

# Archaeological excavations at L'Erée, Guernsey, 2010

*- Interim report -*



Duncan Garrow (University of Liverpool)  
Fraser Sturt (University of Southampton)

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## 1. Introduction and research background

This report presents the results of an archaeological excavation relating to Neolithic and Early Bronze Age occupation at the northern end of L'Erée Bay on the west coast of Guernsey (Figures 1 and 2). The excavation was carried out in September 2010 on land owned by Mr T. Queripel (Field 336), east of the Prosperity Memorial car park. The excavation was initiated primarily in response to the previous years' findings, which had produced a number of settlement-related features within several 2 x 2m test pits (Garrow & Sturt 2010a).

Overall, the 2010 excavations revealed significant further evidence – including numerous structural features – for settlement of Earlier Neolithic<sup>1</sup> date, as well as large amounts of Chalcolithic/Early Bronze Age (EBA) material. These findings represent a significant addition to our knowledge of the site at L'Erée, and indeed to our understanding of prehistoric settlement in Guernsey more broadly.



*Figure 1. Map showing the location of Guernsey.*

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<sup>1</sup> We have chosen to use 'Earlier Neolithic' here, since Guernsey apparently witnessed its first Neolithic occupation during the first half of the 5<sup>th</sup> millennium BC, and thus mainland French chronologies cannot be applied in any straightforward way. The first phase of occupation at L'Erée appears to date to c. 4700-4000 cal BC (see below).

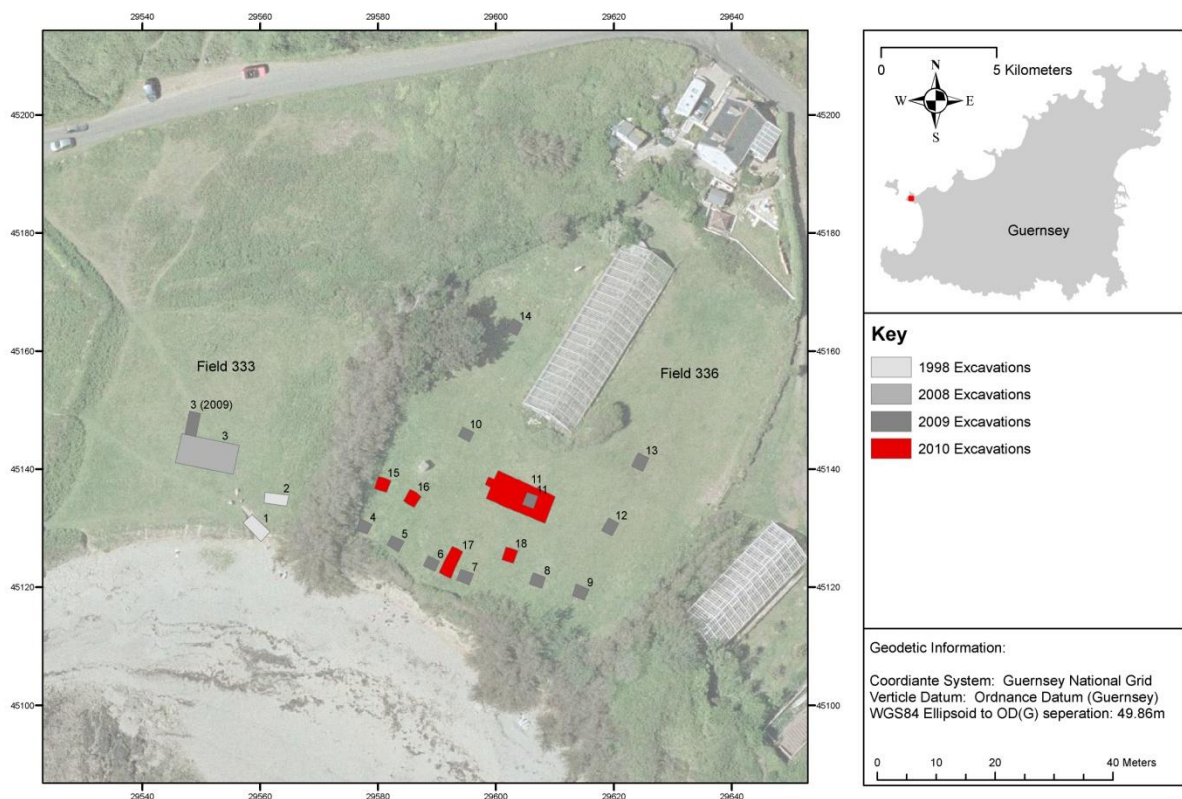


Figure 2. Site location, showing 2010 trenches in relation to 1998/2008/2009 excavations

The Neolithic/EBA of Guernsey is renowned for the impressive number of burial monuments found within its shores, a picture mirrored across the Channel Islands more widely (Patton 1995; Sebire 2005). In stark contrast, the settlement record of the same period remains very poorly understood. Within the Channel Islands as a whole, only four potential Neolithic occupation sites have been identified: an artefact scatter or midden at La Motte, Jersey (Patton 1997, 41), a group of ephemeral post-holes and pits at the Royal Hotel site, St Peter Port, Guernsey (Sebire 2005, 55 and pers. comm.), and the site at L'Erée under discussion here; very recent work on Herm has also produced evidence for probable Earlier Neolithic occupation (Anwen Cooper and Chris Scarre pers. comm.).

Since the 1970s, erosion caused by seasonal storms had been revealing what appeared to be a very promising Neolithic/EBA habitation site at L'Erée. Each year, quantities of pottery and flint/quartz along with occasional settlement-related features (such as hearths) were eroded out of the low cliff face onto the beach below. Concerned by the continuing loss of this vital archaeological material, Barry Cunliffe and Heather Sebire initiated a small-scale excavation at the site in 1998 (Cunliffe & de Jersey 2000). In summary, this work recovered substantial artefactual evidence, two buried horizons and a ditch-like feature, all within two 2 x 4m trenches. This evidence considerably strengthened previous suggestions that the site was indeed a potentially substantial Neolithic and/or EBA settlement.

