

**An Archaeological Evaluation and Watching Brief on
Works Associated with the Hardham Tidal Abstraction Scheme, Hardham, West Sussex**

**NGR 503400 117800
(TQ 034 178)**

**Project No: 4337
Site Code: HSP08**

**ASE Report No: 2010155
OASIS id: 84194**



Sarah Porteus
With contributions by
Fiona Griffin, Luke Barber, Gemma Ayton, Anna Doherty
Trista Clifford, Karine LeHegarar and Lucy Allott
Illustrations by **Fiona Griffin**

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Abstract

Archaeology South-East was commissioned by Scott Wilson Ltd to undertake an archaeological evaluation and watching brief at Hardham Park Farm in association with the Southern Water Hardham Tidal Abstraction Scheme.

The work took place between the 23rd of April and the 19th of August 2010.

The fragmentary remains of a Bronze Age vessel were found in the ploughsoil and further Bronze Age sherds were recovered from a post-medieval foundation. Thirty-six hand-struck flints were also recovered from the site. It is suggested that associated intact Bronze Age features may survive on the site.

Medieval pottery was also recovered, mostly from the ploughsoil. A 16th century pit containing domestic pottery and a post-medieval foundation wall were recorded in the evaluation and further post-medieval pottery was recovered during the watching brief concentrated around the part of the site closest to the village of Hardham.

Given the possibility of in situ Bronze Age archaeology it is suggested that any further development work at the site should be subject to supplementary archaeological mitigation.

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1.0 INTRODUCTION

1.1 Site Background

1.1.1 Archaeology South-East, the contracting division of the University College London Centre for Applied Archaeology were appointed by Scott Wilson Ltd on behalf of their client Southern Water to undertake an archaeological evaluation and watching brief on an area to be affected by the installation of the Hardham Tidal Abstraction reservoir and associated pipelines in Hardham, West Sussex (NGR TQ 034 178 to 045 167; Fig. 1).

1.2 Geology and Topography

1.2.1 The evaluation area occupies a slight spur overlooking the floodplain and has gradual sloping sides. The watching brief area occupies a more low lying flat area to the north.

1.2.2 The underlying geology of the site is sand and Greensand in the north and Gault Clay to the north.

1.2.3 The area is currently in use as arable land and pasture.

1.2 Planning Background

1.2.1 An earlier archaeological evaluation was undertaken as part of an Environmental Impact Assessment for the scheme (ASE 2008). Following this a programme of further archaeological evaluation and watching brief were specified by John Mills, Senior Archaeologist, West Sussex County Council.

1.3 Objectives

1.3.1 The objectives of this work were:

The principle objective of the watching brief is to monitor removal of deposits during selected construction activities. It will, where possible to, identify and record the presence, absence, nature, extent and date of any archaeological deposits or features which are potentially extant in locations which have not been previously disturbed (Scott Wilson 2010).

1.3.2 The general trial trenching objectives are detailed below:

- *To identify the presence/absence of buried archaeological remains within the reservoir site;*
- *To determine (where possible) the nature, depth, extent, character and date of any archaeological deposits or features encountered;*
- *To determine the likely range, quality, and quantity of artefactual and environmental evidence present; and*
- *To inform the design of archaeological mitigation.*

1.4 Scope of Report

- 1.4.1 This report details the findings of the archaeological evaluation and watching brief which were undertaken between the 23rd of April and the 19th of August 2010 by Simon Stevens and Giles Dawkes (Senior Archaeologists), Sarah Porteus and Kathryn Grant (Archaeologists) Gary Webster (Assistant Archaeologist) and Robert Cole (Archaeological Surveyor). The project was managed by Neil Griffin (Field work) and Jim Stevenson (Post Excavation).

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 An archaeological background to the site was given as part of the Environmental Impact Assessment (Atkins 2008) with a detailed background also reproduced as part of the evaluation report (ASE 2008). The information below is summarised from those two documents.

2.2 Prehistoric

2.2.1 Prehistoric finds from within a 1km radius of the site revealed Palaeolithic flaked tools and flint scrapers, a Mesolithic quartzite pebble mace head and a Mesolithic flint working site at Pulbrough park. Neolithic implements and a Bronze Age urn have also been found within Hardham. Along with an Iron Age and Roman kiln or cemetery with several urns found in the 19th century in Stopham. A late Iron Age settlement and Roman posting station are also noted in nearby Coldwaltham.

2.2.2 Earlier trial trenching by Archaeology South-East (ASE 2008) revealed a late Iron Age/ early Roman pit and a possible palaeochannel.

2.3 Roman

2.3.1 In addition to the aforementioned Roman sites, a Roman Cemetery is known at Coldwaltham and Stane Street, Roman Road runs nearby. Two find spots of Roman coins are also known from Coldwaltham.

2.4 Medieval

2.4.1 The Augustinian Scheduled Ancient Monument, Hardham Priory, is located c. 500m to the north-west of the main site. A medieval park is also known at Wiggonholt. In addition Grade 1 listed medieval buildings exist in the area including the early medieval church of St Boltoph with 12th century wall paintings, the church in Greatham and the bridge at Stopham.

2.5 Post-medieval

2.5.1 Within the area a number of post-medieval sites are recorded including a brickworks at Coldwaltham, the Arun Navigation, canal and tunnel, Hardham Mill at Coldwaltham, Manor Farm, Stopham House and parkscape and the Midhurst Canal. A small building, probably a barn, is depicted in the field, first on the 1891-1912 Ordnance Survey map but is no longer visible on modern maps. Trench 108 was targeted on the likely location of this structure

3.0 ARCHAEOLOGICAL METHODOLOGY

3.1 Evaluation Methodology

- 3.1.1 Eighteen, 50m x 2m trenches (Fig. 2) were excavated.
- 3.1.2 Mechanical excavations were undertaken in spits of no more than 0.10m thickness by a 15 ton, 360° mechanical excavator fitted with a 1.8m wide toothless bucket. This was under constant supervision by a suitably qualified archaeologist.
- 3.1.2 Excavation by machine was taken down to the top of any archaeological horizon or, where no archaeological deposits were found at a higher level to the top of 'natural' substrate.
- 3.1.3 The surface of the excavated area was then cleared of loose spoil by hand and inspected by archaeologists.
- 3.1.4 Any finds recovered were bagged separately and clearly labelled by context and retained for examination by ASE specialists. All removed spoil was scanned using a metal detector to recover any artefacts.
- 3.1.5 Suitable material excavated from features was collected for environmental processing up to a maximum of 30 litres per bulk sample.
- 3.1.6 All contexts were recorded on pro forma context recording forms.
- 3.1.7 A digital photographic record was maintained of the excavations with colour slide and black and white photographs taken as appropriate.
- 3.1.8 A full running section of the stratigraphy of each Trench containing archaeological features was made at a scale of 1:50 with individual detailed sections at 1:20. Representative sample sections of 2m length were recorded in trenches containing no archaeological features at a scale of 1:20. The Trench and feature locations were located using GPS surveying equipment and all features were planned in relation to Ordnance Datum heights.
- 3.1.9 Following consultation with Scott Wilson and the County Archaeological Officer the trenches were backfilled and compacted but no further reinstatement was undertaken.

3.2 Watching Brief

- 3.2.1 Topsoil stripping undertaken by the contractor in areas designated by John Mills were monitored at all times by a suitably qualified archaeologist. In areas where the natural subsoil was not reached during the initial topsoil strip, pipe trenching was also monitored. The monitored areas were divided into arbitrary groups to give a broad location for concentrations of finds (Fig. 4).
- 3.2.2 Where archaeological features were identified the archaeologist in attendance was given time to investigate the features using the same methodology described for the evaluation phase.
- 3.2.3 All spoil and exposed surfaces were scanned with a metal detector to recover any finds of interest.

