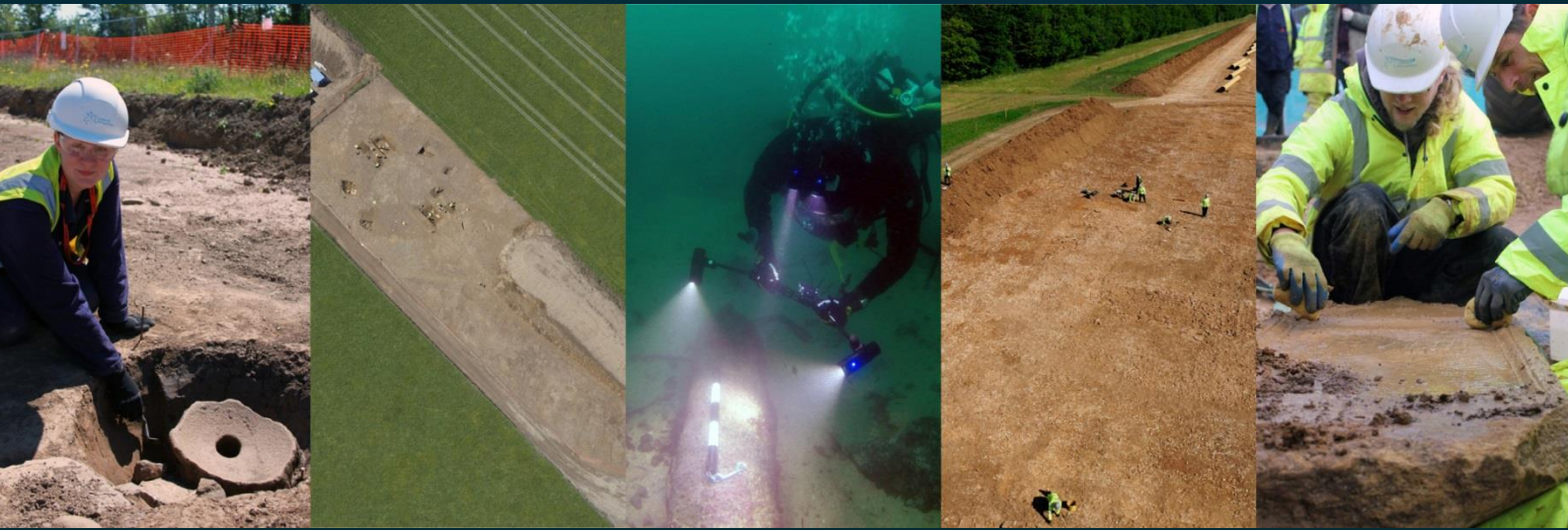


Pin Brook Park Pinhoe Devon

Archaeological Excavation



for
BDW Exeter

CA Project: 889018
CA Report: 889018_1

January 2020



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Pinhoe
Devon

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EARLY NEOLITHIC PITS AND A PREHISTORIC RING-DITCH ALONG THE PIN BROOK: EXCAVATIONS AT PIN BROOK PARK, PINHOE, 2015

By Jonathan Orellana and Jonathan Hart

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Excavations by Cotswold Archaeology revealed a small number of Early Neolithic pits, dated by the presence of pottery with crushed vein quartz inclusions. A small ring-ditch contained Late Neolithic pottery, but charcoal from the same ditch produced a Late Bronze Age radiocarbon date, whilst the backfilled ditch was truncated by a pit associated with a Middle Bronze Age radiocarbon date. No human remains were found, but this is common for barrows found in Devon.

INTRODUCTION

Between July and October of 2015 Cotswold Archaeology (CA) undertook an archaeological evaluation and excavation at Pin Brook Park, Pinhoe (centred on National Grid Reference SX 9638 9374; Fig. 1) prior to residential development. The site is split into two parts straddling the Pin Brook and lies on the north-eastern edge of Exeter, within an area that has seen extensive development and archaeological recording in recent years. At the time of the archaeological work, the site lay within agricultural land and the underlying geology is mapped as the Permian sandstone of the Monkerton Formation (BGS 2019).

