

## 8. DISCUSSION

### 8.1 House construction

Due to the findings of both research- and developer-led projects, the early years of the 21st century have seen a rapid expansion in evidence for Early Mesolithic settlement in Scotland and northern England. The house at East Barns is broadly contemporary with a number of recently investigated sites. With the exception of the more ephemeral camp sites of Fife Ness, near Balcomie, Fife (7400–7600 cal BC) (Wickham-Jones & Dalland 1998) and Cramond, Edinburgh (8630–8210 cal BC) (Saville 2008; Lawson et al forthcoming), these appear in the main to be robust house structures constructed during the turn of the 8th millennium BC and situated within ecologically rich and diverse locations.

Sites such as East Barns, Howick (8000 cal BC) (Waddington 2007), Echline Fields (8300 cal BC) (Robertson et al 2013) and Cass ny Hawin II, Isle of Man (8200–7950 cal BC) (Brown forthcoming) join other established house sites within the record such as Mount Sandel (Woodman 1985) in suggesting the existence of a hitherto unrecognised complexity within the Mesolithic settlement record of the western North Sea Basin.

These excavations have revealed a remarkably consistent set of structural features. The houses are generally between 4m and 6m in diameter and display a subcircular, sunken house pit, often edged with inwardly angled post holes and containing a complex arrangement of centrally positioned hearths. Such house sites are not solely confined to the British Isles but are a frequent component of the Mesolithic settlement record across the breadth of the North Sea Basin (Larsson 2017; Grøn & Sorenson 1995; Grøn 2003; Hesjedal et al 1996). The 26.6m<sup>2</sup> interior living space revealed at East Barns compares favourably with that of the earliest construction phase at Howick (Waddington 2007) and also with Mount Sandel at 30m<sup>2</sup> and Echline Fields at 20.91m<sup>2</sup>.

East Barns displayed a west-facing post-built entrance, a construction feature which appears to be replicated at both Echline Fields (Robertson et al 2013: 129) and Cass Ny Hawin II (Brown forthcoming).

The complexity of Mesolithic settlement is becoming more apparent, with the increasing variety of structural remains appearing within the recent archaeological record across the British Isles. These structural remains have a wide chronological and physical range and include both fairly substantial circular post ring sites such as Castlandhill, Fife (Robertson et al 2013), Star Carr (Conneller et al 2012: 1,004), Lunt Meadows, near Crosby, Merseyside (Liverpool Landscapes 2012), Dunragit, Dumfries & Galloway (Bailie & Mooney 2014) and Greenan, Ayr (Engl forthcoming), together with more ephemeral sites where defined structures are often not immediately apparent.

Other less definitive structural evidence has recently been bracketed under the general term ‘shelter’ (Mithen & Wicks 2018: 85) in order to interpret chronologically and structurally disparate sites with differing feature sets, such as the groups of stake-holes, post holes and pits represented at Cramond, Edinburgh (Lawson et al forthcoming), Morton, Fife (Coles 1971), Fife Ness, Fife (Wickham-Jones & Dalland 1998), Bolsay Farm, Isle of Islay (Mithen et al 1992) and Standingstones, Aberdeenshire (van Wessel 2019), and structures largely defined by constrained artefact concentrations such as at Caochanan Ruadha in the southern Cairngorms (Warren et al 2018).

Mithen & Wicks (2018: 85) included a number of sites containing possible ‘house’ pits and post rings within their ‘shelter’ category. These include Low Hauxley, Northumberland (Waddington & Bonsall 2016) and Cass ny Hawin I (Woodman 1987) as well as Newton, Islay (McCullagh 1989), Staosnaig, Colonsay (Mithen et al 2000) and Lilliehill Bridge, Ayrshire (MacGregor & Donnelly 2001), identified in a previous review of the data set of Mesolithic structures in Scotland (Wickham-Jones 2004a). These sites were not interpreted as unequivocal evidence for house structures, probably because of a combination of partial excavation, differential preservation and the presence of a complex palimpsest of features obscuring phasing and interpretation.