Number of Contexts	65
No. of files/paper record	1
Plan and sections sheets	3
Bulk Samples	1
Photographs	1 digital CD
Bulk finds	1 box
Registered finds	2
Environmental flots/residue	1

Table 1: Quantification of site archive

4.0 RESULTS

- 4.1** Discussion of site stratigraphy is given in this section with recorded contexts listed in Appendix 1.
- 4.2** The evaluated area occupies raised ground with gentle slopes downwards on the west, south and eastern edges and a slope to the north extending downwards to the watching brief area.
- 4.3** The natural drift geology in the southern part of the site recorded in the evaluation trenches was of mottled yellow and orange sand [003] with occasional plough scarring. Overlying the sand in all trenches except Trench 118 was a thin subsoil deposit (0.05m - 0.60m thick) of mid orange brown silty sand with occasional flint inclusions [002]. Thickness varied depending on the slope of the underlying natural sand. Overlying the subsoil was a mid greyish brown sandy silt topsoil [001] between 0.20m and 0.40m thick.
- 4.4** Cut into the subsoil [002] in Trench 108 was a wall foundation [013] (Fig. 3) of 0.63m width and 0.10m+ height comprised of greensand rubble and cream sandy lime mortar with re-used post medieval brick. This is probably the foundation for one of the walls of the barn depicted on the OS map of 1891 to 1912 alleged to have blown down in the hurricane of 1987 (Mr Tedbury *pers. comm.*). No other archaeological features were identified. The foundation included 3 sherds from a single Bronze Age vessel.
- 4.5** The stratigraphy of the northern part of the site recorded in the watching brief differed from the evaluation area and was mostly of flat low-lying farmland. The drift geology of Areas A to D was of a mottled brownish orange clay 'natural' substrate with grey patches [703].
- 4.6** Cut into the clay at the northernmost end of Area A was a single shallow sub-circular pit [705] (Fig. 5) of 4m diameter and 0.35m depth with sharp break of slope at the top and concave sides with a gradual slope to the base and undulating base. This was filled by a possibly water lain blue grey clayey silt with occasional pebbles and charcoal flecks [704] and contained ceramic building material of later medieval or early post-medieval date.
- 4.7** Overlying the substrate [703] (and the pit [705]) across Areas A to D was a brownish orange clayey silt subsoil interface [702] of 0.10m thickness. The subsoil was in turn overlain by a friable mid brown clayey silt plough soil [701] of 0.25m thickness.
- 4.8** The drift geology of Areas 1 to 5 was of mottled brownish orange clay 'natural' substrate with grey patches in Areas 2 to 5 and an orange sandy natural substrate in area 1 [501]. Overlying this was a brownish orange silty sand subsoil interface [502] of up to 0.60m thickness which was in turn overlain by a loose slightly orangish brown humic silty sand plough soil [500] of up to 0.30m thickness in the majority of Areas 1 to 5.
- 4.9** Overlying the subsoil in Area 4 was a 0.15m thick sandy silt buried topsoil with occasional charcoal flecks [504]. Overlying [504] was a series of

compact modern hardcore and rubble [503] of 0.50m thick forming the main farm track and farmyard.

- 4.10** No archaeological features were observed in Areas 1 to 5 and although numerous fragments from a single Bronze Age vessel were uncovered from the plough soil in Area 1, the topsoil strip here was not deep enough to expose the subsoil.

5.0 THE FINDS

5.1 A small assemblage of finds was recovered during the archaeological work. A table of the finds is listed in Appendix 2.

5.2 The Prehistoric Pottery by Anna Doherty

5.2.1 A total of 21 sherds, weighing 476g, from the base and lower wall of a single later Bronze Age vessel were recovered from the plough-soil, context [500] from Area 1; another sherd of a similar fabric type, weighing 86g, which is probably from a different vessel, was also associated. The fact that a large concentration has remained in the plough-soil suggests that it may have been deposited as a whole/partially-complete vessel, and that it may have been relatively recently disturbed from its original context of deposition, perhaps through deeper ploughing. Intact vessels, used both as containers for cremations and as part of other types of structured deposits, are a common feature in both the Middle and Late Bronze Age locally. The vessel is in a typical Middle Bronze Age, Deverel-Rimbury (DR) coarse fabric with common ill-sorted flint-inclusions although, as there is significant continuity between Middle and Late Bronze Age fabrics, it may be of any date in the latter half of the 2nd millennium BC. The walls of the vessel are fairly thick, and suggest a form related to DR Urns. However, the base is splayed, and of relatively small diameter (c.150mm), which again may suggest an element of continuity with the Late Bronze Age, post Deverel-Rimbury tradition.

5.2.2 A further 3 sherds from a single vessel, together weighing less than 2g, were found in context [13] a post-medieval wall foundation. The sherds are undiagnostic and probably too small even to get an accurate picture of the fabric type and consequently they are not closely datable. However, they appear to be fairly coarsely flint-tempered and are as such are not inconsistent with the later Bronze Age date range assigned to the other vessel.

5.3 The Post-Roman Pottery by Luke Barber

5.3.1 The archaeological work recovered 73 sherds of post-Roman pottery from the site. The material consists of small (< 30mm across) to large (> 50mm across) sherds although the majority are of the smaller size. Virtually all show moderate to high levels of abrasion and as such have obviously been subjected to repeated reworking. The material ranges between the 12th and late 19th centuries with the vast majority coming from unstratified deposits.

5.3.3 The earliest unstratified material from Area A consists of bodysherds in reduced hard-fired earthenware and early green glazed oxidised earthenware, both of late 15th- to mid 16th- century date. A glazed red earthenware bowl rim of general 16th- century date is present along with a late 19th- century fragment from an English stoneware preserve jar.

5.3.4 The unstratified material from Area B includes five small medium sand tempered bodysherds of mid 13th- to mid 14th- century date as well as a glazed red earthenware sherd of probable late 17th- to mid 18th- century date.

- 5.3.5 The unstratified material from Area D includes a further five fine/medium sand tempered sherds of mid 13th- to 14th- century date, including a cooking pot with internal green glaze. There is also a sherd from a later 15th- to mid 16th- century Raeren mug and a possible mid 16th- to early 18th- century jar base in glazed red earthenware.
- 5.3.6 A mixed assemblage was also recovered from Area 1, context [500]. The earliest pieces consist of two oxidised cooking pot sherds tempered with sand/chalk which are probably of 12th- century date. The period 1250 to 1350 is again well represented by 12 sherds of sand tempered cooking pot. Transitional material is represented by four sherds of sparse sandy oxidised late medieval wares of probable mid 14th- to early/mid 15th- century date. A single 18th- century London stoneware tankard sherd is also present. Area 2, context [500] produced just two sherds of mid 13th- to mid 14th- fine/medium sand tempered ware.
- 5.3.7 Area A, context [701] produced three oxidised sherds from the same cooking pot tempered with sand and sparse chalk. A 12th- to early 13th- century date is probable. Area B, context [701] also produced three sherds of 12th- to early 13th- century date. These consist of oxidised chalk and sand tempered sherds.
- 5.3.8 Context [704] produced an assemblage split evenly between 1250 to 1350 (x14 presumably residual sherds) and 1350 to 1550 (x14 sherds suggesting an early/mid 16th- century date). The earlier group is composed of sand tempered cooking pots as well as three green glazed jugs, at least two of which could be of the Surrey industry. The later group is dominated by oxidised fine sandy glazed red earthenwares of later 15th- to mid 16th- century type. It also contains a single Cologne/Frechen stoneware sherd.

