggests that monuments did not necessarily act as nodes within mobile systems of residency. Yet settlement patterns may, nevertheless, have been structured at a more general level by the presence of ring ditches, barrows and other monuments in the landscape which may have been referenced visually during settlement activities.

### **Settlement patterns in the Middle and Late Bronze Age**

Beyond the Middle Bronze Age round-house at Glanfeinion in the upper Severn Valley (Britnell *et al.* 1997) and the settlement evidence from the Breiddin (Musson 1991), little is known regarding any wider patterns of settlement in the study area. The only means of assessing

potential settlement location is through the distribution of metal artefacts dating to the Middle and Late Bronze Age.

Whilst the research may have provided an accurate distribution of metalwork finds, it is clear that distinctive areas of settlement activity are difficult to discern from the data. Metalwork distributions for both the Middle and Late Bronze Age suggest an association with water, which indicates places of votive deposition rather than occupation (*cf.* Bradley 1998). What remains ambiguous, however, is the extent to which finds recorded at the edges of river systems or on river floodplains may mark the location of settlement. Similarly, metalwork on hillslopes or hilltops may equally mark the location of settlement locales, yet this is difficult to demonstrate without supporting evidence. Very few of the metalwork types that appear to be more regularly associated with settlement in other regions are present in Shropshire and north-east Powys and those that are share similar contexts of deposition to other types. It is, therefore, difficult to isolate settlement from other potential foci of metalwork deposition.

Where metalwork has been shown to concentrate in wetlands or at the edges of rivers, it remains uncertain as to the extent to which such contexts of deposition were separated from settlement locales in the Middle and Late Bronze Age. Even where metalwork was intentionally placed into rivers and wetlands, this does not necessarily suggest that it was significantly removed from areas of agricultural practice or settlement locales (*cf.* Bradley 2007, 214-5; Yates 2007; Pryor 2001). Yet unlike recent evidence emerging from the fens of East Anglia, there are no indications as yet of an association between metalwork deposition and the settlement related artefacts and materials which may connect the two spheres of activity (Knight 2009).

What the distribution of metalwork has shown, however, is the intensity of activities in lowland landscapes. This existed alongside locations of metalwork deposition at higher elevations which may be significantly under-represented in the data. It reflects a variety of potential settlement contexts which are not represented by the very limited evidence for settlement sites in the Middle and Late Bronze Age. Patterns of metalwork deposition suggest that other foci of settlement existed in the landscape, complementing the evidence for Middle Bronze Age settlement and providing a contrast with the evidence for occupation at hilltop sites in the Late Bronze Age.

### **The context and function of Late Bronze Age hill-top enclosures**

Whilst the evidence from hilltops in the Welsh border region represents the clearest evidence for settlement location in the study area and Welsh border region, the function of these sites and their relationship with surrounding landscapes remains ambiguous.



The types of metalwork at the Breiddin and their context of deposition, can be compared with later Bronze Age settlement sites elsewhere and support the interpretation that they were occupied in the Late Bronze Age. A lack of settlement structures undermines the interpretation that these were permanently occupied settlement sites, although this cannot be dismissed entirely through a lack of evidence.

The prominent position of certain hilltops, where Late Bronze Age activity has been demonstrated or suggested, has been highlighted. Coupled with the evidence for enclosure on certain sites, this has emphasised that these locations were potentially significant natural features in surrounding landscapes (Bradley 2000) and that access to them was potentially restricted. This suggests that they have a relationship with surrounding settled landscapes and that they may reflect a hierarchical settlement structure. It has not, however, been demonstrated that these sites represent the year-round occupation of a certain component of surrounding communities. It may be equally possible that hilltop sites were intermittent gathering points drawing on surrounding populations, or components of those populations, which performed specific functions.

An examination of the context of the metalwork assemblage from the Breiddin (Coombs 1991) has highlighted the presence of weapon fragments and larger tools which may be separated from the deposition of smaller personal objects at other parts of the hill. It has been suggested that activities which may be associated with votive deposition or other potentially special activities such as metalworking (Bradley 1998, xix) may have been undertaken at different parts of the hill. This has enabled a closer understanding of activities at this site and serves to emphasise the relationship between locations of metal deposition and settlement at other sites such as Beeston Castle, Cheshire (Needham 1993). It does also, however, emphasise the ambiguous relationship between metalwork and potential settlement elsewhere in the landscape.

