

Palaeolithic and Mesolithic

National overview

Since the publication of the revised framework for the East of England in 2011, there have been significant developments relevant to Lower and Middle Palaeolithic studies at a national scale. Particularly important, and unfortunate, was the closure of the Aggregates Levy Sustainability Fund (ALSF) in 2011, which had provided a major source of funding for projects concerned with the conservation and management of the archaeology of the Pleistocene. Summaries and outputs of ALSF funded projects, including many within the East of England, are archived by the Archaeological Data Service and a major recent publication has synthesised the results of these projects and assesses their impact on understandings of the Lower and Middle Palaeolithic (White 2015a). Equally significant was the end of the third and final phase of the Leverhulme funded Ancient Human Occupation of Britain project (AHOB) in 2013. Summaries of all the sites investigated under the auspices of AHOB, including many from the East of England, are available on an online database (Stringer et al 2015). Similarly, some of the results of the English Palaeolithic Rivers Project are now available as a searchable online database hosted by the ADS. Several detailed but accessible syntheses, which cover the Lower and Middle Palaeolithic, and draw extensively on the results of AHOB and other important work undertaken in the last two decades, are now available (Pettitt and White 2012; Morigi et al 2011; Ashton 2017).

The Upper Palaeolithic also benefited from work carried out under the auspices of AHOB, especially in terms of reanalysis and dating programmes on museum collections (e.g. Jacobi and Higham 2009; 2011). Arguably as significant, however, has been the recovery, during both research and developer-led fieldwork, of Late Upper Palaeolithic assemblages from open-air sites from southern and eastern England. Analysis and publication of these sites has made a significant contribution to understanding the chronology and character of occupation during the Late Glacial and earliest Holocene (e.g. Barton et al 2009; Conneller 2009; Conneller and Ellis 2007; Cooper 2006; 2012; Jones 2013; Lewis and Rackham 2011). Meanwhile, the online dissemination of the late Roger Jacobi's comprehensive card index of Upper Palaeolithic and Mesolithic finds (the Pamela database; Wessex Archaeology and Jacobi 2014) represents a particularly important resource for studies of the Upper Palaeolithic. A recent synthesis of the Upper Palaeolithic is provided in Pettitt and White's monograph on the British Palaeolithic (2012)

Recent years have witnessed an upsurge of interest in the Mesolithic period, long the 'Cinderella' period of British prehistory. This has been driven by a new and active generation of academic researchers as well as by major and well publicised fieldwork projects at sites such as Star Carr (Milner et al 2013), Howick (Waddington 2007), Bouldnor Cliff (Momber et al 2011) and Blick Mead (Jacques et al 2013). There have also been important developments in understandings of the chronology of the period (Waddington et al 2007; Conneller and Higham 2015; Conneller et al 2016). The 2013 *Mesolithic Research and Conservation Framework* has been published by Historic England (Blinkhorn and Milner 2013). These developments notwithstanding, there remain major uncertainties concerning the Mesolithic sequence in many areas of the country and there is also a lack of detailed syntheses of the period at a national scale to compare with those of earlier periods.

Assessment of Key Projects (since 2011)

Lower and Middle Palaeolithic

Following on from the successes of AHOB, research is ongoing at several key Lower Palaeolithic sites in the region. At and along the Norfolk coast around Happisburgh a programme of monitoring of exposures of the Cromer Forest-bed formation has resulted in the recovery of lithics from several locations including Eccles North Gap, Sea Palling and Waxham, which reflect pre-Anglian activity equivalent to the excavated sites at Happisburgh Sites 1 and 3. Most spectacularly, in 2013 hominin footprints were discovered in newly exposed estuarine silts belonging to the Cromer Forest-bed Formation, within a hundred metres of (and suggested to be broadly contemporary with) the lithic assemblage from the excavations at Site 3 (Ashton et al 2014).

A new campaign of research excavations, begun in 2013, is ongoing at East Farm, Barnham, where Lower Palaeolithic lithics have been recovered since the early 20th century and where excavations carried out in 1989-1994 recovered two substantial lithic assemblages in primary context within deposits attributed to the Hoxnian interglacial (Marine Isotope Stage (MIS) 11). The new fieldwork is orientated towards investigating the stratigraphic relationship between these two assemblages and has produced important evidence that flake and core (Clactonian) industries occurred earlier in the interglacial than assemblages with handaxes (Acheulian) (Ashton et al 2016).

Other sites in the Breckland are also seeing ongoing research, under the aegis of the Leverhulme funded *Breckland Palaeolithic Project*. This includes investigation of key sites belonging to the Pre-Anglian Bytham River system at Warren Hill (Mildenhall) and Maidcross Hill (Lakenheath). A paper summarising some of the preliminary results of this work and including an accessible synthesis of the Lower Palaeolithic of the Breckland have been recently published (Davis et al 2017).

Although not strictly within the region, the results obtained through monitoring of offshore aggregate extraction and subsequent seabed sampling in Area 240, some 10km east of Great Yarmouth, has allowed the recovery of a substantial collection of Pleistocene fauna and Palaeolithic lithics, the latter including handaxes and Levallois material suggested to belong mostly to MIS8/7 (Early Middle Palaeolithic) (Tizzard et al 2014). This work has also provided detail on the Pleistocene and Holocene development of the Palaeo-Yare River, with which the finds are associated. Such off-shore work is now informed by the North Sea Prehistory Research and Management Framework (Peeters et al 2009).

Aside from new excavations and investigations there have been several major publications of earlier work, including a major monograph on the Late Middle Palaeolithic site at Lynford, Norfolk (Boismier et al 2012) and a report on investigations carried out in Purfleet, Thurrock, for High Speed 1, which has provided additional evidence from the important sequence in this part of the Lower Thames which provides the best evidence for the 'Purfleet' Interglacial, correlated with MIS 9 (Bridgland et al 2013). An important synthesis of the Quaternary sequence of the river valleys of the Wash fluvial network has also been published (Boreham et al 2010). Drawing partly on work carried out by an ALSF funded project (The Lower and Middle Palaeolithic of the Fenland Rivers of Cambridgeshire) this study has implications for the understanding of Palaeolithic material recovered from the terrace gravels of many of the major rivers in Eastern England. Recent research has reassessed the geological context of Palaeolithic artefacts from the important sites at High Lodge and Warren Hill, Suffolk and suggested that rather than being associated with the Pre-Anglian deposits of the River Bytham, they instead relate to a post-Anglian interglacial (*inter alia* Gibbard 2013; West et al 2014). This interpretation does, however remain highly controversial (e.g. Bridgland and White 2015; Voinchet et al 2015; Davis

et al 2016) and the work of the Breckland Palaeolithic Project is likely to cast new light on this issue in the immediate future.