A proper understanding of settlement practices is vital to our understanding of any archaeological region. In Guernsey, and indeed the Channel Islands more broadly, it is critical that the monumental record is placed within its broader landscape context, and that we gain a

better knowledge of the sites where the earliest Neolithic activity on the Channel Islands actually took place. It was this aspect of the site's research potential, along with the continuing damage caused by coastal erosion – highlighted specifically as cause for concern within the recent Coastal Strategy document drawn up for the island (Royal Haskoning 2007, 48) – that prompted our interest in and investigations at the site.

Building on the results of Cunliffe's work, we initiated a ground-penetrating radar and borehole survey at L'Erée in March 2008. On the basis of this survey's results, we subsequently carried out a relatively small excavation (10 x 5m trench) in Field 333 in September 2008 (Garrow & Sturt 2009), following up with another small trench in September 2009. These excavations produced further quantities of predominantly Chalcolithic/EBA material, and enabled us to ascertain in more detail the extent and character of the archaeological deposits in that field.

Our work in 2009 focused mainly on Field 336. Overall, we excavated a total of eleven 2 x 2m test pits (Trenches 4-14), and drilled eight boreholes across the extent of the field. This enabled us to evaluate the character and extent of surviving archaeology, and to assess the subterranean topography in further detail. As a result of this work, we uncovered convincing evidence for Earlier Neolithic and Chalcolithic/EBA settlement. Archaeological features identified included two stone-lined hearths, a pit and a post-hole (Trench 11), a substantial ditch (Trench 7), a possible stone wall (Trench 4) and a post-hole (Trench 6). All of these features were situated stratigraphically below the layers containing substantial amounts of Chalcolithic/EBA material: the visible features appeared to be associated with a period of Earlier Neolithic settlement, whilst the Chalcolithic/EBA occupation had resulted in substantial quantities of material, but apparently no detectable features.

## **2. Research Strategy for the 2010 excavations**

The main research objective of the excavation described in this report was to resolve the nature of the Earlier Neolithic and Chalcolithic/EBA settlement(s) identified within Field 336 in greater detail (see also Garrow & Sturt 2010b, 3). In order to do so, we aimed both to explore the areas around the most promising features identified in 2009, and to evaluate other parts of the settlement area (which had not been explored in 2009) in more detail.

In order to achieve these aims, we excavated five more trenches:

- (a) Trench 11 (2010): a large 10 x 5m open area around Trench 11 (2009) which had produced the most promising settlement-related features the previous year; this trench was subsequently extended (with a 1.00 x 1.50m box) at its western end to enable the full excavation of a feature
- (b) Trench 17: a smaller 4 x 2m area in between Trenches 6 and 7, which had produced a ditch and a post-hole in 2009
- (c) Trenches 15, 16 and 18: three further 2 x 2m test pits immediately to the north of those excavated in 2009

## **3. Methodology**

All of the 2010 trenches were machine-excavated to a depth of 0.30-0.40m. This enabled the rapid removal of the Medieval/Post-Medieval cultivation soil. From that point onwards, all of

the deposits were carefully hand-excavated in 0.10m spits, to a maximum depth of 1.70m (in Trench 17). As with the 2009 excavations, in order to avoid confusing terminology, the ‘test pits’ were also numbered as ‘trenches’ (15, 16, 18). The large open area, excavated immediately around 2009’s Trench 11, kept the name Trench 11.

In outlining our excavation strategy, it is important to remind readers of the fact that the deposits encountered at L’Erée can be up to 1.70m deep, and usually contain substantial amounts of prehistoric material culture from a depth of approximately 0.50m. As a result, it is logistically difficult to excavate very large trenches (which would be better for identifying relatively ephemeral prehistoric archaeology), as the majority of the digging needs to be carried out by hand.

In addition to the structural and material cultural remains, the stratified deposits at L’Erée represent a potentially significant source of data on the changing environment of the Channel Islands throughout the Holocene. As such, a coring and sampling programme has been carried out to enable pollen analysis (being undertaken by Dr Rob Scaife), micromorphological analysis (Dr Charly French) and landscape, sediment dynamics and environmental modelling (Dr Fraser Sturt) to be undertaken. The results of these investigations will help us to both understand micro level site formation processes as well as the changing nature of the broader environs.

All trenches were located using a Leica 1200 real time kinematic global position system (RTK GPS) connected to the States of Guernsey correction signal, transmitted via an internet server.

The site archive is currently held at the University of Southampton under the site code LER10. Once the project is fully completed, the archive will be deposited along with all relevant reports at Guernsey Museum.



*Figure 3. Excavation in progress, September 2010 (Trench 11 is in the foreground; Trench 16 and the spoil heap for Trench 15 are visible next to the trees to the centre right, Trench 18 is to the centre left; the large spoil heap for Trench 17 extends along the hedge line by the sea)*

## 4. Results

In 2010, a total of five trenches were excavated within Field 336 (Figure 2). Since these were all located within the general area explored previously, the deposits encountered were very similar to those described in previous years: in summary, modern topsoil and Medieval cultivation layers, overlying 'laminated' pale grey compact sandy silt deposits, overlying mid brown and then dark brown sandy silts (Figure 4; see Garrow & Sturt 2010a, 8-9 for a detailed description of the general stratigraphy of the field).



*Figure 4. Photograph of Trench 17 section, looking east. A probable World War II trench, with two large stones near its base, can be seen in the centre of the picture cutting through the Medieval and uppermost prehistoric layers.*

In addition to these buried deposits and one modern feature (the probable World War II trench in Trench 17), a number of Earlier Neolithic archaeological features were observed (within trenches 11, 16 and 17). These are described in turn, by trench, below.

### Archaeological features

#### *Trench 11*

*Please note that, for the sake of completeness, features identified within the 2009 test pit as well as the 2010 trench are described here, not least because Features 9 and 11 were excavated in both years (since they were only partly exposed in 2009).*

**Feature 7. Hearth pit.** Fully excavated in 2009. Cut [75]: 0.55 x 0.55 x 0.10m deep; circular in plan, bowl-shaped in section, with very gently sloping sides and shallow curving base. Fill [74]: very dark grey-black sandy silt with abundant charcoal flecks and fragments. A series of seven angular stones (up to 0.10m across) was found towards the southern edge of F.7. It is likely that these had originally been placed around the edge of the feature to define its edge during use.