5.4 The Ceramic Building Material by Sarah Porteus

- 5.4.1 A total of 140 fragments of ceramic building material (CBM) with a combined weight of 5288g were recovered from the archaeological investigations. The earliest material is of probable medieval date with all other material being of post-medieval date. A full record of the ceramic building material has been recorded on paper and in an Excel database for the archive.
- 5.4.2 Medieval
Contexts: U/S area B and area D, [2], [5], [13], [18], [21], [24], [27], [30], [36], [45], [48], [54], [500] areas 1 2 and 4, [501] area 5, [502] area 5, [701] area A, [704].
- 5.4.2.1 A total of 98 fragments of medieval material of 3044g were recovered from the work (Table 2). The medieval material consisted of fragments of peg tile three fragments of which could be identified as nibbed peg tile. All of the probable medieval material was in a fabric provisionally named T1: an orange sandy fabric with abundant angular poorly sorted medium to coarse quartz with sparse black sand, often with reduced core. A 15th to 16th century date is probable. The fabric is identical to samples of roofing tile from nearby Hardham Priory, it is likely that the tile is from the same source

possibly from a local kiln as yet unidentified. The roofing tile is abraded and

fragmentary and may have been moved to the location through ploughing of the fields over the years or have been reused on the demolished building represented by wall [12].

Form	Sum of Weight	Sum of Count
nibbed peg tile	280	3
peg tile	2764	95
Total	3044	98

Table 2: Quantification of medieval CBM
 (by count and weight)

5.4.3 Late medieval to early post-medieval
 Contexts: [18], [24], [27], [30], [54], [502] area 5, [701] area A, [704], U/S area B.

5.4.3.1 Brick, floor tile and peg tile of later medieval or early post-medieval date were also recovered (Table 3). All the material is likely to be of 16th to 18th century date. Fabrics FT1, B3 and B4 are similar to the earlier medieval fabric and are likely to represent variations within the same locally produced fabric. Pit fill [704] contained brick with a thickness of 45 to 55mm, a fragment of unglazed floor tile and peg tile, the remainder of the CBM was recovered from topsoil or subsoil deposits.

5.4.3.2 Provisional fabric descriptions

T3: Orange fabric with sparse to moderate fine quartz with fine micaeous sparkles

B4: Brownish orange fabric with moderate coarse rounded quartz with sparse coarse black sand inclusions and moderate fine black sand inclusions

B3: Pale orange fabric with moderate coarse rounded quartz with sparse coarse black sand inclusions.

FT1: Brownish orange fabric with abundant very coarse rounded quartz, some rose quartz, with sparse black sand inclusions.

Form	Sum of Weight	Sum of Count
brick	456	4
floor tile	80	1
peg tile	776	15
Total	1312	20

Table 3: Quantification of late medieval or early post-medieval CBM

(by count and weight)

5.4.4 Post-medieval

Contexts: [13], [48], [500] areas 1 2 and 4, [504], U/S areas B C and D.

5.4.4.1 A total of 21 fragments of post-medieval CBM were recovered comprising brick, field drain and peg tile (Table 4). Brick fragments from wall context [13] included reused brick with one sooted surface in fabric B2 of 17th or 18th century date and a fragment of peg tile in fabric T4 of 17th to 19th century date. Two field drain fabrics of 20th century date were identified likely to have been in general use for drainage within the fields. The remaining material is likely to have originated from farm buildings and barns.

5.4.4.2 Provisional fabric descriptions

P1: Pale orange cream silt fabric with abundant calcareous inclusions and cream silt streaks

P2: Orange sandy fabric with sparse to moderate fine calcareous inclusions and black iron rich inclusions.

B2: Fine orange sandy fabric with sparse fine white flint inclusions

T2: Hard fired fabric, very fine cream silt streaks and coarse black iron rich inclusions

T4: Orange fabric with abundant moderate coarse reddish orange silt inclusions and sparse to moderate fine quartz

Form	Sum of Weight	Sum of Count
brick	338	3
field drain	142	5
peg tile	352	13
Total	832	21

Table 4: Quantification of post-medieval CBM
(by form count and weight)

5.4.5 Undated

5.4.5.1 A single undated brick fragment (1/100g) from context [502] area 5 was identified in provisional fabric B1: a pale orange sandy fabric with fine quartz with pale cream and red coarse silt inclusions.

5.4.6 Samples of the fabrics are to be retained all other material holds little potential for further research and is recommended to be discarded.

5.5 Geological Material by Luke Barber

5.5.1 A single fragment of water-worn fine ferruginous sandstone was recovered from Trench 5, context [24]. The piece is likely to be carstone from the Lower Greensand series transported to the site naturally by fluvial processes.

5.6 The Slag by Luke Barber

- 5.6.1 Two pieces of quite dense black slag with limited aeration and some clear quartz and calcine flint inclusions were recovered from unstratified deposits in Area D. The slag is not particularly diagnostic but does not appear to relate to metal-working. The material may therefore have derived from other high-temperature processes such as lime burning.

5.7 The Glass by Trista Clifford

- 5.7.1 A small unstratified fragment from a green glass wine bottle of 20th century date was recovered from Area B.

5.8 The Metalwork by Trista Clifford

- 5.8.1 The only stratified ironwork came from context [13], which contained a late post medieval nail. Six square sectioned, square headed nails came unstratified from Area D, three of which were clenched heavy duty nails. The remaining three are general purpose. They are likely to be of post medieval date. Unstratified finds consist of a severely corroded Victorian halfpenny, as well as a 19th-century lead bullet.

5.9 The Animal Bone by Gemma Ayton

- 5.9.1 Three fragments of animal bone were recovered from Trench 8, context [13]. The context contained one neo-natal and one juvenile pig tibia and a complete, right, rabbit mandible. No evidence of butchery, burning, gnawing or pathology has been noted.
- 5.9.2 Due to the size of the assemblage, it holds no potential for further analysis.

5.10 Flintwork by Karine Le Hégarat

- 5.10.1 A total of 36 flints considered to be humanly struck, weighing 544g and 8 burnt unworked flints weighing 148g were recovered during the archaeological work at Hardham Tidal Abstraction reservoir (Table 5). With the exception of one piece, the struck flints came from unstratified deposits.
- 5.10.2 Two raw materials were identified. The bulk of the assemblage was manufactured on a good quality dark grey to almost black, fine-grained to very fine-grained flint with rare inclusions and a fine slightly rolled of and occasionally pitted cortex. Five flints were made on a fine-grained light to mid grey flint with white mottled patches, occasional inclusions and a buff thin cortex. The overall condition of the assemblage was poor with over 50% (20) of the flints recorded as broken. A large proportion of the pieces displayed edge damage ranging from slight edge abrasion incurred most probably during re-deposition to more extensive edge nicks typical of plough damage. Rust marks noted on seven pieces are also associated to ploughing activities. One fifth of the assemblage was re-corticated with most flints displaying only incipient traces of bluish white and honey surface discolouration.

5.10.3 The assemblage consisted principally of debitage (86%) including seven flakes, 16 flake fragments, a single blade fragment and seven shattered pieces. Two small flake core fragments weighing 44g and 48g respectively were recovered from unstratified deposits in Area A and unstratified Area C yielded a partially worked nodule. The multi-faceted single platform core and the opposed platform core displayed some minor preparations of the striking platforms. However, as they were both in poor condition, these could also correspond to severe edge damage.

