LAND TO REAR OF GLEBELANDS ESTATE, PULBOROUGH, W SUSSEX

ARCHAEOLOGICAL EVALUATION

SURREY COUNTY
SCAU
ARCHAEOLOGICAL UNIT

AN ARCHAEOLOGICAL TRIAL TRENCH EVALUATION OF THE PROPOSED DEVELOPMENT OF LAND TO THE NORTH OF GLEBELANDS ESTATE, PULBOROUGH, WEST SUSSEX

Summary

An archaeological evaluation was undertaken by SCAU on land to the north of the Glebelands estate in Pulborough, West Sussex, in advance of the construction of 13 houses and related groundworks. The evaluation revealed a buried Iron Age field system with some associated pits and postholes, perhaps indicating nearby domestic activity. Also found was a ditch, seemingly unassociated with the Iron Age activity, but of unknown date, and some unstratified worked flint. After consultation with West Sussex County Council's Senior Archaeologist, a mitigation strategy was proposed which comprised an archaeological watching brief during the installation of the new access road, and excavation of the housing platforms. Further archaeological work may be required during other phases of development, but the nature and necessity of these strategies would depend upon the results of the initial works.

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Client	Croudace Homes

1. INTRODUCTION

1.1 Croudace Homes proposes to build a residential development on the land to the north of Glebelands, Pulborough (figure 1). Horsham District Council is considering the application, and consultation comments from the West Sussex Senior Archaeological Officer requested the preparation of a Written Scheme of Investigation (WSI) in order to act as supporting information for the planning decisions.

1.2 Surrey County Archaeological Unit were commissioned by Croudace Homes to prepare the WSI in order to assess the site's archaeological potential and the likely impact of the proposed developments. Figure 2 shows the existing layout of the development area and figures 3-5 show the proposed development.

1.3 The WSI (Shaikhley 2010, 5) recommended that an archaeological trial trench evaluation should take place in order to establish whether any archaeological remains survived and if they were under threat from the proposed development.

1.4 Surrey County Archaeological Unit were subsequently commissioned by Croudace Homes to undertake the archaeological evaluation of the development site.

2. GEOLOGY

2.1 The Geological Survey of Great Britain sheet No 317, covering this area at scale 1:50,000, was consulted for the geological background to the site. The map indicated that the site geology comprises Clay Head over Hythe Beds.

2.2 Geotechnical investigation revealed *c*300mm of topsoil across the site, overlying silty sandy clay down to *c*900mm.

3. ARCHAEOLOGICAL BACKGROUND AND POTENTIAL

3.1 The WSI (Shaikhley 2011, 2-4) gives a full account of the archaeological background. The following three paragraphs reproduce the summary of that and the archaeological potential.

3.2 There is only limited evidence of precisely located prehistoric material recorded from within the search area, comprising mostly of Bronze Age flintwork or pottery. This should not, however, be taken to imply that this area was not utilised in the pre-Roman periods, as substantial sites have been identified in the vicinity, and it is possible that the low level of systematic fieldwork has led to this lack of evidence.

3.3 The present development area must be regarded as having a good to high archaeological potential for the Roman period. The Roman evidence is shown to lie to the east of the present centre of Pulborough, suggesting a concentration of settlement and activity at some distance from the line of the Roman road The closest record to the proposal area is the discovery of part of a Roman building, thought to be a Roman temple, during the development of the Glebelands residential area. Further evidence of domestic buildings, another temple and a mausoleum are also apparent with the search area.

3.4 Medieval and later settlement at Pulborough concentrated on three areas: at the crossroads of the London Road with Church Lane/Rectory Lane, at the bridgehead of Swan Corner, and in Lower Street, immediately west of its junction with Rectory Lane (Harris 2004). The present site lies just beyond the 20th century expansion of the town, and at some distance from the core of the early village, or the moated site. Evidence relating to early urban expansion in this area is highly unlikely.

4. THE PROPOSED DEVELOPMENT

4.1 The proposed development covers an area of *c*1.3Ha. The development will comprise 13 dwellings, a mix of detached and terraced houses and bungalows (see fig 3). It is anticipated that standard strip foundations will be used in the construction of the new buildings. The development will incorporate a new access road running through the plot from the south-east corner, leading off Glebelands. Both soft and hard landscaping will also be undertaken in order to establish the residential development.

5. AIMS AND METHODOLOGY

5.1 The aim of the evaluation was to gather sufficient information to establish the presence or absence, extent, character, quality and date of any threatened deposits within the site in order to allow definition of an appropriate mitigation strategy.

5.2 The Written Scheme of Investigation (Shaikhley 2010) gives full details of the excavation and recording methods. It may be briefly noted here that the trenches were opened up using a 13t, 360º excavator equipped with a 1.80m wide toothless grading bucket. The machining was carefully observed for the occurrence of features or artefacts of archaeological interest. The undisturbed chalk surface below the overburden was carefully examined for evidence of features cutting it.

5.3 Fourteen trial trenches were proposed to be excavated, each being 25.00m in length, and the work was carried out in close accordance with that.

5.4 All the trenches along the northern edge of the site, 2 to 8, had to be moved southwards by varying degrees as the limits of the site were not clear when producing the trench layout plan. In addition to this a small area to the east of the site could not be evaluated because of access issues.

6. RESULTS

Stratigraphy

6.1 All trenches (figs 6-8) revealed a similar stratigraphy, comprising topsoil above subsoil, lying above hillwash, which in turn was above the natural Greensand geology of the area. Some finds were recovered from the overburden and these are noted within each trench description.

Topsoil 101: Dark brown black humic soil between 100 and 200mm in depth. No finds were recovered.

Subsoil 102: Mid grey-brown sandy silt between 140 and 400mm in thickness. Numerous black plastic bags

were noted, presumable a result of the nursery practices to the north. The occasional modern tile was observed in addition to the finds mentioned below in each trench description.

Hillwash 148: Very soft mid brown silty sand. Between 200 and 500mm in thickness. The deeper areas of hillwash corresponded with lower ground along the southern edge and central part of the site. No finds were observed.

Trench 1

6.2 24.50m long and an average overall depth of *c*600mm. Four pieces of struck flint were found in subsoil 102. These comprised three flakes and a flake fragment. Two pits or postholes were revealed in trench 1, 106 and 107. These were similar to each other in shape and size, both being circular with depths of *c*90mm. Their diameters were 370 and 490mm respectively. Both also contained similar fills of mid brown-orange silty clay, and no finds.

