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Archaeological investigations at Tower Meadows, St Buryan, 2019–2020

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with a contribution from IMOGEN WOOD

An archaeological watching brief was carried out in advance of a housing development in two fields to the north west of Tower Meadows, St Buryan. A burnt spread containing Bronze Age Trevisker ware pottery, cereal grains and the seed of a Celtic / field bean was recorded, in possible association with three pits or postholes. A radiocarbon determination from the Celtic bean produced a Middle Bronze Age date. A single pit in a neighbouring field was undated but fragments of early medieval Grass-marked pottery including part of a bar-lug were found in close proximity to it.

Cornwall Archaeological Unit was commissioned by Classic Builders (South West) Ltd to undertake an archaeological watching brief in advance of the construction of a new housing development within two fields to the north west of Tower Meadows, St Buryan, West Penwith (centred SW 40696 25781; Fig 1). The gently sloping fields stand at 116m to 122m OD, increasing in height towards St Buryan churchtown, to the south east. The site is on granite bedrock of the Land's End Intrusion (British Geological Survey 2021).

The area has a high archaeological potential: St Buryan church, 170m to the east, was the site of an early medieval monastery and the churchyard is a possible *lann*, or early Christian enclosure, although it may have originated as an Iron Age or Romano-British 'round' (Preston-Jones 1987). The wider area includes considerable evidence for prehistoric activity including, most famously, the stone circles of Boscawen-Un (1.6 km to the north east) and the Merry Maidens (2.6 km to the south east).

Within the development site a spread of burnt material associated with Trevisker ware was uncovered and sherds of Grass-marked pottery were found. This short report outlines the key results from the project. Full details are given in Thorpe (2020).

Radiocarbon dating cited below is calibrated to OxCal 4.3.2 (Bronk Ramsey 2009) and the date range calibrated using the IntCal13 atmospheric calibration curve (Reimer *et al* 2013).

Results

The watching brief recorded a small pit in field 1 and, in field 2, a spread of burnt material and a roughly linear arrangement of three pits or postholes. Evidence for more recent ground

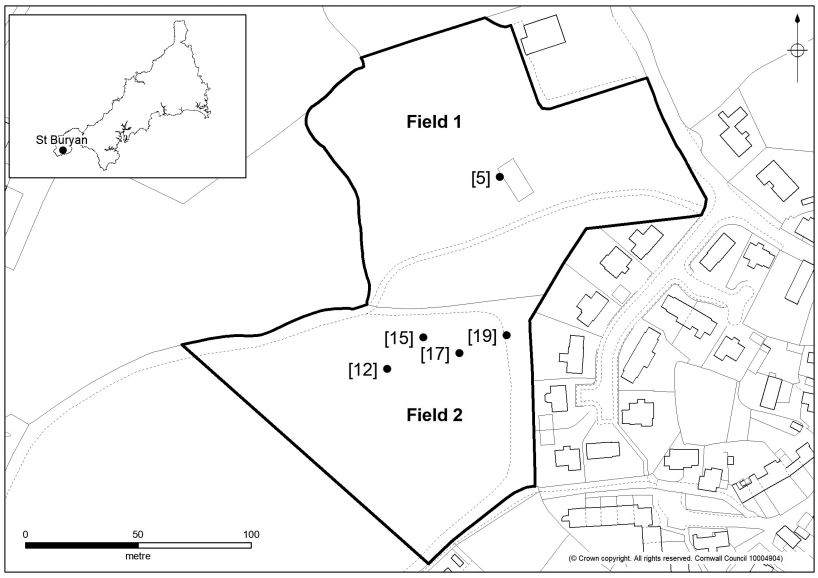

Fig 1 Location of the fields covered and features revealed by an archaeological watching brief at Tower Meadows, St Buryan.

disturbance included land drains in both fields and, in field 1, two electrical cables to serve a sewage pumping station located within the site (Thorpe 2020) (Figs 1 and 2).

Field 1

In field 1 a shallow pit [5] was recorded, measuring 1.4m by 1.2m and 0.2m deep, with the long axis orientated north west to south east. It had a shallow U-shaped profile with an irregular base and was infilled with a black-brown clay containing numerous charcoal fragments (6). Cut into the natural, the southern side of the pit was red in colour, suggesting that it had been heat affected, presumably the result of burning within the pit. No artefacts were retrieved from the pit but the charcoal-rich fill was sampled.

