Cotswold Archaeology

Land at Tithebarn Green (Redhayes) Exeter Devon

Archaeological Evaluation

for

CgMs Consulting

CA Project: 3678
CA Report: 12012
RAMM Reference No. 11/73

February 2012

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CA Project: 3678
CA Report: 12012

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SUMMARY

Project Name:	Land at Tithebarn Green (Redhayes)
Location:	Near Exeter, Devon
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An archaeological evaluation was undertaken by Cotswold Archaeology in January 2012 on Land at Tithebarn Green (Redhayes), near Exeter, Devon. Seventeen trenches were excavated.

The evaluation identified a number of archaeological features throughout the proposed development area which generally correlated well with the results of a preceding geophysical survey. Archaeological features encountered comprised ditches, pits and postholes, generally dated to one of two broad periods; prehistoric and post-medieval/modern.

Evidence of Neolithic activity was identified in Trench 7 where four pits, seemingly forming a north-west/south-east alignment, were found to contain pottery of probable Middle Neolithic date. A $_{14}$C date recovered from one of the pits compliments such an interpretation.

Substantial ditches identified in Trenches 5, 8, 10, 11, 15 and 17 confirm the presence a large enclosure identified by both cropmark evidence and the earlier geophysical survey. Further ditches located in Trenches 3, 7, 10 and 15 attest to the presence of a probable internal division within this enclosure. Although no closely dateable material was recovered from these features, a possible later prehistoric/Iron Age date is postulated for their construction. A $_{14}$C date recovered from the ditch suggests that it remained partially open and visible as an earthwork into the Saxon period. Further undated, but possibly prehistoric, features comprising pits/postholes were identified in Trenches 2, 3, 5, 6, 11 and 14.

Probable post-medieval/modern field boundaries were identified in Trenches 3, 7, 10 and 15. The exact function of the undated ditches identified in Trenches 2, 4, 6, 11, 14 and 17 remains unclear, although they are likely to relate to land management and/or division.

1. INTRODUCTION

1.1 In January 2012 Cotswold Archaeology (CA) carried out an archaeological evaluation for CgMs Consulting at Land at Tithebarn Green (Redhayes), near Exeter, Devon (centred on NGR: SX 975 939; Fig. 1). An Outline Planning Application is to be made to East Devon District Council, the Local Planning Authority (LPA), for residential and mixed use development of the Site, in accordance with a Masterplan proposal. Pre-application consultation with the LPA and their archaeological advisors, Devon County Council Historic Environment Service (DCCHES), identified a strategy for the assessment and management of the Site's Historic Environment Resource. A Desk Based Assessment (DBA; EA 2011) identified a particular focus of archaeological potential to the north of Tithebarn Lane and to the south of the railway line. Within this area a number of cropmarks were identified from aerial photographs, indicating the presence of a potential large prehistoric enclosure, with a number of possible internal features and associated finds. DCCHES and the LPA confirmed that a programme of archaeological works to further assess this enclosure was required at the pre-planning application stage. A recently completed geophysical survey (Stratascan 2011) confirmed the archaeological potential of this area of the Site, and in consultation with DCCHES the requirement for a stage of trial trench evaluation was agreed.

1.2 The evaluation was carried out in accordance with a Written Scheme of Investigation (WSI) for a Programme of Archaeological Trial Trenching (CgMs 2011) that was approved by DCCHES. The fieldwork also followed the methodologies detailed in a subsequent Archaeological Method Statement (AMS; CA 2012), the *Standard and Guidance for archaeological field evaluation* (IfA 2008), the *Management of Archaeological Projects* (English Heritage 1991) and the *Management of Research Projects in the Historic Environment (MORPHE): Project Manager's Guide* (EH 2006). It was monitored by Bill Horner, Deputy County Archaeologist for Devon, DCCHES, including site visits on 18, 23 and 25 January 2012.

The site

1.3 The site is located to the east of the M5 and is bounded to the north by the main Exeter St David's to London Waterloo Railway line and to the south by the A30. The current evaluation area (Fig. 2) covers an area of approximately 4ha and comprises

part of an arable field and part of an adjacent strip of allotments. The current evaluation area is bounded to the north by the Pinn Brook, to the south by Tithebarn Lane, to the west by Langaton Lane and to the east by further agricultural farmland.

1.4 The underlying geology of the area comprises sandstone formations locally overlain with Head deposits of clay, silt, sand and gravels and River Terrace deposits of sand with clay and gravels (CgMs 2011).

Archaeological background

1.5 The archaeological background to the Site is set out in detail within the DBA. Below is a summary of the archaeology relevant to the proposed area of trial trenching.

1.6 Cropmark evidence identifies a large curvilinear feature (DBA Feature 22) to the south of Pinn Brook. This appears to be the southern and south-eastern sides of a large sub-circular enclosure, possibly measuring 350m east to west. The western extent of the enclosure ditch intersects a large, 20m, ring ditch (DBA Feature 8) recorded from aerial photographs.

1.7 To the north, a further curvilinear feature (DBA Feature 14), visible from aerial photographs and geophysical survey, was identified to the south of the railway line. This may form the north eastern side of the large enclosure. Approximately central to the postulated enclosure a scatter of worked flints and a possible hone stone were retrieved from the field.

1.8 A geophysical survey (Stratascan 2011) extended over approximately 4 hectares and covered part of two fields to the south of Pinn Brook and a small area immediately north of the brook (Fig. 4). The results of the survey are set out in detail within the report, of which the following provides a summary (Fig. 4);

- The survey further confirmed the presence of the large enclosure curvilinear ditch previously identified from cropmark evidence. Within the survey area it measured 260m east to west and 120m north to south. Along the central and southern evidence for bank material either side of the ditch was recorded.

- Central to the main enclosure ditch a further curvilinear feature extended 120m to the north, approximately dividing the area in two. This is partially consistent with the cropmark evidence, however the survey results show that the feature abuts or adjoins the main enclosure ditch. The southern part of this feature would appear to partly comprise two parallel ditches with associated bank material, there are a number of breaks in the ditch line suggesting access into the enclosed area. The northern part of this feature appears as a single ditch with only limited adjoining bank material at the very northern end.

- There are two feint geophysical anomalies suggesting extensions to the curvilinear feature which sub-divides the enclosure. The northern of the two potentially forms a further triangular sub-division, whilst the southern extends the ditch to the south.

- At the northern end of the main enclosure ditch, adjacent to Pinn Brook, are a number of anomalies suggestive of an area of pitting, although there appears to be some associated bank material. There is a further area of possible pit like features to the south, although these anomalies are much less well defined.

- With the exception of a few, feint, sinuous linear anomalies, indicative of drainage run off, there is very little evidence of other activity within the majority of the enclosed areas.

- To the immediate southwest of the enclosure, within the southern part of the smaller field, a sub-circular anomaly, approximately 20m in diameter, was identified. Although this has initially been interpreted as the remains of a barrow ring ditch (there is a cropmark to the west of similar dimensions) some caution must be exercised in this interpretation, as this area was problematic to survey.

1.9 In conclusion the geophysical survey has broadly confirmed the cropmark evidence, adding some detail to its interpretation, particularly in the extent and formation of the ditches and the detail of the enclosure's sub-division. With the exception of some possible pits at the northern edge of the survey area, the survey has provided little firm evidence for anthropogenic activity within the majority of the enclosure.

Archaeological objectives

1.10 The results of the trial trenching will inform an appropriate mitigation strategy for this part of the site, either through preservation *in-situ* or through excavation and recording at an appropriate level. Any such works will be undertaken in accordance with a separate Written Scheme of Investigation submitted to, and approved in writing by, DCCHES on behalf of the LPA.

Methodology

1.11 The fieldwork comprised the excavation of 17 trenches (Fig. 2). Trenches 1-6, 8-12, 14, 15 and 17 measured 30m in length and 1.8m in width, Trenches 13 and 16 measured 15m in length and 1.8m in width. Trench 7 was subsequently extended by a further 15m to further investigate a possible pit alignment. Trenches were set out on OS National Grid (NGR) co-ordinates using a Leica 1200 series SmartRover GPS and surveyed in accordance with CA Technical Manual 4 *Survey Manual* (2009).

1.12 All trenches were excavated by mechanical excavator equipped with a toothless grading bucket. All machine excavation was undertaken under constant archaeological supervision to the top of the first significant archaeological horizon or the natural substrate, whichever was encountered first. Where archaeological deposits were encountered they were excavated by hand in accordance with CA Technical Manual 1: *Fieldwork Recording Manual* (2007).

1.13 Deposits were assessed for their palaeoenvironmental potential in accordance with CA Technical Manual 2: *The Taking and Processing of Environmental and Other Samples from Archaeological Sites* (2003) and, where appropriate, were sampled and processed. All artefacts recovered were processed in accordance with Technical Manual 3 *Treatment of Finds Immediately after Excavation* (2010).

1.14 The archive and artefacts from the evaluation are currently held by CA at their offices in Kemble. Subject to the agreement of the legal landowner the artefacts will be deposited with Royal Albert Memorial Museum, Exeter under Reference Number RAMM 11/73, along with the site archive. A summary of information from this project, set out within Appendix D, will be entered onto the OASIS online database of archaeological projects in Britain.

2. RESULTS (FIGS 2-13)

2.1 This section provides an overview of the evaluation results; detailed summaries of the recorded contexts, finds and environmental samples (palaeoenvironmental evidence) are to be found in Appendices A, B and C respectively.

2.2 All identified archaeological features cut the natural substrate, except where re-cutting of earlier features occurred, or where modern features cut through the overlying subsoil.

2.3 No archaeological features or deposits were identified in Trenches 9 or 13.

General Stratigraphy

2.4 The natural geological substrate predominantly comprised mid red-brown sand with frequent manganese inclusions and occasional patches of brown-red clay. Within Trenches 2, 3, 5 and 7-17 this was overlain by silty sand subsoil, ranging from *c*. 0.16m to *c.* 0.77m in thickness, which was in turn overlain by modern ploughsoil, typically 0.12m to 0.5m in thickness. In Trenches 1, 4 and 6 the natural substrate was overlain by a patchy silt clay deposit, most probably alluvial material associated with the adjacent Pinn Brook, ranging from *c.* 0.19m to 0.26m in thickness.

Trench 1 (Fig 2)

2.5 Small pit/ditch terminal 105 was identified towards the north-western end of the trench. It contained a single undated fill, seemingly formed by a process of natural silting. It correlates with part of a group of irregular pit-like anomalies depicted by the geophysical survey.

Trench 2 (Figs 2 & 3)

2.6 Wide, shallow ditch 210 was identified in the south-western half of the trench. It had moderately shallow sides, a concave base and contained a single undated fill. It coincided with a feint linear anomaly depicted by the geophysical survey, and is likely to represent a continuation of ditch 405 excavated in Trench 4 (see below).

2.7 Three small pits/postholes, 204, 206 and 208 were identified towards the centre of the trench. They were all of similar size, ranging from 0.58m-0.73m in diameter and 0.16m-0.19m in depth, and contained single undated fills. None of these features were identified by the geophysical survey

2.8 Pit 212 was partially exposed at the north-eastern end of the trench. It was moderately steep sided, had a flat base and contained three undated fills 211, 213 and 214. It corresponded closely with a pit-like anomaly identified by the geophysical survey.

Trench 3 (Figs 2 & 4)

2.9 Small pits/postholes 306 and 308 were identified towards the south-western end of the trench. Pit/posthole 306 contained a single sterile fill and was undated. A single broken flint flake was recovered from fill 307 within pit/posthole 308. To the north-east shallow, irregular pit 310 was partially exposed. It contained a single undated fill. None of these features were identified by the geophysical survey.

2.10 Ditch 311 was located towards the centre of the trench. It corresponds closely with a linear anomaly depicted by the geophysical survey and appeared to be a continuation of ditches 711, 1008 and 1503 identified in Trenches 7, 10 and 15 respectively. The ditch remained unexcavated.

2.11 North-west/south-east aligned ditch 304 was identified in the north-eastern quarter of the trench. It had relatively shallow sloping sides, an irregular base (suggestive of root disturbance) and contained a single fill, 303, from which a sherd of 16th to 18th-century pottery was recovered. The ditch corresponds closely with a feint linear anomaly depicted by the geophysical survey.

Trench 4 (Figs 2 & 5)

2.12 Wide, shallow ditch 405 was identified towards the north-eastern end of the trench. It was aligned north-west/south-east, had moderately shallow sides, a concave base and contained a single undated fill. Its location coincided with a feint linear anomaly depicted by the geophysical survey, and is likely to represent a continuation of ditch 210 excavated in Trench 2.

Trench 5 (Figs 2 & 6)

2.13 Small pits/postholes 506 and 508 were identified towards the western end of the trench. Both contained single undated fills that appear to represent episodes of natural silting. Neither feature was identified by the geophysical survey.

2.14 Sinuous ditch/gully 510 was identified towards the centre of the trench. It had a shallow, flat-based profile and contained a single undated fill, 509, which was similar to the overlying subsoil. It was not identified by the geophysical survey.

2.15 Further to the east, wide, deep ditch 511 was identified. It was aligned north-east/south-west and contained three undated fills 512, 517 and 518. It was steep sided and had a slightly irregular, almost flat base. Three fragments of calcined bone were recovered from the basal fill, 518, of this feature. The processing of environmental sample <9> taken from basal fill 518, identified charcoal derived from oak along with a small number of carbonised elder (*Sambucus nigra)* seeds and a single carbonised barely grain. The feature correlated closely with the large enclosure ditch identified by the preceding geophysical survey and appeared to be a continuation of ditches 804, 1010, 1509 and 1706 identified in Trenches 8, 10, 15 and 17 respectively.

2.16 Ditch 511 was cut by pit/posthole 513, which was in turn cut by pit/posthole 515. Both features contained single, sterile fills and remained undated. Neither feature was identified by the geophysical survey.