Figure 5. Plan of Trench 11

**Feature 8. Hearth pit.** Fully excavated in 2009. Cut [77]: 0.60 x 0.60 x 0.10m deep; circular in plan, bowl-shaped in section, with very gently sloping sides and shallow curving base. Fill [76]: very dark grey-black sandy silt with abundant charcoal flecks and fragments. A series of nine angular stones (up to 0.20m across) was found curving neatly around the southern edge of F.8. Six additional stones were found spread across the middle part of the feature. As with F.7, it is likely that these stones had been placed around the edge of the feature in order to define its edge during use; the first nine of these were probably still in situ, the other seven displaced from around the north-eastern side of the feature. The pit contained five sherds (8g) of undiagnostic pottery. A fragment of wood recovered from this feature was radiocarbon dated to 4320-4050 cal BC at 95% confidence (see Radiocarbon Dating section below).

**Feature 9. Pit.** Excavated in 2009 and 2010. Cut [79]: 0.52 x 0.50 x 0.16m deep; irregular circle in plan, bowl-shaped in section, with gently sloping sides and shallow curving base. Fill [78]: very dark grey-black sandy silt with abundant charcoal flecks and fragments.



*Figure 6. Photo of the central part of Trench 11, looking north-east. Test pit 11 (excavated in 2009) can be seen clearly on the right-hand side, with F. 9 (half-excavated) and F. 27 (as yet unexcavated) visible in its northern edge and F. 11 (fully excavated) visible at its eastern edge; F. 17 (as yet unexcavated) is next to the scale bar on the left (left hand scale: 1m)*

**Feature 11. Post-hole.** Excavated in 2009 and 2010. Cut [83]: 0.24 x 0.22 x 0.14m deep; oval in plan, steeply sloping sides, narrow curving base. Fill [82]: dark grey sandy silt with abundant charcoal flecks.

**Feature 16. Hearth pit.** Excavated in 2010. Cut [122]: 0.91 x 0.83 x 0.09m deep; oval in plan, steeply sloping sides, flat base. Fill [117]: dark grey/black sandy silt with frequent charcoal flecks. Numerous angular and rounded stones were observed across the surface of the feature (Figure 7). It is likely that these had originally been placed around the edge of the feature to define its edge during use as a hearth; once people had finished using it, the stones were presumably piled on top, perhaps in order to put the fire out.





Figure 7. Photo of F. 16 prior to excavation, within the extension to Trench 11, looking north (scale: 50cm)

**Feature 17. Hearth pit.** Excavated in 2010. Cut [118]: 1.20 x 1.04 x 0.15m deep; oval in plan, near-vertical sides, flattish base. Fill [115]: medium-dark brown/grey sandy silt with frequent charcoal flecks and denuded stone fragments. Several large stones were observed across the surface of the feature prior to its excavation (see Figure 6). As with the other hearth pits, it is likely that these had originally been placed around the edge of the feature to define its edge during use as a hearth.

**Feature 18. Pit.** Excavated in 2010. Cut [121]: 0.70 x 0.63 x 0.27m deep; circular in plan, steep sides, flattish base. Fill [116]: dark grey/black sandy silt with occasional charcoal flecks.

**Feature 20. Pit.** Excavated in 2010. Cut [126]: 0.54 x ?? (0.26 visible) x 0.13m deep; circular in plan, steep sides, flattish base. Fill [127]: light yellow/brown sandy silt.

**Feature 26. Post-hole.** Excavated in 2010. Cut [131]: 0.15 x 0.15 x 0.14m deep; circular in plan, steeply sloping sides, pointed base. Fill [132]: dark brown sandy silt, with occasional charcoal flecks.

**Feature 27. Post-hole.** Excavated in 2010. Cut [141]: 0.24 x 0.20 x 0.15m deep; oval in plan, vertical sides, flattish base. Fill [142]: dark brown sandy silt, with occasional charcoal flecks.

**Features 22-25, 28-31. Stakeholes.** Excavated in 2010. See below for details. All filled with a dark grey/black sandy silt with occasional charcoal.

Feature no.	Cut	Fill	Diameter (m)	Depth (m)
22	133	134	0.06	0.07
23	135	136	0.06	0.05
24	137	138	0.07	0.11
25	139	140	0.06	0.06
26	131	132	0.14	0.10

<b>27</b>	141	142	0.20	0.15
<b>28</b>	143	144	0.07	0.05
<b>29</b>	145	146	0.11	0.07
<b>30</b>	147	148	0.05	0.04
<b>31</b>	149	150	0.06	0.04
<b>33</b>	154	155	0.08	0.08

*Table 1. Summary of stake-holes in Trench 11.*



*Figure 8. The eastern half of Trench 11, looking north-east. Stake-hole F. 30 and post-hole F. 26 are in the foreground (scale: 50cm)*

### ***Trench 15***

No features identified.

### ***Trench 16***

**Feature 21. Ditch.** Cut [129]: 1.10 wide x 0.30 deep x ?? long (2.74m visible); moderately sloping sides, flattish base. Fill [130]: mid-dark grey-brown compact sandy silt. A one-metre slot of this feature was excavated. The excavated portion produced 24 sherds (275g) of Earlier Neolithic pottery. Within the confines of a 2 x 2m test pit, it was difficult to establish fully the form and character of this feature.



Figure 9. Trench 16, looking south-east, showing ditch F. 21 (scale: 50cm)

### ***Trench 17***

**Feature 15. Modern (WWII?) trench.** Cut [100]: 1.13 x ?? x 0.85m deep; the southern (beach-facing) side was vertical, and the northern side was steeply sloping, joining a flat bottomed base. Fill [101]: mid-grey brown sandy silt with frequent large to very large pebbles and boulders. Corroded metal and modern glass were found at the base of the fill.