At Newton, Islay (McCullagh 1989), a sunken, sub-rectangular area *c* 5m × 4m and 0.35m deep and containing angled post holes was suggested as a dwelling. At Staosnaig on Colonsay a 4.5m diameter sub-circular pit was interpreted as the base of a hut,

albeit with an absence of post holes (Mithen et al 2000). This was also the case at Lilliehill Bridge, Ayrshire, where a series of large sub-circular scoops were interpreted as structures (or one structure with frequent rebuilds) ranging from 6m × 4m to 4m × 2m (MacGregor & Donnelly 2001). The majority of these possible 'pit house' sites appear to date to the 7th millennium BC and may suggest the partial survival of the building techniques observed in the robust pit house sites of the late 9th and early 8th millennium BC into the later Mesolithic.

Despite the growing evidence for a variety of structural settlement types within the British Mesolithic it should be noted that all of the later examples differ markedly in their structural form from the substantial, robust, pit-built structures represented at East Barns, Howick and Echline Fields. These sites on current evidence appear to form a temporally and geographically coherent grouping clustered around the early 8th millennium BC.

## 8.2 Occupation deposits

The presence of pit houses is replicated elsewhere around the North Sea Basin. Dwelling pits are seen as one of the most persistent indicators of house sites throughout the South Scandinavian Mesolithic (Grøn 2003: 692) and occur in both Maglemosian and later Ertebølle cultural horizons. They are often recognised by the presence of lenticular-shaped spreads of cultural material (ibid) containing large quantities of lithics. At the early Ertebølle site of Bredasten in Sweden, the lenticular spread was formed inside the wall ditch of the dwelling (Larsson 1986). These spreads of material have been interpreted as the remains of cultural debris that has formed beneath the living floor of the house during its occupation (Grøn 2003: 695). This interpretation has been applied to the lenticular spreads of similar material seen at East Barns. Ellis (Section 7, above) has suggested that the spreads of such material at East Barns may derive from a destruction event associated with the house but this appears unlikely given the large quantities of lithic material contained within the deposit and the uneven distribution of the spreads within and surrounding the house.

Despite the sealed nature of the archaeological deposits, no evidence for the actual living floors was

recorded at East Barns. In southern Scandinavia, floors of bark, branch and twig have been recorded on both submerged and peat bog sites (Grøn 2003: 686), and we might envisage similar floors of soft plant material at East Barns, through which occupation debris filtered onto the base of the dwelling pit.

The absence of substantial structural floor deposits at East Barns can possibly be explained in terms of length of occupation. At both Echline Fields and Howick multiple floor surfaces, clear phases of construction and a wide dating span were interpreted as reflecting the reoccupation of the houses after periodic rebuilds or abandonments (Robertson et al 2013: 81, Waddington 2007: 37). There is no clear evidence at East Barns for large-scale reconstruction (only minimal refurbishment in the replacement of some post holes – see above). Indeed, the areas of erosion present within the East Barns house suggest a single period of use, albeit on an intermittent or seasonal basis. This is supported by the closely clustered radiocarbon dates which reveal a possible period of occupation ranging between 75 and 150 years in duration.

## 8.3 Household activities

The sealed nature of the archaeological deposits and the relatively simple stratigraphy excavated at East Barns allowed for a meaningful interpretation of material distributions to be made as these were free from the 'mixing' effects produced on more open sites, where a complex palimpsest of features and cultural horizons are often in evidence. The distribution of the lithic material suggests that a similar range of activities was being undertaken both within the structure itself and in the areas immediately outside the house. These activities probably included a variety of tasks including primary manufacture, butchery, hide working, and tool/ornament maintenance and manufacture (see Section 5, Lithic microwear analysis). Within the interior of the house these activities appeared to be focused and organised around the central hearths.

What is perhaps most important about the distribution of artefacts, refuse deposits and internal furniture is that this provides clear evidence for deliberate spatial organisation, implying that there were socially defined areas within the East Barns

house where certain activities could and could not take place. The absence of lithics, and the relative lack of deposits on the platform around the inner northern perimeter of the house, suggest that this area may have been isolated from the main area of social and domestic activities centred on the hearths and not subject to the same pressures of movement and subsequent erosion. Such platforms associated with a similar absence of lithic material are a common component of Mesolithic sites in southern Scandinavia (Grøn 2003: 695–6).

