Life with the stones: monuments, fields, settlement and social practice. Revealing the hidden Neolithic-Early Bronze Age landscapes of Exmoor, SW Britain.

Volume 2 of 2

Thesis submitted for the degree of

Doctor of Philosophy

at the University of Leicester

by

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2016

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7. Mitcham, D.J. 2014b. Geophysical and DGPS surveys at East Pinford, Swap Hill and Parracombe Common in Exmoor National Park. Unpublished report for the ENPA and English Heritage.

8. Mitcham D.J. 2014c. Archaeological Excavations at the Western end of Lanacombe in Exmoor National Park. Unpublished report for the ENPA.

9. Lithic catalogue of lithic findspots from HER records.

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11. Lithic catalogue of recorded material (all sites excluding Kentisbury Down).

12. Ayes map of Kentisbury Down. A reconstructed photocopy of the original, held by the MBND.

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Appendix 1 Discussion of relative chronology

1.1 Early Neolithic (4000BC to 3000 BC)

Little is currently known about the Early Neolithic on Exmoor from the archaeological record and chapter 2 has already highlighted the apparent absence of large Early Neolithic monuments (cf. Riley and Wilson-North 2001: 34). There are Early Neolithic monuments not far from Exmoor at Tiverton, with a long barrow at Uplowman Road, and an undated long mortuary enclosure at Capelands Farm, near Bratton Flemming in North Devon (Smith 1990; Hughes and Foreman 2013). At Battle Gore, near Williton in Somerset, a poorly preserved Portal Dolmen was excavated in 1931, which located two stone sockets, and nearby flint implements including a Late Neolithic petit tranchet derivative arrowhead (Gray 1931b; Grinsell 1970: 26; Pearce 1981: 54; Riley 2006: 22-24). The flints were recovered from a small mound or ridge west and north of a cluster of small stones, to the west of the three megaliths (Gray 1931b: 20). However as this area was disturbed by a modern ditch, it is impossible to know if this represents any remnant mound material, Gray himself noting that this deposit might be modern[1] (1931b: 20). Gray concluded there was nothing to suggest the dolmen was much earlier than the large, nearby, Early Bronze Age barrow and the limited information on the flints given does not suggest anything diagnostically Early Neolithic in date (1931b: 20, 36. However the analysis of the lithic assemblages in chapter 6 clearly demonstrated the presence of people on Exmoor during the Early Neolithic and made some interpretations as to the activities being carried out. The absence of any certainly dated Neolithic monuments may suggest either differences in regional burial practices, the existence of regionally distinct monument forms which have not been recognised as they have no surface visibility, or differences in the nature of landscape inhabitation and/or the absence of monument building on Exmoor at this time. As chapter 2 highlighted, our understanding is significantly hampered by a lack of investigations. However since Riley and Wilson-North's overview (2001), a few sites

[1] This is not shown on the plan, and no detailed section was published for cutting I, other than a proposed reconstruction of the dolmen (see Gray 1931: plate iv).

have either been discovered, re-interpreted or surveyed which could belong to the Early or Middle Neolithic, although none have been confirmed or dated through excavation (e.g. Hegarty and Toms 2009; Pullen 2009). These are listed in chapter 5 (table 5.6) and include a possible Tor Enclosure at Little Hangman (HER MMO1635) and several possible mortuary enclosures (HER MDE12830, HER MMO1932 and HER MEM22585). As no firm chronology can be defined for Exmoor a general period range of c.4000 BC to c.3000 BC is all that can be used in this study.

1.2 Later Neolithic (C.3000-c.2300 BC)

The Late Neolithic period on Exmoor is similarly difficult to identify with certainty from the archaeological record on Exmoor, other than through a few instances of residual material in later contexts and the Late Neolithic date from the Farley Hill hearth (see appendix 2), although the lithic assemblages discussed in chapter 6 certainly suggest activity taking place at this time. This period on Exmoor could see the beginnings of stone monument building, with the appearance of a variety of arrangements of stone configurations including single and paired standing stones, circles, settings and rows, which as a group could span a lengthy period of time covering the Late Neolithic and Early Bronze Age. However at present no evidence regarding the chronology of the sites or the extent of temporality represented by these arrangements is yet known. It would be far too simplistic to suggest any straightforward uni-linear development over time from single stones to settings, circles and larger arrangements. The presence or absence of hengiform monuments on Exmoor also remains uncertain, as one possible example on Parracombe Common (HER MDE1064; see chapter 5) is difficult to conclusively identify, for reasons examined in detail in chapter nine. There is equally little evidence regarding funerary activity on Exmoor during the Late Neolithic period, although it has been recognised elsewhere that some round mounds may have a Neolithic origin (Kinnes 1979; cf. Quinnell 1994: 52; Riley and Wilson-North 2001: 34; Jones 2011b: 75). It remains possible that a small number of the many large barrows on Exmoor could have Neolithic origins although none have been excavated under

modern conditions or have any specific dating evidence beyond a few surviving artefacts (Riley and Wilson-North 2001: 6-11, 21-22).

1.3 Early Bronze Age (2300?-1700BC)

A large proportion of the major barrows and cairns on Exmoor can probably be placed in the Early Bronze Age. These are generally thought to date between 2500BC and 1500BC, although as highlighted in chapter 5 none of the former have any absolute dating evidence associated with them (see Jones 2011b: 75). For the south west, Quinnell reviewed the available radiocarbon dates for barrows which were predominantly from Cornwall with a few from Devon (e.g. Christie 1988; Quinnell 1988: fig 1, 5; Smith 1979) and concluded the majority of barrows and related monuments could reasonably be regarded as Early Bronze Age in the south west dating to between 2000BC and 1500BC with a peak around 1800BC; a picture which is still supported by the present data (Quinnell 1988: 4-5; Quinnell 1997: 34; Pollard and Healy 2008: 77; See Jones 2011b: 68-71 for an updated review). Given the Middle Bronze Age dates associated with the ring cairn at Shallowmead and the cairn at Bratton Down (see Quinnell 1997: 34), it is possible that the chronology of the construction of some cairn types (e.g. ring cairns or smaller cairns) is more long lived on Exmoor, although there is simply too little evidence to understand how representative this is of Exmoor's sites more widely (c.f. Quinnell 1988: 8-9). It is not currently possible to examine if there were any distinct later horizons of major cairn or barrow building in the Middle or Later Bronze Age or to understand fully the chronology or the variety of different forms on Exmoor because so little detailed investigation has taken place.

The cists also likely date to the Early Bronze Age and at least some of the examples of stand-alone cists on Exmoor are known to have once been covered by barrows or cairns, for example the cist in Langridge Wood (Riley and Wilson-North 2001: 7). Whilst the records are extremely limited, some artefactual material is known to have been

recovered from barrows or cairns through antiquarian activities, including an Early Bronze Age cordoned urn containing cremated remains in a cist from one of the Brokenbarrow round mounds (Riley and Wilson-North 2001: 8, 21-22, fig 2.9). A beaker was recovered from a stone cist (named the Culbone cist) accompanying an inhumation burial on Yenworthy Common in 1896 (Elworthy 1896; Riley and Wilson-North 2001: 7, fig 1.7, 21, fig 2.8), and the date range of beaker ceramics places this in the range circa 2600-1800 BC (Riley and Wilson-North 2001: 21; Kinnes *et al*. 1991). Finally with regards to the burial practices in the south west during the Late Neolithic - Early Bronze Age, previous research has highlighted regional distinctions, especially in the nature of burials associated with the beaker phenomenon (e.g. Quinnell 1988; Jones 2011a). First, Early beaker burials do not occur in the SW peninsula and when they do appear, they are later in date and associated with cremation practices, which led Jones to argue there was no established tradition of individual inhumations that might be suggestive of the construction of individualised identities during burial rituals (2011a: 71). This is interesting given the highlighted tendency on Exmoor for barrows to overlie a primary cremation burial in a cist, rather than an individual inhumation burial (Riley and Wilson-North 2001: 32). Second that the earliest pre-2000BC beakers are not found with burials but in other contexts and it is only from 2000BC they are incorporated into burial practices, where they are usually but not exclusively associated with cremations (Jones 2011b: 68). This highlights the potential regional distinctiveness of the evidence from Exmoor and demonstrates that the chronology suggested in the SWARF, may well have limited usefulness. It is not clear when beaker or round barrow burials start to occur on Exmoor in absolute terms, or how this relates to the SWARF chronological framework derived from Needham's work (Pollard and Healy 2008: 76-77; Needham 1996).

At present the stone monuments cannot be dated other than by analogy and are generally thought to fall within the Late Neolithic-Early Bronze Age period (Riley and Wilson-North 2001: 23; Todd 1987: 103). Therefore the Early Bronze Age on Exmoor could have witnessed the emergence and zenith of the raising of upright stones into various configurations (i.e. rows, circles, settings, paired and individual stones) but this

cannot be confirmed at present. Recent research by Carnes has highlighted the paucity of any secure dating evidence for stone rows in Britain generally, which are argued to date to the Early Bronze Age, or the Bronze Age in general (e.g. Emmet 1979), purely on the basis of their apparent association with either undated Bronze Age cairns, or their proximity to other evidence such as nearby ceramic finds (2014: 21-24). The stone rows on Exmoor are undated but may well date to the Early Bronze Age, although the potential for them to fall later or earlier in time certainly exists. Carnes also highlighted the highly atypical nature of the recumbent stone row on Cut Hill, Dartmoor, the construction of which was recently radiocarbon dated to the 4th millennium BC (Fyfe and Greaves 2010: 62-63, 66; Carnes 2014: 24). This data from such an unusual site, is therefore of little use in building a wider chronological understanding of stone rows in Britain until more sites can be dated through absolute means. Grinsell favoured an Early Bronze Age date for the standing stones, circles and rows on Exmoor and in the wider region but acknowledged the unusual nature of the settings, pointing out that they might belong to anytime between the 3rd millennium BC and the 19th Century (1970: 38, 47). Subsequent research on Exmoor has demonstrated they clearly belong to the suite of small and large upright stone configurations occurring in Britain in the 3rd and 2nd millenniums B.C. and although there is no dating evidence it is possible the linear settings, at least at Lanacombe, could be connected with the emergence of an Early-Middle Bronze Age field system (see chapter 2; Gillings 2013 and 2015a,b,c).

1.4 Late Early Bronze Age (1700-1500 BC)

The limited, yet critically important absolute dating evidence from Lanacombe discussed in chapter 5, was used by Gillings to suggest the possibility that the development of an embryonic co-axial field system defined by small cairns, stakes, stone spreads and shallow gulley's may have taken place during the Early-Middle Bronze Age, possibly predating the later more substantial complex field systems on Exmoor, perhaps as an equivalent to the pre-reave phases of activity that are known but poorly understood on Dartmoor (Gillings 2013: 65; e.g. Fleming 1988). The Lanacombe III structure (with a TPQ date range of 1604-1433 Cal BC) also appears to

belong to the Early to Middle Bronze Age transition with several other unconfirmed examples in other areas of the moor suggested by geophysical survey (Gillings 2013: 62, 65). Thus whilst this remains the only Bronze Age field system on Exmoor to have any absolute dating evidence associated with it, it would appear that significant changes occurred on Exmoor at this time. This is in terms of the intensity and complexity of land use in the uplands, with the first archaeologically visible bisection of small areas of the landscape by discontinuous and ephemeral anthropogenic structures of stone and timber.

1.5 Middle Bronze Age (1500-1200 BC)

The excavations at Shallowmead did uncover evidence of clearance heaps or stone spreads that although undated, might suggest further evidence of the appearance of the first visible field structures possibly during the Middle Bronze Age, potentially adding to the picture of a more intense utilisation of the landscape which appears to have begun at the very end of the Early Bronze Age (see Quinnell 1997). At present there is no dating or excavation evidence for the 10 or so known complex, extensive fieldsystems which are defined on Exmoor by more substantial banks, cairns and enclosures, and which sometimes include house platforms or hut circles (both enclosed and unenclosed). However it is likely that some of these field systems developed during the Middle Bronze Age and continued into the Late Bronze Age (Riley and Wilson-North 2001: 40-42). This is purely on the basis of analogy with other areas of Britain, where for example on Dartmoor rather limited dating evidence suggests the extensive reave systems developing circa 1700-1600BC (Fleming 1988: 105, 107-110). The dating evidence from Holworthy discussed in chapter 5 is comparable to other landscapes, suggesting substantial round houses were being built during the Middle Bronze Age, but the emergence and chronology of round house architecture and round house settlements is still poorly understood in upland contexts in Britain. Radiocarbon dates from Dartmoor suggest the earliest occupation of the hut circles on Shaugh Moor from circa 1500BC, whilst at Bellever the discovery of trevisker pottery suggested a date of 1500 to 1150BC, which was supported by

radiocarbon dates from charcoal suggesting occupation between 1610-1400BC (Wainwright *et al.* 1980: 109-110; Quinnell 2009: 4; Newman 2011: 65; see DDHER MDV5919). The chronological relationship on Exmoor between the kind of ephemeral circular structure defined by Gillings (2013: 56-62) and the more substantial house platforms is impossible to define at present, given that only a single round house has ever been excavated and securely dated. These entities could relate to subsequent phases of the development of visible and increasingly substantial house architecture and field systems, although these need not be that far separated in time. Alternatively these features might actually be different parts of the same system of landscape inhabitation that are partly co-existent, and the possibility exists that the activities at Lanacombe II and III could partially overlap with those at Holworthy Farm (see chapter 5).

Appendix 2 Absolute chronology data

Table A 1: Radiocarbon dating evidence for the Neolithic and Bronze Age on Exmoor. Produced by the author with sources indicated in the table. Note that the dates for Shallowmead and Bratton Down were recalibrated by the author using OxCal 4.2.4 with the IntCal13 atmospheric curve.

Site or find type	Summary	Location	Material sampled	Context	Associated artefacts	Interpretation (by excavator/in report)	Uncal BP	Cal BP	Cal BC	Cal BC (upper limit)	Cal BC (lower limit)	Probability	Lab code	Primary Cal BC range (Lanacombe only)	ENP HER Monument ID	Source
Ring cairn	Ring cairn, Shallowmead (HAR-2829)	Shallowmead	Charcoal, Oak, from mature timbers.	Buried soil (33) under entrance stones (6)			3060±80	—	1500-1107	1500	1107	94.3% at 2σ	HAR-2829		MDE1206	Quinnell 1997: 25-26.
Cairn	Cairn, Bratton Down (BM-1148)	Bratton Down	Charcoal, species not identified. May have been Oak sapwood from narrow roundwood or hazel, which weere later identified from the same context.	Beneath a stone slab in a pit.	Cremated bone, soil and Trevisker ware sherds were found on top of the slab, possibly contained in a wooden cist.		2832 ± 42	—	1122-895	1122	895	95.4% at 2σ	BM-1148		None (outside ENP)	Quinnell 1997: 6-7, 12-13.
Cairn Porlock Circle	Cairn, Porlock Circle (SUERC-53021)	Porlock Circle	Charcoal, gorse	Buried soil (203), which sealed primary cairn material			3091 ± 29	—	1426-1279	1426	1279	95.4% at 2σ	SUERC-53021		MSO7926	SUERC radiocarbon dating certificate and Gillings 2015.
Burnt mound	Burnt mound, Spooner's moor (SUERC-56652)	Spooner's Moor	Charcoal, bulk sample	Body of burnt mound (103)			3804±32	—	2346-2138	2346	2138	94.8% at 2σ	SUERC-56652		MEM22478	SUERC radiocarbon Dating Certificate and Steinmetzer 2014.
Lanacombe cairn 2	Cairn 2, Lanacombe (SUERC-34247)	Lanacombe	Charcoal, bulk sample	Buried soil (309)			3405±30	—	1769-1625	1769	1625	95.4% at 2σ	SUERC-34247	1862-1622	MEM22099	Gillings 2013: table 1, 46
Lanacombe cairn 2	Cairn 2, Lanacombe (SUERC-34248)	Lanacombe	Charcoal, bulk sample	Buried soil (309)			3220±30	—	1599-1429	1599	1429	95.4% at 2σ	SUERC-34248	1605-1421	MEM22099	Gillings 2013: table 1, 46
Lanacombe cairn 2	Cairn 2, Lanacombe (SUERC-34246)	Lanacombe	Charcoal, Oak, bulk sample	Turf layer (305)			3300±30	—	1666-1501	1666	1501	95.4% at 2σ	SUERC-34246	1664-1501	MEM22099	Gillings 2013: table 1, 46
Lanacombe cairn 2	Cairn 2, Lanacombe (SUERC-34249)	Lanacombe	Charcoal, bulk sample	Turf layer (305)			3395±30	—	1753-1619	1753	1619	95.4% at 2σ	SUERC-34249	1757-1616	MEM22099	Gillings 2013: table 1, 46
Lanacombe cairn 2	Cairn 2, Lanacombe (SUERC-27930)	Lanacombe	Charcoal, bulk sample	Cist fill (009)			3835±30	—	2459-2155	2459	2155	95.4% at 2σ	SUERC-27930	2458-2200	MEM22099	Gillings 2013: table 1, 46