5.10.4 The implements were limited to two incomplete retouched flakes from unstratified Areas A and B. The first tool, manufactured on a tertiary flake, exhibited semi abrupt direct retouches on left-hand edge and the second implement displayed direct abrupt retouches on its proximal end. Both pieces have undergone significant damage and are therefore unclassifiable.

5.10.5 The lithic assemblage provided limited evidence for knapping activities. However, none of the artefacts are chronologically diagnostic. As the majority of the pieces were collected from unstratified deposits and given their conditions, no further study is proposed for the assemblage.

	Category	Topsoil Ploughsoil [500]	Trench 16 [45]	Area A	Area A [701]	Area B	Area C	Total
Debitage	Flake	1		2		3	1	7
	Flake fragment			6		9	1	17
	Blade fragment			1				1
	Shattered piece			2		4	1	7
Core	Core fragment			2				2
	Nodule					1		1
Implement	Retouche d flake			1		1		2
Total		1		14		18	3	36
Burnt unworked flint pieces / Weight(g)		2/52	1/16	1/26	1/<2	2/50	1/4	8/148

Table 5: Quantification of Flints

5.11 Registered Finds by Trista Clifford

5.11.1 A large iron ring formed from a rectangular 'strap' of iron, RF<1> was recovered from context [500] Area 4. Dating of the find is uncertain but likely to be post medieval. A branch from a horseshoe, RF<2> came from Area D. the nail holes are obscured by corrosion product. The find is unstratified and most likely to be of post medieval date.

SITE CODE	RF No	CONTEXT	OBJECT	MATERIAL	PERIOD	Wt (g)	Comments
HSP08	1	Area 4 [500]	RING	IRON	MED/PMED	188	di 85mm; H28mm
HSP08	2	U/s Area D	HOSH	IRON	MED/PMED	62g	branch fragment

Table 6: Registered finds

6.0 THE ENVIRONMENTAL SAMPLES by Lucy Allott

- 6.1** A single sample <1001> was taken from context [704] the fill of a wide, shallow pit containing post-medieval artefacts to establish evidence for environmental remains and to help determine the probable function of this feature. The 40 litre sample was processed in its entirety in a flotation tank and the residue and flot were retained on 500µm and 250µm meshes. The residue was passed through graded sieves and each fraction sorted for environmental and artefact remains (Table 7) The flot was scanned under a stereozoom microscope at x7-45 and an overview of its content recorded (Table 8).
- 6.2** The sample residue produced a small amount of wood charcoal and a faunal assemblage containing burnt bone and tooth fragments. Cattle molar fragments are the only identifiable elements (Sibun pers. comm.) in the faunal assemblage. No charred macrobotanical remains were present in the flot which was dominated by uncharred roots suggesting a degree of modern disturbance.
- 6.3** Although the assemblage of environmental remains from this feature is limited the content alludes to waste disposal that may be associated with the nearby settlement and farming activities. The current assemblage presents no potential for further work.

Sample Number	Context	Context / deposit type	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Bone and Teeth	Weight (g)	Cremated/Burnt bone 4-8mm	Weight (g)	Other (eg ind, pot, cbm)
1001	704	Pit Fill	40	40	**	8	***	4	*	2	*	2	Pottery **/172g CBM */50g Slate */<2g

Table 7: Residue quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250) & weights in grams

Sample Number	Context	weight g	Flot volume ml	Uncharred % of flot	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	weed seeds charred
1001	704	2	10	98		*	*		

Table 8: Flot quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250)

7.0 DISCUSSION

- 7.1** Evidence for prehistoric activity was concentrated within Area 1 of the watching brief where a near complete mid to late Bronze Age vessel was recovered (fig. 4) and in Trench 108 where further sherds of late Bronze Age date were recovered within a post-medieval wall foundation. Additionally, 36 hand-struck worked-flints were recovered from across the site. Although these are chronologically undiagnostic, some may be of a similar date to the pottery. The urn is the second of such vessels to be uncovered in the Hardham area and evidence from the watching brief suggests this urn has only recently been disturbed from the original point of deposition. The excavations within Area A did not continue into subsoil preventing the identification of any associated features and it is suggested here that a Bronze Age cremation cemetery may exist in proximity to Area 1.
- 7.2** No evidence of Iron Age or Roman activity identified during the earlier evaluation (a pit containing abraded late Iron Age or Roman pot sherds (ASE 2008)) was identified in the Area B of the watching brief were uncovered during the works.
- 7.3** A Roman road is projected as crossing the site by Margery (1965) (fig. 4). At this location the road is recorded as taking the form of an 'earth agger' (embankment) and is in part metalled (*ibid.* pp178-179), though this has not been observed where the route crosses the present site. A slight embankment is visible in this location on site and serves as the present farm trackway which has been substantially improved and surfaced, evidence relating to a metalled surface in this location would almost certainly have been removed through either erosion from use as a trackway or during resurfacing work. The evidence is therefore unconvincing that the road passed at this location and given the tendency of this area to flooding it seems an unlikely choice. The absence of any evidence for a track perhaps suggests that the road did not take the projected course to line up with a known causeway in Pullbrough Brooks, but instead followed a more direct route to Stane Street, passing just immediately north of Area A (fig. 4) (John Mills, *pers. comm.*). This projected location is equally possible, intensive arable farming of the fertile alluvial land crossed by the projected route would possibly have levelled any causeway which may once have traversed the area. The watching brief has been unable to confirm the location of the Roman road, however given the predicted possible unmetalled nature of the road and the intensive activity on site since the Roman period can perhaps account for this.
- 7.4** The line of Roman Stane Street is known to cross the site through area D and although it was not observed at this location, again modern use of the site seems likely to have truncated deposits through activities relating to construction of the railway, road and various outbuildings. Stane Street is believed to have been metalled in places. Very few stones were noted in the deposits removed and no areas of metalling were present suggesting the course of the road is likely to have lain along the line of the current railway where stripping was not undertaken during the works. The groundworks were carried out under controlled watching brief conditions and there is a good confidence rating that the methodology employed would have detected archaeological remains if surviving.

- 7.5** A single pit of late medieval or early post medieval date was uncovered, with pottery suggesting an early to mid 16th century date. The exact function of the pit is uncertain, though it contains fragments of domestic pottery including jug and cooking pot fragments with environmental residues suggesting domestic refuse. The remainder of evidence for medieval activity is in the form of unstratified medieval pottery dating from the 12th century onwards and includes domestic cooking pots. The pottery indicated continued domestic activity throughout the medieval period and into the post-medieval period. This may be evidence of medieval manuring and ploughing of these fields with material from Harham Priory and associated settlement.
- 7.6** The evaluation phase of works revealed a single post-medieval feature, wall [13]. Comparison with Ordnance Survey maps suggests that the wall almost certainly belongs to a structure first illustrated on the 1891-1912 map. The structure is most likely a barn, finds recovered from the wall included residual Bronze Age pottery and a later post-medieval nail and reused CBM. Local knowledge suggests that the barn was a victim of the 1987 hurricane and that the barn used to open facing the river (Mr Tedbury, *pers. comm.*). That the barn was open to the river appears to be confirmed by the 1891-1912 map which depicts a roofed structure with 3 enclosures adjoining it to the south facing the river.
- 7.7** The abraded and reworked nature of a majority of the finds is consistent with the arable farming which has dominated the land use of the area to the present day.

