

COASTAL EROSION AT CHALLABOROUGH BEACH, CHALLABOROUGH, SOUTH HAMS, DEVON

(NGR SX 64763 44931)

Results of Archaeological Investigations

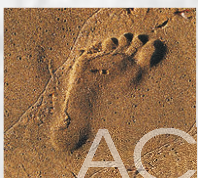
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On behalf of:
Devon County Council

Report No: ACD840/1/2

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The views and recommendations expressed in this report are those of AC archaeology and are presented in good faith on the basis of professional judgement and on information currently available.

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Summary

An archaeological trench excavation carried out on Challaborough Beach, Challaborough, South Hams, Devon (SX 64763 44931), following a storm that caused significant coastal erosion, was undertaken by AC archaeology during January 2014.

Investigations comprised the hand-excavation of two small trenches into newly-exposed deposits identified by a local archaeologist as containing archaeological features and deposits.

The investigations exposed a well-preserved occupational sequence that extended between the Late Iron Age and Post-Roman periods. Radiocarbon dates obtained from samples have shown that the occupation probably commenced towards the end of the Iron Age (late 1st century BC to early 1st century AD), with features and deposits including a probable boundary ditch, the accumulation of an occupational soil and the construction of some stone boxes; the function of which was not established but may have related to funerary or specialised industrial activity. Late first century pottery recovered from a ditch re-cut has suggested that the occupation into the Romano-British period was perhaps continuous, while Post-Roman pottery recovered from the probable up-cast of a later ditch and subsequent soil accumulation has shown activity may have continued into the sixth century AD.

The date ranges exposed have strong parallels with the ongoing results exposed at nearby Mount Folly, where continued occupation from the Iron Age into the Romano-British period has been demonstrated. Post-Roman pottery comprising similar eastern Mediterranean amphorae as recovered some 1.5km southeast at Bantham has the potential to expand on the distribution of coastal sites where the inclusion of imported materials have been considered to represent maintained trade-links with the continent.

1. INTRODUCTION

- 1.1 This report sets out the results of archaeological investigations comprising an excavation following a storm that caused significant coastal erosion on Challaborough Beach, Challaborough, South Hams, Devon (SX 64763 44931).
- 1.2 The archaeological works were commissioned by Devon County Council Historic Environment Team (hereafter DCCHET) and were carried out by AC archaeology during January 2014.
- 1.3 Challaborough Beach is set within a coastal inlet at the end of a valley that is bisected by a stream flowing from Bigbury village to the northeast (Fig.1 and Plate 1). Its southern extent, which is formed by Warren Point is occupied by Bigbury-on-Sea and in turn linked to the tidal Burgh Island. Bigbury-on-Sea sits above the mouth of the River Avon and Bigbury Bay, with Bantham Ham occupying the opposing peninsula. The investigations at Challaborough were located on the northwest portion of its sand and shingle beach, where in early January 2014 significant storms combined with high tides had removed approximately 10m of sand dune that bordered this part of the inlet. The geological makeup of the area consisted of slate, siltstone and sandstone of the Meadfoot Group, which was beneath a superficial deposit sequence of alluvium (clay, silt, sand and gravel) and blown sand (British Geological Society).

2. ARCHAEOLOGICAL BACKGROUND

- 2.1 The site was discovered in January 2014 by local archaeologist Alric Bennet following storms earlier in that month. As set out in the introduction above, the storms had removed a large section of a sand dune that bordered the beach and exposed an area of the underlying alluvial deposits, into which a series of archaeological features and

an overlaying layer sequence was identified (Plate 2). From these deposits a sherd of Late Iron Age pottery were recovered from its eroded face. These findings were then reported to the Devon County Council Historic Environment Team who arranged for detailed investigations to be carried out.

- 2.2 Challaborough Beach lies within an area of known coastal occupation dating from the Bronze Age through to the Post-Roman period. These principally include the nearby sites at Mount Folly and Bantham Ham (Fig. 1).
- 2.3 The site at Mount Folly lies 1km to the east of Challaborough Beach and is situated on elevated ground above the mouth of the River Avon and Bigbury Bay. Originally identified from aerial photographs taken of the site during Devon County Council aerial reconnaissance as consisting of two probable enclosures (and subsequently found to be three during geophysical survey), it has been the focus of ongoing archaeological excavations since 2003 (Devon County Council Historic Environment Record MDV40102). To date the investigations have recorded an occupational range as extending from 1100 BC through to the third century AD, with the main focus of activity dating from the Iron Age and Romano-British periods. Features including roundhouses and related structural elements have been recorded within a terraced occupation area (www.mtfolly.org, Wilkes 2017).
- 2.4 Bantham Ham occupies the peninsula between the mouth of the River Avon and the English Channel on the opposing side from Mount Folly. It is the site of a Scheduled Roman and Post-Roman settlement (Heritage List for England ref. 1019322) where numerous finds recovered from the sand dunes, including midden deposits of animal bones, pottery and other finds, were made throughout the 19th and 20th centuries. The date range for the recovered artefacts demonstrated that occupation continued beyond the end of the Roman period and included material from the Mediterranean region suggesting continued trade-links after the 5th century AD. In addition to these, prehistoric finds within the material recovered indicated that the occupation on the peninsula includes the Bronze Age and Iron Age periods. More recent fieldwork, including excavations ahead of development to the Bantham Surf Life Saving Club, exposed multiple late Roman and Post-Roman occupation horizons that included hearths, pits and ditches associated with a large assemblage of Post-Roman amphorae sherds (Reed, Bidwell and Allan 2011).

3. AIMS

- 3.1 The aim of the archaeological investigations was to record the exposed archaeological remains in order to understand the character, date and function of the activity represented prior to any further erosion.

4. METHODOLOGY

- 4.1 The investigations comprised the hand-excavation of a main area that measured 5.8m long and around 1.2m wide (Trench 1), with this positioned on a narrow ledge above the sand and shingle beach and below a sand dune that extended to the north (Fig. 2 and Plate 3). An additional small trench measuring 0.9m by 0.7m was excavated 1m to the east of this into the face of the ledge (Trench 2).
- 4.2 All features and deposits revealed were recorded using the standard AC archaeology pro-forma recording system, comprising written, graphic and photographic records, and in accordance with AC archaeology's General Site Recording Manual, Version 2 (revised August 2012). Detailed sections and plans were produced at a scale of 1:10, 1:20 or 1:50 as appropriate.

5. RESULTS

5.1 Introduction

The natural subsoil (context 101), which consisted of an alluvial mid reddish-brown silty-clay with small gravel inclusions, was present at a depth of 0.5m below the existing top of the ESE to WSW aligned ledge. The ledge was overlain by sand dune (111) to the north and abutted by the shingle and sand beach (100) to the south. To the west of the area investigated, the exposed cliff face exhibited that the alluvial layer overlay slate bedrock, infilling fissures and generally sloping down towards the base of the inlet valley formed by the stream (Plate 1). A sequence of features and deposits were recorded as cutting or overlaying the alluvium, which represented three phases of activity. These have been dated to; the Late Iron Age, the Romano-British and probable Post-Roman periods.

5.2 Late Iron Age

Deposits and features that have been dated to the Late Iron Age period consisted of an occupational soil (107), a possible surface or trample layer (144), three stone boxes (F125, F140 and F142), a ditch F126 and an erosion-truncated stakehole (F148). Stakehole F148 measured 0.06m across and 0.03m deep.

Occupational deposits (Plan Fig. 2, sections Figs. 4 and 5b; Plates 2-4)

Occupational soil 107 comprised of a dark brownish-grey silty-loam with occasional charcoal and heat-affected clay flecking. It measured a maximum of 0.12m thick and was visible in the eroded section of the ledge as continuing to the east and was exposed in the base of Trench 2. Four fragments of burnt bone and a piece of fired clay was recovered from the layer. It was overlain by possible surface or trample layer 144, which consisted of a mid reddish-brown clayey-loam with abundant flat-lain slate pieces and fragments measuring between 0.01m and 0.25m in length.