Site or find type	Summary	Location	Material sampled	Context	Associated artefacts	Interpretation (by excavator/in report)	Uncal BP	Cal BP	Cal BC	Cal BC (upper limit)	Cal BC (lower limit)	Probability	Lab code	Primary Cal BC range (Lanacombe only)	ENP HER Monument ID	Source
Lanacombe III circular structure	Circular structure, Lanacombe III (SUERC-27929)	Lanacombe	Charcoal, bulk sample	Buried soil (411)			3605±30	—	2034-1887	2034	1887	95.4% at 2σ	SUERC-27929	2034-1887	None, geophysical anomaly is noted in MSO6949 (Lanacombe III stone setting)	Gillings 2013: table 3, 4, 60
Lanacombe III circular structure	Circular structure, Lanacombe III (SUERC-34255)	Lanacombe	Chancoal, single sample	Surface of (411)			3135±30	—	1491-1321	1491	1321	95.4% at 2σ	SUERC-34255	1495-1317		Gillings 2013: table 3, 4, 60
Lanacombe III circular structure	Circular structure, Lanacombe III (SUERC-34254)	Lanacombe	Charcoal, bulk sample	Compacted surface (408)			3425±30	—	1873-1639	1873	1639	95.4% at 2σ	SUERC-34254	1875-1634		Gillings 2013: table 3, 4, 60
Lanacombe III circular structure	Circular structure, Lanacombe III (SUERC-34253)	Lanacombe	Charcoal, bulk sample	Burning layer (401)			3280±30	—	1628-1495	1628	1495	95.4% at 2σ	SUERC-34253	1631-1464		Gillings 2013: table 3, 4, 60
Lanacombe III circular structure	Circular structure, Lanacombe III (SUERC-27928)	Lanacombe	Charcoal, bulk sample	Burning layer (401)			3230±30	—	1604-1433	1604	1433	95.4% at 2σ	SUERC-27928	1606-1431		Gillings 2013: table 3, 4, 60
Hearth Farley Hill	Hearth, Farley Hill (SUERC-52978)	Farley Hill (BFH14)	Charcoal, unknown	Layer of charcoal and burnt sandstone fragments (103)			3977±29	—	2577-2456	2577	2456	95.4% at 2σ	SUERC-52978		None	SUERC radiocarbon dating certificate; Dr L. Bray pers comm.
Charcoal layer Farley Hill	Charcoal layer, Farley Hill (SUERC-52979)	Farley Hill (BFH14)	Charcoal, unknown	Charcoal rich layer (108)			3802±29	—	2339-2140	2339	2140	95.4% at 2σ	SUERC-52979		None	SUERC radiocarbon dating certificate; Dr L. Bray pers comm.
Holworthy Farm	Holworthy Farm, fill of gulley (SUERC-17020) (GU-16319)	Holworthy Farm	Roundwood charcoal, *corylus*	Context 4231, Fill of gulley 4208, sample 2 of 2	Saddle quern on edge of gulley 4208	Presence of faecal material suggests final use of gulley for waste deposition	3060±35	—	1240-1210	1240	1210	Unknown	SUERC-17020 (GU-16319)		MDE10889	Green 2009: 63 & 65, table 1.
Holworthy Farm	Holworthy Farm, fill of gulley (SUERC-17020) (GU-12557)	Holworthy Farm	Roundwood charcoal, *Salicaceae, Corylus*	Context 4231, Fill of gulley 4208, sample 1 of 2			2990±60	—	1400-1020	1400	1020	Unknown	SUERC-17020 (GU-12557)			Green 2009: 65, table 1.
Holworthy Farm	Holworthy Farm, fill of post hole (SUERC-17025)	Holworthy Farm	Sapwood charcoal, *Quercus, Alnus*	Context 4261, fill of truncated post hole 4260		Part of or co-incident with post ring. Post may have either burnt in situ, or the ashes were placed in the feature.	3085±35	—	1430-1260	1430	1260	Unknown	SUERC-17025			Green 2009: 63 & 65, table 1.

Site or find type	Summary	Location	Material sampled	Context	Associated artefacts	Interpretation (by excavator/in report)	Uncal BP	Cal BP	Cal BC	Cal BC (upper limit)	Cal BC (lower limit)	Probability	Lab code	Primary Cal BC range (Lanacombe only)	ENP HER Monument ID	Source
Holworthy Farm	Holworthy Farm, fill of post hole (SUERC-9816)	Holworthy Farm	Roundwood charcoal, *Corylus*	Context 5221, fill of post hole 5219			3085±35	—	1430-1260	1430	1260	Unknown	SUERC-9816			Green 2009: 65, table 1.
Holworthy Farm	Holworthy Farm, fill of scoop (SUERC-9810)	Holworthy Farm	Sapwood charcaol, F*raxinus, sorbus* group (hawthorn)	Context 5133, fill of shallow scoop 5132			3090±35	—	1440-1260	1440	1260	Unknown	SUERC-9810			Green 2009: 65, table 1.
Holworthy Farm	Holworthy Farm, fill of post hole (SUERC-9809)	Holworthy Farm	Sapwood charcoal, *Quercus*	Context 5124, fill of post hole 5112		Part of or co-incident with post ring, large quantity of charcoal and chared post point, burning in situ or ashes placed in the feature	3125±25	—	1460-1310	1460	1310	Unknown	SUERC-9809			Green 2009: 63 & 65, table 1.
Holworthy Farm	Holworthy Farm, fill of scoop (SUERC-4937)	Holworthy Farm	Roundwood charcoal, C*orylus*	Context 4215, fill of shallow scoop 4214	Pottery sherds, loom weight, broken hammerstone	Possibly a deliberate deposit	3130±40	—	1520-1290	1520	1290	Unknown	SUERC-4937			Green 2009: 63 & 65, table 1.
Holworthy Farm	Holworthy Farm, fill in gully (SUERC-9815)	Holworthy Farm	Roundwood charcoal, C*orylus* (unknown maturity)	Context 5214, part of fill 5213 in gully 5217	80+ sherds of Trevisker ware on feature base, beneath charcoal.	Interpreted as a deliberate deposit with no in situ burning.	3135±35	—	1500-1310	1500	1310	Unknown	SUERC-9815			Green 2009: 63 & 65, table 1.
Holworthy Farm	Holworthy Farm, clay silt beneath Trevisker vessel (SUERC-9817)	Holworthy Farm	Roundwood charcoal, C*orylus*	Context 32074, clay silt beneath base of Trevisker ware vessel	Trevisker ware vessel stratigraphically above	Possibly the surface the vessel rested on, or a shallow pit base into which it was placed.	3145±35	—	1350-1310	1350	1310	Unknown	SUERC-9817			Green 2009: 65, table 1.
Holworthy Farm	Holworthy Farm, part of enclosure bank (GU-12556)	Holworthy Farm	Roundwood charcoal, C*orylus*	Context 4108, burnt material at base of stoney band 4106, part of the enclosure bank		Residue of fire where stones were to be laid, or possibly residual.	3360±50	—	1750-1510	1750	1510	Unknown	GU-12556			Green 2009: 65, table 1.
Holworthy Farm	Holworthy Farm (SUERC-20265)	Holworthy Farm	Roundwood charcoal, C*orylus*	Context 5372, fill of cut 5702, within fill 5399 of cut 5317			3460±30	—	1890-1690	1890	1690	Unknown	SUERC-20265			Green 2009: 65, table 1.
Hearth Roman Lode	Roman Lode, hearth (OxA-13871)	Roman Lode	Sapwood charcoal, *Quercus*	In situ hearth, sample 1 of 2	Hearth sealed an anthropogenic horizon containing smashed quartz with copper flecks and iron rich minerals	In situ Early Bronze Age hearth, some fragmentation due to subsidance. Possibly used for ore roasting or smelting	3526±35	—	1950-1750	1950	1750	95%	OxA-13871		MSO6804	Juleff and Bray 2007: 288, figure 5 & 289, table 1, 290
Hearth Roman Lode	Roman Lode, hearth (OxA-13890)	Roman Lode	Sapwood charcoal, *Quercus*	In situ hearth, sample 2 of 2	Hearth sealed an anthropogenic horizon containing smashed quartz with copper flecks and iron rich minerals	In situ Early Bronze Age hearth, some fragmentation due to subsidance. Possibly used for ore roasting or smelting	3508±29	—	1920-1740	1920	1740	95%	OxA-13890			Juleff and Bray 2007: 288, figure 5 & 289, table 1, 290

Site or find type	Summary	Location	Material sampled	Context	Associated artefacts	Interpretation (by excavator/in report)	Uncal BP	Cal BP	Cal BC	Cal BC (upper limit)	Cal BC (lower limit)	Probability	Lab code	Primary Cal BC range (Lanacombe only)	ENP HER Monument ID	Source
Roman Lode	Roman Lode, residual in mining waste (SUERC-10107	Roman Lode	Charcoal, *Betula*	Later mining waste		Residual material in later mining waste at top of stratigraphic sequence	3525±35	—	1950-1750	1950	1750	95%	SUERC-10107			Juleff and Bray 2007: 288, figure 5 & 289, table 1
Roman Lode	Roman Lode, residual in mining waste (SUERC-10108)	Roman Lode	Charcoal, *Corylus* or *Alnus*	Later mining waste		Residual material in later mining waste at top of stratigraphic sequence	3535±35	—	1960-1750	1960	1750	95%	SUERC-10108			Juleff and Bray 2007: 288, figure 5 & 289, table 1
Roman Lode	Roman Lode, residual in mining waste (SUERC-10106)	Roman Lode	Charcoal, *Betula*	Later mining waste		Residual material in later mining waste at top of stratigraphic sequence	5125±35	—	3990-3890 3880-3790	3990	3790	95%	SUERC-10106			Juleff and Bray 2007: 288, figure 5 & 289, table 1

Appendix 3 Discussion of other lithic assemblages

3.1 Woolhanger Estate

The finds here consisted mostly of undiagnostic debitage including three broken flake fragments (table 3.1). A miscellaneous retouched flake (ID 1926) on a siret fractured, slightly elongate shaped square flake has some slight, but fine, retouch on part of the distal end and on an upper area of the RHS. The retouch is not continuous enough to identify the purpose, although it could have been an attempt a producing a small knife which are common in Later Neolithic assemblages. A small bladelet, circa 1.8cm in length exhibits a small diffuse bulb of percussion, a small striking platform and a lip below the latter which suggests careful and deliberate bladelet production, possibly using a soft hammer (ID1929). This is further suggested by multiple neat parallel ridges on the dorsal side and evidence of core preparation in the form of a series of tiny removals on the proximal end of the dorsal surface of the bladelet which are visible with a hand lens, probably caused by edge abrasion of the core to strengthen the platform. This suggests a Mesolithic date, but without any further diagnostic material from the site, it could derive from Mesolithic or Early Neolithic activity. Finally a thumbnail scraper (ID1930) on a thick flake blank, with fine invasive retouch around the distal end and partially up the RHS of the dorsal surface may tentatively relate to Later Neolithic - Early Bronze Age activity in the area. The piece was produced on a secondary flake with some cortex remaining and the presence of a large pronounced bulb and prominent point of impact suggest a hard hammer was used to produce the flake blank.

Table 3.1: Lithic types in the Woolhanger Estate assemblage.

	Location		
	Woolhanger Estate Area 1	Woolhanger Estate Area 2	Woolhanger Estate Area 3
Bladelet	1		
Flake	2	1	
Misc. Retouched Flake	1		
Thumbnail Scraper			1
Total	**4**	**1**	**1**

Overall the assemblage suggests the production of tertiary flakes (i.e. entirely without cortex on their dorsal surfaces) and their subsequent retouch perhaps into tools in an unknown period of later prehistory, with a slight suggestion of earlier activity. The thumbnail scraper could relate to later Neolithic-Early Bronze Age activity, and perhaps be associated with the possible henge or disc barrow, or the other funerary monuments in the wider area. It could also relate to the presumably later, perhaps Bronze Age house platform close to the putative henge. Finally a broken flint fragment which may be a part of a tiny flake (or chip), was recovered from the surface spoil of a molehill on the inside of the bank of the henge /disc barrow during the project's fieldwork[2]. This might tentatively suggest knapping taking place in the vicinity of the ditch and bank of the monument, although no other pieces were visible in the surface spoil of the other molehills.

3.2 Pinkery Exploration Centre

The finds here consisted of an undiagnostic collection of predominantly flake debitage, along with a single tool, totalling 13 pieces (table 3.2). The flint raw materials utilised varied considerably in colour with dark brown, dark grey, brownish-black, grey, and a single greenish orange-brown flake fragment that might be from a gravel flint source.

[2] However the small size of this piece makes any certain identification as worked very difficult.

Table 3.2: Lithic types in the Pinkery Exploration Centre assemblage.

	Frequency	Percent
Flake	9	69.2
Blade-like	2	15.4
Thumbnail Scraper	1	7.7
Unclassifiable/Fragmentary Core	1	7.7
Total	**13**	100.0

Whilst the evidence is slight, there is a suggestion that two different technological traditions of flint working are represented, although their relationship in terms of time is difficult to establish. Firstly we have a flake based technology characterized by small sized pieces, with some step fractures evident on the dorsal surfaces, and two primary flakes (ID1430 and ID1437). One flake (ID1427) has opposed negative scars on the dorsal surface suggesting the core was being worked from opposed directions, whilst another (ID1431) has negative scars on the dorsal surface from three different directions, suggesting a high degree of core rotation was taking place. All of this suggests the reduction of pebble cores (including the primary stage) was taking place on site, which is supported by the presence of a fragmented flint pebble with a few removal scars evident (ID1434). All of the characteristics described here might tentatively suggest this mode of working is consistent with it taking place in the Neolithic or Bronze Age, but it is not particularly diagnostic to any specific period.

A slight residue of a different technological approach is represented by the two blade-like flakes (ID1432 and ID1436). Both of these are broken, with multiple and neat negative linear removal scars on their dorsal surfaces, with evidence of core edge preparation at the proximal end on the former edge of the core and a diffuse bulb on one piece (ID 1432). The latter consists of multiple linear and neat removals to prepare the edge of the platform. Whilst it is very difficult to date a couple of isolated blade-like flakes, the evidence of core preparation and a diffuse bulb is characteristic of Mesolithic blade production (see Waddington 2004: 28; Butler 2005: 84).

The solitary tool within the assemblage is a thumbnail scraper on a small flake (ID1438), with semi abrupt retouch around the proximal end and partially onto the sides whilst the distal end remains cortical. The scraper has evidence of light burning, with slight signs of the distinct crazy-paving effect with blue lines and a greyish white discolouration. The retouch is clumsy with multiple step fractures present and whilst a single scraper is difficult to date specifically, it is most likely to be Bronze Age.

Overall, the evidence suggests the primary and secondary reduction of pebble cores during later prehistory, which may be broadly Neolithic or Bronze Age but cannot be specifically defined chronologically, with a slight trace of earlier Mesolithic or Early Neolithic activity.

3.3 Ashton Farm

The material here comprises 102 pieces of worked flint, of which a large proportion is debitage at 65.8 % (including cores, flakes, blade-like flakes, rejuvenation pieces and all other waste items) (table 3.3). The assemblage is characterized by a high proportion of formal tools comprising 30.4% of the total material from the site (table 3.3). The raw materials utilised were all flints in a variety of colours, including one possible gravel flint and some chalkland flint that may have originated from a primary source. As with all the assemblages the extent of patination is mixed, with heavy, medium and only very lightly patinated pieces present.

Table 3.3: Lithic types in the Ashton Farm assemblage.

	Frequency	Percent
Flake	46	45.1
Blade-like	3	2.9
Rejuvenation Flake Core Face/Edge	1	1.0
Rejuvenation Flake Other	1	1.0
Irregular Waste	1	1.0
Chip	1	1.0

	Frequency	Percent
Other/Unclassifiable (General)	1	1.0
Misc Retouched Flake	4	3.9
Endscraper	10	9.8
Side Scraper	4	3.9
End and Side Scraper	1	1.0
Disc Scraper	5	4.9
Thumbnail Scraper	4	3.9
Other Scraper	2	2.0
Other Knife	1	1.0
Fragmentary/Unclass/Other Arrowhead	1	1.0
Single Platform Blade Core	1	1.0
Tested Nodule/Bashed Lump	4	3.9
Single Platform Flake Core	2	2.0
Unclassifiable/Fragmentary Core	1	1.0
Core on a Flake	5	4.9
Double-ended Scraper	1	1.0
Scraper & Knife	1	1.0
Axe Roughout/Axe Fragment	1	1.0
Total	**102**	100.0

Table 3.4: General lithic types in the Ashton Farm assemblage.

