

**An Archaeological Watching Brief
At Yalding Rising Main,
Yalding, Kent**

NGR: 569103 150586 to 568830 152097



By Pip Stephenson

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Abstract

This report presents the results of an archaeological watching brief carried out by Archaeology South-East at Yalding Rising Main, NGR: 569103 150586 to 568830 152097, between the 3rd of October and the 8th of November 2016. The fieldwork was commissioned by Southern Water in advance of the installation of a new waste water drainage pipe on land lying east of the Medway, to the north-west of Yalding. The works involved the excavation of a 9m wide easement strip and a pipe trench 0.70m wide and 1.5m deep over a distance of c.2km along the east of the Medway valley and onto the upper slopes of Bow Hill.

The river gravels were reached in the southern part of the transect. These were profiled by the production of several detailed sections. There was no evidence of Palaeolithic activity. Small quantities of residual worked flint were recovered, indicative of probable Mesolithic activity concentrated in the valley bottom. Two Mid-Late Iron Age pits were excavated, one in the valley bottom and one on the hill-side, the latter possibly the poorly preserved remains of an inhumation burial. Two further pits may be Roman and late post-medieval in date, but the dating evidence is inconclusive. Pottery retrieved from the surface of the substrate is predominantly late post medieval and indicative of manuring, with slight evidence of Roman, medieval and 17th century activity. Land improvement and management evidence was confined to a late post-medieval field drain to the south of the site and more modern drainage implemented in the adjacent field.

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1.0 INTRODUCTION

1.1 Site Background

- 1.1.1 Archaeology South-East (ASE), was commissioned by MGJV (hereafter 'the client') to undertake an archaeological and geoarchaeological watching brief during ground works associated with installing a section of replacement rising main on behalf of Southern Water. The replacement section was installed between Yalding Old Works Water Pumping Station (NGR 569103 150586) to an existing washout chamber located on the existing rising main approximately 1.5km to the north (NGR 568830 152097) hereafter 'the route' (Fig. 1).

1.2 Geology and Topography

- 1.2.1 The underlying solid geology of the site mapped by the British Geological Survey (BGS) varies along the pipe route. The majority comprises Quaternary period River Terrace Deposits (Clay & Silt) overlying Weald Clay Formation (mudstone). The northern end of the site, where it traverses higher ground, crosses Hythe Formation Sandstone and Limestone and is likely to encounter Holocene Alluvium (BGS 2016).
- 1.2.2 The southern part of the Site traverses low-lying ground east of the Medway River Valley, running parallel to the river. The northern segment, (beyond CH1044) traverses flattish higher ground, on the western side of Bow Hill.

1.3 Planning Background

- 1.3.1 The works fall within permitted development and this investigation was conducted as best practice by Southern Water. ASE consulted the Kent County Council (KCC) Archaeology Officer, Wendy Rogers (hereafter the KCC Archaeologist) who provided useful comments on the scale and scope of archaeological involvement as follows:

'The proposed route does extend through River Terrace Gravels within the southerly section although BGS suggests it tapers out west of Kenward. Kenward itself is of 18th century origins and the water works extend through land which may have been part of its associated parkland. The land seems now to be ploughed fields and historic boundaries seem to have gone.'

'Subject to confirmation of the extent and depth of groundworks, it would be useful for an archaeologist with experience of Palaeolithic archaeology to monitor the groundworks. If Southern Water are undertaking any test pitting it would be worthwhile archaeologically monitoring that to get an idea of deposits.'

'In summary, there is some interest in the Palaeolithic or later prehistoric potential and, subject to confirmation of groundworks details, it would be worthwhile having a watching brief.'

- 1.3.2 An archaeological watching brief was undertaken in line with in a Written Scheme of Investigation (WSI) which was prepared by ASE (2016) and submitted to the KCC Archaeologist for information in advance of fieldwork commencing. This document was prepared in accordance with relevant Standards and Guidance of the Chartered

Institute for Archaeologists (ClfA 2014a-c) and relevant generic KCC Specifications (KCC 2011a; KCC 2011b), all work to be reported upon in line with guidelines set out in Management of Research Projects in the Historic Environment (MoRPHE; Historic England 2015). The WSI was considered sufficient to cover all eventualities but it was noted that a final decision on site as to how to proceed in the event that *significant* remains were revealed in the Watching Brief would be determined in agreement with the client, Southern Water and the KCC Archaeologist.

1.4 Aims and Objectives

1.4.1 The aims of the investigation, in keeping with previous similar projects were:

- To enable any archaeological deposits and features disturbed during the proposed works, to be adequately sampled, recorded, interpreted and reported on with particular reference to the Palaeolithic potential of the River Terrace Gravel deposits;
- To identify, record and date any historic landscape features that formerly existed west of Kenward.

The specific aims of the project were:

- To determine the presence of Roman remains on site.
- To determine the presence of medieval and post-medieval remains particularly the mapped landscape features associated with Kenward towards the northern end of the pipeline route.

1.5 Scope of Report

1.5.1 The current report provides results of the archaeological work carried out at the site between 03-10-2016 to 01-11-2016 and 08-11-2016. The fieldwork was directed by Pip Stephenson and Tom Munnery. The project was managed by Neil Griffin (Project Manager) and by Jim Stevenson (Post-Excavation Manager).

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 Overview

- 2.1.1 The KCC Historic Environment Record (HER) was consulted prior to the works and entries within 1km of the pipeline route were documented in the WSI (ASE 2016). The archaeological background below draws principally upon the information provided by this search (appendix 1) with complementary research as appropriate.

2.2 Period Summaries

Palaeolithic

- 2.2.1 The Palaeolithic period is divided into Upper, Middle and Lower periods. The Lower and Middle Palaeolithic remains have been shown to date from before c.50,000 (BP), and to be associated with the extinct Neanderthal lineage and their ancestors ('Archaics'). Upper Palaeolithic remains date from c.40,000 BP, and are associated with the first appearance of modern type humans (Wenban-Smith et al, 2007, 3). A recent project was implemented in the Medway region, the Medway Valley Palaeolithic Project (MVPP: Wenban-Smith et al, 2007), concerning deposits belonging to the Lower and Middle Palaeolithic. Its study region incorporating the Medway valley north of Maidstone (ibid, 2). There is no known Upper Palaeolithic evidence in the Medway region studied by this project, but considerable material has been produced in the nearby Maidstone area. According to the final report:

'Numerous Palaeolithic artefacts have been recovered in the area, mostly from pits near Aylesford. Levalloisian material is reasonably abundant, being reported from five of the 16 recorded sites. There are also two sites in the Maidstone area with bout coupé handaxes — Johnsons Pit and Clubb's Ballast Pit. The provenance of these handaxes is uncertain, although both probably came from Devensian gravels underlying the present Medway alluvial floodplain. Bout coupé handaxes are thought to date to the middle of the last (Devensian) Ice Age, and so represent late Middle Palaeolithic Neanderthal presence in the region.' (Wenban-Smith et al, 2007, 5)

- 2.2.2 The 1km search produced no Paleolithic findspots. A small hand-axe of Middle Acheulian type has been found to the west of Nettlestead Green at TQ 677 508 on the opposite side of the Medway.

Mesolithic – Iron Age

- 2.2.3 Mesolithic occupation, occurring after the restoration of the land bridge with continental Europe, tended to penetrate inland along river valleys providing access inland from the coast, although temporary camps within rock shelters may be found on higher land. A profusion of finds has been discovered on the greensands around Ightham: that pattern of recovered Mesolithic flintwork on the Lower Greensand Ridge also occurs in Sussex. Mesolithic flint was retrieved from the subsoil interface on a similarly low-lying site on the west bank of the Medway located less 1km to the south (ASE 2008). The presence of a probable base-camp was inferred.

Neolithic – Bronze Age

- 2.2.4 The Neolithic period is a time of warmer temperatures and more settled human occupation, allowing the slow development of more permanent farming in which transhumance and sporadic land clearances occur. Much of the evidence for the Neolithic

period in Kent is found in the north of the county. Outside more major monumental remains, these are usually characterised by findspots of axes, flint scatters and occasional pits. The absence of Neolithic structures in the Low Weald during this period means that the potential of the area for containing structural remains, based on current evidence, is generally considered to be low (Duncan and Yates 2006). Flints continue to be produced throughout the later prehistoric, despite the emergence of Bronze and Iron technologies. In the Bronze Age, there is a concentration of deliberately-placed finds in the River Medway valley signifying the importance attached to this communication route. Late Bronze Age discoveries in the locality have included socketed axes from Yalding, Watlingtonbury and West Peckham and a socketed gouge from Hadlow (Dunkin and Yates 2006). Bronze Age features were identified on the Syngenta site to the south including a Mid-Late Bronze Age / Early Iron Age cremation cemetery and possible evidence for Bronze Age metalworking (ASE 2008).

Iron Age

- 2.2.5 Iron Age finds constituted the only prehistoric activity noted to date within the immediate 1km study area and comprised sherds of late Iron Age 'Belgic' pottery found during excavations at Court Lodge Farm (1) (EKE 394, TQ 6903 5024). Small quantities of Iron Age pottery were also retrieved from the Syngenta site.

Roman

- 2.2.6 Kent experienced contact with Rome from an early date. Following the Roman invasion of AD43, the region became heavily settled, tending to concentrate along the principal routes including Stone Street which ran southwards from Rochester, to access the iron resources of the Weald (Margary 1965, 208-228): it runs through Maidstone, and continues southwards several kms east of the Site.
- 2.2.7 Five copper alloy late Roman coins (**2-6**) as well as sherds of pottery were found (**7**) (MKE 70165) during metal detecting to the south-east of Kenward Farm. Two further late Roman coins (**8-9**) as well as a copper alloy ring (**10**) were recorded at Kenward Farm (TQ 69311 51000).
- 2.2.8 Another notable collection of seventeen late Roman coins was found to the south of Kenward Farm (**11-24**). While no Roman settlement activity has been recorded within the study area, the concentration of finds around Kenward Farm suggests significant activity.

Anglo-Saxon

- 2.2.9 Early Saxon occupation in Kent tended to concentrate on the coastal plain and the river valleys. Nettlestead Place (**25**), lying to the west of the Medway at the northern end of the site, was recorded in the Domesday Book and so is likely to have Saxon origins. No Anglo-Saxon activity was noted within the study area.

Medieval

- 2.2.10 Both Yalding (**26**) and Nettlestead were established as settlements during the medieval period. Nettlestead Place (**27**) lying to the west of the site, was a manor during this period. The earliest part of the manor house is the 13th century undercroft. Further building phases were undertaken in the 15th century. A gatehouse (**28**) and barn (**29**) (TQ 65 SE 44) in the grounds of the house are both of 14th century date. Medieval fishponds have also been recorded below the existing fishpond and Nettlestead Place (**30**).

- 2.2.11 Other major medieval buildings and monuments within the study radius include the Church of St Peter in Yalding (31), St Mary's Church, Nettlestead (32) a Grade I listed 13th century church, Rose Cottages (33) 14th-15th century cottages, Downs Farm House (34) Twyford Bridge (35) a later medieval bridge and the Town Bridge, Yalding (36), a 15th century or earlier bridge.
- 2.2.12 Medieval findspots within the study area include a lead alloy seal matrix (37), medieval ceramic tile (38) and a silver coin of Edward III (39).

Post-medieval

- 2.2.13 The majority of the post-medieval HER data related to listed buildings and monuments, only some of which are relevant. Kenward (40) is a Grade II Listed Building dating to the mid-18th century but sits within land conveyed to the Kenard family in 1533. The house lay within Kenward Farm (41) (MKE 81901) a post-medieval farmstead. Hillside Cottages (42) (TQ 75 SW 219, TQ 7002 5052) are a row of Grade II listed cottages to the east of the site.
- 2.2.14 Further relevant listed buildings include:
- Bow Hill House (43) Grade II listed building with possible medieval origins.
 - Court Lodge and the Dairy House (44) 17th century farmhouse and associated dairy, Grade II listed.
 - Stables west of Bow Hill House (45) 18th century stables.
 - Cleaves Hall (46) Grade II listed building with possible medieval origins.
 - Former Barn and Byres west of Court Lodge (47) Grade II listed buildings.
- 2.2.15 Numerous abandoned and altered farmsteads lay within the study area; geographically these vary in relevance and so only the closest to the site are described here:
- Kenward (48) altered farmstead 18th century or later
 - Outfarm of Hillside Cottage (49) an altered 19th century farmstead
 - Kenward Farm (41) 16th century or later driftway farmstead
 - Court Lodge (50) multi-yard farmstead
 - Nettlestead Place (51) multi-yard farmstead
 - Farmstead to south-west of Bow Hill House (52) row plan farmstead, 19th century.
 - Outfarm south east of Kings Cottages (53) field barn with no associated yard
- 2.2.16 Post-medieval findspots with the study area include a lead alloy cloth seal (54), two copper alloy strap fittings (55-56) and a lead alloy toy (57) all found at TQ 69347 50867, and post-medieval pottery found during a watching brief at Jasmine Cottage (58).
- 2.2.17 Historic mapping from at least 1870 indicates that historic field boundaries and a possible east-west watercourse west of Kenwards were gradually removed from the mid-20th century. These former landscape features will be crossed by the proposed pipeline.

2.3 Recent Archaeological Investigation

- 2.3.1 An evaluation at Rose Cottage (59) (EKE 11384), watching briefs at The Barn, The Elms (60) (EKE 9932), Lyngs Farm (61) (EKE 9736) and Twyford Bridge (62) (EKE 11233) did not find any archaeology. A reported excavation at Yalding Bridge (63) (EKE 3913) does not record any details of the findings.
- 2.3.2 An archaeological excavation at the Syngenta site on the west side of the Medway to the south-west (NGR: 56840 15020) produced evidence of Mesolithic occupation and Late Bronze Age – Iron Age activity (ASE 2008).

3.0 ARCHAEOLOGICAL METHODOLOGY

3.1 Excavation and Recording Methodology

- 3.1.1 The archaeological work consisted of monitoring topsoil stripping (compound and easement) as well as subsequent excavations for open cut trenching and drill/receptor pits along the route. The easement strip was observed along its length but observation of the pipe-trench ceased at c.Ch1080 (1.08km from the south). All work was undertaken in accordance with the WSI and generic KCC Specifications (KCC 2011a; KCC 2011b) unless otherwise agreed in writing by the KCC Archaeological Officer.
- 3.1.2 Excavation work was carried out with a machine fitted with a toothless bucket whenever practicable and monitored at all times by an archaeologist unless it became clear beyond reasonable doubt that no archaeological remains were likely to be exposed (e.g. once excavation reached undisturbed natural subsoils). All mechanical excavation and plant movement carried out by the client was undertaken with due regard for the potential to encounter archaeological remains.
- 3.1.3 The site was divided into five areas to facilitate orientation, corresponding to the fields traversed by the pipeline, numbered from south to north (Fig 2). Context numbers were attributed in a continuous series (1-n) across the site.
- 3.1.4 Exposed archaeological features and deposits were cleaned by hand and recorded in plan and section. Context numbers were attributed to the subsoil or interface exposed by the removal of the topsoil to the required depth (250mm) and corresponded to changes in the substrate, not by area. All features were planned at 1:20 and section/wall elevation drawings were at 1:10. Drawings were on plastic draughting film or by means of survey grade differential global positioning system (DGPS) as site conditions and health and safety considerations dictated. Features and deposits were described on standard pro-forma recording sheets used by ASE. All remains were levelled with respect to Ordnance Survey datum. A photographic record was made in digital format, monochrome and colour transparency.
- 3.1.5 The spoil from the excavations was inspected by the ASE archaeologist to recover any artefacts or ecofacts of archaeological interest. A metal detector was used at regular intervals to scan spoil derived from the excavations and at regular intervals during the excavation of archaeological deposits and features wherever practicable. Finds retrieved from the surface of the substrate, were assumed to be the result of post-deposition taphonomic processes. For location purposes they were attributed the substrate context and their location was noted as a 'positioned find' (PF 1-n) in order to assess the potential of localised activity concentrations (Figs. 8, 9, 12, 13).
- 3.1.6 The strategy for sampling archaeological and environmental deposits and structures was developed with reference to English Heritage guidelines for environmental archaeology and waterlogged wood (English Heritage 2002) and in consultation with the Historic England regional advisor or relevant specialists. Bulk soil samples (of 40 litres where possible or 100% of the context if smaller) were taken to target the recovery of plant remains (including wood charcoal and macrobotanicals), fish, bird, small mammal and amphibian bone, and small artefacts from archaeological features.

- 3.1.7 Due to the presence of River Terrace Gravels that could have Palaeolithic and/or palaeoenvironmental potential, machine excavation through such deposits was undertaken with due care under the direct supervision of the appropriately qualified archaeologist. An ASE geoarchaeologist was available to record the lithology of the sediments within the vertical trench profile and geological sections were drawn at intervals along the excavation. These have been reproduced in detail only where the gravels are present (Figs. 4-6). A profile section has been produced to show the varying levels of the gravels along the transect through the valley bottom. (Fig. 7)

3.2 Fieldwork constraints

- 3.2.1 The methodology applied in the fieldwork phase followed the prescriptions of the WSI as far as reasonably possible. Some variations and additional methodological detail is provided below.
- 3.2.2 The groundworks were undertaken in two stages: an initial topsoil strip of an area 9m wide, followed by the excavation of a pipe trench 0.70m wide. The initial topsoil strip was undertaken to an average depth of 0.25mm, in accordance with the requirements of the contractors. Clean substrate was not reached in all areas. The pipe trench was excavated only once a sufficient length of transect was exposed to facilitate insertion of a continuous welded length of plastic pipeline (several hundred metres). This led to the simultaneous observation of works situated a considerable distance apart (up to 1km).
- 3.2.3 A toothless bucket was used to excavate the pipe trench, but the presence of a large hole above the blade caused re-deposition of spoil over the cleaned surface, restricting the clarity of observation during excavation.
- 3.2.4 The pipe trench was excavated to an average depth of 1.60m below the surface of the substrate on the gravel terraces. As a result, the trenches could only be accessed with the assistance of temporary shoring. This facilitated the production of a series of detailed section drawings of the river gravels (in accordance with methodology statement and supplementary guidance from Ed Blinkhorn pers comm.). Regular close inspection of the gravels was undertaken via the samples deposited on the side of the trench taken from the upper, middle and base of the excavation.