Between 2013 and 2015 Historic England funded two programmes of enhancement of Historic Environment Records within the region which are of direct relevance to the Lower and Middle Palaeolithic. In Essex the Managing the Essex Pleistocene project developed a predictive model allowing the assessment for the potential for the survival of Lower and Middle Palaeolithic archaeology. This was based around integrating HER and other archaeological data sources with geological information and allowed the mapping of areas of potential survival which can act as a guide to the impact of development on the archaeological resource (O'Connor 2015). In Norfolk a project to enhance the records relating to early prehistory (Palaeolithic and Mesolithic) was undertaken. This involved reviewing all Palaeolithic and Mesolithic records and integrating new information from varied sources including important newly available data sets such as the archives of John Wymer and Roger Jacobi (Cattermole and Watkins 2014). The resulting records (available in large part online at www.heritage.norfolk.gov.uk) provide comprehensive and detailed accounts of findspots of these periods which represent an important resource both for management and research purposes.

Project	Location	Authority	Type	Comments	Date
Happisburgh		Norfolk	Monitoring/excavation	Recovery of flints from exposures of the pre-Anglian Cromer Forest-bed Formation and recording of hominin footprints exposed in the intertidal zone, believed contemporary with Happisburgh III (MIS 25 or 21) (Ashton et al 2014).	Pre-Anglian
East Farm	Barnham	Suffolk	Excavation	Renewed excavation of MIS 11 Clactonian and Acheulian assemblages (Ashton et al 2016).	MIS 11 (Hoxnian)
Warren Hill	Mildenhall	Suffolk	Excavation	Ongoing investigation of sediments belonging to the Pre-Anglian Bytham river (Davis et al 2017).	Pre-Anglian
Maidcross Hill	Lakenheath	Suffolk	Excavation	Ongoing investigation of sediments belonging to the Pre-Anglian Bytham river (Davis et al 2017).	Pre-Anglian
Area 240			Monitoring/sampling	Off shore geoarchaeological sampling and monitoring of deposits associated with the Palaeo-Yare valley. Recovery of substantial lithic assemblage and faunal remains relating to MIS8/7 (Early Middle Palaeolithic) (Tizzard et al 2014).	Early Middle Palaeolithic
Lynford		Norfolk	Publication	Monograph on excavations of major Late Middle Palaeolithic lithic and faunal assemblage from palaeochannel on the Wissey floodplain (Boismier et al 2012).	Late Middle Palaeolithic
Quaternary of the Wash		Various	Synthesis	Publication of synthesis of the Pleistocene history of the major river valleys of the Wash (Boreham et al 2010)	
Managing the Essex Pleistocene		Essex	HER enhancement	County-wide predictive modelling of potential for survival of Lower and Middle Palaeolithic archaeology based on geology and archaeological records (O'Connor 2015).	Lower and Middle Palaeolithic
Enhancement of Early prehistoric Records		Norfolk	HER enhancement	Review, expansion and updating of Palaeolithic and Mesolithic HER records in Norfolk (Cattermole and Watkins 2015).	Palaeolithic and Mesolithic
High Speed 1	Purfleet	Essex	Publication	Publication of results of excavations/investigations of MIS 9 and associated deposits. (Bridgland et al 2013).	MIS 9 (Purfleet Interglacial)

Key Projects – Lower and Middle Palaeolithic

Upper Palaeolithic and Mesolithic

In recent years a significant development has been the recovery of several substantial Terminal Palaeolithic ('long/bruised blade') assemblages during developer-led excavations at Hi-Tech House, Norwich (House 2010); Dairy Farm, Willington, Bedfordshire (CAU *in prep*) and Hinxton, Cambridgeshire (Haskins and Clarke 2014; Bishop et al 2016). These major sites are accompanied by an increasing number of sites where smaller numbers of diagnostically Late Upper Palaeolithic lithics have been recovered as part of multi-period assemblages as at Brandon Road, Thetford (Atkins and Connor 2010); North West Cambridge (Cessford and Evans 2014); Sawston, Cambridgeshire (Paul et al 2016) and Stoke Quay, Ipswich (OAE *in prep*). A notable number of putatively LUP lithics recorded on the Portable Antiquities' Scheme database or otherwise reported have also been found as stray finds or during amateur fieldwork (e.g. Martingell 2013). Small scale reinvestigation of the Terminal Palaeolithic site at the Devil's Wood Pit, Sproughton (Wymer 1976) has been undertaken, resulting in the recovery of a small assemblage of lithics and new OSL and ¹⁴C dates on the floodplain deposits at the site (Waghorne 2011).

In contrast to the LUP (and specifically the Terminal Palaeolithic) there has been very little work relating to the Early Upper Palaeolithic, which remains poorly represented in the region. One exception to this was the discovery, in 2012, of an Early Upper Palaeolithic blade point from a ploughsoil context at Colby, Norfolk, which joins a small number of this type of artefact from the region, most notably those from Bramford Road, Ipswich and White Colne, Essex (see Jacobi 2007; Piprani 2016).

Although excavations continue to routinely recover small quantities of Mesolithic lithics, major discoveries remain rare. Significant excavations since 2011 include the investigation of multi-period lithic scatters with a major Mesolithic component at Gaul Road, March (Mellor 2011); sampling of Later Mesolithic flint scatters sealed by alluvial deposits on the floodplain of the R. Ouse at Dairy Farm, Willington (CAU *in prep*) and recovery of a substantial Later Mesolithic assemblage from deposits infilling a natural hollow near Barnham, Suffolk (OAE *in prep*). A large multi-period lithic assemblage from Over, Cambridgeshire, incorporating a large proportion of predominantly Early Mesolithic flintwork, has been recently published (Evans et al 2016) as have the results of fieldwork on an extensive lithic scatter at Priestly Farm, Bedfordshire (Moore 2010), and other assemblages with a significant Mesolithic component from Sawston, Cambridgeshire (Paul et al 2016) and Brandon Road, Thetford (Atkins and Connor 2010). The important results of environmental and geoarchaeological investigations of the Suffolk Rivers Project have recently been published in monograph form (Gearey et al 2016), whilst the ¹⁴C dates from the important pollen sequences from Hockham Mere, Norfolk, have been modelled (Healy et al 2014). Additionally, the earlier Holocene paleogeography of the lower Waveney has been modelled and discussed in the context of Mesolithic occupation (Dewing 2012).

Perhaps the most significant recent discovery is from Langford, Essex, where a cremation deposit found within a small pit has been securely dated to the sixth millennium BC (Gilmour and Loe 2015). The deposit contained 118g of cremated bone representing at least one adult or older juvenile individual and represents the first documented Mesolithic cremation from Britain. Also relevant in this context is the recent dating of the partial skeleton of an adult male, recovered from alluvial deposits at Tilbury, Essex in 1883, to c. 6000 BC (Schulting 2013). The condition and context of the skeleton strongly suggest it represents a deliberate burial and, together with the cremated remains from Langford, joins a small group of around twenty findspots in Britain where Mesolithic human remains have been recovered.

The current writer's recent PhD thesis provides an up to date synthesis of the evidence for the Late Upper Palaeolithic and Mesolithic of a large part of the region including Norfolk, Suffolk, Cambridgeshire and Bedfordshire (Billington 2016). A comprehensive gazetteer of findspots of LUP and Mesolithic lithic artefacts was compiled as part of this study, and the distribution of known sites was assessed and discussed in relation to biases caused by land-use, geomorphology and research histories. The research also allowed the analysis of several poorly documented assemblages including those from the Terminal Palaeolithic sites at Whiteway Drove, Swaffham Prior, Cambridgeshire and the Kings Site, Mildenhall. The enhancement to the Norfolk HER discussed above is as relevant to the Upper Palaeolithic and Mesolithic as it is to earlier periods, and provides an exhaustive record of finds and sites in Norfolk.