Approximately 1m to the north of pit [5] five fragments of Grass-marked pottery of early-medieval date were recovered from the subsoil (3), the pottery assemblage including a fragment of a bar-lug.

Field 2

The principal feature located in field 2 was a large burnt spread of charcoal-rich fill (13) measuring roughly 6m by 3m interleaved with burnt red-brown clay (14), both contained within a very shallow cut [12] which was no more than 0.05m deep (Fig 2). From the charcoal-rich infill (13), three conjoining sherds forming part of the rim of a Middle Bronze Age Trevisker ware vessel were found (Table 2; Fig 2). Another body sherd of the same pottery type (but from a different vessel) was also recovered from the same context. A Middle Bronze Age radiocarbon determination of 3018 ±24 BP, 1390–1140 cal BC (SUERC-96627) was obtained on charcoal from layer (13).

To the east of the burnt spread was a roughly linear arrangement of three small pits or postholes [15], [17] and [19], each filled with a black-brown clay containing charcoal fragments (16), (18), (20). No artefacts were recovered from the postholes but the charcoal-rich fills (16) and (18) were sampled.

From the base of the subsoil (10) within field 2, three abraded body sherds of Bronze Age pottery were also recorded.

Palaeoenvironmental evidence

Alan J Clapham

Soil samples were taken from the fill of burnt spread [12] and the fills of pits or postholes [5] and [15] and [17] were sorted and analysed. Full details are given in Clapham (2020) and are summarised here.

Charred plant remains

While low numbers of charred plant remains were recovered from all four samples, the preservation was good enough to enable the identification of