Stone boxes F125, F138 and F142 (Plan Fig. 3, sections Figs. 5a-b; Plates 4-7)

The three stone box features were set within small pits F125, F138 and F142, which each cut through possible surface or trample layer 144 or occupational layer 107.

Stone box pit F125 was cut to the northwest by a later ditch (F115), while its southern portion had been removed by erosion. It measured 0.8m long and 0.6m wide with steep to vertical sides and a flat base. Set within the cut was the stone box (145), which was formed of three pieces of slate (one of which was broken *in situ*). These had been pressed up to 0.06m into the natural subsoil and formed a rectangular arrangement that measured 0.74m long, 0.43m wide and 0.15m deep. The pit was infilled around the external side of the stone box by packing material consisting of a light yellow clay (146) and a compact mid brownish-red silty-clay (120). Within the stone box and lining the base of the cut was a dark grey soft silt (124), which had occasional charcoal inclusions and was overlain by a slate lining (123). This was made up of four flat pieces that measured 0.02m thick and abutted the upright slates. The slate lining was then sealed by a further silty deposit (122), which was consistent with basal deposit 124. Its upper deposit consisted of a light greyish-yellow compact silty-clay backfill (121), which contained patches of heat-affected clay and slate fragment inclusions. Three amorphous pieces of fired clay were recovered from fill 121. Charcoal taken from deposit 122 was submitted for radiocarbon dating, which produced a date of 48 cal BC – 70 cal AD (SUERC-60267).

Stone box cut F138 was oval in plan, measuring 0.81m long, 0.47m wide and 0.16m deep with moderately-steep sloping sides and a concave base with a central hollow. Its southwest side was lined with a large upright slate piece (108), which measured

0.58m long, 0.14m wide, and 0.34m high. The base of the cut was overlain by a rough lining made up of flat-lain slate pieces (140). This included the infilling of the central hollow with stone packing and was within a matrix of soft dark greyish-brown silt with patches of charcoal. State deposit 140 was sealed by a deposit of light greyish-yellow clay (141), which lined the northeast and northwest sides of the cut, as well as extending around and supporting upright slate 108. The feature was infilled with a soft dark greyish-brown silt (118), similar to that of the matrix around stone lining 140 and deposits 122 and 124 in stone box F125. This was then overlain by a final accumulation of mid brownish-red silty-clay accumulation (117). A total of 199 fragments (11.3g) of unidentified burnt bone was recovered from deposit 118. Charcoal taken from deposit 118 was submitted for radiocarbon dating, which produced a date of 88 cal BC – 68 cal AD (SUERC-60266).

Stone box cut F142 was the smallest of the three such features. It measured 0.17m across and 0.16m deep with vertical sides and a concave base. It contained a mid greyish-brown silty-loam basal deposit into which the stone box (150) was set. This was formed of three upright pieces of slate and a further two pieces that lined its base. No finds were recovered from this feature.

Ditch F126 (Plan Fig.3, sections Figs. 4 and 5c; Plate 8)

Ditch F126 extended into a probable terminal at its southeast extent where it was cut away by the erosion. It was also cut by a re-cut dated to the Romano-British period (F135). Despite this truncation, the ditch was shown to measure 1.95m wide and 1.16m deep with steeply-sloping sides that flared out towards the top and a concave base.

The ditch contained a sequence of six fills. These commenced with a mid reddish-brown silty-clay primary fill derived from the natural subsoil (127) that was sealed by a wet-lain deposit of bluish-grey clay (128). Overlying these deposits was a thick dump of mid brownish-red clayey-silt loam (129) with abundant slate pieces and fragments (0.02m to 0.45m long) and occasional quartz inclusions. This deposit also included charcoal flecks and heat-affected clay lenses and was overlain by an accumulation of mid grey sand that had small slate fragment inclusions (130). Its upper fills (133 and 147) represented similar accumulations of dark reddish-brown clayey-silt loam, with common slate piece inclusions. These upper deposits had been heavily cut by ditch re-cut F135. Two sherds of Late Iron Age pottery were recovered from fill 129.

5.3 Romano-British (Plan Fig. 3, sections Figs. 4 and 5c; Plate 8)

Romano-British activity principally consisted of ditch re-cut F135, which was cut to the southeast by a later ditch (F115). On the south east side of later ditch F115, was a fragment of a heavily cut feature (F114). Based on the position and surviving profile of F114, this was considered to represent a continuation of ditch F135.

Ditch F135 measured 1.38m wide and 0.54m deep with steeply-sloping sides and a flattish base that cut through the deposits of Iron Age ditch F126. It contained a mid grey sand primary fill (134), which was overlain by mid reddish-brown clayey-silt loam accumulations (131 and 132). Three sherds of 1st to 2nd century AD Roman pottery were recovered from fill 132.

On the northeast side of ditch F135 was a dark reddish-brown clayey-silt loam layer (152). This overlay the upper deposit of Iron Age ditch F126 (133) and may have represented an up-cast deposit representing possible bank material.

At the eastern extent of Trench 1, the Iron Age features and deposits were overlain by a mid reddish-brown silty-clay loam (152) accumulation, which probably also dated to this period.

5.4 Post-Roman (Plan Fig. 3, sections Figs. 4 and 5d; Plate 8)

Deposits and features that have been attributed to the Post-Roman period consisted of a ditch (F115) and an up-cast deposit representing a possible associated bank (137).

Ditch F115 was northeast to southwest aligned and cut through possible bank material 152 and accumulation layer 153, dated to the Romano-British period. The ditch measured 1.55m wide and 0.56m deep with moderately-steep sloping sides and a concave base. It contained a mid greyish-brown probable wet-lain basal fill (106), which was overlain by homogeneous mid red silty-clay and mid reddish-brown clayey-silt loam accumulations (119 and 116).

Possible bank material 137 was located on the southeast side of ditch F115 and consisted of a 0.25m thick mid greyish-brown clayey-silt loam. Two sherds of Post-Roman pottery and three amorphous pieces of fired clay were recovered from the deposit, as well as eight residual sherds of Iron Age pottery.

Ditch F115 and possible bank 137 was overlain by a dark reddish-brown silty-clay wet-lain accumulation that had mineralised flecking, with this in turn sealed by a mid reddish-brown clayey-silt loam accumulation (110). One sherd of Post-Roman pottery was recovered from layer 110.

6. THE FINDS

By Naomi Payne with contributions from Charlotte Coles, Maria Duggan and Henrietta Quinnell

6.1 All finds recovered on site during the excavation have been retained, cleaned and marked where appropriate. They have been quantified according to material type within each context and the assemblage examined to extract information regarding the range, nature and date of artefacts represented. The excavation produced small quantities of late prehistoric, Roman and post-Roman pottery, some burnt bone and heat-affected clay. The finds are summarised in Table 1.

Table 1. Summary of finds by context (weights are in grams)

Context	Context Description	Fired clay		Prehistoric pottery		Roman pottery		Post-Roman pottery		Burnt Bone	
		No	Wt	No	Wt	No	Wt	No	Wt	No	Wt
106	Fill of ditch F115	1	7							1	0.9
107	Occupation soil	1	0.5							4	3.3
110	Accumulation soil			6	9			1	9		
112	Fill of ditch F115			1	2						
116	Fill of ditch F115			2	8						
118	Fill of stone box F138									199	11.3
122	Fill of stone box F125	3	2								
129	Fill of ditch F126			2	28						
130	Fill of ditch F126	100	152								
132	Fill of ditch F135	4	9	2	9	3	35				
137	Bank deposit	3	11	8	15			2	4		
Total		112	181.5	21	71	3	35	3	13	204	15.5

6.2 Prehistoric pottery by Henrietta Quinnell

Introduction

The assemblage consists of 21 sherds (71g) and are set out in Table 2 below. Study of the sherds is based on the preliminary work on the large assemblage from the ongoing Mount Folly Enclosures Project (www.mtfolly.org). At Mount Folly, Later Iron Age material consists mainly of two broad fabric groups, 'Local' using riverine clays with a range of inclusions but with input ultimately from the Dartmoor Granite, and 'South Devon Precursor', in which the clays contain obvious mica and are thought to originate closer to the Granite than the 'Local' group. 'South Devon Precursor' fabrics are presumed to be the Iron Age forerunners of Roman South Devon Ware. Detailed petrological work will be carried out on the Mount Folly material, as it is expected that the two broad fabric groups include considerable variation.

