ARCHIVE REPORT

ARCHAEOLOGICAL MONITORING AND RECORDING

LAND AT QUARRY LANE BEER DEVON

PLANNING APPLICATION REF. EDDC 09/2387/FUL

MARCH 2010

Arrowhead Archaeology

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FIGURES (in text body of report)

SUMMARY
A watching brief on construction of a barn north of Quarry Lane, Beer (centred 322088.089564) was conducted in March 2010 by Arrowhead Archaeology to fulfil a condition on the planning consent.

An assemblage of sixty-nine pieces of worked flint was recovered from topsoil and an underlying deposit of colluvium occurring on the upper edge of the scarp forming the northern side of the valley floor.

The lithics from both layers contained a very high proportion of waste material, with a virtual absence of tools or retouched pieces. There was no pottery, burnt flint or other cultural material. The assemblage is interpreted as representing the remains of flint extraction and core preparation activity to the north, with prepared cores taken elsewhere for further working. In the absence of technological attributes indicating an early Neolithic date, this intrinsically undatable assemblage falls by default into a later prehistoric range.

1 PROJECT BACKGROUND

This archaeological monitoring and recording exercise was undertaken in February 2010 in response to a requirement stated in Condition 3 of Planning Consent (granted 21 January 2010) for the erection of a barn for workspace and storage and erection of a sheep shed (East Devon District Council Application No. 09/2387/FUL). The archaeological work was recommended on the basis of HER records of artefact scatters and lithic working sites near the development area, reflecting activity in the prehistoric period, with potential for the presence of associated cut features within the footprint of the barn. The sheep shed was excluded from the requirement for archaeological observation and recording.

Work was undertaken in accordance with a Written Scheme of Investigation (Clarke, February 2010) which addressed the requirements stipulated in the 'Brief for Archaeological Evaluation Monitoring and Recording' (Devon HER ref. Arch/dc/ed/15738, Appendix 1 below); the WSI was approved by Ms Rance of the Devon County Council Historic Environment Service, and Ms S Thomas of East Devon District Council.

Fieldwork was undertaken on 11 February 2010. This report details the results of archaeological monitoring, and reproduces key parts of the WSI. Arrowhead Archaeology was instructed by the applicant, Ms Georgina Wood, to undertake necessary works.

The site code assigned is AA 123. The finds and archive are deposited in The Royal Albert Museum in Exeter under accession no. RAMM 38/2010. A digital version of this report is submitted to the Online Access to the Index of Archaeological Investigations under OASIS Id. 'arrowhea1-74425'.

2 ARCHAEOLOGICAL BACKGROUND

A full map regression was not undertaken because the Devon Record Office was closed during the period of preparation of the WSI. However the Tithe map available on the Parishscapes site was examined; the study area is outside the area covered by the Tithe map. It is very unlikely that buildings were formerly present in this corner of the field.

Surrounding land has been extensively quarried to extract Beer Stone, from the Roman period onwards. The current Beer Quarry lies to the immediate west of the development area; there is extant planning permission for underground quarrying immediately under the site of the barn. Beer Stone is a high quality masonry limestone occurring as a band within the chalk and composed of densely packed minute shell fragments. Quarrying takes the form of open pits in the hillside principally to the west and northwest of Beer, however has also involved cutting onto the chalk and limestone slopes to form the very extensive complex known as Beer Quarry Caves.

Of greater significance for the present study, Beer Head is the most westerly outcrop of upper and middle chalk in Britain, with the densest source of high quality flint in the entire southwest peninsula (Tingle, 1998). The chalk at Beer contains distinctive seams of high quality flint which has been exploited through much of the prehistoric period as a source of flint for lithics manufacture. The occurrence of high quality flint as a raw material would undoubtedly have been of high importance to prehistoric populations; the low quality flint and greensand chert otherwise available in west Dorset and east Devon west of the chalk on the Ridgeway is an inferior material for lithics manufacture. Although both occur as components in local assemblages (e.g. at Mare Lane, Tingle 1998), the preference for high quality flint over chert is indicated in Tingle's assemblage from HER site 11101 (Bovey Lane) where only 18 pieces of chert in an assemblage of 4144 pieces of worked stone, the remainder being flint (Tingle, 1992). An intensive exploitation of this raw material is to be expected, and this is reflected in the concentration of lithics in the area from at least the Neolithic onwards; for HER site 11101 (Bovey Lane) an assignment of a Palaeolithic date for some of the lithics is dismissed after re-examination of the material at the British Museum leading to reclassification of some artefacts as Neolithic and the identification of spontaneous (pressure-caused) retouch on patinated flint, and re-examination by Tingle (pers. comm.).