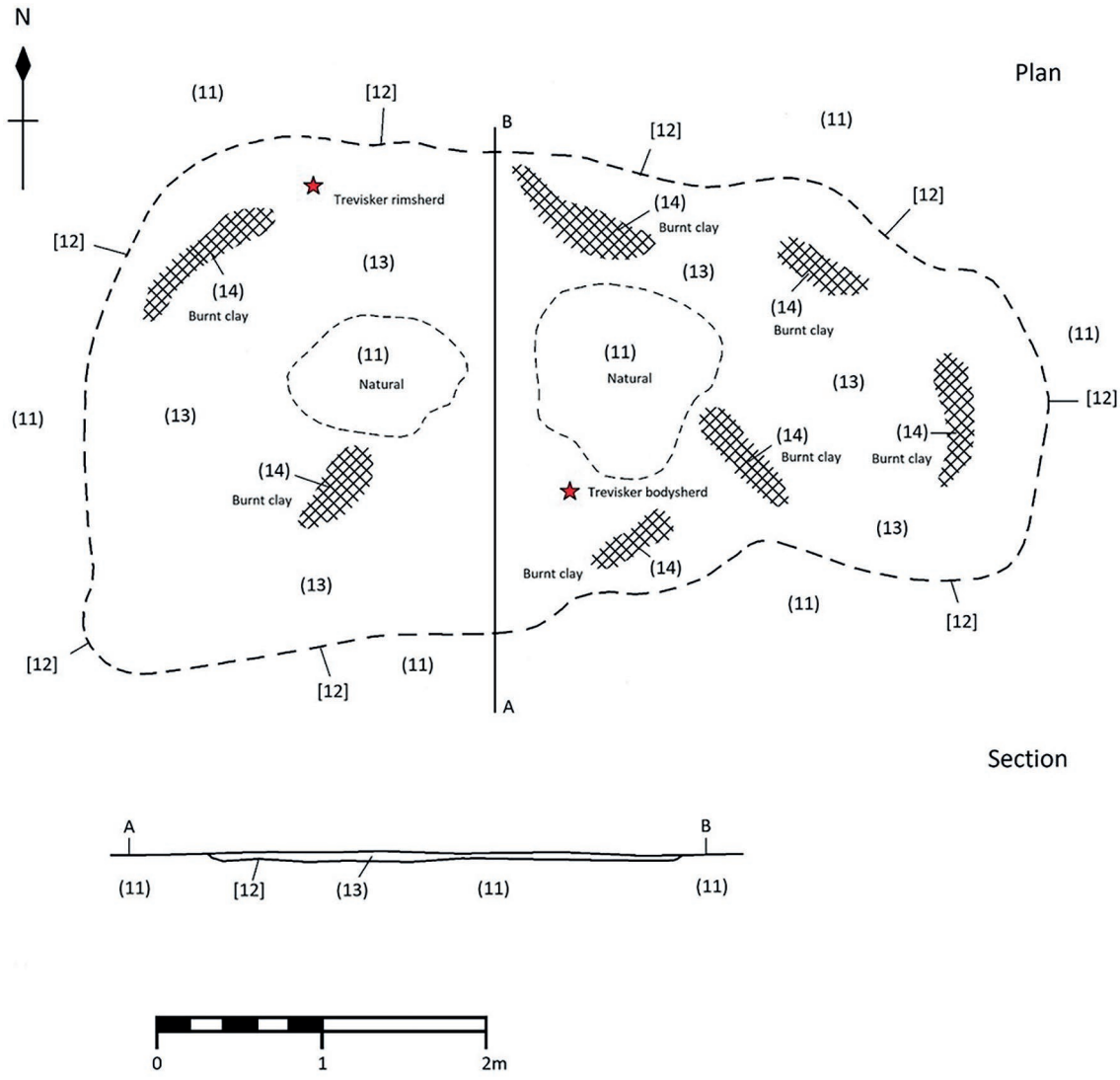

Fig 2 Plan and excavated section of the burnt spread [12] recorded in field 2.

most species; however, it was only the results from fill (13) of burnt spread [12] that were significant.

This deposit contained charred cereal grains: three grains of hulled wheat (*Triticum* sp.; probably emmer) and four grains of hulled barley (*Hordeum vulgare*). Some of the grain exhibited signs of sprouting although this is not thought to represent evidence for malting but rather spoilt grain. No cereal chaff was recorded apart from a single fragment of a barley rachis (its main axial structure).

A whole seed of Celtic / field bean (or horsebean) (*Vicia faba*) was identified from this sample. The weed assemblage includes taxa that are usually associated with crop husbandry, the commonest being that of fat hen (*Chenopodium album*), pale persicaria (*Persicaria lapathifolia*), black bindweed (*Fallopia convolvulus*), ribwort plantain

(*Plantago lanceolata*) and heath grass (*Danthonia decumbens*). These and the majority of the other weed taxa in this assemblage are most probably associated with crop cultivation. The remains of bracken (*Pteridium aquilinum*) suggests that an open heathy element was exploited, although to what extent is difficult to say due to the paucity of remains. The presence of lesser celandine (*Ficaria verna*) tubers may suggest the presence of damp grassland.

Charcoal

Charcoal was the dominant form of plant remain in all the samples analysed. Four taxa were identified from the features in field 2 and two from pit [5] in field 1.

The charcoal from burnt spread [12] was dominated by oak (*Quercus* sp.) heartwood fragments. A single piece of gorse (*Ulex* sp.) roundwood and four heartwood fragments of possible beech (*cf Fagus* sp.) were also recorded.

The samples from the series of small pits or postholes in field 2 yielded several fragments of wood. Fill (16) of [15] was dominated by roundwood fragments of *Maloideae* (apple / pear / whitebeam / hawthorn), with a small proportion of oak heartwood. It is unlikely that the *Maloideae* fragments are the remains of the possible post whereas fill (18) of [17] contained nothing but heartwood fragments of oak, most probably the traces of the original post. In field 1, fill (6) of pit [5] consisted of heartwood and knotwood fragments of oak and a piece of hazel (*Corylus avellana*).

Radiocarbon dating

Michael J Allen

The whole charred seed of Celtic / field bean (or horsebean) (*Vicia faba*) was submitted for AMS radiocarbon dating at the Scottish Universities Environmental Research Centre, and a date of 1390–1140 cal BC returned (Table 1), falling within the range of the Middle Bronze Age (Allen 2021).

Pottery analysis

Imogen Wood

Twelve sherds of pottery weighing 221g were recovered from the watching brief (Table 2).

Middle Bronze Age

The conjoining decorated rim sherds from context (13) have a rim diameter of 340mm, suggesting a large vessel falling into the Quinnell class of style 3 and 4 (Quinnell 2013, 150). There are

Table 1 Radiocarbon result of the *Vicia faba* from burnt spread [12].

Feature	*Context*	*Material*	*Lab no*	*Result BP*	□C^{13} ‰	*Cal BC*
Burnt spread [12]	(13)	*Vicia Faba*	SUERC-96627	3018±24	-23.4	1390–1140

Table 2 Quantification, fabrics, dates and description of the pottery assemblage.