2.17 Narrow, north-west/south-east aligned ditch/gully 504 was located towards the eastern end of the trench. It had moderately sloping sides and a 'U'-shaped profile. It contained a single sandy fill from which no artefacts were recovered. The feature was not identified by the geophysical survey.

Trench 6 (Figs 2 & 7)

2.18 Narrow, north/south aligned ditch/gully 613 was located in the north-western quarter of the trench. It had shallow sides and a generally concave base. It contained a single sandy fill from which no artefacts were recovered. To the south-east probable irregular pit/posthole 611 was identified. It contained a single sterile fill and was undated.

2.19 In the south-eastern half of the trench, ditch 607 was identified. It was aligned north-east/south-west, contained a single undated fill and had a shallow 'U'-shaped profile. Small pit/posthole 605 was partially exposed towards the south-east of the trench. It contained a single undated fill.

2.20 None of the features identified in trench 6 were identified by the geophysical survey.

Trench 7 (Figs 2 & 8)

2.21 A group of four sub-circular pits, forming a potential north-west/south-east alignment, were identified towards the centre of the trench. Pits 703, 706 and 709 all had flat bases and were of similar size, ranging from 1.06m-1.31m in diameter and 0.13m-0.30m in depth. Pit 724 remained unexcavated. Five sherds of probable Middle Neolithic pottery were recovered from the single fill, 710, of pit 709. Ten sherds of probable Middle Neolithic pottery and a single broken flint flake were recovered from upper fill 705 within pit 703, with a single sherd of prehistoric pottery being recovered from its lower fill, 704. Fifteen sherds of probable Middle Neolithic pottery and three pieces of worked flint were recovered from the upper fill, 708, of pit 706. A single broken flint flake or blade was recovered from the lower fill, 707, of this feature. A hazelnut shell recovered from fill 710 within pit 709 was subsequently been $_{14}$C dated to 4500 $\pm$ 30 yr BP.

2.22 Broadly parallel, north-south orientated ditches 714 and 720 were located in the western half of the trench. Ditch 720 had a shallow irregular profile and exhibited evidence of root action to its sides and base. Two sherds of 19th-century pottery and two fragments of roofing slate were recovered from fill 721 within this feature. Ditch 714 remained undated. Both features correlated with linear anomalies identified by the geophysical survey and appear to represent continuations of ditches 304, 1004, 1505/1507 identified in Trenches 3, 10 and 15 respectively.

2.23 Ditches 714 and 720 also appear to correspond to a field boundary depicted on the Pinhoe tithe map of 1841. This boundary appears to have been removed within the current evaluation area shortly after the production of the tithe map as it was not depicted on the 1889 First Edition Ordnance Survey map. The boundary does however continue to survive as an extant 'Devon Bank' in a field immediately to the south of Tithebarn Lane and was noted during the evaluation.

2.24 To the south-east, north-south aligned ditch 711 was identified. It was partially excavated and was found to contain a single undated fill. It corresponds closely to a linear anomaly depicted by the geophysical survey and may represent a continuation of ditches 311, 1008 and 1503 seen in Trenches 3, 10 and 15 respectively.

2.25 Narrow ditch 722 was identified in the south-eastern quarter of the trench. It was aligned north-west/south-east and had steeply sloping sides and a 'V'-shaped

profile. Two fragments of worked flint were recovered from its single fill, 723. This feature is visible as a feint linear trend on the geophysical survey grey-scale plot (although it is not depicted on the interpretative plan) and may represent a further internal division of the large enclosure identified within trenches 5, 8, 10, 15, 11 and 17.

Trench 8 (Fig 2)

2.26 Wide ditch 804 was aligned north-east/south-west and represents a continuation of enclosure ditch 511, 1010, 1109, 1509 and 1706 seen in Trenches 10, 11, 15 and 17 respectively. It was not excavated within Trench 8 and no finds were recovered from the surface of this feature within this trench.

2.27 A further potential feature depicted by the geophysical survey and identified at the north-western end of the trench was investigated and proved to be a variation in the natural substrate.

Trench 10 (Figs 2 & 9)

2.28 Wide ditch 1010 was located towards the centre of the trench. It was aligned north-east/south-west and appeared to represents a continuation of enclosure ditch 511, 804, 1109, 1503 and 1706. It was not excavated within trench 10 and no finds were recovered from the surface of this feature within this trench.

2.29 Further west, north-south aligned ditch 1008 was identified. It was partially excavated and was found to contain a single undated fill. It corresponds closely to a linear anomaly depicted by the geophysical survey and may represent a continuation of ditches 311, 711 and 1503 seen in Trenches 3, 7 and 15 respectively.

2.30 Towards the western end of the trench, north-east/south-west aligned ditch 1004 and pit/ditch terminal 1006 were identified. Both features correlated with anomalies depicted by the geophysical survey. Ditch 1004 appears to be a continuation of ditch 714 and 1505 and/or ditch 1507 identified in Trenches 7 and 15 respectively.

Trench 11 (Figs 2 & 10)

2.31 The location of wide, deep ditch 1109 correlated with the enclosure ditch identified by the preceding geophysical survey and appears to be a continuation of ditches 511, 804, 1010, 1509 and 1706. It was only partially excavated due to its depth, but

was found to contain at least four fills; 1105, 1106, 1107 and 1108. A lump of probable slag was recovered from fill 1108. Processing of environmental sample, <8> recovered from fill 1107 within ditch 1109, identified moderately preserved charcoal, a small quantity of burnt stone and flint, as well as a large, well preserved plant macrofossil assemblage consisting of hazelnut shells, a possible sloe (*Prunus spinosa*) pip, a cherry (*Prunus* spp) pip fragment, cf blackthorn spine and cleavers, honeysuckle (*Lonicera* spp), elder, black-bindweed (*Fallopia convolvulus*), fumitory (*Fumaria* spp) spp, hemp-nettle (*Galeopsis* spp) and dock (*Rumex* spp) seeds. The sloe pip has subsequently been $_{14}$C dated to 1345 $\pm$ 30 yr BP.

2.32 Adjacent ditch 1113 was aligned broadly parallel to enclosure ditch 1109. It was wide and deep, had an irregular profile and contained three undated fills, 1110, 1111 and 1112. It was not identified by the geophysical survey.

2.33 Irregular pit 1104 was partially exposed at the southern end of the trench. It contained a single, undated fill and correlates closely to a weak pit-like anomaly identified by the geophysical survey.

Trench 12 (Fig 2)

2.34 Substantial feature 1204 was identified across the centre of the trench and may represent an infilled pond. It was not excavated due to the depth and instability of the trench and no finds were recovered from the surface of this feature. The extent of the feature correlates closely with an anomaly identified by the geophysical survey.

Trench 14 (Figs 2 & 11)

2.35 Narrow, north-east/south-west aligned ditch/gully 1404 was located towards the centre of the trench. It had moderately sloping sides and a generally concave base. It contained a single sandy clay fill 1403 from which no artefacts were recovered. To the south probable pit/posthole 1406 was identified. It contained a single sterile fill and remained undated. Neither feature was identified by the geophysical survey.

Trench 15 (Figs 2 & 12)

2.36 Broadly parallel, north/south aligned ditches 1505 and 1507 were located in the north-western third of the trench. Neither feature was identified by the geophysical survey. It is possible however, due to their alignment and overall characteristics, that

one or both of these ditches represent a continuation of a former post-medieval field boundary also identified in Trenches 3, 7 and 10 (ditches 305, 714/720 and 1004).

2.37 To the south-east, ditch terminal 1503 was identified. It appeared to be almost square-ended in plan, although it continued beyond the south-western edge of the trench. It was wide and deep and contained a single, undated fill 1504. An environmental sample from this material, <5>, contained burnt stone, flint, a single barley grain and a fragment of hazelnut shell. A quantity of well preserved charcoal consisting of oak and alder/hazel fragments was also recovered.

2.38 Wide ditch 1509 was aligned north-east/south-west and appears to represents a continuation of enclosure ditch 511, 804, 1010, 1109 and 1706 seen in Trenches 5, 8, 10, 11 and 17 respectively. It was not excavated within Trench 15 and no finds were recovered from the surface of this feature within this trench.

2.39 North-south aligned ditch 1511 was located towards the south-east end of the trench. It correlates closely with a weak linear anomaly depicted by the geophysical survey. It remained unexcavated and no finds were recovered from the surface of this feature.

Trench 17 (Figs 2 & 13)

2.40 Narrow, north-west/south-east aligned ditch 1706 was identified towards the centre of the trench. It had an irregular, flat-based profile and was filled by silty sand deposit 1705, which appeared to have formed as part of a process of natural silting. No finds were recovered from the fill of this feature. Ditch 1706 was not identified by the geophysical survey however; it is possible that it represents a continuation of the enclosure ditch seen in Trenches 5, 8, 10, 11 and 15 although if such an interpretation is correct, it is much narrower and shallower in nature.

2.41 Located towards the north-eastern end of the trench was wide, shallow ditch 1704. It had a shallow ‘U’-shaped profile and contained a single, undated fill. It was not identified by the preceding geophysical survey.

The Finds and Palaeoenvironmental Evidence

The Finds

2.42 Small quantities of pottery, worked flint and metallurgical residue were hand-recovered from seven separate deposits (appendix B). In addition, small quantities of pottery, worked flint, burnt stone and burnt bone were retrieved following processing of bulk soil samples. Of greatest significance is pottery of probable Middle Neolithic date recovered from the fills of small pits within trench 7.

Pottery

2.43 A total of 40 sherds of prehistoric pottery (305 g) was recovered from four deposits. The condition of this material is good, with little surface loss observed and the impressed decoration well defined. Sherds from fill 705 within pit 703 and some from fill 708 within pit 706 are however small, making certain attribution impossible. A number of sherds from pit fill 708 preserve internal carbonised residues.

2.44 The initial macroscopic examination of the prehistoric pottery has noted two distinct fabric types characterised by moderately coarse igneous and mudstone or similar inclusions (appendix B). A Middle Neolithic date, (*c*. 3500–2800 BC) is probable for all material, more certainly for the decorated vessels from deposits 704 (fill of pit 703) and 710 (fill of pit 709). The pottery is of some significance regionally, as one of very few Middle Neolithic groups recorded from Devon (Laidlaw and Mepham 1999, 44–45; Quinnell forthcoming). The rock-tempered fabrics may be comparable to those associated with Middle Neolithic impressed ware (Mortlake and possibly Fengate styles) known from Castle Hill, Devon (Laidlaw and Mepham 1999, 44–45). Fabrics analysis (petrography) would be required to establish source with certainty.

2.45 Pottery from pit fill 710 comprises sherds from two vessels in a similar fabric with coarse igneous rock inclusions. Both vessels exhibit the collared rims characteristic of the Fengate style of the Middle Neolithic impressed ware (Peterborough ware) tradition. One vessel from this deposit exhibits scored or impressed decoration to the outer part of its rim 'collar' and upper portion of its rim, arranged in a herringbone pattern. Decoration to the second vessel consists of two rows of whipped cord to the collar zone arranged as chevron, and at the junction of collar and body, a row of deep impressions made using a round-ended implement. The upper rim also features whipped cord impressions, arranged obliquely to the line of the circumference. Sherds from pit fill 704 occur in a similar rock-tempered fabric to that

from fill 710. All are bodysherds from a thick-walled (17mm) vessel of uncertain form. The decoration, which consists of rows of whipped cord 'maggots' arranged in a herringbone pattern, is characteristic of Middle Neolithic impressed wares, both the round-based Ebbsfleet/Mortlake bowls and the vase-like Fengate vessels.

2.46 The group from pit fill 708 is more difficult to characterise. All occur in a similar fabric, finer than that seen from deposits 710 and 704 and with probable mudstone inclusions. One sherd features indistinct rows of fingernail ornament and is probably of the Middle Neolithic impressed ware tradition.

2.47 Two sherds of post-medieval pottery were recorded from deposits 303 and 721 (appendix B). Included from ditch fill 721 is a sherd of Westerwald stoneware which dates to the late 17th or 18th centuries. This, however, occurred with a sherd of yellow ware of 19th century type and would appear to be re-deposited.

Worked flint

2.48 A total of 13 pieces of worked flint were hand-recovered, mostly from deposits containing Middle Neolithic pottery. An additional nine pieces, all small flakes or chips (<10mm), were retrieved from soil samples. All material occurs in good quality grey-coloured flint which is unpatinated. Absence of cortex makes determination of source difficult, though it is known that good quality chalk flint was exploited locally from Beer Head.

2.49 The microdebitage from pit fill 710, and the sharp condition of the worked flint overall, is consistent with a stratified group, with knapping taking place in the vicinity. The larger removals mainly comprise unretouched flakes or broken flakes/blades (appendix B). The flakes from pit fill 710 are large and sharp, with one piece exhibiting edge wear consistent with utilisation. Pieces with secondary working are restricted to a crude serrated flake from pit fill 708 and a flake with knife-like (semi-abrupt) retouch to one edge from (undated) deposit 723.

Other material (with comment on slag fragment by Dr T. Young)

2.50 A lump of slag-like material weighing 236 g was the only artefactual material to be recovered from ditch fill 1108. It is magnetic and this, together with its internal structure and presence of charcoal, suggests a smithing slag. Untypical aspects include some dense zones surrounding some of the voids, and this raises a slight doubt regarding the interpretation. Slag-like textures can be generated, if rarely,

through, other processes and the unintentional burning of iron ores, and further analysis would be required to rule this out.

2.51 Small quantities of burnt stone, all quartzite fragments, were recovered from soil samples 3, 5 and 8.

Palaeoenvironmental Evidence

2.52 Environmental samples (135 litres of soil) were retrieved from eight different deposits with the intention of recovering evidence of industrial or domestic activity and material for radiocarbon dating. The samples were processed by standard flotation procedures (CA Technical Manual No. 2).