Trench 2

6.3 24.00m long with an average overall depth of *c*800mm. Five archaeological features and a sixth potential feature were revealed and investigated. These consisted of three postholes, a ditch 112 and gulley 111.

The three postholes, 104, 105 and 109, were all of a similar form to the two in trench 1. All were circular and had depths of between 80 and 160mm and diameters of between 370 and 570mm. Only the largest, 109, produced any finds, which comprised three fragments of baked clay weighing 4g.

The terminal of a north-west to south-east ditch 112 (segment 108) was also exposed within the trench. A stretch of just over 2.00m was excavated and revealed a width of *c*700mm and depth of 420mm. The ditch contained a fill of grey brown silt sand along with two pieces of struck flint, one piece of calcined flint and a single fragment of baked clay. This feature was the only one on the site aligned on a north-west to south-east axis.

Gulley 111 (segment 110) was shallow, at only 70mm deep, with a width of 250mm and a U-shaped profile. The fill contained a few flecks of charcoal, which may be root derived, and no finds of archaeological interest.

Trench 3

6.4 26.50m long with an average depth of 800mm. A possible scraper on a core tablet was recovered from within the subsoil 102, and a single north to south aligned gulley was found.

Gulley 120 (segment 121) was similar in form and fill to gulley 111 in trench 2, reaching a depth of 70mm and width of 350mm. No finds were recovered.

Trench 4

6.5 24.50m long with an average depth of 1200mm. No finds or features were noted.

Trench 5

6.6 24.50m long with an average depth of 1050mm. No finds or features were noted.

Trench 6

6.7 24.50m long with an average depth of 800mm. No finds were recovered from the overburden, but four features were noted. These comprised two gulley terminals, a posthole and a treethrow.

The two gulley terminals, 126 and 127, appear to be on an east to west alignment. Their widths were 340 and 380mm respectively, and reached depths of 200 and 120mm. Both had similar profiles, with steep sides and rounded bases. Each also contained a sherd of Iron Age pottery.

Posthole 125 was situated between gulley terminals 126 and 127. It was roughly circular in plan with a diameter of *c*470mm, had steep sides with a rounded base reaching a depth of 200mm. A single irregular piece of struck flint was recovered from the light brown fill.

The fourth feature was a probable treethrow, 124, located at the southern end of trench 6. It had gently sloping sides and a flat base, and its fill was lighter than most on site, being a very light brown silt clay. The feature yielded no finds.

Trench 7

6.8 23.50m long with an average depth of 800mm. No finds were recovered from the overburden, but two portions of a north to south aligned gulley and a pit or treethrow were revealed.

The two north to south gulleys, 113 (segment 114) and 115 (segments 116, 117 and 118), both had similar rounded profiles, but their depths differed slightly. Gulley 113 reached a maximum depth of 100mm, whereas 115 varied between 50mm at the southern end and 140mm at the northern. Two pieces of pottery, one Iron Age or Roman, and the other Iron Age or possibly Bronze Age, were recovered, along with a single piece of calcined flint from gulley 115. Gulley 113 contained a single sherd of Iron Age or possibly Roman pottery and at its northern end started to curve round to the west, possibly creating another east to west aligned gulley (fig 9).

Towards the northern end of, and cut by, gulley 115, was feature 119. Ovoid in shape and with a depth of only 60mm, gently sloping sides and a flat base, it is unclear whether it was a pit or a treethrow. No finds were recovered from it.

Glebelands, Pulborough, Figure 9: View of excavated segment 114 of gulley 113, which curves to the west towards the top of the picture

Trench 8

6.9 24.50m long with an average depth of 850mm. A single flint flake was recovered from the overburden and two gulleys, one pit, and a pit or ditch terminal were revealed (fig 10).

Pit 134 was rectangular in plan with steep sides, a flat base and dimensions of 1300x440mm and a depth of 115mm. The fill comprised a mid grey-brown clay silt that was moist and sticky, different to most on the site. Contained within the fill were a sherd of Iron Age or possibly Roman pottery, two flint flakes and a single fragment of calcined flint. Despite a resemblance in form to a grave, the complete absence of bone suggests this is very unlikely.

Feature 142 protruded from the western baulk of trench 8 for a length of 1170mm. It reached a depth of 260mm and had a U-shaped profile. No finds were recovered from the feature, and it is unclear whether it is the terminal of an east to west aligned ditch or a portion of a large pit.

Glebelands Pulborough, Figure 10: View, looking south, of trench 8 showing pit 134, ditch/pit 142 and gulleys 143 and 145

Two north to south aligned gulleys were located. The northern gulley, 143 (segment 144) was, on average, 270mm wide and 120mm deep. The southern gulley, 145 (segments 146 and 147) which was in line with 143, was on average 290mm wide and 110mm deep. Both gulleys had similar U-shaped profiles and brown clay-silt fills. Finds recovered were also similar, with only struck flint being observed – see the flint report below for further detail. Trench 8 sloped downhill from north to south, and as it did so, both gulleys 143 and 145 petered out without properly terminating, the northern terminal of 145 was, however, present. This fading out of both the gulleys may be a product of thicker hillwash as the trench progresses downhill.

Trench 9

6.10 24.50m long with an average depth of 750mm. No finds were recovered from the overburden, but two pits, a posthole, a gulley and another linear feature were observed and examined.

The two pits, 135 and 136, were both ovoid in plan, but their depths differed. Pit 135 reached a depth of only 90mm, while 136 achieved a depth of 290mm. Both had rounded bases and 136 had steep sides, whereas no true sides were visible in 135 because of its lack of depth. Neither pit contained any finds.

Close to the east of these pits were gulley 137 (segment 138) and linear feature 139 (segment 140). Both features ran from north to south and were intercutting (fig 11). Gulley 137 was 350mm wide and 200mm deep with a rounded base and contained two sherds of Iron Age or Roman pottery, two flint flake fragments and two pieces of calcined flint. Gulley 137 was cut on its western edge by feature 139, which had a slightly lighter fill. 139 was shallower than 137, achieving only 120mm in depth, but was wider at 480mm. The length of 139 could also be conjectured, reaching *c*1600mm. No finds were recovered from 139.

Glebelands Pulborough, Figure 11: View, looking north, of feature 139 (excavated segment 140) cutting gulley 137 (excavated segment 138)

At the western end of trench 9 was posthole 141. This was circular with a diameter of 330mm and depth of 120mm and a rounded base. No finds were recovered.

Trench 10

6.11 23.50m in length, with an average depth of *c*750mm. No finds were retrieved from the overburden, but an east to west aligned gulley, two pits and a pit or posthole were observed.