**Feature 19. Post-hole.** Cut [125]: 0.30 x 0.23 x 0.29m deep; oval in plan, very steep sides, narrow, pointed base. Upper fill [123]: dark brown sandy silt with occasional charcoal flecks. Lower fill [124]: dark brown sandy silt with occasional charcoal flecks. This feature was notably similar to the post-hole found just 3m away in Trench 6 in 2009. As a result, it is possible that they formed part of the same building.

### ***Trench 18***

No features identified.

## **5. Specialist analyses**

### **5.1. Prehistoric pottery (Anwen Cooper)**

#### ***Introduction and methodology***

This assessment relates to an assemblage of 3557 pottery sherds, weighing 14,676g, recovered during the 2009 and 2010 excavation seasons from twelve test pits and two larger excavation areas (Trenches 11 and 17) within Field 336 at L'Erée. It provides a broad characterisation of the

prehistoric pottery recovered from the site and summarises the potential for further analysis. The vast majority of this material (3464 sherds, weighing 14,147g - 96% of the assemblage by weight) was found within postglacial soil layers. A small but significant component (90 sherds, weighing 517g - 4% of the assemblage by weight) was found within features – pits, post holes, hearths, ditches and gullies - cut into these palaeosols. The remaining three prehistoric sherds came from a World War II trench which cut through Trench 17. Overall, this material spans the period from the Earlier Neolithic to the 20th century. However the vast majority of sherds can be dated either to the Earlier Neolithic on Guernsey (c.4700-4200BC, corresponding broadly with the Cérny period in northern France), or to the Chalcolithic/EBA period (c. 2500-2000BC).

The sherds were scanned rapidly in order to assess their overall date and character. No detailed analysis was undertaken but a note was made of the principal decorative traits, dominant inclusions and vessel forms represented. Identification was aided by reference to key texts on the prehistoric pottery of the Channel Islands (Burns 1988, Bukach 2000, Patton 1995, Pioffet 2010, Sebire 2005). Leading specialists in the prehistoric pottery of Northern France and the Channel Islands (I. Kinnes, C. Marcigny and H. Pioffet) were consulted regarding the specific identification of key diagnostic sherds.

### ***Summary of findings***

#### *Material from palaeosols*

Within Trench 11 and many of the surrounding test pits, the prehistoric pottery was located within two distinct palaeosol horizons – the ‘upper’ and ‘lower’ buried soils. This preliminary assessment focuses primarily on the most abundant assemblages, from the larger trenches (11 and 17).

#### *Lower buried soil*

Most of the sherds from ‘lower buried soil’ contexts ([99] in Trench 11) were undecorated, small and abraded. The largest assemblage was, perhaps unsurprisingly, recovered from Trench 11 where most of the Neolithic cut features were identified. Overall, the material from lower buried soil contexts varied considerably in character. Both coarse and fineware vessels were represented, most of which were probably bowls of various forms and sizes. Sherds from coarseware vessels were generally well-fired with a fine reddish-brown paste and ill-sorted, predominantly feldspar or quartz inclusions. One coarseware sherd came from a large carinated vessel. Several others had round or elongated lugs (one potentially pierced), positioned on or immediately below the rim. The fineware sherds from lower buried soil contexts were typically dark brown in colour. Some of these fragments were made from a fine clay paste with ill-sorted feldspar, quartz and mica inclusions. However, occasional sherds were made from a fine clay paste with more uniform, small to medium-sized inclusions. A small proportion of the fineware sherds had burnished surfaces. Rim sherds were commonly simple and either slightly everted and/or tapered. Several fineware sherds derived from carinated vessels. The decorative traits represented on these sherds include small vertical incisions along the rim, rows of comb impressions or small vertical incised lines on the shoulder of the vessel, and clusters or rows of small or large bouton repoussé. This material has clear affinities with Pinnacle/Fouaillages assemblages recovered from across the Channel Islands. Consequently a date range of c. 4500-4200BC seems likely. Close resemblance with the material from Les Fouaillages itself was evident (H. Pioffet pers. comm.). In particular one unusual burnished sherd decorated with horizontal incised lines and a row of comb impressions, was very similar to sherds recovered from Phase I of the Les Fouaillages excavation.

### *Upper buried soil*

Again, most of the material from 'upper buried soil' contexts ([98] in Trench 11) was undecorated, small and abraded – very few clearly diagnostic sherds were recovered. Within Trench 11, and to a certain degree within the surrounding test pits, a clear gradation from top to bottom was evident in the material from this soil horizon. Material recovered from the upper spits of these contexts was larger and fairly homogenous in character, mostly comprising well-fired red-brown coarseware sherds (mainly c.1-1.5cm thick) with well-sorted, common, predominantly feldspar inclusions. Sherds from the bases, bodies, necks and rims of a range of jars, bowls and cups were recovered. Rims were characteristically simple - most were tapered, a few were beaded, and they were either upright or everted. Occasional broken perforated lug fragments were recovered from these contexts and several body sherds were embellished with applied cordons. One sherd had a red surface finish. Other decorative traits included fingernail impressions, irregular rows of large impressed dots similar to sherds recovered from the Bronze Age assemblage at Jerbourg (Burns 1988, 18), and roughly incised horizontal and diagonal lines. Material recovered from the lower spits of the upper buried soil in Trench 11 and the surrounding test pits was generally smaller, more worn and more varied in character. The latter included a highly abraded Earlier Neolithic component.

### *Trench 17*

The accumulation of palaeosols within Trench 17 was not straightforwardly comparable with that from Trench 11 and the surrounding test pits – the soil layers were much thicker than those in Trench 11 (probably due to its positioning further down-slope) and the Neolithic 'lower buried soil' horizon was not clearly distinguishable. Rather, a substantial prehistoric pottery assemblage, most of which probably dates to the Early Bronze Age, was recovered from the upper parts of the buried soil (and the upper spits of the lower parts) within this trench. As noted with reference to the 'upper buried soil' material from Trench 11, the assemblage from Trench 17 was dominated by fairly homogenous, well-fired red-brown sherds (c.1-1.5cm thick), most of which were tempered with common, well-sorted, coarse feldspar inclusions. Sherds from the bases, bodies, necks and rims of jars, bowls and cups were recovered. Rims were simple - mostly tapered but occasionally flattened or beaded. Lugs and cordons were present on many fragments. In one case the lug was extended and tapered, much like that on an Early Bronze Age example from Petit Port (Patton 1995, 97). Most other decorative features were focused along cordons. This included rows of fingernail impressions or impressed lozenges. Decorative parallels are present in the Early Bronze Age assemblages from Jerbourg (Burns 1988) and Icho Islet (Patton 1995, 96). It is also worth noting that soot adhered to the surfaces of many sherds from these contexts. A small, highly worn Earlier Neolithic component was also present within the lower spits of the lower buried soil horizon in this trench.