3.3 The Site Archive

- 3.3.1 The Yalding Rising Main site archive is due to be deposited with Maidstone Museum. Maidstone Museum is currently not accepting archives due to lack of storage space and they do not issue accession numbers at this stage. The site archive is currently held at the offices of ASE and will be deposited at Maidstone museum in due course. The contents of the archive are tabulated below (Table 1).

Context sheets	36
Section sheets	5
Plans sheets	1
Colour photographs	0
B&W photos	0
Digital photos	183
Context register	2

Drawing register	1
Watching brief forms	24
Trench Record forms	0
Paper Developers plans	10`

Table 1: Quantification of site paper archive

Bulk finds (quantity e.g. 1 bag, 1 box, 0.5 box 0.5 of a box)	0.5 box
Registered finds (number of)	0
Flots and environmental remains from bulk samples	0.5 box
Palaeoenvironmental specialists sample samples (e.g. columns, prepared slides)	0
Waterlogged wood	0
Wet sieved environmental remains from bulk samples	6 bags

Table 2: Quantification of artefact and environmental samples

- 3.3.2 The finds and environmental samples ultimately deposited as part of the archive are dependent on specialist recommendations and regional archive requirements.

4.0 RESULTS

4.1 Geology

- 4.1.1 A series of representative sections of the pipe trench were drawn at intervals along the transect where it traversed the river terraces, in order to explore the nature and changes in sedimentation processes. With the exception of the first section (Section 1), contexts were not attributed. A representative selection of the detailed field drawings has been reproduced for the following geo-sections, shown in figures Figs.3-6. The changing profile of the gravels and superficial deposits across the river valley has been reconstructed from the ensemble of the section data (Fig. 7)

Section 1 @ CH 130.19 (Fig 3 and 7)

- 4.1.2 A section drawn at the extreme south of the pipe-trench, at the southern end of Field 1, revealed thick bands of reddish brown clay-silt [16] and clay [17] sealing the top of the gravels to a depth of c.1.35m below current ground level.

Section 2 @ CH 400

- 4.1.3 The top of the gravel rose gradually across Field 1, rising to c.-0.85 into Field 2. The gravels at this point were a fairly homogenous dark yellowish – grey fine, loose deposit below 1.20m depth, capped with sandy deposits and an upper layer of coarser gravels. After CH420, the deposits in Field 2 became increasingly dynamic, the lower gravels tipping away northwards, sealed by a thick band of yellow clay which also tipped away northwards at c CH460, to be sealed by further gravel reached a depth of 1.70m, the surface of the gravel situated at a depth of 1.50m. The activity in this area may indicate the presence of a palaeochannel. The surface of the gravels rose rapidly to reach 0.50m below current ground level at CH500.

Section 3 @ CH 500 (Figs. 4 and 7)

- 4.1.4 At CH500 towards the north of Field 2, the introduction of temporary shoring enabled detailed recording of the nature of the gravels). The deposits at this point were heavily stratified, loose sand and gravels varying between finer and coarser deposits, sealed by a soft light brown clay silt alluvium.

Section 4 @ CH 550 (Figs. 5 and 7)

- 4.1.5 The top of the gravels remained constant into the southern part of Field 3. The upper deposit [05], sealed by the topsoil was a mid reddish-brown sandy clay-silt, 7cm thick with frequent patches of gravel, demonstrating a coarser gravelly matrix than the upper alluvial clay-silts to the south. This deposit remained visible on the surface of the easement strip over a distance of c50m. The emergence of a gravelly deposit so high in the sequence at this point may have allowed for better drainage and enabled the implantation of limited occupation in the Mid-Late Iron Age, attested by pit [04] established in this deposit (see below). It sealed a compact light reddish-brown clay-silt deposit 0.22m thick which overlay the very loose river gravels. These emerged at 0.50m below ground level. The upper sediments (0.70m) were dominated by bands of coarse reddish sand alternating with fine and coarser gravels. Towards the base of the stratigraphy the matrix was predominantly greyish-brown coarser sandy gravels.

Section 5 @ CH 650

- 4.1.6 Further to the north in Field 3, deposit [05] was no longer present, the gravels in this

location were sealed by a 0.50 thick deposit of mid brownish red clay silt, with the top of the gravels occurring at c.0.75m below the current ground level.

Section 6 @ CH700

- 4.1.7 At this point the gravels were not reached by the sondage, excavated to a depth of 1.10m below ground level. The entire sequence comprised deposits with a high clay matrix. The upper deposits (0.50m) comprised greyish/red-brown silty-clays sealing a band of grayish-yellow clay over sticky orange-grey clay at the base. The upper deposit corresponds to substrate deposit [07]. The clay matrix suggests an area of less dynamic alluvial deposition and corresponds to a poorly-drained modern, and probably historical land surface. The water-table was reached at the base of this trench.

Section 7 @ CH750

- 4.1.8 Further north the clays were sealed by a yellowy orangey-brown brickearth deposit [08], the top of the clay reached at 0.60m below current ground level. Towards the base of the trench at 1.60m below ground level, a deposit of light-mid grey sticky clay was reached, which contained charcoal flecks and possible traces of organic matter.

Section 8 @CH1030

- 4.1.9 Gravels were once again reached at a depth of 1.0m, dominated by finer dark-brown gravels and sands towards the top of the sequence (0.75m) and loose, coarser light-greyish brown sandy gravels at the base (0.30m) (Figs. 6 and 7)
- 4.1.10 From CH1200 the transect traversed higher ground, leaving the river gravels. As such, detailed observation of the pipe-line stratigraphy was no longer undertaken. The substrate thereafter was dominated by light brownish-grey sandy-clay-silt [22] which emerged on the slope in Field 4. A narrow strip of a mid-orangey-brown sandy-clay deposit [25] overlay [22] at CH1400.

Context	Area (Field)	Type	Interpretation	Max. Length m	Max. Width m	Deposit Thickness m
02	1 and 2	Layer	Upper substrate		9.0	0.05
05	3	Layer	Upper substrate	100	9.0	0.07
07	3	Layer	Upper substrate	60	9.0	0.20
08	3	Layer	Upper substrate	230	9.0	0.25
13	3	Layer	Upper substrate	120	9.0	-
15	2	layer	Silt below [02]	-	0.50	0.30
16	2	Layer	Alluvial silts	-	0.50	0.50
17	2	Layer	Alluvial clay	-	0.50	0.50 – 0.60
18	2	Layer	Alluvial gravels	-	0.50	0.20+
20	4	Layer	Upper substrate	100	9.0	-
22 (36)	4, 5 (6)	Layer	Upper substrate	100	9.0	-
25	5	Layer	Upper substrate	9.0	7.0	-

Table 3: List of recorded substrate contexts

4.2 Fields 1 and 2 (Fig. 8)

- 4.2.1 The topsoil strip of the easement at the south of the transect where it traversed Fields 1 and 2, did not reach a clean substrate horizon but exposed the interface [02] between topsoil and the subsoil (see Table 3). As such there was little possibility for surface archaeological observation and no features were recorded.

Field drains, Field 1 and Field 2

- 4.2.2 Two types of field drain were observed in this section. In Field 1 at c. CH 225 a field drain was observed cut into the substrate at a depth of c.0.60m below current ground level (Fig. 8). It could not be seen in the northern section. A narrow steep-sided cut, [23] c.0.25m across at the top, narrower at the base and 0.60m deep, contained a loose dark greyish-brown sandy silt deposit [24] with frequent chalky gravel and larger sub-angular blocks at the base. A fragment of Ceramic Building Material (CBM) retrieved from this deposit is likely to date from the late 18th century or later.
- 4.2.3 Field 2 was drained by a more modern system. The transect was diagonally traversed at intervals by a series of clay-pipe field drains. These were yellow or orange in colour with ribbed exterior and an aperture c.0.5m across.

Surface finds

- 4.2.4 Finds were retrieved from the exposed horizon of the substrate. These were presumed to be the result of plough disturbance to the substrate and manuring. Their locations were roughly plotted (Fig. 8). A low incidence of finds was observed in Field 1, but increased towards the north of the area. The centre of Field 2 contained a concentration of find-spots (Figure 8). Unfortunately, the metalwork retrieved (5.11) provides little supplementary evidence for dating or landuse.

Struck Flint

- 4.2.5 Thirteen pieces of struck flint were recovered, three of which probably date to the Mesolithic or Early Neolithic, 6 to the Mesolithic or Early Bronze Age and two could not be dated with greater precision than between the Mesolithic and Late Bronze Age. This assemblage represents a relatively localised concentration contrasted to a relative sparsity of struck flint identified in adjacent [05]. The flint assemblage comprised 6 flakes, 4 blade and blade-like flakes, a hammerstone and 2 retouched pieces: an end-and-side scaper and a piercer.

Pottery and CTP

- 4.2.6 Six pottery sherds were retrieved from Fields 1 and 2, a single Roman, a single medieval sherd dated AD 1125 – 1325, and the remainder 19th century in date. A fragment of Clay Tobacco Pipe (CTP) is dated to the early 18th century. All the material is presumed to derive from manuring and these fields were certainly under agricultural exploitation by the late 19th century (OS map 1880s: <http://digimap.edina.ac.uk/roam/historic>), but the land may also have been in use in the Roman and medieval period prior to the mid-14th century, although agricultural activity cannot be specified.
- 4.2.7 Material from the Roman period is very slight, comprising a single shed of undiagnostic unsourced Roman sandy ware. The only other significant assemblage of Roman pottery retrieved from the site came from nearby context [05] in Field 3. This was retrieved from the vicinity of occupation evidence dating to the Mid-Late Iron Age (150-1BC) (pit [04]). Previously retrieved Roman artefacts recorded in the HER data (Table Appendix 1) are exclusive to a locality to the south-east of these findspots. Although slight, this evidence therefore suggests a localisation of Roman activity towards the southern end of the Site, in the vicinity of Field 2 and the south of Field 3.

Context	Type	Interpretation	Max. Length m	Max. Width m	Deposit Thickness m
23	Cut	Field drain	9.0	0.30	0.60
24	Fill	Fill of [23]	9.0	0.30	0.60

Table 4: List of recorded contexts (excluding substrate), Fields 1 and 2

4.3 Field 3 (Figs 9 and 10)

CH543 – CH700

- 4.3.1 The topsoil strip of the easement in the south of Field 3 did not reach a clean interface with the substrate [05] which was a reddish-brown sandy-silt with a gritty gravelly matrix (Table 3). A single isolated pit [04] was identified truncating this deposit, situated towards the southern limit of the transect. This was identified as a result of a pottery concentration on the surface and was not otherwise visible. The immediate surrounding area was cleaned to the surface of the substrate but no associated features were identified.
- 4.3.2 Pit [04], was a small pit, with a rounded concave profile and a shallow lip on the northern side. It measured 1.90m by a maximum of 0.90m, the body of the pit being 0.60m wide (Fig. 10). It truncated surface substrate deposit [05] towards the south of Field 3 and contained a single fill, which was divided into upper and basal deposits [03] and [06] to test for variation between surface and basal inclusions. Two samples were retrieved, <1> from the upper deposit [03] and <2> from the basal deposit [06]. The deposits [03] and [06] were dark-greyish or blackish-brown clay-silt with frequent small charcoal inclusions, frequent small and occasional larger fragments of burnt clay and moderate to frequent pottery. Some larger flat-lying fragments were found at the base of the pit. The pit edges were reddened in places indicating either in-situ burning or the deposition of hot material.
- 4.3.3 The pottery assemblages from [03] and [06] probably belong to a transitional Middle/Late Iron Age period, dating to around the later 2nd or earlier 1st centuries BC. A small flint assemblage comprising 2 flakes and 3 chips is attributed a Mesolithic to Late Bronze Age date and is assumed to be residual. The numerous fired clay fragments recovered included one that contained three wattle impressions and two other fragments possibly deriving from a fired clay object. No other significant material was retrieved.
- 4.3.4 Charred plant macrofossils were occasional in pit [04] and may represent a cultivated variety. The charred plant remains from the pit likely represent 'background' noise of cereal crop processing. A single poorly-preserved large legume (Fabaceae) was also present.
- 4.3.5 There was no clear evidence to indicate pit-function. The pottery assemblage, comprised larger sherds together with fired clay, at least one fragment of which has wattle impressions that would suggest the likely proximity of settlement in this period.

Surface Finds

- 4.3.6 Surface finds retrieved from substrate deposit [05] include struck flint dated between the Mesolithic and Bronze Age, a fragment of fire cracked flint, a single Late Bronze Age – Early Iron Age pottery sherd and small quantities of Iron Age and Roman pottery.

CH700 – CH750

- 4.3.7 The transect reached a low-point in this area. The clay nature of the surface substrate [07] (Table 3) attests to the likelihood of boggy, waterlogged conditions. Two late post-medieval deposits [14] and [21] were identified underlying the northern edge of [07] and both suggest attempts at consolidation of a waterlogged area.
- 4.3.8 Deposit [14] was identified by manual excavation of a small area 0.5 x 0.5m removing the surface sediment [07] to reveal a light yellowish-silty-clay with frequent inclusions of charcoal, occasional coal fragments and clinker. This deposit was dated to 1750 – 1900 by the presence of a single CTP stem.
- 4.3.9 Deposit [21], which was exposed over an area 1.5 x 1.5m, was located under the northern limit of deposit [07] and proved to be a disorganised spread of rounded stones ($\leq 0.10 \times 0.10$) with associated deposits of tile, some pottery and frequent coal fragments. The tile is likely to be 18th century or later and the pottery dates to the first half of the 19th century (1800-1840).
- 4.3.10 No surface finds were retrieved.

CH750 – CH1200

- 4.3.11 This transect, turning north-east after c.CH700, began to climb gently and lay at the base of an increasingly steep slope to the immediate east. The surface substrate, a firm light yellowish-brown sandy-clay silt [08], remained constant along much of this length changing to a heavier yellow-clay matrix [13] with frequent ploughmarks at CH1044 (Table 3). The regular surface finds retrieved from along the length of deposit [08] are likely to result from ploughing and are increasingly likely to have moved down-slope from an initial point of deposition.
- 4.3.12 Historic maps of the 1870s and again in the 1960s (not reproduced) suggest the presence of water channels traversing the line of the transect to the west of Kenward House. The locations of two possible channels [9] and [11] were identified during the easement strip, as was a possible linear alignment of rounded ragstone fragments [19] (Figs 9 and 11).
- Channel [9] (Figs. 9 and 11)
- 4.3.13 A linear feature 3.5m wide was thought to traverse the transect at CH1044, in-line with a modern drainage channel lying to the immediate west. This feature was not confirmed during excavation of the pipe trench.
- Channel [11] (Figs. 9 and 11)
- 4.3.14 A segment of a probable linear east-west channel, c.3.5m wide, was situated on the east side of the transect at CH970. This was marked by the presence of a dark greyish-brown fill [12]. It extended 3.0m into the trench where it was truncated by a modern machine trench. As such it was not observed in profile. It probably represents at least one phase of the drainage features noted on historical map evidence.
- Stone alignment [19] (Figs. 9 and 11)
- 4.3.15 A series of rounded ragstone blocks, varying between 0.10 x 0.10m and 0.40 x 0.25m in size, traversed the transect on a north-east to south-west orientation at c.CH980. Surface excavation to expose the stone identified no associated cut for a linear or foundation cuts

for the stones, and the deposit is thought to be natural.

Surface Finds (Fig. 9)

- 4.3.16 Finds retrieved from the surface of [08] included eleven pieces of flintwork: eight flakes, two blades or blade-like flakes, two probably Mesolithic exhausted cores and one retouched flake. Five pieces overall are likely to predate the Middle Bronze Age. The pottery includes one sherd of Late Iron Age – Early Roman pottery three medieval findspots, two sherds dating between AD 1175-1250 and the remainder dating between AD 1200 and 1350. Context [08] produced a single 17th century potsherd and both [8] and [13] yielded small quantities of late post-medieval pottery.

Context	Type	Interpretation	Max. Length m	Max. Width m	Deposit Thickness m
03	Fill	Upper fill of pit [04]	1.40	0.90	0.20
04	Cut	Pit	1.40	0.90	0.30
06	Fill	Basal fill of pit [04]	1.40	0.60	0.10
09	Cut	Possible linear channel (discarded)	9.0	3.5	-
10	Fill	Fill of [09]	9.0	3.5	-
11	Cut	Probable linear channel	3.0 (truncated)	3.5	-
12	Fill	Fill of [11]	3.0 (truncated)	3.5	-
14	Layer	Dump	0.5	0.5	-
19	Linear	Stone alignment (natural)	11.0	c. 0.50	0.20
21	Layer	Stony dump	1.5	1.5	-

Table 5: List of recorded contexts (excluding substrate), Field 3

4.4 Fields 4 and 5 (Fig. 12)

- 4.4.1 In Field 4 (CH1200 – c.Ch1380), the transect climbed in altitude achieving the western edge of Bow Hill in Field 5 (c.CH1380 – CH1582). Three subsoil contexts were recorded, [20], [22] and [25] (4.1.10) but no archaeological deposits were observed. Surface finds comprise six flints (three from context [20] and three closely grouped near CH1500, comprising four flakes, one blade or blade-like flake and one scraper. All the pieces date between the Mesolithic and Early or Late Bronze Age.

4.5 Field 6 (Figs 13-15)

- 4.5.1 The transect traversed level ground across the western edge of Bow Hill, dropping down partially only at the northern end. The substrate [22] remained constant, but was renumbered as [36] in Field 6. Three pits were identified, pits [26], [30] and [33], the former likely to be late post-medieval in date, the latter two dating to the Mid-late Iron Age (probably 150 – 1 BC).