East to west aligned gulley 128 (segments 129 and 131) reached maximum dimensions of 350mm in width and 110mm in width with a bowl shaped profile. It produced two sherds of pottery, one Iron Age and the other Iron Age or Roman, and one baked clay fragment.

Pit 130 was cut by gulley 128 at its easternmost exposed end (fig 12). The pit was ovoid, measuring 1050mm in length, 550mm in width and 200mm deep and produced no finds.

Glebelands Pulborough, Figure 12: View of gulley 128 (excavated segment 129) cutting pit 130

A second pit, 132, was excavated at the western end of trench 10 and was possibly cut by pit or posthole 133. Pit 132 was ovoid in plan with dimensions of 950x250x110mm.

Feature 133 was circular with a diameter of 300mm and depth of 70mm and had a bowl shaped profile. Neither feature yielded any finds.

Trench 11

6.12 24.00m in length and 1000mm deep on average. No finds were recovered from the overburden, but a north to south running ditch was revealed at the eastern end.

Ditch 122 (segments 123) was 1170mm wide and 270mm deep and had a rounded base. No finds were recovered.

Trench 12

6.13 23.50m long and 1000mm deep. No finds or features were noted.

Trench 13

6.14 24.50m long and on average *c*900mm in depth. No finds or features were noted.

Trench 14

6.15 24.50m long and *c*950mm deep. No finds were observed in the overburden, but towards the western end one area was investigated, 103, which was proven to be a variation in the natural geology.

Pottery *by Phil Jones* (table 1)

6.16 Eleven sherds of pottery (20g) were recovered, of which six are most likely to be of Iron Age date, and the remaining five of the same or of Roman date. These latter are those that are tempered only with quartz sand (from contexts 114 of gully 113, 131 of gully 128 and 138 of gully 137) or grog in combination with calcined flint or quartz sand (contexts 117 of gully 115, and pit 134). For those with only sand inclusions, uncertainty about precise dating arises from their small size and relatively rolled condition that precludes their identification as deriving from either hand-made or wheel-thrown vessels. If the latter, they may be more likely to be of Roman date rather than earlier. It should be emphasized, however, that the size and condition of most other sherds also lends uncertainty to any more precise dating.

One sherd that may be relatively early is the 9g piece from context 116 of gully 115 that is predominantly tempered with grog, but which has almost equal amounts of crushed calcined flint. That its grog derives from earlier vessels of the same material is indicated from the smaller pieces of grog and flint within its temper. There is another sherd predominantly tempered with grog from context 115 of the same gully, but with lesser quantities of calcined flint and a burnished surface. Both of these sherds may be more likely to derive from Iron Age vessels.

Two sherds with differing quantities of glauconitic grains as a tempering medium are also more likely to be of Middle to Late Iron Age date. One from gully 127, is predominantly tempered with such ooids, has almost equal quantities of calcined flint and iron mineral inclusions, and is from a seemingly upright and plain rim although the size of the sherd is too small to be certain of diameter or precise orientation. The other, a body sherd from context 138 of gully 137, is predominantly tempered with sub-rounded, buff pellets of grog and only sparse amounts of glauconite.

The only other 'featured' sherd in the collection is another uncertainly orientated (and dated) rim fragment in a predominantly sand-tempered fabric with lesser quantities of calcined flint and iron mineral inclusions from gully 127.

This small collection suggests the presence nearby of later Iron Age and possibly early Roman activity, but their condition does not indicate that any had been recovered from positions of primary deposition.

Count

Trench	Context	Part of	Date				**Total**	Notes
			IA/BA?	IA	IA/R?	IA/R		
7	114	113	-	-	1	-	**1**	Q
7	116	115	1	-	-	-	**1**	GROG/Calc
7	117	115	-	-	-	1	**1**	GROG/calc
6	126	-	-	1	-	-	**1**	GLAUC/Iron/calc
6	127	-	-	1	-	-	**1**	Q/Calc/iron
10	131	128	-	1	-	1	**2**	Q
8	134	-	-	-	1	-	**1**	Q/Grog
9	138	137	-	1	-	1	**2**	GROG/glauc/Q
	Total		**1**	**4**	**2**	**3**	**10**	

Weight (g)

Trench	Context	Part of	Date				**Total**	Notes
			IA/BA?	IA	IA/R?	IA/R		
7	114	113	-	-	1	-	**1**	Q
7	116	115	9	-	-	-	**9**	GROG/Calc
7	117	115	-	-	-	1	**1**	GROG/calc
6	126	-	-	1	-	-	**1**	GLAUC/Iron/calc
6	127	-	-	2	-	-	**2**	Q/Calc/iron
10	131	128	-	2	-	2	**4**	Q
8	134	-	-	-	1	-	**1**	Q/Grog
9	138	137	-	1	-	1	**2**	GROG/glauc/Q
	Total		**9**	**6**	**2**	**4**	**21**	

Table 1: Pottery classification

Flint *by Nick Marples* (table 2)

6.17 Twenty flints deemed to have been humanly worked, weighing a total of 134g, were recovered from nine archaeological contexts, and eight additional struck flints of a rather more ambiguous nature, weighing 36g, were collected from context 147. It is unclear if these eight flints are the result of human workings or natural processes, as their characteristics are indistinct. Very little unworked flint was otherwise observed during excavation, and this isolated collection may indicate Iron Age flintworking.

The remaining lithic finds are in variable condition, ranging from fresh and unabraded, to quite glossy and with occasional modern edge damage. One small, pale blue patinated trimming flake, bearing evidence of platform edge abrasion and with bladelet scars on its dorsal surface, which was recovered in the course of machining Trench 1, is likely to be of Mesolithic date, but this piece is in poor condition. Another fragment from the same trench with indications of platform edge trimming is also likely to be Mesolithic or Neolithic.

Most of the other flakes and fragments from the site are of indeterminate date, but they include some pieces with thermal flaws and one flake from context 125 with incipient cones of percussion deriving from hard hammer miss-hits. These are characteristics of flintwork usually regarded as later Bronze Age (defined as middle to late Bronze Age), but are potentially of Iron Age origin, given the general dating for the site. Evidence for Iron Age flint working is rare and difficult to identify (Humphrey 2004, 243), and its confirmation here would be of importance.

The only tool identified is an end-and-side scraper from Trench 3 manufactured on a core rejuvenation flake, which probably dates to the Neolithic or Early Bronze Age. One flake from context 144 has been detached incidentally from a hammerstone in the course of its usage.