Project	Location	Authority	Type	Comments	Date
Hi Tech House	Norwich	Norfolk	Excavation	Recovery of Terminal Palaeolithic lithic assemblage from small exposures of sub-alluvial surface of the Wensum floodplain (House 2010).	Terminal Palaeolithic
Dairy Farm	Willington	Bedfordshire	Excavation	Excavation of large Terminal Palaeolithic lithic scatter sealed by colluvial deposits. Sampling of sub-alluvial Later Mesolithic lithic scatters on the floodplain of the Great Ouse.	Terminal Palaeolithic; Later Mesolithic
Hinxton Genome Campus		Cambridgeshire	Excavation	Excavation of Terminal Palaeolithic lithic scatter preserved within natural hollow on terrace of the River Cam/Granta.	Terminal Palaeolithic
Land off Gaul Road	March	Cambridgeshire	Excavation	Sampling of extensive Mesolithic and Neolithic lithic scatters from peat sealed buried soils (Mellor 2011).	Mesolithic
Barnham		Suffolk	Excavation	Excavation of Later Mesolithic lithic scatter preserved in natural hollow in the Little Ouse valley.	Later Mesolithic
Over Narrows	Over	Cambridgeshire	Publication	Publication of large multi-period lithic scatters with substantial Early Mesolithic component from the floodplain of the Lower Great Ouse (Evans et al 2016)	Mesolithic
Priestly Farm	Flitwick	Bedfordshire	Publication	Publication of large scale sampling of multi-period ploughzone lithic scatter with significant Mesolithic component. Associated environmental sequence from palaeochannel of the Flit (Moore 2010).	Mesolithic
Suffolk Rivers Project		Suffolk	Publication	Synthesis of the results of the Suffolk Rivers Project incorporating geoarchaeological and palaeoenvironmental work on floodplain deposits across Suffolk (Gearey et al 2016).	Mesolithic
Tilbury		Essex	Dating/ publication	Radiocarbon dating of human skeleton from Tilbury Docks to the Later Mesolithic (Schulting 2013).	Mesolithic
Langford		Essex	Excavation	Excavation of Mesolithic cremation deposit from small pit, first of its kind in Britain (Gilmour and Loe 2015).	Mesolithic
LUP and Mesolithic lithic scatters in Eastern England		various	PhD thesis	Synthesis of the LUP and Mesolithic of Norfolk, Suffolk, Cambridgeshire and Bedfordshire (Billington 2016).	Late Upper Palaeolithic and Mesolithic

Key projects – Upper Palaeolithic and Mesolithic

Assessment of progress on research topics proposed in 2011

Lower and Middle Palaeolithic

Key research topics for the Lower and Middle Palaeolithic highlighted in the revised research framework included the potential of systematic fieldwalking to identify new sites, especially away from the river valleys. There has been little progress on this issue, which is returned to below. The need to better understand the geological context of extant collections of Palaeolithic artefacts was raised, especially in terms of re-visiting the sites of older, poorly provenanced/contextualised, collections to investigate the geological sequence and where possible acquire new samples of artefacts and dates. This too remains largely unfulfilled, although the recent re-investigations at various sites in the Breckland represent an obvious major exception.

The erosion and loss of Pleistocene deposits along the coastline was raised as issue of particular concern in the context of the then very recent discoveries at Happisburgh and Pakefield. The successes of monitoring of this coastline have been noted above and should be considered an ongoing priority, worthy of expansion to all areas where high potential Pleistocene deposits are exposed.

Attention was also drawn to the need to better characterise the nature of lithic assemblages recovered from gravel terraces, in particular assessing the taphonomic of artefacts within a derived/secondary context in gravel and sand deposits to assess their integrity and interpretative potential. Most recent work has focused on sites where artefacts are found in primary or near primary contexts and such investigation of artefacts in secondary contexts arguably continues to be somewhat neglected.

Special emphasis was given to the need to provide local authorities with information necessary to adequately protect the Palaeolithic resource. In particular it was suggested that the incorporation of geological and palaeoenvironmental data into HERs should be a priority. The *Managing the Essex Pleistocene* project and its predecessor, the ALSF funded *Medway Valley Palaeolithic Project* provide models of this kind of work which should prove an invaluable tool for assessing the impact of proposed development.

Late Upper Palaeolithic and Mesolithic

Research topics for the Upper Palaeolithic specifically were largely limited to the observation that the evidence for the Late Upper Palaeolithic in the region in particular required further study to “characterise and model” the evidence for activity. There has been some progress on this issue with the Norfolk HERs enhancement, incorporating information from the Jacobi and Wymer archives, providing very detailed information on the LUP sites from that county, whilst Billington (2016) highlights the relative poverty of the evidence for LUP activity during the Late Glacial Interstadial, but contrast this with the plentiful and often high quality evidence for the Terminal Palaeolithic and is able to discuss the character and landscape distribution/location of Terminal Palaeolithic lithic scatters in some detail.

Key research topics identified for the Mesolithic included a need to consider how fieldwork methodologies might be improved to allow the detection of Mesolithic sites, which appeared to be underrepresented by the results of developer-led projects. This remains a key issue and is discussed in more detail below. It was suggested that predictive modelling/better understanding of site location of site location based on collation and analysis of the existing corpus of sites would be an important first step towards improving understanding of the period and this has been explicitly addressed by Billington (2016) for parts of the region.

At a more general level the need to better understand and model Holocene sequences and environments from river valleys across the region, and offshore and wetland areas and the implications of this for Mesolithic settlement and the preservation of sites was highlighted. There has been important work in this area, including the large amount of work that has been directed towards understanding the off-shore palaeo-landscapes of ‘Doggerland’ and the history of sea level rise during the early Holocene (e.g. Gaffney et al 2009; Sturt et al 2013), and assessment of alluvial sequences of river valleys in certain areas (e.g. Gearey et al 2016) and modelling of the palaeolandscapes of parts of the Broads (Dewing 2012). There do, however, remain many areas, including major river valleys, where understanding of Holocene geomorphology and environments remain relatively poor.

Future Research Topics

Lower and Middle Palaeolithic

Any consideration of research topics for the Middle and Palaeolithic of the region must begin with an acknowledgement that the archaeology of the Pleistocene remains poorly integrated into broader developer-led programmes of investigation and mitigation. This issue has been explicitly addressed by Mark White in a discussion of research priorities frameworks for these periods, written in the context of an assessment of the major achievements in Palaeolithic studies during the early twenty first century (White 2015b). White’s concise paper deserves close reading by curators, consultants and contractors across the region. In particular, his review highlights the manner in which the overwhelming majority of recent research has been undertaken by a small group of academic specialists and has focused on sites known since the late 19th or early 20th century – put simply, with a few notable exceptions such as Lynford and Happisburgh, there has been a failure throughout the later twentieth and twenty-first century to identify and investigate new sites (see also Pettitt and White 2012, 4-6).