8.0 CONCLUSIONS

- 8.1** The excavation of 18, 50 metre by 2 metre trenches and a watching brief on ground reduction associated with the insertion of service pipes revealed a small number of archaeological features and an assemblage of finds ranging in date from Bronze Age to post-medieval.
- 8.2** Tentative evidence was found to suggest that a possible middle to late Bronze Age cremation cemetery may have existed to the east of the present village. If this is true then a settlement nearby is also possible.
- 8.3** No further evidence of Iron Age or Roman activity was uncovered. And the presence of projected Roman roads across the site could not be confirmed or conclusively ruled out.
- 8.4** A mid to late 16th century pit containing domestic pottery was identified to the west of the present village and an assemblage of medieval pottery from the 12th century onwards was also recovered. This is probably associated with Hardham Priory and associated settlement.
- 8.5** A wall relating to a later post-medieval barn was also identified.
- 8.6** The archaeological works have effectively mitigated the archaeological impact of works associated with the installation of the Hardham Tidal Abstraction Scheme.
- 8.7** Given the possibility of in situ Bronze Age archaeology it is suggested that any further development work at the site should be subject to supplementary archaeological mitigation.

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Archaeology South-East would like to thank Scott Wilson Ltd for commissioning the work and John Mills of West Sussex County Council for his guidance throughout the project. The assistance of Trant, BTU and Southern Water are also appreciated along with the assistance of Mr Tedbury of Church Farm.

APPENDIX 1: LIST OF CONTEXTS

Context	Trench	Description	Max. length	Max. Width	Max. thickness	Height mAOD
1	113	Topsoil	Tr.	Tr.	0.20m	8.280
2	113	Subsoil	Tr.	Tr.	0.23m	8.050
3	113	Natural	N/A	N/A	N/A	7.820
4	115	Topsoil	Tr.	Tr.	0.22m	8.344-7.038
5	115	Subsoil	Tr.	Tr.	0.05m	8.124-6.818
6	115	Natural	N/A	N/A	N/A	8.074-6.768
7	118	Topsoil	Tr.	Tr.	0.22m	7.108-4.458
8	118	Natural	N/A	N/A	N/A	6.888-4.238
9	108	Topsoil	Tr.	Tr.	0.30m	9.119
10	108	Subsoil	Tr.	Tr.	0.10m	8.819
11	108	Natural	N/A	N/A	N/A	8.719
12	108	Cut for wall	Tr.	0.63m+	0.10m+	8.819
13	108	Wall	Tr.	0.63m	0.10m+	8.819
14	109	Topsoil	Tr.	Tr.	0.30m	9.832
15	109	Subsoil	Tr.	Tr.	0.18m	9.532
16	109	Natural	N/A	N/A	N/A	9.352
17	110	Topsoil	Tr.	Tr.	0.30m	9.207-8.274
18	110	Subsoil	Tr.	Tr.	0.30m	8.907-7.974
19	110	Natural	N/A	N/A	N/A	8.607-7.674
20	103	Topsoil	Tr.	Tr.	0.23m	6.673-5.031
21	103	Subsoil	Tr.	Tr.	0.30m	6.443-4.801
22	103	Natural	N/A	N/A	N/A	6.143-4.501
23	105	Topsoil	Tr.	Tr.	0.25m	8.622-6.391
24	105	Subsoil	Tr.	Tr.	0.30m	8.372-6.141
25	105	Natural	N/A	N/A	N/A	8.072-5.841
26	102	Topsoil	Tr.	Tr.	0.30m	6.515-4.832
27	102	Subsoil	Tr.	Tr.	0.60m	6.215-4.532
28	102	Natural	N/A	N/A	N/A	5.615-3.932
29	101	Topsoil	Tr.	Tr.	0.30m	7.257-5.552
30	101	Subsoil	Tr.	Tr.	0.56m	6.957-5.252
31	101	Natural	N/A	N/A	N/A	6.397-4.692
32	104	Topsoil	Tr.	Tr.	0.20m	9.568-8.958
33	104	Subsoil	Tr.	Tr.	0.30m	9.368-8.758
34	104	Natural	N/A	N/A	N/A	9.068-8.458
35	111	Topsoil	Tr.	Tr.	0.30m	8.690
36	111	Subsoil	Tr.	Tr.	0.40m	8.390
37	111	Natural	N/A	N/A	N/A	7.990
38	106	Topsoil	Tr.	Tr.	0.30m	9.358
39	106	Subsoil	Tr.	Tr.	0.50m	9.058
40	106	Natural	N/A	N/A	N/A	8.558

Context	Trench	Description	Max. length	Max. Width	Max. thickness	Height mAOD
41	107	Topsoil	Tr.	Tr.	0.30m	9.828
42	107	Subsoil	Tr.	Tr.	0.40m	9.528
43	107	Natural	N/A	N/A	N/A	9.128
44	116	Topsoil	Tr.	Tr.	0.30m	8.837-6.119
45	116	Subsoil	Tr.	Tr.	0.30m	8.537-5.819
46	116	Natural	N/A	N/A	N/A	8.237-5.519
47	117	Topsoil	Tr.	Tr.	0.40m	6.933-4.618
48	117	Subsoil	Tr.	Tr.	0.40m	6.533-4.218
49	117	Natural	N/A	N/A	N/A	6.133-3.818
50	114	Topsoil	Tr.	Tr.	0.30m	8.049-7.317
51	114	Subsoil	Tr.	Tr.	0.20m	7.749-7.017
52	114	Natural	N/A	N/A	N/A	7.549-6.817
53	112	Topsoil	Tr.	Tr.	0.30m	9.302-8.233
54	112	Subsoil	Tr.	Tr.	0.40m	9.002-7.933
55	112	Natural	N/A	N/A	N/A	8.602-7.533
500	Areas 1-5	Topsoil/plough soil	Tr.	Tr.	0.30m	5.53-3.27
501	Areas 1-5	Natural	N/A	N/A	N/A	4.63-2.37
502	Areas 1-5	Subsoil	Tr.	Tr.	0.60m	5.23-2.97
503	Areas 1-5	Modern foundation	Tr.	Tr.	0.50m	3.27
504	Areas 1-5	Deposit	Tr.	Tr.	0.15m	2.77
701	Areas A-D	Ploughsoil	Tr.	Tr.	0.25m	10.37-8.58
702	Areas A-D	Subsoil	Tr.	Tr.	0.10m	10.12-8.33
703	Areas A-D	Natural	N/A	N/A	N/A	10.02-8.23
704	Areas A-D	Pit fill	4.00m	4.00m	0.30	
705	Areas A-D	Pit cut	4.00m	4.00m	0.30	

APPENDIX 2: Quantification of Finds

Context	Pot	Wt (g)	CBM	Wt (g)	Bone	Wt (g)	Flint	Wt (g)	FCF	Wt (g)	Stone	Wt (g)	Fe	Wt (g)	Glass	Wt (g)	Industrial Debris	Wt (g)	pb	wt(g)	cu	wt (g)	
2			1	56																			
Area 1 [500]	19	266	6	362															1	10	1	8	
Area 2 [500]	58	1014	3	100			1	12	2	52													
Area 3 [500]													2	40									
Area 4 [500]			7	322																			
Area 5 [501]			1	36																			
[504]			2	124																			
Tr 1 [30]			4	496																			
Tr 2 [27]			6	150																			
Tr 3 [21]			1	12																			
Tr 5 [24]			6	98							1	232											
Tr 8 [13]	3	<2	5	206	3	4							1	4									
Tr 9 [15]			5	184																			
Tr 11 [36]			1	56																			
Tr 17 [48]			4	96																			
Tr 10 [18]			8	606																			
Tr 12 [54]			5	130																			
Tr 15 [5]			7	82																			
Tr 16 [45]			8	304					1	16													
704	28	310	15	1006																			
Area A us	4	132					22	458	1	26													