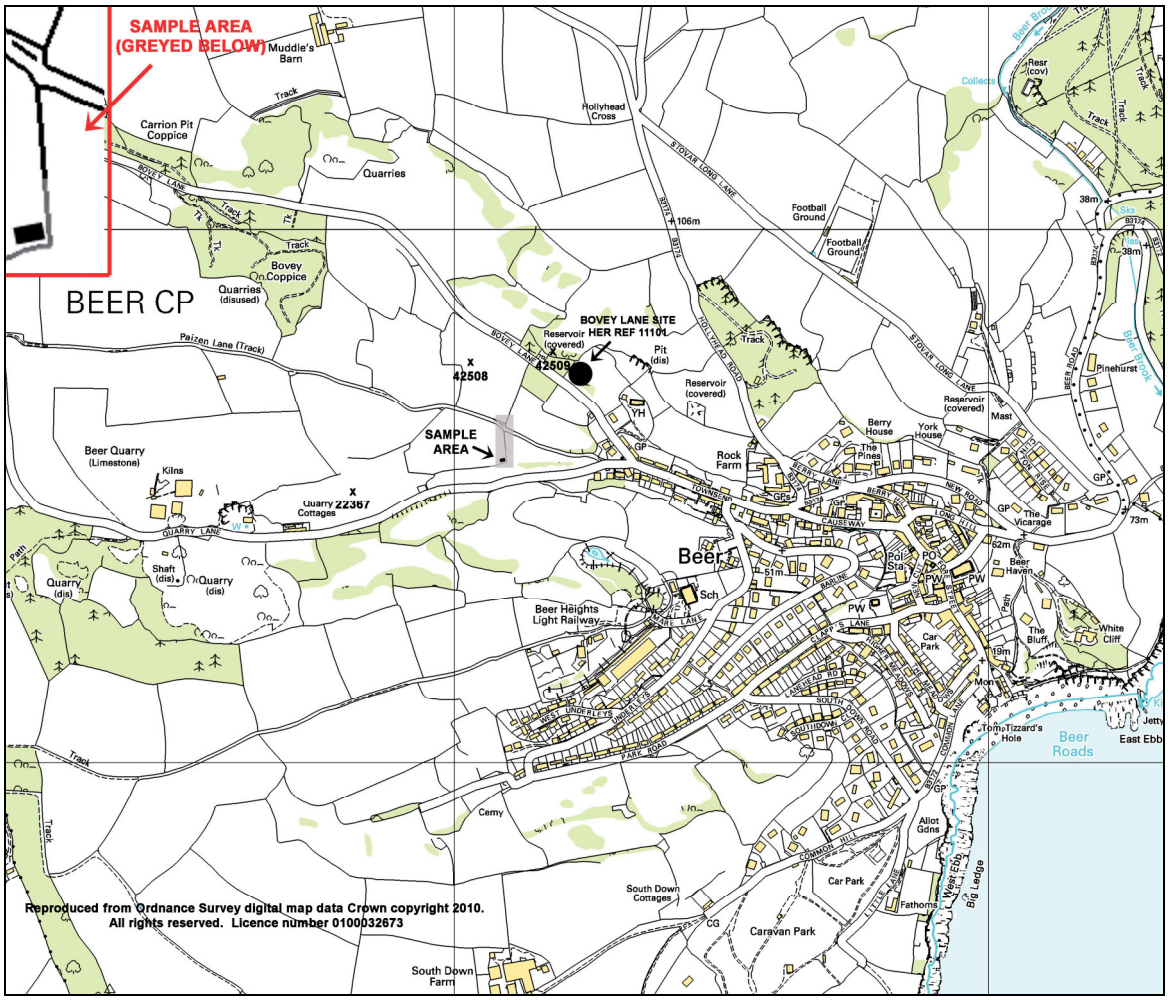

Fig. 1 Location plan showing Barn area (arrowed), with plot HER of listed sites within a 500m radius. Bovey Lane site indicated.

The HER data within a 500 m radius of the development area (Fig. 1) shows principally the results of two individuals with an interest in surface recovery of, particularly, prehistoric lithics. These are G. MacAlpine Woods (active in the 1930's), J. Lichfield-Smith (site find dates in 1983 and 1984). Martin Tingle undertook further survey in 1991 (below). In all, within the 500m radius current study zone, there are: four 'lithic working sites (all discovered by Lichfield-Smith and described as 'Neolithic working floors'; one 'spoil heap', also Lichfield-Smith and described as a tip of waste flint of Neolithic date; and twelve 'artefact scatters', mainly originally found by Mac Alpine Woods and Lichfield-Smith.

All in all, there is little distinction between the 'artefact scatters' and 'lithic working' sites; many of the HER descriptions of the former include waste material which might just as easily, and perhaps better, be classified as 'lithic working sites' – for example, finds from HER site 22367 consisted of cores, hammer stones, waste flakes'. It seems to the writer highly likely, that although there is clear indication of domestic settlements, most of the instances of flint reflect the ready availability of high quality raw material. Further, although sites might be abundant reflecting the availability of raw material, it is likely that the large number of sites recorded probably mainly reflects the survey activity of three individuals, and that if a similar level of survey were to be applied to a wider area then the abundance of sites would not appear so restricted in area – the absence of any sites north of

Bovey Lane is much more likely to reflect a lack of survey rather than absence of sites. The lack of cropmark enclosures and ring ditches additionally suggests that settlement is not concentrated within the study area.