Given this, defining specific research aims or topics relating to Pleistocene archaeology is arguably far less important than developing methods and procedures by which the investigation of Lower and Middle Palaeolithic archaeology can become part of ‘mainstream’ archaeological projects. For this reason this section does not provide a list of what would be essentially irrelevant research topics (for national research objectives, see Historic England’s 2008 *Research and Conservation Framework for the British Palaeolithic*), and very briefly reflects on the prospects for approaching Lower and Middle Palaeolithic archaeology in a developer-led context.

The recognition of the problems in integrating Pleistocene archaeology into developer-led projects is not, of course, a new one (see, e.g. Wenban-Smith 1994; 1995a&b), but it remains an intractable issue, especially given the somewhat acrimonious breakdown in communication between the ALSF funded National Ice Age Network and the Mineral Products Association (the latter representing the concerns of quarry companies operating in the UK) (see Schreve 2015, 96-101). We remain in a position where the fate of Pleistocene archaeology remains very much dependant on the stance and concerns of individual local authority archaeologists and contractors and their relationships with individual developers.

Whilst acknowledging this problem, the review of recent projects provided above clearly shows that some progress has been made. Of especial importance are those projects which have served to provide curators with detailed information on the potential for Palaeolithic archaeology, exemplified by the Mapping the Essex Pleistocene project, but also provided in part by the Cambridge Rivers project and the Norfolk HER enhancement. Mapping potential and collating existing data is an essential first step towards more effective curation of Pleistocene archaeology and it is notable that the Essex mapping project has informed recent fieldwork specifications, with investigation of

Pleistocene deposits carried out as part of trial trench evaluations at sites believed to have potential for Palaeolithic archaeology or important geological sequences (e.g. Collie 2018). In this context it would clearly be extremely useful if comparable mapping projects could be undertaken for other parts of the region, but in a post-ALSF world it is difficult to imagine where the resources from such work will originate in the future. Beyond mapping for potential and enhancing records of known Palaeolithic finds, there are now a set of reasonably well-established methodologies for evaluating Pleistocene archaeology which can be integrated into programmes of fieldwork; typically these include programmes of geophysical survey, bore-holing, test pitting and watching-briefs. A useful summary of these approaches has recently been provided by Martin Bates and Matthew Pope (Bates and Pope 2015), but there does remain a pressing need for explicit guidance documents, summarising these methods and providing contacts to appropriate specialists, if these practices are to be undertaken on a more routine basis during developer-led work.

Upper Palaeolithic and Mesolithic

As noted above, there have been substantial developments at national scale in understandings of the chronology of the Upper Palaeolithic and Mesolithic in recent years and it is essential that work carried out within the region is undertaken, and contributes to, these wider themes. For both periods there has traditionally been a heavy reliance on certain typologically distinctive flint tools for dating purposes and the great majority of lithic material can only be attributed a very broad date, of dubious relevance for understanding activity over the extended time spans and changing environmental conditions of these periods. In recent years, and particularly for the Late Upper Palaeolithic, studies of lithic assemblages have demonstrated chronologically significant differences in technology which have the potential of assemblages lacking strictly diagnostic forms to be placed in a more detailed chronological sequence. Studies of LUP assemblages from the region should draw on this growing body of work (see e.g. Barton et al 2009; Conneller and Ellis 2007; Cooper 2006; Cooper in Jones 2013).

There has been less work of this kind in relation to the Mesolithic and dating remains heavily reliant of microlith typology. There have, however, been important developments in this area, especially in terms of the recognition of the diachronous appearance of narrow-blade, later Mesolithic across Britain and an increasingly detailed understanding of chronological developments in the earlier part of the period (Waddington et al 2007; Reynier 2002; 2005; Conneller et al 2016). Again, it is essential that work on Mesolithic assemblages in the region engages with this work.

At present, evidence from the region makes little contribution to chronological understandings of the Upper Palaeolithic and Mesolithic at a national scale, with a very small number of sites with reliable associated ¹⁴C dates. To a large extent this reflects the dearth of minimally disturbed lithic scatters representing single or relatively discrete episodes of occupation associated with material suitable for dating (see below). Where such sites are located and investigated every effort should be made to secure reliable samples for dating and the implications of such dates will invariably be of more than regional significance.

It would be useful to apply more detailed technological studies to Mesolithic lithic assemblages to explore whether there are chronologically significant differences in raw material use, core reduction strategies and assemblage composition during the period. Such differences are hinted at in the existing data set, and can be paralleled in other parts of the country (see Billington 2016), but remain poorly understood at a regional scale and might have important implications for understanding changing patterns of mobility and settlement over the course of the Holocene.

Improving fieldwork methodologies for locating and investigating Upper Palaeolithic and Mesolithic sites remains a key concern. This applies especially to those rare, but disproportionately important sites where minimally disturbed/*in situ* lithic scatters survive, and are sometimes associated with other evidence such as faunal remains and palaeoenvironmental proxies. Within the region the best opportunities for investigating sites of this kind come from the alluviated floodplains of the river valleys and from areas of former coastal wetland. The problems of prospecting for ephemeral lithic scatters sites in such contexts are well known and have seen substantial discussion, especially in terms of the deficiencies of traditional evaluation strategies (see papers in Bradley 1998). Recent work elsewhere in southern Britain provide models and discussion of how such landscapes can be effectively evaluated through deposit modelling, trenching and bore hole/test pit sampling (e.g. Bates et al 2007; Bates and Stafford 2013; see Jones 2013, 1-7), whilst within the region systematic sampling of the extensive buried soils in the Fenland during evaluation fieldwork have been effective in locating lithic scatters of all periods (e.g. Evans et al 2016). There is a real need for effective strategies for locating and investigating sites of this kind to be implemented in areas of high potential and it is important to note that these periods are often poorly served by watching brief/strip-map-and-sample type briefs, where it is difficult to anticipate and adequately deal with ephemeral artefact scatters.

Aside from alluvial contexts, important *in situ* scatters of Upper Palaeolithic and Mesolithic date continue to be recovered from beneath colluvial deposits and within near surface sub-soil layers, occasionally in locations where it would be difficult to anticipate the survival of such deposits, as at Rookery Farm, Cambridgeshire (Conneller 2009) or Great Melton, Norfolk (Wymer and Robins 1995). This again highlights the need for effective modelling and sampling of deposits encountered during evaluation phases.

In addition to improving methods to locate such high integrity sites, it is essential that appropriate fieldwork methodologies are applied in their investigation, particularly in terms of securing as total excavation/recovery as possible, together with intensive sampling and sieving of deposits and detailed spatial recording. The potential of such work to be carried out at, even at a very large scale, within the context of developer funded projects has been demonstrated in a number of recent fieldwork projects in Southern Britain such as Bexhill, and Stainton West, Cumbria.

Apart from these kinds of well-preserved sites of clear interpretative potential/value, the evidence for Upper Palaeolithic and Mesolithic activity invariably takes the form of lithic material, often as a component of multi-period assemblages, recovered from contexts which have seen considerable post-depositional disturbance, including those derived as a residual element from excavation of later sites and from ploughsoil deposits. Despite the interpretative difficulties of dealing with assemblages of this kind they provide the only evidence for activity in areas where better preserved scatters are absent and can yield important information, but do require appropriately intensive sampling. Ploughzone archaeology in general remains poorly served by developer-led projects but intensive sampling through excavation of a ploughzone scatter with a major Mesolithic component at Priestly Farm, Bedfordshire (Moore 2010), demonstrates what can be achieved when sufficient resources are available for the investigation of known ploughzone sites, and could be usefully emulated elsewhere.