Table 2. Details of prehistoric pottery

Context	Context description	'Local fabric'	'South Devon precursor fabric'	Totals
110	Accumulation soil	4 sherds 7 g	2 sherds 2 g	6 s 9 g
112	Fill ditch F115		1 sherd 2 g	1 s 2 g
116	Fill ditch F115		2 sherds 8 g	2 s 8 g
129	Fill ditch F126	2 sherds 28 g		2 s 28 g
132	Fill ditch F135	2 sherds 9 g		2 s 9 g
137	Bank material	6 sherds 11 g	2 sherds 4 g	8 s 15 g
Totals		14 sherds 55 g	7 sherds 16 g	21 s 71 g

Comments on individual sherds and fabrics

One sherd from context 129, fill of ditch F126 has two clear horizontal girth lines with just possibly traces of geometric decoration above. One 'Local' sherd from 132 has parallel incised lines, probably from just below vessel neck with a line from curvilinear decoration below. Both these sherds belong to local variants of Middle Iron Age South Western Decorated ware.

At Mount Folly most Middle Iron Age material is in 'Local' fabrics but some have now been identified in 'South Devon Precursor' fabrics.

Discussion

Sherds are generally a little abraded and the average sherd size of only 3.9 g: these two factors are consistent with the presence of many of the sherds as residual in later deposits.

While occupation at the excavated Mount Folly enclosure appears to have been continuous, it is still unclear how far Late Iron Age ceramics with a distinctive style are represented. However, the presence of a distinctive Late Iron Age Plain Ware style in East Devon was only recognised in 2010, well after the start of the Mount Folly Project. While this style has now been recognised as far west as the lower Teign Valley (Pears and Valentin 2013 and Hughes 2015) it has only been tentatively distinguished at Mount Folly. This is because the vessel forms are plain versions of those in the preceding Middle Iron Age South Western Decorated Ware and that, certainly in the east of Devon, the same fabrics continue to be used.

It is probably best to describe the assemblage from Challaborough Beach as 'Later Iron Age', thus spanning the Middle and Late Iron Age periods.

6.3 Roman pottery

Three sherds (35g) of Roman pottery were recovered from context 132, upper fill of ditch F135. These consist of two unabraded sherds of Samian ware and a piece of grey ware. Both of the Samian sherds are carinated body sherds from Dragendorff 18 plates/dishes, although they are in different fabrics. The larger sherd appears to be from the lower body of a Dr 18 (AD50-100). The smaller sherd is from the same part (of a different vessel) but in this case it expands more, suggesting that it is from Dr 18/31 (AD90-150).

6.4 Post-Roman pottery by Maria Duggan

Introduction

Three sherds (13g) of post-Roman pottery were recovered from two contexts. The identification of the inclusions was based on visual examination in hand-specimen by naked eye and at 20x magnification (hand-lens) and following guidelines in Peacock 1977. Colour descriptions relate to Munsell colour and code.

Context 110, Accumulation soil

One sherd weighing 9g in moderately good condition. 36mm x 25mm. Wall thickness 8.5 mm.

Soft fabric with irregular fracture. Smooth feel to the exterior surface but rough interior. Colour is noticeably paler on the exterior surface, probably due to (oxidised) firing conditions as the sherd doesn't appear to be slipped. The interior surface is darker, possibly due to depositional conditions and there is no clear sign of interior coating/pitch. Exterior surface very pale brown (10YR 7/4), interior surface light brownish yellow (10YR 6/4), core reddish yellow (5YR 7/6). Frequent, ill-sorted inclusions. Common medium to coarse (0.5-1.5mm) sub-angular pale grains (quartzite?), sparse limestone and medium dark rock fragments that could not be identified with certainty without thin-section analysis. Sparse fine voids and very fine gold mica. The fabric is reminiscent of the Bantham LRA1 fabric 'type 1' although the Challaborough sherd seems rather more coarse-grained (Bidwell et al. 2011, 93-100).

Although the find is a small, undiagnostic body-herd the sherd curvature suggests it is from a relatively large vessel, such as an imported amphora. The surface shows wheel-throwing marks and faint undulations – but not the clear clapboard ridging/rilling or combing associated with Late Roman Amphorae (i.e. amphorae of fifth/sixth century date). It may be that the sherd is from the upper or lower body where this ridging does not appear.

Context 137 bank material

Two moderately abraded fragments (a and b) with a combined weight of 4g. Non-joining, but fabric is identical and these appear to be from the same vessel:

a. 6mm x 2mm. Wall thickness 7.5mm

b. 6mm x 4mm. Wall thickness 7.5mm

Soft-moderately hard fabric with irregular fracture. Surfaces rough but this is likely to have been affected by abrasion. Exterior surfaces light brownish yellow (10YR 6/4), core reddish yellow (5YR 6/6). Inclusions appear comparable to the sherd from (110): common medium to coarse (0.5-1.5mm) sub-angular pale grains and dark rock fragments.

Discussion

As the fabric of the sherds from contexts 110 and 137 are very similar it seems likely that all three were from the same vessel – although it should be noted that none of these sherds joined. It is possible that all three represent re-deposited Roman-period Mediterranean amphora sherds, but given the location of the find-spot close to Mothecombe (Agate et al. 2012) and, most particularly, Bantham (Reed et al. 2011) as well as the stratigraphic position, the identification of the sherds as post-Roman in date would seem reasonable. The sherd from context 110 would equate well within the range of amphora fabrics observed at Bantham and Mothecombe. However, a more precise identification of the type is less clear. Late Roman 1 (previously *Biii*/Peacock and Williams Class 44) would be the most likely based on the fabric (appearance and inclusions) and it can be stated that the sherd does not equate with descriptions of Late Roman 2 (previously *Bi*) (University of Southampton 2005). LRA1 was also the most common type identified at Bantham and Mothecombe, potentially reflecting a focus for the shipment of this type to South Devon (Duggan 2016). This amphora type was produced in a range of locations in the eastern Mediterranean, including Southern Turkey (Cilicia), Cyprus and the Antioch region – and therefore shows some variability in fabrics (Pieri 2005, 81; Williams 2005). Nevertheless, the fabric of the sherd from (110) is somewhat coarse, and it may be that it represents the product of an, as yet, unidentified source. A provisional identification of the sherd as ‘LRA’ (an un-typed Late Roman Amphora – and therefore a post-Roman import), but possible LRA1 can be offered.

The location of discovery in the sand-dunes also presents strong parallels for the imported amphorae found at the two adjacent sites. Following the 2001 excavations at Bantham, the site has been interpreted as a port (Reed et al. 2011), and it seems likely that it operated as the primary point-of-arrival and redistribution for imported wares on the South Devon coast during the later-fifth and sixth century. The date-range for the post-Roman Mediterranean imports in western Britain has been broadly established to between c. 475-550 on the basis of associated, but less common, finewares (Campbell 2007).

6.5 Burnt bone by Charlotte Coles

A total of 204 pieces of burnt bone (15.5g) were recovered from three contexts, these are a single piece of unidentified bone from context 106, four pieces of unidentified animal bone from context 107 and 199 pieces of unidentified bone from context 118. None of these bones can be positively identified as human bone.

6.6 Fired clay

113 pieces (189.5g) of fired clay were recovered from seven contexts. The fired clay is amorphous, featureless and soft. It should perhaps be better described as heat-affected clay.

7. PALAEO-ENVIRONMENTAL ASSESSMENT by Cressida Whitton

7.1 Introduction

In total, 7 bulk soil samples were recovered during the excavation and have been assessed for environmental potential. Three other samples were taken, with these consisting of samples of clay deposits 121 (fill of stone box F125) and 128 (fill of ditch F126) for possible identification of their origin, and a monolith sample taken through deposits 107, 144 and 153 and 137 (Sample 7). The results of the palaeoenvironmental assessment are presented in Table 3 below.