Initial investigations comprised geophysical surveys (Stratascan 2012; AS 2013) and a trial trench evaluation undertaken by CA. Significant archaeological features were identified in Trenches 46 and 47 in the eastern part of the site, and Trench 38 in the western part, which were expanded into three small excavation areas (Fig. 2). The findings within those excavation

areas are reported on here. Details of the discoveries across the remainder of the site, which comprised medieval or later ditches, along with undated ditches and pits exposed within evaluation trenches, are contained within the site archive.

RESULTS

The excavation areas were machine-stripped to the top of the natural substrate, which comprised reddish silty sand with occasional outcrops of gravel and sandstone, sealed by up to 0.75 m depth of subsoil and topsoil. Radiocarbon dates are quoted below at the 95.4% probability level (Table 1). Details of finds relating to the significant results are discussed below; full details of these, and of the remaining finds recovered from the site, are contained within the site archive, as are details of the palaeoenvironmental evidence.

Early prehistoric

The evaluation and excavation as a whole produced an assemblage of eighty worked flints, the majority of which were residual within later deposits. Of these, 29% were made using flints from secondary sources, such as beach/river gravel pebbles, whilst the remainder came from chalk or clay-with-flint sources. Much of this material is only broadly dateable, but six flakes, eight blades, a core rejuvenation flake, a possible bladelet fragment and a double-ended scraper are compatible with Mesolithic or Early Neolithic technology (Sommerville, 2018 'Lithics', in archive).

Pits 3805, 47021 and 47030 contained Neolithic pottery and flint flakes. Although the flints are only broadly dateable, the pottery contains crushed vein quartz inclusions and is considered to date to *c.* 3900–3400 cal. BC, a range within the Early Neolithic (Quinnell, 2018 'Prehistoric Pottery', in archive).

Pit 47030 within Trench 47 (Fig. 2) had truncated a small pit, 47009, which lacked finds. The later pit, 47030, comprised a broad, circular cut 3.7 m wide and 0.45 m deep with moderate edges leading to a flat base (Fig 3). It contained three sandy silt fills, the lowest of which produced a single sherd of Neolithic pottery, probably a lug fragment, and the uppermost of which contained a further four sherds of Neolithic pottery. To the immediate north of pit 47030, pit 47021 was an elongated irregular cut, 2.5 m long, 0.95 m wide and 0.25 m deep, with moderate sides leading to a concave base (Fig. 4, top). It contained two silty fills, the uppermost of which produced five small sherds (5g) of Neolithic pottery. Pit 3805 within Trench 38 (Fig. 1), was an irregular cut 3.5 m long, 1.1 m wide and 0.5 m deep (Fig. 4, bottom). Its single silty fill produced three sherds of Neolithic pottery as well as flint flakes.

A ring-ditch (A), was identified within Trench 46 (Figs 2 and 5). It comprised a ditch with a continuous circuit enclosing an area 9.5 m in diameter. The ditch itself was 1.3 m–1.7

m wide with steep sides leading to a flattish base at a depth of 0.35 m–0.65 m (Fig. 6). The ditch contained a sequence of up to four fills which seemed to reflect natural infilling, and although this material potentially derived from a bank or mound, there was no clear evidence for this. Finds from the ditch fills comprise a flint flake and a flint core, and four pottery sherds in a grog- and rock-tempered fabric, all of which probably come from the same vessel and may be of Late Neolithic date. These sherds came from sondage 46012 along the northern part of the ditch circuit. Samples from the ditch fills produced charcoal from fuelwood (Boardman, 2018 ‘Wood Charcoal and Charred Plant Remains’, in archive), mostly oak (*Quercus* sp) heartwood and sapwood, but with other species present, including as roundwood, and also yielded very small quantities of charred cereal remains from spelt wheat and hulled barley alongside larger quantities of wild fruit and nut remains including sloes, hawthorns and hazelnut shells. A hazel (*Corylus avellana*) roundwood fragment from the lower fill of the ring-ditch within sondage 46025 along the north-western part of the circuit produced a radiocarbon date of 1221–1045 cal. BC (SUERC-82094), a range within the Late Bronze Age. The only features within the area enclosed by the ring-ditch comprised areas of root disturbance, although these were undated.