2.53 Fill 518 was sampled from ditch 511 (SS 9) and contained small numbers of carbonised elder (*Sambucus nigra*) seeds and a single carbonised barley (*Hordeum vulgare*) grain. The charcoal recovered consisted of a small number of poorly preserved oak (*Quercus* spp) fragments. Larger quantities of soil would have to be recovered to ascertain whether the barley was being cultivated and processed in the area or whether this was a grain that had become accidentally burnt during food preparation.

2.54 Five samples were taken from fills 704 and 705 within pit 703 (SS 6, SS 1), fill 707 within pit 706 (SS 7) and fills 708 and 710 within pit 709 (SS 2, SS 3) all dating to the Neolithic. The fills from these pits all contained broadly similar plant macrofossil and charcoal assemblages consisting of moderate quantities of well preserved carbonised hazelnut, (*Corylus avellana*) shells, and carbonised cleavers (*Galium aparine*) seeds. The charcoal was present in small quantities, was moderately well preserved and, where identifiable, consisted of alder/hazel (*Alnus glutinosa*/*Corylus avellana*) and oak fragments. In addition pottery was recovered from fills 704 and 710 and flint and burnt stone from fill 710. This material is indicative of burnt domestic waste and indicates the gathering of hand collected foodstuffs.

2.55 Fill 1504 was recovered from enclosure ditch 1503 (SS 5) and contained burnt stone, flint and a single barley grain and a fragment of hazelnut shell. The moderately well preserved charcoal consisted of oak and alder/hazel fragments. As discussed above, since only a single barley grain was recovered, it is not possible to ascertain whether the material in this pit represents crop processing waste or an accidental loss during food preparation.

2.56 Fill 1107 was recovered from ditch 1109 (SS 8). It contained a small amount of burnt stone and flint and a large, well preserved plant macrofossil assemblage consisting of hazelnut shells, a possible sloe (*Prunus spinosa*) pip, a cherry (*Prunus* spp) pip fragment, cf blackthorn spine and cleavers, honeysuckle (*Lonicera* spp), elder, black-bindweed (*Fallopia convolvulus*), fumitory (*Fumaria* spp) spp, hemp-nettle (*Galeopsis* spp) and dock (*Rumex* spp) seeds. The charcoal from this deposit was abundant, moderately preserved and consisted of a large number of small 'twiggy' fragments. Unfortunately most charcoal was too small to identify, however where large enough moderately well preserved oak, elder and alder/hazel fragments were identified. The one notable species within the sample was elder, where in excess of 200 seeds were recorded. This together with elder charcoal and large number of twiggy fragments of charcoal indicates that branches of an elder tree, including the attached berries have been burnt. Elder is a hard wood and hence is a good fuel (Cutler and Gale 2000, 242), however the branches containing the berries are relatively narrow and if burnt with berries and possibly leaves, this would not provide the most efficient fuel. Taken together this material is indicative of domestic waste, although further sampling would be required to interpret the large elder seed assemblage and ascertain what activities were being carried out on site.

2.57 Any of the carbonised plant macrofossil material and charcoal (with the exception of oak) is suitable for radiocarbon dating.

Radiocarbon Dating

2.58 Two samples, one from fill 710 within pit 709 the other from fill 1107 within enclosure ditch 1109, were sent to Scottish Universities Environmental Research Centre for radiocarbon dating ($_{14}$C). The results are summarised in Table 1 below and presented in full within Appendix D.

Table 1: Radiocarbon dates

Feature	Context	Lab No.	Material	δ ^{13}C	Radiocarbon Age	95%	68%
Pit 709	710	SUERC-38330 GU26613	Hazelnut shell (*Corylus avellana*)	-29.0‰	4500 ± 30 yr BP	3348-3096 BC (95.4% of area)	3336-3309 BC (11.6% of area) plus 3301-3283 BC (7.3% of area) plus 3277-3265 BC (5.1% of area) plus 3240-3210 BC (13.3% of area) plus 3192-3152 BC (17.0% of area) plus 3138-3105 BC

							(13.8% of area)
Ditch 1109	1107	SUERC-38331 GU26614	cf Sloe pip (*Prunus spinosa*)	-25.7‰	1345 ± 30 yr BP	640-716 AD (85.4% of area) plus 744-769 AD (10.0% of area)	650-685 AD (68.2% of area)

3. DISCUSSION

3.1 The evaluation has identified numerous archaeological features throughout the proposed development area. Where linear archaeological features were encountered there was a good correlation with the results of the preceding geophysical survey.

3.2 Archaeological features encountered during the evaluation included ditches, pits and postholes. Although a number of the features remain undated, the remainder were generally dated to one of two broad periods; prehistoric and post-medieval/modern. This was achieved either by direct dating evidence, examination of feature form or by reference to cartographic sources. Each of these periods is dealt with in chronological order below.

Prehistoric

3.3 Evidence of probable prehistoric activity was identified in Trenches 3, 5, 7, 8, 10, 11, 15 and 17.

Neolithic

3.4 Evidence of Neolithic activity was limited to Trench 7 where quantities of probable Middle Neolithic pottery were recovered from the fills of pits 703, 706 and 709. Such an interpretation is further supported by the $_{14}$C date of 4500 ± 30 yr BP (3348-3096 BC at 95% probability) for a hazelnut shell recovered from fill 710 within pit 709 A further probable Neolithic pit, 724, was also identified in the trench but remained unexcavated. These features appeared to form a north-west/south-east alignment within the trench however; due to the limited nature of the current works, such an interpretation remains unproven.

3.5 The location of these features, seemingly within a possible sub-division of the large enclosure identified by the geophysical survey, is intriguing. However, any possible

relationship between these features and the enclosure itself remains unclear and, in all probability, coincident.

Late prehistoric and later

3.6 Within Trenches 5, 8, 10, 11, 15 and 17 substantial ditches 511, 804, 1010, 1109, 1509 and 1706 confirm the presence of the large enclosure previously identified by both cropmark evidence and geophysical survey. No closely dateable artefacts were recovered from the excavated fills of the enclosure ditch, although a lump of probable slag recovered from within ditch 1109 suggests a date for its construction from the later prehistoric period onwards.

3.7 The $_{14}$C dating recovered from the sloe pip retrieved from ditch fill 1107 is noteworthy. The charcoal rich deposit from which the sample was recovered sits high in the fill sequence of the enclosure ditch, and is certainly later than the probable slag recovered from 1108. The $_{14}$C date suggests that the ditch was, at least partially, open in the early to middle Anglo Saxon period. The possibility that the enclosure ditch is much earlier in origin but survived as a negative earthwork that remained visible in the landscape into the Saxon, and possibly later, period should not be overlooked. Indeed, the size and form of the enclosure is most suggestive of the later prehistoric period.

3.8 Undated ditches 311, 711, 1008 and 1504 (located in Trenches 3, 7, 10 and 15 respectively) appear to confirm the presence of an internal division within the main enclosure. No relationship between this ditch and the main enclosure could be determined; however it is possible that they are both broadly contemporary.

Post-medieval and modern

3.9 Post-medieval/modern features were identified in Trenches 3 and 7 where quantities of post-medieval pottery/modern pottery were recovered from the fills of ditches 304 and 720. These ditches correspond to a field boundary depicted by the Pinhoe tithe map of 1841 and are closely aligned with an extant 'Devon Bank' observed to the south of the current evaluation area. Undated ditches 304, 1004, 1505/1507 identified in Trenches 3, 10 and 15 respectively also appear to form part of this field boundary.

Undated

3.10 Undated features comprising pits/postholes, seemingly indicative of settlement, were identified in Trenches 2, 3, 5, 6, 11 and 14 and may be associated with the prehistoric enclosure. The exact function of the remaining undated ditches identified in Trenches 2, 4, 6, 11, 14 and 17 remains unclear, although they are likely to relate to land management and/or division.

4. CA PROJECT TEAM

Fieldwork was undertaken by Steven Sheldon, assisted by Hazel O'Neill, Jon Pick, Christopher Watts and Diarmuid O'Seaneachain. The report was written by Steven Sheldon. The illustrations were prepared by Peter Moore. The archive has been compiled by Steven Sheldon, and prepared for deposition by James Johnson. The project was managed for CA by Cliff Bateman.

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APPENDIX A: CONTEXT DESCRIPTIONS

Trench 1

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
100	Layer	Topsoil			0.25	
101	Layer	Subsoil			0.77	
102	Layer	Patchy red grey silt clay deposit, probably representing alluvial material			0.19	
103	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.2	
104	Fill	Single fill of 105	>0.97	0.54	0.39	
105	Cut	Pit/ditch terminal	>0.97	0.54	0.39	

Trench 2

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
200	Layer	Topsoil			0.2	
201	Layer	Subsoil			0.26	
202	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.06	
203	Fill	Single fill of 204		>0.73	0.19	
204	Cut	Pit/posthole		>0.73	0.19	
205	Fill	Single fill of 208		>0.58	0.16	
206	Cut	Pit/posthole		>0.58	0.16	
207	Fill	Single fill of 208		0.73	0.19	
208	Cut	Pit/posthole		0.73	0.19	
209	Fill	Single fill of 210	>1.8	3.66	0.41	
210	Cut	SE/NW ditch	>1.8	3.66	0.41	
211	Fill	1st fill of 212	>1.8	>1.56	0.14	
212	Cut	Pit	>1.8	>1.56	0.58	
213	Fill	2nd fill of 212	>1.8	>1.56	0.08	
214	Fill	3rd fill of 2012	>1.8	>1.56	0.37	

Trench 3

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
300	Layer	Topsoil			0.22	
301	Layer	Subsoil			0.23	
302	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.1	
303	Fill	Single fill of 304	>1.8	2.43	0.45	C16-C18
304	Cut	SW/NE ditch	>1.8	2.43	0.45	
305	Fill	Single fill of 306		0.32	0.08	
306	Cut	Pit/posthole		0.32	0.08	
307	Fill	Single fill of 308		0.43	0.06	
308	Cut	Pit/posthole		0.43	0.06	
309	Fill	Single fill of 310		1.33	0.21	
310	Cut	Irregular pit		1.33	0.21	
311	Fill	Single fill of 312	>1.8	3.27	N/A	
312	Cut	NW/SE ditch	>1.8	3.27	N/A	

Trench 4

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
400	Layer	Topsoil			0.53	
401	Layer	Subsoil			0.57	
402	Layer	Patchy red grey silt clay deposit, probably representing alluvial material			0.06	
403	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.01	
404	Fill	Single fill of 405	1.8	2.59	0.22	
405	Cut	NW/SE ditch	1.8	2.59	0.22	

Trench 5

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
500	Layer	Topsoil			0.2	
501	Layer	Subsoil			0.26	
502	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.06	
503	Fill	Single fill of 504	>1.8	0.66	0.3	
504	Cut	SE/NW ditch/gully	>1.8	0.66	0.3	
505	Fill	Single fill of 506		0.71	0.34	
506	Cut	Small pit/posthole		0.71	0.34	
507	Fill	Single fill of 508		0.61	0.12	
508	Cut	Small pit/posthole		0.61	0.12	
509	Fill	Single fill of 510	>2	0.68	0.11	
510	Cut	Irregular, curving ditch/gully	>2	0.68	0.11	
511	Cut	NE/SW enclosure ditch	>1.8	4.7	2	
512	Fill	3rd fill of 511	>1.8	4.7	0.8	
513	Cut	Pit/posthole		0.8	0.48	
514	Fill	Single fill of 513		0.8	0.48	
515	Cut	Pit/posthole		0.85	0.4	
516	Fill	Single fill of 515		0.85	0.4	
517	Fill	2nd fill of 511	>1.8	3.7	0.92	
518	Fill	1st fill of 511	>1.8	1.8	0.3	

Trench 6

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
600	Layer	Topsoil			0.26	
601	Layer	Subsoil			0.4	
602	Layer	Patchy red grey silt clay deposit, probably representing alluvial material			0.19	
603	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.01	
604	Fill	Single fill of 605	1.57	0.72	0.33	
605	Cut	Pit/posthole	1.57	0.72	0.33	
606	Fill	Single fill of 607	>1.8	1.24	0.19	
607	Cut	NW/SE ditch	>1.8	1.24	0.19	
608	Fill	Single fill of 609		0.22	0.15	
609	Cut	Animal burrow		0.22	0.15	
610	Fill	Single fill of 611	0.34	0.3	0.05	
611	Cut	Pit/posthole	0.34	0.3	0.05	
612	Fill	Single fill of 613	>1.8	0.45	0.06	
613	Cut	Irregular N-S ditch/gully	>1.8	0.45	0.06	

Trench 7

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
700	Layer	Topsoil			0.3	
701	Layer	Subsoil			0.58	
702	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.05	
703	Cut	Sub-circular pit		1.06	0.3	
704	Fill	1st fill of 703		1.06	0.3	Middle Neolithic
705	Fill	2nd fill of 703		0.43	0.3	Middle Neolithic?
706	Cut	Sub-circular pit		1.31	0.3	
707	Fill	1st fill of 706		1.31	0.3	
708	Fill	2nd fill of 706		0.9	0.22	Middle Neolithic?
709	Cut	Sub-circular pit		1.15	0.13	
710	Fill	Single fill of 709		1.15	0.13	Middle Neolithic
711	Cut	N-S enclosure ditch	>1.8	3.95	>0.66	
712	Fill	Lower fill of 711	>1.8	>1.88	>0.58	
713	Fill	Upper fill of 711	>1.8	3.95	0.18	
714	Cut	NW/SE ditch	>1.8	2.7	>0.77	
715	Fill	1st fill of 714	>1.8	1.07	>0.29	
716	Fill	2nd fill of 714	>1.8	1.42	0.45	
717	Fill	3rd fill of 714	>1.8	2.7	0.32	
718	Cut	NW/SE field drain	>1.8	0.3	>0.43	
719	Fill	Single fill of 718	>1.8	0.3	>0.43	
720	Cut	N-S ditch	>1.8	3.09	0.39	
721	Fill	Single fill of 720	>1.8	3.09	0.39	C19
722	Cut	NW/SE ditch	>2.55	1.04	0.58	
723	Fill	Single fill of 722	>2.55	1.04	0.58	
724	Cut	Sub-circular pit	1.29	1.27	N/A	
725	Fill	Single fill of 724	1.29	1.27	N/A	