	Frequency	Percent
Flake	48	47.1
Blade-Like Flake	3	2.9
Misc. Waste	2	2.0
Cores	13	12.7
Retouched or Utilised Flake or Blade	4	3.9
Formal Tools	31	30.4
Other	1	1.0
Total	**102**	100.0

The debitage element of the material is predominantly flake based, with a mixture of smaller and larger thick flakes many of which derive from working flint pebbles and a small quantity of larger nodular flint. A few show large pronounced bulbs suggesting hard hammer working. As a group their characteristics are consistent with Later Neolithic-Early Bronze Age flint working (although they are not hugely diagnostic) which include a number of broken or fragmented pieces, signs of crushing and step fractures, a few flakes with plunging terminations and a number of siret fractured

pieces. All of these features point to a lessening of concern with control over the knapping process at this time and there is a willingness to work some quite poor quality raw material at Ashton Farm. The fragmentation of pieces may also point to a technological strategy that maximised the number of useful pieces from the available material. The presence of both primary, secondary and tertiary flakes suggests all stages of core reduction were taking place on site, although the palimpsest nature of the assemblage means that it is not clear whether this was always the case in all periods of activity. The three blade-like flakes in the assemblage look accidental rather than deliberate attempts at blade production, they are irregular, one has a pronounced bulb, another a cortical platform and there are no signs of core preparation.

The cores present in the assemblage demonstrate an almost exclusively flake based techno-complex at Ashton Farm produced by working and splitting flint pebbles. The five cores on flakes in the assemblage are all the result of the splitting of flint pebbles which are then worked from a single platform frequently exhibiting only a few flake removals. The cores generally demonstrate quite untidy flint working, and a number show evidence of crushing, frequent step fractures and edge recession. The presence of bashed lumps or tested pieces with only ad-hoc removals suggests primary stages of knapping are occurring on the site, probably using flint pebbles transported from limited secondary sources on Exmoor's coastline. Finally there is a single example of a pebble bladelet core (ID1346) which exhibits severe edge recession on the working face and multiple step fractures and was probably discarded when no longer workable. The working of the bladelet core is untidy and does not look Mesolithic in character; it is therefore possible it relates to continued use of small blade technology into the Neolithic and Bronze Age on Exmoor, as tentatively suggested by the evidence at Lanacombe (Pollard 2013b: 67-69). It is also possible this was a Mesolithic apprentice piece.

The tool element of the assemblage is dominated by a group of 27 scrapers of a variety of types including for example disc, side, thumbnail and end scrapers. These are characteristically small and generally on thick or quite chunky flakes, although a few larger examples are present. The vast majority show poor control over the knapping process, with some showing frequent signs of crushing and severe receding step fractures (edge recession) on the working edge of the scraper. A couple of examples are described here to highlight their character. Firstly the disc scraper ID 1319 was produced on a thick, sub-rounded shaped flake with a slightly dipping profile circa 2.7cm wide. Abrupt retouch was present around the distal end, all of one side and most of the other side, whilst some cortex remains on the dorsal surface. One area of the distal end had been retouched to the point of exhaustion, with repeated step fractures causing a receding edge. The bulb of percussion has been left in place, with an incipient cone present on the proximal end behind it, with severe crushing evident on the former. There are other similar scrapers in the assemblage, and whilst their chronology is difficult to define with certainty, such pieces tentatively suggest Neolithic or Bronze Age activity, most likely Later Neolithic or Early Bronze Age rather than earlier, although given the possible broken leaf shaped arrowheads at the site, some of these scrapers could also be Early Neolithic in date. Several of the end, side and thumbnail scrapers are on small thick flakes and exhibit very poor knapping control, with frequent crushing, whilst several are on mostly, or entirely, cortical flakes. The suggestion here is that some of these are likely to be Bronze Age, possibly Middle Bronze Age, but again this can only be a tentative interpretation. Whilst the scrapers are problematic to date specifically, the character of those present here are consistent with what would be expected in a broadly Neolithic or Bronze Age assemblage. A short unpublished report on the assemblage in the Exmoor HER archive highlights that some of the scrapers are made on core rejuvenation flakes, and that the general character of them is 'unusual' although no specific reasons are given (Plummer *et al.* 2000). This may well reflect the adoption of highly adaptable working strategies that were dependant on what raw material was available, and the need to utilise all workable pieces due to the limited availability of flint in the area. The tentative interpretation put forward here, is that the assemblage represents a palimpsest of activity taking place in the Middle or Later Neolithic-Early Bronze Age periods, with some possible

Middle Bronze Age activity. Perhaps most tellingly, the assemblage from Ashton Farm does not contain anything that is conclusively diagnostic of Mesolithic activity.

In terms of other tools, one fragmented point (which may be a leaf shaped arrowhead) suggests Neolithic activity at the site, but this is difficult to classify with certainty as it is only a partial fragment with one half missing (ID1322). The fragment is triangular in shape with one rounded corner, exhibiting retouch on the dorsal surface and very limited retouch on the ventral side. If this is a partial leaf shaped arrowhead, it is an expedient rather than a carefully worked example, or perhaps a blank which broke during manufacture. Another tool fragment has been tentatively classified as an 'other knife' in table 3.3 (ID1320), although it could be another partial leaf shaped arrowhead. This fragment has careful invasive retouch by pressure flaking across the entire remaining dorsal surface, with one semi abrupt edge and one edge with a very low angle, whilst no retouch was visible on the ventral side. The thickness perhaps makes the interpretation of the fragment as a knife more likely, but it could equally be an unfinished leaf arrowhead which broke during manufacture or use. The quality of the workmanship also tentatively suggests a Neolithic origin. Another potentially diagnostic item is a flaked axe fragment (ID1324), which has an area of bifacial flaking with one more gradual and one semi abrupt edge, with a surface adjoining the latter that is clearly a break which joins the semi abrupt edge at an angle of circa ninety degrees. This is likely to be a fragment of a Neolithic flaked flint axe, but it is not clear whether it broke through shock during use, or if it was deliberately broken to utilise the material for another less prosaic reason. The few large removals on the semi abrupt edge would suggest that some limited attempt was made to use the fragment as a core, whilst the patination is consistent across all the surfaces suggesting the breaking of the axe and subsequent working took place at the same time in the Neolithic.

3.4 Porlock

The material discussed here has issues regarding provenance. For example, based on a study of secondary sources the macehead appears most likely to have come from Ash Farm, although confusion exists over the exact location. The Porlock assemblage consists of a small group of twenty four items, few of which are diagnostic (table 3.5). The material from the submerged forest bed is likely to be Mesolithic in date. The landscape context of the finds here is notably different, with the material originating from the submerged forest bed on the coast, material picked up in gardens of the present day village and items probably from the fields on the wider Vale of Porlock. The difference in landscape context is significant as this is a low lying flat area which is particularly fertile; a coastal plain with easy access to the sea. Only a few kilometres from here on the uplands and high plateaus of Porlock Hill and beyond to the south is an area which is rich in evidence for Late Neolithic and Bronze Age activity in terms of monuments, house platforms and complex field systems.

The assemblage is predominantly debitage with 17 flakes which were quite mixed in terms of raw material colour and in the extent of patination; once again we are confronted by a complex palimpsest of activity over time. They seem to represent the secondary stages of reduction (no cortical or primary flakes were evident) are generally small and some are broken fragments. Other than suggesting the secondary reduction of presumably small flint pebbles in later prehistory this material is not diagnostic. This is suggested by the single fragmentary flint pebble core (ID1276), probably discarded as it split during working, which has been worked from two platforms with at least four negative removal scars (one linear and some flake-like). The blade is a small, well-worked piece which is likely to be Mesolithic, along with the bladelet. Once again, on their own these items are not hugely diagnostic; they might be broadly Mesolithic or Early Neolithic or even later given the presence of a bladelet within a late Early Bronze Age context at Lanacombe (see Chapter 2; Gillings 2013: 60).

The single thumbnail scraper is difficult to place in terms of date. The piece is on a thick, rounded, squat flake with regular retouch around the end, with less controlled retouch on the side and with the bulb of percussion left in place. A long step fracture runs along most of the scraping edge, with edge recession and crushing apparent. This tentatively suggests a Bronze Age date but scrapers are very difficult to date precisely as individual finds.

Table 3.5: The lithic assemblages from the Porlock Area.

	Location				
	Ash Farm Porlock	Porlock	Porlock Beach Submerged Forest	Porlock near to Submerged Forest	Total
Blade	0	1	0	0	
Blade-like Flake	0	0	0	1	
Bladelet	0	1	0	0	
Flake	0	17	0	0	
Macehead	1	0	0	0	
Thumbnail Scraper	0	1	0	0	
Unclassifiable/Fragmentary Core	0	0	1	0	
Utilised/Edge Damaged Flake	0	1	0	0	
Total	**1**	**21**	**1**	**1**	**24**

3.5 Luccombe

Only a small assemblage was recorded from this area as detailed in table 3.6 and only a few items have a specific known findspot. Of these items the debitage and scrapers are not particularly diagnostic. The flake (ID 1086) from Ley Hill appears to have been struck on unusual material, possibly white quartzite, from an opposed or multiple platform flake core with edge recession and crushing evident on the proximal end of the dorsal surface (the former edge of the core). The second flake (ID 1038) has a large and pronounced bulb, and may have been removed to rejuvenate the core face. The main axis of the flake is at 90 degrees to the previous removal facets on the dorsal surface which are characterised by small removals. Of the end and side scrapers, ID 1039 is broken (an ancient break) and was produced on a thick blank, which may have

been from a blade but this is difficult to determine from what remains. This scraper has heavy retouch around most of the remaining end and side, and exhibits iron spotting and possible plough damage. The second end and side scraper (ID 1040) was produced on a small thick flake which has retouch around the end and most of the side to within 0.5cm of the flake butt. This piece is rather small to be classed as a horseshoe type and a little large to be classed as a thumbnail scraper. This item is extremely difficult to date specifically.

Table 3.6: Lithic types in the Luccombe assemblages.

		Location				
		Luccombe	Luccombe 2	Luccombe Ley Hill	Luccombe Wootton Courtenay	Total
Flake	Count		1			**1**
	% within Location		20.0%			**12.5%**
Rejuvenation Flake Core Face/Edge	Count			1		**1**
	% within Location			100.0%		**12.5%**
End and Side Scraper	Count		2			**2**
	% within Location		40.0%			**25.0%**
Thumbnail Scraper	Count		1			**1**
	% within Location		20.0%			**12.5%**
Leaf Arrowhead	Count				1	**1**
	% within Location				100.0%	**12.5%**
Axe Roughout/Axe Fragment	Count	1				**1**
	% within Location	100.0%				**12.5%**
Macehead	Count		1			**1**
	% within Location		20.0%			**12.5%**
Total	**Count**	**1**	**5**	**1**	**1**	**8**

The polished axe fragment (ID1004) and leaf shaped arrowhead (ID1024) are more diagnostic, both broadly dating to the Neolithic. The former was identified as greenstone by Grinsell (1970: 186) and consists of around half of an axe, with an ancient break (where the surface patina is consistent with the rest of the axe) in what was probably the central area of the tool, perhaps close to the point of hafting. Both long edges of the axe are generally rounded, whilst the broad end has a honed blade tip with a more acute angle. However, this is still not particularly sharp and questions

whether the piece could ever have been used; perhaps it is actually unfinished. The surviving blade on the broad end is still intact, with only a single area of damage, consisting of a small negative flake scar with a different, dark brownish-pink patina. The surface still retains a rough texture, with small dark-black grey inclusions within the stone matrix protruding slightly. It is possible that this is an unfinished piece which has been partly shaped through grinding and polishing, but it has not been finely polished and the cutting edge was never honed completely. There are no signs as to why the piece fractured, and this could have occurred by accident during manufacture. Alternatively given the break is in the area where a haft may have contacted the stone, attempts to use an unfinished axe with a blunt edge may have resulted in the piece breaking on impact at this point of stress.

The leaf shaped arrowhead (ID1024) is the most diagnostic find, which suggests potentially Early Neolithic activity. The example here is a small and very finely worked piece made on a translucent light brown flint which has been retouched with invasive pressure flaking over all of both surfaces, whilst the very tip of the point has broken off. Further damage is evident with a break on the base of the arrowhead, whilst the patina is consistent between the broken surface and the rest of the piece suggesting this is an ancient break. These breaks are consistent with the interpretation that the damage occurred as the piece was fired rather than during manufacture. However, given the small size and fragility of the piece, accidental trampling during prehistory is also possible. Finally the hour-glass perforated macehead (ID1007) is a complete, well worked example made from brown quartzite which was found buried at depth, suggesting it may have been disturbed from an archaeological context. Some recent damage is evident with a flake detached from part of the surface exhibiting a lighter colour and patina. Some damage is evident on the edges of the piece which has an oval shape, whilst more continuous surface damage around the longer edges and end may suggest it was used as a hammer, with slight crushing/flattening of the polished surface, although this could represent general surface damage that may be post depositional. Perforated maceheads are not well dated artefacts, and have been found with possible Neolithic, or Late Neolithic-Early Bronze Age associations, possibly

including Grooved Ware (Roe 1979:30; Edmonds 1995: 96, 103, 108, 110-111, 143; Waddington 2004: 45-46).

All that can be said regarding interpretation for Luccombe, is that these few fragments represent much larger assemblages of flint working and activities in the landscape which have deterritorialised and left little surviving trace, with some activity indicated in the Neolithic and possibly the Bronze Age, which might have included woodland clearance and task specific activities (e.g. hunting, scraping tasks).

3.6 Selworthy and Selworthy Beacon

The lithic assemblage from the Selworthy area comprises a total of 297 worked pieces (table 3.7) and information in the ENP HER indicates this group of material originated from a number of locales in the area. At least eighteen of the pieces examined are probably those collected from an area close to Selworthy Beacon by A.L. Wedlake[3], an undiagnostic group of flakes, bladelets and blade-like flakes some of which exhibit evidence of severe edge recession and crushing, which is typical of Later Prehistoric assemblages generally. A denticulate, or saw within the Cornish collection was specifically marked as from Selworthy, Blackford and might be of Early Neolithic date. The HER records a number of groups of finds from the area, but it is not possible to identify the finds within the collection to all of these specific locations. Therefore all that can be done here is to treat this as a regional aggregate assemblage for a large area, discussing the Selworthy material as a whole. The group from above Selworthy Coombe is discussed separately in section 3.6.2. The material in table 3.7 certainly represents a palimpsest from a greater number of locations and according the ENP HER (MSO8013) a much larger quantity of material was collected from Blackford farm than could be located for examination here.

[3] The flints were marked AL Wedlake with accession number 50.A.9 and the material was located with the flints from Selworthy in the Cornish Collection. These probably belong to one of the sites recorded in the ENP HER in the Selworthy area (Near to Selworthy Beacon) from which A.L. Wedlake is known to have recovered lithics.

Table 3.7: Lithic types in the Selworthy assemblages.

		Field above Selworthy Combe	Near Selworthy Beacon? (A.L. Wedlake)	Selworthy 1 (SS 924 481)	Selworthy 2 (SS 923 471)	Selworthy Blackford (Blackford Farm?)	Selworthy unknown location	
Flake	Count	29	8		6		33	**76**
	%	37.2%	44.4%		27.3%		18.6%	**25.6%**
Blade	Count	3					2	**5**
	%	3.8%					1.1%	**1.7%**
Bladelet	Count		4				5	**9**
	%		22.2%				2.8%	**3.0%**
Blade-like	Count	8	6				3	**17**
	%	10.3%	33.3%				1.7%	**5.7%**
Rejuvenation Flake Core Face/Edge	Count						1	**1**
	%						0.6%	**0.3%**
Axe Sharpening Flake	Count						2	**2**
	%						1.1%	**0.7%**
Other/Unclassifiable (General)	Count	1						**1**
	%	1.3%						**0.3%**
Misc Retouched Flake	Count	10					15	**25**
	%	12.8%					8.5%	**8.4%**
Utilised/Edge Damaged Flake	Count	3			2		8	**13**
	%	3.8%			9.1%		4.5%	**4.4%**
Endscraper	Count	4			2		17	**23**
	%	5.1%			9.1%		9.6%	**7.7%**
Side Scraper	Count						3	**3**
	%						1.7%	**1.0%**
End and Side Scraper	Count						11	**11**
	%						6.2%	**3.7%**
Disc Scraper	Count						5	**5**
	%						2.8%	**1.7%**
Thumbnail Scraper	Count	1		1			7	**9**
	%	1.3%		100.0%			4.0%	**3.0%**
Other Scraper	Count						2	**2**
	%						1.1%	**.7%**
Awl	Count						5	**5**
	%						2.8%	**1.7%**
Piercer	Count						1	**1**
	%						0.6%	**0.3%**
Denticulate	Count					1		**1**
	%					100.0%		**0.3%**
Notch	Count	4					10	**14**
	%	5.1%					5.6%	**4.7%**
Plano-Convex Knife	Count						2	**2**
	%						1.1%	**0.7%**
Other Knife	Count	4						**4**
	%	5.1%						**1.3%**
Leaf Arrowhead	Count				5		12	**17**
	%				22.7%		6.8%	**5.7%**
Barbed and Tanged Arrowhead	Count				1			**1**
	%				4.5%			**0.3%**
Triangular Arrowhead	Count	1					1	**2**
	%	1.3%					0.6%	**0.7%**
Unfinished Arrowhead/Blank	Count						2	**2**
	%						1.1%	**0.7%**
Fragmentary/Unclass/Other Arrowhead	Count				4		3	**7**
	%				18.2%		1.7%	**2.4%**
Single Platform Blade Core	Count						4	**4**
	%						2.3%	**1.3%**
Bipolar (Opposed Platform) Blade Core	Count						1	**1**
	%						0.6%	**0.3%**
Other Blade Core	Count						3	**3**
	%						1.7%	**1.0%**
Single Platform Flake Core	Count						1	**1**
	%						0.6%	**0.3%**
Multi-Platform Flake Core	Count						1	**1**
	%						0.6%	**0.3%**
Keeled Non-Discoidal Flake Core	Count						1	**1**
	%						0.6%	**0.3%**
Levallois/ Other Discoidal Flake Core	Count						2	**2**
	%						1.1%	**0.7%**
Double-ended Scraper	Count						1	**1**
	%						0.6%	**0.3%**
Scraper & Knife	Count						1	**1**
	%						0.6%	**0.3%**

		Field above Selworthy Combe	Near Selworthy Beacon? (A.L. Wedlake)	Selworthy 1 (SS 924 481)	Selworthy 2 (SS 923 471)	Selworthy Blackford (Blackford Farm?)	Selworthy unknown location	
Spurred Implement	Count						3	**3**
	%						1.7%	**1.0%**
Edge Damaged/Utilised Blade	Count	1					3	**4**
	%	1.3%					1.7%	**1.3%**
Retouched Blade	Count	9			2		6	**17**
	%	11.5%			9.1%		3.4%	**5.7%**
Total	**Count**	**78**	**18**	**1**	**22**	**1**	**177**	**297**

3.6.1 Selworthy General Area

The assemblage overall is characterized by a high proportion of formal tools (38.4%) with a slightly higher proportion of debitage (41.1% in total), along with a high percentage of retouched or utilised flakes or blades (19.9%) (table 3.7 and table 3.8). Raw material and patination extent were not recorded individually, but it was noted that the raw material utilised and patination extent were varied and consisted mainly of flints, including black, grey-black, black-greenish, grey, and banded grey flints, along with a smaller proportion of grey-whitish and blue chert, with some Portland chert. The assemblage here is certainly a palimpsest containing some probable Mesolithic material in the form of a number of blades and bladelets, blade cores and blade fragments that were retouched or notched which looked Mesolithic in character, although no diagnostic items such as microliths were present. The discussion here will focus on the later elements of the assemblage.