The study area also contains four cropmark or soilmark enclosures, noted by Frances Griffith after aerial survey in 1984; two of these are likely to be of prehistoric date, and two are undated. These are grouped in the northwest of the study area.

Of the above, pottery was found associated in three instances: a small assemblage of Roman and prehistoric at 42508, medieval and post-medieval at 42509, and an assemblage of later prehistoric fragments at 11101. Intense activity strongly indicating settlement is most clearly seen at 11101, several hundred metres north of the current sample area.

Excavation occurred at Bovey Lane by MacAlpine Woods in 1931 after trenching by the Water Board in a dry valley exposed a large assemblage of struck flint in a deep deposit of colluvium. This site was re-examined by Martin Tingle in 1991, with the cutting of a stepped trench to a depth of c. 4m, exposing a clean colluvium underlain by a charcoal rich colluvium deposited over a considerable period of time. Roman pottery was present in the lower part of the upper colluvium; both colluvial deposits contained chipped stone, however this was concentrated, and apparently structured, in the lower colluvium (which had been recut), in which a wood burning episode appears to have occurred. The flint from the undisturbed lower colluvium was of earlier Neolithic date.

Extensive systematic fieldwalking over all of the available arable land on Beer Head was undertaken by Tingle in 1990-91. This produced several scatters of retouched implements, the two most extensive of which were on flat hilltops overlooking the sea at the top of dry valleys terminating on the beach at Beer. One of these (Mare Lane) was sampled by means of nine trenches in two fields, with limited evidence for cut features in the form of a hearth and large oval pit containing abundant charcoal, with a stone filled recut at the western end, and a group of three pits 175 m to the north containing common sherds of weathered Beaker pottery. There was no evidence of domestic or structural features within the sampled area, and the absence of associated debitage is taken to rule out a manufacturing centre. Ritual or ceremonial activity is attributed to both Bovey Lane and Mare Lane sites (Tingle, 1998).

3 LOCAL TOPOGRAPHY AND LAND-USE

The sample area lies in the south east corner of the field shown in Fig. 1, immediately north of a scarp from which the land drops to a flat valley floor along which runs the road. The land fall to the sample area is to the southeast (Fig. 3).

The sample area lies approximately 1 km to the WNW of the centre of Beer Village, on the north side of Quarry Lane. The Beer Quarry Caves lie some 500 m to the west of the sample area, on the south side of Quarry Lane.

The sample area lies on the northern side of a valley, on the upper edge of a steep scarp forming the lower valley side (Fig. 2); the southern side of the valley is higher and steeper sided than the northern, which, around the sample area falls

gently and rather irregularly, toward the east and southeast. The valley floor is a flat, some 50 m wide, the road running along the southern edge; this appears to be a floodplain, though it is possible that levelling has resulted from undocumented quarrying .

The field in which sampling took place is currently pasture, however was ploughed for two years in the late 1980's (pers. comm. Steve Light, previous landowner); this was abandoned because the topsoil was too shallow. The land may well have been under plough from time to time in earlier years, and it seems likely that MacAlpine Woods' sites were discovered during surface survey of ploughed land in the 1930's. The small amount of post-medieval pottery from the topsoil and colluvium (below) probably found their way to the field by way of manure spreading, suggesting that ploughing also took place in the 18th or 19th century. Nevertheless, the absence of any headland formation at the bottom of the field indicates that such ploughing was infrequent.

Fig. 2 Sample area (immediately behind hedge), looking west, on upper edge of scarp forming northern side to valley. Photo CPC 11 Feb. 2010, ref. AA 123 EX 08.

Fig. 3 Sample area from north-west, beyond spoil heaps, Beer Village beyond. Photo CPC 11 Feb. 2010, ref. AA 123 EX 15

4 SAMPLE AREA

An area 9.3 m N-S x 13 m E-W was reduced to form a level platform for construction of the barn, the depth of the cut increasing from 0 cm in the south of the area to 1.05 m maximum in the north. Short ramps into the reduced area were also dug from the north-eastern and north-western corners to allow vehicle access into the reduced area.

All machining was undertaken using a JCB 3C digger with 1.85 m ditching bucket, and was closely observed by the writer.

Turf covered topsoil, 20-25 cm thick, was removed first and stored into a temporary heap. After removal of the topsoil to another location nearby, underlying soil and chalk were removed in layers, in strips commencing on the western side of the development area. Underlying soil was stored in temporary heaps and removed to a separate nearby storage area in the same way as the topsoil.

The surfaces of machined soils were examined at four stages: the machined surface and bucketed soil during machining; the surface of the spoil heap when the bucket was emptied; the surface of the second spoil heap when the soil was moved; and the surface of the original spoil heap after partial removal to the new heap. Artefacts were recovered at all stages, however examination of spoil heap surfaces in stages 2 and 3 were particularly productive.