- Pit [26]
- 4.5.2 Pit [26] was a circular pit measuring 0.86m across and 0.17m deep, with steep sides and a flat base (Fig 14). It contained two fills. The primary fill [27] was a charcoal-rich deposit 0.07m thick from which small quantities of CBM and glass were retrieved. The secondary fill [28] was a light greyish-brown clay-silt with occasional small stones. A single sample <4> was retrieved from the primary deposit [27]. Small quantities of pottery retrieved from the sample <4> from fill [27] date to the early 19th century, but may be intrusive. A small quantity of peg tile was also retrieved. In the absence of earlier dating, it is likely that this pit belongs to the late post-medieval period.
- 4.5.3 Sample <4> yielded frequent wood charcoal, and oat grains in small numbers. This is likely to represent only background noise of crop processing in the vicinity.
- Pit [30]
- 4.5.4 Pit [30] was a sub-rectangular pit measuring 1.84m x 1.30m and 0.40m deep, with steeply sloping sides and a flattish base (Fig 15). It contained two fills. The primary fill [31] was a mid yellow-brown silty clay with frequent charcoal, moderate stones, a moderate pottery assemblage and a small quantity of disarticulated human bone and four teeth (molars). The upper fill [32] was a moderately compact light yellowish-brown silty-clay containing moderate charcoal and occasional burnt clay. The presence of significant quantities of charred grain was recorded in [31], concentrated on the north-east side of the pit. A single sample <5> was retrieved from the primary fill [31] and this yielded abundant well-preserved cereal grains
- 4.5.5 The pottery dates to the Mid-Late Iron Age. The bone assemblage from basal fill [31] comprised fragments of tibia and fibula from an adult individual. The organisation of the human remains and the absence of burnt bone may suggest these to represent the remains of a poorly conserved crouched burial.
- Pit [33]
- 4.5.6 Pit [33] was an ovoid pit measuring 1.69m x 1.14m x 0.68m deep, with very steep sides and a rounded, uneven base (Fig 15). It contained a firm mid-brown silty-clay basal fill [34] and a mid-brown sandy clay-silt upper deposit [35]. The environmental sample <6>, taken from context [34] yielded non-diagnostic sandy-ware sherds dated to the Roman period. These were recovered along with a very small fragment of post-medieval glass, likely to be intrusive. Neither yielded further significant evidence of material culture, with the exception of fired clay fragments. Much of this material has been subjected to a high temperature and may derive from the body of a heat-proof structure or kiln although no burning is noted on the side of the pit. The pottery evidence may date this pit to the Roman period, but the small sherd size renders this inconclusive and the possible presence of mortar on some of the fired clay fragments may instead indicate a relatively recent date.
- Surface Finds
- 4.5.7 Two surface finds were retrieved from the substrate towards the south end of Field 6 [36], and comprise a single flint flake dating from the Mesolithic – Early Bronze Age and a late post medieval potsherd.

Context	Type	Interpretation	Max. Length m	Max. Width m	Deposit Thickness m
26	Cut	Pit	0.86	0.85	0.17
27	Fill	Primary fill of pit [26]	0.86	0.85	0.07
28	Fill	Secondary fill of [26]	0.65	0.65	0.14
30	Cut	Pit	1.86	1.30	0.40
31	Fill	Primary fill of pit [30]	1.86	1.30	0.22
32	Fill	Secondary fill of [30]	1.10	1.10	0.18
33	Cut	Pit	1.68	1.14	0.40
34	Fill	Basal fill of pit [33]	1.52	1.14	0.30
35	Fill	Secondary fill of [33]	1.68	1.14	0.40

Table 6: List of recorded contexts (excluding substrate) Filed 6

5.0 THE FINDS

5.1 Summary

- 5.1.1 A moderate-sized assemblage of finds was recovered during the watching brief at Yalding, Rising Main. All finds were washed and dried or air dried as appropriate. They were subsequently quantified by count and weight and were bagged by material and context (Table 7). All finds have been packed and stored following ClfA guidelines (2014c). A number of bulk finds were issued with plotted finds numbers in the field. These are also quantified in the table and addressed within the relevant material category.

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Human Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)
02	22	164	8	116	13	265					2	84			1	2	1	8				
03	3	18	63	356													1	26	17	84		
05	1	8	24	90																		
06	2	48	37	384															13	138		
08	10	60	11	79													1	29				
10											2	20										
13	1	1	1																			
14									1	2					1	4						
20	3	30																				
21			3	20	6	136					1	12										
22	2	22	1	12									2	22								
23					1	160																
27					1	<2															1	<2
31	1	<2	32	96			9	44					13	68					3	10		
35							2	6											78	346		
36	3	32																				
PFs	4	22	1	6							1	10										
Total	52	405	176	878	21	561	11	50	1	2	6	126	15	90	2	6	3	26	111	578	1	0

Table 7: Finds quantification (PF = plotted bulk finds)

5.2 The Flintwork by Karine Le Hégarat

- 5.2.1 A total of 40 pieces of struck flint weighing 247g and a flint hammerstone fragment weighing 16g were recovered along the route of the Yalding Rising Main. No large concentrations were found, and considering that the flints were recovered from five fields (Fields 1, 2, 3, 4 and 6), the quantity of material is low. The pieces were principally recovered from various deposits below the top soil, and five pieces were recovered from two pits (Table 8). The assemblage is small, but it provides evidence for prehistoric

presence in the landscape. Unfortunately, no chronologically diagnostic pieces were found, and the majority of pieces can't be precisely dated. Nonetheless, based on technological and morphological traits a few pieces indicate human presence during the Mesolithic and Neolithic period. A few pieces are likely to be later.

- 5.2.2 The pieces of struck flint were individually examined and classified using standard set of codes and morphological descriptions (Butler 2005, Ford 1987 and Inizan *et al.* 1999). Basic technological details as well as further information regarding the condition of the artefacts (evidence of burning or breakage, degree of cortication and degree of edge damage) were recorded. Dating was attempted when possible. The assemblage was catalogued directly onto a Microsoft Excel spreadsheet.

Field	Context	Flake	Blade and blade-like flake	Chip	Blade core	Retouched pieces	Hammerstone	Total
1 & 2	Deposit [02]	6	4	-	-	2 - End-and-side scraper, piercer	1	13
3	Pit [04]	2	-	3	-	-	-	5
3	Deposits [08]	8	2	-	2	1 Retouched flake	-	13
4	Deposits [20] and [22]	4	1	-	-	1 Scraper	-	6
6	Pit [31]	2	-	1	-	-	-	3
6	Ploughsoil [36]	1	-	-	-	-	-	1
Total		23	7	4	2	4	1	41

Table 8: the flintwork

- 5.2.3 The most commonly encountered flint within the assemblage consists of a mid to dark grey flint with occasional inclusions. A few pieces were also manufactured on a light brown flint. Were present, the cortex was stained, abraded and thin (between 1 and 2mm). This material is typical of chalk-derived flint, and it could have been obtained from surface deposits. No gravel-derived flint were noted. Overall, the flints display moderate to extensive edge-damage, possibly a result from successive re-depositions. Twenty two pieces are broken. Most pieces were free from surface cortication, but six pieces are re-corticated light-bluish or pale grey.
- 5.2.4 The small assemblage is largely composed of un-retouched pieces of flint débitage products, and no diagnostic pieces were present. In total, 23 flakes, two blades, five blade-like flakes, four chips, two cores, four modified pieces and a hammerstone fragment were recovered. The majority of pieces can't be closely dated. However the presence of blade cores from context [08] strongly suggests a Mesolithic date. Both cores are exhausted, weighing just 24g and 21g respectively, and they have been used to remove narrow bladelets. A broken blade from context [02] is a product of a blade-oriented industry; it

indicates a Mesolithic or Early Neolithic date. Although the majority of the flakes can't be dated with any certainty, a few examples display abraded platform edge and a winged platform which indicates a careful reduction strategy. These pieces are likely to pre-date the Early Bronze Age. Four modified pieces were collected; an end-and-side scraper, and a piercer from [02], a retouched flake from [08] and a scraper from [22]. None of the retouched pieces are chronologically diagnostic, but they are all likely to pre-date the Middle Bronze Age.

- 5.2.5 The watching brief has produced a small quantity of struck flints. The material was widely dispersed, and the general moderate to high degree of edge wear implies some degree of post depositional disturbance. Although it indicates prehistoric presence in the area, the small quantity of flints and the absence of concentrated scatters suggest only a "background" activity.

5.3 The Prehistoric and Roman Pottery by Anna Doherty

- 5.3.1 A small assemblage of later prehistoric and Roman pottery was hand-collected from the site, totalling 163 sherds, weighing 943g. The pottery was examined using a x 20 binocular microscope and quantified by sherd count, weight and estimated vessel number (ENV) on pro forma records and in an Excel spreadsheet. Fabrics were recorded according to a site-specific fabric type-series in accordance with the guidelines of the Prehistoric Ceramics Research Group (PCRG 2010). In addition to the material quantified in this report, a very small assemblage was recovered from the residues of environmental samples (Table 17). This pottery was briefly examined to determine whether it was of different character to the hand-collected pottery but not fully recorded.

Site specific fabric type-series

FLIN1 Moderate to common flint of 0.5-2.5mm in a non-silty matrix

GLAU1 Abundant, very well-sorted glauconite of c. 0.4mm and rare large quartz grains of 0.8-1.5mm

GLAU2 Moderate/common, well-sorted glauconite of c.0.3-0.4mm and sparse quartz in a similar size range

GROG1 Moderate, rounded brown iron-rich argillaceous inclusions of c.1-2mm; on surfaces these occasionally appear leached giving a slightly vesicular appearance; no visible quartz at x20

GROG2 Moderate, rounded grog of 0.5-1.5mm in a much denser quartz-free matrix than GROG1

QUAR1 Moderate quartz of c.0.2-0.4mm

QUFL1 Moderate quartz of c.0.2-0.4mm and rare/sparse fairly ill-sorted flint of up to 3mm

QUGL1 Moderate quartz of c.0.2-0.4mm and sparse glauconite in a similar size range

Overview

- 5.3.2 A fairly broad range of prehistoric fabrics was recovered, quantified in Table 9. A single sherd in a moderately coarse non-sandy flint tempered fabric, FLIN1, is possibly the earliest element in the assemblage as this fabric is fairly typical of the Late Bronze Age/Early Iron Age; however, no diagnostic features are present and the sherd was directly associated with both later Iron Age and Roman material in context [05].

Fabric	Sherds	Weight	ENV
FLIN1	1	8	1
GLAU1	39	128	4
GLAU2	1	6	1
GROG1	94	608	9
GROG2	1	8	1
QUAR1	6	15	6
QUFL1	10	34	1
QUGF1	5	109	2
QUGL1	1	3	1
Total	158	919	26

Table 9: Quantification of prehistoric pottery fabrics

- 5.3.3 Moderate-sized pottery groups of over 30 prehistoric sherds were noted contexts [03], [06] and [31]. Possibly the earliest of these is context [031] which contains sherds in typically Middle Iron Age glauconitic fabrics GLAU1, GLAU2 and QUGL1; however no diagnostic material is present and many of the sherds derive from a single vessel. In the other two groups Middle Iron Age style fabrics such as QUGF1, QUAR1 and QUFL1 occur alongside grog-tempered wares GROG1 and GROG2. The co-occurrence of these fabrics probably indicates that these are transitional Middle/Late Iron Age groups, probably dating to around the later 2nd or earlier 1st centuries BC. Just a few rim-sherds were recorded, including a hand-made necked jar in fabric QUGF1 from context [03] and two examples of hand-made plain profile jars in grog-tempered fabric GROG1, from [03] and [06] respectively.
- 5.3.4 A very small number of undiagnostic unsourced Roman sandy ware sherds were hand-collected from the site (5 sherds, weighing 24g). Those from context [05] also contained post-Roman material. In addition, a small number of similar oxidised Roman sandy sherds were noted in the residue of environmental sample <6>, taken from context [34] (7 sherds, weighing 24g); but again these occurred alongside post-medieval glass.

5.4. The Post-Roman Pottery by Luke Barber

5.4.1 The archaeological work recovered 23 sherds of post-Roman pottery, weighing 138g, from one of six individually numbered contexts. The material has been fully listed in Table 10 as part of the visible archive along with a suggested date range for each piece.

Context	Fabric	No	Weight (g)	Comments	Date
02	Unglazed earthenware	1	10	Flower pot x1 (rouletted)	c. 1800-1900
02	Refined whiteware	2	6	Bowl x1 (blue sponged decoration)	c. 1825-1900
02	English stoneware	1	10	Uncertain form x1 (iron wash, salt glaze)	c. 1800-1900
02	Fine-medium sandy ware	1	16	Jug x1 (reduced strap handle)	c. 1225-1325
08	Fine sandy ware (Maidstone type)	1	8	Jug x1 (green glazed)	c. 1225-1350
08	Sandy-shelly	2	2	Cooking pot x1	c. 1175-1250
08	Sandy-shelly	2	16	Cooking pot x1 (triangular club rim)	c. 1200-1275
08	Sand, rare shell	1	1	Cooking pot x1	c. 1200-1275
08	Metallic glazed earthenware	1	12	Uncertain form x1 (metallic glaze all over)	c. 1600-1700
08	Pearlware (Transfer-printed)	3	8	Plate x3 (willow pattern)	c. 1800-1830
13	Green transfer-printed whiteware	1	2	Cup x1 (floral design)	c. 1825-1900
21	Creamware	1	2	Plate x1	c. 1800-1840
21	Pearlware (Transfer-printed)	1	1	Uncertain form x1	c. 1800-1840
21	Glazed red earthenware (late)	1	14	Uncertain form x1 (clear glaze internally)	c. 1800-1840
27	Pearlware	1	1	Plate x1	c. 1800-1840
27	Yellow ware	1	1	Uncertain form x1	c. 1800-1840
36	Glazed red earthenware (late)	1	18	Jar x1 (rounded club rim, clear internal glaze)	c. 1750-1900
36	London stoneware	1	10	Bottle x1 (iron wash, salt glaze)	c. 1750-1900

Table 10: Post-Roman pottery assemblage

- 5.4.2 The earliest material consists of a small group of medieval sherds from contexts [02] and [08] but both deposits produced later material suggesting the medieval pot is residual. Those from [08] are the earliest and include a few sandy-shelly wares of the later 12th to mid-13th centuries as well as some more developed types of the mid-13th to early 14th century. Although the sherds are small they are not excessively abraded suggesting they have not been subjected to repeated reworking.
- 5.4.3 There are no late medieval sherds (post c. 1350) and just one early post-medieval one: the metallic glazed earthenware from context [08] that is probably of the 17th century. The remainder of the pottery appears to represent a domestic scatter of the late 18th to 19th centuries. All of these pieces are small and most exhibit moderate signs of abrasion.

5.5 The Ceramic Building Material by Isa Benedetti-Whitton

- 5.5.1 Fifteen pieces of ceramic building material (CBM) weighing 482g were collected from four contexts: [02], [21], [23], and [27]. With the exception of a broken piece of brick from [23] all the CBM was comprised of broken pieces of peg tile, and all in a single fabric, which was an evenly fired and slightly micaceous medium orange colour, with sparse-moderate calcareous inclusions up to 0.5mm.
- 5.5.2 None of the CBM was particularly dateable, although a later post-medieval date of the 18th century or later is likely. The tile was all neatly formed and generally evenly fired, although some fragments were over fired. Only one tile fragment from [02] had the partial remains of a square or diamond-shaped peg hole. The only piece of brick was overfired to the point that the fabric was vitrified, and the fragment was too broken to allow any meaningful dimensions to be taken.
- 5.5.3 All the material was quantified by form, weight and fabric and recorded on standard recording forms; this information was then entered into a digital Excel spreadsheet. All the CBM has been retained at present but is suggested for discard.

5.6 The Fired Clay by Isa Benedetti-Whitton

- 5.6.1 A total of 104 pieces of fired clay weighing 579g were hand collected from four contexts: [03], [06], [31] and [35]. Two fabric types were represented (F1 and F2), although it is possible these represent two differing firing conditions rather than two distinct clay varieties. Fabric descriptions are provided in Table 11.
- 5.6.2 With the exception of a single piece of F1 from [06] on which three wattle impressions were clearly apparent, none of the clay was particularly diagnostic, although it is possible that more of the F1 pieces were originally structural clay, but any wattle impressions have since been worn away or the fragments collected were not originally in contact with a wattle support. All of the F1 clay was either highly oxidised to a red-orange colour or reduced to black-grey, indicating proximity to high heat, and so it is likely that the clay was used to form the body of a heat proof structure such as an oven or kiln or similar.
- 5.6.3 F1 was the more common fabric type, with only a few abraded fragments of F2 collected from [03] and two better preserved fragments from [06]. Both of the fragments from [06] were edge fragments, with a pink-cream exterior and interior reduced to black. It is

possible these latter two represent fragments of a broken fired clay object, although the nature of the object cannot be deduced from the surviving fragments, nor can any of the fired clay be dated.

- 5.6.4 All the fired clay has been recorded on standard recording forms and quantified by fabric, form, and weight. Examination of fabrics was primarily conducted macroscopically although a x20 binocular microscope was utilised when necessary. The fired clay has been retained but is suggested for discard.

Fabric	Description
F1	Slightly micaceous red-orange brick-earth clay with few apparent inclusions.
F2	Blotchy pink-cream fabric with common ferrous inclusions up to 4mm.

Table 11: Fired clay fabric descriptions for Yalding Rising Main

5.7 The Clay Tobacco Pipe by Luke Barber

- 5.7.1 The archaeological work recovered just two pieces of clay pipe from the site. The material has been fully listed in Table 12.

Context	RF	Element	No	Weight (g)	Comments	Date
02	RF 2	stem	1	2	Bore 2.2mm 34mm long. Very worn	c. 1700-1750
14		stem	1	2	Bore 1.5mm 47mm long. Worn	c. 1750-1900

Table 12: Clay pipe assemblage

- 5.7.2 The clay pipe assemblage is too small to enable meaningful conclusions but it does suggest a chronological spread across the later 18th to 19th centuries.