Table 3.8: Lithics from Selworthy according to general types.

	Frequency	Percent
Flake	79	26.6
Blade or Bladelet	14	4.7
Blade-Like Flake	17	5.7
Cores	13	4.4
Retouched or Utilised Flake or Blade	59	19.9
Formal Tools	114	38.4
Other	1	0.3
Total	**297**	100.0

Debitage

The debitage element of the assemblage is relatively undiagnostic, and fairly typical of the mixture of small blades, bladelets and flakes which are frequently broken or retouched that characterise lithic assemblages for Exmoor generally. As noted, it also contains a portion of Mesolithic flint working. A single axe sharpening flake was also recorded, although this may be from a Mesolithic axe or adze. The cores present are not particularly diagnostic with many of the blade cores probably being Mesolithic, whilst the presence of keeled non discoidal and discoidal cores are known to occur in Early and more commonly in Later Neolithic assemblages (Butler 2005: 120-121, 156-157).

Tools

The formal tool portion of the material from Selworthy comprises 114 pieces, which are predominantly scrapers and arrowheads, along with notches and knives (tables 15 and 16). The scrapers and knives are not particularly diagnostic and most of the scrapers are end scrapers, with some side, disc, end and side, and thumbnail examples. Given the aggregate nature of the assemblage from multiple locations, these tools represent a palimpsest of activity in the Mesolithic, Neolithic, and Early Bronze Age, the latter suggested by the plano-convex knife fragments (ID1563 and 1618) (Butler 2005: 172), the barbed and tanged arrowhead (ID1531) and the presence of thumbnail scrapers.

The presence of at least seventeen[4] Early Neolithic leaf shaped arrowheads (table 3.7) represents a significant and noteworthy local concentration for Exmoor, although this is not particularly exceptional in a national context (see Green 1980: 77, fig. 31). The majority of the leaf arrowheads here are broken, either with missing tips, or larger

[4] Grinsell recorded 19 from Selworthy (1970: 187).

fragments of either the tip, or lower portions missing. The majority are small examples with some variation in the extent of retouch evident, either covering all of both surfaces or one surface only partially, whilst one example (ID1533) has been burnt. Generally they exhibit neat working and careful invasive flaking probably via pressure, and several are beautifully worked examples produced by highly skilled individuals. One leaf arrowhead was produced on Portland Chert (ID1530), with very fine invasive bifacial retouch across both surfaces and all edges, with the exception of one small area on one side. The piece is broken, with a fracture from just below the tip (characterised as a hinge termination) which runs to just above one of the bottom corners and a second break of the tip, which may have broken into several pieces. An incipient cone and point of impact are present in the centre of the piece and a fault line in the chert joins this cone to the unretouched area on the edge, which may suggest the area was left unretouched because of the flaw. It is not possible to say with certainty if the arrowhead broke during manufacturing or use, although the damage to the tip suggests the latter. Overall the breakage patterns of the group suggest many broke during use suggesting they were fired, whilst at least two (ID1551 and ID1570) may have broken during the latter stage of manufacturing. The presence of several unfinished arrowheads or partly worked blanks further supports the idea of arrowhead manufacture in the Selworthy area (items ID1577 and ID1623) and triangular arrowheads have sometimes been considered as blanks for barbed and tanged arrowheads (Green 1980: 142; Butler 2005: 160). The presence of seven arrowhead fragments that were not classifiable also supports both their likely use and manufacture in the area. These include a possible squat chisel form and an uncertain oblique that might tentatively suggest some Middle and Later Neolithic activity in the Selworthy area.

3.6.2 Field above Selworthy Coombe

The material from the field above Selworthy coombe predominantly consists of formal tools, which are largely scrapers and knives (with several on blades), notched pieces, flake debitage and a few blades along with a significant grouping of retouched blade segments (table 3.7). Several of the blade fragments show truncation of the edge by

percussion and retouch, and the overall occurrence of blade-like flakes and retouched blade segments suggests Mesolithic activity. The scrapers present are difficult items to place chronologically and they likely represent a palimpsest of Mesolithic and possibly Later Neolithic and Bronze Age examples. Some of these items exhibit far less careful knapping and a willingness to work irregular shaped pieces, which appears different from the much more controlled techniques used on the Mesolithic portion of the assemblage. However, scrapers in Mesolithic assemblages are often not particularly well worked or diagnostic (Butler 2005: 105). For example, of the end scrapers present, example ID1713 is poorly worked with uncontrolled semi abrupt retouch on the distal end of a fragmented piece, whilst others are on blanks with irregular forms, such as a siret fractured flake (ID1696). Another example has been produced on a thick, elongate chunk with severe edge recession evident on the scraping edge (ID1698). One unclassifiable piece appears to be a chunk from a core tool, with an area of crushing and severe edge apparent. This may have originated from poor knapping control and an attempt to maintain or rejuvenate part of a core or core implement. A single possible example of a triangular arrowhead (ID16940) tentatively supports the interpretation of Neolithic-Early Bronze Age activity being present, which has invasive retouch over the dorsal surface and less controlled more ad-hoc retouch on the ventral side of the piece. The lower portion has broken off and the piece is thin. It is difficult to classify and could be interpreted either as a Neolithic triangular arrowhead (Butler 2005: 160) or perhaps less likely, as an Early Bronze Age dagger fragment (Butler 2005: 172). The interpretation favoured here is that it represents a Neolithic triangular arrowhead. The assemblage overall is not particularly diagnostic, other than suggesting Mesolithic blades were fragmented and turned into small retouched fragments, and that some later, possibly Neolithic-Early Bronze Age activity took place. No cores are present which suggests only items that were exhausted, or of no further use were discarded.

The material from Selworthy as a whole represents a palimpsest of activity that includes a significant element of Mesolithic material. There is a focus of Neolithic activity in the area suggested by the arrowheads, during the Early and Later Neolithic,

and the Early Bronze Age. Whilst the majority of the scrapers and other tools are difficult to assign to a specific period, there is a concentration on scraping tasks, and on the use and possible manufacture of arrowheads in the Selworthy area. The picture suggests task specific and repeated use of the landscape over a long period of time.

3.7 Tivington Farm (Wootten Courtenay, Tivington)

This site has an assemblage of 58 pieces which is clearly a palimpsest demonstrating activity at the site during the late Mesolithic, Neolithic and Bronze Age (table 3.9). The raw material utilised was quite mixed, including a number of pieces on a dark grey flint with chert-like inclusions, with a few pieces on black, dark-brown and brown green material. Four pieces of orange brown, yellow-orange, orange-greenish and orange-brown flint might originate from an unknown gravel flint source. The majority of the material has only a light, or a medium patina with the exception of the retouched blades and the complete leaf shaped arrowhead which are heavily patinated with a dark grey to white patina. The material here was recorded as from Tivington, Wootten Courtenay in the Cornish collection and it is likely to be the group of finds known from Tivington Farm (ENP HER MSO8020). Any interpretation put forward below is with the caveat that it is possible some of the material located in the Cornish collection as being from Tivington or Periton may have also originated from this site, but it is now impossible to determine if this is indeed the case and to identify these items individually.

Table 3.9: Lithic types probably from Tivington Farm, labelled as Wooten Courtenay, Tivington in the Cornish collection.

	Frequency	Percent
Backed Blade/ Flake	1	1.7
Blade	1	1.7
Blade-like Flake	2	3.4
Bladelet	1	1.7
Chip	1	1.7
Crested Blade	1	1.7
Edge Damaged/Utilised Blade	2	3.4
End Scraper	4	6.9
Flake	15	25.9
Fragmentary/Unclass./Other Arrowhead	1	1.7
Leaf Arrowhead	1	1.7

	Frequency	Percent
Microlith	5	8.6
Misc. Retouched Flake	1	1.7
Notch	1	1.7
Rejuvenation Flake Tablet	1	1.7
Retouched Blade	6	10.3
Scraper on a Non-flake Blank	1	1.7
Single Platform Blade Core	3	5.2
Spurred Implement	1	1.7
Thumbnail Scraper	7	12.1
Unfinished Arrowhead/Blank	1	1.7
Y Shaped Core Tool (miniature)	1	1.7
Total	**58**	100.0

Firstly the presence of five microliths and two single platform microlithic blade cores demonstrates certain activity at the site during the Late Mesolithic. The technological elements associated with a blade producing industry are present including blades, blade cores, blade-like flakes and a crested blade, which suggests on site blade core preparation and reduction, although the mixed nature of the raw materials used and patination extent tentatively suggests these reflect residues of multiple knapping events spread over time. These probably represent fragments of previous assemblages of stone working which are not reflected in the record; populations of assemblages that have dispersed. The absences here are quite telling, which demonstrates how the virtual and actual capacities of assemblages can transform in complex ways, from virtual, to actual (in terms of the complete material outcome of knapping) and then become virtual once more, in terms of the portion of the assemblage which does not survive archaeologically. The elements of the blade production industry evidenced here represents only parts of the transformative interaction with materials that took place; a few discarded cores and some debitage, a few retouched pieces, with little evidence of the primary stage of reduction in terms of predominantly cortical flakes. There are also no flake cores present despite the group of 15 flakes in the assemblage. Whilst a portion of these flakes may well derive from working and shaping the blade cores, the absence of flake cores might also suggest that these were not left behind or discarded at the site. Whilst the chronology of these episodes of flint working is impossible to unravel more specifically, it might suggest a difference in organisation, with the absence of flake cores arguing that the site played a different role, perhaps

during the Later Neolithic-Early Bronze Age, where assemblages were predominantly flake based.

Three of the thumbnail scrapers on small flake blanks, exhibited mixed patina and messy knapping, with one produced on a cortical flake and another on a distinctive light eggshell coloured flint. This suggests Bronze Age activity, perhaps during the early Bronze Age (e.g. Butler 2005: 168). A further group of three finely worked examples are likely to be Mesolithic. Of the three end scrapers, one is broken and produced on a blade like blank with messy retouch on the distal end, which might be Late Mesolithic or Early Neolithic in date. Another example was produced on a crude blade blank which is partly cortical, with retouch on the end and one side, which might be Early Neolithic in date. Two further end scrapers were on small but thick flake blanks without any attempt at removing the bulb of percussion, which might be Neolithic, or more broadly would fit into an assemblage dating to the Later Neolithic-Early Bronze Age. These exhibited notably poorer working than some of the other scrapers in the assemblage.

The presence of one complete and undamaged leaf shaped arrowhead, which is a finely worked example with neat, pressure flaking removals over both surfaces demonstrates Early Neolithic activity at the site. The piece had an unusual larger removal at the base end, which had the effect of producing a slight tang, perhaps to assist with hafting which had patina consistent with the rest of the piece, suggesting it did not occur from subsequent damage. At least one unfinished arrowhead or blank may tentatively suggest arrowhead production was taking place at the site, or partly shaped blanks being brought in and finished. Finally, one well worked broken arrowhead tip was present of indeterminate type, although it is likely to have been a leaf, oblique or triangular form, rather than a chisel or petit tranchet. All three of these arrowheads were produced on different coloured flints, with mixed extents of patination being evident. This idea of arrowhead production or finishing is potentially supported by the presence of a notch and the scrapers which would be needed for woodworking, specifically in the shaping of the arrow shafts. The spurred implement and notch are difficult items to date specifically, but the former was a very small piece

on a flake, with the spur created by fine and careful retouch of the distal end. This might suggest it belongs to the Mesolithic activity at the site. The Y-shaped miniature core tool (ID1068) may relate to the Later Neolithic-Early Bronze Age portion of the assemblage. This object had been worked bifacially and retouched to create a Y-shape with rounded ends and exhibits crude knapping. The piece is severely crushed around most of the edge, on both the internal curves and the external corners. This Y-shaped artefact is comparable to those identified as often being found on clay-with flint sites in central southern Britain, which are broadly Later Neolithic in date (Gardiner 1984: 28). The severe edge crushing may partly derive from poor knapping control and this could therefore be an apprentice piece. Alternatively the damage on the external corners might derive from using the item in percussive activity, as a hammer or perhaps as a strike-a-light.

3.8 Tivington and Periton

The locational information for this group of material in the Cornish collection is uncertain; some of the finds here were labelled as from Tivington *or* Periton[5] and it is not possible to distinguish which material originated from which location. Only a few finds had a specific location, including an end scraper (ID1129) which was recorded as from Periton along with a miscellaneous retouched flake (ID1765), both of which have been included in table 3.10 in the 'Tivington or Periton' group. A single triangular arrowhead was recorded as from Periton Hill (ID1728) and another group of debitage and scrapers originated from Grabbist Hill. The raw material present in the assemblage is quite varied in colour and in the extent of patination with light, medium and heavily patinated pieces and it is clearly a palimpsest. It includes black flint with grey chert-like inclusions, brownish green flint, brownish or yellowish-brown flint and some dark grey flint. The raw material is quite similar to that for the Tivington Farm assemblage which further suggests some of the material may have originated from the same site, although this is impossible to confirm with any certainty (see also the note in the Tivington Farm section). The uncertainty over the origin of the material is a limiting

[5] A note was found with the material which confirms a portion of it is that known to have been collected by Miss Hatch Barnwell and then given to A.V. Cornish (ENP HER MSO8020).

factor although given the generally limited flint collections available for studying Exmoor it can still make a worthwhile contribution to understanding how people were using the landscape.

Table 3.10: Lithic types from the Periton and Tivington areas.