Along the western part of the ring-ditch circuit, the uppermost fill had been cut into by circular pit 46089, a steep-sided cut 0.5 m wide and 0.35 m deep with a concave base. Pit 46089 contained a lower silty fill sealed by a charcoal-rich upper fill which produced a flint flake. A sample from this upper fill (46087) produced oak charcoal, and a very small quantity of charred cereals, including wheat (*Triticum* sp.) and hulled barley (*Hordeum vulgare*), wild fruits (sloes; *Prunus spinosa*; hawthorn (*Crataegus monogyna* Jacq., and *Crataegus* sp.), and hazelnut shell fragments, one of which was radiocarbon dated to 1411–1262 cal. BC (SUERC-82095), a range within the Middle Bronze Age.

An abraded Beaker/Early Bronze Age barbed and tanged flint arrowhead recovered from medieval or later ditch 46066, 10 m north of Ring-ditch A (Fig. 2) possibly derived from the ring-ditch, but this must remain as speculation.

Medieval and later

Medieval and later remains comprised field boundaries, details of which are contained within the site archive. Ditch 46082 which ran across prehistoric Ring-ditch A (Fig. 2) produced two small fragments of fuel ash slag suggestive of small-scale smithing, perhaps the repair of tools or other metallic objects (Smyrnaioi, 2018 ‘Mixed Finds, in archive). The condition of the slag is good, suggesting a relatively recent date compatible with the suggested medieval or later date of these ditches. There were no indications that the smithy itself had stood within the site.

Undated

A small number of pits and ditches across the site remained undated; details are contained within the site archive.

DISCUSSION

Mesolithic and/or Early Neolithic activity is well recorded near the Pin Brook. At Old Park Farm, 1.5 km north of Pin Brook Park, 182 worked lithics were retrieved, most of which were redeposited, but which included Mesolithic/Early Neolithic material (Sommerville 2017; Fig. 1). A smaller assemblage was recovered from Tithe Barn Green, east of Pin Brook Park (Good and Massey 2017, 103; Fig. 1) and a much more substantial group of 1121 flints came from Pin Brook Enclosure, 1 km east of Pin Brook Park, again, mostly residual but including Mesolithic/Earlier Neolithic flints (Sommerville forthcoming this vol?; Fig. 1).

The three dated Early Neolithic pits add to a small but growing body of such discoveries revealed by the developments around Exeter and dating across the Neolithic period. At Project Dixie, 2.6 km north-east of Pin Brook Park, of three pits dated to the Early Neolithic period, one contained a notable placed deposit of unused clay loom weights, found alongside sherds from an Early Neolithic pottery vessel, animal bone and charred plant remains (Hart *et al.* 2014; Fig. 1). Some 1 km north-east of Pin Brook Park, a pit containing Early Neolithic pottery was discovered at Pin Brook Enclosure, along with an alignment of four Middle Neolithic pits (Garland forthcoming this vol?; Fig. 1). A possible Early Neolithic house was suggested at Hayes Farm (Hart *et al.* 2014; Fig. 1) and these, along with other Neolithic pits discovered in the vicinity, suggest that the valleys of the Rivers Clyst and Exe were settled from the Early Neolithic period. The nature of such settlements, including their size, duration and economic and social basis, is uncertain, but on the basis of the existing evidence, family or extended family sized groups practicing mixed farming along with hunting-gathering seems likely.

The form of Ring-ditch A, comprising as it did a full ditch circuit with no entrance gaps, suggests that it was the remains of a barrow or similar monument rather than of a henge or roundhouse. The dating evidence for this feature is somewhat ambiguous. The single (but fragmented) sherd of pottery from its fills seems to be from a Late Neolithic vessel, whilst a radiocarbon date of 1221–1045 cal. BC (SUERC-82094) from a hazel roundwood fragment recovered from a lower fill falls within the Late Bronze Age. Added to this, following infilling, the ditch had been cut by pit 46089 from which a hazelnut shell fragment produced a Middle Bronze Age radiocarbon date (1411–1262 cal. BC; SUERC-82095). At face value, the Late Neolithic pottery might indicate the construction date for this barrow, but it is possible that it was deposited, or redeposited, long after its manufacture. Equally, whilst the radiocarbon dated Late Bronze Age charcoal fragment might date the construction or early use of the

monument, it is conceivable that this single charcoal fragment was intrusive, and the same is conceivably true of the hazelnut shell fragment.