Context	Pot	Wt (g)	CBM	Wt (g)	Bone	Wt (g)	Flint	Wt (g)	FCF	Wt (g)	Stone	Wt (g)	Fe	Wt (g)	Glass	Wt (g)	Industrial Debris	Wt (g)	pb	wt(g)	cu	wt (g)
Area A [701]	3	16	2	44					1	2												
Area B us	6	18	23	446			34	668	2	50					1	14						
Area B [701]	3	8																				
Area C us			1	48			7	26	1	4												
Area D us	8	90	11	174									6	70			2	208				

SMR Summary Form

Site Code	HSP08					
Identification Name and Address	Hardham Tidal Abstraction Scheme, Hardham Church Farm					
County, District &/or Borough	West Sussex					
OS Grid Refs.	503400 117800					
Geology	Greensand and Gault Clay					
Arch. South-East Project Number	4337					
Type of Fieldwork	Eval. √	Excav.	Watching Brief √	Standing Structure	Survey	Other
Type of Site	Green Field √	Shallow Urban	Deep Urban	Other		
Dates of Fieldwork	Eval. 28.4.10- 31.4.10	Excav.	WB. 23.4.10- 19.8.10	Other		
Sponsor/Client	Scott Wilson Ltd.					
Project Manager	Neil Griffin					
Project Supervisor	Sarah Porteus					
Period Summary	Palaeo.	Meso.	Neo.	BA√	IA	RB√
	AS	MED √	PM √	Other Modern		
<p>100 Word Summary</p> <p><i>Archaeology South-East was commissioned by Scott Wilson Ltd to undertake an archaeological evaluation and watching brief at Hardham Park Farm in association with the Southern Water Hardham Tidal Abstraction Scheme.</i></p> <p><i>The work took place between the 23rd of April and the 19th of August 2010.</i></p> <p><i>The fragmentary remains of a Bronze Age vessel were found in the ploughsoil and further Bronze Age sherds were recovered from a post-medieval foundation. Thirty-six hand-struck flints were also recovered from the site. It is suggested that associated intact Bronze Age features may survive on the site.</i></p> <p><i>Medieval pottery was also recovered, mostly from the ploughsoil. A 16th century pit containing domestic pottery and a post-medieval foundation wall were recorded in the evaluation and further post-medieval pottery was recovered during the watching brief concentrated around the part of the site closest to the village of Hardham.</i></p> <p><i>Given the possibility of in situ Bronze Age archaeology it is suggested that any further development work at the site should be subject to supplementary archaeological mitigation.</i></p>						

OASIS Form

OASIS ID: archaeol6-84194

Project details

Project name An archaeological evaluation and watching brief on works associated with Hardham Tidal abstraction Scheme, Hardham

Archaeology South-East was commissioned by Scott Wilson Ltd to undertake an archaeological evaluation and watching brief at Hardham Park Farm in association with the Southern Water Hardham Tidal Abstraction Scheme.

The work took place between the 23rd of April and the 19th of August 2010.

Short description of the project The fragmentary remains of a Bronze Age vessel were found in the ploughsoil and further Bronze Age sherds were recovered from a post-medieval foundation. Thirty-six hand-struck flints were also recovered from the site. It is suggested that associated intact Bronze Age features may survive on the site.

Medieval pottery was also recovered, mostly from the ploughsoil. A 16th century pit containing domestic pottery and a post-medieval foundation wall were recorded in the evaluation and further post-medieval pottery was recovered during the watching brief concentrated around the part of the site closest to the village of Hardham.

Given the possibility of in situ Bronze Age archaeology it is suggested that any further development work at the site should be subject to supplementary archaeological mitigation.

Project dates Start: 23-04-2010 End: 19-08-2010

Previous/future work Yes / No

Any associated project reference codes HSP08 - Sitecode

Any associated project reference codes 49450 - OASIS form ID

Type of project Field evaluation

Site status None

Current Land use Cultivated Land 2 - Operations to a depth less than 0.25m

Monument type PIT Medieval

Monument type BARN Post Medieval

Significant Finds VESSEL Middle Bronze Age

Methods & techniques 'Metal Detectors', 'Sample Trenches'

Development type Service infrastructure (e.g. sewage works, reservoir, pumping station, etc.)

Prompt	Planning condition
Position in the planning process	After full determination (eg. As a condition)
Project location	
Country	England
Site location	WEST SUSSEX HORSHAM PULBOROUGH Hardham Tidal Abstraction, Hardham
Study area	4.00 Kilometres
Site coordinates	TQ 034 178 50.9497959404 -0.527840493678 50 56 59 N 000 31 40 W Point
Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	Scott Wilson
Project design originator	Scott Wilson
Project director/manager	Neil Griffin
Project supervisor	Sarah Porteus
Type of sponsor/funding body	Southern Water
Project archives	
Physical Archive recipient	Local Museum
Physical Archive ID	HSP08
Physical Contents	'Ceramics','Metal'
Digital Archive recipient	local museum
Digital Archive ID	HSP08
Digital Contents	'none'
Digital Media available	'Images raster / digital photography'
Paper Archive recipient	local museum
Paper Archive ID	HSP08
Paper Contents	'none'
Paper Media available	'Context sheet','Drawing','Photograph','Plan','Report','Section','Survey','Unpublished Text'
Project bibliography 1	Grey literature (unpublished document/manuscript)

Publication type

Title An archaeological evaluation and watching brief for Hardham
Tidal Abstraction Scheme, Hardham, West Sussex

Author(s)/Editor(s) Porteus, S.