Trench 8

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
800	Layer	Topsoil			0.26	
801	Layer	Subsoil			0.2	
802	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay. Changes to mottled orange and yellow sand at NW end of the trench			>0.08	
803	Fill	Single fill of 804	>1.8	4.9		
804	Cut	NE/SW enclosure ditch	>1.8	4.9		

Trench 9

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
900	Layer	Topsoil			0.26	
901	Layer	Subsoil			0.53	
902	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.06	

Trench 10

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1000	Layer	Topsoil			0.12	
1001	Layer	Subsoil			0.18	
1002	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.05	
1003	Fill	Single fill of 1004	>1.8	2.08	0.6	
1004	Cut	NE/SW ditch	>1.8	2.08	0.6	
1005	Fill	Single fill of pit 1006		1.02	0.4	
1006	Cut	Sub-circular pit		1.02	0.4	
1007	Fill	Single fill of ditch 1008	>1.8	3.83	>0.66	
1008	Cut	NE/SW enclosure ditch	>1.8	3.83	>0.66	
1009	Fill	Single fill of 1010	>1.8	9.26		
1010	Cut	NE/SW enclosure ditch	>1.8	9.26		

Trench 11

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1100	Layer	Topsoil			0.2	
1101	Layer	Subsoil			0.21	
1102	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.07	
1103	Fill	Single fill of 1104	>1.8	>1.17	0.4	
1104	Cut	Sub-circular pit	>1.8	>1.17	0.4	
1105	Fill	4th fill of 1109	>1.8	3.6	0.86	
1106	Fill	3rd fill of 1109	>1.8	>1.54	0.26	
1107	Fill	2nd fill of 1109	>1.8	>1.16	0.06	
1108	Fill	1st fill of 1109	>1.8	>1.1	>0.28	
1109	Cut	NE/SW enclosure ditch	>1.8	3.6	1.91	
1110	Fill	3rd fill of 1113	>1.8	2.6	0.46	
1111	Fill	2nd fill of 1113	>1.8	2.7	0.3	
1112	Fill	1st fill of 1113	>1.8	2.54	0.1	
1113	Cut	NNW/SSE ditch	>1.8	3.7	0.84	

Trench 12

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1200	Layer	Topsoil			0.5	
1201	Layer	Subsoil			0.55	
1203	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.1	
1203	Fill	Single fill of 1204	>1.8	21	>0.3	
1204	Cut	Infilled pond	>1.8	21	>0.3	

Trench 13

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1300	Layer	Topsoil			0.27	
1301	Layer	Subsoil			0.29	
1302	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.09	

Trench 14

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1400	Layer	Topsoil			0.22	
1401	Layer	Subsoil			0.29	
1402	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.1	
1403	Fill	Single fill of 1404	>1.8	0.81	0.26	
1404	Cut	NW/SE ditch	>1.8	0.81	0.26	
1405	Fill	Single fill of 1406	0.45	0.31	0.17	
1406	Cut	Sub-circular pit	0.45	0.31	0.17	

Trench 15

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1500	Layer	Topsoil			0.14	
1501	Layer	Subsoil			0.16	
1502	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.09	
1503	Cut	NE/SW enclosure ditch terminus	1.55	1.25	0.82	
1504	Fill	Single fill of 1503	1.55	1.25	0.82	
1505	Cut	NE/SW ditch	>1.8	2.33	0.67	
1506	Fill	Single fill of 1505	>1.8	2.33	0.67	
1507	Cut	NE/SW ditch	>1.8	1.8		
1508	Fill	Single visible fill of 1507	>1.8	1.8		
1509	Cut	NE/SW enclosure ditch	>1.8	5.4		
1510	Fill	Single visible fill of 1509	>1.8	5.4		
1511	Cut	NW/SE enclosure ditch	>1.8	5.12		
1512	Fill	Single visible fill of 1511	>1.8	5.12		

Trench 16

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1600	Layer	Topsoil			0.3	
1601	Layer	Subsoil			0.28	
1602	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.04	

Trench 17

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1700	Layer	Topsoil			0.23	
1701	Layer	Subsoil			0.61	
1702	Layer	Natural substrate: mid red-brown sand with frequent manganese inclusions and rare patches of brown red clay			>0.1	
1703	Fill	Single fill of 1704	>1.8	2.75	0.22	
1704	Cut	N/S ditch	>1.8	2.75	0.22	
1705	Fill	Single fill of 1706	>1.8	1.75	0.28	
1706	Cut	N/S ditch	>1.8	1.75	0.28	
1707	Fill	Single fill of 1708	>1.8	1.3	>0.5	
1708	Cut	Possible water channel	>1.8	1.3	>0.5	

APPENDIX B: THE FINDS

Context	Description	Count	Weight(g)	Spot-date
303	Post-medieval pottery: internally-glazed earthenware	1	15	C16-C18
307	Worked flint: broken flake	1	8	-
518	Bone: calcined	3	<1	-
704	Prehistoric pottery: igneous rock inclusions; whipped cord impressed Worked flint: broken blade, flake	10 2	110 5	Middle Neolithic
704 <6>	Prehistoric pottery: flake with whipped cord impressed decoration	1	1	-
705	Prehistoric pottery: igneous rock inclusions (crumbs) Worked flint: broken flake	10 1	9 2	Middle Neolithic?
707	Worked flint: broken flake or blade	1	1	-
708	Prehistoric pottery: mudstone-inclusions; 1 x fingernail impressed Worked flint: serrated flake; broken flakes	15 3	112 29	Middle Neolithic?
710	Prehistoric pottery: igneous rock inclusions; 2 x whipped cord impressed; 1 x other impressed. Fengate style Worked flint: flakes	5 4	74 94	Middle Neolithic
710 <3>	Prehistoric pottery: igneous rock inclusions, indistinct impressed decoration Worked flint: chips/microdebitage Burnt stone: quartzite	4 6 1	14 1 23	-
721	Post-medieval/modern pottery: yellow ware; Westerwald Roofing slate	2 2	8 24	C19
723	Worked flint: re-touched flake; broken flake	2	8	-
1107 <8>	Worked flint: broken flake, chip Burnt stone: quartzite	2 1	1 22	-
1108	Metallurgical residue: indeterminate ironworking slag	1	236	-
1504 <5>	Worked flint: chip Burnt stone: quartzite Bone: calcined	1 1 1	<1 35 <1	-

APPENDIX C: THE PALAEOENVIRONMENTAL EVIDENCE

Sample No	Context No	Volume (L)	Percentage of sample processed	Flots	Flot Weight (g)	Material	Weight (g)	Identification (where applicable)
1	705	10L	100%	1mm and 0.25mm	51.5	Charcoal	1 plus flot	Alder/hazel (2) Oak (8)
						Plant macrofossils	<1 plus flot	Cleavers + Hazelnut shells ++++
2	708	20L	66%	1mm and 0.25mm	82.5	Charcoal	3 plus flot	Oak (2)
						Plant macrofossils	5 plus in flot	Cleavers + Hazelnut shells ++++
3	710	20L	50%	1mm and 0.25mm	217.5	Burnt stone	23	
						Flint	1	
						Pottery	14	
						Charcoal	3 plus flot	Too small to identify
						Plant macrofossils	2 plus flot	Hazelnut ++++
5	1504	20L	66%	1mm and 0.25mm	98.5	Burnt stone	35	
						Charcoal	2 plus flot	Alder/hazel (1) Oak (9)
						Flint	<1	
						Large mammal bone	<1	
						Plant macrofossils	<1 plus flot	Barley + Hazelnut +
6	704	5L	100%	1mm and 0.25mm	2.5	Charcoal	1 plus flot	Alder/hazel (1)
						Plant macrofossils	<1 plus flot	Hazelnut + Cleavers +
						Pottery	1	
7	707	20L	50%	1mm and 0.25mm	22.5	Charcoal	1 plus flot	Oak (10)
						Plant macrofossils	4 plus flot	Cleavers + Hazelnut ++++
8	1107	20L	100%	1mm and 0.25mm	33.5	Burnt stone	22	
						Charcoal	2 plus flot	Alder/hazel (3) Elder (2) Oak (5) Frequent small twiggy fragments
						Flint	1	
						Plant macrofossils	<1 plus flot	Black-bindweed + Blackthorn/gorse spine + cf blackthorn/sloe pip + cf cherry spp pip + Cleavers + Dock spp + Elder ++++ Fumitory spp + Hazelnut + Hemp-nettle + cf honeysuckle +
9	518	20L	100%	1mm and 0.25mm	13	Charcoal	<1 plus flot	Oak (5)

						Plant macrofossils	<1 plus flot	Cleavers + Hazelnut +

Key:
+ 1-5 items; ++ 6-20 items; +++ 21-40 items; ++++ >40 items
(3) – number of identified fragments of charcoal

Species List

Family	**Species**	**Common Name**
Adoxaceae	*Sambucus nigra*	Elder
Betulaceae	*Alnus glutinosa*/*Corylus avellana*	Alder/hazel
	Corylus avellana	Hazel
Caprifoliaceae	*cf Lonicera* spp	cf Honeysuckle
Fagaceae	*Quercus robur/ petraea*	Sessile/pedunculate oak
Lamiaceae	*Galeopsis* spp	Hemp-nettle spp
Papaveraceae	*Fumaria* spp	Fumitory spp
Poaceae	*Hordeum vulgare*	Barley
Polygonaceae	*Fallopia convolvulus*	Black-bindweed
	Rumex spp	Dock spp
Rubiaceae	*Galium aparine*	Cleavers
Rosaceae	*cf Prunus* spp	cf Cherry spp

APPENDIX E: RADIOCARBON DATING

Scottish Universities Environmental Research Centre
Director: Professor A B MacKenzie Director of Research: Professor R M Ellam
Rankine Avenue, Scottish Enterprise Technology Park,
East Kilbride, Glasgow G75 0QF, Scotland, UK
Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

23 February 2012

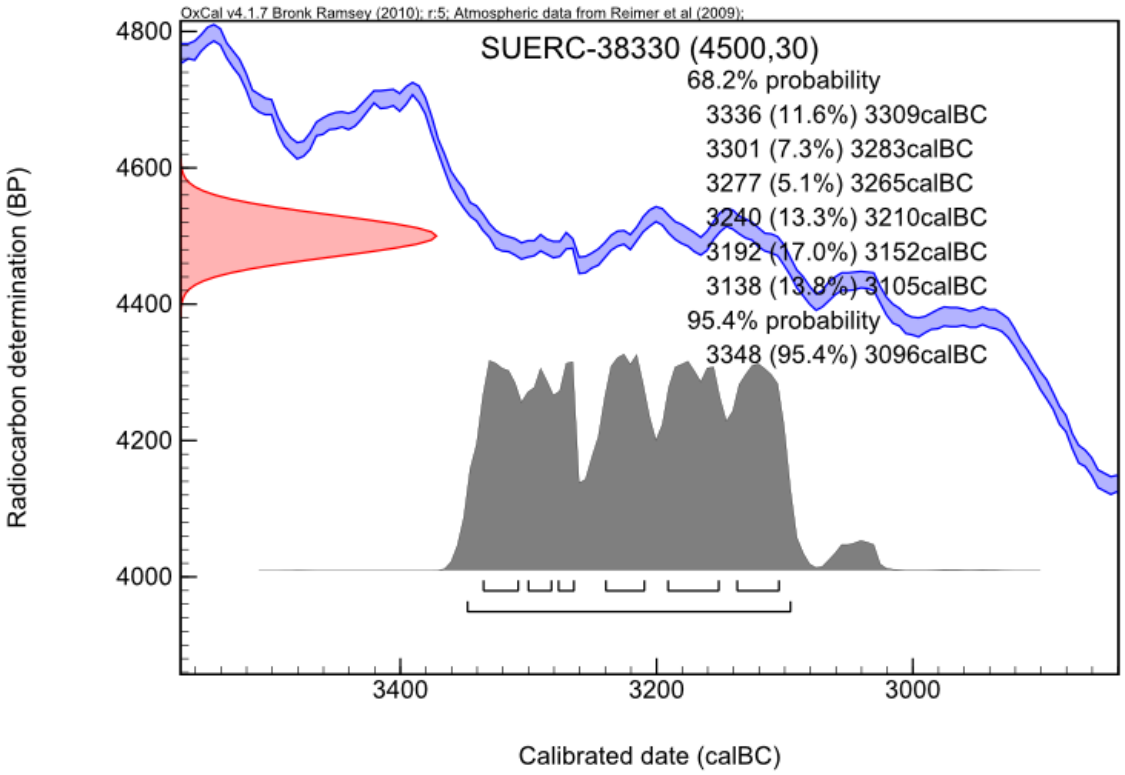
Laboratory Code	SUERC-38330 (GU26613)
Submitter	Sarah Cobain Cotswold Archaeology Building 11 Kemble Enterprise Park Cirencester GL7 6BL
Site Reference	Redhayes, Devon
Sample Reference	RHY127103
Material	Plant Macrofossil : hazelnut shell
$\delta^{13}C$ relative to VPDB	-29.0 ‰
Radiocarbon Age BP	4500 ± 30

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 standards, background standards and the random machine error.

The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the IntCal09 curve while marine samples are calibrated using the Marine09 curve.