7.2 Methodology

The samples were processed by standard flotation using a siraf-type tank and 250 micron mesh. Residues were sieved over 5.6mm, 2mm and 500 micron mesh sieve nest. A percentage of the dried sample flot (depending on size), was sorted for charcoal and charred ecofacts under a stereo-binocular microscope (10 – 30 x magnification) and finer residues (2mm and 500 micron) were also scanned for charred ecofacts. The 5.6mm coarse residue was hand-sorted for artefacts and ecofacts using an illuminated hand lens.

Table 3. Results of palaeo-environmental assessment

Sample no.	Context no. /type	Sample volume processed (lt)	Environmental Ecofact Amt/Type x – occasional xx – moderate xxx - frequent	Environmental potential (Yes/Some/No). RC dating potential (Yes/No).
1	118 fill of stone box F138	10	Charcoal x Charred Plant Macrofossils x (?weed) Burnt Bone xxx	Env - Yes ; RC - Yes
2	129, fill of ditch F126	2.5	Charcoal x	Env –Some; RC - Yes
3	122, fill of stone box F125	4	Charcoal x Charred Plant Macrofossil x (bud/weed)	Env – Yes ; RC - Yes
5	107, occupation soil	20	Charcoal x	Env – Some; RC - Yes
8	128, fill of ditch F126	6.5	Waterlogged clay sample- occ. rooty env. remains (v. small flot)	Env/RC -No
9	106, fill of ditch F115	3	No env. remains (v. small flot)	Env/RC - No
10	124, fill of stone box F125	1.5	Charred plant macrofossils x (2x charred grain & 1 x charred weed)	Env – Yes ; RC – Yes

7.3 Discussion

Overall flot sizes were small and charcoal only occasional, however material with radiocarbon-dating potential, especially where charred twigs have been found (Samples 1, 2, 3, 5 & 10), has been identified.

8. RADIOCARBON DATING

8.1 Three samples were submitted to SUERC for accelerator Mass Spectrometry AMS Dating of which two were successful The results from these are presented in Appendix 1 and summarised in Table 4 below.

Table 4: Results of radiocarbon dating

Sample Number	Lab No.	Context	Description	Uncalibrated date in years BP	Calibrated date 95.4% probability
1	SUERC-60266	118	Fill of stone box F138	2004±30	56 CalBC-68 calAD
3	SUERC-60267	122	Fill of stone box F125	1992±29	48 calBC-70 calAD
10	GU37460	124	Fill of stone box F125	FAILED	-

9. DISCUSSION

9.1 Despite the small-scale of the investigations, they have established the presence of a relatively-complex series of well-preserved deposits and intercutting features sealed beneath accumulated soils and sand dune. These have provided an occupational range that probably extended between the late 1st century BC and the 6th century AD.

9.2 Late Iron Age

The formation of dark soil layer 107 is likely to be the product of occupation, while the overlying layer 144 potentially represents a rough surface. These deposits were shown to continue to the east of Trench 1 and into Trench 2. The insertion of stone boxes F125, F138 and F142 are likely to be contemporary to this and have been radiocarbon dated to the very Late Iron Age. The function of these features is not clear. However, they represent a specific and relatively complex process in their construction and infilling: feature F125, which had the most regular arrangement but with its southern portion probably lost to erosion, displayed two phases of dark soft silty deposition that were separated by the insertion of a snugly-fitted slate lining. Feature F138 contained a similar dark silty deposit and from which the 199 small fragments of burnt bone (11.3g) were recovered. The presence of burnt bone in this feature, albeit not found in the deposits in stone box F125, may provide some indication on their function (see below). The backfilling of F135 with clay suggests it was rapidly infilled following its second phase of use.

The relatively deep depth and steep profile of ditch F126 suggests that it perhaps functioned as a boundary feature. Its deposit sequence, including stony deposit 129, is likely to demonstrate rapid infilling following stable accumulation and prior to being re-cut by ditch F135 during the Romano-British period.

9.3 Romano-British

Given the very late Iron Age date provided by the radiocarbon dating and the probable late 1st century pottery recovered from ditch F135, the occupation represented probably continued unbroken between these two periods. Indeed, the re-cutting of Iron Age ditch F126 suggests that the line of the feature retained some importance suggesting and that there was probably little hiatus in between these phases.

9.4 Post-Roman

Based on the recovery of pottery from deposit 137, which has been considered to represent the possible up-cast of ditch F115, as well as from overlying accumulation layer 110, these features and deposits have been attributed to the Post-Roman period. Although activity of this period was limited to the single ditch, the presence of the sherds from amphorae, which would have been imported from the eastern Mediterranean, suggests that the nature of this occupation could indeed be added to other sites with coastal-trading associations during this period such as at nearby Bantham (Reed, Bidwell and Allan 2011).

9.5 Regional comparisons *by Paul Rainbird*

The stone boxes in a coastal location at Challaborough invite general comparisons with other sites dating to the later Iron Age, Romano-British and Post-Roman periods in similar locations in the South West Peninsula. An Iron Age custom for constructing stone boxes is illustrated by the cist-grave tradition, with the best known sites at Harlyn Bay, Cornwall where 130 inhumation burials are known (Whimster 1977) and Stamford Hill, overlooking the Mount Batten peninsula, Plymstock, which was uncovered during the construction of Stamford Fort in 1865 (Spence Bate 1866; see also Cunliffe 1988). Both sites are poorly recorded, but the Harlyn Bay cemetery is located in dunes at the head of a small cove and the stone-lined cists varied greatly in size and shape,

although the majority are square or rectangular, with the smaller having dimensions which are similar to the boxes at Challaborough. Here, the small cists contained the remains of infants and young children. Other Iron Age cist-graves are known from sites in west Cornwall, but only one further example is known from Devon at Woodleigh, near Loddiswell, north of Kingsbridge, where building work uncovered a slate-lined cist inhumation associated with Romano-British pottery, possibly indicating a continuation of the Iron Age tradition (Fox 1963). A funerary role for the stone boxes at Challaborough, with this related to young children is therefore possible. However, given that the bone recovered from box F138 was undiagnostic and there was of the lack of finds that may be interpreted as grave goods, this interpretation remains inconclusive.

In Cornwall, other Iron Age and Romano-British period coastal sites are considered to have been the locations for specialised industrial activities, such as producing dye from marine molluscs or, more commonly, salt production (Nowakowski 2011, 254). At Trebarveth on the Lizard, two stone-lined rectangular pits with each having an open end are interpreted as ovens above which ceramic containers for evaporating brine to salt crystals were placed (Peacock 1969). At Duckpool, Morwenstow, near Bude, where it is considered that producing dye from whelks was one of the activities taking place, another site is located at the head of a small cove. Here a pair of stone-lined pits, gullies and hearths were uncovered, but as at Trebarveth, and unlike Challaborough, there were clear signs of burning (Ratcliffe 1995). To the west of Challaborough, at Wembury Bay, excavations of a site eroding from a low foreshore cliff face revealed a burnt stone-lined pit, which is regarded as probably functioning as a hearth, was dated by a secondary fill to AD410-620 (Wk-13086), indicating a Post-Roman date (Reed 2005).

10. CONCLUSIONS

- 10.1** The excavations at Challaborough Beach have recorded well-preserved evidence for occupation that has been shown to extend between the late prehistoric and Post-Roman periods. Despite the limited size of the investigation, a somewhat complex sequence of occupation has been demonstrated to continue inland, beyond the current sea front, and beneath the existing sand dunes.
- 10.2** Radiocarbon dating has suggested that the occupation of the site commenced towards the end of the Iron Age (late 1st century BC early 1st century AD), with this represented by the establishment of a probable boundary ditch, an accumulation of occupational soil and the construction of some stone boxes; the function of which is yet to be realised, but perhaps related to funerary or specialised industrial activity. Late first century pottery recovered from a re-cut of the Iron Age ditch re-cut is considered to demonstrate that the occupation into the Romano-British period was probably continuous, while Post-Roman pottery, which was recovered from the probable up-cast of a later ditch and subsequent soil accumulation, has suggested that activity continued perhaps into the sixth century AD.
- 10.3** Positioned towards the base of a stream valley and adjacent to a sheltered natural inlet, its coastal siting probably formed the focus for the nature of the occupation and the types of activities that were being carried out; something that further investigation may establish.
- 10.4** The date range of activity established at Challaborough includes strong parallels with the on-going results from nearby Mount Folly, where continued occupation from the Iron Age into the Romano-British period has been demonstrated (www.mtfolly.org). Latterly, the Post-Roman pottery, comprising similar eastern Mediterranean amphorae,

as recovered from Bantham (Reed, Bidwell and Allan 2011), has the potential to expand on the distribution of coastal sites where the inclusion of imported materials has been considered to represent maintained trade-links with the continent.