Early or Middle Bronze Age dating is suggested for other ring-ditches in the region (Fitzpatrick *et al.* 1999, Jones and Quinnell 2011, 211; 218; Quinnell and Farnell 2016). Closest to the current site, a ring-ditch at Tithe Barn Green, 400 m north-east of the Pin Brook Park, was 16.5 m in diameter and was dated to the Middle Bronze Age on the basis of 27 sherds of Trevisker pottery (Good and Massey 2107; Fig. 1). At Pin Brook Enclosure, a ring-ditch 16 m in diameter was dated to the Early Bronze Age on the basis of two radiocarbon determinations (Garland forthcoming; Fig. 1). Although the date of the current example is unclear, if the Late Bronze Age radiocarbon determination reflects the construction of the ring-ditch, then this would be the latest date yet recorded for a ring-ditch in Devon (H. Quinnell pers. comm. to J. Hart).

As with the ring-ditch at Pin Brook Park, those at Pin Brook Enclosure and Tithe Barn Green contained no human remains. This is common for ring-ditches in Devon (Jones and Quinnell 2011, 214), which may in part at least reflect the locally acidic soils although examples with burials are known, for at Digby Drive where a ring-ditch contained cremation deposits within Middle Bronze Age pottery vessels and associated with a radiocarbon date of 1440–1260 cal. BC (Wk-27667) (Quinnell and Farnell 2016, 93–95).

Analysis of the wood charcoal from Ring-ditch A at the current site (Boardman, 2018 'Wood Charcoal and Charred Plant Remains', in archive), has revealed that a wide range of woody taxa were used for fuel across the time during which the ring-ditch infilled, including oak, hazel, broom/gorse, blackthorn, hawthorn group species (probable hawthorn, apple and/or wild service *Sorbus torminalis*), blackthorn/cherry, ash, holly, birch and alder. This points to a fairly well-wooded landscape with trees such as oak, hazel and ash, plus more open, acidic areas supporting broom and gorse, and possibly some areas of scrub, with blackthorn, hawthorn and elder. Charred seeds/fruits of blackthorn, hawthorn and elder were also present. The range of woody taxa from Pinn Brook is very similar to that from Early to Late Bronze Age sites found along the A30 Honiton to Exeter road (at Castle Hill, Patteson's Cross and Hayne Lane; Gale, in Fitzpatrick *et al.* 1999). This in turn hints at some stability in the wooded vegetation of the region during this period.

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Feature	Lab No.	Material	$\delta^{13}\text{C}$	Radiocarbon age	Calibrated radiocarbon age 95.4% probability	Calibrated radiocarbon age 68.2% probability
Fill 46026 Ring-ditch A	SUERC-82094	Charcoal: Hazel Roundwood (<i>Corylus avellana</i>)	-25.2‰	2934±26 yr BP	1221–1045 cal BC	1208–1110 cal BC (65.3%) 1097–1091 cal BC (2.9%)
Fill 46087 Pit 46089	SUERC-82095	Charcoal: Hazelnut Shell Fragment (<i>Corylus avellana</i>)	-25.4‰	3069±26 yr BP	1411–1262 cal BC	1391–1336 cal BC (41.6%) 1323–1289 cal BC (26.6%)

Table 1. Radiocarbon dating results

The samples were analysed during September/October 2018 at Scottish Universities Environmental Research Centre (SUERC). The uncalibrated dates are conventional radiocarbon ages. The radiocarbon ages were calibrated using the University of Oxford Radiocarbon Accelerator Unit calibration programme OxCal v4.3.2 (2017) (Bronk Ramsey 2009) using the IntCal13 curve (Reimer *et al.* 2013).