### *Material from cut features*

The material recovered from cut features was sparse, mostly comprising small, abraded and undecorated sherds. Most of this material fits well with that recovered from the 'lower buried soil' in Trench 11 and is almost certainly of Earlier Neolithic date. Several of these sherds are worthy of note. A burnished fineware sherd decorated with a row of small dots, probably made with the tip of a fish bone (I. Kinnes pers. comm.) was recovered from a posthole (F.10) in Trench 6. Two refitting rim sherds decorated with bouton repoussé were recovered from a hearth (F.8) in Trench 11. A rim sherd with a small, round lug positioned on the rim itself, probably from a small hemispherical bowl was recovered from a hearth (F.17) in Trench 11. Additionally sixteen unabraded and in some cases refitting rim and body sherds from a large coarseware necked bowl with an everted rim were recovered from the ditch (F.21) in Trench 16. The vessel was poorly fired and made of a fine paste with ill-sorted predominantly feldspar and quartz inclusions. A collar of soot or charred organic residue clung to the neck sherds. No clear

parallels for this vessel are evident within Pinnacle/Fouaillages assemblages from elsewhere on the Channel Islands. It is conceivable that this material is several centuries earlier than that recovered from the Neolithic cut features in Trench 11. This notion is supported by the fact that sherds from a burnished vessel decorated with an early, large form of bouton repoussé - similar to those found on Cérny ancien vessels in northern France (H. Pioffet pers. comm.) - were recovered from the soil immediately above F.21. The freshness of the material recovered from F.21 suggests that it was deposited soon after it was broken.

### ***Potential and recommendations***

Overall the prehistoric pottery assemblage recovered from LER 09 and LER 10 comprises a small but potentially highly significant Earlier Neolithic component and a larger component which probably spans the Chalcolithic to Early Bronze Age. The Earlier Neolithic element adds to a small but growing body material of this date recovered from across the Channel Islands (Patton 1995, Pioffet 2010, Sebire 2005). However the fact that some of it clearly derives from cut settlement features makes it particularly unusual and important. All of this material should be analysed in full and illustrated appropriately (according to the guidelines set out in PCRG 2010) following the completion of investigations at L'Erée.

## **5.2. Worked stone (Fraser Sturt)**

This interim assessment relates to 6179 lithics weighing 97,498 grams excavated from fourteen trenches in 2009 and 2010. Analysis of this material is ongoing and as such interpretations offered here at present tentative rather than final. The assemblage mainly consists of flake material and angular shatter, produced from the knapping of small beach pebble cores. In addition, there are a number of identifiable tools (scrapers, blades, arrowheads) and cores. Broadly, most of this material can be seen to fit within established lithic manufacturing practices for the Late Neolithic and Early Bronze Age (Audouard 2009, Butler 2005; Edmonds 1995). However, there is also a recognisable Earlier Neolithic component within the lower buried soil deposits.

### ***Methodology***

The assemblages from all three seasons (2008, 2009, 2010) are being analysed in accordance with best practice, as identified by Andrefsky (2003), Butler (2005) and Edmonds (1995). This includes determination of raw material, reduction sequence, technology and, where appropriate, typological classification. As such, all lithic material is being counted, weighed and in some instances measured. Each lithic has been examined using an illuminated x20 magnifying glass.

### ***Distribution***

Figures 10 and 11 (below) provide distribution plots for excavated lithic material and pottery. In each figure the amount of material recovered has been normalised against the area of excavation to give a 'lithics/pottery per m<sup>2</sup>'. This has enabled direct comparison of quantities of material recovered over the three years of excavation carried out as a part of this project and Cunliffe and de Jersey's (2000) earlier work.