		Location			
		Periton slopes of Grabbist Hill	Periton or Tivington	Periton Hill	Total
Flake	Count	20	70	0	**90**
	%	58.8%	59.8%	<0.1%	**59.2%**
Blade	Count	0	2	0	**2**
	%	<0.1%	1.7%	<0.1%	**1.3%**
Bladelet	Count	0	3	0	**3**
	%	<0.1%	2.6%	<0.1%	**2.0%**
Blade-like	Count	2	1	0	**3**
	%	5.9%	0.9%	<0.1%	**2.0%**
Thinning Flake	Count	1	1	0	**2**
	%	2.9%	0.9%	<0.1%	**1.3%**
Irregular Waste	Count	4	4	0	**8**
	%	11.8%	3.4%	<0.1%	**5.3%**
Chip	Count	1	2	0	**3**
	%	2.9%	1.7%	<0.1%	**2.0%**
Misc Retouched Flake	Count	0	7	0	**7**
	%	<0.1%	6.0%	<0.1%	**4.6%**
Endscraper	Count	0	1	0	**1**
	%	<0.1%	0.9%	<0.1%	**0.7%**
Disc Scraper	Count	2	0	0	**2**
	%	5.9%	<0.1%	<0.1%	**1.3%**
Thumbnail Scraper	Count	0	1	0	**1**
	%	<0.1%	0.9%	<0.1%	**0.7%**
Scraper on a Non-Flake Blank	Count	0	1	0	**1**
	%	<0.1%	0.9%	<0.1%	**0.7%**
Other Scraper	Count	2	3	0	**5**
	%	5.9%	2.6%	<0.1%	**3.3%**
Other Knife	Count	0	2	0	**2**
	%	<0.1%	1.7%	<0.1%	**1.3%**
Triangular Arrowhead	Count	0	0	1	**1**
	%	<0.1%	0.0%	100.0%	**0.7%**
Single Platform Blade Core	Count	0	2	0	**2**
	%	<0.1%	1.7%	<0.1%	**1.3%**
Other Blade Core	Count	0	1	0	**1**
	%	<0.1%	0.9%	<0.1%	**0.7%**
Single Platform Flake Core	Count	0	2	0	**2**
	%	<0.1%	1.7%	<0.1%	**1.3%**
Multi-Platform Flake Core	Count	0	1	0	**1**
	%	<0.1%	0.9%	<0.1%	**0.7%**
Unclassifiable/Fragmentary Core	Count	0	1	0	**1**
	%	<0.1%	0.9%	<0.1%	**0.7%**
Core on a Flake	Count	1	1	0	**2**
	%	2.9%	0.9%	<0.1%	**1.3%**
Double-ended Scraper	Count	0	5	0	**5**
	%	<0.1%	4.3%	<0.1%	**3.3%**
Spurred Implement	Count	0	2	0	**2**
	%	<0.1%	1.7%	<0.1%	**1.3%**
Retouched Blade	Count	1	4	0	**5**
	%	2.9%	3.4%	<0.1%	**3.3%**
Total	**Count**	**34**	**117**	**1**	**152**

This group of material is characterised by a relatively high proportion of formal tools at 12.8% and predominantly consists of flake debitage 60.7 % (71 flakes in total). A small proportion of blades or bladelets (4.3%, 5 pieces) and a single blade-like flake are also present. The debitage element of the assemblage is fairly undiagnostic but is consistent with Later Neolithic or Bronze Age characteristics of flint working. The flakes are quite small and some rather ad-hoc, demonstrating poor knapping control and a willingness to work both very small and very poor quality raw materials. They are very mixed in terms of the colour of the flint and in the extent of patination. Circa 13 flakes are primary and resulted from splitting flint pebbles, whilst secondary flakes are also present, with tertiary flakes making up the largest proportion. Whilst this material is not very diagnostic in terms of chronology it demonstrates all stages of core reduction were present, although this most likely represents activity spread over a considerable period of time rather than a single episode of activity. One piece had opposed ripples emanating from both the proximal and distal ends of the ventral surface, demonstrating the use of a bipolar anvil technique. A single thinning flake (ID1132) with a curving profile may suggest the early stages of axe blank production (or the maintenance or re-edging of a worn tool), although this is extremely tentative on the basis of just one item. This partly cortical flake has a curving profile with a striking platform at the characteristic angle to the body of the flake with some evidence of flake scars being struck from multiple directions on the dorsal surface, although it could not be described as a textbook example of an axe thinning flake. Finally the small proportion of blade debitage (5.3%) consists of three bladelets, two blades, two blade-like flakes and several blade cores of which the former are well worked pieces that are likely to be Mesolithic. The two blades (ID1121 and ID1141) are both broken fragments, although one is a more recent break with the broken surface less patinated than the rest of the piece. The presence of fragmentary blades also suggests Mesolithic activity.

The tools present within the assemblage suggest activity in the Mesolithic, Neolithic and Bronze Age with the caveat that they consist mostly of fairly undiagnostic scrapers and knives. The four retouched blades and a scraper on a backed blade (ID1124) are all

probably Mesolithic, along with a scraper and small knife (ID1126) produced on a blade fragment that has been truncated by retouch in order to break it. Similarly (ID1138) was a blade fragment with retouch on both edges, whilst the presence of a massive incipient cone on the dorsal surface suggests the deliberate snapping of a thick blade by direct percussion against the dorsal surface. The deliberate snapping of blades through truncation and direct percussion are characteristics of Mesolithic technology. The character of the remaining scrapers and knives in the assemblage suggest Neolithic and Bronze Age activity, but this can only be a tentative suggestion as these items are very difficult to date specifically. For example, one other scraper (ID 1125) on a siret fractured flake fragment with an irregular shape and uncontrolled retouch is likely to be Bronze Age. Several other pieces exhibit a similar lack of control over knapping, especially the miscellaneous retouched flakes in the assemblage, whilst one had neat retouch produced by pressure flaking. The end scraper (ID1129) was produced on a broken blade with a dipping profile, exhibiting some step fractures on the dorsal surface and retouch on the distal end formed by quite large removals with edge recession and step fractures present. It is tentatively interpreted as a Neolithic scraper. The most diagnostic item is the triangular arrowhead (ID1728) from Periton Hill, which is broadly Neolithic-Early Bronze Age in date (Butler 2005: 160). The tip is missing which suggests it may have broken on impact when fired and the body of the arrowhead was formed by invasive flaking of both surfaces. A massive incipient cone is stranded in one side suggesting damage via an impact. It is not clear whether the latter occurred during manufacturing, resulted from use or post depositional damage. The piece is unusual in that it has a broad rounded tang on the base, formed by the removal of the corners. Whilst this could be a transitional form between a triangular and a barbed and tanged arrowhead, it seems more likely this has been done to aid hafting a triangular shaped piece, as there has been no attempt to form barbs.

The character of the cores present once again suggests the assemblage is a palimpsest of Mesolithic, and Neolithic-Bronze Age material. The other blade core (ID1153) was made from a small pebble with a second platform at ninety degrees to the main working face, and the core showed signs of edge recession that indicate it was

discarded due to reaching the exhaustion of any further working potential. This is a good example of a well worked small blade core that is likely to be Mesolithic. The two single platform blade cores suggest Mesolithic or Early Neolithic activity in terms of their working character, whilst one exhibits such extremely poor control that it is more characteristic of blade industries that are post Mesolithic. The working face of this core is so severely and deeply step fractured that the working face resembles a stair case. This hints once again, that blade industries continued well beyond the Mesolithic into the Neolithic and Bronze Age, as suggested by the evidence at Lanacombe (Gillings 2013: 60; Pollard 2013b: 67-69). The flake cores are fairly undiagnostic, typical of the more expedient and less controlled approach found in Later Neolithic and Bronze Age assemblages generally.

Given the lack of clear locational information over this particular assemblage, any specific interpretation would be difficult. It should be noted here however that given the similarity of the raw material, technological, and chronological composition to the material from Tivington Farm it is possible some of this this material actually originated from there. Whilst this may be the case it cannot be proven with any certainty and it is impossible to identify the individual finds. For this reason the material which is almost certainly from Tivington Farm has been discussed separately, from the mixed 'Tivington or Periton' assemblage which is included here with the Periton assemblages.

3.9 Furzebury Brake

The material comprises 14 pieces of worked flint, a number of which are grey-blue banded flints, whilst the knife was made on a black flint with chert-like inclusions. This location produced a small assemblage of predominantly tools with two flakes, one of which was a partly cortical broken blade-like flake with irregular abrupt retouch around most of one edge.

The tool element of the assemblage comprises eight scrapers, of various forms (table 3.11). Scrapers are difficult items to place chronologically, but a few tentative observations can be made here. The thumbnail scraper (ID1730) was produced on a small broken pebble with neat linear abrupt retouch, the character tentatively suggesting a Late Neolithic-Early Bronze Age date, rather than during the Middle or Later Bronze Age. The disc scraper (ID1900) was a small piece with very neat retouch around the entire circumference, which again would be consistent with a Neolithic (or Late Neolithic-Early Bronze Age) date although this very difficult to say with certainty. The other knife (ID1716) was made on a blade-like flake and was marked 'Grexey Camp' suggesting it was found in the vicinity of the earthwork enclosure (ENP HER MSO7577). It is characterised by continuous semi abrupt retouch on the LHS with less regular semi abrupt retouch on the RHS edge. As a single find this is not a particularly diagnostic find, but the blade-like blank might tentatively suggest an origin earlier than the Bronze Age. The second knife (ID1903) was produced on a small flake with semi abrupt retouch on one edge and short abrupt retouch on the other and again, this is not particularly diagnostic. Overall the assemblage suggests Neolithic activity based on the character of some of the pieces, with some activity during the Bronze Age. Whilst certainly a palimpsest, the exclusive composition of mostly scrapers and a few knives, suggests a focus on scraping and cutting tasks, hinting at a task specific site with little evidence of the primary stages of knapping and no cores present. A solitary barbed and tanged arrowhead is also recorded from this area in the ENP HER (MSO7629) which indicates some use of the area during the Early Bronze Age.

Table 3.11: Lithic finds from near Furzebury Brake, Minehead.

	Frequency	Percent
Disc Scraper	2	14.3
End And Side Scraper	1	7.1
End Scraper	4	28.6
Flake	3	21.4
Misc. Retouched Flake	1	7.1
Other Knife	2	14.3
Thumbnail Scraper	1	7.1
Total	**14**	100.0

3.10 Higher Hopcott

Comprising a total of 158 items the Higher Hopcott assemblage is a palimpsest of Mesolithic, Neolithic and Early Bronze Age date (table 3.12). The raw material utilised is predominantly flint of varied colours, with a small number of pieces on grey-white chert, Portland chert and dark brown chert. Two unidentified and unusual materials included a glass-like shiny black stone with orange brown cortication lines (ID1857) and an implement on a shiny dull blue grey coloured stone that was noticeably heavy (ID1877). The latter was in a box labelled 'haematite implement', although this may actually be pitchstone, with the main sources of archaeological pitchstone in northern Britain and Scotland found on Arran (Waddington 2004: 6; Ballin 2015: 6; Preston *et al*. 1998; Preston *et al.* 2002; Thorpe and Thorpe 1984). Finally a single polished axe was produced using a greenish tuff, whilst a second example from this site recorded by Grinsell was not examined (1970: 186).

Table 3.12: Lithic types from Higher Hopcott.

	Frequency	Percent
Flake	37	23.4
Bladelet	2	1.3
Blade-like	5	3.2
Rejuvenation Flake Core Face/Edge	1	0.6
Axe Sharpening Flake	1	0.6
Misc Retouched Flake	12	7.6
Utilised/Edge Damaged Flake	1	0.6
Microlith (Subdivide)	2	1.3
Endscraper	7	4.4
Side Scraper	3	1.9
End and Side Scraper	16	10.1
Disc Scraper	6	3.8
Thumbnail Scraper	11	7.0
Scraper on a Non-Flake Blank	1	0.6
Other Scraper	2	1.3
Awl	1	0.6
Notch	3	1.9
Backed Knife	2	1.3
Plano-Convex Knife	2	1.3
Other Knife	2	1.3
Single-Piece Sickle	1	0.6
Leaf Arrowhead	6	3.8
Barbed and Tanged Arrohead	1	0.6
Unfinished Arrowhead/Blank	3	1.9
Single Platform Blade Core	1	0.6
Other Blade Core	1	0.6
Tested Nodule/Bashed Lump	1	0.6
Double-ended Scraper	1	0.6
Scraper & Knife	4	2.5
Backed Blade/Flake	1	0.6
Chisel	1	0.6

	Frequency	Percent
Edge Damaged/Utilised Blade	5	3.2
Retouched Blade	6	3.8
Other Axe	1	0.6
Core Tool Fragment	5	3.2
Knife Fragment	2	1.3
Small Bifacial Core Tool	1	0.6
Total	**158**	100.0

The debitage component of the assemblage was composed predominantly of flakes, with 37 pieces which comprise 23.4% of the overall assemblage. Much of this material is not particularly diagnostic including some broken fragments and a couple of thick chunks. One flake (ID1817) demonstrated core edge preparation, with neat vertical trimming of the edge evident on the distal end of the dorsal surface. Further evidence of some level of core preparation and maintenance is provided by a single core rejuvenation flake (ID1787). Two bladelet fragments and five blade-like flakes (with one on a chocolate brown coloured chert) suggests some blade production was also taking place, with the implication that the majority of the results of this were removed from the site for use elsewhere. The two bladelet cores could be Mesolithic, with one being worked from two non-opposed platforms (ID1789) and the other for three quarters of its circumference from a single platform (ID1790). The presence of two microliths, ten retouched blades or bladelets (three bladelets, seven blades) some of which are fragments, with one piece (ID1863) demonstrating truncation by multiple burin spall removals, are diagnostic of late Mesolithic activity. A second example (ID 1724) was a fragment with more ad-hoc semi abrupt retouch on the long edges and a single burin removal evident from the pointed end. One unusual piece (ID1738) with a rounded cross section on a thick blade has the appearance of a blunted rod, with heavy retouch around both sides and most of the dorsal surface without any retouch on the ventral side, but it does not exhibit any evidence of crushing or use as a fabricator. The tested nodule or bashed lump of Portland Chert with a shiny surface with orange-red patches appears to have been struck randomly with a few negative scars evident. This is undiagnostic but implies that Portland Chert was being brought into the site unmodified apart from initial testing. No examples of flake cores are present, which may suggest these were retained and carried until they reached a completely exhausted state. Finally, a single axe sharpening flake tentatively suggests

that either maintenance of finished tools or the very final stages of production were taking place, probably in the Neolithic using blanks that were almost finished. Whilst the chronology of much of the debitage here is impossible to define with any certainty, it appears to have resulted from Mesolithic and Neolithic-Bronze Age activity.

The largest proportion of the Higher Hopcott assemblage is composed of formal tools with 85 pieces accounting for 53.8% of the overall group, whilst the overall non tool component of the assemblage accounts for 31% of the material (49 items) (table 3.13). The scrapers and knives are difficult items to place chronologically, but the plano-convex knives and the two knife fragments are all examples of the 'slug knife' variant, which can be broadly dated to the Later Neolithic-Early Bronze Age (Kipfer 2007: 295; Butler 2005: 170-172). There is a known associated of plano-convex knives with food vessels and beakers which suggests an Early Bronze Age date for these items (Butler 2005: 172). The remaining composite types (scraper and knives) (table 3.12) are consistent with what would be expected in a broadly Later Neolithic-Early Bronze Age assemblage, whilst the backed knives may be earlier and relate to activity in the Early Neolithic (see Butler 2005: 129) or perhaps Mesolithic for the single example on a thick elongate blade (ID 1741). The scrapers within the assemblage are not particularly diagnostic, and exhibit variation in terms of the quality of working and in the raw material with both flint and chert used, including a neatly worked thumbnail scraper made on Portland Chert (ID1733). The scrapers are probably a palimpsest of Mesolithic, Neolithic and Bronze Age examples and it is not possible to interpret them any further.

Table 3.13: General lithic types at Higher Hopcott.

	Frequency	Percent
Flake	39	24.7
Blade or Bladelet	2	1.3
Blade-Like Flake	5	3.2
Cores	3	1.9
Retouched or Utilised Flake or Blade	24	15.2
Formal Tools	85	53.8
Total	**158**	100.0

The group of six leaf shaped arrowheads suggest activity in the Early and Middle Neolithic, Five of the leaf arrowheads were broken with the tips missing, whilst only one was a complete example which exhibited fine retouch over all of both surfaces (ID 1767). Item ID1772 exhibited a slightly irregular shape in plan with a break evident on one side and it is possible this broke during manufacturing. The tips of the arrowheads are the most likely area for the points to break, either accidentally through dropping them, or through firing as the first part of the point to hit either the target or the ground. It remains possible therefore that at least five may have broken during use, suggesting they were fired. Unfortunately no information exists as to the distribution of the lithic finds on this site, so it is impossible to know if they were spread over a wide area or found in a more localised group.

The possibility of manufacture on site (perhaps using partly prepared blanks transported in) is suggested by several unfinished arrowheads, including a partially shaped leaf point with some neat invasive retouch. This practice probably took place in different periods of prehistory on the site, which is suggested by an unfinished and crude attempt at a triangular arrowhead which is broken (ID 1791) and a further unusual unfinished chisel or transverse arrowhead (ID 1877). The latter is the possible pitchstone implement mentioned previously, which exhibits some broad flake removals over the dorsal side and none on the ventral surface. The retouch around the proximal end was untidy and abrupt, whilst the longest edge has slight fine retouch over half its length with the rest unmodified. The implement is noticeably heavy, which would suggest it would not have functioned well as an arrowhead, perhaps explaining the abandonment and unfinished appearance of the item. Finally a single barbed and tanged arrowhead (ID1771) with a small barb, one broken tang and a broken tip, suggests some activity taking place in the Early Bronze Age at Higher Hopcott.

The remaining tool element of the assemblage further demonstrates the time depth represented by the surface lithics, with activity in the Neolithic and Bronze Age. The polished axe (ID1006) which can be dated broadly to the Neolithic is 92.63mm in length with an elongate, sub-trapezoidal shape and a blade tip formed on the wider end. Grinsell identified this as greenish tuff (1970: 186). The sickle (ID1743) was broken, and produced on a small slightly curving blade with semi abrupt invasive retouch covering the entire dorsal surface. This may date to either the Early-Middle Neolithic or the Later Neolithic-Early Bronze Age (Butler 2005:132, 172-173) and it is not clear if this was a single type, or part of a multi component sickle (see Butler 2005: 132, 137, 172-173). Given the almost exclusive use of small pebble flint nodules on Exmoor, producing multi component sickles using multiple small blades or flakes is perhaps more likely given the lack of larger nodules needed to produce larger blanks for single piece sickles.