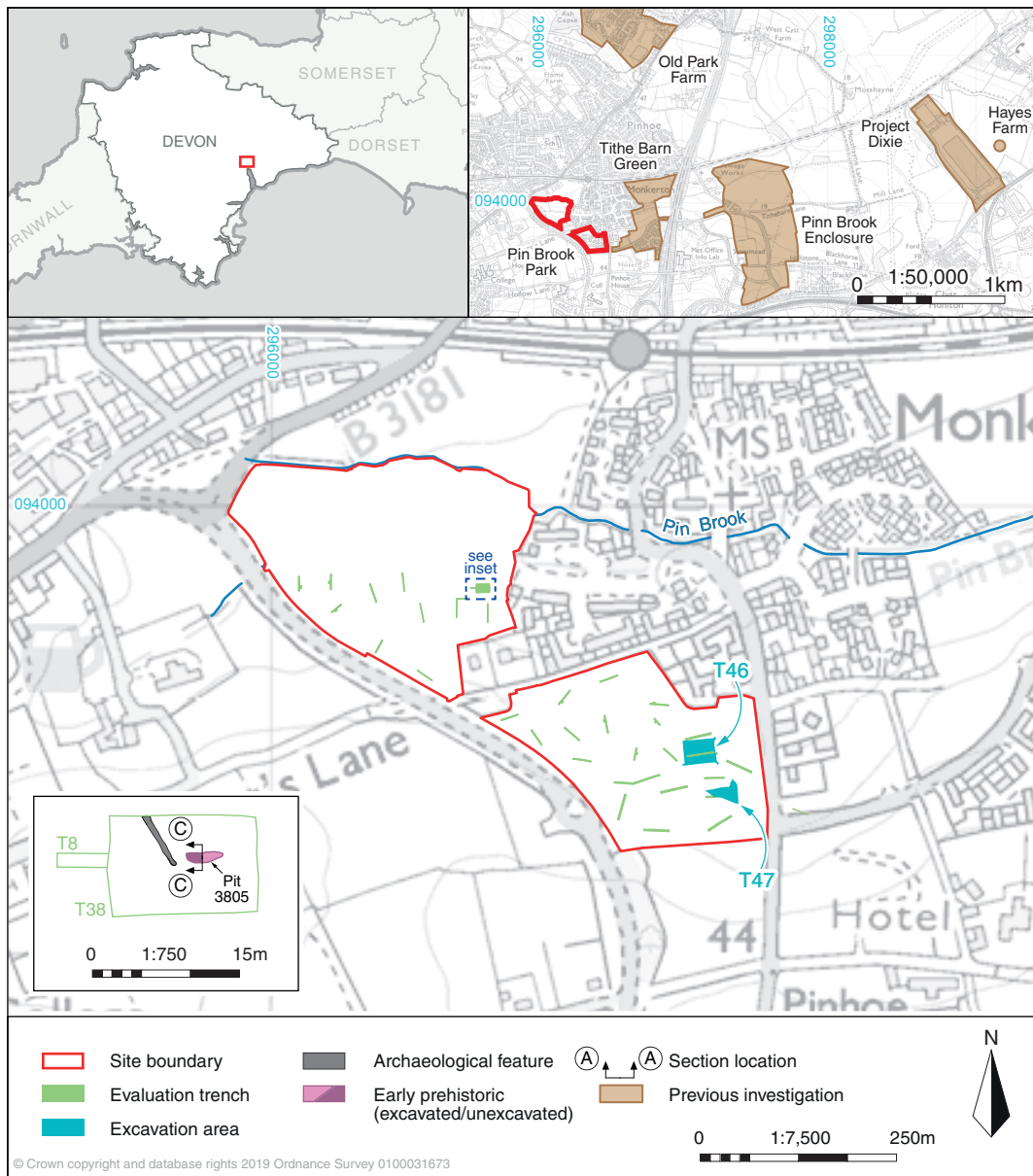


Figure 1. Site location plan, showing location of groundworks

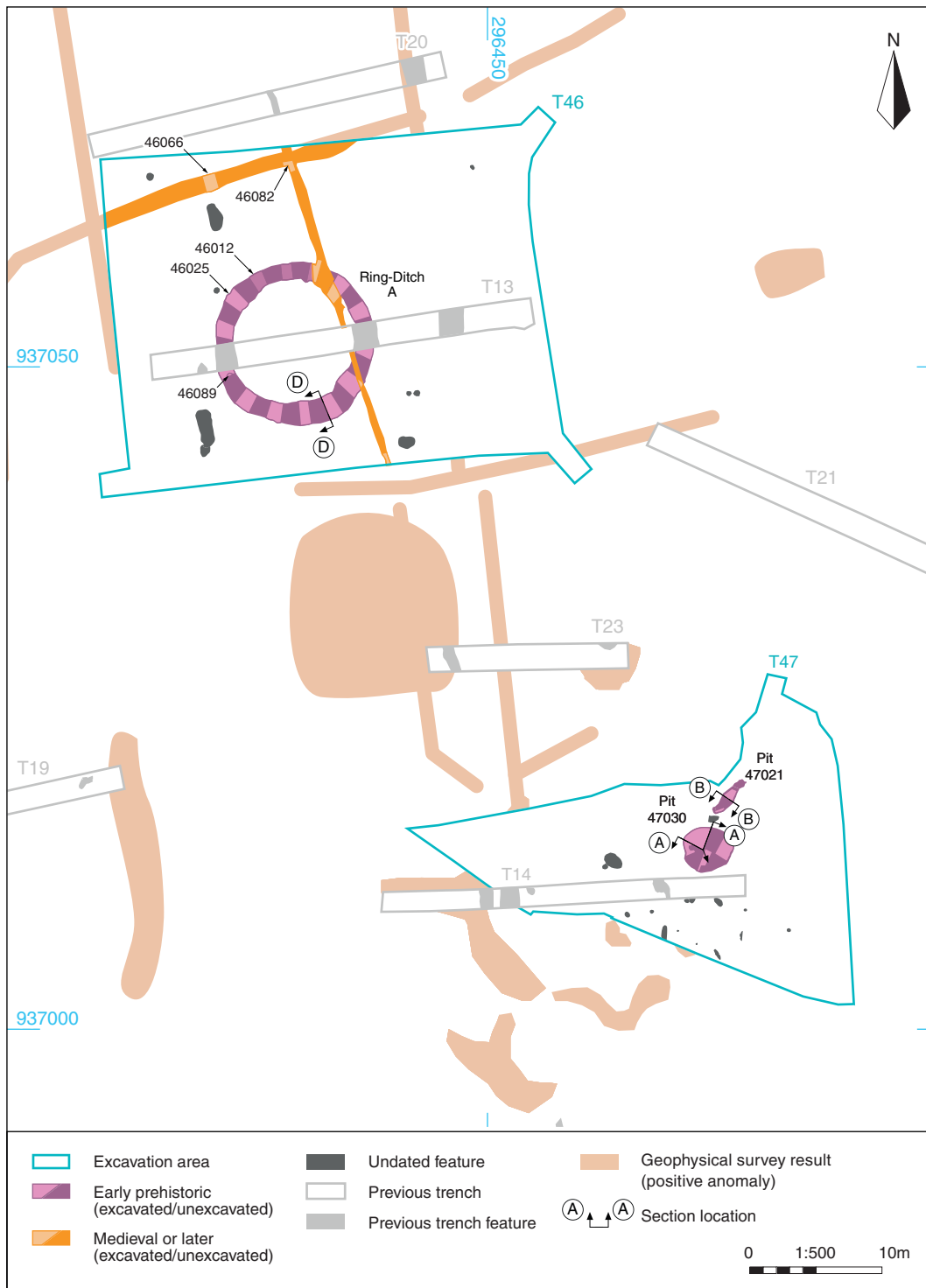