Fieldwalking has declined in importance as a strategy for evaluation during developer-led projects and it would be beneficial to consider methods of sampling ploughsoil artefact scatters during evaluation trenching to allow significant ploughsoil scatters to be identified. As noted above, many new findspots have been identified through amateur fieldwork and are reported/recorded on the PAS database. Particularly notable is the number of finds of putatively Upper Palaeolithic date, which presumably partly reflects the visibility of large and distinctive blade based products of this period. It would be

very valuable to carry out further investigations of some of these locations where the potential to recover substantial assemblages and/or locate well-preserved sites seems high.

A central research topic for these periods is in documenting the scale, distribution and character of occupation in the region and interpreting these patterns in terms of the dramatic climatic and environmental changes that occurred over the course of the Upper Palaeolithic and Mesolithic. The very sparse record of Early Upper Palaeolithic activity in the region is characteristic of lowland southern Britain more generally and at present there is little scope for detailed interpretations of this period. The identification of new findspots would be of importance in expanding the known distribution of activity, whilst the recovery, almost a century ago, of an Early Upper Palaeolithic leaf/blade point and associated fauna within a deposit of fluvial sand on the floodplain of the Colne at White Colne (Layard 1927), demonstrates the potential for the survival of undisturbed sites of this date under some, probably very rare, circumstances. The same points largely apply to that part of the Late Upper Palaeolithic record belonging to the Late Glacial Interstadial (i.e. Creswellian/Final Magdalenian and Final Palaeolithic (Hengistbury-type and Federmesser assemblages)), which, taken at face value, suggests relatively limited, episodic occupation by small populations (Pettitt and White 2012, 423). It is notable, however, that there are significantly more findspots of Final Palaeolithic date than those belonging to the Creswellian/Final Magdalenian (Billington 2016), and this might indicate that the latter part of the interstadial saw somewhat more sustained/intensive activity. In adjacent parts of the continent, especially in the Low Countries, Final Palaeolithic sites are extremely common in some areas (e.g. Crombé et al 2011) and future work, both in terms of new fieldwork and reassessment of older assemblages, should attempt to assess the extent to which Final Palaeolithic activity may have been underestimated and/or how it differs from the continental record.

The Terminal Palaeolithic record of the region is of considerable importance at a national scale (Barton 1998) and recent projects have continued to recover new and important assemblages of this date. This data set has potential for making useful inter-site comparisons in terms of assemblage composition, landscape location and possible site function. There is an emerging picture, in the region and elsewhere in southern Britain, of a high degree of variability between assemblages of this date which might indicate substantial differences in the character and duration of occupation at different locales (see Cooper 2006). This offers a challenge to the interpretation that many such 'long blade' sites represent somewhat specialised and short lived workshop or butchery sites (e.g. Barton 1995; Fagnart 2009; Naudinot and Jacquier 2014) and is an issue which the evidence from the region is well placed to address, although several major assemblages including the Kings Site, Mildenhall; Staunch Meadow, Brandon; Hockwold-cum-Wilton, Norfolk and Whiteway Drove, Swaffham Prior, are poorly documented and require analysis and/or reporting. Patterns of raw material use also require more detailed analysis - sites are generally located in proximity to high quality sources of flint and include abundant evidence for on-site working, but the extent to which material was transported around the landscape, and in what form, remains unclear. Analysis of site location in part of the region has revealed that there are major clusters of findspots in the lower river valleys of Norfolk and Suffolk and there seems to be a clear preference for floodplain/river valley locations (Robins and Wymer 2006; Billington 2016). At present our understanding of sites located away from such locations is very poor and characterising some of the findspots from more 'upland' locations is necessary to determine any differences in the character of activity taking place in different parts of the landscape.

Evidence for Mesolithic activity is widespread across the entire region. Traditionally the distribution of Mesolithic findspots has been taken to indicate the preferential occupation of river valleys, with less activity on the boulder clay uplands and a general preference for lighter sandy soils. Whilst these patterns remain compelling, there is a need to test them in specific areas through systematic survey

and, equally importantly, to determine whether there are chronological and/or functional differences between sites located in different topographic and geological locations.

One of the major difficulties facing research in the region is the frequency with which Mesolithic sites form a component of large multi-period palimpsest lithic scatters, in which not only are different phases of the Mesolithic itself represented, but later prehistoric material is also abundant (e.g. Edmonds et al 1999; Leivers et al 2009). Whilst such sites will always be interpretatively challenging in terms of characterising activity belonging to specific episodes of occupation, attention needs to be paid to attempting to identify the tempo and history of occupation of such sites; even in the very coarse sense of estimating the extent of Early versus Later Mesolithic material.

One striking aspect of the Mesolithic record of the region is the substantially greater proportion of findspots of 'Early Mesolithic' broad blade microlith forms than Later Mesolithic narrow blade forms. This pattern was first observed by Jacobi in relation to the record from Essex (Jacobi 1996) and has been paralleled in a study of Norfolk, Suffolk, Cambridgeshire and Bedfordshire (Billington 2016). Although Jacobi suggested this pattern reflected a genuine decline in activity in some areas during the Later Mesolithic, coincident with changes in ecology and resource availability, this is a pattern that needs testing through more systematic work and in light of future discoveries, especially given the diminutive size of Later Mesolithic microlith forms and their corresponding underrepresentation in assemblages which have not been subject to rigorous collection/sampling.

The discovery of the cremation deposit at Langford raises the possibility that a hitherto unrecognised tradition of Mesolithic cremation burial may be present in parts of southern Britain and emphasises the requirement for deposits of this kind to be routinely dated. Attention should also be directed to other putatively Mesolithic cut features which have been reported during excavations. There are a growing number of sites where small pits, generally containing only small assemblages of flintwork have been suggested to date to this period (e.g. Dawson 1988; Wymer 1996; Powell 2013) and it would be useful if analysis of these features and their finds and ¹⁴C dating could examine this issue in more detail.

The Mesolithic/Neolithic transition remains a key research topic for the region, especially given the ubiquity of palimpsest scatters with both Mesolithic and Neolithic material. Given the progress in understanding the Early Neolithic sequence in recent years, it is important to recognise the poor chronological control we have over the Mesolithic, a period that spans over 5000 years. As Frances Healy has recently emphasised, at many sites where both Early Neolithic and Mesolithic material are found the activity they represent could often be separated by millennia (Healy 2012), and at present, unlike some other areas of Britain, evidence from the Mesolithic side of the transition can contribute little to ongoing debates on the subject (cf. Griffiths 2014a and b). One area that could be of considerable interest is comparing, in detail, lithic assemblages from what seem to be the earliest Neolithic sites in the region (e.g. those associated with very early dates and/or carinated bowl pottery) with those from discrete Later Mesolithic assemblages (e.g. Robins 1998), although absolute dating of the relevant Mesolithic assemblages might be seen as an essential pre-requisite for this.