11. ARCHIVE AND OASIS ENTRY

11.1 The paper and digital archive is currently held at the offices of AC archaeology Ltd, at 4 Halthaies Workshops, near Exeter, Devon, EX5 4LQ. This will ultimately be deposited with the finds at the Plymouth City Museum, Plymouth under the accession number **PLYMG.2017.26**.

11.2 An online OASIS entry has been completed, using the unique identifier **273120** which includes a digital copy of this report.

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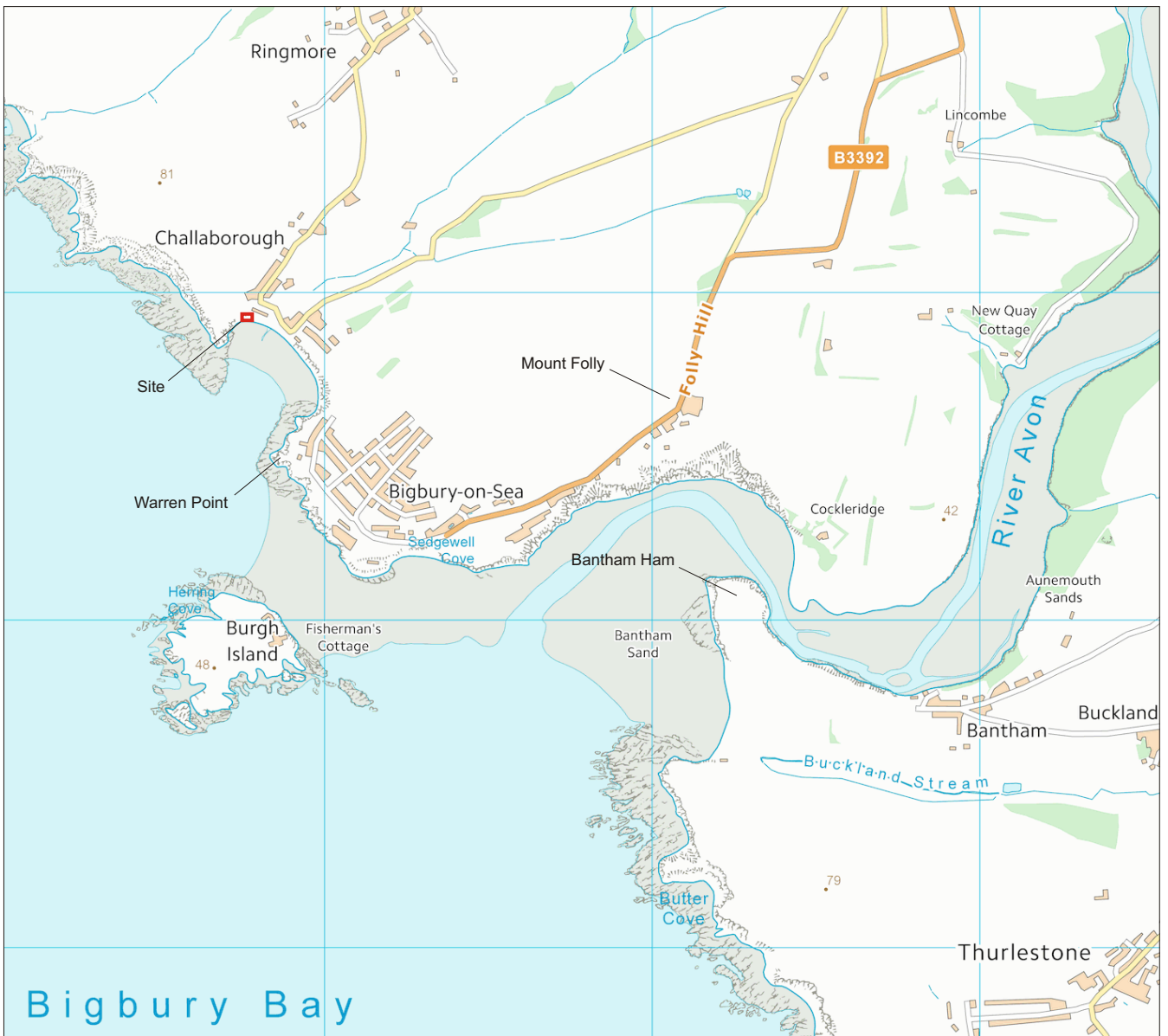
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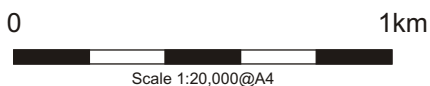
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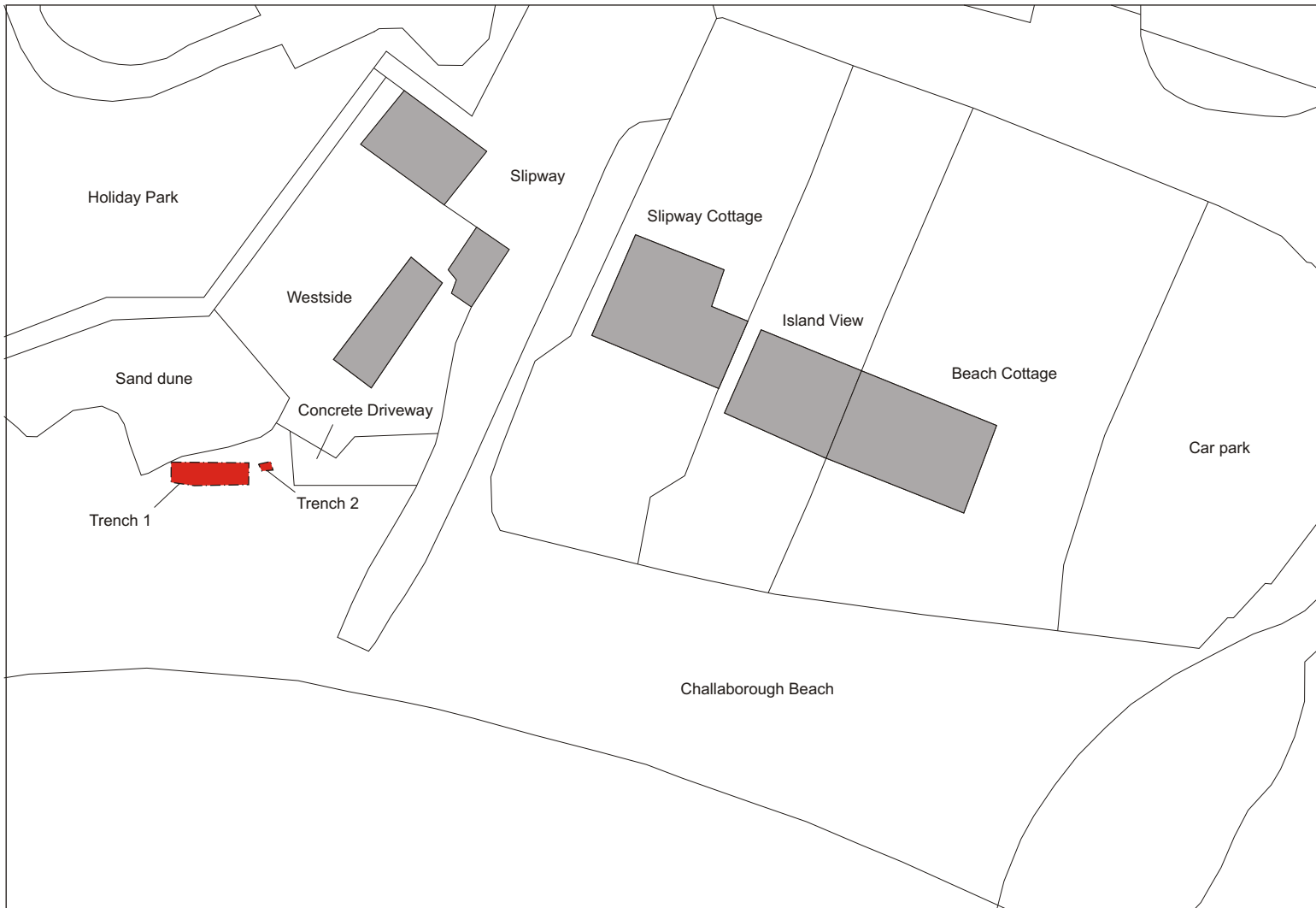