The relationship between hoards and metal deposits and settlement elsewhere in the landscape is uncertain. It is possible that metalwork deposited in hoards or as single items on other hilltops may reflect similar nodes of settlement activity, and there are many examples from Shropshire and north-east Powys, such as the Willow Moor hoard at the foot of the Wrekin, Shropshire, or the Guilsfield hoard, Powys, on the side of a hillfort. Such relationships have been highlighted elsewhere such as at South Cadbury, Somerset, and Dinorben, Denbighshire (Bradley 2007; Coles *et al.* 1999; Savory 1980). Without clear supporting evidence for settlement, however, the relationships between metalwork and hilltops and metalwork in other landscape contexts and phases of settlement activity remains uncertain.

### **The potential for Mid-Late Bronze Age land division**

The dating evidence recovered from the Four Crosses pit alignment indicates that land division was taking place from at least the Early Bronze Age. The presence of Late Neolithic and Early Bronze Age finds from these features was unexpected and whilst the dating may remain ambiguous, it raises the possibility that the pit alignments are earlier than anticipated (*cf.* Wigley 2007a). It is clear that pit alignments have the strongest potential to represent Bronze Age land division in this region and this may have implications for the dating and interpretation of similar systems elsewhere. If settlement and pit alignments at Four Crosses are contemporary then this provides a useful parallel with more certain forms of land division and settlement elsewhere in regions such as Dartmoor (Fleming 1988; Johnston 2005). The cumulative development of the pit alignment system at Four Crosses may also have parallels with the development of certain boundaries at Dartmoor (*ibid.*).

It has not been possible to demonstrate that ditched boundaries belong to the later Bronze Age in the study area, although where ditch systems appear to have a relative association with monuments for example, the possibility remains that these may represent early forms of land division. The presence of upland land divisions in the broader region, such as cross-ridge dykes in southern Shropshire (Wigley 2007a), and possible field systems in north Wales (Manley 1990) also suggest that lowland systems of land division may exist within the region. At present it is not possible, however, to suggest that the central Welsh Marches witnessed intensive episodes of landscape division as evidenced in the south of England.

### **Chronological development within patterns of settlement: the Late Neolithic to the Late Bronze Age**

The examination of the evidence for settlement sites, landscape divisions and artefact distributions can be used to form a chronological narrative for the development of patterns of occupation in the study area. Such a narrative can be placed into the context of significant developments in the occupation of the landscape in other regions, which will further help to clarify our understanding of the development of the central Welsh border area. As a result the extent to which regionally distinctive patterns of occupation may have existed in England and Wales in prehistory can be assessed.

#### **Late Neolithic/ Early Bronze Age**

The Late Neolithic and Early Bronze Age was characterised by short-lived settlement episodes closely associated with monuments. The pattern of settlement reflected by flint distributions

and settlement structures suggest that monuments and the development of monuments may have been closely associated with episodes of occupation.

The low levels of lithics in the landscape appear to be characteristic of a broad region of north-east Powys and northern Shropshire, extending northwards into Cheshire. The study area does not share the characteristics of artefact use and deposition of the south-western Shropshire and south-eastern Powys regions, with which it may have had limited contact. This may suggest infrequent social interaction with regions further south and indicate that settlement and population may have had distinct regional characteristics in this period. It may be possible that beyond smaller scale interactions with landscape and monuments, populations shared common identities across broader regions, although the extent to which this was expressed or recognised is uncertain.

At a smaller scale, the pattern of flintwork distribution indicates a generally increased frequency of activity in the vicinity of lowland ring ditches, which may suggest that they provided a focus for settlement activities. There may, however, have been subtle relationships with monuments, with some degree of spatial separation or conceptual division maintained with settlement structures or foci.

Where flintwork is directly associated with ring ditches and other lowland monuments this is limited in quantity and there are several examples of formally deposited flint artefacts with burials or central pit features. This suggests that settlement activity associated with the use, production and deposition of flintwork was limited where it took place at monuments. As with the evidence for settlement structures at Trelystan, either side of a grave and facing away from it, the relationship between settlement and lowland monuments in the Early Bronze Age may not have been a casual one. This suggests that although monuments and settlement in lowland contexts may have existed in close proximity, there may have been a conceptual separation between the two in the Early Bronze Age. The ephemeral and dispersed evidence suggests that settlement was transitory in nature and comparable with patterns envisaged for the south of England in the Late Neolithic and Early Bronze Age (Thomas 1991; Whittle 1997; Brück 1999).