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 g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Calibration Plot



Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Scottish Universities Environmental Research Centre
Director: Professor A B MacKenzie Director of Research: Professor R M Ellam
Rankine Avenue, Scottish Enterprise Technology Park,
East Kilbride, Glasgow G75 0QF, Scotland, UK
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RADIOCARBON DATING CERTIFICATE

23 February 2012

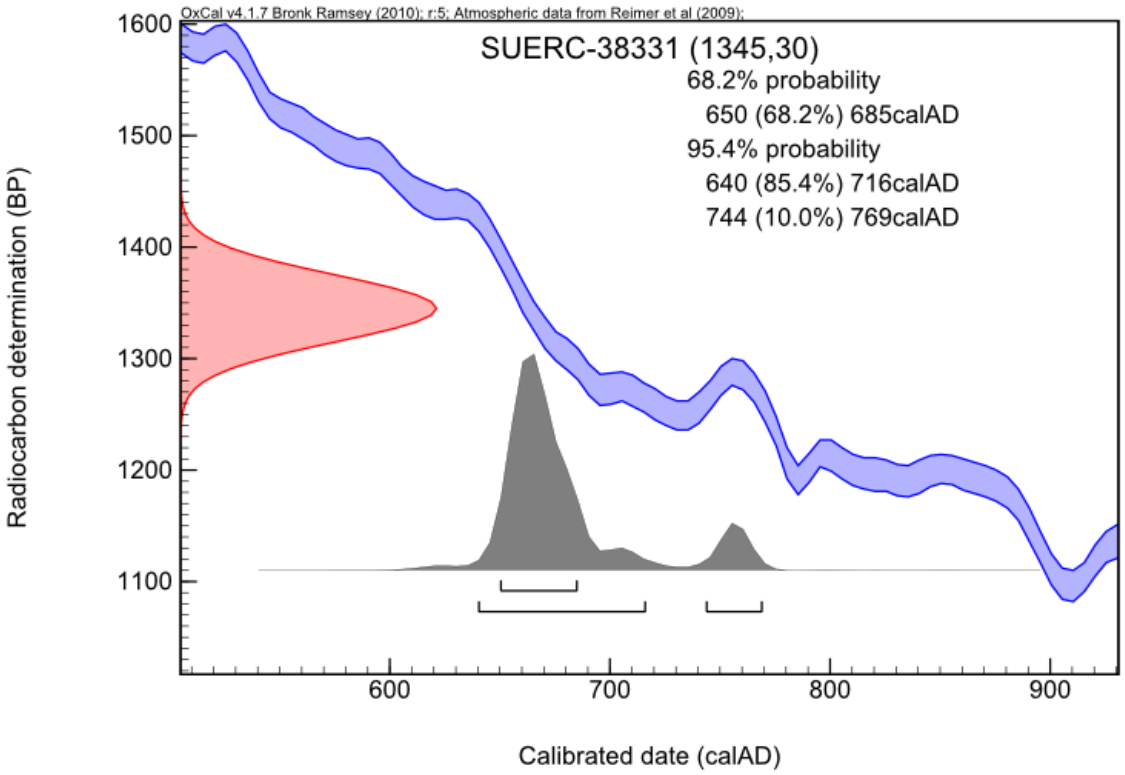
Laboratory Code	SUERC-38331 (GU26614)
Submitter	Sarah Cobain Cotswold Archaeology Building 11 Kemble Enterprise Park Cirencester GL7 6BL
Site Reference	Redhayes, Devon
Sample Reference	RHY1211078
Material	Plant Macrofossil : cf Prunus spinosa (sloe pip)
$\delta^{13}C$ relative to VPDB	-25.7 ‰
Radiocarbon Age BP	1345 ± 30

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 standards, background standards and the random machine error.

The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the IntCal09 curve while marine samples are calibrated using the Marine09 curve.

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 g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Calibration Plot



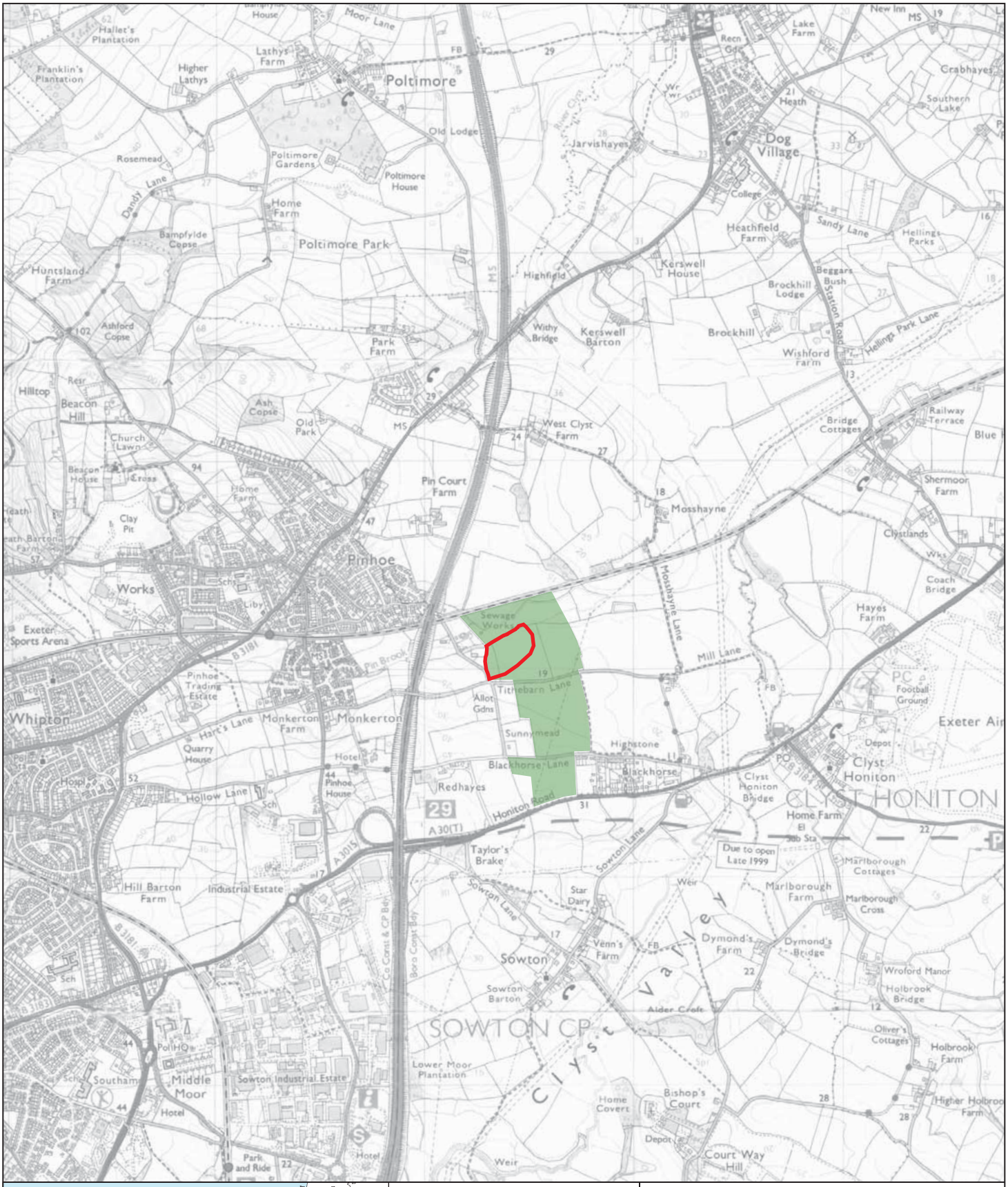
Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

APPENDIX E: OASIS REPORT FORM

PROJECT DETAILS		
Project Name	Land at Tithebarn Green (Redhayes) Near Exeter, Devon	
Short description	An archaeological evaluation was undertaken by Cotswold Archaeology in January 2012 on Land at Tithebarn Green (Redhayes), near Exeter, Devon. Seventeen trenches were excavated. The evaluation identified a number of archaeological features throughout the proposed development area which generally correlated well with the results of a preceding geophysical survey. Archaeological features encountered comprised ditches, pits and postholes, generally dated to one of two broad periods; prehistoric and post-medieval/modern. Evidence of Neolithic activity was identified in Trench 7 where four pits, seemingly forming a north-west/south-east alignment, were found to contain pottery of probable Middle Neolithic date. A $_{14}$C date recovered from one of the pits compliments such an interpretation. Substantial ditches identified in Trenches 5, 8, 10, 11, 15 and 17 confirm the presence a large enclosure identified by both cropmark evidence and the earlier geophysical survey. Further ditches located in Trenches 3, 7, 10 and 15 attest to the presence of a probable internal division within this enclosure. Although no closely dateable material was recovered from these features, a possible later prehistoric/Iron Age date is postulated for their construction. A $_{14}$C date recovered from the ditch suggests that it remained partially open and visible as an earthwork into the Saxon period. Further undated, but possibly prehistoric, features comprising pits/postholes were identified in Trenches 2, 3, 5, 6, 11 and 14. Probable post-medieval/modern field boundaries were identified in Trenches 3, 7, 10 and 15. The exact function of the undated ditches identified in Trenches 2, 4, 6, 11, 14 and 17 remains unclear, although they are likely to relate to land management and/or division.	
Project dates	16-25 January 2012	
Project type	Field Evaluation	
Previous work	DBA (EA 2011) Geophysical Survey (Stratascan 2011)	
Future work	Unknown	
PROJECT LOCATION		
Site Location	Land at Redhayes, Near Exeter, Devon	
Study area (M^2/ha)	4ha	
Site co-ordinates (8 Fig Grid Reference)	SX 975 939	
PROJECT CREATORS		
Name of organisation	Cotswold Archaeology	
Project Design (WSI) originator	CgMs Consulting	
Project Manager	Cliff Bateman	
Project Supervisor	Steven Sheldon	
MONUMENT TYPE	Enclosure	
SIGNIFICANT FINDS	Neolithic Pottery	
PROJECT ARCHIVES	Intended final location of archive (museum/Accession no.)	Content
Physical	Royal Albert Museum, Exeter RAMM 11/73	Pottery, flint, charcoal, slag

Paper	Royal Albert Museum, Exeter RAMM 11/73	WSI, pro forma registers, recording forms, section drawings and photographs
Digital	Royal Albert Museum, Exeter RAMM 11/73	Digital photographs
BIBLIOGRAPHY		
CA (Cotswold Archaeology) 2012 *Land Tithebarn Green (Redhayes), Near Exeter, Devon: Archaeological Evaluation.* CA typescript report **12012**		



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e enquiries@cotswoldarchaeology.co.uk

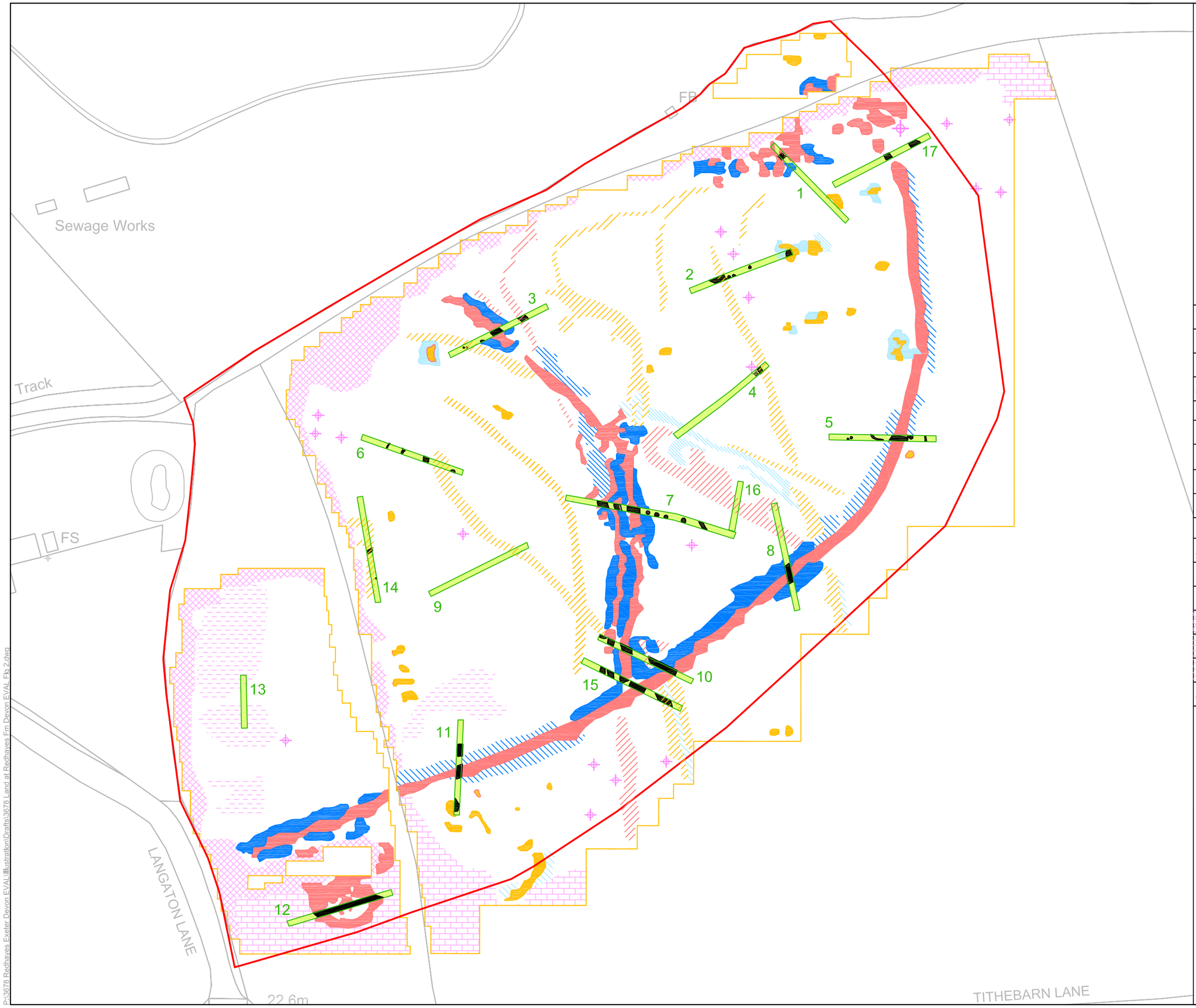
PROJECT TITLE

Tithebarn Green (Redhayes), near Exeter Devon

FIGURE TITLE

Site location plan

PROJECT NO.	**3678**	*DATE*	**7-2-2012**	*FIGURE NO.*
DRAWN BY	**PJM**	*REVISION*	**00**	**1**
APPROVED BY	**PJM**	*SCALE@A4*	**1:25,000**	