Context	*Feature*	*Weight (g)*	*Count*	*Abrasion*	*Fabric*	*Date*	*Description*
(13)	Fill of spread [12]	74	3	2	Granitic 1	MBA	3 conjoining rim sherds with incised horizontal and diagonal decoration typical of Trevisker ware. Reduced fabric.
(13)	Fill of spread [12]	20	1	3	Gabbroic Admixture	MBA	1 body sherd slightly more abraded, variably oxidised and reduced fabric.
(10) (base of)	Subsoil (Field 2)	28	3	3	Gabbroic Admixture	BA	3 body sherds, oxidised and abraded
(3) (base of)	Subsoil (Field 1)	99	5	2	Granitic 2	EMC	1 Grass-marked bar-lug strap handle. 2 conjoining upright flat-topped rim sherds. 1 springing sherd for handle, external sooting. 1 body sherd with external sooting.

Fig 3 Bronze Age Trevisker ware rimsherd from context (13) within spread [12]. (Photograph: Cornwall Archaeological Unit.)

two horizontal incised lines with diagonal incised lines below (Fig 3), which could have formed a bordered zone similar to sherds from Guisseny Place, Porthleven, dated to 2840 ±35 BP, 1114–910 cal BC (SUERC-30658), which has been interpreted by Quinnell (2011, 34, fig 17) as a late Trevisker style. A similar incised geometric pattern is also found at Bosiliack, Madron, which also has later Trevisker style radiocarbon dates: 2900 ±30 BP, 1200–1005 cal BC (SUERC-29274 and SUERC-29279) (Quinnell 2013, 150; Jones and Quinnell 2011). However, the everted rim with internal bevel and the neatness of the decoration are more characteristic of the typical Middle Bronze Age Trevisker style, which is also consistent with the radiocarbon determination. The highly abraded oxidised sherds from the base of context (10) are not decorated and are broadly assigned to the Bronze Age. The single sherd of Gabbroic Admixture fabric (Gad) retrieved from (13) is a finer vessel with smaller inclusions. The use of both Gabbroic Admixture and Granitic fabrics is also seen in the assemblage at Bosiliack.

Early medieval

The bar-lug cauldron sherds from the base of context (3) are typical of Grass-marked ware and are comparable to those found throughout Cornwall from the seventh to eleventh century AD (Thorpe and Wood 2011, 278). The bar sherd and flat upright rim, with an estimated 340mm rim diameter, both have grass impressions on the interior and exterior. Analysis of rim diameters spanning the occupation of the house excavated at Gunwalloe suggested rim diameters increased over time, with sizes between 260mm–360mm dating to cal AD 1030–1210, although the sample size was small and further dated sequences are needed (Wood 2015). The general lack of dating and more importantly the static form of this ware sadly make precise dating problematic.

The nearest comparable examples are from Sennen (Guthrie 1962, 119) and Hellesvean, St Ives (Guthrie 1954, 73), both of which are undated. The vessels from these sites were also in a Granitic fabric with large inclusions. The use of crushed Biotite Granite 2, as opposed to the rounded Tourmaline Granite 1 temper used in the Middle Bronze Age, suggests a different source of tempering material while still both using essentially local clay sources rather than Gabbroic clay.

The significance of the results

These small archaeological features provide further evidence for past activity in West Penwith. Although undated, the small pit [5] could be of early medieval date, as it was found in close proximity to the Grass-marked ware; however, due to the limited evidence this remains conjecture. St Buryan was an important monastery in the tenth and eleventh centuries (Preston-Jones 1987; Olson 1989) so activity in the surrounding area is to be expected.

We have a fuller understanding of the burnt spread [12] due to the good preservation of charred plant remains, charcoal and pottery and the supporting radiocarbon date with a range within the Middle Bronze Age. Due to their close proximity to the burnt spread it could be inferred that the three pits or postholes are broadly contemporary, but they have not been dated. It is possible that the heartwood recorded in [17] represents a standing post.

The absence of documented settlement activity in the immediate area makes the context of the burnt spread uncertain. In isolation, it is possible that the spread either represents vegetation clearance for cultivation, is linked with a celebratory event of some kind, or was perhaps residues that had been generated by settlement activity. The presence of

unburnt Trevisker ware sherds within the area of the spread and the lack of evidence for *in situ* burning beneath it might suggest the latter scenarios are more likely, and the presence of charred cereals and crop weeds may indicate the processing and consumption of food. The burnt spread therefore has two areas of archaeological significance, one as an indicator of settlement activity of some form and the second in terms of the environmental information that it contains.