Overall the lithic finds from Higher Hopcott have a small proportion of diagnostic finds, which suggests activity taking place at the site during the Late Mesolithic, the Early-Middle Neolithic, and also during the Later Neolithic-Early Bronze Age. The general lack of flake cores, and the fact that the blade cores are probably Mesolithic examples would suggest much of the activity during the Neolithic and Bronze Age was quite task specific (and less focused on primary core reduction). This presence was concerned with finishing blanks that were brought in or in utilising small flakes or fragments. Cores were either not brought into the site or all cores with further use potential were taken away for use elsewhere. This activity also included a general focus on scraping and cutting tasks, with arrowhead finishing and use taking place during the Early-Middle Neolithic, which may have continued into the Early Bronze Age. Overall the picture suggested is that of short term, task specific, perhaps seasonal activities in different periods which have left a very light footprint in terms of surface lithics. The generally high proportion of formal tools and small broken or retouched pieces of debitage with a low overall frequency of lithic finds is consistent with what would be expected in an area such as Exmoor where raw material availability is limited.

3.11 North Hill and Minehead area

The lithic collections from the Minehead area comprise a total of 243 pieces (table 3.15), most of which are located to the general area only, with a few specific locations known. A particular concentration of lithic finds has come from the North Hill area, whilst smaller groups or single finds have come from paths leading up onto the moorland, the enclosed fields behind the modern settlement of Minehead and from gardens in the area. The raw material and patination extent were not recorded in detail individually for this material. However, it was noted that it exhibited a mixture of different coloured flints with just a few pieces of chert (both Portland and Greensand) typical of assemblages from Exmoor, whilst the extent of patination was also mixed. The discussion here will focus on the largest site assemblage from North Hill and give a brief summary of the remaining material.

Table 3.14: Lithic types from North Hill, Minehead

		North Hill Minehead	North Hill Minehead Footpath	Total
Flake	Count	19	0	**19**
	%	35.8%	<0.1%	**34.5%**
Blade	Count	1	0	**1**
	%	1.9%	<0.1%	**1.8%**
Rejuvenation Flake Tablet	Count	1	0	**1**
	%	1.9%	<0.1%	**1.8%**
Irregular Waste	Count	2	1	**3**
	%	3.8%	50.0%	**5.5%**
Other/Unclassifiable (General)	Count	1	0	**1**
	%	1.9%	<0.1%	**1.8%**
Hammerstone	Count	2	0	**2**
	%	3.8%	<0.1%	**3.6%**
Misc Retouched Flake	Count	1	0	**1**
	%	1.9%	<0.1%	**1.8%**
Utilised/Edge Damaged Flake	Count	1	1	**2**
	%	1.9%	50.0%	**3.6%**
Side Scraper	Count	4	0	**4**
	%	7.5%	<0.1%	**7.3%**
End and Side Scraper	Count	1	0	**1**
	%	1.9%	<0.1%	**1.8%**
Disc Scraper	Count	1	0	**1**
	%	1.9%	<0.1%	**1.8%**
Thumbnail Scraper	Count	3	0	**3**
	%	5.7%	<0.1%	**5.5%**
Other Scraper	Count	1	0	**1**
	%	1.9%	<0.1%	**1.8%**

		North Hill Minehead	North Hill Minehead Footpath	Total
Scale Flaked Knife	Count	1	0	**1**
	%	1.9%	<0.1%	**1.8%**
Chisel Arrowhead	Count	1	0	**1**
	%	1.9%	<0.1%	**1.8%**
Barbed and Tanged Arrowhead	Count	5	0	**5**
	%	9.4%	<0.1%	**9.1%**
Single Platform Flake Core	Count	1	0	**1**
	%	1.9%	<0.1%	**1.8%**
Multi-Platform Flake Core	Count	1	0	**1**
	%	1.9%	<0.1%	**1.8%**
Double-ended Scraper	Count	1	0	**1**
	%	1.9%	<0.1%	**1.8%**
Retouched Blade	Count	3	0	**3**
	%	5.7%	<0.1%	**5.5%**
Core Tool Fragment	Count	2	0	**2**
	%	3.8%	<0.1%	**3.6%**
Total	**Count**	**53**	**2**	**55**

3.11.1 North Hill

North Hill - debitage

The debitage from the North Hill group is fairly undiagnostic, with a small number of flakes and retouched pieces (including three blades). Whilst the raw material type was not recorded individually, it was noted it consisted of predominantly flint (dark grey and black) with a few pieces of white chert. One of the retouched blades (ID1717) had fine semi abrupt retouch on the LHS of the dorsal edge and the RHS and was probably used as a knife, and this may relate to Mesolithic or Early Neolithic activity. The presence of a blade end fragment with neat semi abrupt retouch across the edge and side, forming a scraping edge, is also suggestive of Mesolithic activity although not definitively diagnostic of it. Several of the flakes are large thick pieces, For example, ID1719 was a siret fractured piece which had a large bulb and partial incipient cone with edge crushing and limited irregular semi abrupt retouch on the RHS edge. Whilst Item ID1725 was a thick broken primary flake with 75% cortex remaining on the dorsal surface. The presence of a number of thick flakes is consistent with the Later Neolithic and Early Bronze Age activity suggested by the arrowheads, with evidence of poor knapping control evident in some of the debitage. The flake cores are not diagnostic pieces; one is a small pebble core and the other an uncontrolled multiple platform example (ID1722). The latter is noteworthy due to the unusual raw material, a chert

(or quartz?) of greyish colour with a pink hue and yellowish orange cortex, which exhibits uncontrolled knapping of flakes from many directions and frequent receding step fractures. Finally the rejuvenation tablet suggests core maintenance techniques were being used, which in this case resulted in the complete removal of a previous platform.

North Hill - tools

The North Hill surface collection comprises 56 finds which are mostly formal tools (40.7%) or flake debitage (37%). The tool component of the material comprises six arrowheads and eleven scrapers. The Early Bronze Age barbed and tanged group are all broken examples, where the surface patina is consistent between the break and the rest of the piece suggesting ancient breaks. The damage includes frequent broken barbs, tips, or the upper portions missing. Much of this would be consistent with damage from use suggesting they could have been fired, although some accidental damage perhaps through trampling or handling (in prehistory) cannot be ruled out as such items are fragile. The scrapers are not particularly diagnostic and include various types (see table 3.14). Whilst scrapers are difficult to date with any certainty, the thumbnail scrapers could be Early Bronze Age examples. Of the latter, example ID1754 exhibited some linear retouch whilst step fractures and damage were also evident. The side scraper (ID1726) is also a knife formed with abrupt retouch around the RHS of the platform to a break on the distal end, whilst semi abrupt retouch on the LHS edge of the dorsal side is present from about half way up to the proximal end. The item is on a thick rounded flake and whilst not particularly diagnostic, the character of the item is consistent with a broad Later Neolithic/Early Bronze Age date. Finally, the double ended scraper (ID1848) is a rather crude example on a natural chert chunk, and might relate to Early or Later Neolithic activity (Butler 2005: 125, 128, 166-167).

The single fragment of a scale flaked knife consists of an elongate piece with a rounded end, formed by careful invasive (ripple flaked) retouch onto the dorsal surface. This is most likely the broken end of a knife and is also indicative of activity during the Later

Neolithic and Early Bronze Age (Butler 2005: 170-171). Finally of the two core tool fragments ID1721 is a sub rounded triangular piece formed by crude hard hammer flaking over most of its ventral surface and a blunted point of square cross section on one end. The sides are slightly concave and the edges exhibit severe crushing. This is best interpreted as a blunted borer that was subsequently re-used as an anvil or hammer and is undiagnostic, but the crude character of the working suggests it is likely to be Later Neolithic or Bronze Age in date. The other (ID1723) is broken and produced on a thick, long blade-like flake which may have been an attempt at producing a fabricator with invasive retouch over most of the ventral surface and none on the dorsal side. Again this is a difficult item to date as fabricators occur in multiple periods. Finally, two hammerstones (one made of chert (ID1720) and one on a reused core fragment (ID1718)), demonstrated clear evidence of severe crushing from use as hammers on their edges and ends, indicating that hard hammer knapping was taking place in the area.

3.11.2 Minehead area

The remainder of the material from the Minehead area consists of smaller groups and single finds which will only be briefly summarised here, whilst a number of the flints are only provenanced to the Minehead area very generally (table 3.15). Much of the material is not particularly diagnostic and is typologically and technologically similar to the characteristics of the North Hill assemblage. It consists of predominantly formal tools which are mostly scrapers and knives, small flake and bladelet debitage including a single bladelet and flake core with a number of tested nodules (mostly pebbles). The material has limited interpretative potential as these items are undiagnostic and the assemblage consists of small groups or odd finds from various locations. However, it suggests a mixture of activity during the Neolithic and Bronze Age, with some activity that is possibly Mesolithic (although there is nothing here that can be said to definitively diagnostic of such).

Table 3.15: Lithic finds from the Minehead area

		Location				Total
		Minehead	Minehead Without 1 (submerged forest)	Minehead Without 2 (parish survey)	Minehead on Moorland Path	
Flake	Count	93	0	9	0	**102**
	%	54.7%	<0.1%	81.8%	<0.1%	**54.3%**
Bladelet	Count	5	0	0	0	**5**
	%	2.9%	<0.1%	<0.1%	<0.1%	**2.7%**
Blade-like	Count	6	0	0	0	**6**
	%	3.5%	<0.1%	<0.1%	<0.1%	**3.2%**
Irregular Waste	Count	4	0	0	1	**5**
	%	2.4%	<0.1%	<0.1%	25.0%	**2.7%**
Chip	Count	4	0	0	0	**4**
	%	2.4%	<0.1%	<0.1%	<0.1%	**2.1%**
Misc Retouched Flake	Count	7	0	0	0	**7**
	%	4.1%	<0.1%	<0.1%	<0.1%	**3.7%**
Utilised/Edge Damaged Flake	Count	1	0	0	0	**1**
	%	0.6%	<0.1%	<0.1%	<0.1%	**0.5%**
Endscraper	Count	5	1	0	1	**7**
	%	2.9%	33.3%	<0.1%	25.0%	**3.7%**
Side Scraper	Count	6	0	0	0	**6**
	%	3.5%	<0.1%	<0.1%	<0.1%	**3.2%**
End and Side Scraper	Count	4	0	0	0	**4**
	%	2.4%	<0.1%	<0.1%	<0.1%	**2.1%**
Disc Scraper	Count	2	0	0	0	**2**
	%	1.2%	<0.1%	<0.1%	<0.1%	**1.1%**
Thumbnail Scraper	Count	11	0	0	0	**11**
	%	6.5%	0.0%	0.0%	<0.1%	**5.9%**
Other Scraper	Count	0	1	0	1	**2**
	%	<0.1%	33.3%	<0.1%	25.0%	**1.1%**
Awl	Count	1	0	0	0	**1**
	%	0.6%	<0.1%	<0.1%	<0.1%	**0.5%**
Denticulate	Count	1	0	0	0	**1**
	%	0.6%	<0.1%	<0.1%	<0.1%	**.5%**
Notch	Count	1	0	0	0	**1**
	%	0.6%	<0.1%	<0.1%	<0.1%	**0.5%**
Other Knife	Count	6	0	0	0	**6**
	%	3.5%	<0.1%	<0.1%	<0.1%	**3.2%**
Other Blade Core	Count	1	0	0	0	**1**
	%	0.6%	<0.1%	<0.1%	<0.1%	**0.5%**
Tested Nodule/Bashed Lump	Count	5	1	2	1	**9**
	%	2.9%	33.3%	18.2%	25.0%	**4.8%**
Levallois/ Other Discoidal Flake Core	Count	1	0	0	0	**1**
	%	0.6%	<0.1%	<0.1%	<0.1%	**0.5%**
Scraper & Knife	Count	3	0	0	0	**3**
	%	1.8%	<0.1%	<0.1%	<0.1%	**1.6%**
Retouched Blade	Count	1	0	0	0	**1**
	%	0.6%	<0.1%	<0.1%	<0.1%	**0.5%**
Core Tool Fragment	Count	1	0	0	0	**1**
	%	0.6%	<0.1%	<0.1%	<0.1%	**0.5%**
Knife Fragment	Count	1	0	0	0	**1**
	%	0.6%	<0.1%	<0.1%	<0.1%	**0.5%**
Total	**Count**	**170**	**3**	**11**	**4**	**188**

3.12 Dunster Area

The material from Dunster comprises three small assemblages from different locations and a few additional items which total 48 pieces of predominantly worked flint (table 3.16). The overall raw material colour is mixed as is the extent of patination, with light, medium and heavily patinated pieces evident. The majority of the items here are from surface collection either intentionally or by chance, whilst some of the material labelled as from the 'ballast pit' may have originated from a buried context that was disturbed by workmen (Somerset HER 35238). Unfortunately no further information exists on the latter discovery, so it remains unclear if the material was found together or whether a small mixed surface scatter was present in the area. Given the small size of the assemblages, each will be discussed in turn according to the locations of the material.

Table 3.16: Lithic finds from the Dunster area

		Dunster 2 (general area)	Dunster Ballast Pit	Dunster East of Railway (ballast pit?)	Dunster Beach General Area	Dunster Field East of Ellicombe Hill	Dunster Sea Lane	Total
Blade	Count	1	2					**3**
	%	5.6%	12.5%					**6.3%**
Blade-like Flake	Count	3						**3**
	%	16.7%						**6.3%**
Chisel Arrowhead	Count			1		1		**2**
	%			50.0%		10.0%		**4.2%**
Disc Scraper	Count		1			3		**4**
	%		6.3%			30.0%		**8.3%**
Double-ended Scraper	Count	1						**1**
	%	5.6%						**2.1%**
Edge Damaged/Utilised Blade	Count		1					**1**
	%		6.3%					**2.1%**
End And Side Scraper	Count				1			**1**
	%				100.0%			**2.1%**
End Scraper	Count					1		**1**
	%					10.0%		**2.1%**
Flake	Count	9	1			1		**11**
	%	50.0%	6.3%			10.0%		**22.9%**
Irregular Waste	Count					1		**1**
	%					10.0%		**2.1%**
Macehead	Count			1				**1**
	%			50.0%				**2.1%**
Microburin	Count		1					**1**
	%		6.3%					**2.1%**

		Dunster 2 (general area)	Dunster Ballast Pit	Dunster East of Railway (ballast pit?)	Dunster Beach General Area	Dunster Field East of Ellicombe Hill	Dunster Sea Lane	Total
Misc. Blank	Count		1					**1**
	%		6.3%					**2.1%**
Misc. Retouched Flake	Count	1	1			1		**3**
	%	5.6%	6.3%			10.0%		**6.3%**
Multi-Platform Flake Core	Count	1						**1**
	%	5.6%						**2.1%**
Other Scraper	Count		1			1		**2**
	%		6.3%			10.0%		**4.2%**
Retouched Blade	Count		2					**2**
	%		12.5%					**4.2%**
Scraper & Knife	Count		1			1		**2**
	%		6.3%			10.0%		**4.2%**
Single Platform Blade Core	Count	1	1					**2**
	%	5.6%	6.3%					**4.2%**
Spurred Implement	Count		2					**2**
	%		12.5%					**4.2%**
Thumbnail Scraper	Count						1	**1**
	%						100.0%	**2.1%**
Utilised/Edge Damaged Flake	Count	1	1					**2**
	%	5.6%	6.3%					**4.2%**
Total	**Count**	**18**	**16**	**2**	**1**	**10**	**1**	**48**

3.12.1 'Ballast Pit' and finds 'East of the Railway'

The finds from the Ballast Pit location are mostly formal tools, with only a few pieces of debitage and a single platform blade core present. The latter is a light grey chert pebble with a dark grey band that is heavily patinated, and the core exhibits step fractures on the face and edge recession suggesting it was discarded. This core could be Mesolithic, and several other items suggest a portion of this assemblage is likely to be Mesolithic or Early Neolithic in date. The blade (ID1175) has the characteristic lip below the platform on the ventral surface and diffuse bulb associated with soft hammer working, as well as signs of core preparation (edge abrasion) on the proximal end of the dorsal surface. All of these are characteristic of Mesolithic blade production, although some of these features are also found in Early Neolithic assemblages as well. Of the retouched blades (ID1191) one has some edge damage and slight retouch which has created a slightly convex area although it is not classifiable as a notch. The second

(ID1194) is a blade fragment with shallow retouch on one edge and abrupt retouch on the end, with some retouch on the broken end. Both of these are on the same black-dark grey flint with chert-like inclusions and thus may be related to the same working event with both exhibiting a light patina. A third edge damaged blade (ID1190) had step fractures on the dorsal surface, crushing and a plunging termination suggesting poor knapping control. Whilst not hugely diagnostic on their own, these finds are consistent with what would be expected in a Mesolithic or Early Neolithic assemblage. This includes the spurred implements and the single example of an awl. The items here which relate to blade production are clearly a palimpsest of working episodes over time, given the different raw materials utilised between the debitage and the core (flint blades, chert core). It is impossible to say with certainty, but these residues as fragments of larger now dispersed assemblages of flint working, might represent at least three different former event-assemblages, possibly at different times.