N

site

evaluation trench

archaeological feature

GEOPHYSICAL SURVEY RESULTS

	Positive anomaly / weak positive anomaly - probable cut feature of archaeological origin
	Negative anomaly / weak negative anomaly - probable bank or earthwork of archaeological origin
	Moderate strength discrete anomaly - probable thermoremanent feature
	Widely spaced curving parallel linear anomalies - probably related to ridge-and-furrow

POSSIBLE ARCHAEOLOGY

	Positive anomaly / weak positive anomaly - possible cut feature of archaeological origin
	Negative anomaly / weak negative anomaly - possible bank or earthwork of archaeological origin
	Moderate strength discrete anomaly - possible thermoremanent feature
	Magnetic spike - probable ferrous object

OTHER ANOMALIES

	Closely spaced parallel linear anomalies - probably related to agricultural activity such as ploughing
	Linear anomaly - probably related to pipe, cable or other modern service
	Linear anomaly - possibly related to land drain
	Magnetic disturbance associated with nearby metal object such as service or field boundary
	Strong magnetic debris - possible disturbed or made ground
	Magnetic variation of an unknown origin
	Area of amorphous magnetic variation - probable natural (e.g. geological or pedological) origin

0 50m

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PROJECT TITLE

Tithebarn Green (Redhayes), near Exeter Devon

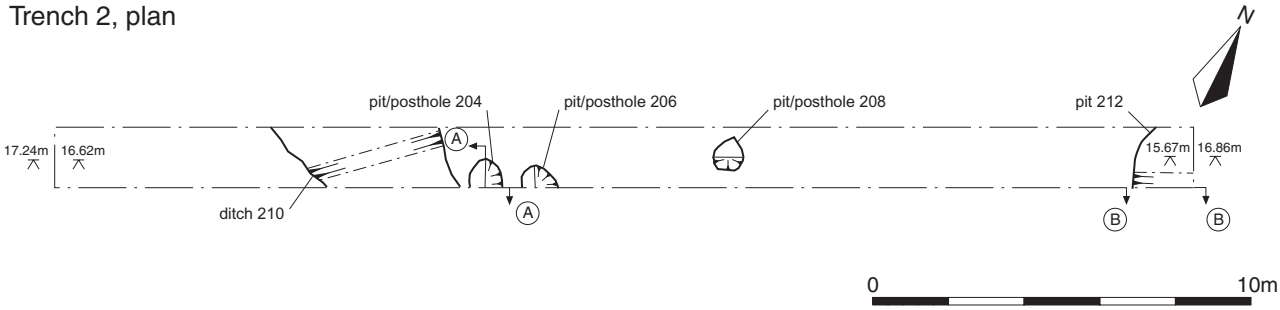
FIGURE TITLE

The site, showing archaeological features and geophysical survey

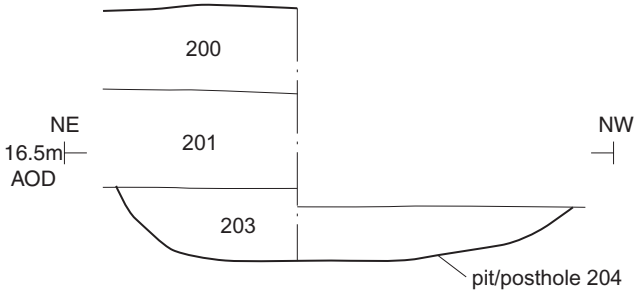
PROJECT NO.	**3678**	*DATE*	**7-2-2012**	*FIGURE NO.*
DRAWN BY	**PJM**	*REVISION*	**00**	**2**
APPROVED BY	**PJM**	*SCALE@A3*	**1:1000**	

P:\3678 Redhayes Exeter Devon EVAL\Illustration\Drafts\3678 Land at Redhayes Fm Devon EVAL Fig 2.dwg

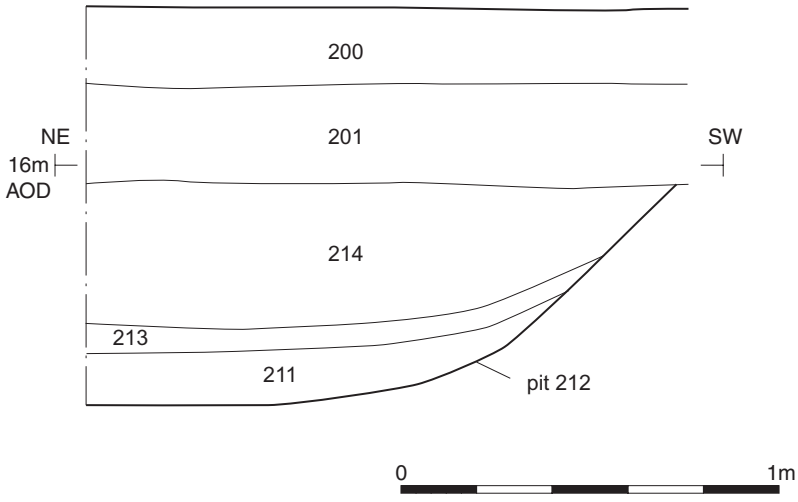
Trench 2, plan



Trench 2, section AA



Trench 2, section BB



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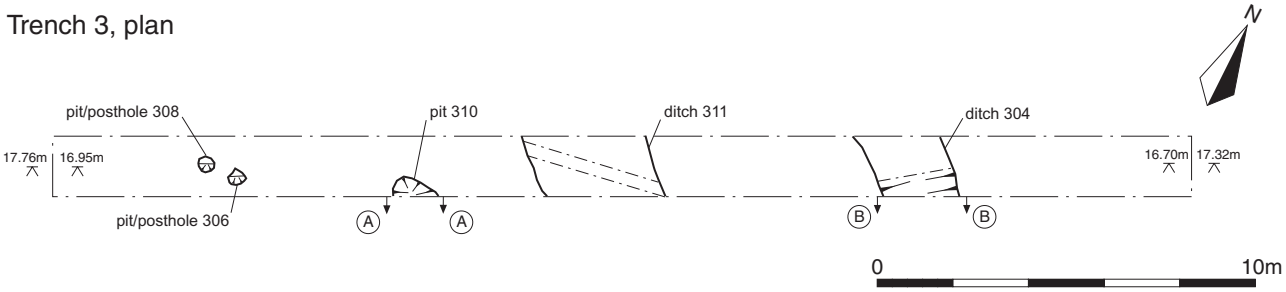
PROJECT TITLE
Tithebarn Green (Redhayes), near Exeter
Devon

FIGURE TITLE
Trench 2: plan and sections

				FIGURE NO.
PROJECT NO.	3678	DATE	7-02-2012	
DRAWN BY	PJM	REVISION	00	
APPROVED BY	PJM	SCALE@A4	1:200 & 1:20	3

Trench 3, plan



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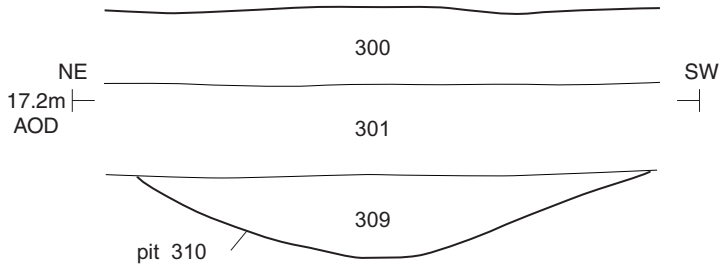
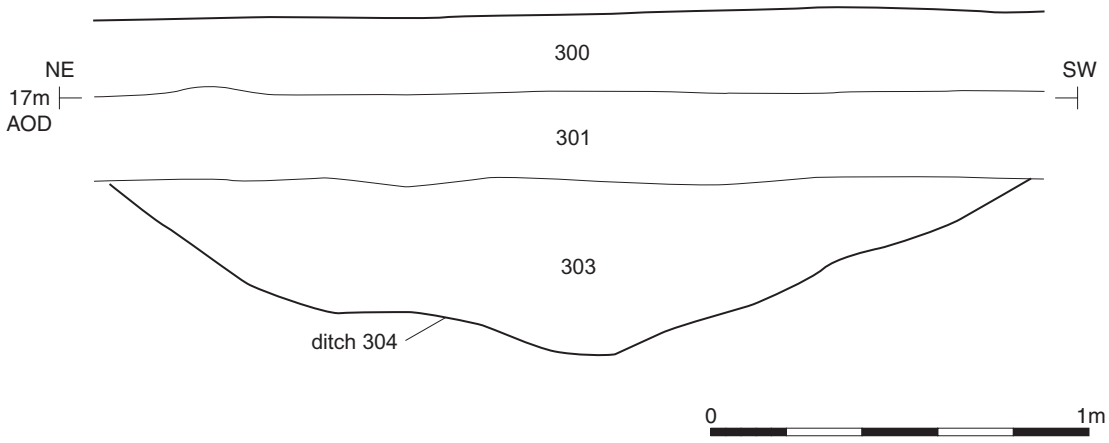


Trench 3, section BB



Ditch 304, looking east (scale 1m)

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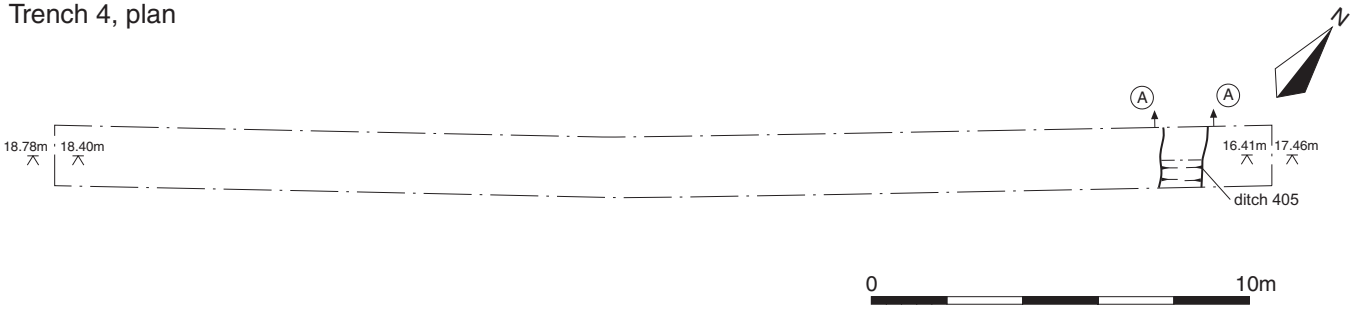
PROJECT TITLE
Tithebarn Green (Redhayes), near Exeter
Devon

FIGURE TITLE
Trench 3: plan, sections and photograph

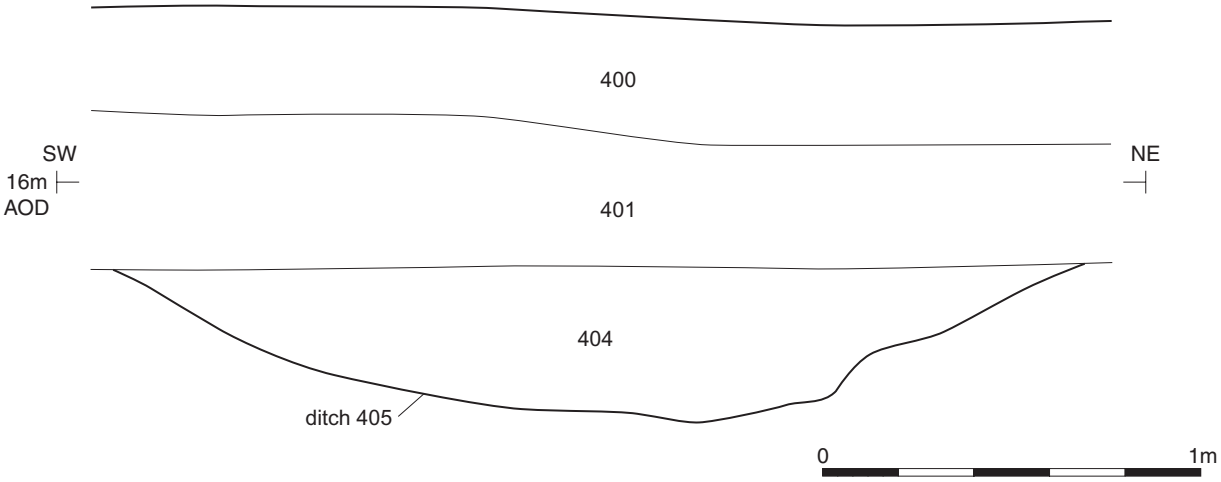
PROJECT NO.	3678	DATE	7-2-2012
DRAWN BY	PJM	REVISION	00
APPROVED BY	PJM	SCALE@A4	1:200 & 1:20

FIGURE NO.
4

Trench 4, plan



Trench 4, section AA



Ditch 405, looking north-west (scale 1m)

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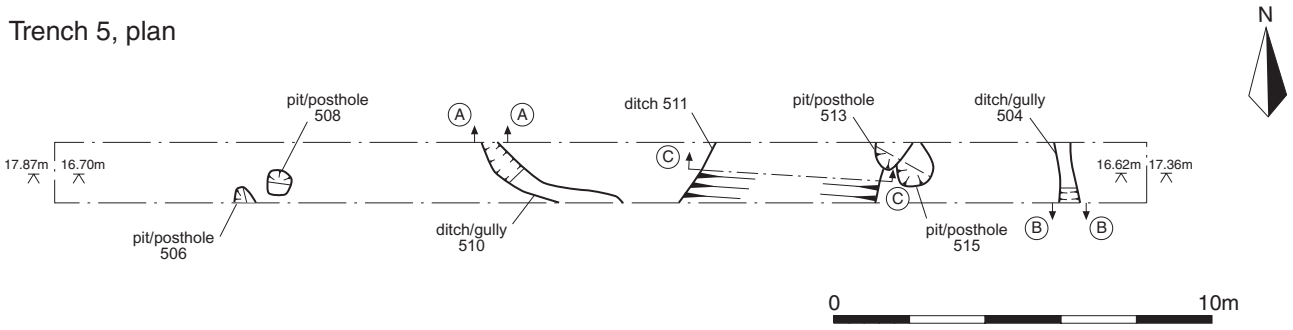
PROJECT TITLE
Tithebarn Green (Redhayes), near Exeter
Devon