Other
bibliographic
details Report 2010155

Date 2010

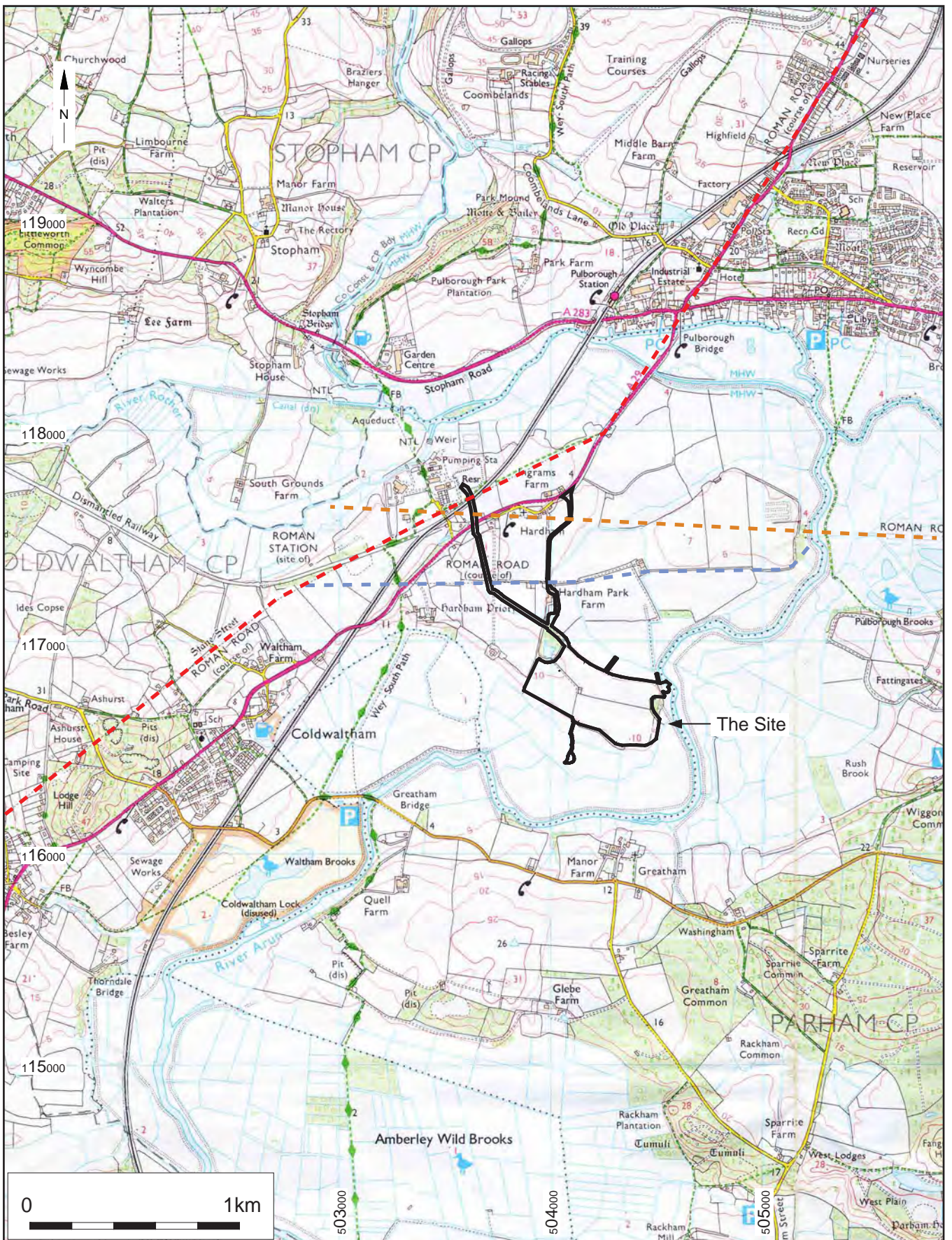
Issuer or publisher Archaeology South-East

Place of issue or
publication Archaeology South-East, Portslade

Description A4 bound report and pdf versions

Entered by Sarah Porteus (s.porteus@ucl.ac.uk)

Entered on 15 October 2010



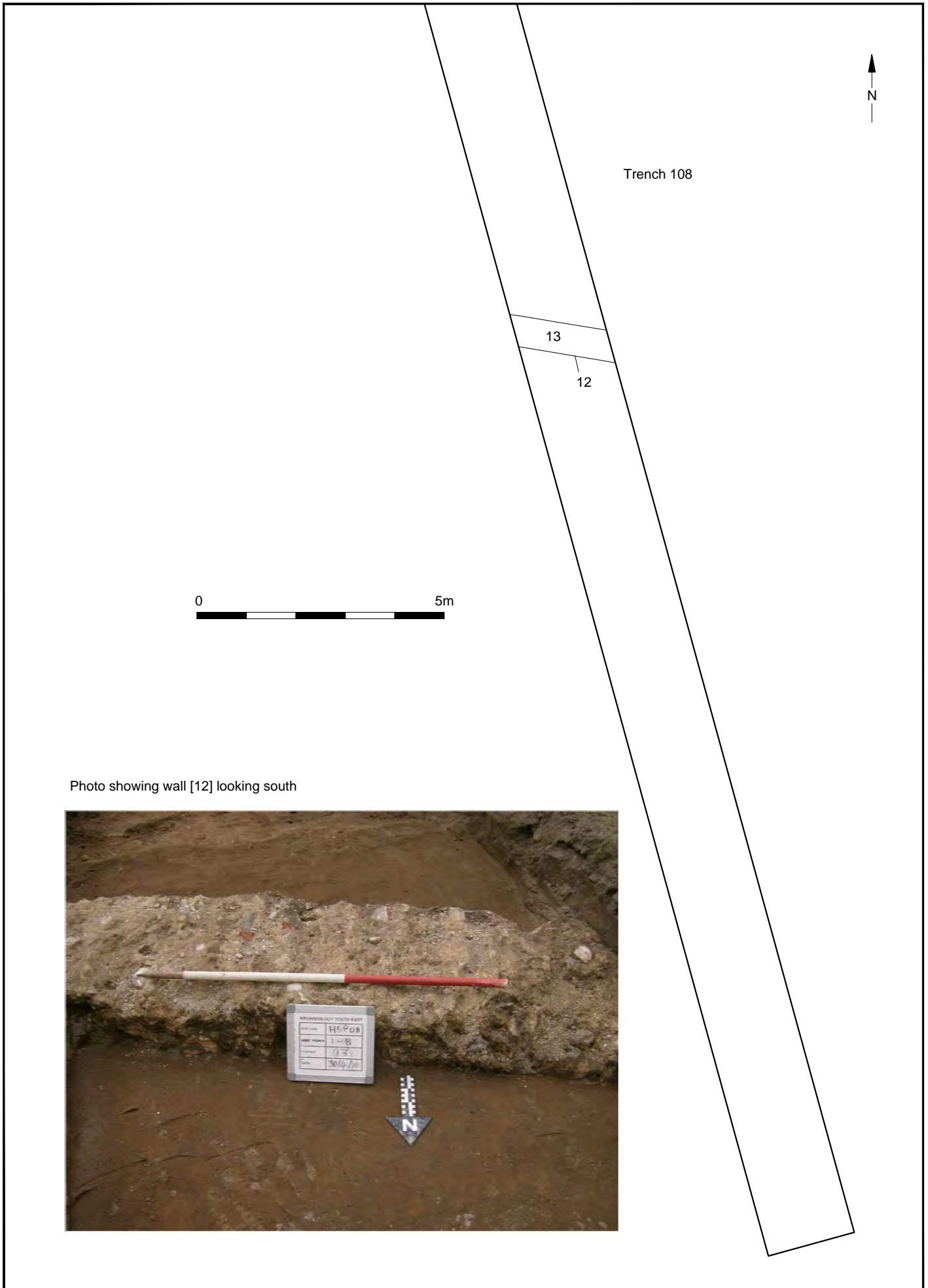
- - - Conjectural route by John Mills
- - - Projected route by Margery
- - - Stane Street

© Archaeology South-East		Hardham Tidal Abstraction		Fig. 1
Project Ref: 4337	Oct 2010	Site location plan		
Report Ref: 2010155	Drawn by: JLR			