Trench	Context	Part of	Frag	Flake	Chip	Irregular	Core	Hammerstone	?Scraper	**Total**	Weight (g)
1	100	-	1	3	-	-	-	-	-	**4**	49
3	100	-	-	-	-	-	-	-	1	**1**	20
8	100	-	-	1	-	-	-	-	-	**1**	13
2	108	112	-	1	1	-	-	-	-	**2**	1
6	125	-	-	-	-	1	-	-	-	**1**	9
8	134	-	-	2	-	-	-	-	-	**2**	2
9	138	137	2	-	-	-	-	-	-	**2**	4
8	143	143	2	-	-	-	1	-	-	**3**	17
8	144	143	1	2	-	-	-	1	-	**4**	19
8	147	145	-	-	-	-	-	-	-	**8**	36
	Total		**6**	**9**	**1**	**1**	**1**	**1**	**1**	**28**	**170**

Table 2: Struck flint classification

Calcined Flint, Stone and Baked Clay (table 3)

6.18 Five pieces of calcined flint were recovered from four contexts weighing 41g. Three stone fragments weighing 263g were recovered from two contexts. Five pieces of baked clay were retrieved from three contexts, weighing 7g.

Trench	Context	Part of	**Count**	Weight (g)	Material	Notes
2	108	112	**1**	2	Baked Clay	
2	108	112	**1**	21	Calcined Flint	
2	109	-	**3**	4	Baked Clay	
7	116	115	**2**	187	Stone	Hythe beds sandstone, glauconitic sandstone
7	116	115	**1**	8	Calcined Flint	
10	131	128	**1**	1	Baked Clay	
10	131	128	**1**	76	Stone	Ferrunginous siltstone
8	134	-	**1**	1	Calcined Flint	
9	138	137	**2**	15	Calcined Flint	
	Total		**13**	**315**		

Table 3: Calcined flint, stone and baked clay classifications

7. DISCUSSION

7.1 All the artefacts recovered were of small size. This creates difficulties in dating features and establishing the chronology of an area, as finds may be intrusive, working their way in to features through root or animal action. This site, however, with most finds belonging to one period allows the dating of, not necessarily individual features, but general activity, to a particular period.

7.2 The most significant and concentrated evidence recovered was of Iron Age date, and most of this lay at an average depth of *c*700mm. Few artefacts were recovered from other periods, but when found, they were not from features. This suggests that that activity prior to the Iron Age was minimal.

7.3 Of the Iron Age activity, most noteworthy, and easily dated, are a series of north-south and east-west gulleys that appear to form a field system or enclosing of land. Previously, little evidence for prehistoric field systems has been encountered on the upper greensand geology across the south-east. Most recorded prehistoric field systems have been upon the either the chalk downs or river terrace gravels. The most recently investigated site of this type was at Dean Way excavated in 2000 in Storrington (Howard-Davis & Matthews 2002).

7.4 The gulleys all get progressively shallower the further south they lay. There are two possible reasons for this. The first could be the result of the segments being originally more deeply cut on the uphill end, and subsequent erosion obscuring the precise position of the downhill terminations. The second could be the product of the gulleys being cut through some of the hillwash, therefore not impacting upon the areas where it lay thicker. Subsequent bioturbation could then have disguised the interface between hillwash and gulley fill, leaving the only visible traces cutting the natural.

7.5 Despite petering out as they progress south, the gulleys found are clearly separated on occasion, for example 143 and 145, and 113 and 115, indicating the use of segmented ditching. This may also be represented between east-west gulleys 126 and 127. The curving evident at the northern exposed end of gulley 113 may only signify a change in direction, but could also relate to herding of livestock. The tentative suggestion below that a post hole is also similarly associated might hint at a primary use of the fields for pasture, but no great stress should be put on that.

7.6 It is unclear if the pits and postholes revealed are associated or contemporary with the field system. Features 130 and 119 are the only two that have a stratigraphic relationship with any part of the field system. Both are earlier than the gulleys. Posthole 125 may also be of importance, or indicate an interrelationship between the types of feature. Situated between two gulley terminals, 125 may have held a post, which formed part of a fence or gate, perhaps to aid herding. In general, given the absence of material of other dates, both within the features and across the site, it is perhaps more probable that the pits and posthole revealed are associated with the field system.

7.7 The association of ditches 142 and 122 with the other features is also unclear. Both are on similar alignments to the field system, but are much broader and deeper. These ditches may represent a slightly different phase in the dividing of the land during this period, or formed more substantial boundaries of the same system.

7.8 Consideration must also be made to north-west to south-east aligned ditch 112. It is the only feature on this alignment and is difficult to associate with others. This feature may indicate another phase of activity, although whether this is earlier or later is unestablished.

7.9 There is a slim possibility that rectangular feature 134, located at the north of trench 8, could be a grave, however, the absence of bone and its location and isolation make this unlikely.

7.10 The lack of Roman finds is curious for this site, and should be noted. The quantity of important Roman remains that are in close proximity to Glebelands; the mausoleum to the north-east, temple to the south and domestic activity to the east within Pulborough, all indicate a rich Roman history for the locale. That no definite Roman evidence was found, including pottery that may have been spread during manuring, is unexpected. The area may have been physically separated from Roman activity areas by woodland and/or itself been under woodland or pasture.

8. CONCLUSIONS

8.1 Despite the relocation of some of the trenches, good coverage of the proposed development site was achieved, except in the small area to the east. This unassessed portion is small and abuts the edge of the evaluated area, meaning features of a similar nature may be expected.

8.2 The Iron Age activity revealed on site was located at the eastern and western ends. Its absence in the central area may be an effect of the increased depth of the overburden in this area and indicate that the gulleys were not deep enough to impact upon the natural here, assuming (see 7.4) they were originally dug from a higher level. Equally, the distance between identified gulleys and their segmented character leave open the possibility that trial trenches in the central area fall between portions of the field system. For this reason, it remains possible that features dug to a greater depth and/or field system elements will survive in the centre of the site.

9. IMPACT OF THE DEVELOPMENT AND RECOMMENDATIONS

9.1 In general, the depth at which archaeological evidence of significance survived was around 700mm below ground level. Despite the depth at which the archaeology survives, the shallowness of the archaeological features themselves means they are highly susceptible to impact during the course of the development. The proposed development can be split into four main categories with relation to impact upon the buried archaeology; Road Installation, Unit Footings, Services, and Landscaping.