Although used over a much shorter period than either of the structures found at Howick or Echline Fields, the East Barns house did see inter-generational occupation; it was constructed with a degree of permanence in mind and it is likely that the appearance of the house remained relatively constant throughout its lifespan. As argued for Howick, this points to a level of residential stability, or perhaps an increasing sedentism which was probably determined by the economic cycle of its inhabitants and which reflected their physical attachment to a landscape rich in a diverse and stable set of resources (Waddington et al 2007a: 197).

A key similarity in all of the robust house sites in the British Isles is their ecotonal setting within the Mesolithic landscape though it is noted that this can also be applied to many more ephemeral sites. At East Barns as at Howick the site appears to have occupied an optimum location in terms of economic advantage, with ready access to marine, estuarine, riverine and terrestrial resources. This choice of location was perhaps only constrained by the need to maintain social relations with the wider Mesolithic inhabitants of the locale.

Unfortunately, with the exception of lithic material, timber and hazelnuts, the variety of these resources is not particularly visible within the site record. A small quantity of burnt bone was retrieved from the site, but a combination of relatively hostile preservation conditions and the corroded nature of the remains produced only two positive identifications: those of a medium-sized bird and those of a seal (*phocidae*) (Bailey 2002: 23–4). Seal was also recovered at Howick. Despite the lack of identifiable animal remains it is likely that a coastal adaptation based on the hunting of marine mammals was also practised at East Barns.

The lack of palaeoenvironmental data is not

particularly helpful in determining if the occupation of East Barns occurred on a seasonal or more year-round basis. At Howick, the most likely scenario saw the house used on a seasonal basis, possibly over the autumn and winter (Waddington et al 2007: 198).

Seal and bird bones were also recovered at Howick, along with those of wild boar (*Sus scrofa*), fox (*Vulpes vulpes*) and probable dog (*Canis familiaris*). At Echline Fields a wider inventory of taxa was identified, including wild boar, canids and possible auroch (*Bos primigenius*), roe deer (*Capreolus capreolus*) and red deer (*Cervus elaphus*) (Robertson et al 2013: 101–2).

Other sites with midden material located around the Forth have also provided a variety of information. At Morton, Fife, mammal remains included hedgehog (*Erinaceus europaeus*), wild boar, red and roe deer and aurochs (Coles 1971). Whereas the Late Mesolithic shell midden sites of the Forth Valley have produced red deer in addition to large quantities of oyster (Lacaille 1954).

Surprisingly, given the coastal location enjoyed at East Barns, no marine shell was recovered. However, it is possible that this food source was processed closer to the coast and such midden evidence has either been removed or lies under the Forth. Marine shell was not found at Echline Fields either (Robertson et al 2013), though at Howick dog-whelk, periwinkle and limpet amongst others were recovered from the site, albeit with the majority obtained from unstratified sources.

Despite the varied but ephemeral quality of the organic evidence it is clear that the house sites of the Forth littoral would have had access to a wide variety of faunal and plant resources taken from marine, terrestrial and estuarine environments.

#### 8.4 East Barns in the Mesolithic world

As argued above, the location of robust house sites such as East Barns can be intimately linked to the availability of reliable and predictable resources such as food, building materials and lithic material. These ‘pull factors’ (Lillie 2015: 45–64) will have contributed to the viability of residential permanence and this ‘permanence’ would then likely result in the emergence of substantial house structures as populations spent increasing amounts

of productive time within a fixed locale. The robust construction evident at East Barns implies just such an exhibition of permanence. The ethnographic literature suggests that Mesolithic populations are likely to have operated on a number of spatial scales, with settlement activities ranging from base camp aggregation to more seasonal and resource-specific temporary camps. This spatial scale may have been reduced at sites such as East Barns, where the relative ease of resource procurement may have fostered a cultural adaptation involving longer periods of extended occupation or perhaps the regular reoccupation of a known location. Ethnographic observations (Fretheim et al 2016) of hunter-gatherer groups in the Beagle Channel area of South America show that sunken hut structures located in preferential foraging areas were often intermittently occupied, with reoccupation involving only minor repairs to the structure.

Whichever occupation pattern was employed at East Barns, the house would appear to meet all of the requirements for the definition of a 'home' within the archaeological record of the Mesolithic. The house was set within a suitable and productive economic location, it was large and substantial enough to house a family unit, it was occupied, possibly seasonally for a lengthy duration and it is associated with a varied artefact assemblage which would cover a less specialised and wider-ranging series of activities.