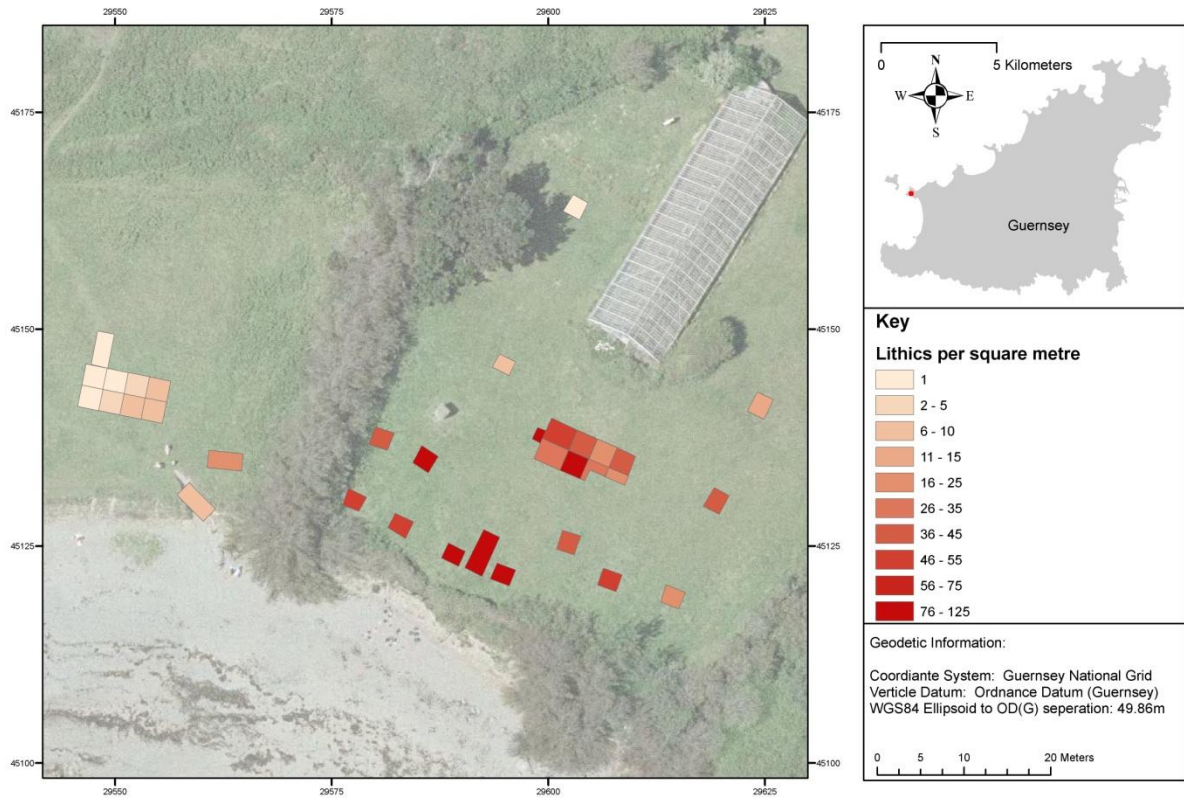


Figure 10. Distribution map showing number of lithics per square metre for excavated areas.

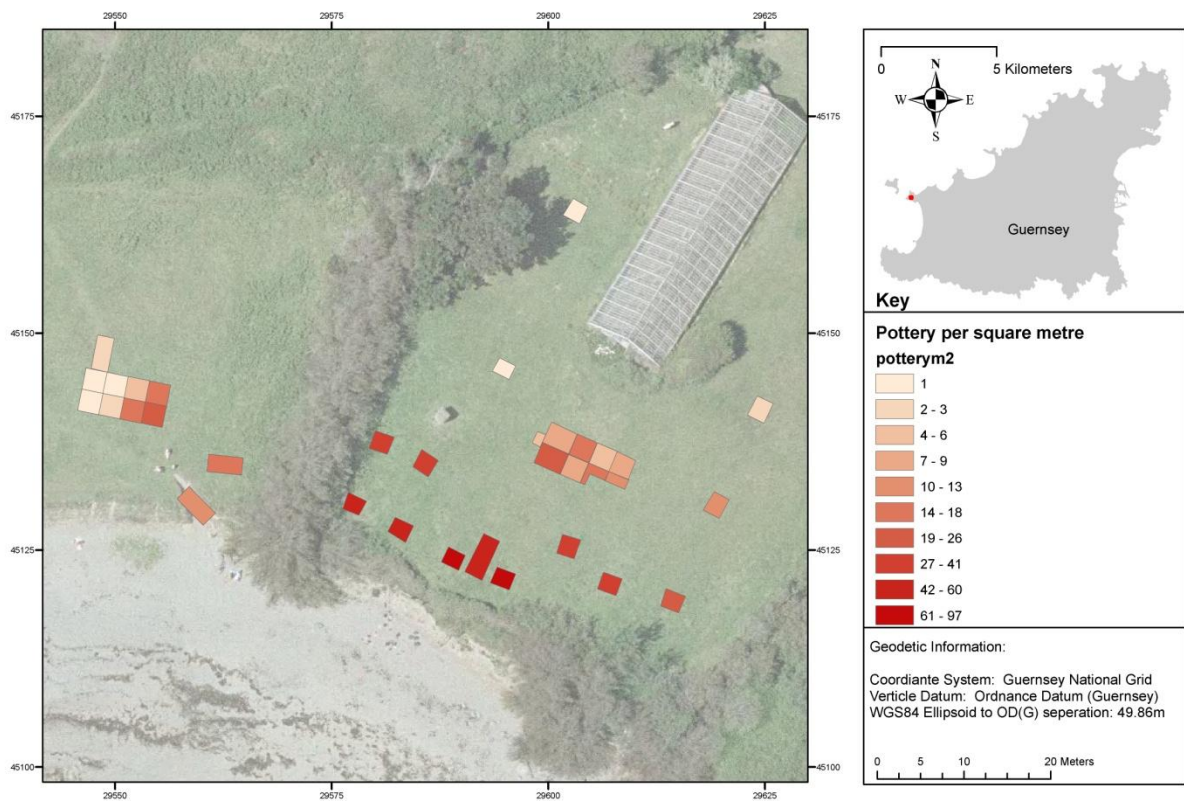


Figure 11. Distribution map showing the number of pottery sherds per square metre for excavated areas.

The overall impression gained from both distribution plots is of an increasing density of material in the central southern part of the site. As discussed above, it should be borne in mind that this also relates to the area with the greatest depth of deposit.

Ongoing work appears to indicate that variation in distribution pattern is as discernable vertically as it is horizontally across the site. Figure 12 shows the variability in number of lithics recovered from different contexts and associated arbitrary levels for grid squares excavated in Trench 11. Here a bimodal distribution appears to occur across the squares, with peaks in the mid to lower levels of context [98] (the upper buried soil) and context [99] the lower buried soil. Just as with the pottery, this broad trend also tentatively links to changes in assemblage composition, with lower levels producing more blade like material, suggestive of Earlier Neolithic activity. In addition, lithics from these lower levels also appear to be produced from a greater variety of raw materials.