A meeting between Horsham District Council, West Sussex County Council, Croudace and SCAU was arranged, and the following was agreed as the most suitable approach to mitigation (the Appendix gives full details of the methodology for the works).

Road Installation

9.2 The road installation groundworks will exceed the 700mm depth at which the archaeology is encountered, and largely or wholly remove the archaeology that is present.

An archaeological watching brief during the reduced level strip of the route of the road is therefore proposed so that any archaeological features can be recorded.

House platforms and foundations

9.3 The levels to which the footings and platforms for the proposed development reach vary across the site, according to their location in comparison to the slope of the site. The foundations will be a minimum of 900mm below the original ground level and 450mm wide. These would all reach the level of the archaeology. The platforms for the buildings will be required to reach a depth of *c*600mm. It is provisionally recommended that an archaeological watching brief is maintained on the reduced level strip for the platforms. This should be maintained on the foundation trenches but if features are still not visible after the first spit of trench excavation for a house, the watching brief should be discontinued, except in the unevaluated eastern portion of the site, where it should be continued to full depth.

9.4 However, if the watching brief does not prove an effective methodology for recording archaeology during the road installation, an alternative strategy may need to be agreed, for example a strip, map and sample (SMS) of the housing platforms.

Services

9.5 Soakaways and drains will be excavated to depths of between 1.00 and 2.00m. Manholes will be excavated to between 0.60 and 1.00m in depth. Other services will be required between some of these installations. Some of these services reach and surpass the level at which the archaeology is present, and would therefore have a detrimental affect upon it.

The need for and nature of archaeological works in relation to the services should be reviewed in the light of the results of the access road and house building archaeological works. A continuation of the watching brief could be suitable for this phase of works.

Soft Landscaping

9.6 The proposed soft landscaping will only reach minimal depths in comparison to that at which the archaeology is encountered. It is therefore recommended that no further work is required in connection with this phase of work.

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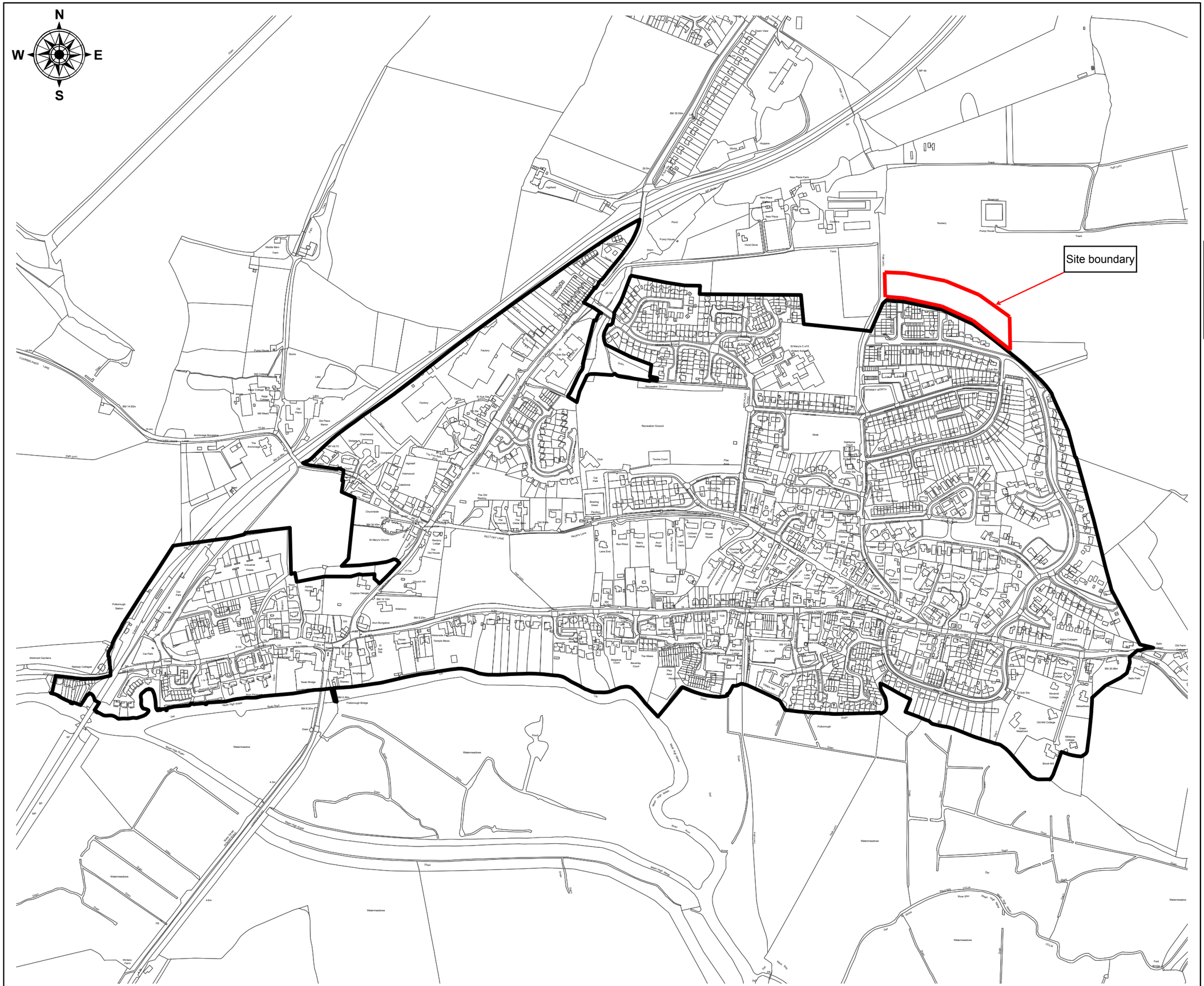

Sussex EUS

west sussex county council

East Sussex County Council

Brighton & Hove

ENGLISH HERITAGE

Figure 1: Site location map

KEY

EUS boundary

EUS research and mapping:
Dr Roland B Harris BA DPhil MIFA
October 2004

SCALE 1:6,000

0 25 50 100 150 200 Meters

Figure 2: Proposed development plans for the land to the north of Glebelands Estate, Pulborough