It was noted that artefacts occurred at the bottom of the machined context 2; artefacts occurred throughout context 2, though may have been slightly more concentrated in the upper part; there were certainly no discernible concentrations.

The machined area was recorded by photography, a drawn section of the cleaned western face of the reduced area, and a plan showing the edge of the machined chalk (context 3) and topsoil (context 1) (Figs 5-6). HER officers were informed of progress and results by telephone.

Fig. 4 The sample area during machining, from WSW. The near edge of the trench is shown in Figs 5-6. Photo CPC 11 Feb. 2010, ref. AA 123 EX 01

Fig. 5 Sample area from east, showing northern part of section 1. Scales 2m (horizontal) and 1m (vertical). Photo CPC 11 Feb. 2010, ref. AA 123 EX 06

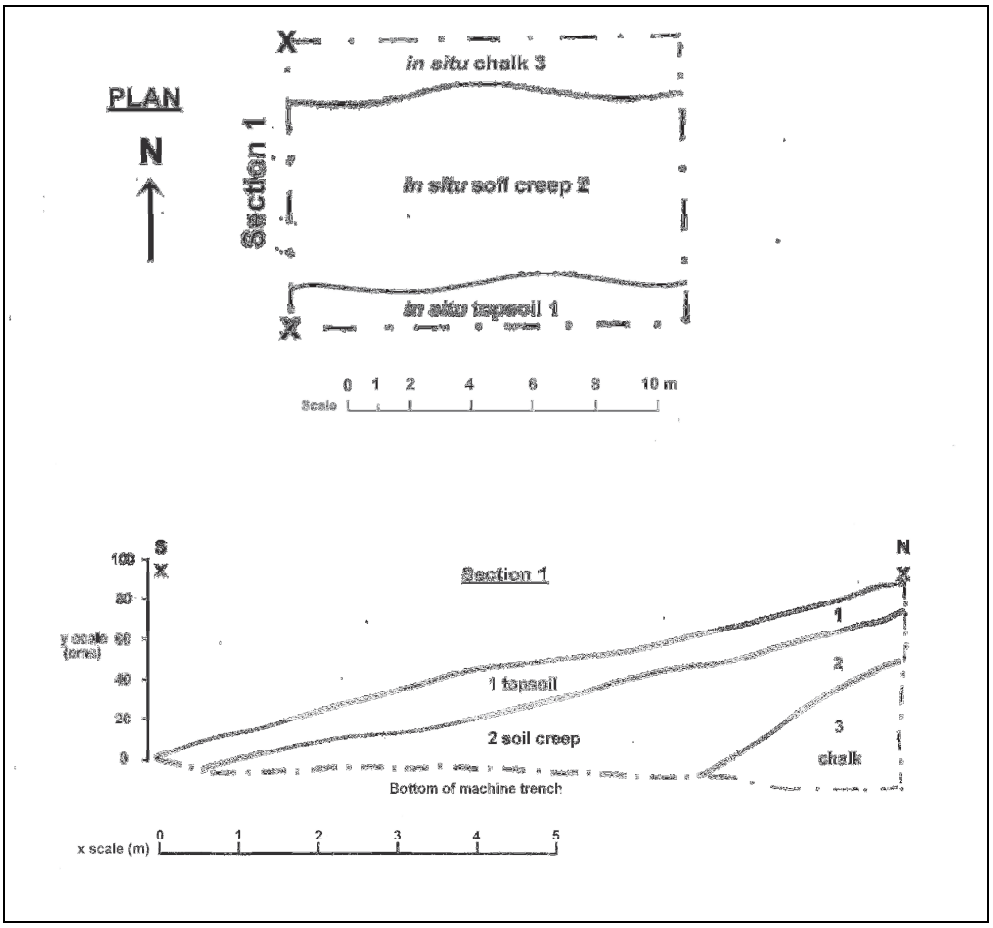

Fig. 6 Plan of sample area and Section 1. Note that x and y scales in section are different. See Fig. 1 for position of sample area.

Stratigraphy

Three layers were present (Figs 4-6)): topsoil (context 1), colluvium (context 2) and natural chalk (context 3).

Context 1: Topsoil layer, 20-25 cm thick, turf on surface. Dark grey friable silt loam.

Context 2: Undifferentiated friable mid brown silt loam, with pasty feel when moist; inclusions of common small to medium chalk pieces and common small to medium pieces of flint, with rare large pieces of unworked flint to c. 15 cm diameter. Increases in thickness from north-south and west-east. Maximum thickness in sections 50 cm in west, 70 cm in east; only bottomed over chalk. Clean interfaces with topsoil above and chalk below.

Context 3: Solid chalk, easily fragmented and crushed by machine. Stone free.