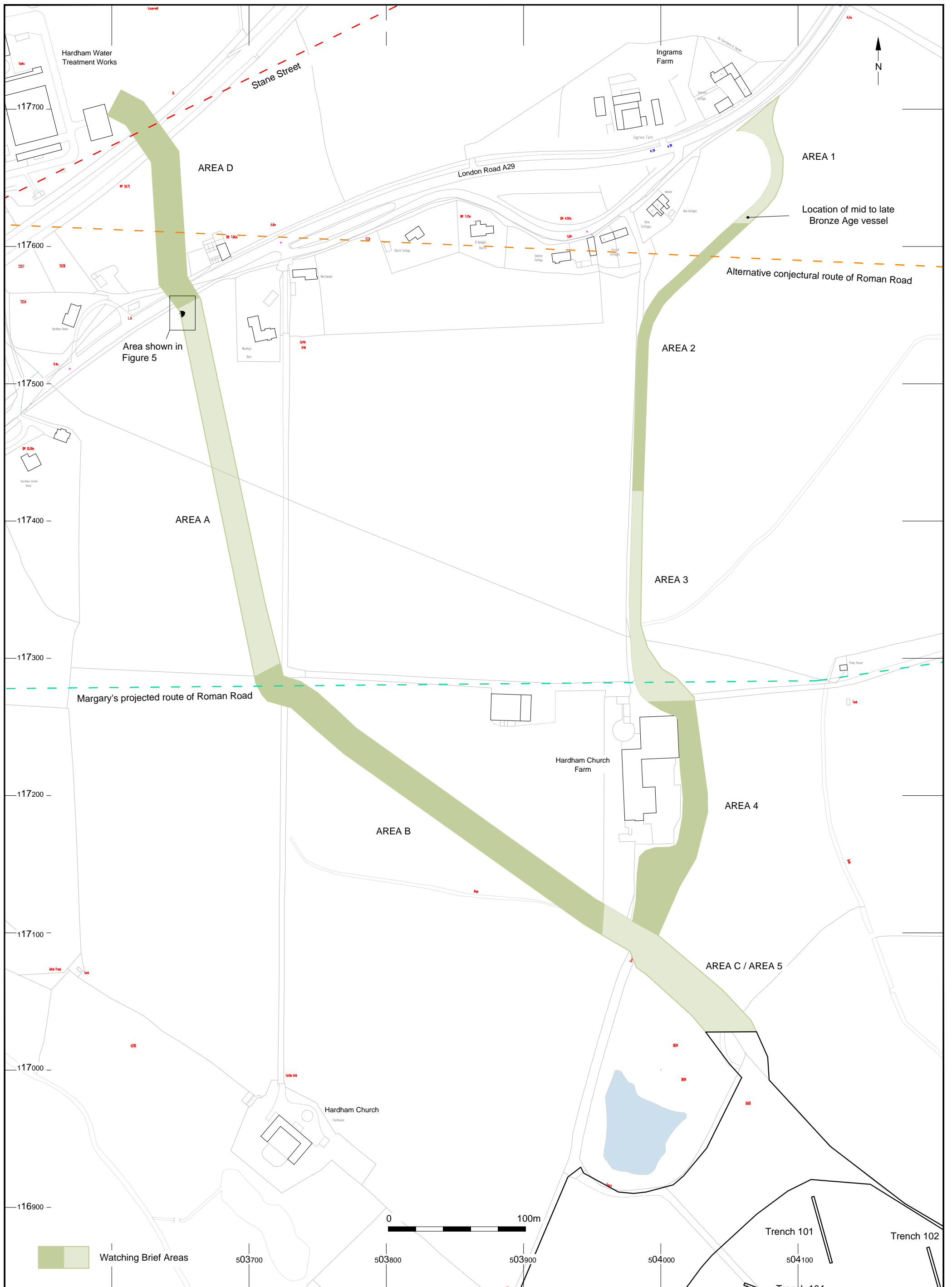


Archaeology South-East		Hardham Tidal Abstraction	
Project Ref: 4337	Oct 2010	Trench location plan	
Report Ref: 2010155	Drawn by: FEG		

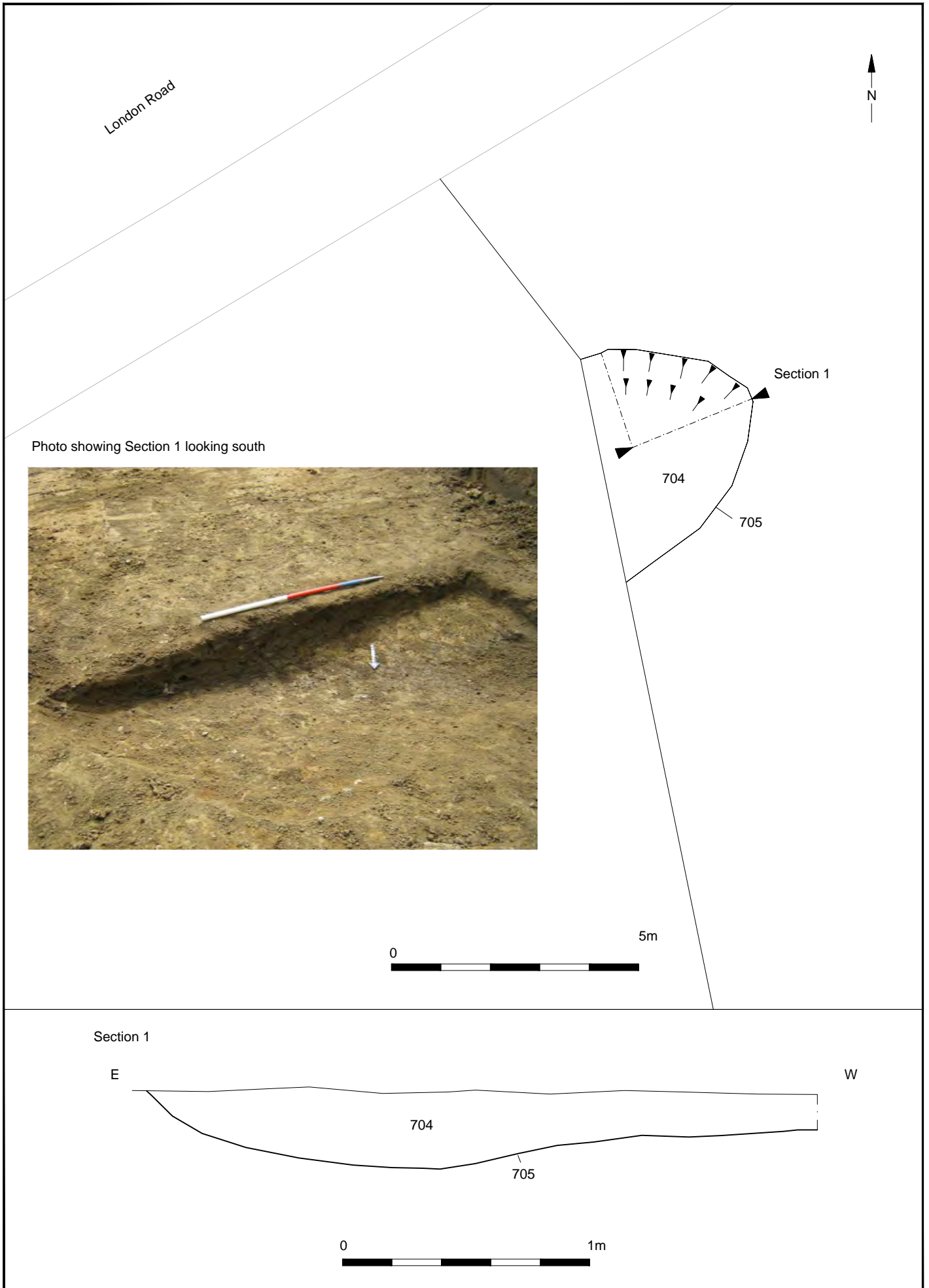
Fig. 2



		Hardham Tidal Abstraction	Fig. 3
Project Ref: 4337	Oct 2010	Plan of trench 8 and photograph of wall foundation [13]	
Report Ref: 2010155	Drawn by: FEG		



		Hardham Tidal Abstraction Watching brief plan	Fig. 4
Project Ref: 4337	Oct 2010		
Report Ref: 2010155	Drawn by: FEG		



		Hardham Tidal Abstraction	Fig. 5
Project Ref: 4337	Oct 2010	Plan, section and photograph of pit [705]	
Report Ref: 2010155	Drawn by: FEG		

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