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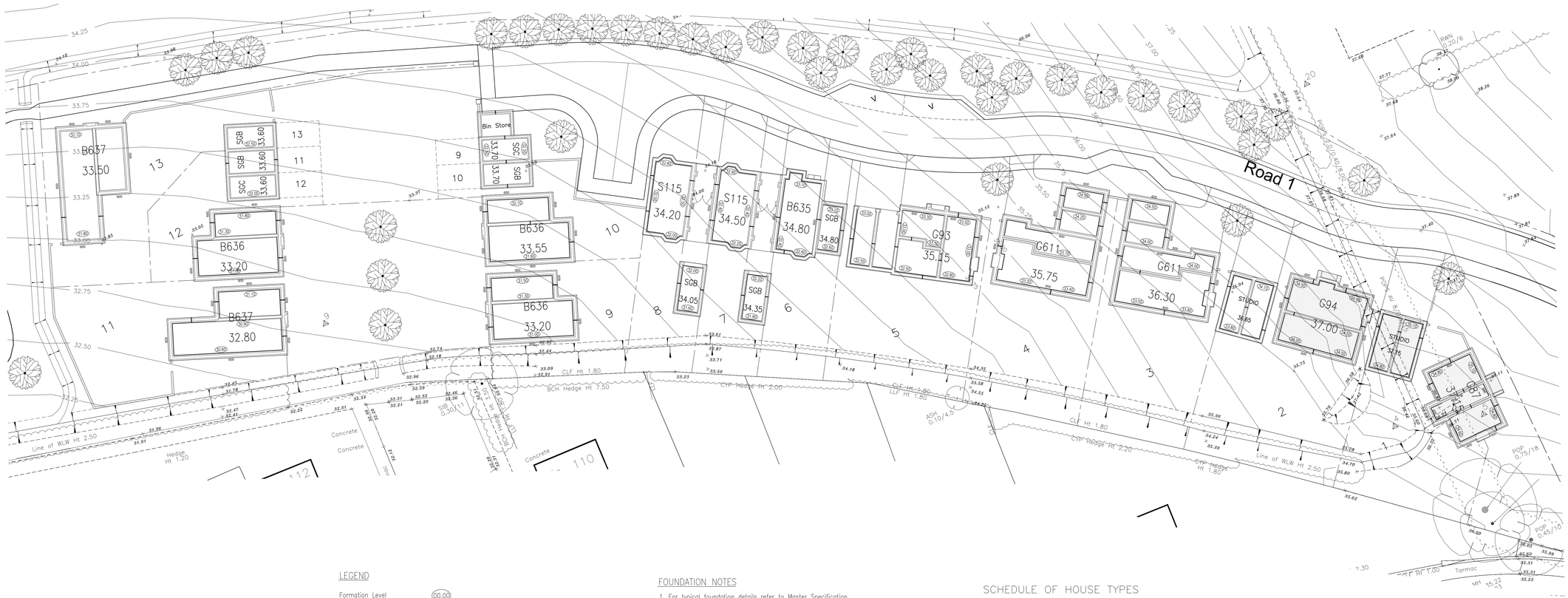
PULBOROUGH

GLEBELANDS

BASE LEVELS FOR ARCHAEOLOGY

SCALE :	1/200
DATE :	SEPT 2011
DRAWN :	K.H.H.
CHECKED :	
DRG.No. :	115/xx -



LEGEND

Formation Level 00.00

Step in Foundation

50mm Claymaster

Existing Contour 73.00

Existing Ground level + 73.00

Existing tree/hedge retained

Existing tree/hedge removed

New tree

Plots requiring 'Cordex' correx

FOUNDATION NOTES

1. For typical foundation details refer to Master Specification.
2. The foundation stratum is the sandy clay subsoil found approximately 0.30m–1.8m below existing ground level.
3. Foundation widths to be 450mm minimum unless otherwise noted.
4. Foundation widths are based on a bearing capacity in the foundation stratum of 100kN/m^2
5. The soils report concludes that the clay subsoil is rated as 'Medium Shrinkability' by the NHBC. This is only applicable to the overlying clay layer which is a max depth of 1.8m. Therefore deepening will not be required below 1.9m where trees affect the foundation. The underlying strata of sand has negligible shrinkage potential. Based on the above all foundations must be a min of 0.9m below original ground level.
6. Foundations to be taken a minimum of 300mm into the clay/sand sub. TECH to be advised if the formation level is exceeded in order to achieve this requirement.
7. TECH are to be advised if tree roots are observed within 500mm of the formation level.
8. Foundations to have a minimum concrete thickness of 500mm.
9. Where steps are shown in the foundation refer to Master Specification for details. Steps are under no circumstances to be located within 500mm of a return.
10. For construction joints in the foundations refer Master
11. Where drainage and services pass through foundations refer to Master Specification for details.
12. All houses to have suspended floor slab refer to Master Specification for details.
13. All garages to have suspended floor slab refer to Master Specification for details.
14. The void beneath the underside of the floor beams is to minimum of 250mm.
15. For concrete strengths refer to Concrete Specification.
16. All plots to be nominally reinforced top and bottom with B503 steel mesh. Minimum of 75mm cover.

SCHEDULE OF HOUSE TYPES

G87	5 Bed House	1
G94	4 Bed House	1
G639	5 Bed House	2
G93	5 Bed House	1
B635	3 Bed House	1
S115	3 Bed House	2
B636	2 Bed Bungalow	3
B637	2 Bed Bungalow	2
		13

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GLEBELANDS

FOUNDATION LAYOUT

SCALE :	1/200
DATE :	MAY 2011
DRAWN :	K.H.H.
CHECKED :	
DRG.No. :	115/31 -

Figure 3: Proposed development plans for the land to the north of Glebelands Estate, Pulborough

SCHEDULE OF HOUSE TYPES

G87	5 Bed House	1
G94	4 Bed House	1
G639	5 Bed House	2
G93	5 Bed House	1
B635	3 Bed House	1
S115	3 Bed House	2
B636	2 Bed Bungalow	3
B637	2 Bed Bungalow	2
		13

PUBLIC FOUL WATER MANHOLE SCHEDULE

MAIN SEWER

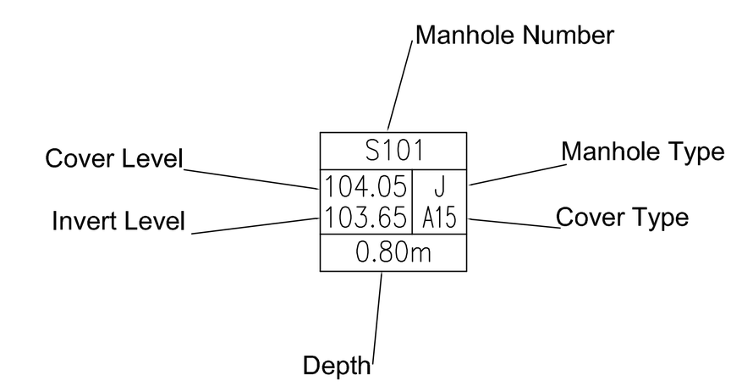
MH No.	C.L.	I.L
F001	32.00	30.00

NOTES

1. Invert levels to existing manholes & sewers are to be checked on site BEFORE any construction commences & any discrepancy is to be reported to TECH
2. All private drainage to be 100mm diameter unless otherwise stated
3. Bed & surround to all private drainage is to be Class 'S' or 'X', refer to Master Specification.
4. For details of drainage passing through foundations refer to Master Specification.
5. All gullies & rainwater pipes which join a main run at a 'Y' junction are to be roddable
6. For manhole details refer to Master Specification.
7. In all cases drainage carrying toilet waste must be on the straight through run of pipe.
8. To eliminate leakage all pipework under buildings is to be PVCu and joints are to be kept to a minimum.