5.8 The Glass by Luke Barber

- 5.8.1 Just seven shards of glass were recovered from the site, most coming from the environmental residues. The assemblage has been quantified in Table 13.

Context	Sample	No	Weight (g)	Comments	Date
27	<4>	4	1	pale green x2, dark green x1, colourless x1	c. 1800-1840
27		1	2	dark green wine bottle	c. 1800-1840
34	<6>	2	1	x1 pale green, x1 colourless	c. 1800-1900

Table 13: Glass assemblage

- 5.8.2 All of the glass consists of tiny non-corroded pieces that are not particularly diagnostic of form, but which are in keeping with a late post-medieval date. However, the small size of the pieces does mean they could easily be intrusive.

5.9 The Geological Material by Luke Barber

5.9.1 The small assemblage of stone from the site is summarised in Table 14. As with the glass, most was recovered from environmental residues.

Context	Residue	Type	No	Weight	Comments
03	<1>	Coal	1	<1g	
06	<2>	Lower Greensand chert	3	12g	
27	<4>	Coal	20	2g	
31		Lower Greensand	8	40g	Hassock from Hythe Beds. Some burnt
31		Lower Greensand chert	1	4g	
31	<5>	Coal	11	1g	
31	<5>	Lower Greensand chert	44	316g	Some burnt
34	<6>	Lower Greensand chert	18	212g	Some burnt
34	<6>	Coal	47	1g	
35		Coal	2	6g	

Table 14: Stone assemblage

5.9.2 The entire assemblage consists of either coal granules (possibly intrusive) or small weathered pieces of Lower Greensand-derived types that could be expected to occur naturally at the site.

5.10 The Metallurgical Remains by Luke Barber

5.10.1 The small assemblage of 'slag' is summarised in Table 15. As can be seen, most was recovered from the environmental residues and consists of tiny pieces which could easily be intrusive.

Context	Residue	Fraction	Type	Weight	Comments
03	<1>	Magnetic	Magnetic fines	50g	Well-rounded ferruginous siltstone
06	<2>	2-4mm	Fuel ash slag	<1g	Aerated, possibly from coal burning
06	<2>	Magnetic	Magnetic fines	12g	-
14	-	-	Clinker	2g	Matt black, aerated x1
27	<4>	Magnetic	Magnetic fines	6g	Well rounded, quite black
31	<5>	2-4mm	Iron concretion	10g	Burnt
31	<5>	Magnetic	Magnetic fines	2g	-
31	<5>	Magnetic	Fuel ash slag	<1g	Some glassy
34	<6>	2-4mm	Clinker	1g	-
34	<6>	Magnetic	Magnetic fines	<1g	-

Table 15: Quantification of metallurgical remains

5.10.2 Granules of well-rolled fine ferruginous siltstone and burnt clay totally dominate the magnetic material. These have had their magnetic properties enhanced by heating but are not indicative of metal-working: they could have formed via the heat of a domestic hearth. The fuel ash slag and clinker all appear to relate to the burning of coal and are likely to be of 17th- to 19th- century date.

5.11 The Bulk Metalwork by Susan Chandler

- 5.11.1 A total of five iron objects were recovered during the works on site, weighing a total of 124g. All of the objects are in poor, corroded condition making confident identification tricky. The most identifiable are two nail stems, from context [10]. One of these stems has a round section and is likely to be fairly modern, while the second has a square section, which is a common form from the roman period through to the 1800s. It is not possible to give a firm dating due to the longstanding use of this form, though it is likely the nail is late post medieval in date. From context [02] there is a length of iron bar, which is broken at both ends and from [05] there is a loop of iron wire, broken at both ends. It is possible that it is an incomplete chain link. Due to its condition it is not possible to suggest a date. Finally the objects from context [21] included a small concretion of stones and corrosion around what is possibly another nail stem.
- 5.11.2 A single copper alloy object was recovered from context [02]. This is a squashed hollow button with a livery or coat of arms design on the face and an incomplete looped stem on the back. The design on the face is much worn from use, though it is possible to make out a wreath or ring surmounted by a crown, with a unicorn on the right side and a second figure or creature to the left. It is most likely an accidental loss and of a post medieval, late 18th or 19th century date.

5.12 The Human Bone by Dr Paola Ponce

Introduction

- 5.12.1 A small amount of human bone weighing 70.6 grams was recovered from one context [31], the primary fill of a pit dated to the Middle Iron Age. A small amount of the above (2.3 grams) was recovered from the environmental sample <5> taken from this fill. It was uncertain whether the bones were disarticulated or represented the remains of a very poorly-preserved crouched burial

Methods

- 5.12.2 Age and sex assessments were carried out whenever possible following the standards proposed by Buikstra and Ubelaker (1994), Brothwell (1981), and Scheuer and Black (2004). The analysis of the skeletal material also included the assessment and diagnosis of basic nature of gross pathology on the bone. This analysis was carried out following the diagnostic criteria described in Aufderheide and Rodríguez-Martín (1998) and Ortner (2003).
- 5.12.3 The excavated fill of the pit underwent flotation and was processed as an environmental sample. Bone fragments were collected and subjected to careful recording and separated in sieve fractions of 2-4mm, 4-8mm and >8mm. All recognisable finds were amalgamated with the rest of the identified human bone and the remainder was kept as unidentifiable.

Results

- 5.12.4 The bones identified were the diaphysial fragments of an unsided tibia and fibula. On the basis of the dimensions, thickness of cortical bone (Buikstra and Ubelaker 1994, Scheuer and Black 2004), these long bone fragments belonged to an adult individual. No

assessment of sex was possible due to the degree of fragmentation and preservation of the bones and the absence of dimorphic traits. Finally, no evidence of pathology was observed.

- 5.12.5 In addition to the bones, four human teeth consisting of crowns with little or no surviving roots were also part of the assemblage. These un-sided molars were possibly the 2nd and 3rd mandibular and maxillary molars. The observation of dental wear in the 2nd molars (Brothwell 1981) suggested that the age of the individual was between 25-35 years of old at the time of death. Other than dental wear no other pathological condition was observed in the four teeth found.

Discussion

- 5.12.6 Although difficult to confirm, it is possible that the bones and teeth found within pit fil [31] belonged to one single adult individual of unknown sex.

5.13 The Burnt Bone by Dr Paola Ponce

Introduction

- 5.13.1 A very small amount of burnt bone was recovered from one context [06], a lower/basal fill of an oval pit [04] dated to the Middle/Late Iron Age

Methods

- 5.13.2 The excavated fill of the deposit underwent flotation and was processed as an environmental sample. Bone fragments were collected and subjected to careful recording and separated in sieve fractions of 2-4mm, 4-8mm and >8mm. The assessment of this material was undertaken according to standard guidelines (McKinley 2004).

Results

- 5.13.3 The total amount of bone recovered from the context analysed was 0.4 grams (Table 16). Only small and medium-size fragments were represented in the sample and none of these were identifiable as either human or animal.

Context	Weight (grams)				Type
	2-4mm	4-8mm	>8mm	Total	
6	0.3	0.1	-	0.4	Unknown

Table 16: showing the summary of results on burnt bone

- 5.13.4 With regards to the degree of oxidation of the organic component of bone, it was noted that 95-100% of the assemblage was fully oxidised white (>c. 600° C) which suggests a highly efficient burning process. A combination of grey and blue hues was identified in a small percentage (5%) of the total fragments present, thus suggesting an incomplete process or oxidation (up to c. 600° C).

6.0 The Environmental Samples by Stacey Adams

6.1 Introduction

- 6.1.1 Six bulk samples were taken from pit fills [03], [06], [27], [31] and [34] and a waterlogged alluvium deposit [29] for the recovery of environmental remains such as plant macrofossils, wood charcoal, fauna and Mollusca. The following report details the preservation of the charred and waterlogged plant material and discusses its potential to inform on the diet, environment and arable economy of the site.

6.2 Methods

- 6.2.1 The flotation samples from the pit fills, ranging from 20 to 40L in volume, were processed by flotation tank with a 250µm mesh for retention of the flot and a 500µm mesh for the heavy residue, before being air dried. The heavy residues were passed through graded sieves of 8, 4 and 2mm and each fraction sorted for environmental and artefactual remains (Table 17). A 2L subsample from the waterlogged alluvium deposit [29] was washed through a stack of geological sieves ranging from 4mm to 250µm, and each fraction was retained wet. Artefacts recovered from the samples were distributed to specialists, and are incorporated in the relevant sections of this volume where they add further information to the existing finds assemblage. Where abundant, 10% percent of the charred plant remains were extracted from the residues and the residues retained for future examination. The flots, both wet and dry, were scanned under a stereozoom microscope at 7-45x magnifications and their contents recorded (Table 18 & 19). Where necessary, flots were subsampled and 100ml of the volume scanned. Provisional identification of the charred remains was based on observations of gross morphology and surface cell structure and quantification was based on approximate number of individuals. Nomenclature follows Stace (1997) for wild species and Zohary and Hopf (1994) for cereals.

6.3 Results

Samples <1> [03], <2> [06], <3> [29], <4> [27], <5> [31] and <6> [34].

- 6.3.1 The heavy residues contained small amounts of burnt clay, burnt stone, flint and magnetic material as well as industrial material including slag and coal. Wood charcoal was infrequent within the samples and was not present in sufficient quantities (>3g in the >4mm fraction) to submit for evaluation.
- 6.3.2 The flots contained between 1 and 70% uncharred material, mostly of modern roots and recent seeds of goosefoots (Chenopodiaceae), blackberry (*Rubus* sp.), elder (*Sambucus* sp.), knotweed (*Polygonum* sp.) and those of the carrot family (Apiaceae). Worm capsules and land snail shells were infrequent within the flots whilst wood charcoal was only common in pit fill [27]. Charred plant macrofossils were present in all samples, excluding that of pit fill [34], they were occasional in pits fills [03], [06] and [27] and abundant in pit fill [31].

Charred Plant Macrofossils

- 6.3.3 Charred cereal remains were absent or rare within the majority of the flots, excluding pit [31] which contained abundant well-preserved cereal grains. Hulled wheat (*Triticum* sp.)

grains, with the distinctive glume impressions still visible, were the most common cereal-type observed within pit fill [31]. A large proportion of the grains displayed the distinct hump-back dorsal ridge associated with emmer wheat (*Triticum dicoccum*). The grains of wheat alone can be difficult to identify to species level due to the high amount of morphological variation within the genera. However, the presence of several of the more diagnostic glume bases confirms the presence of emmer wheat within the assemblage. Several of the short, more rounded wheat grains were indicative of free-threshing wheat (*Triticum durum/aestivum*). Glume impressions were present on a number of these grains indicating they were of the hulled variety. It is likely that these grains became distorted during the charring process, a phenomenon that has been observed by Braadbaart (2008). Grains and rachis of hulled barley (*Hordeum vulgare*) were recorded within pit fill [31]. Oat (*Avena* sp.) grains were present in small numbers in pit fill [27] and common in pit fill [31], one grain was preserved with its floret base still attached indicating it was of the wild variety of oat (*Avena fatua*) and was likely present as a weed of the main emmer wheat crop.

- 6.3.4 The large weed seeds of chess (*Bromus* sp.) and bedstraw (*Galium aparine*-type) are difficult to remove from the cereal crop and often stay with the grains even after the final stages of processing (van der Veen, 1992). Fat hen (*Chenopodium album*), oraches (*Atriplex* sp.), docks (*Rumex* sp.) and knotweed (*Polygonum* sp.) were also present and are all common weeds of cereal cultivation. A single poorly-preserved large legume (Fabaceae) was present in pit fill [06] and may represent a cultivated variety.

Waterlogged Plant Remains

- 6.3.5 The plant remains from the alluvium deposit [29] were preserved through waterlogging due to the anoxic conditions. Both large and small soft wood fragments were abundant within the sample along with roundwood and twigs. A small number of fragmented berry (*Rubus* sp.) seeds were recorded as well as an individual seed of black-bindweed (*Fallopia convolvulus*).

6.4 Discussion

- 6.4.1 The charred plant remains from pit fills [03], [06] and [27] likely represent 'background' noise of cereal crop processing at Yalding. The abundant well-preserved cereal grains, chaff and weed seeds from pit fill [31] indicate cereal processing on a large-scale and are likely to have become charred during roasting to remove the grain from the glumes, which have largely burnt away. The recovery of the more diagnostic chaff is significant as it is less likely to survive charring than the harder grains and often has the potential to better inform on the arable economy of the site. The presence of both charred cereal remains and waterlogged plant material are evidence for the survival of well-preserved environmental deposits at Yalding. It is therefore recommended that further investigations target both dry and waterlogged secure primary deposits for bulk sampling.

Table 17: Residue quantification from dry samples (* = 1-10, ** = 11-50, *** = 51-250) and weights in grams.

Sample Number	Context	Context / deposit type	Sample Volume (L)	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Other (eg, pot, cbm) (presence/ weight)
1	03	Pit	40	*	<1	**	<1									Mag.Mat (****/48g) Coal (*/<1g)
2	06	Pit	20	*	<1	**	<1	*	<1			*	<1	**	<1	Burnt Stone (*11g) Flint (*3g) Burnt Clay (**/141g) Slag (*/<1g) Pot (**/80g) Mag.Mat (***/37g)
4	27	Pit	30	*	<1	**	2									Pot (*1g) Coal (**/3g) Glass (*1g) Mag.Mat (***/8g)
5	31	Pit	40	*	<1			****	44	**	2					Pot (**/86g) Mag.Mat (*2g) Stone (*127g) Burnt Clay (*19g) Ind.Mat (*11g) Burnt Stone (**/187g) Flint (*1g) Coal (*/<1g)
6	34	Pit	40			**	<1									Mag.Mat (**/2g) Coal (**/1g) Burnt Clay (*6g) Glass (*/<1g) Ind.Mat (**/1g) Pot (*24g) Stone (*138g) Burnt Stone (**/74g)

Table 18: Dried flot quantification (* = 1-10, ** = 11-50, *** = 51-250) (+ = poor, ++ = moderate, +++ = good).

Sample Number	Context	Weight (g)	Flot volume (ml)	Volume scanned (ml)	Uncharred (%)	Sediment (%)	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanical charred	Identifications	Preservation	Insects etc.	Land Snail Shells
1	03	21	50	50	50	30	<i>Rubus</i> ** Chenopodiaceae*		*	**	*	<i>Cerealia</i> indet.	+	**	<i>Rumex Carex</i> <i>Chenopodium album</i> Poaceae (small) <i>Polygonum</i>	++				*	*
2	06	6	20	20	70	15	<i>Rubus</i> *** Chenopodiaceae*		*	**				**	<i>Atriplex</i> <i>Bromus</i> <i>Rumex</i> <i>Polygonum</i> Poaceae (small)	++	*	Fabaceae (large)	+	**	*
4	27	34	110	100		30	Chenopodiaceae* <i>Sambucus</i> * <i>Polygonum</i> * Apiaceae* <i>Rubus</i> *	**	***	****	*	<i>Avena</i> sp.	++	*	<i>Chenopodium album</i> Poaceae (small)	++	*	Culm node Straw frags	++		
5	31	45	110	100	1			*	**	***	****	<i>T.dicoccum</i> <i>Triticum</i> (hulled) <i>Hordeum vulgare</i> (hulled) <i>Avena</i> <i>Triticum</i> (rounded) <i>Cerealia</i> indet.	+++	**	<i>Bromus</i> <i>Galium</i> aparine-type <i>Chenopodium album</i> <i>Atriplex</i>	+++	**	<i>Hordeum vulgare</i> rachis <i>T.dicoccum</i> glume base <i>T.dicoccum/ spelta</i> glume base <i>Avena fatua</i> floret base	++	*	
6	34	3	15	15	30	10	Chenopodiaceae* <i>Sambucus</i> *			***											

Table 19: Waterlogged sample quantification (* = 1-10, ** = 11-50, *** = 51-250).

Sample Number	Context	Context / deposit type	Sample Volume (L)	Sub-sample processed (L)	Sieves used	Sub-sample scanned (ml)	Macrobotanical Remains	Identification and preservation notes	Wood	Notes on Preservation of Wood
3	29	Alluvium deposit	40	2	4, 2, 1mm, 500 & 250 micron	30	*	<i>Rubus</i> * <i>Fallopia convolvulus</i> *	****	Large and small waterlogged wood fragments - soft to the touch. Roundwood, twigs and branches present.

7.0 DISCUSSION AND CONCLUSIONS

7.1 Overview of stratigraphic sequence

- 7.1.1 The pipeline transect ran over a distance of 1941.70m, starting from a ground height of 11.98m aOD, dipping to a low point of 8.92m aOD at CH700 in the valley bottom, and rising to a maximum height of 22.33m aOD. Starting at the old pumping station in the valley bottom, it traversed northwards on a broadly parallel line to the east of the Medway at an average distance of 150m from the river. It climbed the southwest slope of Bow Hill to the north-west of Kenward House terminating at a final ground height of 22.27m aOD. Archaeological observations were undertaken from CH103.19, along the length of the topsoil strip of a 9.0m wide easement, and to CH1080 along the pipe-trench. This was 0.70m wide and cut to an average depth of 1.50m.
- 7.1.2 The depth and nature of sediments varied along the transect. In the valley bottom, with the exception of the south end of Field 3, the lower substrate layers (studied in section) were sealed by an upper light or orange brown clay-silt brickearth substrate, between 0.50m and 0.25m thick. To the extreme south and north of c.CH700, this sealed a series of clay deposits of varying depth and consistency. Moving northwards from CH102.19, the top of the gravels rise rapidly to a depth c.0.70m below current ground level in Field 1, 0.50m at the north end of Field 2, and the south of Field 1. The surface substrate context in the south of Field 3 ([05]), is a narrow gritty sandy-silt band with gravel inclusions above loose reddish sandy-silt, with underling sand strata above the coarser gravels. At the lowest point of the site, which is also that nearest the Medway river in the valley bottom at CH700, the subsoils are heavy waterlogged clays.