Although the necessity of hearth features within house structures may seem obvious, hearths or fire pits may also have had an important role within the social ordering of the Early Mesolithic. Numerous ethnographic examples (Spikins et al 2010: 186; Lavrillier 2010: 221) reinforce not only the practical, but also the social and cosmological importance of fire to varied hunter-gatherer communities. The presence of at least three hearth features with associated furniture at East Barns suggests that the fireplace was central to the occupation of the house. As Marshall (1976: 84–6) states 'the fire is the nuclear family's home, its gathering place, its rightful place to be'.

Feelings of attachment to place and tenure are therefore likely to develop and increase with each subsequent occupation and use of the 'home'. Substantial and long-lasting structures such as East Barns would therefore serve not only as dwellings

but perhaps as historical, visual and symbolic monuments expressing ownership and exclusivity with regard to the exploitation of the resources in the vicinity. Monumentality within the Scottish Mesolithic has been argued for by Pollard (1996), who has suggested that the Oronsay shell middens acted as cultural markers, though this has been recently challenged by Finlay et al (2019).

The long occupation sequences recorded at robust house sites such as Howick and Echline Fields appear to support Tilley's assertion (1994) that certain localities were revisited by Mesolithic populations over significant timescales (Lillie 2015: 37–51). This gives rise to the notion of 'persistent places' (Barton et al 1995: 81–2; Jacques & Phillips 2014: 7). The siting of these places would not only be influenced by utilitarian concerns such as resource procurement, subsistence and settlement strategies but also by social, personal, cosmological and historical factors (Mithen 2019: 131) that place the East Barns site within a likely enculturated Mesolithic landscape possibly as initial territorial markers, ceremonial centres or both (ibid: 105).

At East Barns, the area of the hollow in which the house was placed appears to have been subject to repeated activity throughout the Mesolithic and into the Neolithic and Bronze Age. At the northern end of the hollow two Late Mesolithic dates represent activity some 3,000 years after the abandonment of the house itself.

The construction of robust house structures in association with large narrow-blade lithic industries has been proposed as a specific cultural response to the inundation of the North Sea Plain at the turn of the 8th millennium BC (Waddington et al 2007a; 2015; Waddington & Bonsall 2016; Waddington & Passmore 2012). The excavation at East Barns joins an emerging suite of early, robust Mesolithic house sites including Howick and Echline Fields, in providing strong support for this 'colonising' hypothesis. The sites are relatively uniform in nature, with a similar suite of structural features, economies and locations focused on the coast. The sites are clustered both temporally (8400–7800 cal BC) and geographically (north-east England and south-east Scotland), giving credence to what Waddington sees as a population move westwards from Doggerland along the then shoreline towards the north-east coast of Britain (Waddington & Bonsall 2016:

277). These populations then quickly spread throughout the northern part of the British Isles. While archaeological evidence for other types of substantial hut structures is present within the later Mesolithic, none appear to be directly comparable to the earlier pit house sites dating to the turn of the 8th millennium BC.

The majority of recent Mesolithic 'house' site discoveries (East Barns, Echline Fields, Dunragit, Cas Ny Hawin II and Greenan) have occurred as a result of developer-funded fieldwork undertaken within areas not traditionally subject to such pressures. Mesolithic settlement sites in general have been thought to be relatively unpredictable in both form and location (Wickham-Jones 2004b: 12). However, patterns are emerging in the discovery of sites with a recurring set of structural features, set in similar ecotonal locations and associated with large

narrow-blade lithic assemblages, thus producing the beginnings of a consistent framework for the Mesolithic settlement record of the British Isles. These patterns should provide stimulus to future research into this aspect of Mesolithic archaeology in the 21st century.

The excavation at East Barns provided the first unequivocal evidence for robust construction in Mesolithic Scotland (Goode 2007). An increasing number of such structures are now steadily making their way into the archaeological record, but East Barns remains an important and influential site due to its wealth of structural information, large stratified cultural assemblages and early date. With this publication it now takes its place alongside its 'sister site' of Howick in revealing the emerging complexity of Early Mesolithic settlement around the North Sea Basin.