LEGEND

- Open vented SVP
- WC stub waste
- Basin/sink stub waste
- Public Foul Sewer & Manhole
- Public Surface Water Sewer & Manhole
- Private Foul Sewer & Access
- Private Surface Water Sewer & Access
- Backdrop (or)
- Road Gully
- Drive Gully
- 300mm dia. Mini Access Chamber
- Surface Water Rodding Eye
- Slotted Drain
- Porous Paving



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PULBOROUGH

GLEBELANDS

DRAINAGE LAYOUT

SCALE :	1/200
DATE :	MAY 2011
DRAWN :	K.H.H.
CHECKED :	
DRG.No. :	115/32 -

Figure 4: Proposed development plans for the land to the north of Glebelands Estate, Pulborough

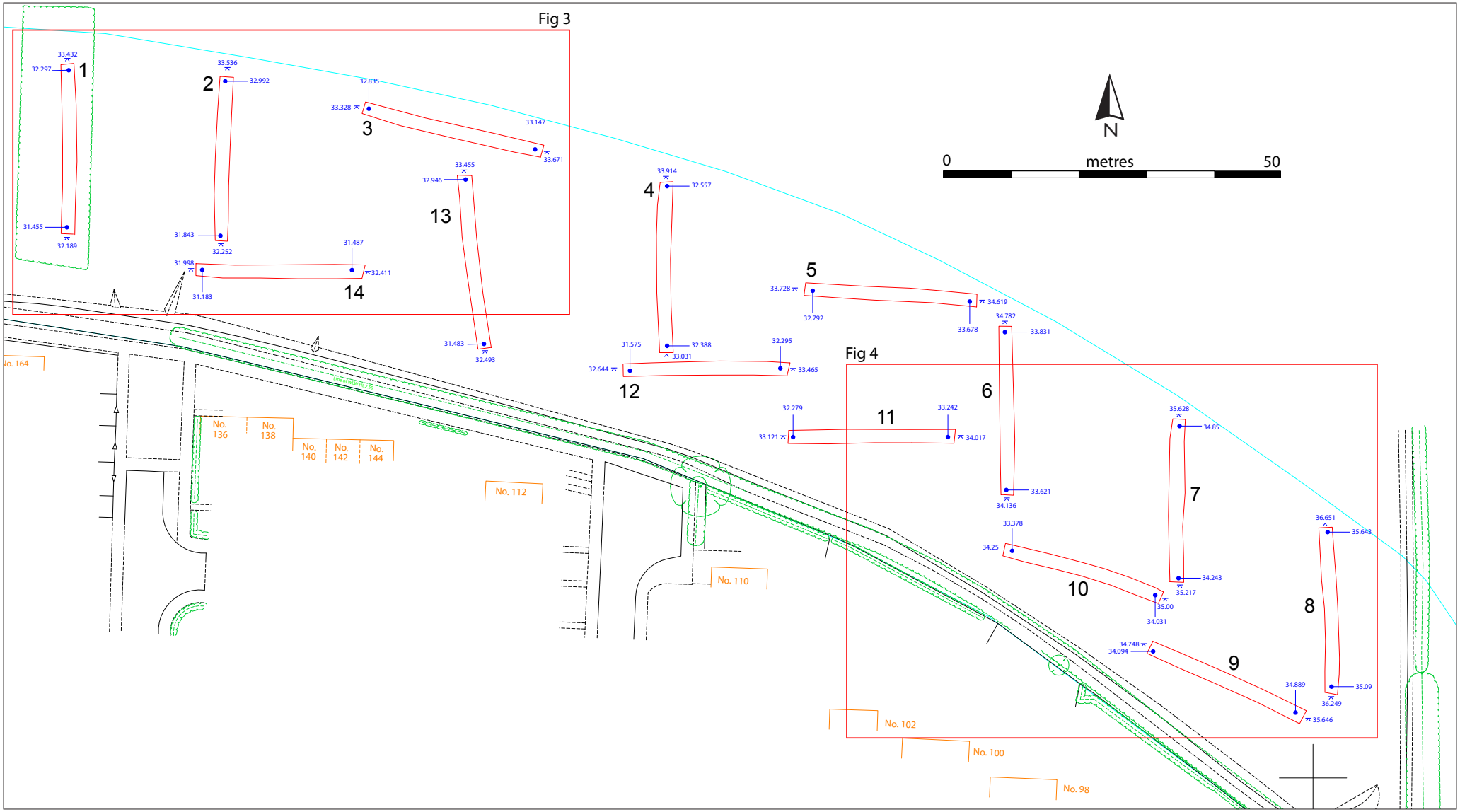


Figure 5: Layout of archaeological evaluation trenches

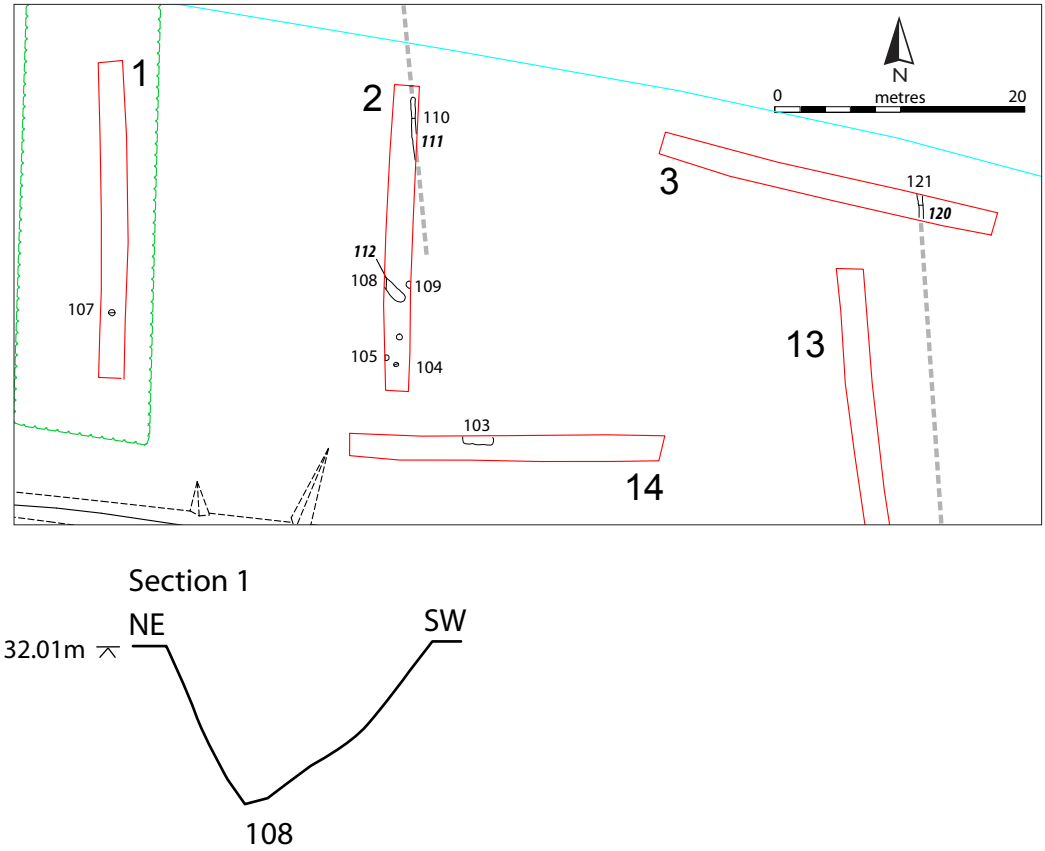
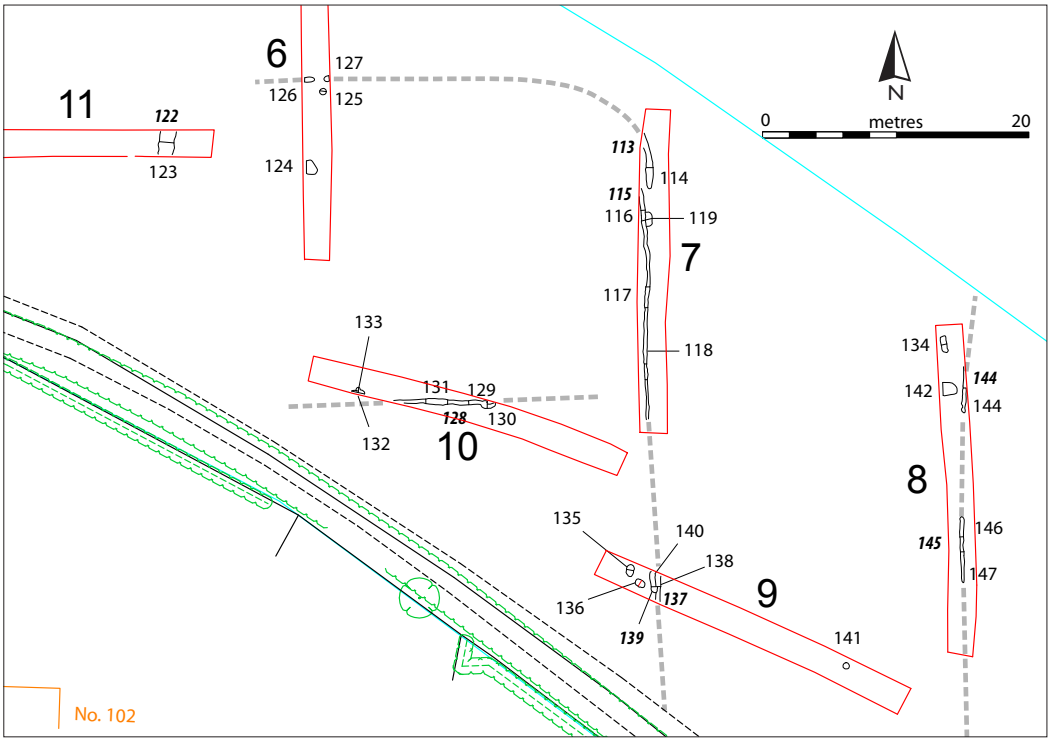


Figure 6: Detail of evaluation trenches containing archaeology



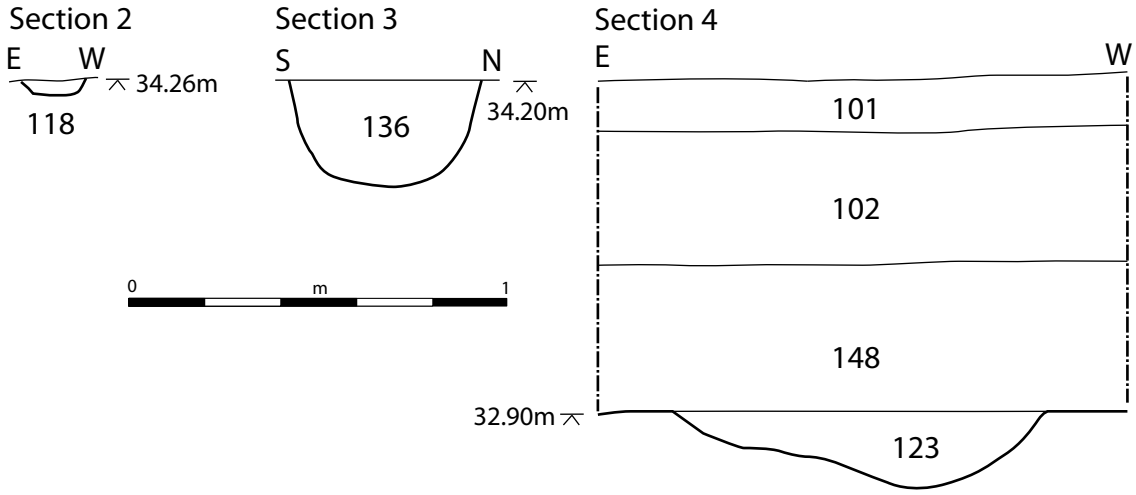


Figure 7: Detail of evaluation trenches containing archaeology