Site formation process: it seems likely that the chalk represents the valley side after erosion by glacial meltwaters flowing down the narrow valley eroded the chalk to form the edge shown in section. Context 2 is best interpreted as colluvium down the valley side, gradually accumulating in the lowest part of the sample area. The increasing depth of context 2 from north to south might reflect the formation of plough headland during the apparently infrequent and largely unsuccessful attempts to plough the field, or the banking of colluvium against a

hedge at the bottom of the field. Alternatively, if the level floor at the bottom of the valley did result from quarrying, the colluvium probably continued to the bottom of the valley in an increasingly gentle slope, but was cut away to the immediate south of the sample area.

Context 2 was pasty in feel, and clearly included considerable quantities of ground chalk.

5 FINDS

Lithics

I am most grateful to Dr Martin Tingle for looking through the flint with me, and commenting on an earlier draft of this report. Resulting amendments are included below.

126 pieces of flint were recovered from site, in the way described above. After subsequent washing, marking and close examination, 58 of these were discarded as certainly not struck or dubious.

Of the remaining 69 pieces (weight 2300 g), 36 weighing 1520 g came from topsoil context 1, and 33 weighing 780 g from the layer of colluvium, context 2 (Table below). Judging from the size of the spoil heaps, the volume of machined context 2 was approximately four times that of the machined topsoil context 1. A higher proportion of lithics present was probably recovered from the topsoil because of tiredness and some intermittent activity on photography and section drawing etc., however it is certain that the density of artefacts in the topsoil was much higher than in the colluvium, probably in ratio approaching 5 : 1. From the recovery opportunities described above, it is unlikely that much more than about 5% of the total topsoil and colluvium assemblages was recovered.

The finds from the topsoil are unstratified, and those from the colluvium context 2 are unstratified in the sense that they have moved with the colluvium away from their point of discard. Finds positions within the colluvium did not show any sign of structure, and their distribution within it appears to be random. The colluvium appears to comprise a layer which has moved downslope over the course of time, with finds becoming randomly sorted in the process.

The finds are therefore only very loosely stratified, and separated between topsoil and colluvium only. In view of this and the small size of the groups, detailed metrical analysis is not worthwhile. However some basic quantification and measurement by weight is given below:

Numbers	FLAKES / BLADES						CORES / LUMPS		TOOLS *		TOTAL	DISCARDED
	Primary		Secondary		Tertiary							
	No.	%	No.	%	No.	%	No.	%	No.	%		
Context 1 (topsoil)	3	*8*	13	*36*	13	*36*	7	*19*	0	*0*	36	39
Context 2 (soil creep)	4	*12*	17	*52*	12	*36*	0	*0*	(2)	*6*	33	18
Totals	7	*10*	30	*43*	25	*36*	7	*10*	(2)	*3*	69	57

* Tools counted in flake / blade totals

		Primary		*Secondary*		*Tertiary*		*Cores / lumps*	
Weights (g)	**Context**	*Total*	*Av wt*	*Total*	*Av wt*	*Total*	*Av wt*	*Total*	*Av wt*
Average weight	**1**	295	98	285	22	118	9	822	117
	2	286	72	440	26	54	5	0	0

Table: basic quantification of lithics

Terminology
In the following, the term 'cortex' refers to the naturally weathered exterior surface of a piece of flint, while 'patination' denotes the colouration of the flaked surfaces. The term 'primary flake' refers to those with cortex covering 100% of the dorsal surface; 'secondary' flakes have some cortex remaining on the dorsal surface, or have more than 20% cortex remaining on the flake edges; 'tertiary' flakes have no remaining cortex.

Material
All lithics were of high quality flint derived locally from the chalk, with the exception of a single secondary flake of chert from the Upper Greensand.

All of the flint from context 2 was patinated, usually of a mottled pale blue to white colour, occasionally white, with the exception of a single secondary flake with hammer type bruising (below) which was unpatinated. Seven of the flakes from the topsoil were not patinated (three primary and four secondary), and none of the hammers / core was patinated.

Assemblage classification and description
The finds were classified as primary, secondary and tertiary flake/blades, tools, cores and hammers, groups were counted and weighed to enable the calculation of average weights. Finds were examined on a piece by piece basis, with aspects of use and technology noted, including retouch, indications of utilisation, the presence of blade scars and platform preparation.

The two groups contain very similar proportions of primary, secondary and tertiary flakes with a slightly higher proportion of secondary flakes in context 2; the higher average weight of tertiary flakes from context 1 is skewed by the presence of a single large flake in a small group. Hammers are restricted to the topsoil context, and the single core also comes from the topsoil.

Only two tools are present, both from context 2. One of these is a small notch on a tertiary fake, the other a point on a large primary flake. Retouch is otherwise absent, except on one or two flakes which show minor areas of utilisation or possible retouch.