FIGURE TITLE
Trench 4: plan, section and photograph

				FIGURE NO.
PROJECT NO.	3678	DATE	7-2-2012	
DRAWN BY	PJM	REVISION	00	
APPROVED BY	PJM	SCALE@A4	1:200 & 1:20	5

Trench 5, plan



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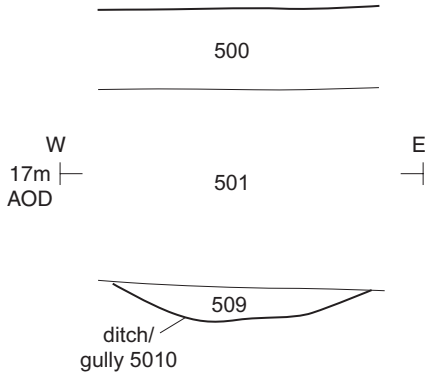

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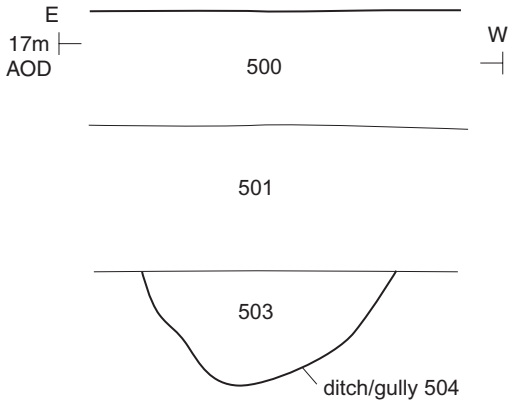
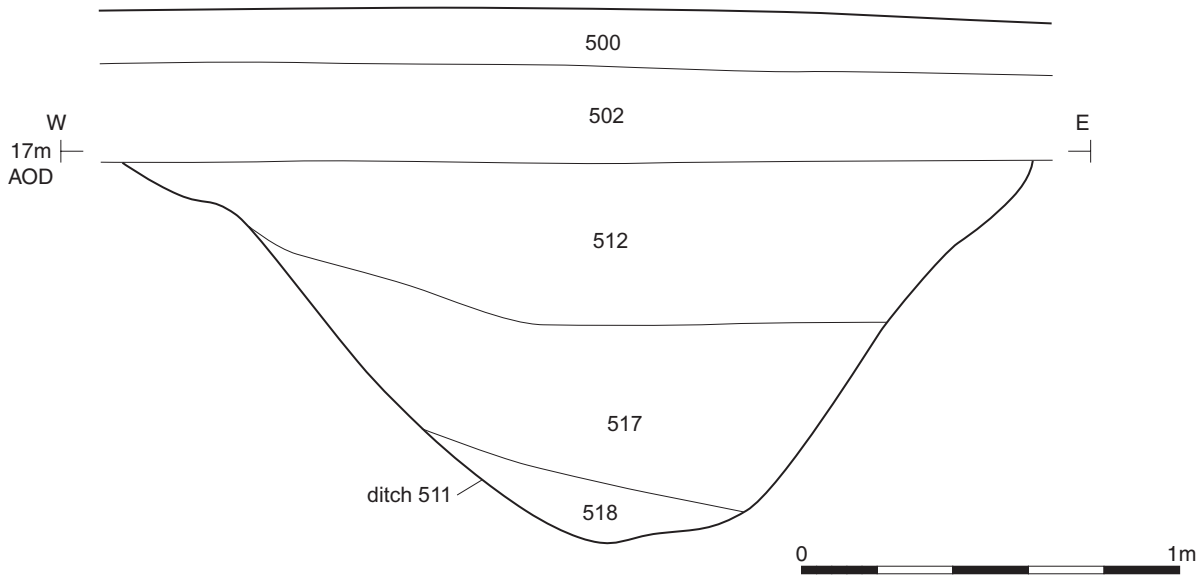


Trench 5, section CC



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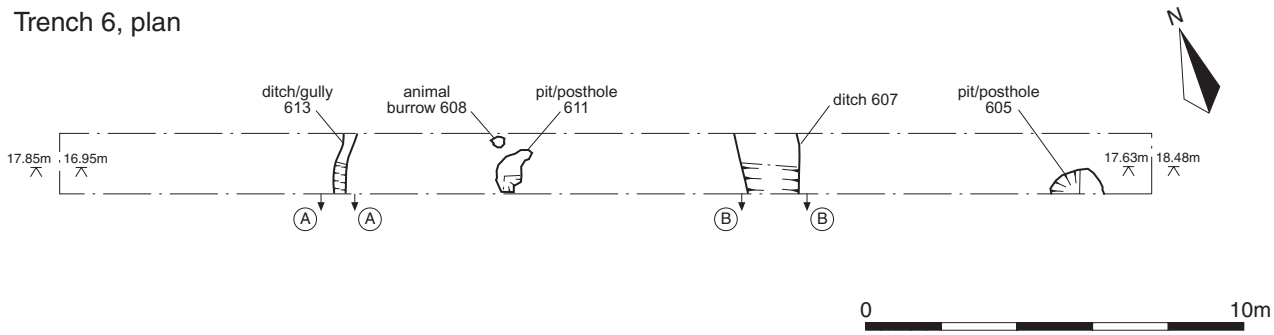
PROJECT TITLE
Tithebarn Green (Redhayes), near Exeter Devon

FIGURE TITLE
Trench 5: plan and sections

				FIGURE NO.
PROJECT NO.	3678	DATE	7-2-2012	6
DRAWN BY	PJM	REVISION	00	
APPROVED BY	PJM	SCALE@A4	1:200 & 1:20	

Trench 6, plan



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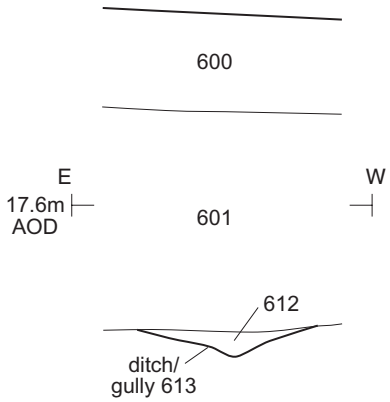

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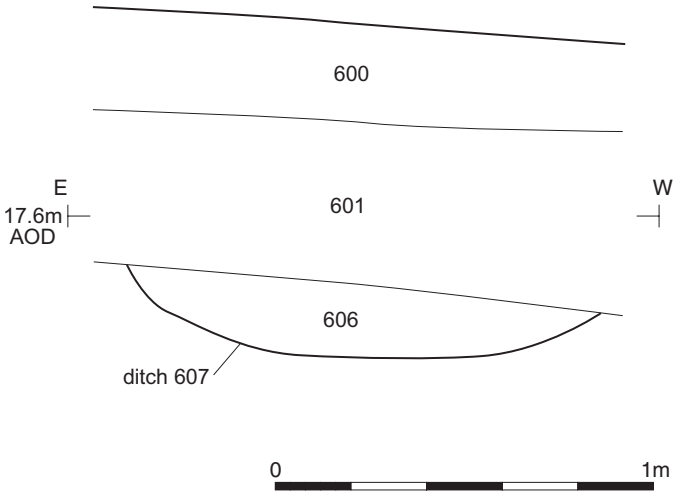

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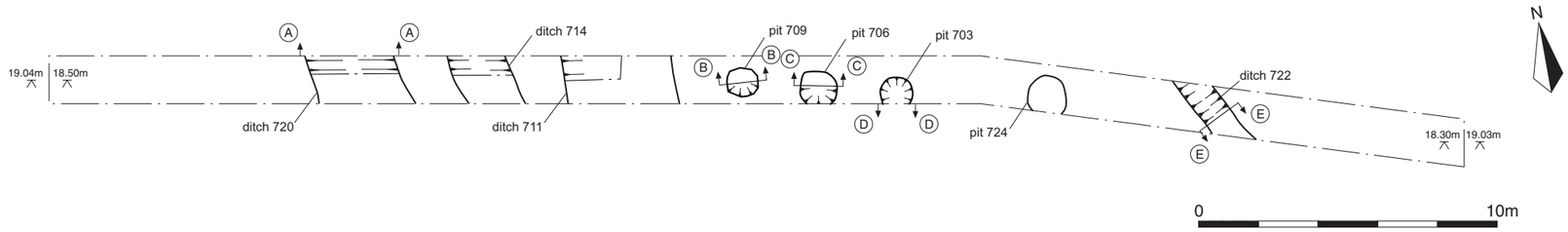
PROJECT TITLE
Tithebarn Green (Redhayes), near Exeter Devon

FIGURE TITLE
Trench 6: plan and sections

PROJECT NO.	3678	DATE	7-2-2012
DRAWN BY	PJM	REVISION	00
APPROVED BY	PJM	SCALE@A4	1:200 & 1:20

FIGURE NO.
7

Trench 7, plan



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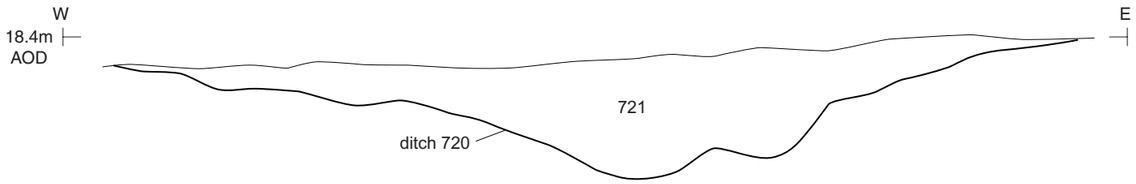
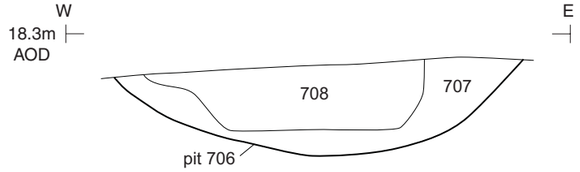
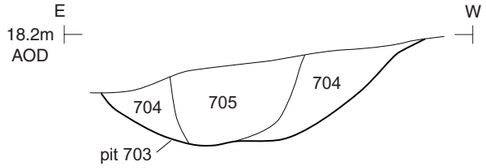


Trench 7, section BB

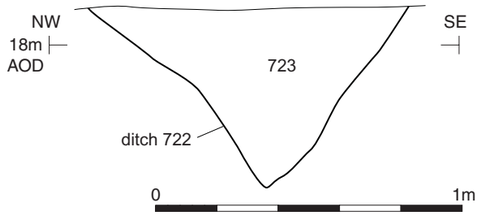
Trench 7, section CC



Trench 7, section DD



Trench 7, section EE



Ditch 720, looking east (scale 1m)

Pits 703, 706 and 710, looking west (scales 1m)

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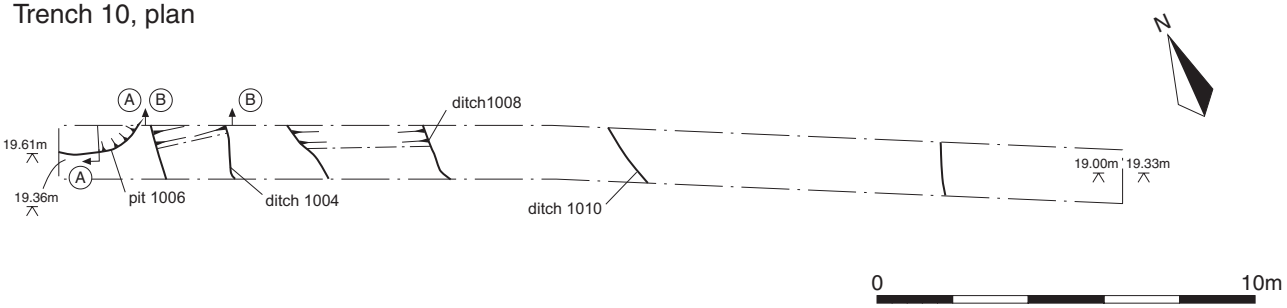
PROJECT TITLE
Tithebarn Green (Redhayes), near Exeter Devon

FIGURE TITLE
Trench 7: plan, sections and photographs

PROJECT NO.	3678	DATE	7-2-2011	FIGURE NO.
DRAWN BY	PJM	REVISION	00	8
APPROVED BY	PJM	SCALE@A3	1:200 & 1:20	

Trench 10, plan



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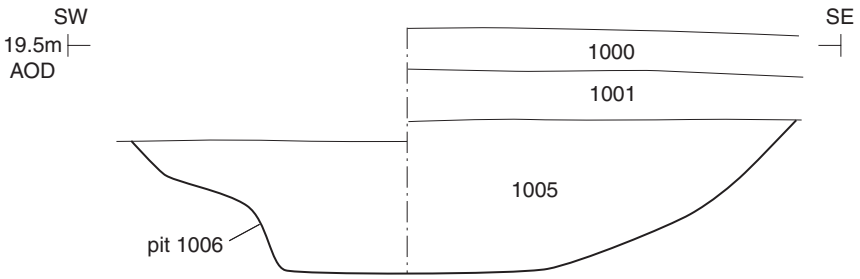