PROJECT
**Coastal erosion at Challaborough
 Beach, Challaborough, Devon**

TITLE

Fig.1: Site location





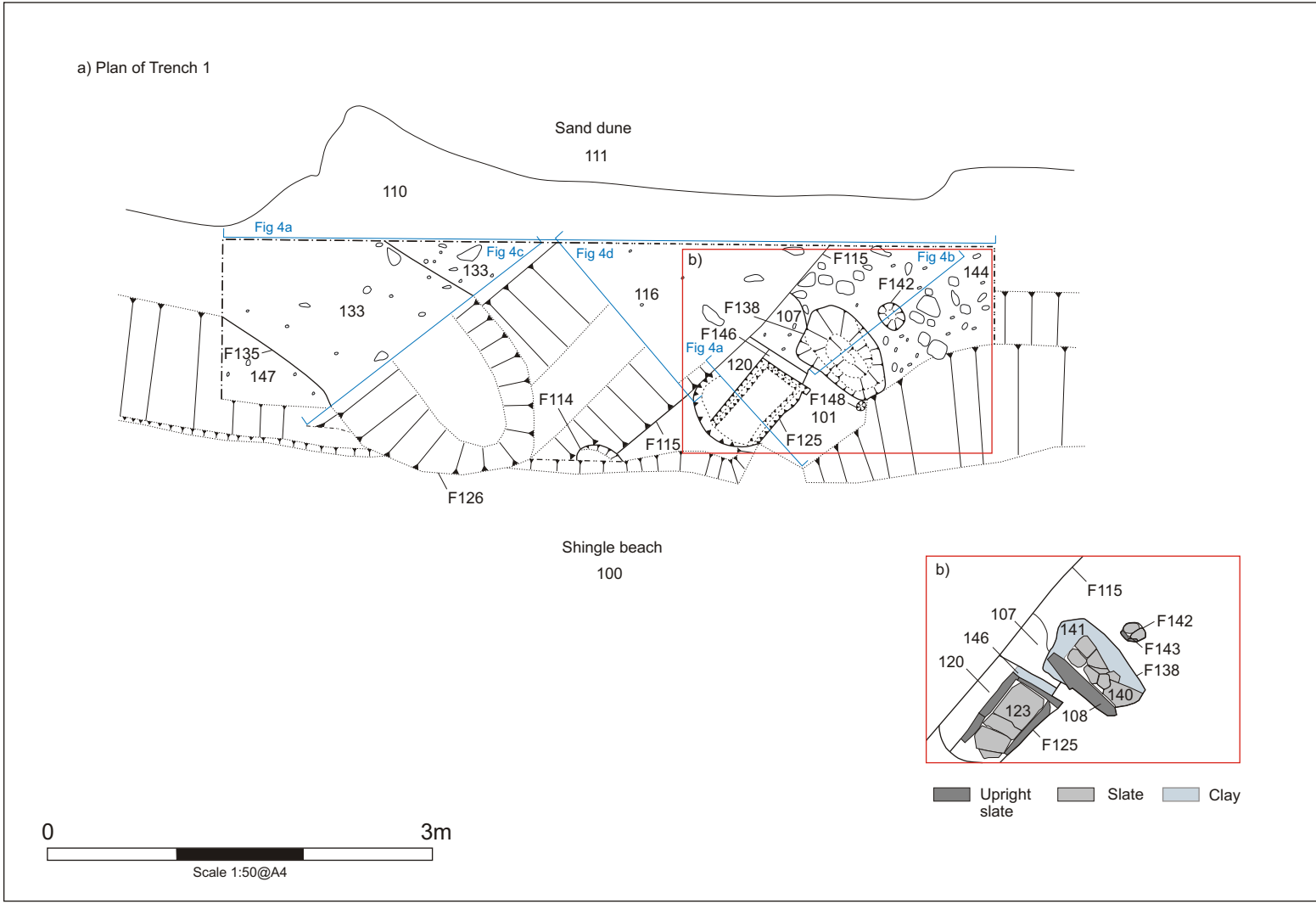
PROJECT

Coastal erosion at Challaborough
Beach, Challaborough, Devon

TITLE

Fig. 2: Location of investigations



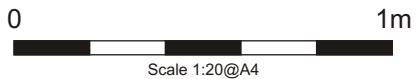
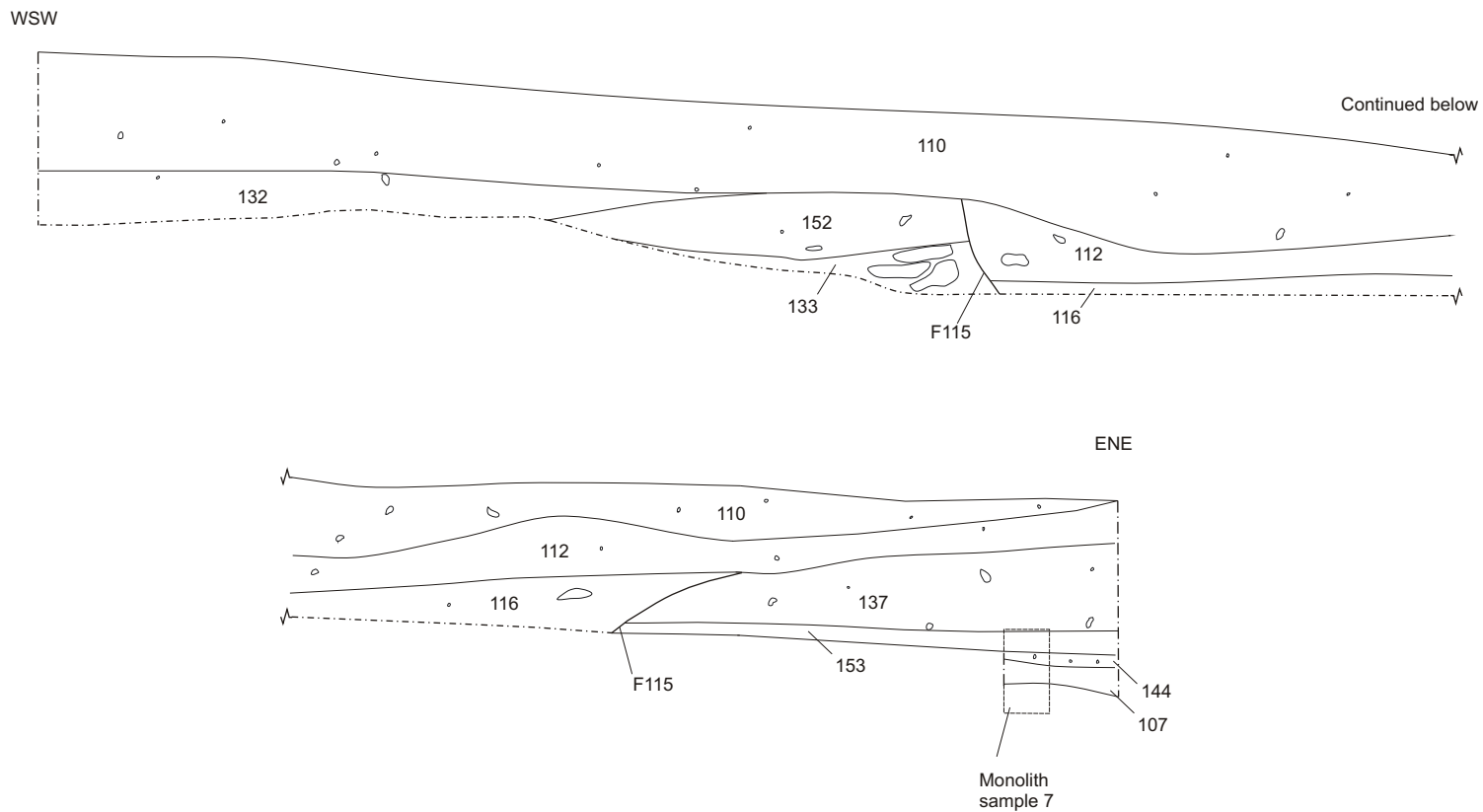