The three scrapers present from the Ballast Pit site are difficult to date as individual items, but a few observations can be made on their character. The disc scraper (ID1171) is on a thick flake blank with severe frost damage destroying the proximal end. Continuous abrupt retouch is present around the surviving edge of the piece, characterised by flake removals through direct percussion. The other scraper (ID1173) appears to be on a flake from a hammerstone, suggested by areas of severe crushing on a prominent ridge on the dorsal surface, with clumsy retouch on the end and part of the side forming a steep scraping edge. Finally the scraper and knife (ID1172) is a small square piece with retouch across most of the surface and neat retouch on the tip to form a semi abrupt angle, with the opposite end blunted by small removals, perhaps to facilitate hafting or holding. It is suggested that these scrapers may be Neolithic or Bronze Age, rather than Mesolithic, although this is difficult to say with any confidence. A single flake fragment with negative facets in four directions on the dorsal surface suggests a high degree of core rotation was taking place, which is more characteristic of flint working strategies in the Later Neolithic-Early Bronze Age, or later, but as a single piece of debitage it is not that diagnostic. Whilst this collection of finds is not hugely diagnostic, the overall interpretation of the Ballast Pit assemblage is

that it probably represents a mixture of Mesolithic or Early Neolithic, and later (perhaps Late Neolithic and Bronze Age) material. This idea is supported by the three perforated adze hammers which may also have come from the ballast pit (not examined for this study) which may date to the Late Neolithic-Early Bronze Age (ENP HER MSO9416 (now removed); Somerset HER 35238). The perforated shale macehead which was found east of the railway (again possibly from the Ballast Pit) was examined but is a difficult item to date and exhibits evidence of having been re-worked through crude bifacial flaking. Whilst the HER record and others speculate as to the possible Mesolithic date of this find (Grinsell 1970: 19), perforated mace heads are not well dated and it could equally date to the Later Neolithic-Early Bronze Age (Roe 1979:30; Edmonds 1995: 96, 103, 108, 110-111, 143; Waddington 2004: 45-46). Finally a single chisel arrowhead (ID1174) which was found to the east of the railway, and potentially also from the ballast pit is diagnostic of Later Neolithic activity. Given the uncertainty over what was found where, and the suggested time depth represented by the lithics, the interpretation favoured is that this represents a palimpsest of material rather than a discreet assemblage that was disturbed from a single buried context. Given the location in a low lying coastal area, the potential for surface deposits to be quite deeply buried by sediment is fairly high and might explain why at least some of the material was found possibly by accident, during ballast excavation for the railway.

3.12.2 Dunster 2

The material from the Duster 2 location is not particularly diagnostic, and all that can be said here is that it might be thought of as a mixed assemblage of possible Mesolithic/Early Neolithic and Later Prehistoric material. The scrapers from Dunster Beach and Sea Lane are not that diagnostic as single finds, although the thumbnail scraper on a thick, broad and squat shaped flake, with regular but messy retouch is at least consistent with the forms of scraper found in Later Neolithic-Early Bronze Age or Bronze Age assemblages generally.

3.12.3 Field East of Ellicombe Hill

The final group of finds, a surface collection of ten lithics from a field east of Ellicombe Hill is characterized by seven formal tools which include scrapers, working waste and a chisel arrowhead (table 3.16). The raw material utilized was a mixture of dark grey, dark blue and black flint and the extent of patination was also quite mixed. The disc scrapers were fairly well produced pieces although some evidence of expediency and edge recession is evident in the retouched areas. The end scraper (ID 1169) was produced on a small thick flake with some crushing and a step fracture present on the scraping edge. The scraper and knife (ID1170) is an unusual piece on an irregularly shaped flake, with abrupt retouch forming a steep scraping edge on one side, with shallow retouch on the other side to produce a cutting edge along a rounded protrusion. The latter retouch is fairly neat, whilst some edge recession and step fractures are present on the scraping edge. A spur is also present on the piece. The different retouched areas are consistent with a similar level of patination suggesting a multi-purpose tool was the intention, rather than reworking an older piece to suit a new task. The single chisel arrowhead (ID1166) is the most chronologically diagnostic piece, and broadly dates to the Later Neolithic although this particular item is difficult to classify. The arrowhead is formed by retouch across most of the dorsal surface and part of the ventral side. One long edge has been blunted by retouch that is rather messy, with step fractures and crushing apparent whilst the point of the roughly triangular shaped piece is blunt with an incipient cone present. A small flake has been detached from here across the ventral surface perhaps to facilitate hafting. The presumed edge of the arrowhead has more careful semi abrupt retouch, with a protruding area in the centre. Although the piece does not conform to the classic definition of the chisel type in the way it has been produced, the interpretation favoured here is that it is an attempt at producing a loosely chisel form that was intended to be hafted in the manner of the standard chisel type (e.g. Butler 2005: 159). The character of all the material here suggests broadly Late Neolithic activity, although probably represents a palimpsest given the differences in patination. Scrapers are difficult items to place chronologically, but the interpretation here is their character would also fit with Late Neolithic activity in the area.

Whilst the nature of the lithic material from the Dunster area makes a specific reconstruction of wider landscape activities difficult, the interpretation put forward here is that the assemblages suggest potentially short lived, task specific activities taking place during the Mesolithic, Neolithic and probably into the Bronze Age. More tentatively the material from East of Ellicombe and the Ballast Pit suggests that both the coastal lowland plain and the slopes of the upland behind have activity taking place possibly during the Later Neolithic-Early Bronze Age, perhaps including hunting and a focus on scraping tasks (perhaps processing hides or skins, as well as gathered and farmed resources).

3.12.4 Withiel Farm

The assemblage here comprises 63 pieces on a variety of different sources of flint (table 3.17). This includes black flint (some with an orange cortex), brownish-black and bluish-black forms, which are quite mixed in terms of patination extent between heavy, to no visible patination. Two different technological strategies of stone working are clearly evident at Withiel Farm and each will now be discussed in turn.

Table 3.17: Lithic finds from Withiel Farm

	Frequency	Percent
Bipolar Opposed Platform Blade Core	1	1.6
Blade	6	9.5
Blade-like Flake	6	9.5
Bladelet	5	7.9
Core on a Flake	1	1.6
Flake	34	54.0
Irregular Waste	1	1.6
Multi-Platform Flake Core	2	3.2
Single Platform Blade Core	1	1.6
Spurred Implement	1	1.6
Tested Nodule/Bashed Lump	2	3.2
Unclassifiable/Fragmentary Core	2	3.2

	Frequency	Percent
Utilised/Edge Damaged Flake	1	1.6
Total	**63**	100.0

One approach was based on producing blades and bladelets. Given the presence of multiple blade cores and blade-like flakes, this suggests at least the secondary stages of blade and bladelet production were occurring on the site. The bipolar core (ID1233) had been worked from opposed directions to produce bladelets and was probably discarded due to the exhaustion of further working potential. A flake scar running across the core from the working edge suggests core rejuvenation techniques were being utilised, and that at least one core rejuvenation tablet was removed. The single platform blade core (ID1252) was a small bladelet core that had been finely worked all the way around with severe step fractures across one of the working faces suggesting it was discarded due to the exhaustion of any further working potential. Edge abrasion had also been used to prepare the core. Both of these cores are probably Mesolithic. Of the blade related debitage, at least three blades demonstrate the diffuse bulb and lip on the ventral surface below the point of impact characteristic of being worked with a soft hammer, which are characteristic of Mesolithic flint working. Some of the blades and bladelets are finely produced examples that are diagnostically Mesolithic in terms of working character, accurately struck without any crushing evident, although a few are less well produced with some crushing apparent. Finally the patination extent and raw material colour is quite varied, suggesting the assemblage here contains a number of residues of previous events of flint working of which the final products or useful items of waste were not discarded and taken elsewhere for use.

A second technological tradition is evident, based on a much less controlled and more ad-hoc knapping strategy, in working small cores to produce flakes. Of the flake debitage, most of the pieces are small suggesting the working of small pebbles, whilst many pieces are broken or fragmented and several are siret fractures. Some irregularly shaped and thick pieces were present, and a number demonstrated poor control with

step fractures and crushing evident. Whilst there are no diagnostic finds within the assemblage, the character of this part of the assemblage in terms of working strategy is consistent with what one would expect to see in a Later Neolithic-Early Bronze Age assemblage, or broadly within the Later Neolithic or Bronze Age, but this cannot be defined with any degree of certainty as the material is not diagnostic enough. It is, however, clearly a very different tradition of working to the classic Mesolithic portion of the assemblage, and a strong argument can be made that it relates to activity in the Late Neolithic or Bronze Age. It also suggests that whatever the products of this activity were in terms or tools or retouched pieces these were taken away and only waste was left behind. The single possible tool, the spurred implement is not particularly diagnostic in terms of date. However, the piece is crude with poor flaking control evident, with a spur which is poorly defined and rather expedient in character and is therefore more likely to be associated with the presumably later (i.e. post Mesolithic) more ad-hoc flake-based working tradition.

Appendix 4 Lithic recording scheme

Table 4.1 lists the classification system that was used to record all of the lithic assemblages that were examined for this thesis. The additional category numbers reference table 4.2.

Table 4.1: List of types recorded. Produced by the author.

Category number	General category number	General category with flakes and blades separated number	General tool type number	Lithic type
1	1	1	8	Flake
2	1	2	8	Blade
3	1	2	8	Bladelet
4	1	3	8	Blade-like Flake
5	2	4	8	Burin Spall
6	1	1	8	Rejuvenation Flake Core Face/Edge
7	1	1	8	Rejuvenation Flake Tablet
8	1	1	8	Rejuvenation Flake Other
9	1	1	8	Thinning Flake
10	1	1	8	Flake From Ground Implement
11	1	1	8	Axe Sharpening Flake
12	1	1	8	Janus Flake
13	1	1	8	Levallois Flake
14	1	2	8	Crested Blade
15	6	7	7	Scraper and Denticulate
16	2	4	8	Irregular Waste
17	3	4	8	Chip
18	7	8	8	Other/Unclassifiable (General)
19	7	7	7	Hammerstone
20	7	7	7	Misc. Blank
21	5	6	7	Misc. Retouched Flake
22	5	6	8	Utilised/Edge Damaged Flake
23	6	7	3	Burin
24	6	7	7	Microlith
25	6	7	1	End Scraper
26	6	7	1	Side Scraper
27	6	7	1	End And Side Scraper
28	6	7	1	Disc Scraper
29	6	7	1	Thumbnail Scraper
30	6	7	1	Scraper on a Non-flake Blank
31	6	7	1	Other Scraper
32	6	7	3	Awl
33	6	7	3	Piercer
34	6	7	6	Serrated Flake
35	6	7	6	Saw
36	6	7	6	Denticulate
37	6	7	7	Notch
38	6	7	4	Backed Knife
39	6	7	4	Edge Ground Knife
40	6	7	4	Discoidal Knife

Category number	General category number	General category with flakes and blades separated number	General tool type number	Lithic type
41	6	7	4	Scale Flaked Knife
42	6	7	4	Plano-convex Knife
43	6	7	4	Other Knife
44	6	7	4	Single-piece Sickle
45	6	7	7	Fabricator
46	6	7	5	Ground Flint Axe
47	6	7	2	Petit Tranchet Arrowhead
48	6	7	2	Leaf Arrowhead
49	6	7	2	Chisel Arrowhead
50	6	7	2	Oblique Arrowhead
51	6	7	2	Barbed and Tanged Arrowhead
52	6	7	2	Triangular Arrowhead
53	6	7	2	Hollow-based Arrowhead
54	6	7	7	Laurel Leaf
55	6	7	7	Unfinished Arrowhead/Blank
56	6	7	7	Fragmentary/Unclass./Other Arrowhead
57	7	8	8	Gun Flint
58	6	7	7	Scraper & Serrated Flake
59	4	5	8	Single Platform Blade Core
60	4	5	8	Bipolar Opposed Platform Blade Core
61	4	5	8	Other Blade Core
62	4	5	8	Tested Nodule/Bashed Lump
63	4	5	8	Single Platform Flake Core
64	4	5	8	Multi-Platform Flake Core
65	4	5	8	Keeled Non-Discoidal Flake Core
66	4	5	8	Levallois/Other Discoidal Flake Core
67	4	5	8	Unclassifiable/Fragmentary Core
68	4	5	8	Core on a Flake
69	6	7	1	Double-ended Scraper
70	6	7	7	Scraper & Knife
71	6	7	7	Spurred Implement
72	6	7	7	Backed Blade/ Flake
73	6	7	7	Chisel
74	8	6	8	Edge Damaged/Utilised Blade
75	8	6	7	Retouched Blade
76	6	7	7	Miniature Adze/Tranchet Tool
77	6	7	5	Axe Roughout/Axe Fragment
78	6	7	5	Flint Axe
79	6	7	7	Macehead
80	6	7	5	Other Axe
81	6	7	5	Y Shaped Core Tool (miniature)
82				Natural Unmodified Flint
83				Other Finds
84	6	7	7	Core Tool Fragment
85	2	4	8	Microburin
86				Burnt Unworked Flint
87	6	7	4	Knife fragment
88	6	7	7	Small bifacial core tool

The system of general categories which was also used to analyse the lithic assemblage is presented in table 4.2.

Table 4.2: General categories used in summarising the data. Produced by the author.

General category N°	Lithic type
1	Flakes and blades
2	Misc Waste
3	Chips
4	Cores
5	Retouched flakes and utilised flakes
6	Formal Tools
7	Other
8	Retouched Blades and Utilised Blades
Flakes and blades separated N°	**General category with flakes and blades separated**
1	Flake
2	Blade or Bladelet
3	Blade-Like Flake
4	Misc. Waste
5	Cores
6	Retouched or Utilised Flake or Blade
7	Formal Tools
8	Other
General tool type N°	**General tool type category**
1	Scraper
2	Arrowhead
3	Awl or Burin or Piercer
4	Knife
5	Polished or Flaked Axe
6	Denticulate or Serrated Tool
7	Other Tool
8	Non Tool Component

Appendix 5 Formal spatial analysis of study area C

5.1 Testing the distribution in Area C

A visual inspection of the distribution of prehistoric features (see chapter 7 in volume 1, figure 7.1), demonstrates a strong sense that the distribution is clustered and discontinuous. This observation was tested using the spatial statistics functions in ArcGIS 10, average nearest neighbour and Ripleys-K, on a simplified GIS layer which represented all the likely Neolithic or Bronze Age monuments as simple points. The nearest neighbour results shown in figure 5.1 demonstrate that the distribution was clustered and that there was a less than 1% chance of this pattern occurring by accident. The Ripleys-K function results for area A shown in figure 5.2, which tests the degree of clustering at multiple spatial scales, suggested that clustering does occur in this area at all the spatial scales tested. Whilst these statistical results suggest the patterning is not down to random chance they can say nothing about the cause of this patterning, in terms of whether it is a result of the ad-hoc destruction of evidence through later activities, or a direct result of human behaviour. Whilst various later disturbances in area C have certainly affected the distribution, the distribution does still reflect to some degree a fragmented picture of real patterning in terms of the prehistoric activity.