<u>Context 1</u>
Seven large pieces of flint are present, all unpatinated. All had had some flake removals. They are classified as 'bashed lump' (1), core fragments (4), unsystematic core (1) and ? hammerstone (1). Several pieces have small areas of bruising characteristic hammerstone use on parts of one or more surfaces. Primary flakes are large (average weight 76 g), one has possible utilisation on one edge; one of the patinated pieces is slightly rolled. Secondary flakes include one of greensand chert, none showing signs of utilisation or retouch. Tertiary flakes are all patinated; blade scars are present on the dorsal surfaces of two flakes, and there is one recently broken blade with retouch on one edge.

Several flakes show spontaneous retouch through patina.

<u>Context 2</u>
Primary flakes are large (average weight 72 g). None shows utilisation, but one large flake has some secondary working to form a point. Secondary flakes are all

patinated except one, which shows slight signs of hammer bruising; one flake appears to be retouched through the patina. Tertiary flakes include one small notched piece.

Conclusions
The assemblage is dominated by waste flakes. This is most likely to indicate core reduction activities rather than tool manufacture, and it is surmised that prepared cores were taken elsewhere for the manufacture of tools. The assemblage is most likely to represent exploitation of a good source of high quality raw material. The seam(s) of flint exploited are not present within the sampled area, and processing of flint must have taken place further upslope, whence it was presumably derived.

The examples of retouch through patina may be the result of later reuse, however are more likely to represent spontaneous retouch from natural and modern agricultural processes.

The assemblage is not closely datable, however Martin Tingle comments that the assemblage is comparable to that from the upper colluvium at Bovey Lane. Later pieces may be present but unidentifiable.

Retention
The material, with the exception of the 'discarded', is stored at the Royal Albert Museum Exeter under accession no. 38/2010.

Pottery
Two small sherds of whiteware and one of blue transfer printed whiteware were recovered from the topsoil, and a single sherd of blue transfer printed whiteware from the colluvium context 2. The last is intrusive. Not retained.

Archive
All finds are retained with the archive and will be lodged in the Royal Albert Museum Exeter under accession no. RAMM 38/2010. The site code is AA 123.

6 CONCLUSIONS

The assemblage of struck flint is broadly comparable to that from the upper colluvium sampled by MacAlpine Woods and Tingle (Tingle, 1998). It is essentially not closely datable, contains no technology to associate it with an earlier Neolithic date, and is best ascribed to the later prehistoric period. Occasional retouch through patina and the presence of some unpatinated flakes and unsystematic cores suggest that elements of a later industry are present within the topsoil assemblage.

The site formation process appears to be a simple downhill movement of chalky soil as a colluvial deposit of the same type as the slowly accumulating deposits been examined at Bovey Lane. The artefacts are stratified only within this deposit and within the topsoil. The colluvium had by definition displaced artefacts, and there was no sign of structure in the artefact positions.

The almost complete absence of worked flint, the absence of burnt flint, pottery, bone and shell suggests that the assemblage represents flint extraction and

preparation of cores for use elsewhere. The chalk in the sample area was stone free, and it is presumed that the flint was sourced and subjected to preparatory knapping further upslope.

The assemblage of worked stone appears to be one of a very large number of scatters of worked flint over the Beer peninsula. The density of scatters reflects the importance of the high quality flint; domestic sites have not been located, although ritual activity is indicated in the colluvium in a dry valley at Bovey Lane to the north (excavated by MacAlpine Woods and resampled by Tingle) and below a dense scatter of tools in the ploughsoil at Mare Lane to the south (Tingle, 1998). The land at Beer Head will have been attractive to populations through time on account not only of the availability of high quality flint, but also because of light, easily cultivable soils, and access to marine as well as land resources.

7 ACKNOWLEDGMENTS

I thank Ms Georgina Wood for instructing Arrowhead Archaeology in this matter, and facilitating the work through provision of an excavator with driver.

Messrs Steve and Gerald Light, previous owners of the land, are thanked for providing me with information about ploughing in the field.

I am most grateful to Helen Rance and Marrina Neophytou for their help in provision of HER data and their hospitality in the HER offices, and Helen's helpful comments on an earlier draft.

I am very grateful to Dr Martin Tingle for kindly going through the lithics with me and commenting on my draft report, and to John Allan for allowing us to meet in the Exeter Archaeology premises at the Custom House in Exeter.

8 REFERENCES

Clarke, C.P., 2010, 'Written scheme of investigation for archaeological monitoring and recording at Land at Quarry Lane, Beer, Devon, EX12 3NJ', unpublished

MacAlpine Woods, G and R, 1933, 'Excavations in a Dry Valley in Beer', Proceedings of the Devon Archaeological Exploration Society Vol II, Part 1, 28-39

MacAlpine Woods, G and R, 1937, 'Further Excavations in the Beer Valleys, East Devon', Proceedings of the Devon Archaeological Exploration Society Vol III, Part 1, 44-50

Tingle, M., 1992, 'Interim Report for the Excavation of a Colluvial Deposit near the Prehistoric Flint Source at Beer Head' (Devon HER)

Tingle, M., 1998, 'Excavations of a colluvial deposit and an artefact scatter at the prehistoric flint source in Beer, Devon', Archaeological Journal 155