Figure 2. Plan of Trenches 46 and 47

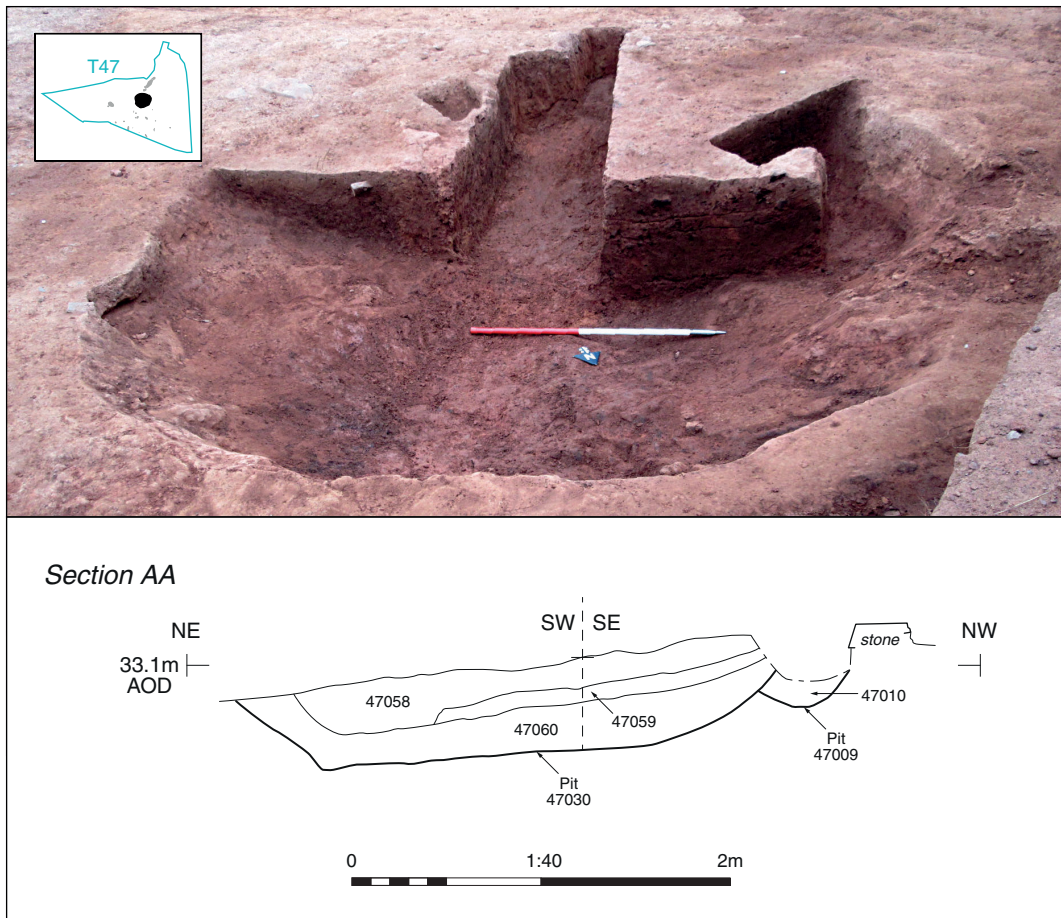


Figure 3. Pit 47030, photograph looking south-west (1m scale), and section

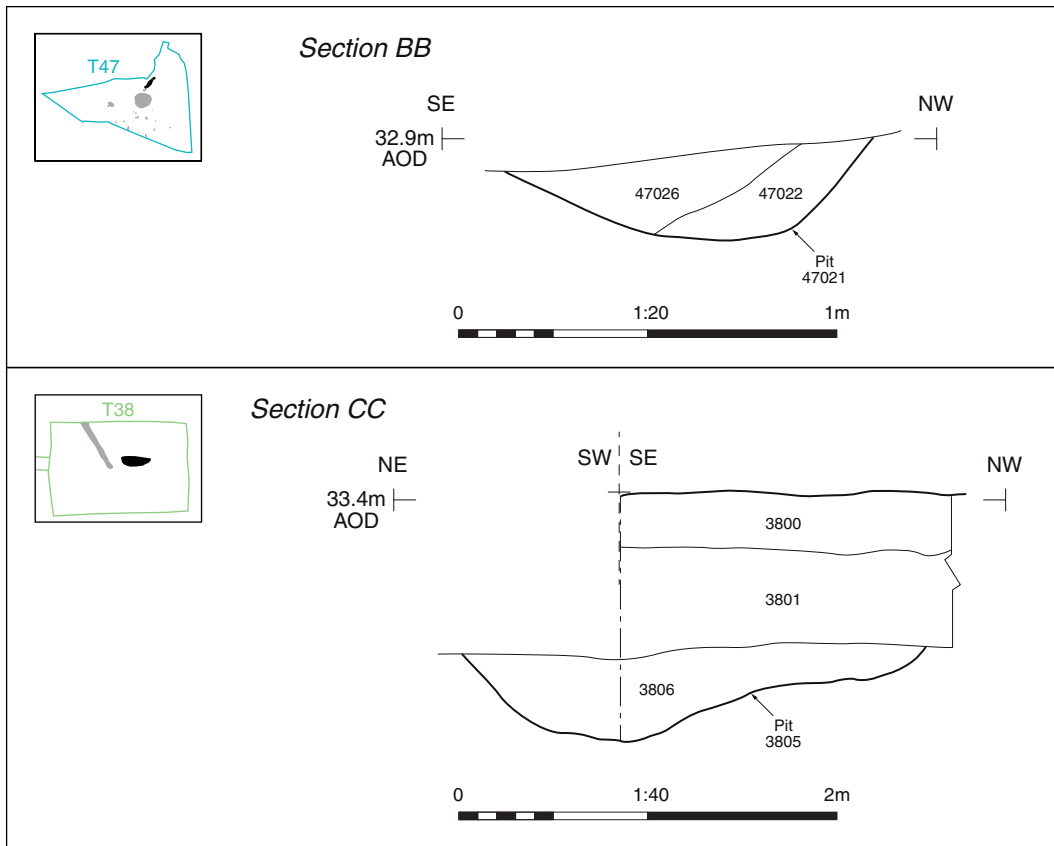


Figure 4. Sections through pits 47021 (top) and 3805 (bottom)