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TITLE
Fig. 3: Plan of Trench 1



a) Section of excavation area



PROJECT

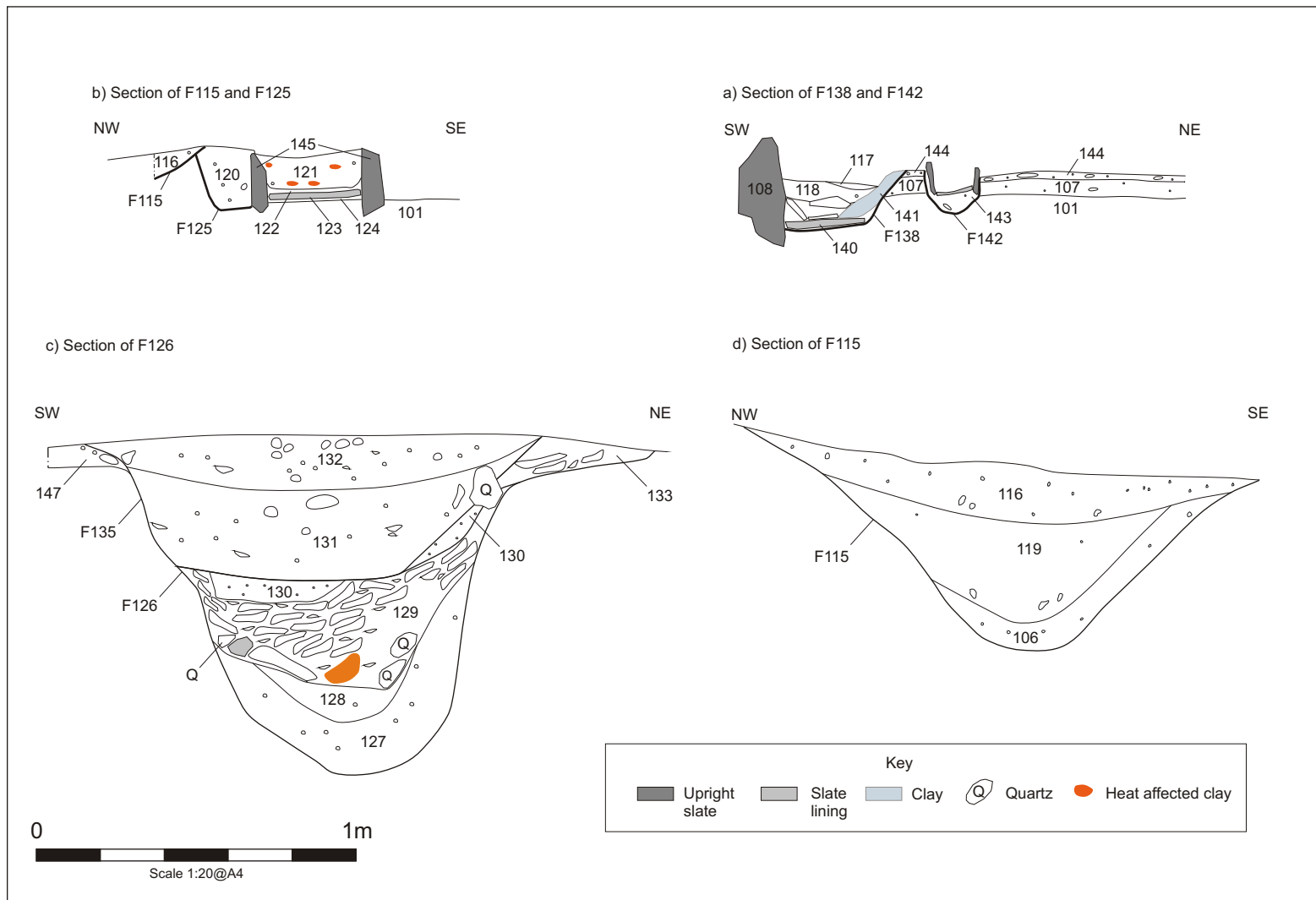
Coastal erosion at Challaborough
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TITLE

Fig. 4: Section of Trench 1 showing
deposit sequence



AC archaeology



PROJECT

Coastal erosion at Challaborough Beach, Challaborough, Devon

TITLE

Fig. 5: Sections of features



Plate 1: Challaborough Beach with investigations in progress. View to northwest



Plate 2: Pre-excavation view of exposed archaeological features and deposits following storm erosion with dark occupational layer 107 visible in section to the right. Looking north (Scale 1m)



Plate 3: Working view of investigations with Trench 2 in foreground. Looking west



Plate 4: Showing stone box features F125, F138 and F142. View to southwest (scale 0.3m)



Plate 5: Detailed view of stone box F125. Looking northeast (scale 0.3m)



Plate 6: Showing section through stone box F125. View to northeast (scale 1m)



Plate 7: Detailed view of stone box F138. Looking northwest (scale 1m)



Plate 8: Showing Iron Age ditch F126 and Romano-British ditch F135 to the left and Post-Roman ditch F115 to the right. View to north (scale 2m)

Appendix 1

Radiocarbon dating results

RADIOCARBON DATING CERTIFICATE

19 May 2015

Laboratory Code SUERC-60266 (GU37458)

Submitter Charlotte Coles
AC Archaeology Ltd
Unit 4,
Halthaies Workshops, Bradninch,
Exeter, Devon.
EX5 4LQ

Site Reference Challaborough Beach - ACD 840
Context Reference 118
Sample Reference 1

Material Charcoal : Corylus avellana sp.

$\delta^{13}\text{C}$ relative to VPDB -26.0 ‰

Radiocarbon Age BP 2004 \pm 29

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal4).

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email Gordon.Cook@glasgow.ac.uk or telephone 01355 270136 direct line.