The morphology of monument groups in lowland contexts suggests that they structured the landscape and that they may reflect zones that were frequently settled. Ring ditches and other monuments may, therefore, have developed in places that were conceptualised through repeated settlement activities over potentially long periods of time, serving to legitimise, structure and define settlement space within a transient pattern of residency.

Early Bronze Age monuments referenced earlier places of funerary and ceremonial activities (*cf.* Bradley 2002; Garwood 2007c). Later monuments were constructed over Neolithic pit

graves at Trelystan (Britnell 1982) and Four Crosses (Warrilow *et al.* 1986), in the vicinity of an early penannular ring ditch and cursus at Sarn-y-bryn-caled (Gibson 1994) by earlier Neolithic monuments at Lower Luggy, Berriew, and the henge at Dyffryn Lane (Gibson 2002). There were, therefore, repeated interactions with specific places in the landscape over considerable periods of time, although these may not necessarily have been constant and unbroken. The construction of monuments may have formalised concepts of place which were subsequently maintained by intermittent funerary and ceremonial events or by their visual referencing in the course of settlement and agriculture. Monuments, therefore, served to structure patterns of settlement in the landscape and reflect cumulative interactions between people and places. The interaction with monuments created a framework around which settlement patterns existed in the Early Bronze Age, at a time when contemporary monument groups may have been most extensive.

Where monuments are recorded in upland contexts they appear to have existed in pairs within generally more dispersed patterns than those present in the lowlands. This suggests that activities associated with them may have been relatively focussed and localised. Their topographic positions, however, suggest that they maintained close conceptual links with both lowland and distant landscapes. This may suggest that the identity of population groups in the uplands were defined by their relationship with lowland landscapes. This could be a means of framing distinctive upland localities within contrasting environments and suggest that populations in upland areas maintained distinct identities. Any desire to maintain a visual reference with distant landscapes may also suggest a regular interaction with such places. Relationships between upland and lowland landscapes need not, however, necessarily be seen within systems of seasonal transhumance (*cf.* Fleming 1971).

If monuments structured settlement by defining places these must have been maintained through regular funerary and ceremonial activities or settlement in close proximity. This suggests that mobility in patterns of settlement interacted with monuments on a more frequent basis than seasonal cycles.

### **The Middle Bronze Age**

It is possible that landscapes characterised and defined by groups of Early Bronze Age monuments began to be divided from the mid-second millennium BC, when monuments still retained some significance. The evidence for pit alignments at Four Crosses suggests that particular areas of landscape were being divided following the development of Early Bronze Age ring ditches. Whilst the alignments may closely post-date the ring ditch group, as the small artefactual assemblage from Four Crosses suggests, they are more likely to belong to later

second millennium BC systems of land division.

The co-axial arrangement of pits at Four Crosses and Llanymynech is very similar to arrangements of field systems which date from the Middle Bronze Age in regions of southern England. The fact that the pit alignments divide an area of gravels and brown earths which represent better quality agricultural land in the area (Thompson 1982), may suggest that these boundaries relate to the organisation of agricultural practice (*cf.* Wigley 2007a). The pit alignments do not, however, appear to present any substantial physical barrier. If they relate to agriculture, therefore, this may be in the form of arable cultivation systems, rather than livestock control. It is possible that areas were divided in order to manage crop rotation systems. The boundaries may also have marked tenurial divisions which were conceptually expressed through the creation of alignments of pits which did not form physical barriers but, nevertheless, created recognisable divisions of space.

Where pit alignments are recorded elsewhere they are characterised by the extensive enclosure of large zones of landscape, such as at Whitemoor Haye, Staffordshire (e.g. Coates 2002). The division of land into smaller parcels at Four Crosses may simply be a product of a more restricted area of suitable agricultural land.

At a larger scale the pit alignment system at Four Crosses suggests that settlement focussed upon an area of river-margin gravels above the floodplain of the river. River valleys can be seen to have been the focus for the repeated deposition of metalwork in the Middle and Late Bronze Ages in the study area. In southern England river valleys have also been demonstrated to have been a focus for Middle Bronze Age land division (Ladle and Woodward 2009) and extensive areas of occupation in the Late Bronze Age (e.g. Moore and Jennings 1992; Brossler 2001). It is likely that the pit alignment system at Four Crosses reflects similar settlement foci in the landscape, at some time after the formation of the Early Bronze Age ring ditch group.