There is an urgent requirement for detailed and up-to-date and readily accessible regional/county-based syntheses of the Upper Palaeolithic and Mesolithic to be produced. For most areas the most recent of these kinds of accounts remain those of Jacobi for Essex and parts of Norfolk and Suffolk (Jacobi 1980, 1984 1996), since which time there have been significant changes in our understanding of the periods, as well the accumulation of much new evidence.

References

- Ashton N, Lewis SG, De Groote I, Duffy SM, Bates M, Bates R, et al. (2014) Hominin Footprints from Early Pleistocene Deposits at Happisburgh, UK. *PLoS ONE* 9(2), e88329.
- Ashton, N. 2017. *Early Humans*. Collins New Naturalist Library.
- Ashton, N.M., Bowen, D.Q., Holman, J.A., Hunt, C.O., Irving, B.G., Kemp, R.A., Lewis, S.G., McNabb, J., Parfitt, S. and Seddon, M.B., 1994. Excavations at the Lower Palaeolithic site at East Farm, Barnham, Suffolk 1989–92. *Journal of the Geological Society* 151 (4), pp.599-605.
- Atkins, R. and Connor, A. 2010. *Farmers and Ironsmiths: Prehistoric, Roman and Anglo-Saxon Settlement beside Brandon Road, Thetford, Norfolk*. East Anglian Archaeology 134. Bar Hill: Oxford Archaeology East.
- Barton, R.N.E. 1995. The long blade assemblage. In Allen, T.G. *Lithics and Landscape: archaeological discoveries on the Thames Water pipeline at Gatehampton Farm, Goring, Oxfordshire 1985-92*. Oxford: Oxford Archaeological Unit/Oxbow Books, 54-64.
- Barton, R.N.E. 1998. Long Blade technology and the question of British Late Pleistocene/Early Holocene lithic assemblages. In Ashton, N., Healy, F. and Pettitt, P. (eds.), *Stone Age Archaeology: essays in honour of John Wymer*. Oxford: Oxbow Monograph 102, 158-64
- Barton, R.N.E., Ford, S., Collcutt, S., Crowther, J., Macphail, R., Rhodes, E. and Van Gijn, A. 2009. A Final Upper Palaeolithic site at Nea Farm, Somerley, Hampshire (England) and some reflections on the occupation of Britain in the Late Glacial Interstadial. *Quartär* 56, 7-35.
- Bates, M.R., Bates, C.R. and Whittaker, J.E., 2007. Mixed method approaches to the investigation and mapping of buried Quaternary deposits: examples from southern England. *Archaeological Prospection*, 14(2), pp.104-129.
- Bates, M. and Pope, M. 2015. Methods for Reconstructing Ice Age Landscapes. In White, M. (ed.) 2015. *Lost Landscapes of Palaeolithic Britain*. Oxford Archaeology Monograph 26, 11-51.
- Bates, M. and Stafford, E. 2013. *Thames Holocene: a geoarchaeological approach to the investigation of the river floodplain for High Speed 1 1994-2003*. Wessex Archaeology.
- Billington, L. *Lithic Scatters and Landscape Occupation in the Late Upper Palaeolithic and Mesolithic: A Case Study from Eastern England*. Unpublished PhD thesis: University of Manchester.
- Bishop, B. with Clarke, R. and Haskins, A. 2016. *A Late Upper Palaeolithic Lithic Assemblage from Hinxton, Cambridgeshire. Catalogue and Overview Report*. Unpublished Oxford Archaeology East Report No. 1995.
- Blinkhorn, E. and Milner, N. 2013. *Mesolithic Research and Conservation Framework 2013*. English Heritage/The University of York/Council for British Archaeology.
- Boreham, S., White, T.S., Bridgland, D.R., Howard, A.J. and White, M.J., 2010. The Quaternary history of the Wash fluvial network, UK. *Proceedings of the Geologists' Association* 121 (4), 393-409.
- Boismier, W.A., Gamble, C. and Coward, F. 2012. *Neanderthals among Mammoths: Excavations at Lynford Quarry, Norfolk*. Swindon: English Heritage.
- Bradley, P. (ed.) 1998. *Lithics* 19.

- Bridgland, D. R. and White, M. J. 2015. Chronological variations in handaxes: patterns detected from fluvial archives in north-west Europe. *Journal of Quaternary Science* 30, 623-638.
- Bridgland, D.R., Harding, P., Allen, P., Candy, I., Cherry, C., George, W., Horne, D.J., Keen, D.H., Penkman, K.E., Preece, R.C. and Rhodes, E.J., 2013. An enhanced record of MIS 9 environments, geochronology and geoarchaeology: data from construction of the High Speed 1 (London–Channel Tunnel) rail-link and other recent investigations at Purfleet, Essex, UK. *Proceedings of the Geologists' Association* 124 (3), 417-476.
- Cattermole, A. and Watkins, P. 2014. *Enhancement of early prehistoric information within the Norfolk Historic Environment Record: End-of-Project Report*. English Heritage Project No. 6623.
- Cessford, C. and Evans, C. 2014. *North West Cambridge Archaeology: University of Cambridge 2012-13 Excavations. Introduction and Prehistory* (NWC Report No. 3; Pt. 1) Unpublished Cambridge Archaeological Unit Report No. 1225.
- Collie, T. 2018. *Land at Maldon Road, Burnham West, Burnham-on-Crouch, Essex. Archaeological Evaluation Report*. Unpublished Oxford Archaeology East Report No. 2216.
- Conneller, C. 2009. Investigation of a Final Palaeolithic Site at Rookery Farm, Great Wilbraham, Cambridgeshire. *Proceedings of the Prehistoric Society* 75, 167-88.
- Conneller, C. and Ellis, C. 2007. A Final Upper Palaeolithic Site at La Sagesse Convent, Romsey, Hampshire. *Proceedings of the Prehistoric Society* 73, 191-227.
- Conneller, C. and Higham, T. 2015. Dating the Early Mesolithic: new results from Thatcham and Seamer Carr. In Ashton, N. and Harris, C. (eds.) *No Stone Unturned: Papers in honour of Roger Jacobi*. London: Lithic Studies Society, Occasional Paper 9, 157-166.
- Conneller, C., Bayliss, A., Milner, N. and Taylor, B. 2016. The Resettlement of the British Landscape: Towards a chronology of Early Mesolithic lithic assemblage types. *Internet Archaeology* 42. <http://dx.doi.org/10.11141/ia.42.12>.
- Cooper, L. 2012. An Open-Air Creswellian Site at Bradgate Park, Newton Lynford, Leicestershire. *Lithics* 33, 30-39.
- Cooper, L.P. 2006. Launde, a Terminal Palaeolithic Camp-site in the English Midlands and its North European Context. *Proceedings of the Prehistoric Society* 72, 53-94.
- Crombé, P., Sergant, J., Robinson, E. and De Reu, J., 2011. Hunter–gatherer responses to environmental change during the Pleistocene–Holocene transition in the southern North Sea basin: Final Palaeolithic–Final Mesolithic land use in northwest Belgium. *Journal of Anthropological Archaeology* 30 (3), 454-471.
- Davis, R. J., Lewis, S.G., Ashton, N.M., Parfitt, S.A., Hatch, M.T. and Hoare, P.G. 2017. The early Palaeolithic archaeology of the Breckland: current understanding and directions for future research. *The Journal of Breckland Studies* 1, 28-43.
- Dawson, M. 1988. Excavations at Ursula Taylor Lower School. *Bedfordshire Archaeology* 18, 6-24.
- Dewing, E.A. 2012. *Mesolithic Coastal Community Perception of Environmental Change in the Southern North Sea Basin*. Unpublished PhD thesis: University of Southampton.