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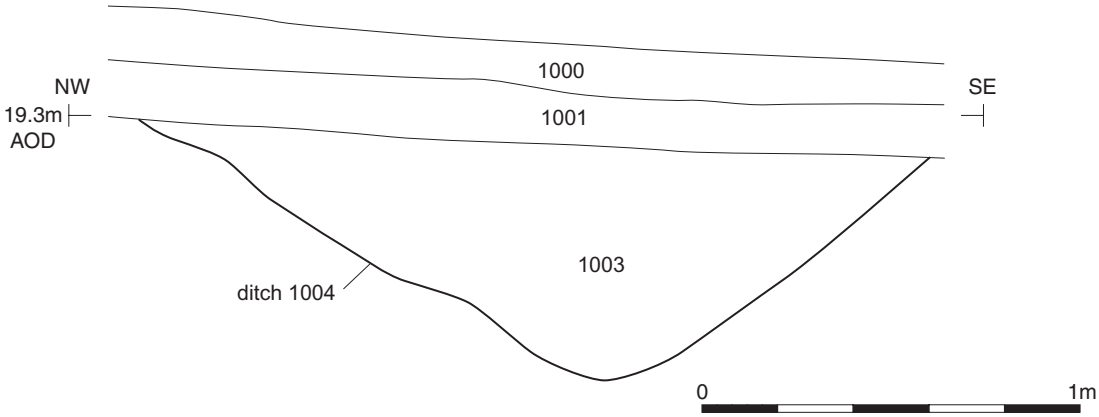

Pit 1006 and ditch 1004, looking east (scale 1m)

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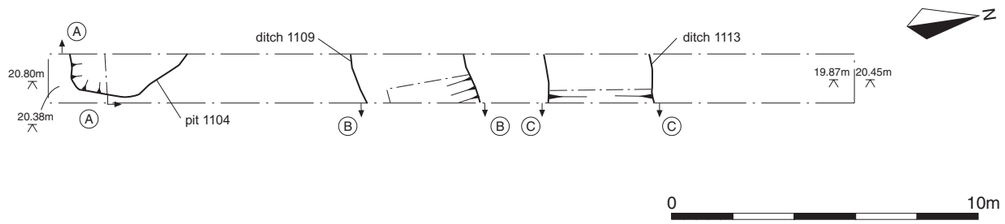
PROJECT TITLE
Tithebarn Green (Redhayes), near Exeter
Devon

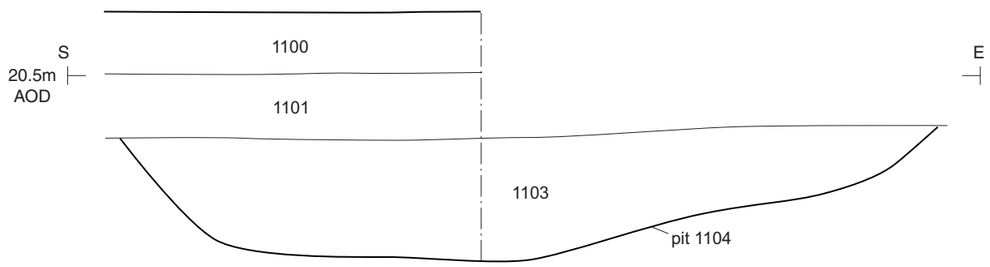
FIGURE TITLE
Trench 10: plan, sections and photograph

				FIGURE NO.
PROJECT NO.	3678	DATE	7-02-2012	
DRAWN BY	PJM	REVISION	00	
APPROVED BY	PJM	SCALE@A4	1:200 & 1:20	9

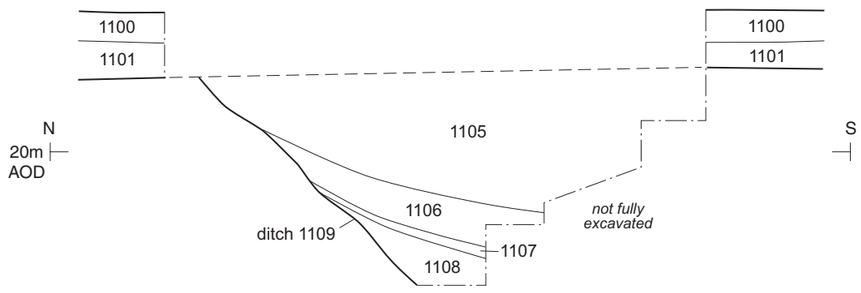
Trench 11, plan



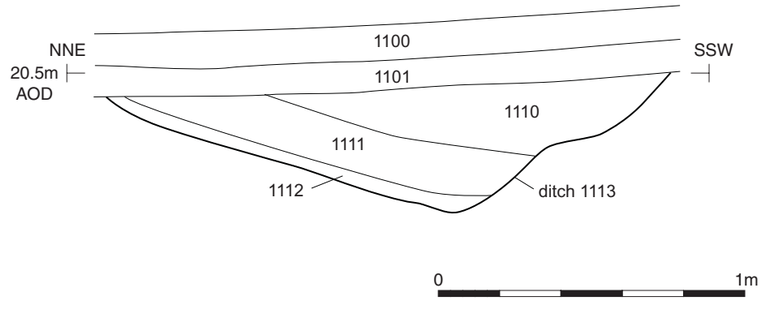
Trench 11, section AA



Trench 11, section BB



Trench 11, section CC



Ditch 1109, looking south (scales 1m)

Ditch 1113, looking north-east (scale 1m)

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PROJECT TITLE

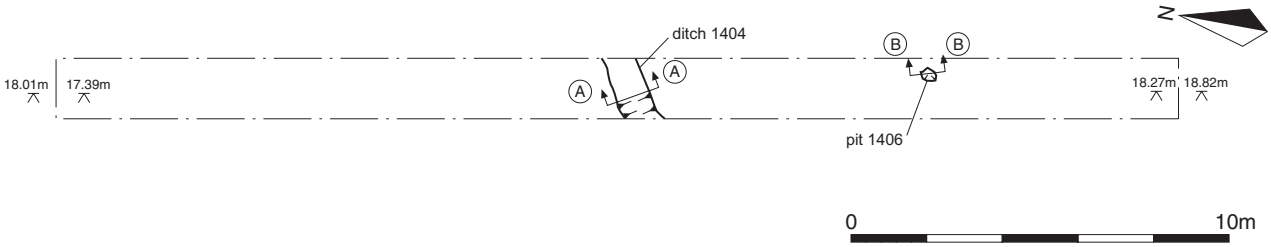
Tithebarn Green (Redhayes), near Exeter
Devon

FIGURE TITLE

Trench 11: plan, sections and photographs

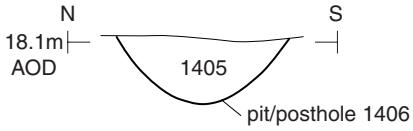
PROJECT NO.	3678	DATE	7-2-2011	FIGURE NO.
DRAWN BY	PJM	REVISION	00	10
APPROVED BY	PJM	SCALE@A3	1:200 & 1:20	

Trench 14, plan



Trench 14, section AA

Trench 14, section BB



Pit/posthole 1406, looking north-west (scale 200mm)

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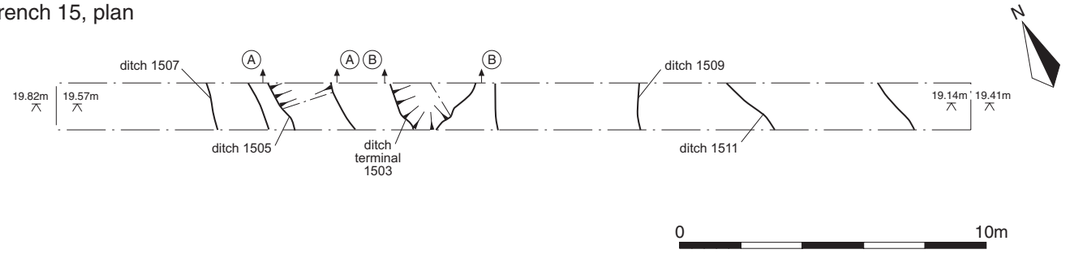
PROJECT TITLE
Tithebarn Green (Redhayes), near Exeter
Devon

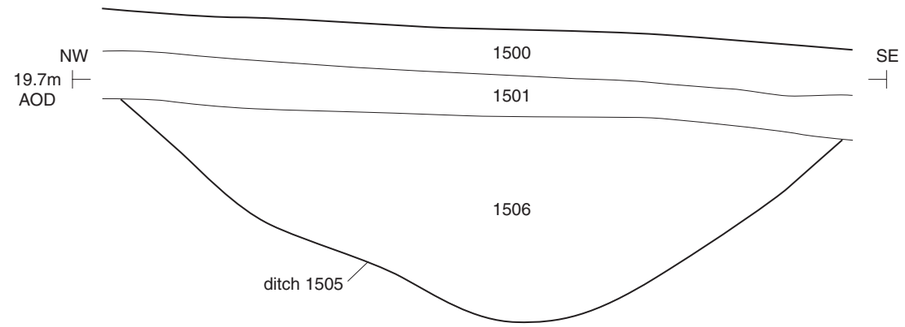
FIGURE TITLE
Trench 14: plan, sections and photograph

				FIGURE NO.
PROJECT NO.	3678	DATE	7-02-2012	11
DRAWN BY	PJM	REVISION	00	
APPROVED BY	PJM	SCALE@A4	1:200 & 1:20	

Trench 15, plan



Trench 15, section AA



Trench 15, section AA

Ditch 1505, looking north-east (scales 1m)

Ditch terminal 1503, looking north (scale 1m)

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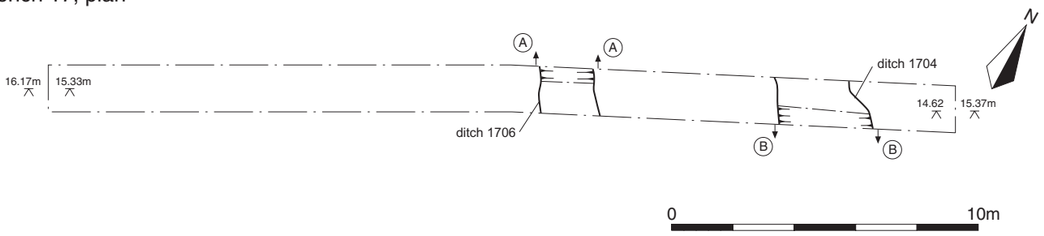
PROJECT TITLE
Tithebarn Green (Redhayes), near Exeter Devon

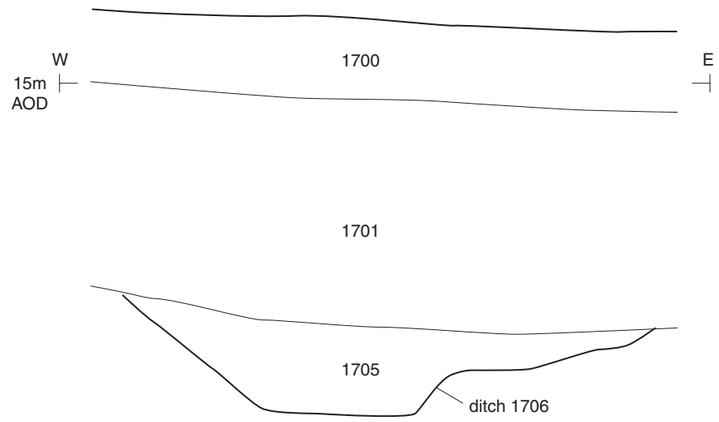
FIGURE TITLE
Trench 15: plan, sections and photographs

PROJECT NO.	3678	DATE	7-2-2011	FIGURE NO.
DRAWN BY	PJM	REVISION	00	12
APPROVED BY	PJM	SCALE@A3	1:200 & 1:20	

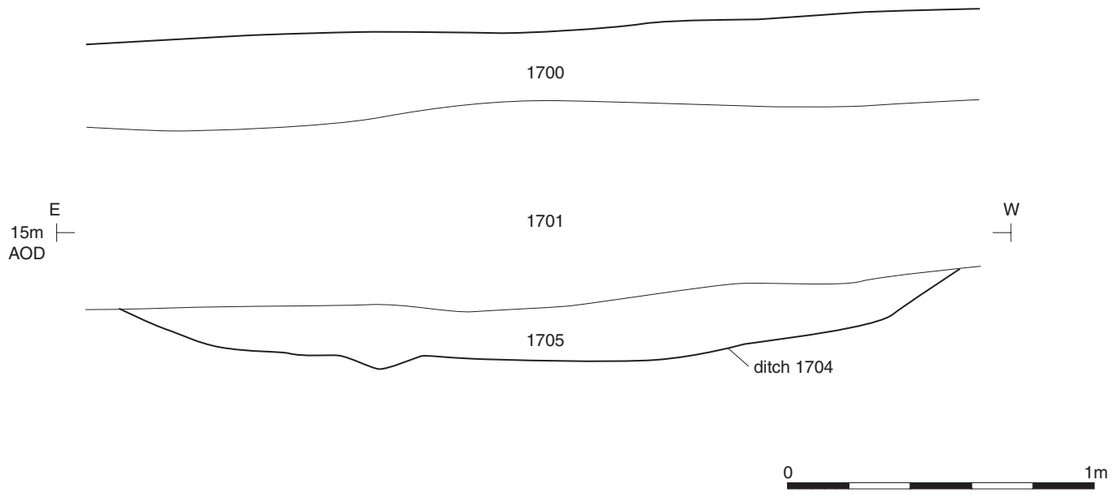
Trench 17, plan



Trench 17, section AA



Trench 17, section AA



Ditch 1706, looking north-east (scale 1m)

Ditch 1704, looking south-east (scale 1m)

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PROJECT TITLE
Tithebarn Green (Redhayes), near Exeter
Devon

FIGURE TITLE
Trench 17: plan, sections and photographs

PROJECT NO.	3678	DATE	7-2-2011	FIGURE NO.
DRAWN BY	PJM	REVISION	00	13
APPROVED BY	PJM	SCALE@A3	1:200 & 1:20	