HER and NMR records

9 APPENDIX 1: ARCHAEOLOGICAL BRIEF

BRIEF FOR ARCHAEOLOGICAL MONITORING AND RECORDING
Location: Land at Quarry Lane
Parish: Beer
District: East Devon
County: Devon
NGR: 322088.089564
Planning Application no: 09/2387/FUL
Proposal: Erection of barn for workspace and storage and erection of sheep shed
Historic Environment Service ref: Arch/dc/ed/15738

1. INTRODUCTION AND ARCHAEOLOGICAL BACKGROUND

1.1 This brief has been prepared by the Devon County Council Historic Environment Service (HES), at the request of Georgina Wood of Honeysuckle Cottage, with regard to the archaeological works required as a condition of planning consent for the above works. This brief has been produced specifically for the above planning application and may require alteration if this application is revised, amended or resubmitted. This document is not transferable to any other scheme or planning application.

1.2 In accordance with PPG16 (1990) Archaeology and Planning Policy, and the Local Development Framework Policy on archaeology, consent has been granted, conditional upon a programme of archaeological work being undertaken. This condition requires that: *'No development shall take place until the applicant has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved by the Local Authority.' The development shall be carried out at all times in strict accordance with the approved scheme, or such other details as may be subsequently agreed in writing by the Local Planning Authority.*

1.3 The principal objective of the programme shall be to observe, investigate, excavate and record any surviving below-ground archaeological artefacts and deposits across the area affected by the proposed development.

1.4 The proposed development lies in an area of archaeological potential. The HER records evidence for prehistoric activity surrounding the proposed development area including significant artefact scatters and lithic working sites. There is the potential for the survival of further prehistoric evidence within the 'footprint' of the proposed development. Groundworks associated with the construction of this development may therefore expose and destroy archaeological or artefactual evidence associated with the known prehistoric activity in the area.

1.5 This Brief covers the application area as defined in the plans submitted in support of this application.

2. WRITTEN SCHEME OF INVESTIGATION

2.1 This document sets out the scope of the works required to record the extent and character of any surviving archaeological deposits within the application area and will form the basis of the *Written Scheme of Investigatio*n (WSI) to be prepared by the archaeological consultant and approved by the HES and the Local Planning Authority (LPA).

2.2 The Written Scheme of Investigation must be submitted by the applicant or on their behalf by their agent or archaeological consultant and approved by the HES and the Local Planning Authority *prior* to any development commencing on site.

3. PROGRAMME OF ARCHAEOLOGICAL WORKS

3.1 *Desk-based assessment*

The programme of work shall include a desk-based *appraisal* of the site to place the development area into its historic and archaeological context. This work will consist of map regression based on the Ordnance Survey maps and the Tithe Map(s) and Apportionments. An examination will also be made of records and aerial photographs held by the HER. The reporting requirements for the deskbased work will be confirmed in consultation with the HES. This information will be presented as part of the final report along with the results of the fieldwork.

3.2 *Monitoring and recording*

Topsoil removal and all groundworks across the site will be undertaken by a 360o tracked or wheeled JCB-type mechanical excavator fitted with a toothless grading bucket under the supervision and control of the site archaeologist to the depth of formation, the surface of *in situ* subsoil/weathered natural or archaeological deposits whichever is highest in the stratigraphic sequence. Should archaeological deposits be exposed machining will cease in that area to allow the site archaeologist to investigate the exposed deposits.

3.3 Archaeological features and deposits will be cleaned and excavated by hand and will be fully recorded by context as per the Institute for Archaeologists' *Standard and Guidance for an Archaeological Watching Brief* (1994 - revised 2008). All features shall be recorded in plan and section at scales of 1:10, 1:20 or 1:50. All scale drawing shall be drawn at a scale appropriate to the complexity of the deposit/feature and to allow accurate depiction and interpretation.

As a minimum:

i) small discrete features will be fully excavated;

ii) larger discrete features will be half-sectioned (50% excavated); and

iii) long linear features will be sample excavated along their length - with investigative excavations distributed along the exposed length of any such feature and to investigate terminals, junctions and relationships with other features.

Should the above % excavation not yield sufficient information to allow the form and function of archaeological features/deposits to be determined full excavation of such features/deposits will be required. Additional excavation may also be required for the taking of palaeoenvironmental samples and recovery of artefacts.

Any variation of the above will be undertaken in agreement with the HES.

3.4 Spoil will be examined for the recovery of artefacts.

3.5 Should deposits be exposed that contain palaeoenvironmental or datable elements appropriate sampling and post-excavation analysis strategies will be initiated. The project will be organised so that specialist consultants who might be required to conserve or report on finds or advise or report on other aspects of the investigation (e.g. palaeoenvironmental analysis) can be called upon and undertake assessment and analysis of such deposits - if required.

3.6 In the event of particularly significant discoveries, the HES will be informed and a site meeting between the consultant, the HES and the client/applicant to determine the appropriate mitigation.