- Edmonds, M., Evans, C. and Gibson, D. 1999. Assembly and Collection – Lithic Complexes in the Cambridgeshire Fenlands. *Proceedings of the Prehistoric Society* 65, 47-82.
- Evans, C. with Tabor, J. and Vanderlinden, M. 2016. *Twice crossed river: prehistoric and palaeoenvironmental investigations at Barleycroft Farm/Over, Cambridgeshire*. Cambridge. McDonald Institute for Archaeological Research.
- Fagnart, P. 2009. Les industries à grandes lames et éléments mâchurés du Paléolithique final du Nord de la France: une spécialisation fonctionnelle des sites Épi-ahrensbourgiens. In Crombé, P., Van Strydonck, M., Sergant, J. Boudin, M. and Bats, M. (eds.) *Chronology and Evolution within the Mesolithic of North-West Europe: Proceedings of an International meeting, Brussels, May 30th-June 1st 2007*. Newcastle on Tyne: Cambridge Scholars Publishing, 39-55.
- Gaffney, V.L, Fitch, S., and Smith, D. 2009. *Europe's Lost World: The rediscovery of Doggerland*. York: Council for British Archaeology, Research Report No. 160.
- Gearey, B., Chapman, H. and Howard, A.J. 2016. *Down by the River. Archaeological, Palaeoenvironmental and Geoarchaeological Investigations of the Suffolk River Valleys*. Oxford: Oxbow Books.
- Gibbard, P.L., Turner, C. and West, R.G. 2013. The Bytham river reconsidered. *Quaternary International*. 292, 15-32
- Gilmour, N. and Loe, L. 2015. A Mesolithic cremation-related deposit from Langford, Essex, England: a first for the British Mesolithic. *Mesolithic Miscellany* 23 (2), 55-57.
- Griffiths, S. 2014a. Points in Time: The Mesolithic-Neolithic transition and the chronology of late rod microliths in Britain. *Oxford Journal of Archaeology* 33 (3), 221-243.
- Griffiths, S. 2014b. A Bayesian Radiocarbon Chronology of the Early Neolithic of Yorkshire and Humberside. *Archaeological Journal* 171 (1), 2-29.
- Haskins, A. and Clarke, R. 2014. *Hinxton South Field, Phase 3 Post-excavation Assessment and Updated Project Design*. Oxford Archaeology East Report 1659.
- Healy, F. 2012. In the Shadow of Hindsight. Pre-Iron Age Spong Hill viewed from 2010. In Hills C. and Lucy S. *Spong Hill Part IX. Chronology and Synthesis*. Cambridge: McDonald Institute of Archaeological Research, 12-21.
- Healy, F., Marshall, P., Bayliss, A., Cook, G., Bronk Ramsey, C. van der Plicht, J. and Dunbar, E. 2014. *Grime's Graves, Weeting-with-Broomhill, Norfolk. Radiocarbon Dating and Chronological Modelling. Scientific Dating Report*. Portsmouth: English Heritage, Research Report Series No. 27-2014.
- House, J. 2011. *Prehistoric and Early Medieval remains at Hi-Tech House, Norwich*. Unpublished Oxford Archaeology East Report No. 1246.
- Jacobi, R.M. 2007. A Collection of Early Upper Palaeolithic Artefacts from Beedings, near Pulborough, West Sussex, and the Context of Similar Finds from the British Isles. *Proceedings of the Prehistoric Society* 73, 229-326.
- Jacobi R. M., 1980a The Mesolithic of Essex In Buckley, D. G. (ed.) *Archaeology in Essex to AD 1500* London: Council for British Archaeology, Research Report 34, 14-25.

- Jacobi, R. 1984. The Mesolithic of Northern East Anglia and Contemporary Territories. In Barringer, C. (ed.) *Aspects of East Anglian Prehistory*. Norwich: Geo Books, 43-76.
- Jacobi, R.M., 1996. The Late Upper Palaeolithic and Mesolithic in Essex. In Bedwin, O. (ed.) *The Archaeology of Essex: Proceedings of the Writtle Conference*. Essex County Council, 10-14.
- Jacobi, R.M. and Higham, T.F.G. 2009. The early Lateglacial re-colonisation of Britain: new radiocarbon evidence from Gough's Cave, southwest England. *Quaternary Science Reviews* 28, 1895-1913.
- Jacobi, R.M. and Higham, T.F.G. 2011. The Later Upper Palaeolithic Recolonisation of Britain: New Results from AMS Radiocarbon Dating In Ashton, N., Lewis, S.G., Stringer, C. (eds.) *The Ancient Human Occupation of Britain*. Amsterdam: Elsevier, 223-247.
- Jacques, D. and Phillips, T. 2014. Mesolithic settlement near Stonehenge at Blick Mead, Vespasian's Camp, Amesbury. *Wiltshire Archaeological and Natural History Magazine* 107, 7-32.
- Jones, P. 2013. *Upper Palaeolithic Sites in the Lower Courses of the Rivers Colne and Wey: Excavations at Church Lammas and Wey Manor Farm*. Woking: Spoil Heap Publications, Monograph 5.
- Layard, N.F. 1927. A Late Palaeolithic Settlement in the Colne Valley, Essex. *The Antiquaries Journal*, 7 (04), 500-514.
- Leivers, M., Barnett, C. and Harding, P., 2009. Excavation of Mesolithic and Neolithic flint scatters and accompanying environmental sequences at Tank Hill Road, Purfleet, Essex 2002. *Essex Archaeology and History*, 38, pp.1-44.
- Lewis, J.S.C. with Rackham, J. 2011. *Three Ways Wharf, Uxbridge: A Lateglacial and Early Holocene hunter-gatherer site in the Colne Valley*. London: Museum of London, Monograph 51.
- Martingell, H. 2013. Three prehistoric worked flints of special interest. *Essex Archaeology and History* 4 (fourth series), 216-217.
- Mellor, V. 2011. *Archaeological Excavations at Gaul Road, March, Cambridgeshire 2011*. Unpublished Archaeological Project Services Report 06/11
- Milner, N., Taylor, B., Conneller, C. and Schadla-Hall, R. T. 2013. *Star Carr: Life in Britain after the Ice Age*. York: York: Council for British Archaeology.
- Momber, G Tomalin, D, Scaife, R, Satchell, J and Gillespie, J, 2011. *Mesolithic occupation at Bouldnor Cliff and the submerged prehistoric landscapes of the Solent*. York: Council for British Archaeology, Research Report 164.
- Moore, R. 2010. Flint Scatter at Priestley Farm Flitwick. *Bedfordshire Archaeology* 26.
- Morigi, A. Schreve, D. and White, M. 2011. *Part 1. The Ice Ages: palaeogeography, Palaeolithic archaeology and Pleistocene environments. The Thames through Time. The Archaeology of the Gravels Terraces of the Upper and Middle Thames. Early Prehistory: to 1500 BC*. Oxford Archaeology, Thames Valley Landscapes Monograph No.32, 1-149.
- Naudinot, N. and Jacquier, J. 2014. Socio-economic organisation of Final Palaeolithic societies: New perspectives from an aggregation site in Western France. *Journal of Anthropological Archaeology* 35, 177-189.
- O'Connor, T. 2015. 6639. *Managing the Essex Pleistocene Project*. Project Report. Essex County Council.