Middle Bronze Age spreads and mounds

The burnt spread is difficult to interpret; however, it is possible that it represents a deposit which had been used to seal a shallow cut feature. The charcoal, which was interleaved with burnt clay, does not appear to have been burnt *in situ*, and the unburnt but abraded nature of some of the pottery might at least suggest that the deposit was not in its original context. It is therefore possible that the deposit was derived from an event or activities which had occurred elsewhere, possibly on a settlement.

Spreads of material dating to the Middle Bronze are known from elsewhere in West Penwith and Cornwall, although the context for most of these deposits is ambiguous. At Tredarvah, Penzance (Pearce and Padley 1977), a spread of occupation material, which included Trevisker pottery, worked stone artefacts, charcoal and metalwork was uncovered and was initially thought to be associated with a roundhouse. Salvage investigation suggested that although the layer was occupation-derived it was not directly associated with a structure and it is possible that it represented a heap of material into which the metalwork had been deposited (Jones and Knight, forthcoming). At Bussow, St Ives, Noall (1971) reported on an early discovery of Trevisker pottery from what he thought might have been a barrow. However, no burial was identified and instead only 'ashes', more pottery and grinding stones were recorded, which had possibly covered a large stone. The site was already disturbed when Noall visited but it is evident that it was not far from a roundhouse settlement, and the large deposit of charcoal might have been generated by settlement activity.

On the Lizard peninsula, at Higher Polcoverack, St Keverne, a low mound covering an area containing Bronze Age pottery was found to cover a series of pits and postholes (Harris and Smyth 1983). The features did not form a structure and the mound did not appear to be a barrow but did appear to have been deliberately deposited. Another potentially comparable example was uncovered at Trenowah, St Austell (Johns 2008). Here a shallow hollow measuring approximately 6.2m by 5m had been infilled with charcoal-rich layers containing sherds of Trevisker pottery. Two postholes and a pit were sealed by the deposit but these did not form a structure and no roundhouses were uncovered in the immediate vicinity. Two radiocarbon determinations were obtained from the hollow, 3112 ±42 BP, 1495–1264 cal BC (Wk-11930) and 3155 ±50 BP, 1512–1290 cal BC (Wk-11932), which places it in the Middle Bronze Age. In the case of Trenowah it seems that occupation deposits had been deliberately used to seal a hollow and, in common with Higher Polcoverack, earlier non-structural features.

The lowland Middle Bronze Age settlement at Trethellan, Newquay, also produced evidence for the intentional infilling of hollows (Nowakowski 1991). Here, three 'ritual' hollows had been deliberately infilled with layers which included charcoal-rich deposits, pottery and organic-rich remains. Although dating to the end of the Middle Bronze Age, and therefore a little later in date, a large shallow pit at Trevassack Hill, Hayle (Brown *et al* 2016), has similarities with burnt spread [12]. It was filled by a charcoal-rich deposit which contained sherds of Bronze Age pottery, an amber bead and charred food remains, which included cereals. The cereals had not been burnt in the pit and the fill was interpreted as being deliberately placed into the cut.

Lowland Middle Bronze Age settlements across Cornwall have produced a significant amount of evidence for midden deposits containing pottery, charcoal and charred plant remains being used to infill roundhouse sites as part of rites of abandonment (for example, Jones *et al* 2015).

Although it is not possible to determine where the deposit formed or what the events were that led to its deposition, it is possible that the burnt material covering cut [12] was part of a spectrum of practices involving the deliberate deposition of accumulated occupation-related material to seal features.

Agricultural activity in the Bronze Age

The second area of significance from Tower Meadows lies in the proxy indicators for the surrounding environment of the Middle Bronze Age, which suggest agriculture and woodland management in the Middle Bronze Age of west Cornwall, together with the secure dating of the Celtic bean in association with fragments of Trevisker ware.

The material retrieved from burnt spread [12] demonstrates that hulled wheat, most likely emmer (*Triticum turgidum* ssp. *dicoccum*), and hulled barley (*Hordeum vulgare*) were grown, with further signs of cultivation nearby provided by the identified weed seeds.