7.2 Deposit survival and existing impacts

- 7.2.1 The archaeology observed on site was identified immediately below topsoil at a depth of c.0.25 – 0.30m below current ground levels. The transect traversed agricultural fields under arable cultivation, with the exception of Field 4 which, on a slope, is under grass. Surface archaeology in the fields under cultivation is likely to have been subject to an unknown degree of truncation by ploughing.
- 7.2.2 The original waste pipe being replaced had burst at a number of locations along its length. Previous trenching had been undertaken at intervals for repairs and would have truncated any surviving archaeology at these locations.
- 7.2.3 River scouring in the valley may have impacted on early prehistoric deposits, however, there is no evidence of landscaping or major earth-moving, notably to the north of Kenward House.
- 7.2.4 Given the survival of features evidenced both in the valley and on the hill-top, where weathering processes might have impacted on preservation, it is likely that there has been relatively good conservation of archaeological features cut into the substrate.

7.3 Discussion of archaeological remains by period

Palaeolithic

- 7.3.1 The excavation of the pipe-trench truncated the river gravels and was observed along the majority of its length. This provided the most likely context for discovery of Palaeolithic material although no Palaeolithic finds were recovered. The rapid nature of the pipe-trench excavation, and the watching brief conditions of the operation, excluded anything beyond cursory scrutiny for evident, larger finds, and periodic more detailed scrutiny.

Mesolithic and Neolithic

- 7.3.2 Surface finds retrieval from the topsoil/substrate interface produced an assemblage of 40 pieces of struck flint. These were mixed with later material and the material is presumed to be in secondary locations as a result of ploughing and other possible post-deposition processes. No chronologically diagnostic pieces were found, and the majority of pieces cannot be precisely dated. Nonetheless, based on technological and morphological traits a few pieces indicate human presence during the Mesolithic and/or Neolithic periods. A few pieces are likely to be later in date. Although no large concentrations were identified, it is noted that this material was scarce in Field 1, at the southern end of the transect, with a possibly significant cluster towards the middle of Field 2. In this area, the flat topography may have retained material closer to its original deposition context. Evidence of struck flint was found along the length of the transect, the material more scarce on the hill-top, favouring the brickearth deposits in the valley bottom. In Fields 3 and 4, the land to the east was more sloped. Surface finds would have been more affected by colluvial action.

Bronze Age

- 7.3.3 Despite close scrutiny of the land surface during the easement strip, and retrieval of all observed pottery fragments, there was no evidence for Bronze Age occupation along the length of the transect and no undated field system or features that could be attributed to this period.

Iron Age

- 7.3.4 The watching brief produced evidence of Mid-Late Iron Age occupation (probably 150-1BC). Two pits were dated to this period by pottery, one on the valley bottom, one on the hill crest.
- 7.3.5 Pit [04], a moderate-sized oval feature on the valley bottom, showed evidence of in-situ burning, or the dump of hot hearth waste. Containing dark charcoal-rich deposits [03] and [06], it produced a moderate assemblage of pottery and fired clay, one fragment of which had wattle impressions, possibly indicative of nearby settlement.
- 7.3.6 Pit [30], a larger sub-rectangular pit located on flattish land on the west slope of Bow Hill, contained a small quantity of human bone and teeth which may be evidence of a poorly preserved crouched inhumation. It was dated by a moderate pottery assemblage and accompanied by a significant deposit of charred grain within a charcoal-rich deposit. It is suggested in the specialist report that the abundant well-preserved cereal grains, chaff and weed seeds from pit [31] indicate cereal processing on a large-scale and are likely to have become charred during roasting to remove the grain from the glumes, which

have largely burnt away. Given the potential ritual context of the deposit it is also possible that the plant remains may have been burnt for other reasons.

Medieval

- 7.3.7 The site produced no evidence of Saxon occupation but a small quantity of medieval pottery was retrieved from the surface of the substrate in the valley bottom in Fields 2 and 3, [02] and [08]. The earliest sherd dates to AD1175-1250, the latest to AD 1225 – 1350. Only moderately abraded, these may result from nearby features, or possibly manuring.

Post-medieval

- 7.3.8 Evidence of post-medieval activity is provided by a small assemblage of pottery retrieved from the surface of the subsoil in the valley bottom, predominantly belonging to the 19th century, although one fragment of 17th century pottery was retrieved from Field 3, west of Kenward House.
- 7.3.9 Pit [26], from the higher land in Field 6 may be dated to the 19th century. It was a small circular feature with a charcoal-rich primary deposit and yielded small quantities of CBM, glass and 19th century pottery. The latter is small and may be intrusive. In the absence of earlier dating, the pit is attributed to the late medieval period.
- 7.3.10 A field or French drain in Field 1 is dated to the late 18th or 19th century and indicates land improvement during this period. More modern field drain pipes traversed Field 2.

7.4 Consideration of research aims

- 7.4.1 The work paid close attention to the potential of the river gravels to yield Palaeolithic material but no evidence of early human activity was identified. A profile was produced of the river terrace gravels reached in the southern part of the transect to add further detail to the geological profiling of the Medway River valley.
- 7.4.2 The watching brief successfully identified new evidence of later Iron Age occupation both in the Medway valley bottom and on the higher land to the east. Two pits, one of which may be an inhumation, provide possible evidence of nearby settlement. Sample evidence, particularly on the hill-slope indicates well-developed agricultural exploitation in the vicinity during this period and the wetter valley-bottom may have been exploited for other resources. The occupation evidence is identified on an area where the gravels lie closer to the surface, with a very sandy matrix, which may have provided a localised well-drained environment. This adds to previous evidence of prehistoric activity noted within the study area, which comprised sherds of late Iron Age 'Belgic' pottery found during excavations at Court Lodge Farm to the immediate south-east of the transect.
- 7.4.3 The evidence therefore suggests that the land was likely to be reasonably well-occupied at the time of the Roman conquest, with mature arable exploitation, probably on the higher better drained soils. The work produced only slight additional evidence for occupation in the Roman period. A pit, [34], on the higher ground in Field 6 may belong to this period, but this is only dated by a

small pottery assemblage retrieved from the bulk sample, in which the small sherd size makes the evidence inconclusive. Five further, small undiagnostic and unsourced sandy ware sherds and seven small sherds of similar oxidised Roman sandy ware were recovered from environmental sample <6>, taken from context [34] (7 sherds, weighing 24g). However, this was recovered alongside post-medieval glass.

7.4.4 A small quantity of re-deposited medieval pottery was retrieved as surface finds from Field 2 and Field 3 in the valley bottom. Not heavily abraded and reworked, these may be evidence of nearby features. Alternatively, they could result from manuring and be indicative of agricultural exploitation of the valley bottom in this period. There was no pottery indicative of activity from the mid-14th century until the 17th century, which was represented by a single surface find.

7.4.5 A channel [11] probably relating to post-medieval drainage or to an ornamental feature to the west of Kenward House, was identified on the surface of the easement strip (Fig. 11). This had been truncated by previous trenching and could not be observed in section.

7.5 Conclusions

7.5.1 Despite the opportunity to examine the river gravels in this part of the Medway valley, the work produced no further evidence of Palaeolithic occupation. A distribution of struck flints was recovered, much of which may belong to the Mesolithic, strongly suggested by the presence of two blade cores from context [08] (west of Kenward House). This material, although not in-situ, provides evidence of activity in the valley bottom in this period to add to that produced by the Syngenta site located c.1km to the south (ASE 2008).

7.5.2 The distribution of Mesolithic – Bronze Age flints, with some evidence for a Mesolithic Early Neolithic horizon concentrated in the valley bottom, adds to knowledge concerning the likely spread of hunter-gather penetration along the valley bottom in this area. It also adds to evidence for a possible base camp identified to the south at the Syngenta site. However, in contrast to the Syngenta site no Bronze Age activity was identified.

7.5.3 The presence of at least two Mid-Late Iron Age pits, probably dated between 150 – 1BC, one on the valley floor and one on the more upland reach of Bow Hill, confirms the presence of Late Iron Age occupation in the locality. One of the pits may be the poorly conserved remains of an inhumation burial. Additionally, environmental evidence suggests well-developed agricultural exploitation.

7.5.4 The very low incidence of Roman pottery provides little evidence to add to the understanding of Roman land use and occupation in this period in the locality. A possible Roman pit was found on the higher ground, although this dating is inconclusive.

7.5.5 A channel possibly related to the post medieval drainage related to Kenward House was located, but was truncated by prior trenching and could not be examined in detail.

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ACKNOWLEDGEMENTS

ASE would like to thank MGJV for commissioning the work and for their assistance throughout the project, and Wendy Rogers County Archaeologist Kent County Council for her guidance and monitoring.

Appendix 1: Selected HER data

No	ID	Date	Name	NGR (TQ)
1	EKE 394	Prehistoric	The only prehistoric activity noted within the study area comprised sherds of late Iron Age 'Belgic' pottery found during excavations at Court Lodge Farm.	6903 5024
2-6	MKE 70265-69	Late Roman	Five copper alloy late Roman coins.	69388 50905
7	MKE 70165	Late Roman	Sherds of pottery found during metal detecting to the south-east of Kenward Farm.	69400 50900
8&9	MKE 95933-4)	Late Roman	Two further late Roman coins recorded at Kenward Farm.	69298 51013
10	MKE 95901	Late Roman	Copper alloy ring were recorded at Kenward Farm.	69311 51000
11-24	MKE 95677-83, MKE 95686-89, MKE 95710-11, MKE 95715-16.	Late Roman	Collection of 17 late Roman coins to the south of Kenward Farm.	69347 50867
25	TQ 65 SE 15	Early Medieval	Nettlestead Place to the west of the site was recorded in the Domesday Book and is likely to have Saxon origins.	6852 5195
26	TQ 65 SE 51	Medieval	Yalding medieval settlement	69897 50191
27	TQ 65 SE15	Medieval	Nettlestead Place – located to the west of the site was a manor during this period. The earliest part of the manor house is the 13 th century undercroft built by Michael de Wahul. Further building phases were undertaken in the 15 th century.	68416 52038
28	TQ 65 SE 43	Medieval	Nettlestead Place Gatehouse - 14 th century date	68428 52068
29	TQ 65 SE 44	Medieval	Nettlestead Place Barn - 14 th century date	68416 52038
30	TQ 65 SE 45	Medieval	Medieval fishponds recorded below the existing fishpond and Nettlestead Place.	68506 52020
31	TQ 65 Se 5	Medieval	Church of St Peter in Yalding - Grade I listed building of 12 th /13 th century date with later medieval alterations.	6985 5006
32	TQ 65 SE 16	Medieval	St Mary's Church, Nettlestead - a Grade I listed 13 th century church.	6850 5212
33	TQ 65 SE 49	Medieval	Rose Cottages - 14 th -15 th century cottages, Grade II listed.	6997 5035
34	TQ 65 SE 49	Medieval	Downs Farm House - 14 th -15 th century farmhouse, Grade II listed.	699 503
35	TQ 64 NE 4	Medieval	Twyford Bridge - a late medieval bridge.	6906 4977

36	TQ 65 SE 3	Medieval	The Town Bridge, Yalding - a 15 th century or earlier bridge.	6977 5003
37	MKE 96031	Medieval	Lead alloy seal matrix findspot.	6950 5230
38	MKE 95676	Medieval	Medieval ceramic tile findspot.	69347 50867
39	MKE 70036	Medieval	Silver coin of Edward III findspot.	6940 5090
40	TQ 65 SE 92	Post Medieval	Kenward - Grade II Listed Building dating to the mid-18 th century but sits within land conveyed to the Kenward family in 1533.	6911 5143
41	MKE 81901	Post Medieval	Kenward Farm - 16 th century or later driftway farmstead.	6918 5099
42	TQ 75 SW 219	Post Medieval	Hillside Cottages - a row of Grade II listed cottages to the east of the site.	7002 5052
43	TQ 65 SE 103	Post Medieval	Bow Hill House - grade II listed building with possible medieval origins.	6943 5190
44	TQ 65 SE 142	Post Medieval	Court Lodge and the Dairy House - 17 th century farmhouse and associated dairy, Grade II listed.	6985 5020
45	TQ 65 SE 102	Post Medieval	Stables west of Bow Hill House - 18 th century stables.	6947 5191
46	TQ 65 SE 146	Post Medieval	Cleaves Hall - Grade II listed building with possible medieval origins.	6994 5029
47	TQ 65 SE 133	Post Medieval	Former Barn and Byres west of Court Lodge - Grade II listed buildings.	6981 5021
48	MKE 81899	Post Medieval	Kenward - altered farmstead 18 th century or later.	6919 5140
49	MKE 81900	Post Medieval	Outfarm of Hillside Cottage - an altered 19 th century farmstead.	6931 5125
50	MKE 81942	Post Medieval	Court Lodge - multi-yard farmstead.	6979 5023
51	MKE 84412	Post Medieval	Nettlestead Place - multi-yard farmstead.	6841 5207
52	MKE 84473	Post Medieval	Farmstead to south-west of Bow Hill House - row plan farmstead, 19 th century.	6933 5178
53	MKE 88656	Post Medieval	Outfarm south east of Kings Cottages - field barn with no associated yard.	6894 5244
54	MKE 95691	Post Medieval	A lead alloy cloth seal findspot	65972 50269
55 & 56	MKE 95692-3	Post Medieval	Two copper alloy strap fitting findspot	69347 50867
57	MKE 95690	Post Medieval	Lead alloy toy findspot	69347 50867
58	EKE 9584	Post Medieval	Post-medieval pottery found during a watching brief at Jasmine Cottage.	6995 5038
59	EKE 11384	Post Medieval	An evaluation undertaken at Rose Cottage.	69644 49940
60	EKE 9932	Post Medieval	Watching brief undertaken at The Barn, The Elms.	69859 50040
61	EKE 9736	Post Medieval	Watching brief undertaken at Lyngs Farm.	69690 49911
62	EKE 11233	Post Medieval	Watching brief undertaken at Twyford Bridge.	69047 49796
63	EKE 3913	Post Medieval	Watching brief undertaken at Yalding Bridge.	69803 50107

HER Summary

HER enquiry no.						
Site code	YOW16					
Project code	160216					
Planning reference	Permitted Development					
Site address	Yalding rising main, west of kenward road (on land east of the Medway and north-east of Yalding)					
District/Borough	Yalding					
NGR (12 figures)	569103 150586 to 568830 152097					
Geology	Quaternary period River Terrace Deposits (Clay & Silt) overlying Weald Clay Formation					
Fieldwork type	Eval	Excav	WB X	HBR	Survey	Other
Date of fieldwork	03/10/206 – 08/11/2016					
Sponsor/client	MGJV					
Project manager	Neil Griffin					
Project supervisor	Pip Stephenson / Tom Munnery					
Period summary	Palaeolithic	Mesolithic X	Neolithic	Bronze Age	Iron Age X	
	Roman X	Anglo- Saxon	Medieval X	Post- Medieval X	Other	
Project summary (100 word max)	<p>An archaeological watching brief was conducted on works at Yalding Rising Main (land lying east of the Medway, to the north-west of Yalding) NGR: 569103 150586 to 568830 152097, between the 3rd of October and the 8th of November 2016, commissioned by MGJV for ground works on behalf of Southern Water. The works involved the excavation of a 9m wide easement strip and a pipe trench 0.70m wide and 1.5m deep over a distance of c.2km along the east of the Medway valley and onto the upper slopes of Bow Hill. The river gravels were reached in the southern part of the transect. These were profiled by the production of several detailed sections. There was no evidence of Palaeolithic activity. Small quantities of residual worked flint were recovered indicative of probable Mesolithic activity concentrated in the valley bottom. Two Mid-Late Iron Age pits, were excavated, one in the valley bottom and one on the hill-side, the latter possibly the poorly preserved remains of an Inhumation burial. Two further pits may be Roman and Late post-medieval in date, but the dating evidence is inconclusive. Pottery retrieved from the surface of the substratel is predominantly late post medieval in date and indicative of manuring, with slight evidence of Roman, Medieval and 17th century activity. Land improvement and management evidence was confined to a late post medieval field drain to the south of the site and more modern drainage implemented in the adjacent field.</p>					
Museum/Accession No.						

Finds summary

Find type	Material	Period	Quantity
Struck Flint	Struck Flint	Mesolithic – Bronze Age	Small
Pottery	Pottery	Iron Age-post-med	Moderate
Bone	Human and animal	Iron Age	Small
CTP	CTP	Post-med	Small
Fired Clay	Fired Clay, CBM	Post-med	Small
Fe	Unidentified small objects	Post-med	Post-med

OASIS Form

OASIS ID: archaeol6-274152

Project details

Project name Yalding Rising Main

Short description of the project

This report presents the results of an archaeological watching brief carried out by Archaeology South-East on land to the east NGR: 569103 150586 to 568830 152097. The fieldwork was commissioned by MGJV in advance of the installation of a new waste water drainage pipe on behalf of Southern Water. The works involved the excavation of a 9m wide easement strip and a pipe trench 0.70m wide and 1.5m deep over a distance of c.2km along the east of the Medway valley and onto the upper slopes of Bow Hill. Results include a distribution of probable Mesolithic struck flint, two Later Iron Age pits, one with possible remains of an inhumation burial, a possible Roman pit, later medieval pit and medieval, 17th century and late post medieval pottery, CTP and fired clay.