- Paul, S., Colls, K. and Chapman, H. 2016. *Living with the Flood: Mesolithic to post-medieval archaeological remains at Mill Lane, Sawston, Cambridgeshire*. Oxford: Oxbow Books.
- Peeters, H., Murphy, P. and Flemming, N. 2009. *North Sea Prehistory Research and Management Framework*. Rijksdienst voor het Cultureel Erfgoed/English Heritage.
- Pettitt, P. and White, M. 2012. *The British Palaeolithic: Human Societies at the Edge of the Pleistocene World*. Abingdon: Routledge.
- Piprani, J. 2016. *Penetrating the 'transitional' category: an emic approach to Lincombian Early upper Palaeolithic technology in Britain*. Unpublished PhD thesis. University of Manchester.
- Powell, A. 2013. *Post excavation assessment report: Pentlows Farm, Braughing, Hertfordshire*. Unpublished Post-Excavation Assessment.
- Reynier, M. 2002. Kettlebury 103: A Mesolithic 'Horsham' type stone assemblage from Hankley Common, Elstead. *Surrey Archaeological Collections* 89, 211–31
- Robins, P. 1998. Mesolithic Sites at Two Mile Bottom, near Thetford, Norfolk. In Ashton, N., Healy, F. and Pettitt, P. *Stone Age Archaeology: Essays in honour of John Wymer*. Oxford: Oxbow Books, 207-212.
- Robins, P. and Wymer, J.J. 2006. Late Upper Palaeolithic (Long Blade) Industries in Norfolk. *Norfolk Archaeology* 45 (1), 86-95.
- Schulting, R. 2013. 'Tilbury Man': A Mesolithic Skeleton from the Lower Thames. *Proceedings of the Prehistoric Society* 70, 19-38.
- Schreve, D. 2015. Terrestrial Fluvial Archives. In White, M. (ed.) 2015. *Lost Landscapes of Palaeolithic Britain*. Oxford Archaeology Monograph 26, 73-101.
- Stringer, C.B., Ashton, N., Polly, P.D., Lewis, M., Bello, S., Parfitt, S., Schreve, D., Carrant, A., Scott, R., Jacobi, R., Higham, T., Candy, I., Lewis, S., Penkman, K., and Preece, R. 2015. *The Ancient Human Occupation of Britain Database*. London, AHOB Project. Available at <http://www.ahobproject.org/database/index.php>
- Sturt, F., Garrow, D., and Bradley, S. 2013. New models of North West European Holocene paleogeography and inundation. *Journal of Archaeological Science* 40 (11), 3963–3976.
- Tizzard, L., Bicket, A.R., Benjamin, J. and Loecker, D., 2014. A Middle Palaeolithic site in the southern North Sea: investigating the archaeology and palaeogeography of Area 240. *Journal of Quaternary Science* 29 (7), pp.698-710.
- Voinchet, P., Moreno, D., Bahain, J.-J., Tissoux, H., Tombret, O., Falguères, C., Moncel, M.-H., Schreve, D., Candy, I., Antoine, P., Ashton, N., Beamish, M., Cliquet, D., Despriée, J., Lewis, S., Limondin-Lozouet, N., Locht, J.-L., Parfitt, S. and Pope, M. 2015. New chronological data (ESR and ESR/U-series) for the earliest Acheulian sites of north-western Europe. *Journal of Quaternary Science* 30, 610–622
- Waddington, C. (ed.) 2007. *Mesolithic Settlement in the North Sea Basin: A Case Study from Howick, North-East England*. Oxford: Oxbow Books.
- Waddington, C. Bailey, G., Bayliss, A. and Milner, N. 2007. Howick in its North Sea Context. In Waddington, C. (ed.) *Mesolithic Settlement in the North Sea Basin: A Case Study from Howick, North-East England*. Oxford: Oxbow Books, 203-224.

- Waghorne, R.S. 2011. *Rapid climate change during the late glacial in southern England: a multiproxy study of Sproughton, Suffolk*. Unpublished PhD thesis: Royal Holloway, University of London.
- Wenban-Smith, F.F., 1994. Managing the Palaeolithic heritage: looking backwards, looking forwards, in N Ashton and A David (eds), *Stories in Stone*, Lithic Studies Society Occasional Paper 4, London, 104–111
- Wenban-Smith, F.F., 1995a. Square pegs in round holes: problems of managing the Palaeolithic heritage, in M Cooper, A Firth, J Carman and D Wheatley (eds), *Managing Archaeology*, London, 146–62
- Wenban-Smith, F.F., 1995b. Managing the Palaeolithic heritage IV: the end of the beginning, in J Schofield (ed.), *Lithics in Context: Suggestions for the Future Direction of Lithic Studies*, Lithic Studies Society Occasional Paper 5, London, 115–24
- Wessex Archaeology and Jacobi, R.M. 2014. *Palaeolithic and Mesolithic Lithic Artefact (PaMELA) database [data-set]*. Archaeology Data Service [distributor] (doi:10.5284/1028201).
- West, R.G., Gibbard, P.L., Boreham, S. and Rolfe, C. Geology and geomorphology of the Palaeolithic site at high Lodge, Mildenhall, Suffolk, England. *Proceedings of the Yorkshire Geological Society* 60, 99–121.
- White, M. (ed.) 2015a. *Lost Landscapes of Palaeolithic Britain*. Oxford Archaeology Monograph 26.
- White, M. 2015b. Lost Landscapes of the British Palaeolithic: Where do we go from here? In White, M. (ed.) 2015. *Lost Landscapes of Palaeolithic Britain*. Oxford Archaeology Monograph 26, 131–136.
- Wymer, J.J. 1996 The Excavation of a Ring-ditch at South Acre. In Wymer, J.J. (ed.) *Barrow Excavations in Norfolk, 1984–88*. East Anglian Archaeology 77. Gressenhall: Field Archaeology Division, Norfolk Museums Service, 59–89.
- Wymer, J.J. 1976. A Long Blade Industry from Sproughton. In Carr, R.D., Colman, S., Dunmore, S., Loader, T., Martin, E.A., Plouviez, J., Rose, J., Scarfe, N., Wade, K., West, S.E. and Wymer, J.J. *Suffolk, various papers*. East Anglian Archaeology 3. Ipswich: Suffolk County Planning Department, 1–10.
- Wymer, J.J. and Robins, P. A. 1995. A Mesolithic Site at Great Melton. *Norfolk Archaeology* 42 (2), 125–147.