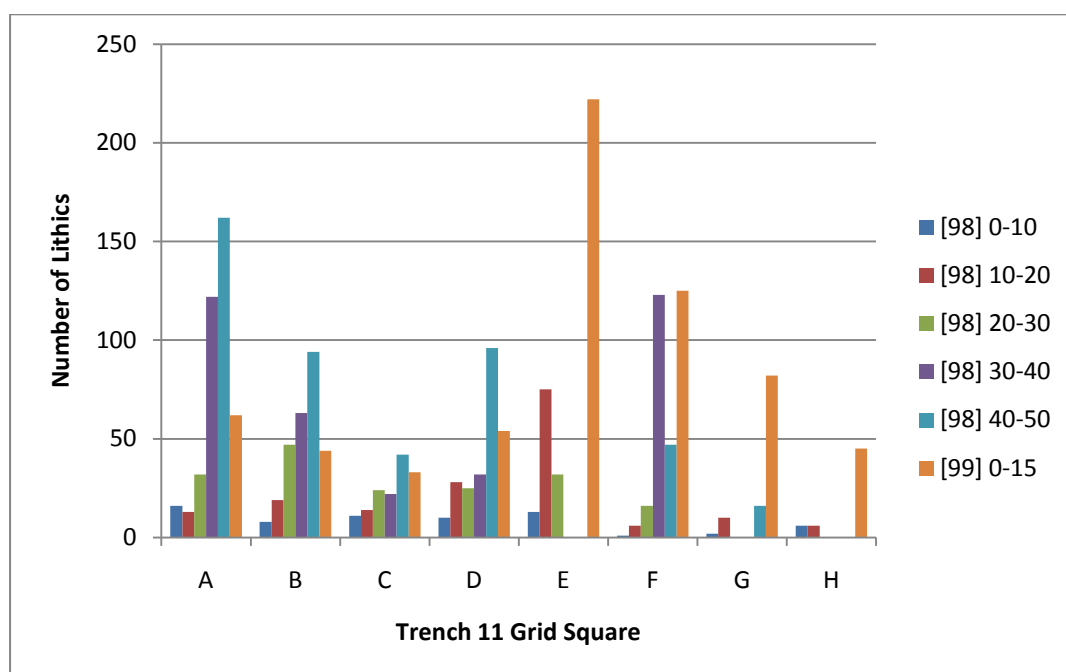


Figure 12. Chart showing numbers of lithics recovered from arbitrary levels of contexts [98] and [99] per Grid Square in Trench 11.

### **Raw Material**

The lithic material from all three seasons' work represents a variety of raw material sources, from orange/brown through to black and grey flint, to reddish and opaque white quartz material. Significantly, material from field 336 has produced a greater variety of raw materials than described in Brooks' (2000) report from Cunliffe and de Jersey's work, or that noted in our own 2008 excavations. This, added to the discovery of a saddle quern and two rubbing stones from Trenches 8 and 9 and structural features discussed above, reinforces the idea of field 336 being a centre of settlement activity in this area.

### **Discussion**



The multi-period lithic assemblage recovered through the three seasons of excavation at L'Erée now represents a significant resource for investigation of knapping strategies and stone tool use from the Earlier Neolithic through until the Early Bronze Age. This chronological range and the stratified nature of the site will allow for detailed comparisons to be made between this settlement based assemblage, and that uncovered at Les Fouaillages, recently analysed and currently awaiting publication. At present, there are hints that the expedient use of beach cobble material which dominates the upper level assemblage is not representative of the lower buried soil levels. Here, large core fragments, an increased number of blades and a greater variety of raw materials could suggest a broader procurement network.

### ***Polished stone ring fragment***

A fragment of polished stone ring (probably schist) was recovered from the lower buried soil layer [99] in Trench 11. The piece recovered represents approximately 12% of the original object, and so it is difficult to be completely sure of its original dimensions, especially since both the outer and inner edges are somewhat uneven. The ring's outer diameter would probably have been c. 11cm, and it is 0.5cm thick (in section). The distance between its outer and inner edges (its width in plan) is c. 1.5cm.



*Figure 13. Polished stone ring fragment*

Polished stone rings of this type are commonly associated with the Villeneuve-St-Germain complex on the French mainland. Patton (1995, 31) notes that a small number (at least five complete rings and several fragments) have previously been found in the Channel Islands, notably including one fragment from L'Erée which was recovered having eroded out of the cliff face (Sebire 2005, 55). Eight fragments were also found at Les Fouaillages (Patton 1995, 31); prior to this year's excavation at L'Erée, the latter were the only examples to have come from a secure archaeological context. Patton discusses the fact that two main types of stone ring are known, those predominantly associated with the Paris Basin and those from Brittany (*ibid.*); the former tend to be between 0.9 and 1.9 cm thick, the latter much wider. The majority of those from the Channel Islands fit closely with the Paris Basin series (as indeed does the one under discussion here).

### ***Further work***

Analysis of the lithic assemblage will continue following the method described above, with a greater amount of time spent attempting to account for the variety of raw materials recovered. In

addition the quern and rubbing stones recovered will be assessed for the potential recovery of phytolith material, and the polished stone ring fragment material type definitively established.

### 5.3. Radiocarbon dating

One sample of wood charcoal (recovered in 2009) from hearth F. 8 was submitted to Beta Analytic for dating. This gave a date range of 4320-4050 cal BC at 95.4% confidence (Table 1). The sample submitted was not clearly young wood (none was available), and so due to a potential ‘old wood effect’ the determination obtained must be treated only as a *terminus post quem* for this feature.

Location	Lab no.	Material	d13C	Radiocarbon measurement BP	Date ranges at 95.4%
LER 09 F.8, [76]	Beta- 271214	Wood charcoal	-22.80	5340 +/- 40	4320-4290 cal BC (6.8%) 4270-4050 cal BC (88.6%)

Table 2. Radiocarbon measurement and calibrated date ranges

It is very interesting to note the close correspondence between this date range, and that obtained as a result of the 1998 excavations on a “hearth exposed some 55m to the east of Trench 1” – 4230-3810 cal BC at 95.4% confidence (Cunliffe & de Jersey 2000, 89). According to this fairly approximate locational information, the hearth previously dated would also have been situated in Field 336, but given that it was exposed in the eroding cliff face was presumably some distance to the south of Trench 11.

A number of samples recovered in 2010 should provide accurate dates in future. A piece of charred wood from pit F. 18 has been identified as *Ulex* (gorse) (Eleni Asouti, pers. comm.); given the fact that this branch was clearly young wood, this sample should provide a good date for this occupation. In addition, charred residues on sherds within ditch F.21 in Trench 16 should provide a key date there.