3.7 The photographic record should be made in B/W print supplemented by digital or colour transparency. However, if digital imagery is to be the sole photographic record then suitably archivable prints must be made of the digital images by a photographic laboratory. Laser or inkjet prints of digital images, while acceptable for inclusion in the report, are not an acceptable medium for archives. The drawn and written record will be on an appropriately archivable medium.

3.8 Human remains must initially be left in-situ, covered and protected. Removal can only take place under appropriate Ministry of Justice and environmental health regulations. Such removal must be in compliance with the relevant primary legislation.
3.9 Should any finds identified as treasure or potential treasure, including precious metals, groups of coins or prehistoric metalwork, be exposed, these will be removed to a safe place and reported to the local coroner according to the procedures relating to the Treasure Act 1996 Code of Practice (2nd Revision). Where removal cannot be effected on the same working day as the discovery suitable security measures will be taken to protect the finds from theft.

4. MONITORING

4.1 The archaeological consultant shall agree monitoring arrangements with the HES and give two weeks notice, unless a shorter period is agreed, of commencement of the fieldwork. Details will be agreed of any monitoring points where decisions on options within the programme are to be made.
4.2 Monitoring will continue until the deposition of the site archive and finds, and the satisfactory completion of an OASIS report - see 5.5 below.

5. REPORTING

5.1 The reporting requirements will be confirmed with the HES on completion of the site work. In the event that few or no archaeological remains are exposed, only minimal reporting would be required. The results may be presented in the form of a short entry to the Historic Environment Record (HER), sent to the HES either digitally or as a hard-copy. If archaeological deposits or remains are exposed during the course of the works, then more detailed reporting would be required, in the form of an illustrated summary report submitted both in hard-copy and digitally and, if merited, wider publication.
5.2 The report shall be prepared collating the written, graphic, visible and recorded information outlined above. The report shall include the results of the desk-based work, along with plans of exposed archaeological features, including their location, description of deposits and artefacts together with their interpretation. It is recommended that a draft report is submitted to the HES for comment prior to its formal submission to the Local Planning Authority. A copy of this brief shall be included in the report.
5.3 The HES would normally expect to receive the report within three months of completion of fieldwork - dependant upon the provision of specialist reports, radiocarbon dating results etc the production of which may exceed this period. If a substantial delay is anticipated then an interim report will be produced.
5.4 On completion of the report, in addition to copies required by the Client, hard copies of the report shall be supplied to the HES on the understanding that one of these copies will be deposited for public reference in the HER. In addition to the hard copies of the report, one copy shall be provided to the County Historic Environment Service in digital format - in a format to be agreed in advance with the HES - on the understanding that a digital version of the report may in future be made available to researchers via a web-based version of the Historic Environment Record.
5.5 The archaeological consultant shall complete an online OASIS (*Online AccesS to the Index of archaeological investigationS*) form in respect of the archaeological work. This will include a digital version of the report. **The report or short entry to the Historic Environment Record will also include the OASIS ID number.**
5.6 *Publication*
Should particularly significant archaeological remains, finds and/or deposits be encountered, then these, because of their importance, are likely to merit wider publication in line with government planning guidance (PPG16). If such remains are encountered, the publication requirements – including any further analysis that may be necessary – will be confirmed with the HES.

6. PERSONNEL

6.1 The work shall be carried out by a recognised archaeological consultant, agreed with the DCHES. Staff must be suitably qualified and experienced for their project roles. All work should be carried out under the control of a specified Member of the Institute for Archaeologists (MIFA), or by a specified person of equivalent standing and expertise. The Written Scheme of Investigation will contain details of key project staff and specialists who may contribute during the course of the works - excavation and post-excavation.
6.2 Health and Safety matters, including site security, are matters for the consultant. However, adherence to all relevant regulations will be required.
6.3 The work shall be carried out in accordance with *IFA Standard and Guidance for an Archaeological Watching Brief (1994),* as amended *(2008)*.

7. DEPOSITION OF ARCHIVE AND FINDS

7.1 The archaeological consultant shall contact the museum that will receive the site archive to obtain an accession number and agree conditions for deposition. *The accession number will be quoted in the Written Scheme of Investigation*, and within the final report or the short entry to the Historic Environment Record.
7.2 Archaeological finds resulting from the investigation (which are the property of the landowner), should be deposited with the appropriate museum - in a format to be agreed with the museum, and within a timetable to be agreed with the HES. The museum's guidelines for the deposition of archives for long-term storage should be adhered to. If ownership of all or any of the finds is to remain with the landowner, provision and agreement must be made for the time-limited retention of the material and its full analysis and recording, by appropriate specialists.
7.3 The artefact discard policy must be set out in the Written Scheme of Investigation.
7.4 The condition placed upon this development will not be regarded as discharged until the report has been produced and submitted to the HES and the LPA, the site archive deposited and the OASIS form submitted.

8. CONTACT NAME AND ADDRESS

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