Project dates Start: 03-10-2016 End: 08-11-2016

Previous/future work No / Not known

Any associated project reference codes YOW16 - Sitecode

Type of project Recording project

Site status None

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

Monument type PIT Late Iron Age

Monument type PIT Roman

Monument type PIT Post Medieval

Significant Finds STRUCK FLINT Late Mesolithic

Significant Finds POTTERY Late Iron Age

Significant Finds POTTERY Medieval

Significant Finds POTTERY Post Medieval

Project location

Country England

Site location KENT MAIDSTONE YALDING Yalding Rising Main

Postcode ME18 6AH

Study area 18000 Square metres

Site coordinates TQ 70314 50433 51.227082613553 0.439497576291 51 13 37 N 000 26 22 E Point

Height OD / Depth Min: 11m Max: 24m

Project creators

Name of Organisation Archaeology South East

Project brief originator	MGJV
Project design originator	MGJV
Project director/manager	Neil Griffin
Project supervisor	Tom Munnery
Project supervisor	Philippa Stephenson
Type of sponsor/funding body	Contractor
Name of sponsor/funding body	MGJV
Project archives	
Physical Archive recipient	local museum
Physical Contents	"Ceramics", "Human Bones", "Metal", "Worked stone/lithics"
Digital Archive recipient	local museum
Digital Media available	"Database", "Images raster / digital photography", "Text"
Paper Archive recipient	local museum
Paper Media available	"Context sheet", "Drawing", "Miscellaneous Material", "Plan", "Report", "Section"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	An Archaeological Watching Brief At Yalding Rising Main, Yalding, Kent
Author(s)/Editor(s)	Pip Stephenson
Date	2017
Issuer or publisher	ASE
Place of issue or publication	Portslade
Description	A4
Entered by	pip stephenson (pip.stephenson@ucl.ac.uk)
Entered on	23 January 2017

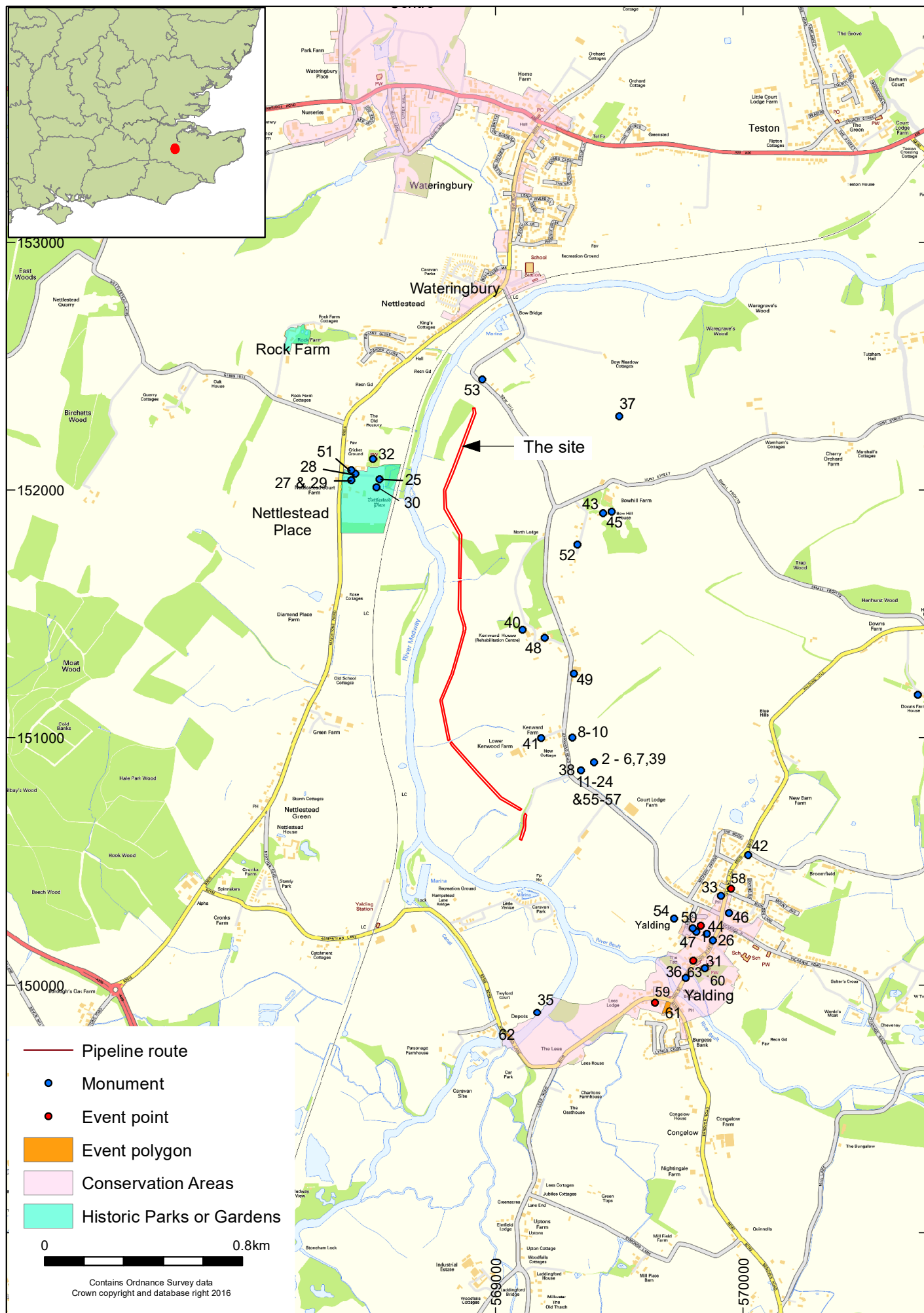
OASIS:

Please e-mail [Historic England](#) for OASIS help and advice

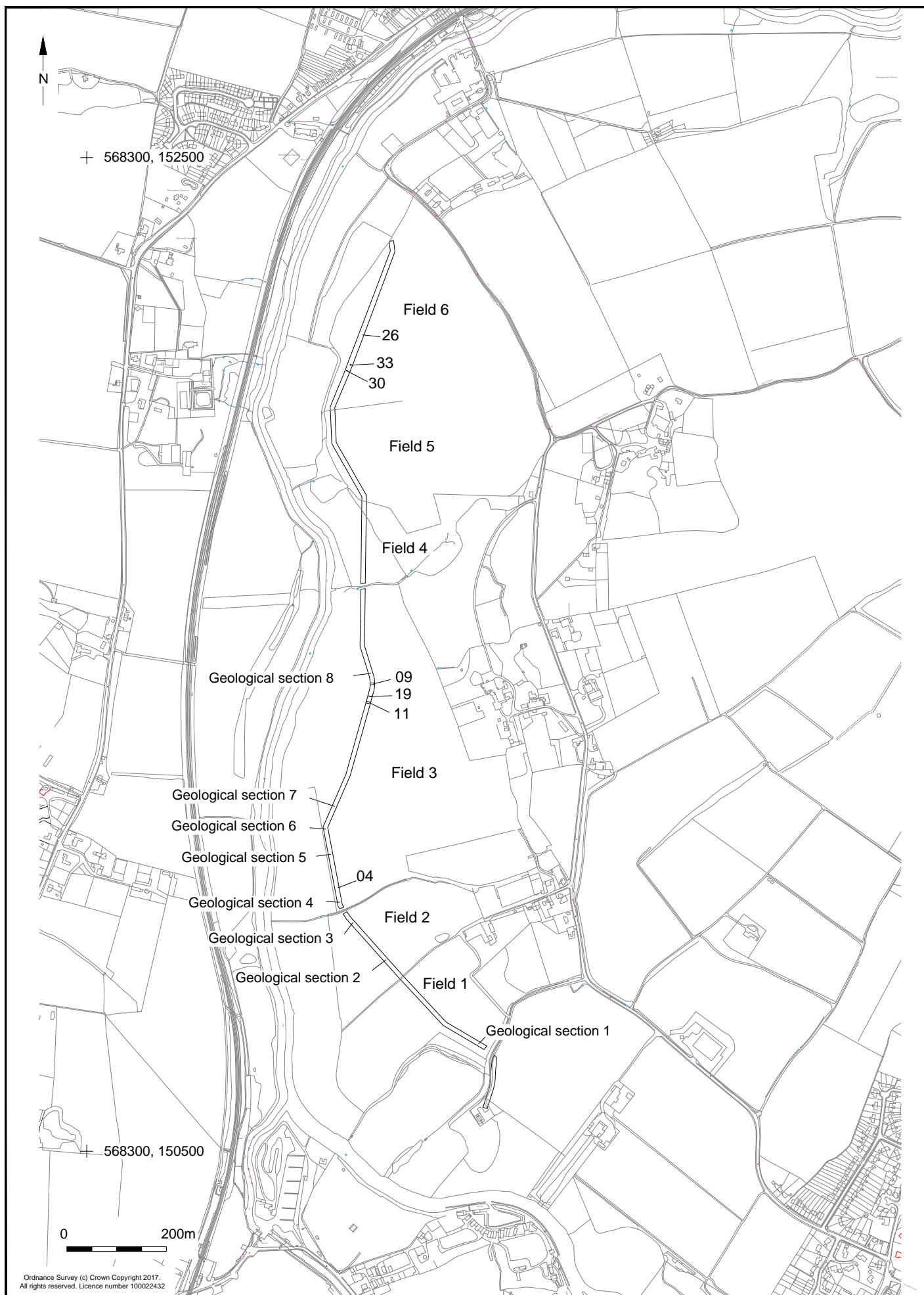
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Wednesday 9 May 2012

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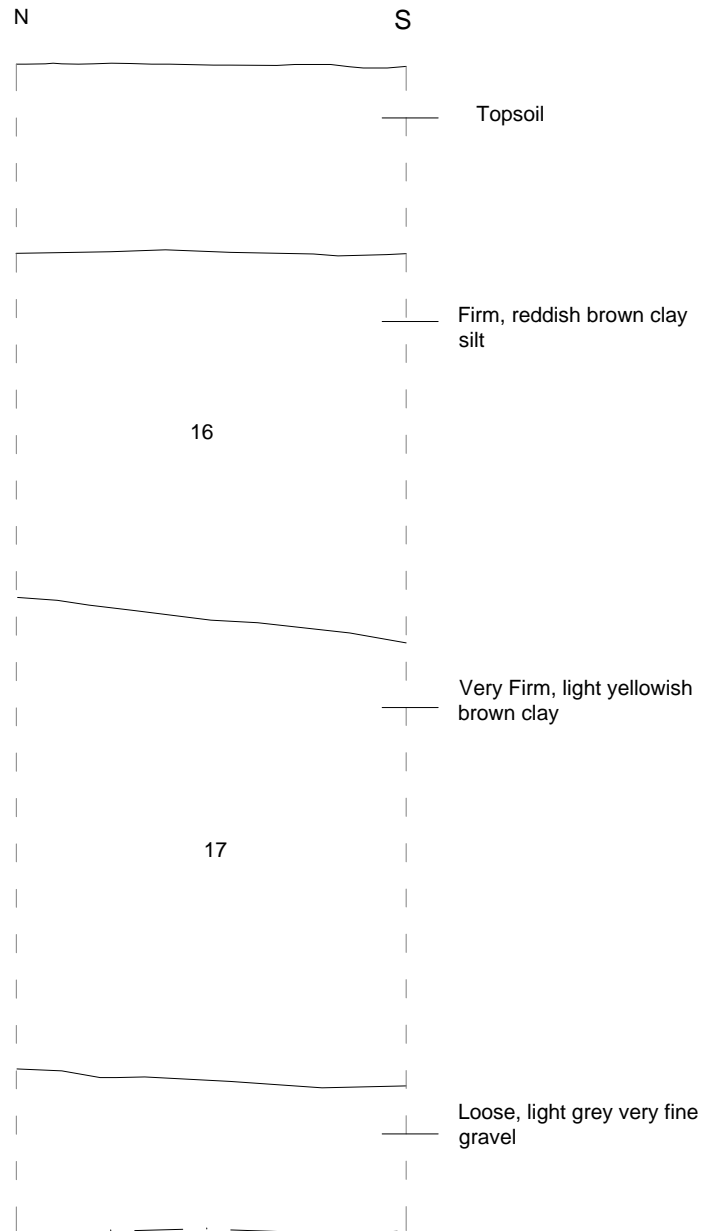


© Archaeology South-East		Yalding Old Works Risings Main Replacement	Fig. 1
Project Ref: 160216	Feb 2017	Site Location & HER Data	
Report Ref: 2017013	Drawn by: AR		



Geological section 1

CH130.19



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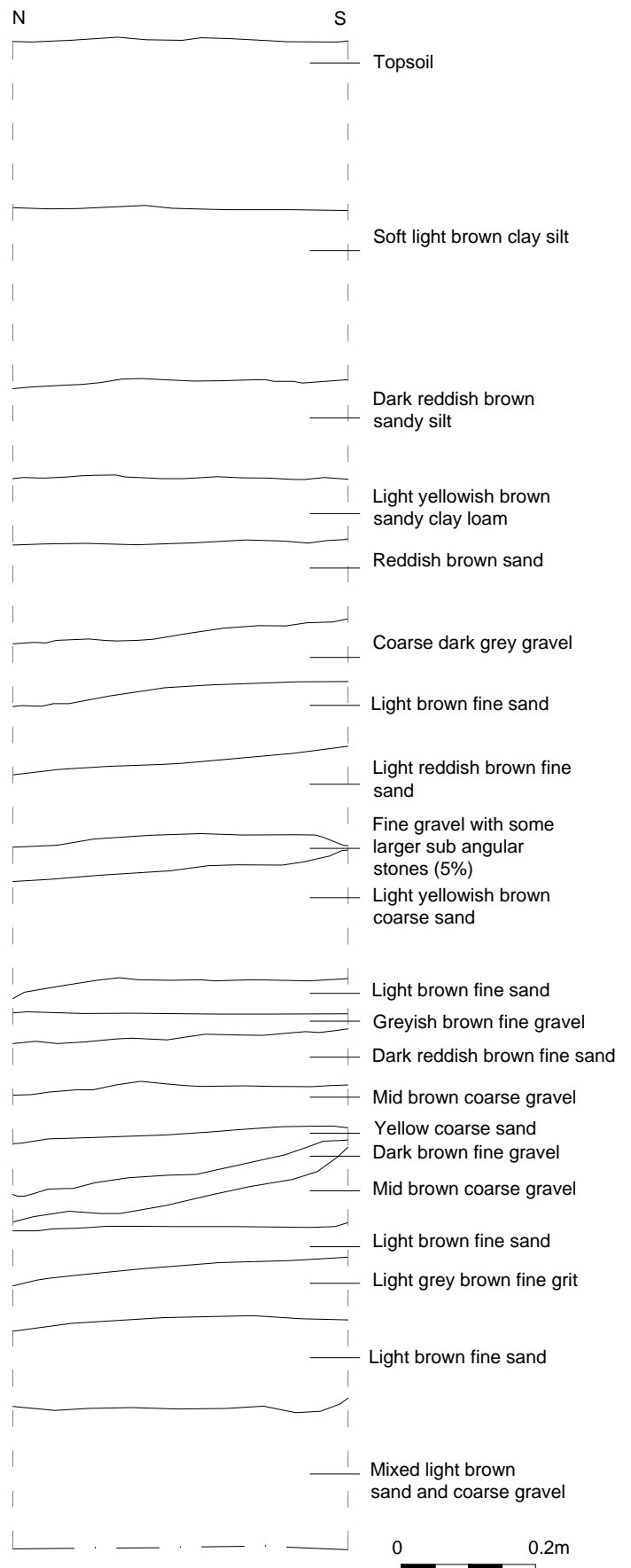


Geological section 4

© Archaeology South-East		Yalding rising main	Fig. 3
Project Ref: 160216	January 2017	Geological section 1 at CH103.19	
Report Ref: 2017013	Drawn by: JC		

Geological section 3

CH500



Geological section 3



Geological section 3



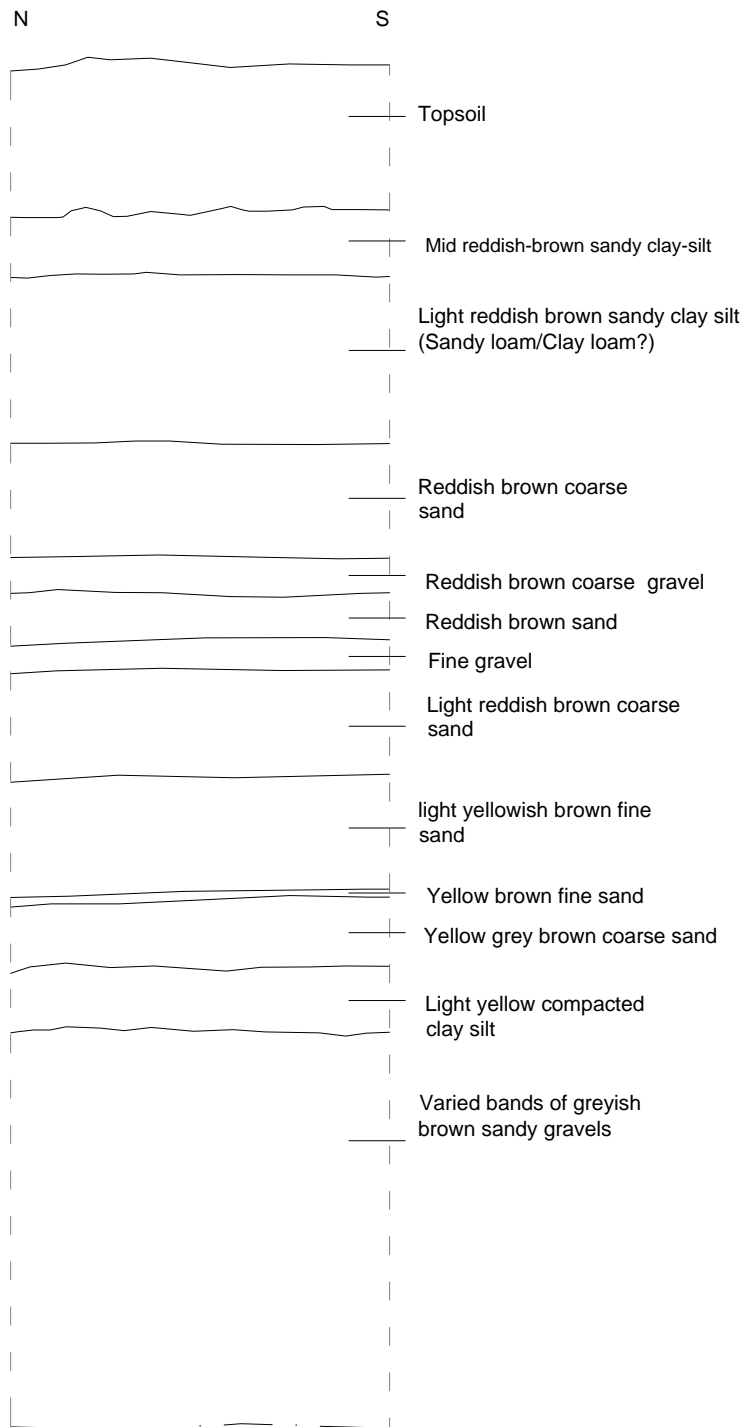
Geological section 3



Geological section 3

Geological section 4

CH550



0 0.2m



Geological section 4

© Archaeology South-East		Yalding rising main	Fig. 5
Project Ref: 160216	January 2017	Geological section 4 at CH550	
Report Ref: 2017013	Drawn by: JC		