Figure 5. Photograph of Ring-Ditch A, looking north (1m scales)

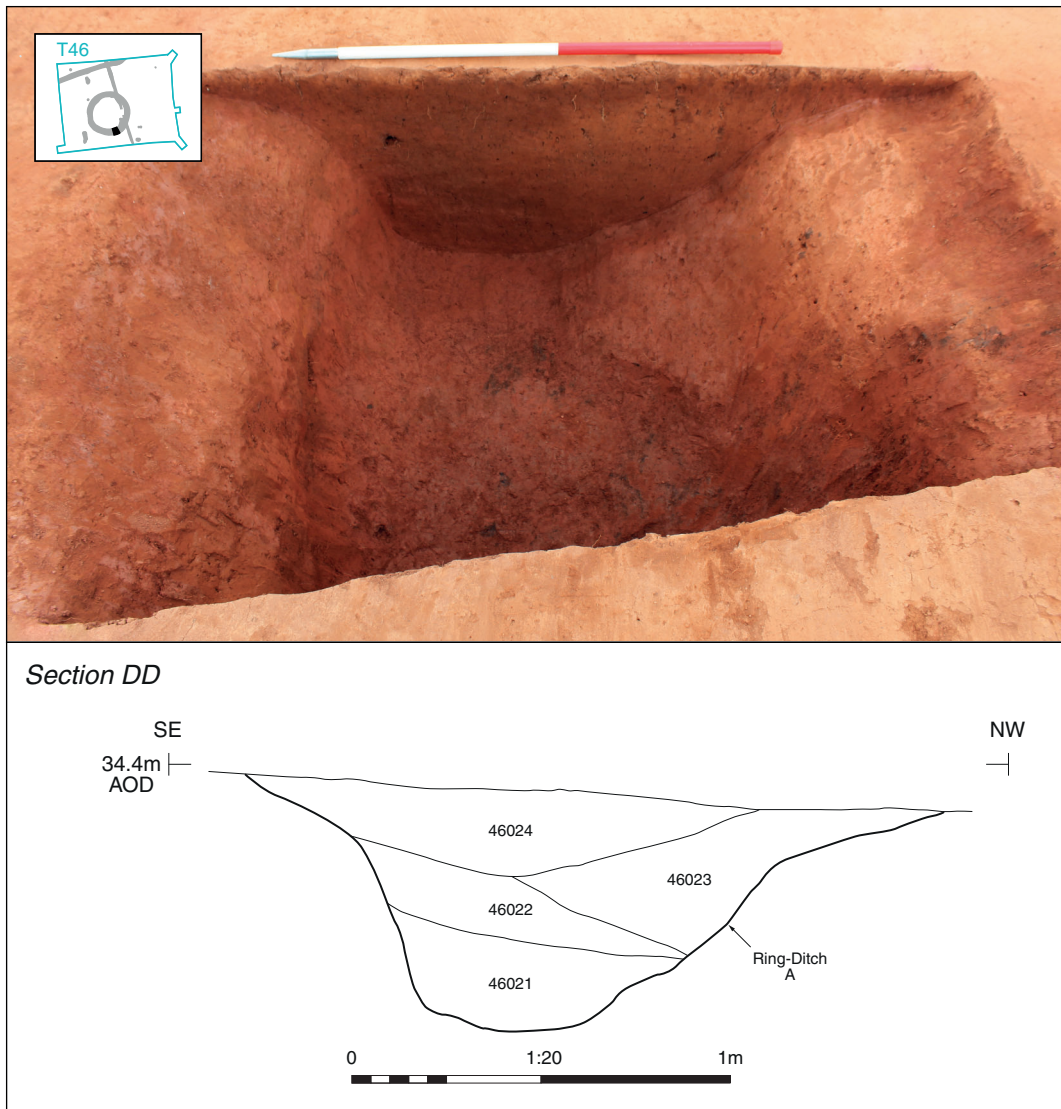


Figure 6. Ring-Ditch A: photograph, looking south-west (1m scale), and north-east facing section

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