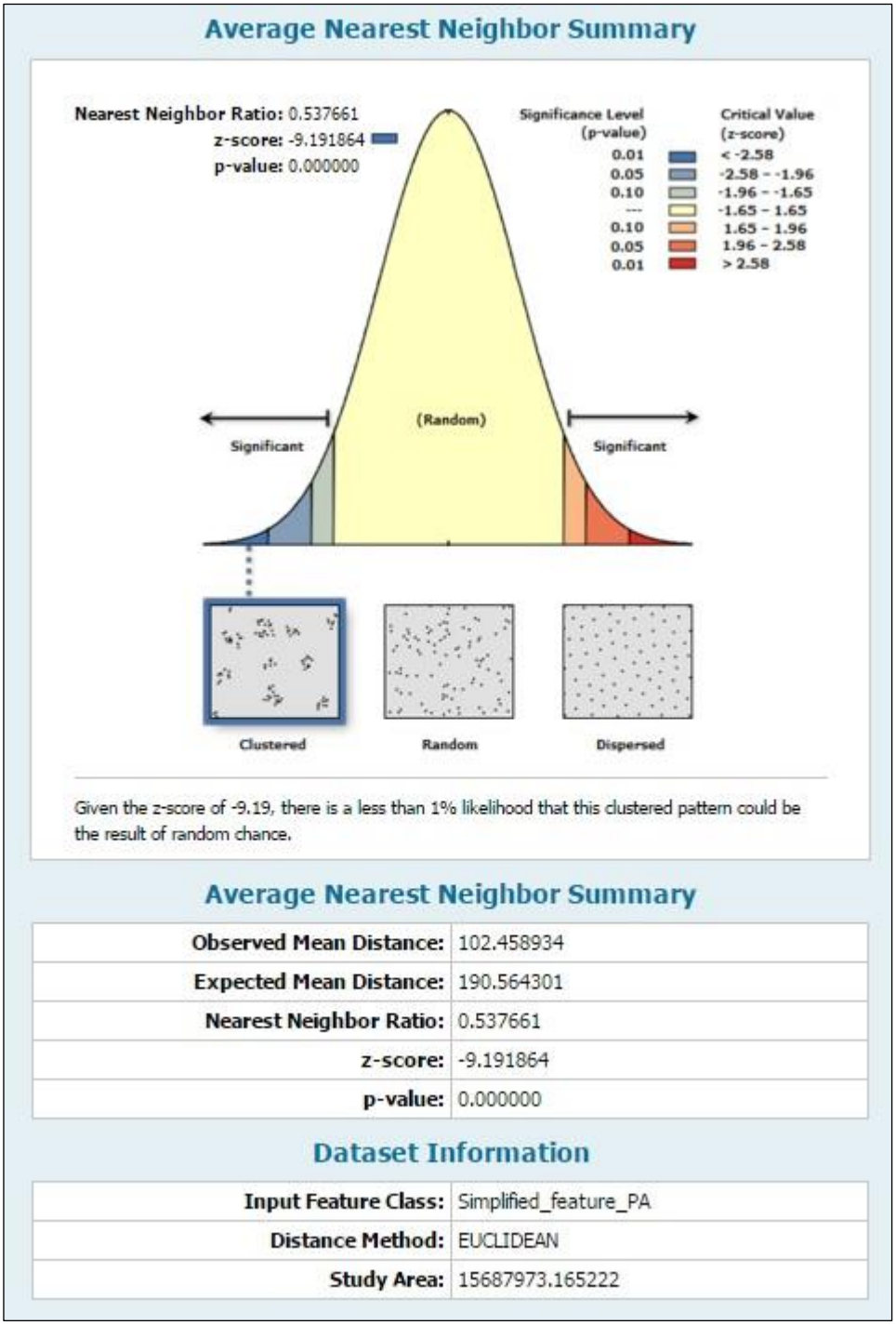

Figure 5.1: Nearest neighbour analysis results for all features in area C generated by ArcGIS 10 GIS software.

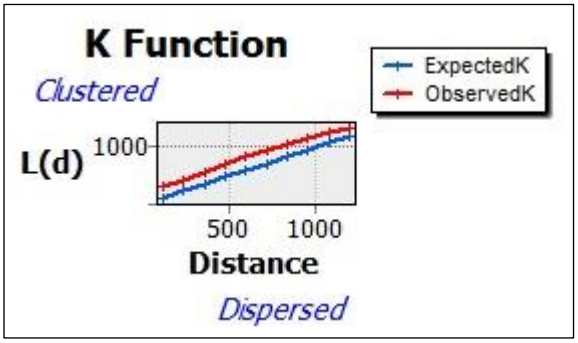

Figure 5.2: Ripleys-K result graph for all features in area C. Generated by ArcGIS 10 GIS software.

5.2 Analysis of spatial relationships between structures

To interrogate potential spatial relationships in study area C, a set of specific questions and methods have been developed based on the current state of knowledge as shown previously in table 5.1, which are summarised below in table 5.1. These questions allow hypotheses to be tested using standard tools and functions available in the ArcGIS software. For the methods which involve selecting features within set distances of specific monuments, the analysis was conducted globally on a single monument features layer for all three study areas simultaneously and results extracted for each study area. The questions have been designed to focus on examining relationships between the stone monuments and other features, as well as considering wider relationships in terms of the development of the landscapes to address RQ's two and three specifically.

Table 5.1: Rationale and methods used to conduct spatial analysis of the projects study areas.

Question	Method
Define the proportion of stone settings that have nearby cairns or mounds.	1.) Use multiple ring buffer tool in ArcGIS 10 to generate buffers at set distances from stone settings, then utilised the spatial join function to count the number of mounds, barrows and cairns within each distance band. Export the data and process with Excel. 2.) Calculate count and proportion of stone settings with nearby mounds from monument feature database in Excel, to quantify further mounds/cairns noted in the HER text records which are not mapped or represented in the GIS data.
Test the proximity of stone settings to prehistoric settlement remains.	Follow method 1 above.
Test the proximity of stone settings to field banks and field systems.	Follow method 1 above.
Quantify the relationship between stone rows and barrows.	Follow method 1 above.

5.3 Results of spatial analysis - global and area C

The results of investigating the relationship between stone settings and cairns, based on the feature database built from the HER data, indicates that 50% of all the stone settings in the three study areas are recorded as having cairns in their vicinity (table 5.2). It should be noted that the data in table 5.2 only includes sites within the study areas and not all the stone settings within ENP. In Area C, 62.5% of the stone settings have cairns nearby (table 5.3). Generating buffers at set distances from the stone settings and counting the number of mounds, barrows or cairns within these buffer zones tells a similar story. Table 5.4 shows that 50% of the stone settings in area C have a mound, barrow or cairn within 100m of their location, and 75% within 250m. Two sites, MSO7911 and MSO7923 have multiple mounds, or cairns within 50m of their location. Various factors have a significant impact on the strength of this pattern, including the limited number of sites that have been subject to close ground inspection to identify small cairns, which may have little or no surface expression and are easily buried under the peat or hidden by vegetation. The very small cairns are also totally invisible to large scale aerial survey. It is likely therefore that the number of small cairns is underrepresented in the data presented here and in the records for Exmoor

generally so the pattern could be more extensive than is suggested; only more detailed field survey could refine our understanding further. With no chronological information as yet available for any of the stone settings, it is not possible to investigate the relationships between cairns and settings any further, although the evidence in area B at Lanacombe discussed in chapter 2 and 5 allows some speculation on this issue.

Table 5.2: Number of the complete database of stone settings that have nearby mounds, cairns or barrows. Produced by the author using data from ENP HER.

		Associated feature?		
ENPHER No	Name of stone setting	Cairn	Mound/ barrow	Monument type
MDE1044	Quincunx above the River Bray	0	1	Stone Setting
MDE1278	Double Stone Row or Stone Setting at Winnaway	0	0	Stone Setting
MDE1285	Quincunx Near Woodbarrow Hangings	0	0	Stone Setting
MDE1317	Stone setting southwest of Longstone Barrow	1	1	Stone Setting
MDE1319	Rectangular stone setting on North Regis Common	0	1	Stone Setting
MDE9886	Stone setting on Hoccombe Hill	0	0	Stone Setting
MEM15202	Stone Setting on Trout Hill	0	0	Stone Setting
MSO12256	Stone alignment, south of Black Barrow, Hoscombe	0	0	Stone Setting
MSO12301	Stone setting, east of Lanacombe III	1	0	Stone Setting
MSO6727	Stone Setting on Almsworthy Common	1	0	Stone Setting
MSO6815	Stone Setting on the Northeast End of Trout Hill, Trout Hill I	0	1	Stone Setting
MSO6819	Stone Setting at the North End of Trout Hill, Trout Hill II	1	0	Stone Setting
MSO6820	East Pinford Stone Alignment	1	0	Stone Alignment
MSO6862	Beckham Hill Stone Setting	0	1	Stone Setting
MSO6873	Swap Hill Stone Setting	1	0	Stone Setting
MSO6881	Kittuck Hill Stone Setting	1	1	Stone Setting
MSO6882	Possible Stone Setting, South of Black Barrow (Hoscombe North)	0	0	Stone Setting
MSO6886	Standing Stones southwest of Black Barrow (Hoscombe)	1	1	Stone Setting
MSO6947	Lanacombe II: Stone Setting at the East End of Lanacombe	1	0	Stone Setting
MSO6948	Lanacombe I: Large stone setting at Lanacombe	1	0	Stone Alignment
MSO6949	Lanacombe III: Stone Setting at Lanacombe	1	0	Stone Setting
MSO6965	Lanacombe IV: Triangular Stone Setting at Lanacombe	0	0	Stone Setting
MSO6966	Stone setting, Trout Hill 3, Exmoor	0	0	Stone Setting
MSO7093	Lanacombe V: Stone Setting at Lanacombe	1	0	Stone Alignment
MSO7750	Stone row on Tom's Hill	0	1	Stone Setting
MSO7903	Stone setting, Porlock Allotment 1	0	0	Stone Setting
MSO7911	Standing stones, Porlock Allotment	1	0	Stone Setting
MSO7923	Possible Stone Setting, south of Coley Water, Porlock Allotment II	1	0	Stone Setting

	Cairn	Mound/ barrow
Total records with nearby feature	14	8
Total stone settings in all study areas	28	28
Percentage of total stone settings with nearby feature	**50%**	28.57%

Table 5.3: Number of stone settings in area C that have nearby mounds, cairns or barrows. Produced by the author using data from ENP HER.

		Associated feature?		
ENPHER No	Name of stone setting	Cairn	Mound/ barrow	Monument type
MSO12256	Stone alignment, south of Black Barrow, Hoscombe	0	0	Stone Setting
MSO6727	Stone setting on Almsworthy Common	1	0	Stone Setting
MSO6881	Kittuck Hill Stone Setting	1	1	Stone Setting
MSO6882	Possible stone setting, south of Black Barrow (Hoscombe North)	0	0	Stone Setting
MSO6886	Standing stones southwest of Black Barrow (Hoscombe)	1	1	Stone Setting
MSO7903	Stone setting, Porlock Allotment 1	0	0	Stone Setting
MSO7911	Standing stones, Porlock Allotment	1	0	Stone Setting
MSO7923	Possible stone setting, south of Coley Water, Porlock Allotment II	1	0	Stone Setting

	Cairn	Mound/ barrow
Total records with nearby feature	5	2
Total stone settings in study area C	8	8
Percentage of stone settings in area C with nearby feature	**62.5%**	25%

Table 5.4: Cumulative count of mounds, barrows or cairns within specific distances from the stone settings in study area C. Not that the count is cumulative and that the buffers overlap, counting everything between the distance and point of origin. Produced by the author using ArcGIS 10 with data from ENP HER and project fieldwork.

		Buffer distance from stone setting (m)																			
		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
ENPHER No	Name of stone setting	Cumulative count of mounds, barrows or cairns																			
MSO12256	Stone alignment, south of Black Barrow, Hoscombe	0	0	0	0	1	1	1	1	1	1	3	4	4	4	4	4	4	4	5	8
MSO6727	Stone Setting on Almsworthy Common	0	1	1	1	2	2	2	2	3	3	5	5	5	5	5	5	5	8	8	9
MSO6881	Kittuck Hill Stone Setting	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	4
MSO6882	Possible Stone Setting, South of Black Barrow (Hoscombe North)	0	0	0	0	0	0	0	1	1	1	1	1	2	4	4	4	4	5	5	5
MSO6886	Standing Stones southwest of Black Barrow (Hoscombe)	0	0	0	0	1	1	2	3	3	3	3	4	4	4	4	4	4	7	10	11
MSO7903	Stone setting, Porlock Allotment 1	0	0	0	0	0	0	0	0	0	1	1	1	2	2	2	3	7	7	12	12
MSO7911	Standing stones, Porlock Allotment	2	2	2	2	2	3	5	5	5	6	11	17	20	20	21	21	21	21	21	23
MSO7923	Possible stone setting, south of Coley Water, Porlock Allotment II	2	3	3	4	6	8	10	13	15	15	16	17	19	21	21	21	21	22	23	23

With regard to any potential relationship between prehistoric settlements and stone settings, the same GIS method was used to count the numbers of house platforms or hut circles within a series of buffer distances of stone settings (table 5.5). The results suggest that relatively few are close to settlement remains, at the 50-150m distances. Fifty percent of the settings in area C are within 200m of settlement structures, whilst 62.5% of the settings are within 250m of prehistoric settlement remains. In area C there is no chronological data from either stone settings or settlement remains, which could elucidate if there is any contemporaneity between the construction, use and abandonment of these two types of features. Given this, it remains an open possibility that either the construction, use or significance of stone monuments may have continued well into the Middle Bronze Age with the appearance of substantial settlement architecture. What this further demonstrates, in light of the mapping of the potential affective capacities of the stone monuments as discussed in chapter 7, is that the people living in the former structures would frequently have encountered the settings as they inhabited the landscape, and entered the medium and high probability zones, becoming involved in the creation of dispersal of assemblages, through the emergence of affective fields in the experience of the sites.

Table 5.5: Cumulative count of prehistoric settlements (house platforms and hut circles) within specific buffer distances of the stone settings in area 3. Produced by the author using ArcGIS 10 with data from ENP HER.

		Buffer distance from stone setting (m)																				
		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
ENPHER No	Name of stone setting	Cumulative count of mounds, barrows or cairns																			
MSO12256	Stone alignment, south of Black Barrow, Hoscombe	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	6	7	7
MSO6727	Stone Setting on Almsworthy Common	0	0	0	0	0	1	1	1	1	1	1	2	3	3	3	3	3	3	3	3
MSO6881	Kittuck Hill Stone Setting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MSO6882	Possible stone setting, south of Black Barrow (Hoscombe North)	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	7
MSO6886	Standing stones southwest of Black Barrow (Hoscombe)	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	3	6	6
MSO7903	Stone setting, Porlock Allotment 1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	6	7	7	8
MSO7911	Standing stones, Porlock Allotment	0	0	1	1	1	2	6	6	6	7	7	11	12	12	12	12	12	12	12	12
MSO7923	Possible stone setting, south of Coley Water, Porlock Allotment II	0	0	1	3	5	6	6	8	8	9	9	9	12	12	12	12	13	14	15	15

The analysis examining the spatial relationships between stone settings and field banks, systems and lynchets produced a quite different set of results. Just one stone setting in area C has a field bank within 250m of its location as shown in table 5.6, suggesting that in area C the location of fields and boundaries were not built near to settings, or were not directly related to the construction of stone settings or used as points from which to lay out boundaries, although this is dependent on only the evidence that is visible as a surface feature. It does however strongly suggest that the location of the settings were known and still important (presuming the settings were older features), their positions being carefully respected during the Middle and Later

Bronze Age in area C in terms of the location of fields and boundaries. However there is no available data at present to examine more closely the chronological relationship between the two in area C.

Table 5.6: Cumulative count of field banks, systems and lynchets at specific buffer distances from stone settings in area C. Produced by the author using ArcGIS 10 using data from ENP HER and project fieldwork.

		Buffer distance from stone setting (m)																			
		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
ENPHER No	Name of stone setting	Cumulative count of field banks, systems and lynchets																			
MSO12256	Stone alignment, south of Black Barrow, Hoscombe	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	2	2	2	3
MSO6727	Stone Setting on Almsworthy Common	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2
MSO6881	Kittuck Hill Stone Setting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MSO6882	Possible stone setting, south of Black Barrow (Hoscombe North)	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	2	2	4	4
MSO6886	Standing stones southwest of Black Barrow (Hoscombe)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2
MSO7903	Stone setting, Porlock Allotment 1	0	0	0	0	0	0	0	1	1	1	2	2	2	3	3	3	5	5	8	9
MSO7911	Standing stones, Porlock Allotment	0	0	0	0	0	0	0	0	0	1	3	4	5	5	5	5	6	6	6	6
MSO7923	Possible stone setting, South of Coley Water, Porlock Allotment II	0	0	0	0	1	1	1	3	4	4	4	5	6	6	8	8	8	8	9	9

Finally, in terms of potential spatial relationships between the stone rows and cairns or barrows, of the three stone rows within the projects study areas, all have cairns or barrows in close proximity (table 5.7). Of the two sites located in area C, the Madacombe single row and Porlock double row, the latter is aligned on a cairn whilst the former has a possible association with barrows at either end, though it is not

specifically aligned between them (Quinnell and Dunn 1992: 62; Gillings 2015a: 5-6). The greater number of cairns within 150m of the Porlock row is notable in table 5.7, and this includes several clearance cairns which form part of a possible field system and enclosure adjacent to the row. This is potentially laid out in respect of the rows position, suggested by very slight earthworks and geophysical anomalies (see Gillings 2015a: 8 (fig 8), 23). In study area C there is therefore a possible spatial and chronological relationship between the stone rows and the development of a presumed, but as yet undated Middle Bronze Age farming landscape.

Table 5.7: Cumulative count of mounds, barrows or cairns within specific distances from the centre of stone rows in all study areas. Produced by the author using ArcGIS 10 with data from ENPHER and project fieldwork data.

		Buffer distance from stone setting (m)																			
		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
ENPHER No	**Name of stone row**	**Cumulative count of mounds, barrows or cairns**																			
MDE8974	Stone row on Thornworthy Little Common	0	0	0	1	1	1	2	2	3	3	3	4	5	5	5	6	7	7	7	7
MSO6883	Madacombe Stone Row	0	0	1	2	2	2	2	2	4	4	5	5	5	5	6	6	6	6	6	6
MSO7924	Prehistoric double stone row on Porlock Allotment	2	3	5	5	5	7	7	8	11	12	14	18	19	20	20	21	21	21	21	21