There is far less evidence for interaction with funerary monuments in the Middle Bronze Age. Although some evidence may exist for secondary burials in the form of occasional 'Bucket Urn' sherds, there is little to indicate that monuments formed the regular focus of activity which characterised the Early Bronze Age, and there is no evidence for new monument construction. This is a characteristic that seems to be shared by broader areas of the English west midlands, which may suggest that regional commonalities apparent in the Early Bronze Age may to some extent have continued. Whilst there is evidence for Mid-Late Bronze Age cremation at Bromfield in southern Shropshire (Stanford 1982; Buteux and Hughes 1995), this activity is not replicated further north within the Welsh borders.

Whilst there is little to suggest that Middle Bronze Age settlement was to any extent structured around activities at monuments, there is no clear evidence to suggest that settlement in the

Middle Bronze Age was any less mobile or more 'fixed' in the landscape. There is no evidence that nucleated or enclosed settlement locales, such as examples recorded in southern England and other regions of Britain, existed in the study area. This may suggest that a relatively mobile system of residency continued in this region. Settlement structures may have been widely dispersed and may have regularly shifted location in the landscape.

If settlement in the Middle Bronze Age did not frequently reference monuments through funerary and ceremonial activities and had ceased to construct new monuments, this suggests that settlement patterns were less closely defined than in the Early Bronze Age. Settlement and landscape may have been defined at larger scales than attachments to monuments or monument groups may have allowed, which may suggest broader social identities were emerging.

The far larger quantities of metalwork present in the landscape for the Middle Bronze Age suggests, at a broad scale, a focus of settlement at river valley locations, as the settlement structure at Glanfeinion in the upper Severn Valley, demonstrates (Britnell *et al.* 1997). Much activity in lowland and wetland locations may, however, have been concerned with the votive deposition of metalwork which may have served to structure and define settled landscapes at a large scale by referencing significant natural features.

The liminality of natural places such as rivers, wetlands or hill-tops may have focussed attention upon areas that existed beyond recognised settlement locales and may have served to transcend smaller scale perceptions of settlement space and domestic activity (*cf.* Bradley 2000). Regular activities at places such as burnt mounds in the wider region may also have served to define the limits of settlement space, possibly in the course of structured social interactions (*cf.* Barfield and Hodder 1987). Settlement space and identity may, therefore, have been perceived at more extensive scales than in the Early Bronze Age.

### **The Late Bronze Age**

A significant change in the Late Bronze Age is the evidence for regular activity on prominent hilltops in the region, some of which appear to have been enclosed. A new emphasis was therefore placed on locations which offered significant vistas across surrounding landscapes and which were also recognisable at large distances within those landscapes. The enclosure of these hills suggests that access was restricted and potentially selective. Artefactual evidence and structural evidence suggests that certain hilltops were occupied and may have been the focus for processes such as the production of metalwork. It can be suggested, therefore, that these were settlement locales, although this settlement may not necessarily have been year-round, as suggested by palaeo-environmental data (Buckland *et al.* 2001), the comparatively



limited number of artefacts and limited evidence for roundhouses (Musson 1991).

It may be argued that enclosed hilltops were foci for intermittent coalescence of a restricted number of individuals from surrounding areas. The significance of these sites must, however, have been maintained through regular interactions with wider areas. Placing enclosures upon prominent natural hills in the landscape may have been a means of emphasising their significance at a broad landscape level. Regular events at hilltop enclosures reinforced their significance and referenced broader landscapes during the course of episodes of occupation. This occupation may have taken place alongside specific social interactions which may have negotiated territorial extents or involved the production and exchange of objects.

It is clear that prominent hills were a focus of some activity in the Early Bronze Age, with an axe hoard deposited at Titterstone Clee, Shropshire and also in the Middle Bronze Age, with a rapier deposited at Caer Caradoc, Shropshire, for example. A large hoard of axes were also placed in a wetland context upon a mountain as at Cemmaes, Powys, in the Middle Bronze Age. Metalwork of all periods, despite appearing to concentrate in lowland river valleys, also has a potentially under-represented distribution in upland contexts. There is nothing to suggest, however, that upland locations were in any way central at a larger scale in these earlier periods. The enclosure of prominent hills in the Late Bronze Age does, therefore, mark a significant development where activity was intermittently focused at prominent places.