### 5.4. Micromorphology

Experimental work is being carried out to compare traditional micromorphological analysis with results that can be gained via x-ray micro tomography. At present samples from the 2010 season are being scanned in the micro-CT lab at University of Southampton. Concurrently, Dr Charly French from the University of Cambridge is carrying out a more traditional micromorphological analysis of samples taken from the deepest stratified sequence in trench 17.

## 6. Discussion

The excavation described within this report produced a series of extremely interesting results, which increase our knowledge of the site at L’Erée significantly. It is important to note first of all that the main research objective for the season was met in full: we were able to ascertain a great deal more about the character of both the Earlier Neolithic and the Chalcolithic/EBA settlements at L’Erée.

Overall, our understanding of the site’s chronology has been improved considerably as a direct consequence of the 2010 excavations. We can now feel confident that we are dealing with two

main phases of occupation, which are separate rather than continuous: one Earlier Neolithic (c. 4700-4000 cal BC), and one Chalcolithic/EBA (c. 2500-2000 BC). There is evidence that both main phases themselves lasted for a fairly long time, each leading to the relatively substantial build-up of soils.

### ***Earlier Neolithic occupation***

Within the Earlier Neolithic, we appear to be dealing with two sub-phases of occupation. The later sub-phase is represented by features which in Trench 11 (where things were clearest due to the large size of the area excavated) were cut into a developed soil [99] that had formed a layer 0.15-0.20m thick above the loess subsoil. The earlier phase is represented by features associated with occupation directly on top of the subsoil (which were not visible at the upper level). The temporal and spatial distinction between these two sub-phases can be seen very clearly in Figure 6, which shows a hearth and a pit cut into the later, upper level, but also the earlier, lower level, which is visible in the bottom of the fully re-excavated 2009 test pit. Soil formation occurred as a result of what must have been anthropogenic activity associated with the initial occupation of the site, leading to the build-up of [99], into which the later phase features had been cut.

In Trench 11, the earliest sub-phase of occupation is characterised by nine stake-holes and two post-holes (Fs 26 and 27). While these do not form a completely coherent group in terms of their arrangement (we are not dealing with an immediately obvious 'house' for example), they were certainly fairly coherent in terms of their morphology (see Table 1) and fills. Equally, a number of them were clearly arranged into a straight line (see Figures 5 and 8). It is probable that they represent the visible traces of temporary structures associated with relatively ephemeral settlement, echoing patterns seen across large parts of Britain, for example, during the fourth millennium BC (e.g. Darvill 1996). The later sub-phase of occupation is characterised by four hearth pits (stone-lined during use), three pits containing burnt material and one post-hole (F. 11). These features also suggest camp-like occupation, with the site probably being returned to intermittently over time.

It is likely that most features recovered in other trenches across the site date to one of these two Earlier Neolithic sub-phases. The ditch in Trench 7 (F. 12, dug in 2009), however, contained several probably Early Bronze Age sherds (as well as one Earlier Neolithic sherd), and thus may well be EBA in date. By contrast, the ditch in Trench 16 (F. 21) produced potentially the earliest pottery from the site. Material from the post-hole in Trench 6 (F. 10) also appeared to be Earlier Neolithic; the post-hole in Trench 17 (F. 19) contained no pottery. The discovery of sizeable ditches on the site is, at present, difficult to explain – while their date and full extent is far from established, their presence does not sit entirely comfortably with an interpretation of relatively small-scale, repeated but probably not permanent occupation at the site. This issue is clearly one which could be resolved through future work.

Importantly, the two-phase – or, at the very least, fairly extended – stratigraphic timescale for Earlier Neolithic occupation at L'Érée fits well with the material culture recovered, the single radiocarbon date obtained, and the overall soil profile revealed. The bulk of the earliest pottery in evidence on the site was characterised by Pinnacle-Fouaillages type vessels, which would normally be assigned to c. 4500-4200 BC; some sherds recovered from ditch F. 21 may even push this date back slightly further towards c. 4700 BC. In Trench 11, the lowest soil in the profile [99] contained much of the Pinnacle-Fouaillages material, along with a fragment of polished stone ring (which, being closely associated with Villeneuve St Germain pottery in France, would usually be seen as dating to c. 4900-4200). The radiocarbon date obtained from a

hearth pit *cutting into* the lower soil [99] was 4330-4060 cal BC (at 95% confidence). Thus, overall, we might well be dealing with Earlier Neolithic activity on the site which began in the second quarter and ended in the final quarter of the 5<sup>th</sup> millennium BC (c. 4700-4100 cal BC).

### ***Chalcolithic/EBA occupation***

Given the large amounts of Chalcolithic/EBA pottery and flint recovered from the site, it is in many ways surprising that as yet very few features associated with this phase of occupation have been recovered. As a result, frustratingly, it is very difficult to say a great deal more about the nature of occupation at L'Erée during this period. Certainly, the amounts of material recovered suggest substantial occupation overall. It is possible that insubstantial features associated with this occupation have simply not survived; equally, they may never have been present in the first place. In this light, it is interesting to note that other contemporary sites in the Channel Islands have also produced quantities of artefactual material, but little in the way of features (Patton 1995, 86-88).

### ***Summary***

In summary, the site at L'Erée – which includes occupation evidence of Earlier Neolithic (c. 4700-4100 BC) and Chalcolithic/EBA (c. 2500-2000 BC) dates – represents a vital addition to our knowledge of prehistoric settlement in Guernsey. The earlier phase represents well-defined and conclusive evidence of Earlier Neolithic occupation (with surviving settlement features) in Guernsey, adding to previous glimpses obtained at the Royal Hotel site, St Peter Port (Sebire 2005, 55). Importantly, close material connections (the pottery assemblage, the polished stone ring fragment, etc.) between the site at L'Erée and Phase 1 of the tomb at Les Fouaillages suggest a close temporal relationship between the two sites: this does appear to be a settlement which was contemporary with the earliest known monument on the island.

The latter phase of the site, equally, represents important excavated evidence for Chalcolithic/EBA occupation in the Channel Islands, and provides an important landscape context for the Le Creux ès Faïes tomb immediately upslope, which is known to have been re-used during the Late Neolithic/EBA (Kendrick 1928, 184-5; Sebire 2005, 74).

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