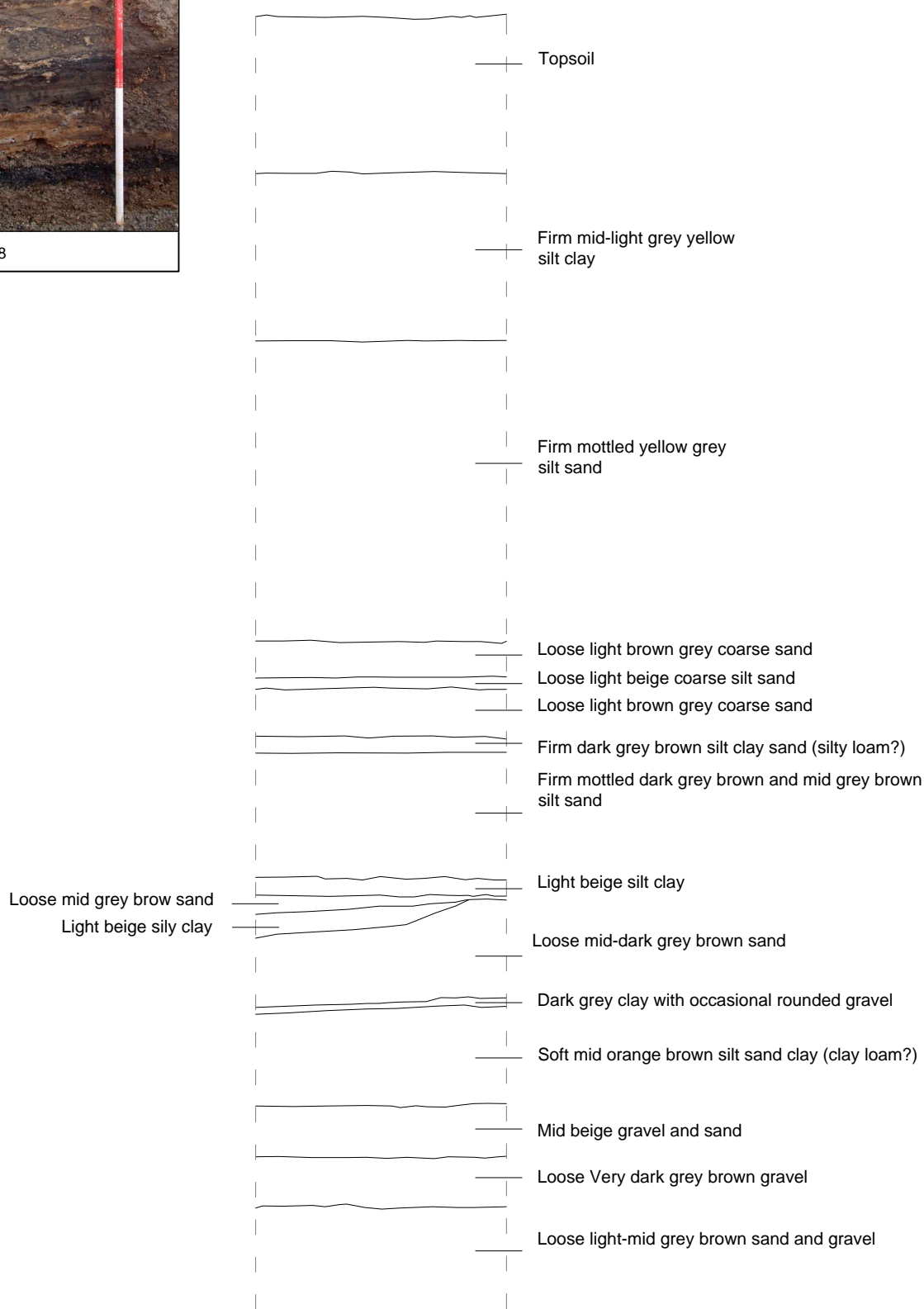
Geological section 8

Geological section 8

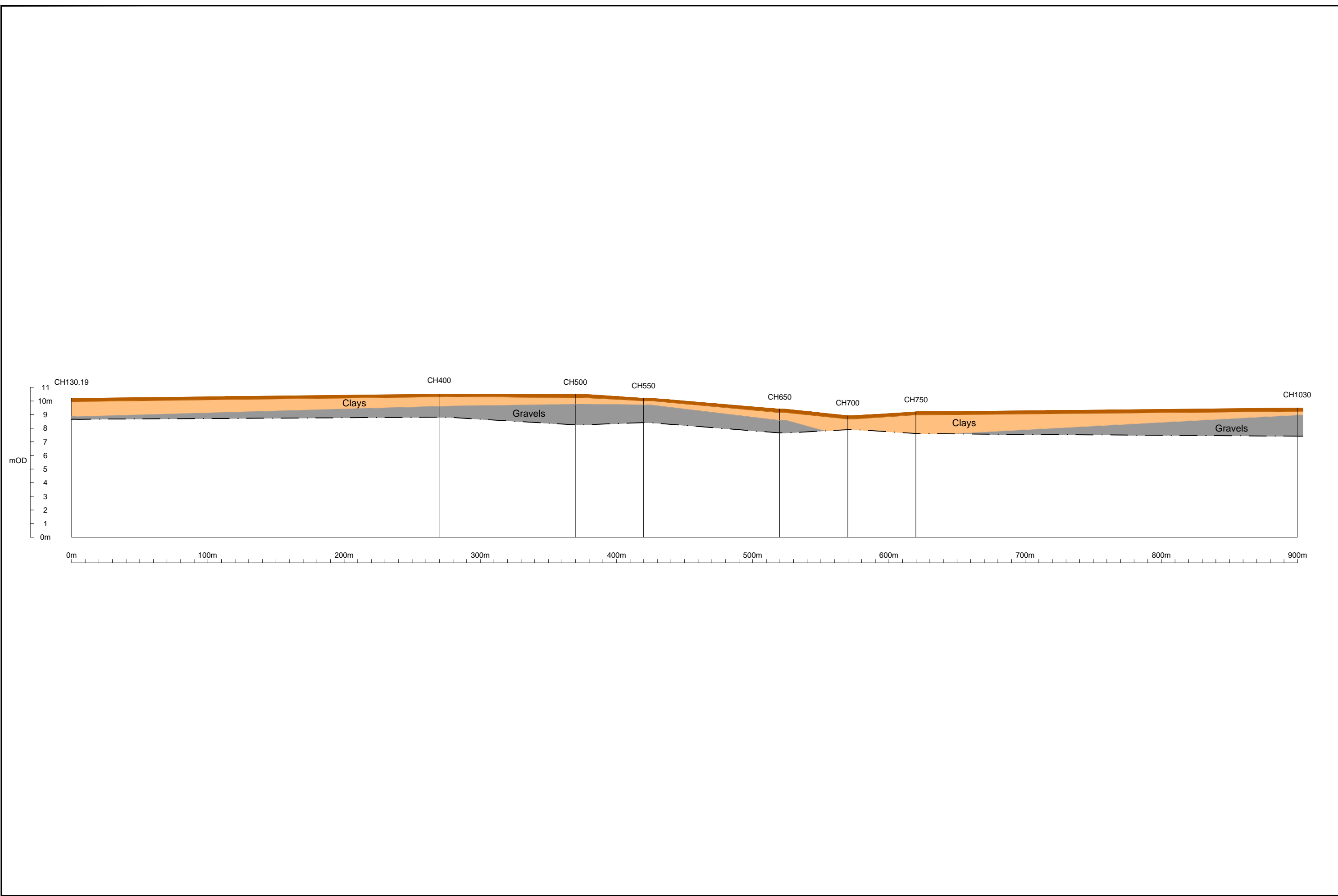
CH1030

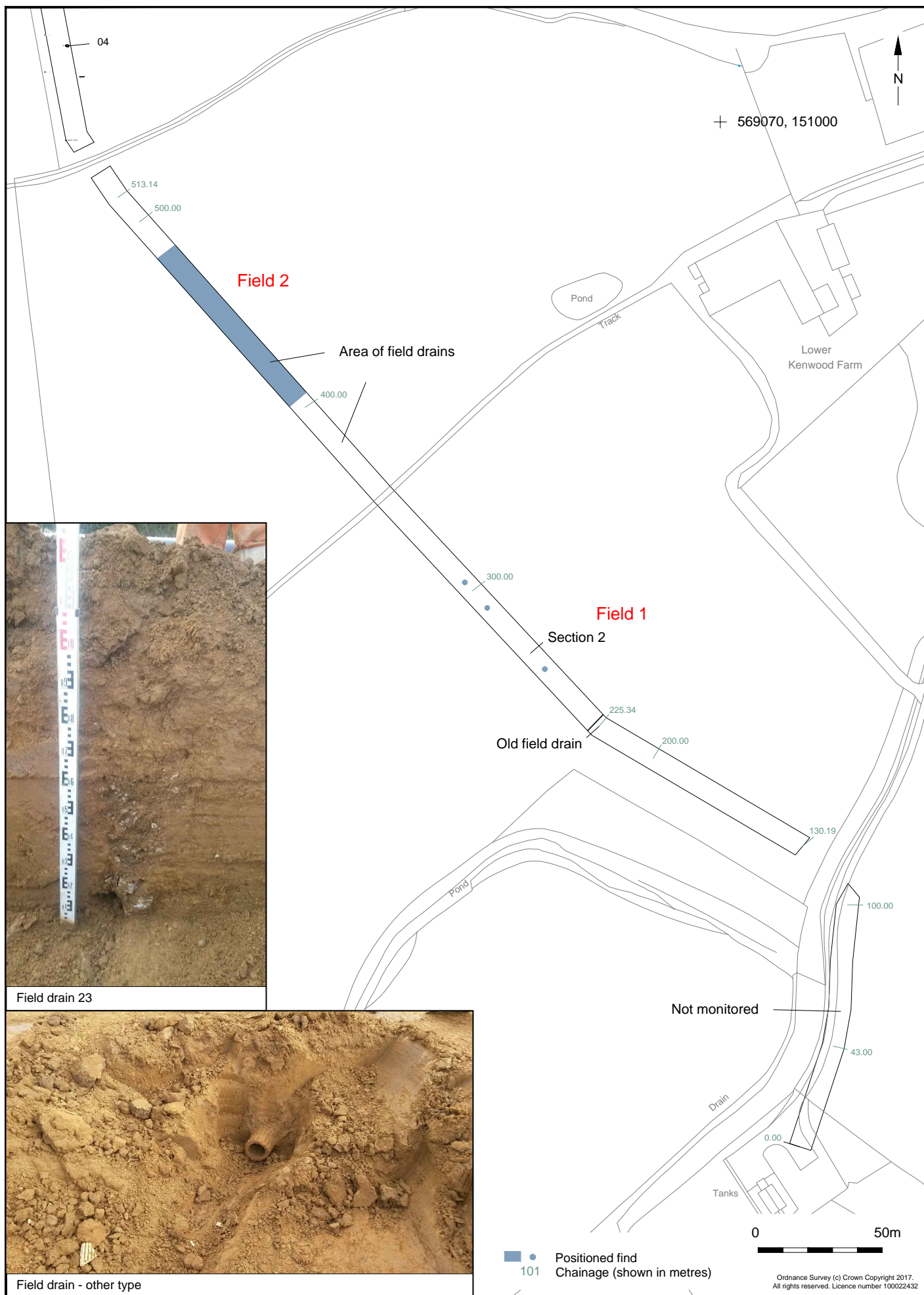
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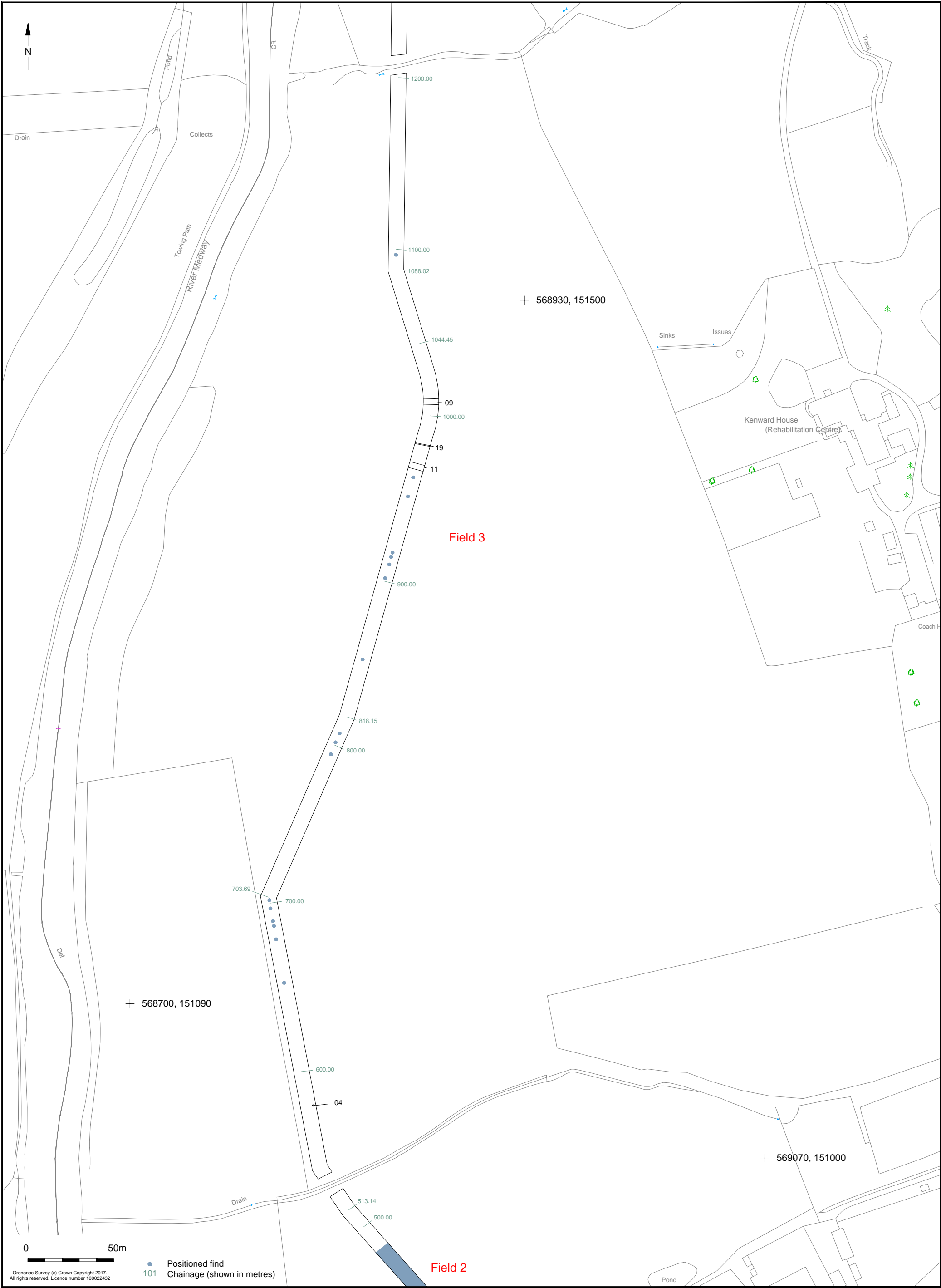