The Celtic / field bean (*Vicia faba*), securely dated to the Middle Bronze Age, is an unusual and important find, as it did not become a significant crop until the Iron Age. Previous work in Cornwall, however, has recorded a small number of beans in features dated to the Middle and Late Bronze Age (Treasure and Church 2017; Table 3). The bean from Tower Meadows, however, is potentially the most south-westerly Bronze Age example found yet.

The presence of lesser celandine tubers (*Ficaria verna*), grass and bracken remains suggests that other habitats such as damp grassland and heathland were exploited in the Middle Bronze Age in the area of St Buryan. The exploitation of heathland is supported by the presence of gorse (*Ulex* sp.) charcoal identified from the burnt spread.

The charcoal from the Bronze Age contexts – (13), and possibly (16) and (18) – suggests that wood or fuel for domestic fires was collected from various habitats, such as heathland (as mentioned above) and scrubland, as indicated by the presence of *Maloideae* charcoal, most likely to be that of hawthorn rather than apple / pear or whitebeam, although blackthorn (*Prunus spinosa*) cannot be ruled out. Taxa more associated with woodland included oak (*Quercus* sp.), which was the commonest find and perhaps formed the original post in posthole [17]. The remains of oak consisted of heartwood which exhibited close grown annual growth rings, suggesting that perhaps that there was some stress in the environment inhibiting growth. In other oak charcoal fragments the late summer vessels were very small and infrequent suggesting that the stress may be in the form of the occasional summer drought or some other physiological means which would restrict the late growth of the oak (perhaps use as fodder for grazing animals?).

The burnt spread also produced an interesting find in the presence of a few pieces of possible beech (*Fagus* sp.). It used to be thought that beech was a post-Roman introduction into the British Isles, given its requirements for warmer weather, but beech wood and charcoal remains have been found in Neolithic to Roman contexts in southern Britain (for example, Godwin 1975; Clapham 1988).

The presence of beech in Cornwall may be considered part of its expansion throughout southern Britain. It is possible that beech formed only a small proportion of the wooded landscape but it may have formed pure stands in favourable conditions where, due to the dense shade cast by its canopy, all other woodland species were excluded. The presence of the scrubby *Maloideae* and heathland gorse suggests that the woodland was managed to some degree, although there is no evidence from the site for coppicing.

Table 3 Occurrence of *Vicia faba* in Bronze Age contexts in Cornwall (from Treasure and Church 2017, appendix 1).

Site	*No of beans*	*Reference*
Trethellan Farm	14	Straker 1991
Scarcewater	5	Jones 2010
Tremough	2	Jones 2015
Trevilson	V abundant frags	Jones 2004
Callestick	1	Gilbert and Straker 1999

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References

Allen, M J, 2021. Tower Meadow, St Buryan, West Penwith, Cornwall – radiocarbon result of spread 12 and the field / Celtic bean, unpublished report, 22 February 2021 (Allen Environmental Archaeology)

British Geological Survey, 2021. *Geology of Britain viewer* [online] Available at: https//mapapps.bgs.ac.uk/geologyofbritain/home.html [accessed 15 Jun 2021]

Bronk Ramsey, C, 2009. Bayesian analysis of radiocarbon dates, *Radiocarbon*, **51**, 337–60

Brown, A, Quinnell, H, and Rainbird, P, 2016. A Bronze Age pit and amber bead from Trevassack Hill, Hayle, Cornwall, *Cornish Archaeol*, **55**, 231–39

Clapham, A, 1988. *The charred macroscopic plant remains from a Neolithic pit and Bronze Age barrow and ditch at Roughridge Hill, Wiltshire,* Ancient Monuments Laboratory Report **187/88**

Clapham, A J, 2020. Tower Meadow, St Buryan, West Penwith, Cornwall – charred plant remains and charcoal, unpublished report, 5 November 2020 (Allen Environmental Archaeology)

Gilbert, P, and Straker, V, 1999. Assessment of charred plant macrofossils, 38–39, in A M Jones, The excavation of a Later Bronze Age structure at Callestick, *Cornish Archaeol,* **38**, 5–55

Godwin, H, 1975. *History of the British flora. A factual basis for phytogeography*, Cambridge (2nd edn)

Guthrie, A, 1954. Dark Ages sites at St Ives, *Proc West Cornwall Field Club*, **1**,**2**, 73–5

Guthrie, A, 1962. Miscellaneous sherds from Sennen, *Cornish Archaeol*, **1**, 118–19