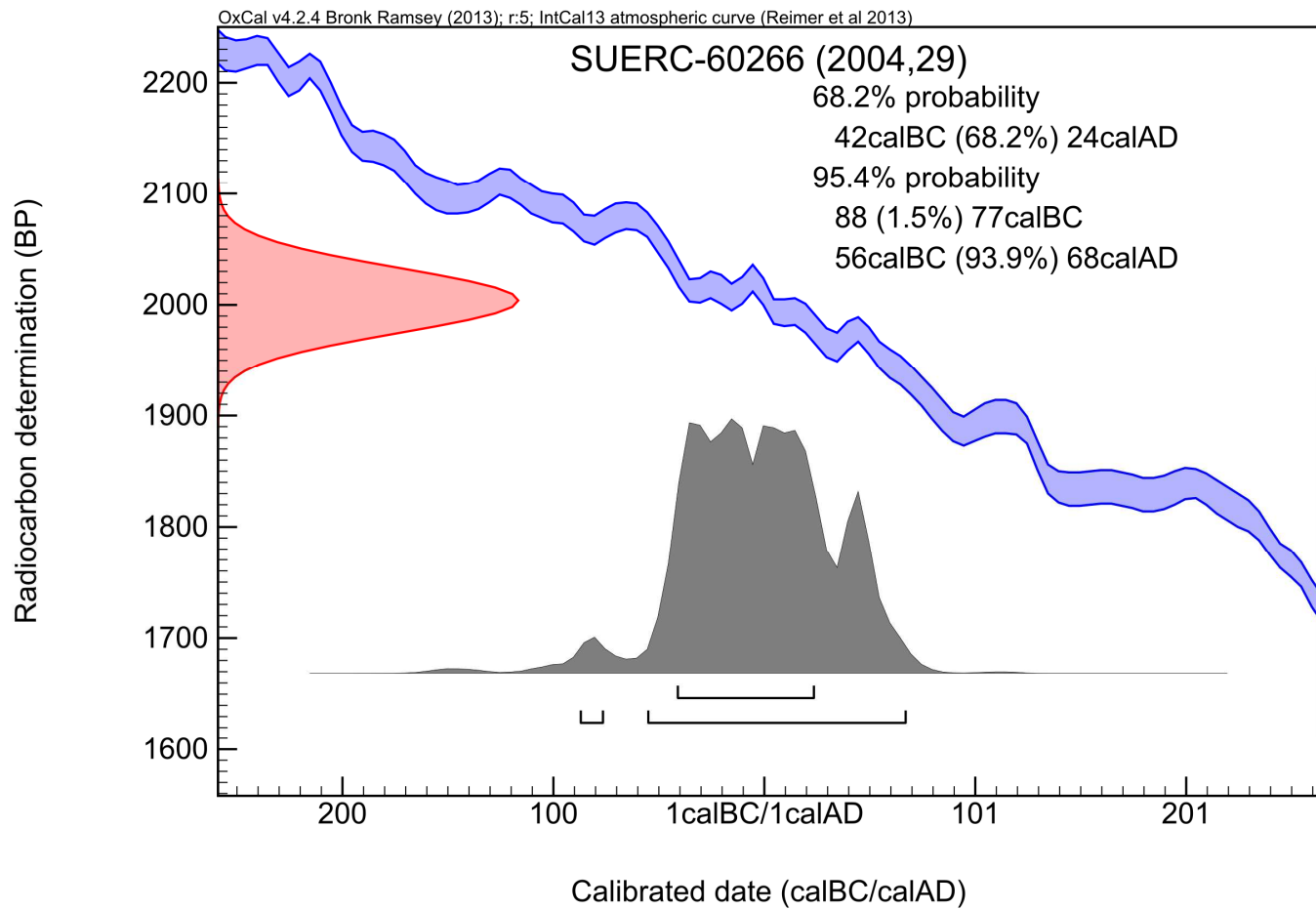
Conventional age and calibration age ranges calculated by :- *E. Dunbar*

Date :- 19/05/2015

Checked and signed off by :- *P. Naynab*

Date :- 19/05/2015

Calibration Plot



RADIOCARBON DATING CERTIFICATE

19 May 2015

Laboratory Code SUERC-60267 (GU37459)

Submitter Charlotte Coles
AC Archaeology Ltd
Unit 4,
Halthaies Workshops, Bradninch,
Exeter, Devon.
EX5 4LQ

Site Reference Challaborough Beach - ACD 840
Context Reference 122
Sample Reference 3

Material Charcoal : Cytisus/Ulex spp.

$\delta^{13}\text{C}$ relative to VPDB -24.3 ‰

Radiocarbon Age BP 1992 \pm 29

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal4).

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email Gordon.Cook@glasgow.ac.uk or telephone 01355 270136 direct line.

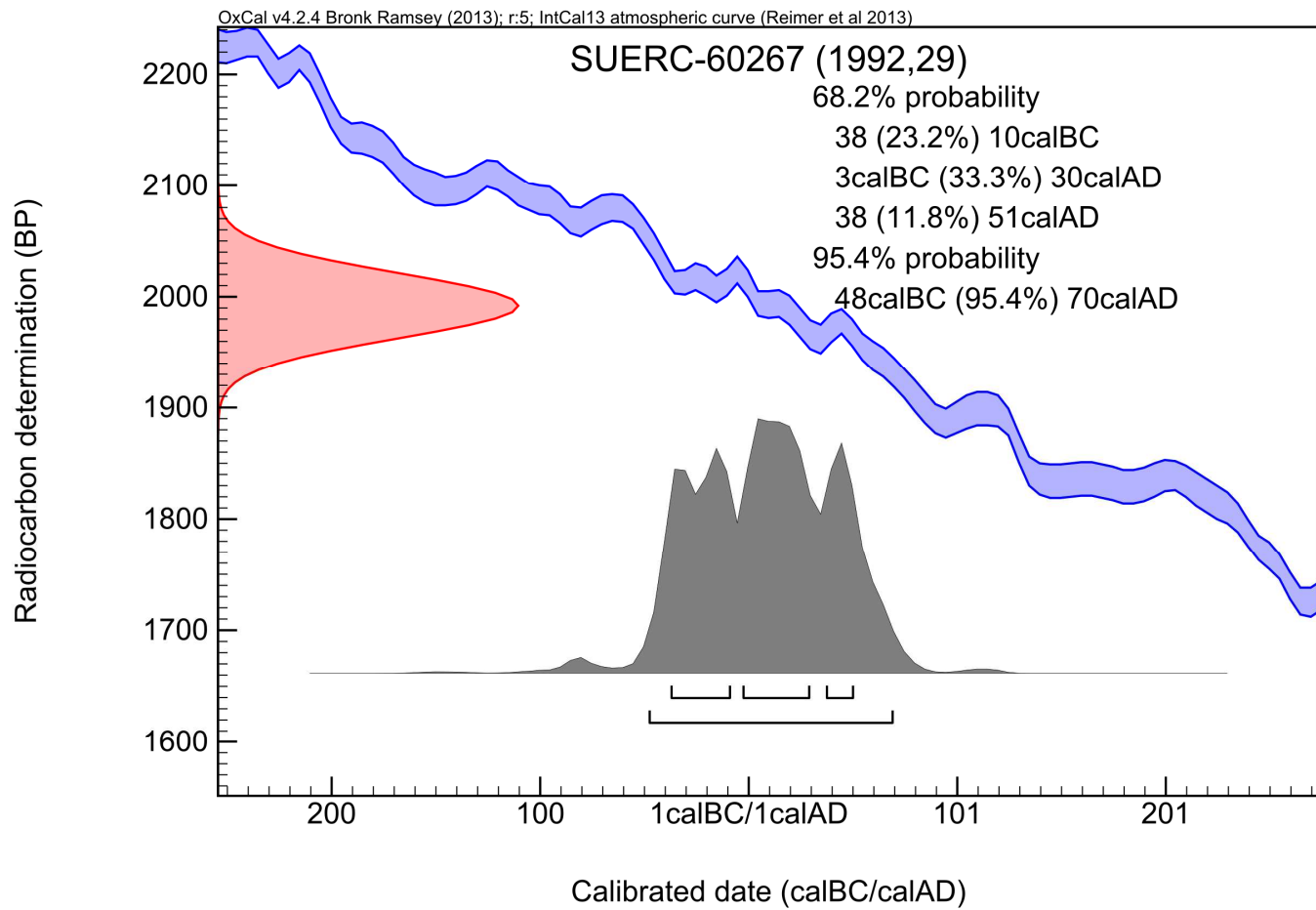
Conventional age and calibration age ranges calculated by :- *E. Dunbar*

Date :- 19/05/2015

Checked and signed off by :- *P. Naynab*

Date :- 19/05/2015

Calibration Plot



RADIOCARBON DATING CERTIFICATE

19 May 2015

Laboratory Code GU37460

Submitter Charlotte Coles
AC Archaeology Ltd
Unit 4,
Halthaies Workshops, Bradninch,
Exeter, Devon.
EX5 4LQ

Site Reference Challaborough Beach - ACD 840
Context Reference 124
Sample Reference 10

Material Charred Grain : Hordeum sp

Result Failed: insufficient carbon.

N.B. Any questions directed to the Radiocarbon Laboratory should quote the GU coding given above.

The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or telephone 01355 270136 direct line.

Checked and signed off by :-

P. Naynab

Date :- 19/05/2015

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