In addition to activity at enclosed hilltops, other hills were also a focus for the deposition of large weapon-related hoards or hoards of potentially significant groups of objects. Examples include the Guilsfield hoard, Powys, which contained weapon related material in a hill-top context and the Willow Moor hoard of spear-heads which was deposited at the foot of the prominent hill at the Wrekin, Shropshire. It appears, therefore, that hilltops were significant in the Late Bronze Age and that they were a focus for the deposition of significant metalwork.

Weapons hoards were carefully selected and deposited groups of material which had 'biographies' relating to dispute, violence or warfare and were potentially associated with prestige. Such prestige may also be associated with other hoards of material, such as tools, at varying scales of significance. It is possible that the deposition of hoards may relate to conspicuous consumption and the negotiation of inter-group relationships (Barrett and Needham 1988; Bradley 1990; 1998).

It may be possible that by the Late Bronze Age an expansion of socio-political interaction across wider regions, perhaps facilitated by the frequent exchange of metalwork, resulted in conflicts and territorial dispute. Placing hoards at places in the landscape such as prominent hills may, therefore, have been a means of marking locations which were significant in structuring the landscape of territory and social interaction at a large scale. The location of metalwork in

other landscape contexts such as rivers or bogs may have had a similar purpose in structuring landscapes, continuing practices evident in the Middle Bronze Age.

Cross ridge dykes in the broader region of south-west Shropshire suggest that upland landscapes were divided at large scales after the Middle Bronze Age. The dykes cut across the natural access along ridge-ways and may have been a physical barrier to both people and livestock. This may indicate that certain upland landscapes were subject to closely controlled systems of tenure. Such cross ridge dyke systems do not extend as far north as north-east Powys, and further north in Denbighshire smaller scale landscape division may have existed associated with stock control and temporary settlement (Manley 1990). There is, therefore, regional diversity in the settlement and organisation of upland landscapes from the later second millennium BC.

Whilst fewer examples of metal objects have been recorded from what appear to be non-wetland contexts, the distribution of these objects alongside those placed into water suggest that nearby areas of associated settlement existed, as has been demonstrated in other regions such as the Thames Valley (Yates 2001) and extending to the southern English midlands, (e.g. Moore and Jennings 1992; Hearne and Heaton 1994; Jackson and Napthan 1998). There is no firm evidence at present to suggest that these landscapes were settled or divided in the Late Bronze Age. A lack of clearly identifiable settlement sites in these areas suggests that settlement retained a degree of mobility, defined at a large scale by the limits of natural features in the landscape.

## CONCLUSION

In examining Late Neolithic and Early Bronze Age settlement patterns the thesis has provided an insight into the potential location of settlement in the landscape and has suggested differences in the intensity of occupation across the landscape. The relationship between settlement and monuments has been addressed through contextualising the location of round barrows and ring ditches through extensive field survey and by examining the excavated evidence for settlement from monuments. This has suggested that monuments may represent foci for settlement activity but that this may have a degree of spatial separation. At a broader scale the distribution of monuments has been suggested to reflect defined places in the landscape that may reflect areas of settlement.

For the Middle and Late Bronze Age the thesis has broadened our understanding of potential settlement distribution in the landscape by highlighting the intensity of activity in lowland landscapes and the potential for settlement foci beyond the few known settlement sites in

the region. The potential for early land division has been highlighted and the study area has been placed into the wider context of settlement, particularly with areas of southern England where the principal evidence for settlement has been recorded. A greater definition has been provided for the character of settlement in a region for which this has not traditionally formed a principal focus for research.

Similarities are highlighted in the pattern of Late Neolithic and Early Bronze Age settlement with those in other parts of Britain, yet the potential for diversity within this is indicated between different regions of the Welsh border and between different topographic contexts. The study area highlights the significant contrast in the evidence for settlement and agricultural organisation in the Middle and Late Bronze Age with areas of southern England and indicates greater similarities with areas of the English west midlands and regions of north-west England and south-west Scotland.