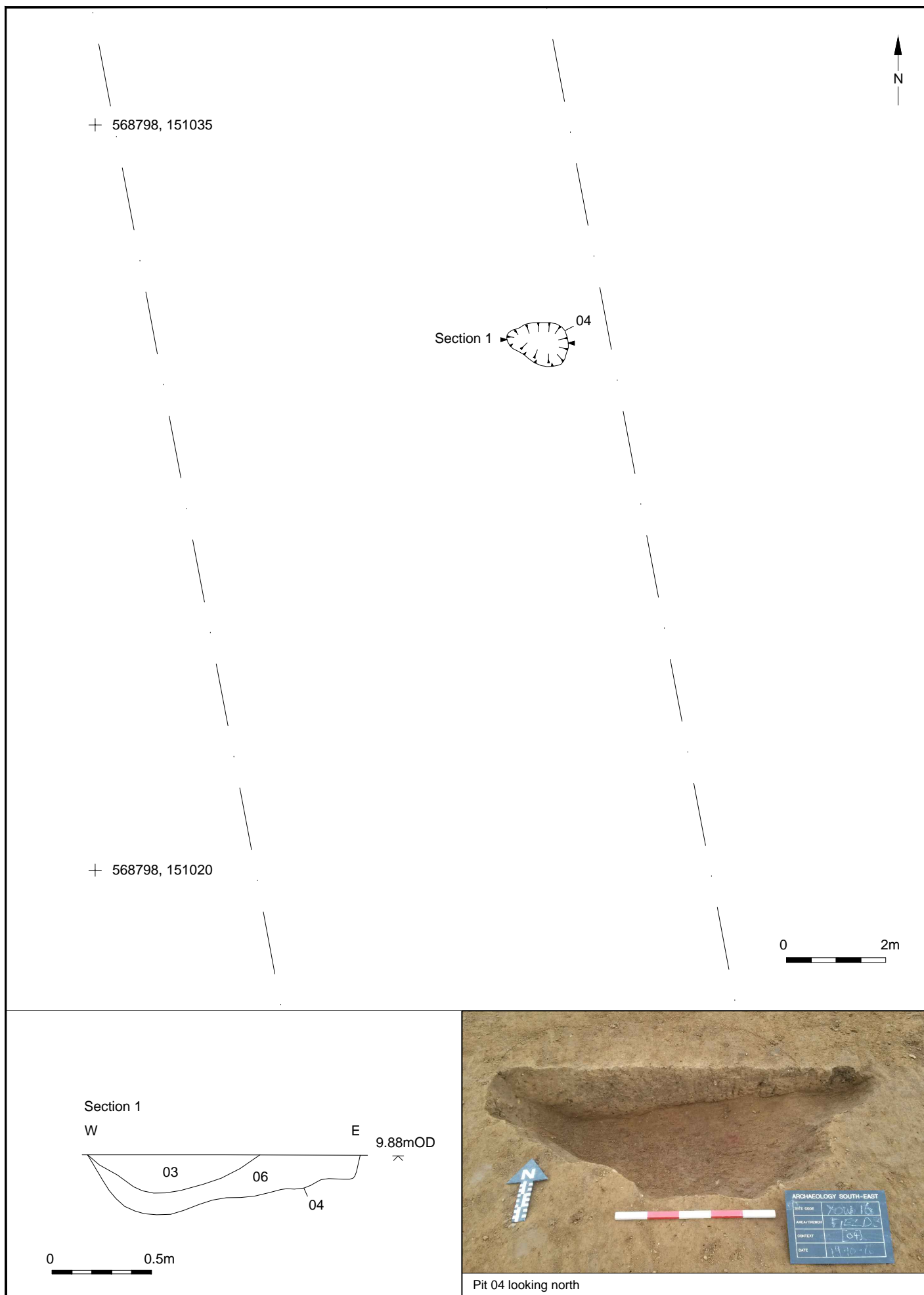
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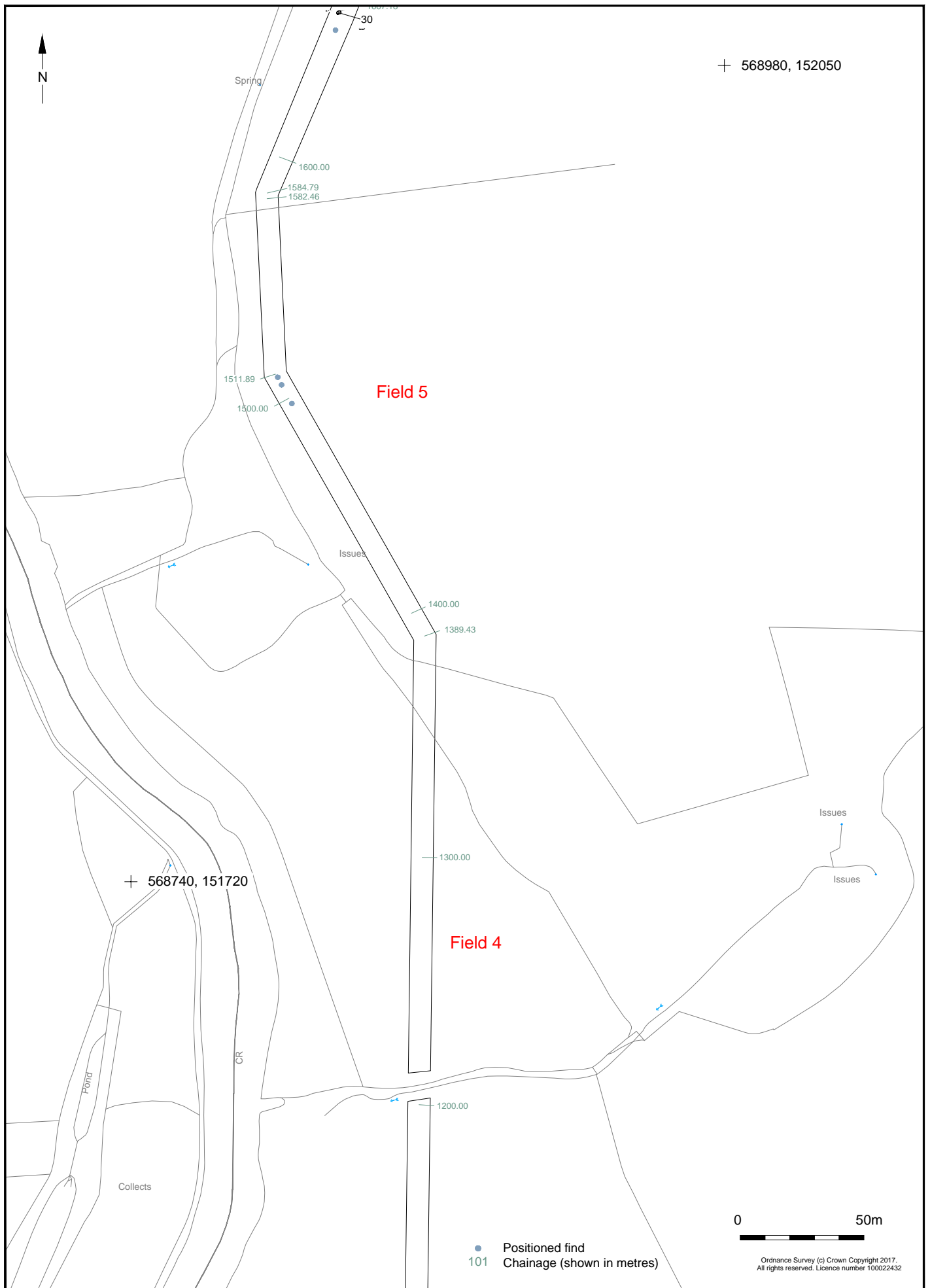
© Archaeology South-East		Yalding Rising Main	Fig. 8
Project Ref: 160216	Feb 2017	Plan of fields 1 and 2	
Report Ref: 2017013	Drawn by: JLR		



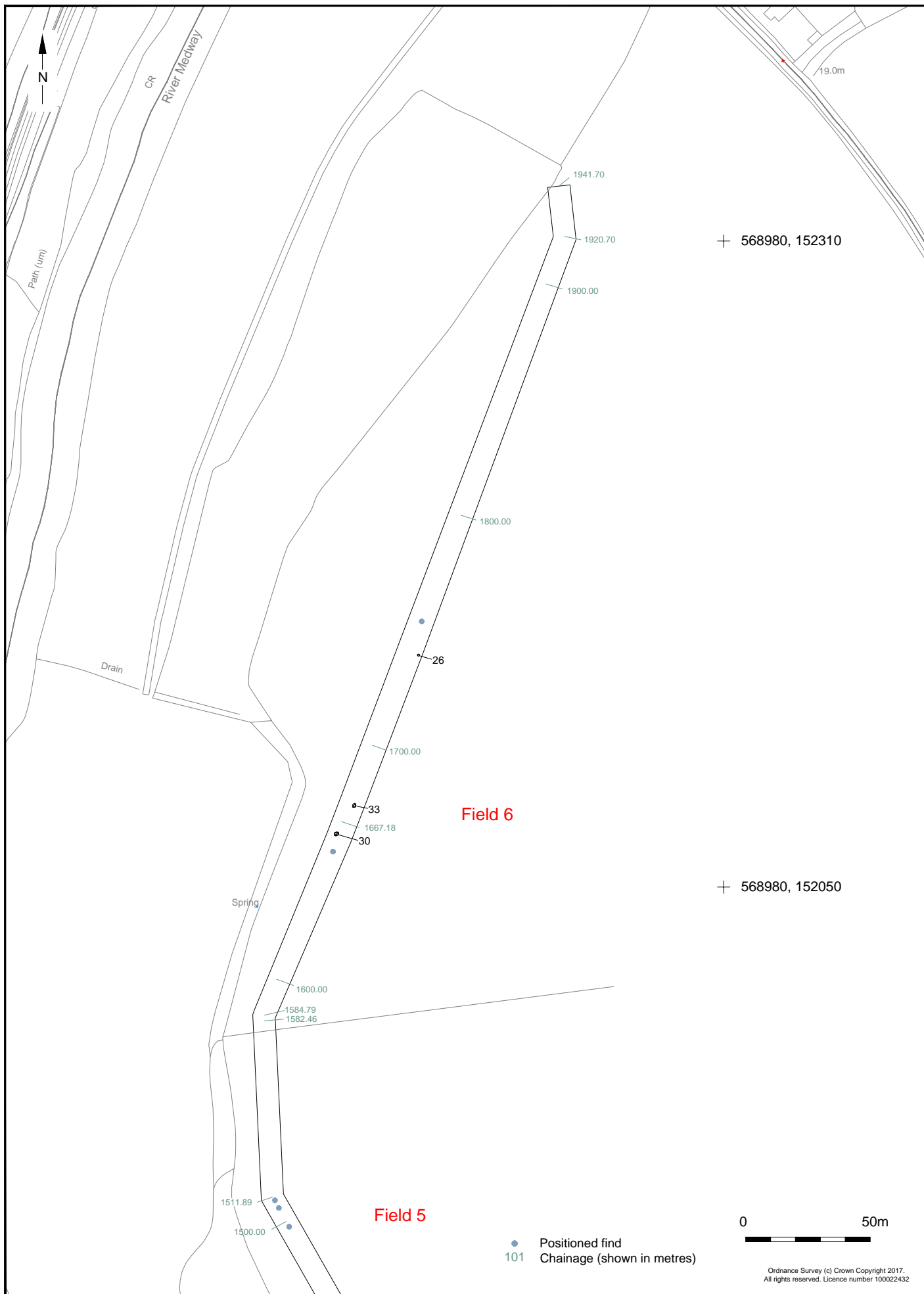


© Archaeology South-East		Yalding Rising Main	Fig. 10
Project Ref: 160216	Feb 2017	Field 3: plan, section and photograph of pit 04	
Report Ref: 2017013	Drawn by: JLR		

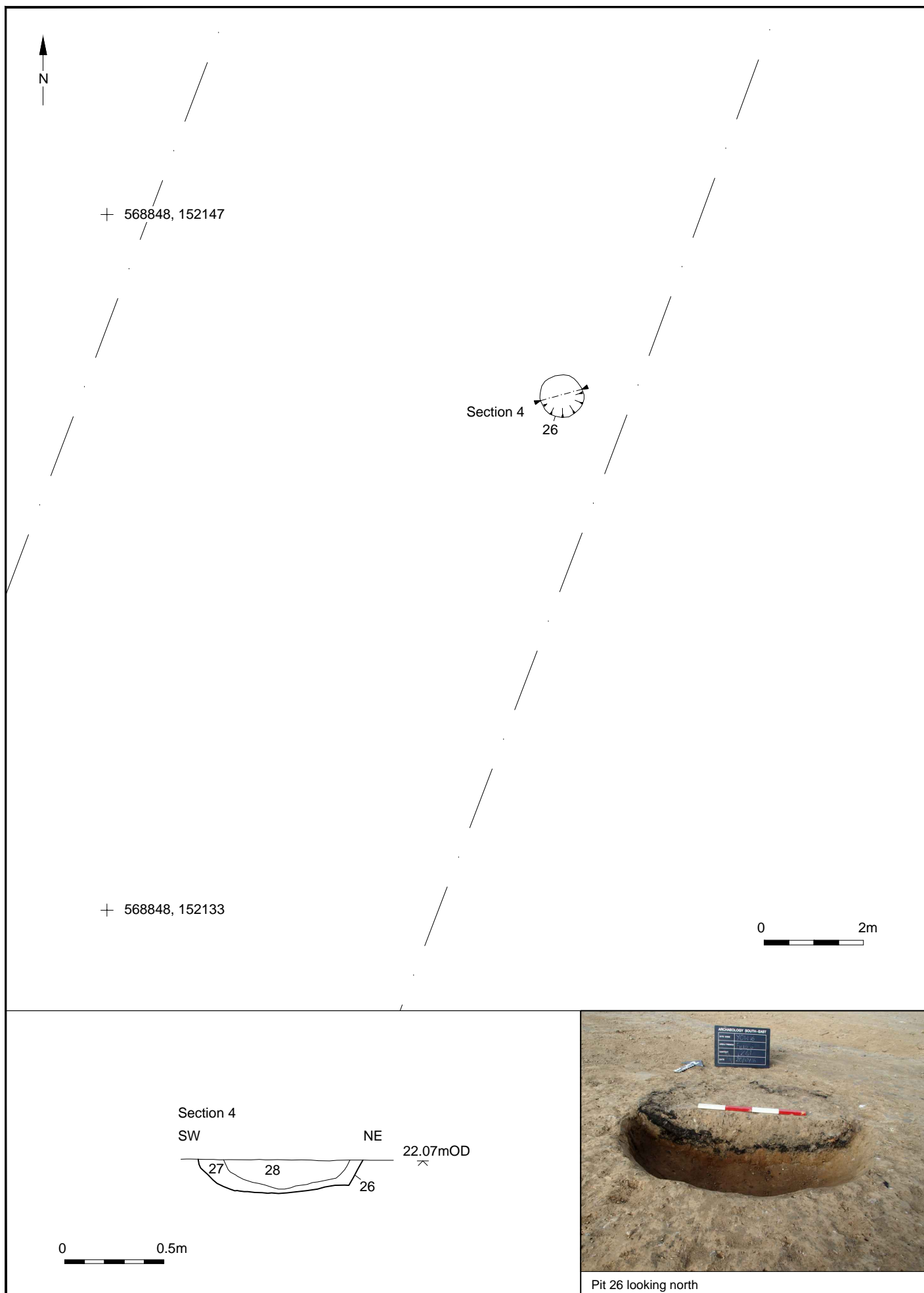




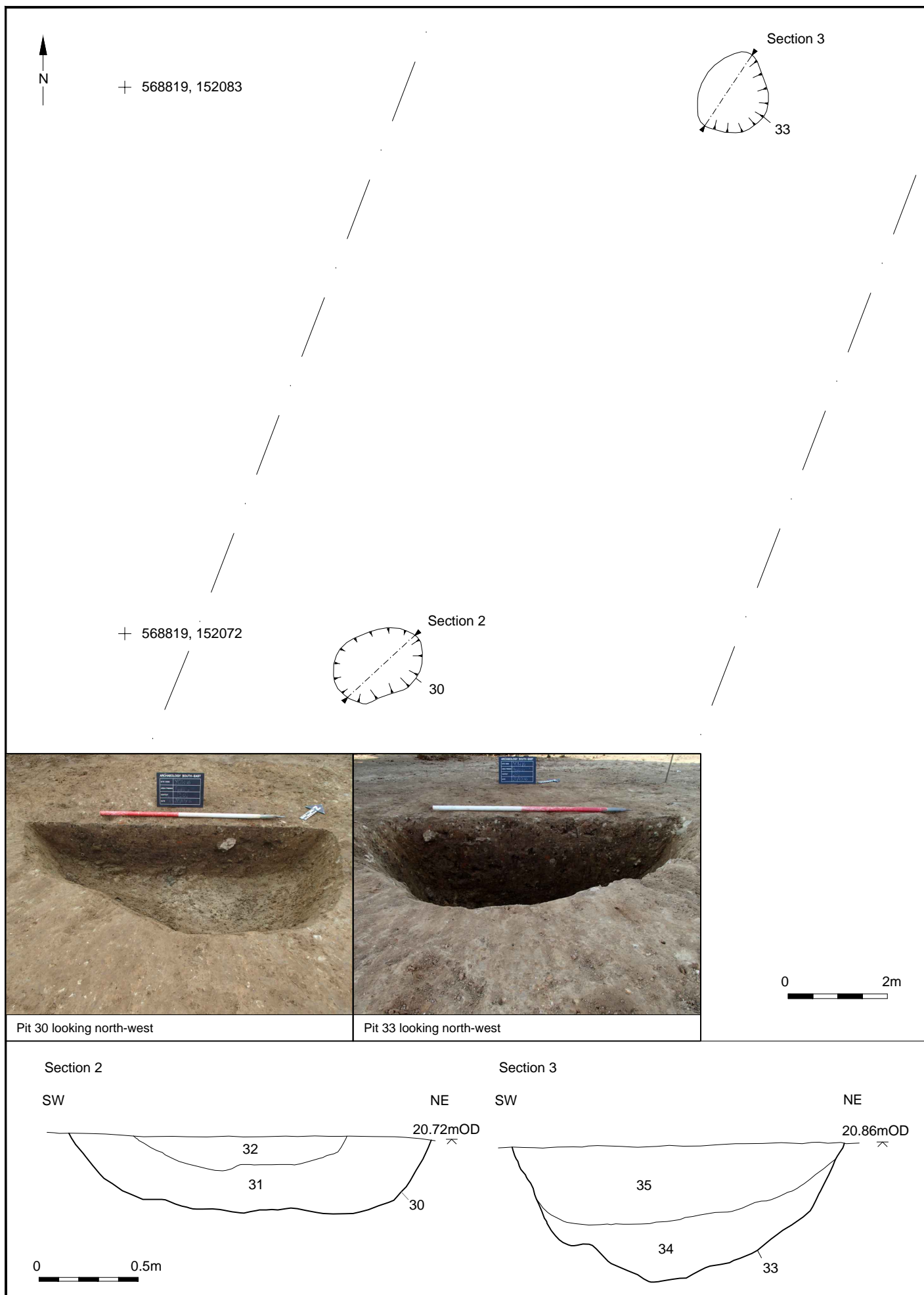
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Project Ref: 160216	Feb 2017	Fields 4 and 5	
Report Ref: 2017013	Drawn by: JLR		



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Project Ref: 160216	Feb 2017	Field 6	
Report Ref: 2017013	Drawn by: JLR		



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Project Ref: 160216	Feb 2017	Field 6: plan, section and photograph of pit 26	
Report Ref: 2017013	Drawn by: JLR		



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