Harris, D, and Smyth, G, 1983. Excavation of a barrow (?) at Higher Polcoverack, St Keverne, *Cornish Archaeol*, **22**, 93–9

Johns, C, 2008. The excavation of a multi-period archaeological landscape at Trenowah, St Austell, Cornwall, 1997, *Cornish Archaeol*, **47**, 1–48

Jones, A M, and Knight, M G, forthcoming. A landscape of deposition, in A M Jones and M J Allen, *Exploration of a drowning landscape*, Oxford

Jones, A M, Gossip, J, and Quinnell, H, eds, 2015. *Settlement and metalworking in the Middle Bronze Age and beyond: new evidence from Tremough, Cornwall*, Leiden (Sidestone Press)

Jones, A M, and Quinnell, H, 2011. Bosiliack: a later prehistoric settlement in Penwith, Cornwall, *Arch Jnl*, **168**, 96–132

Jones, J, 2004. Analysis of charred plant macrofossil remains, 73–80, in A M Jones and S R Taylor, *What Lies Beneath… St Newlyn East and Mitchell. Archaeological investigations 2001*, Truro (Cornwall County Council)

Jones, J, 2010. Plant remains, 142–8, in A M Jones and S R Taylor, *Scarcewater, Pennance, Cornwall. Archaeological excavation of a Bronze Age and Roman landscape*, Brit Arch Repts, Brit Ser, **516**, Oxford

Jones, J, 2015. Charred plant remains, in Jones *et al* 2015, 121–36

Noall, R J, 1971. Bussow Bronze Age village and its last inhabitants, *Cornish Archaeol*, **10**, 29–31

Nowakowski, J A, 1991. Trethellan Farm, Newquay: the excavation of a lowland Bronze Age settlement and Iron Age cemetery, *Cornish Archaeol*, **30**, 5–242

Olson, B P, 1989. *Early monasteries in Cornwall*, Woodbridge

Pearce, S M, and Padley, T, 1977. A Bronze Age find from Tredarvah, Penzance, *Cornish Archaeol*, **16**, 25–41

Preston-Jones, A, 1987. Road widening at St Buryan and Pelynt churchyards, *Cornish Archaeol*, **26**, 153–60

Quinnell, H, 2011. Pottery, in B Morris, *Guisseny Place, Porthleven, Cornwall*, South Molton (South West Archaeology report no 110314)

Quinnell, H, 2012. Trevisker pottery: some recent studies, in W Britnell and R J Silvester, eds, *Reflections on the past, essays in honour of Frances Lynch*, Welshpool, 146–71

Quinnell, H, 2013. Pottery from the 2011 and 1984 roundhouse excavations, in A M Jones, Archaeological excavations at Bosiliack, Madron Cornwall, *Cornish Archaeol*, **52**, 135–69

Reimer, P J, Bayliss, A, Beck, J W, Blackwell, P G, Bronk Ramsey, C, Buck, C E, Cheng, H, Edwards, R L, Friedrich, M, Grootes, P M, Guilderson, T P, Haflidason, H, Hajdas, I, Hatté, C, Heaton, T J, Hoffman, D L, Hogg, A G, Hugen, K A, Kaiser, K F, Kromer, B, Manning, S W, Niu, M, Reimer, R W, Richards, D A, Scott, E M, Southon, J R., Staff, R A, Turney, C S M and van der Plicht, J, 2013. Intcal13 and marine13 radiocarbon age calibration curves, 0–50,000 years cal BP, *Radiocarbon* **55**, 1869–87

Straker, V, 1991. Charred plant macrofossils, in Nowakowski 1991, 161–79

Thorpe, C, 2020. *Tower Meadows, St Buryan, Cornwall – archaeological watching brief*, Truro (Cornwall Archaeological Unit, Cornwall Council)

Thorpe, C, and Wood, I, 2011. Early medieval pottery, in P Herring, A Preston-Jones, C Thorpe and I Wood, Early medieval Cornwall, *Cornish Archaeol*, **50**, 263–86

Treasure, E R, and Church, M J, 2017. Can't find a pulse? Celtic bean (Vicia faba L.) in British prehistory, *Environmental Archaeology,* **22**, 113–27

Wood, I, 2015. *Gunwalloe through the ages: Middle Bronze Age to the 12th century AD, Lizard Peninsula, Cornwall*, Helston

Wood, I, 2020. Ceramic analysis at Tower Meadows, St Buryan, Cornwall, unpublished report