A regional narrative for settlement has begun to be defined beyond the core areas of settlement study in the south of England. Regional diversity is therefore highlighted in the pattern and development of settlement which contributes to a broader picture of settlement diversity in Britain. This is necessary in order to contribute to a broader and more representative narrative of Neolithic and Bronze Age settlement.

The thesis has examined a specific area of the Welsh Marches and has built upon previous recent studies by gathering new data through field survey and excavation (*cf.* Halsted 2005; 2007). It has examined existing data in detail, examining the topographic location of artefacts and monuments through a Geographic Information System. It has examined only well-provenanced metalwork finds and has utilised the most recent Portable Antiquities Scheme data. It has placed a focus upon Neolithic and Bronze Age settlement as a theme in a region where this subject has received little previous attention beyond the examination of monuments in the landscape (Gibson 2002) and the excavation of hillforts (Musson 1991). Field survey has provided a useful insight into the intensity of activities in the upper Severn valley, to the west of previous large scale surveys in Shropshire (Gaffney and White 2007; Barfield 1998; Leah *et al.* 1998) and provides comparative data for other areas of the Welsh border (*cf.* Leah *et al.* 1997) and the north-west of England (Cowell 2000) which are characterised by varying levels of lithic material and evidence for settlement in the landscape. Field survey and excavation has, therefore, contributed to the definition of a region which is beyond the principal foci for research into Neolithic and Bronze Age settlement in the south, south-west and south-east of England.

The project has demonstrated that intensive field survey can produce useful data even in a region where artefacts in the landscape are relatively few and that meaningful results

regarding the relative intensity of activities in the landscape can be produced. Targeted yet small-scale research-focussed excavation has also demonstrated that useful evidence for both the form and dating of early boundaries and the location of activities beyond monuments can be achieved.

It is clear that a greater definition of Neolithic and Bronze Age settlement patterns may only be achieved by further targeted excavation and field survey. The current fieldwork has demonstrated that flintwork exists in the landscape of the study area and can provide a valuable contribution to the understanding of the relative intensity of activities in the landscape for the Neolithic and earlier Bronze Age. This therefore places an emphasis on further ploughsoil sampling in the region during the course of excavation programmes and further field survey. The survey has suggested that test pitting as a means of sampling the ploughsoil is of limited value in a region where lithic material is very limited in quantity. It may be necessary, however, to contextualise flintwork recorded through fieldwalking through targeted excavation, which may be difficult where specific nodes of activity are difficult to discern. Any excavation programme would therefore need to sample both ploughsoils and subsoils relatively extensively in areas where lithics have been identified, if further valuable information regarding the location of settlement is to be recovered.

For the Middle and Late Bronze Age periods it is clear that metalwork provides the most wide-ranging evidence for activity in the landscape of this region. The context of these artefacts is, however, often ambiguous and it is necessary to establish this with greater certainty if a fuller understanding of the relationship with settlement is to be achieved. It is clear that metalwork finds are being increasingly sample excavated as part of the Portable Antiquities Scheme (Gwilt *et al.* 2005) which has the potential to provide valuable data regarding their context. It may also be useful to target other well-provenanced find-spots, particularly in non-wetland or upland locations which have the potential to be related to settlement. It may also be beneficial to target specific types of finds that have been demonstrated to have a more regular association with settlement elsewhere. Any such sample excavation would, however, need to be relatively extensive, in order to fully contextualise find-spots, particularly where their location may not be accurate enough to target specifically. Any such programme would need to involve test pitting which sampled both topsoil and subsoil horizons, in order to maximise the recovery of artefacts and to identify any archaeological features.

Excavation as part of this project has demonstrated that targeting potentially early boundary systems such as pit alignments with an intensive methodology that is specifically aimed at retrieving dating evidence can produce potentially significant results. The dating evidence recovered remains ambiguous, and artefacts from pit alignments have often proved to be scarce across the country. Yet if we are to understand the chronological development of boundaries

and enclosures across the Welsh border region and more extensively in the west midlands region, it is necessary to continue to target and investigate potentially early boundaries. This may be achieved by relatively wide ranging yet targeted and potentially small scale excavation and survey.

The thesis has highlighted ways in which settlement can be approached through examining existing data. Field survey and excavation have contributed to existing knowledge and have tested methodologies for the identification of settlement, relative intensities of settlement activity and the chronology of land division. It has, therefore, contributed to the definition of settlement patterns in Britain and provides a basis for further research into regional patterns of settlement in prehistory.

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