

# Cromhall STW Phosphorous removal wetland:

Results of archaeological monitoring of geotechnical trial pits

NGR ST 6854389460

Wessex Water Project no. D9750

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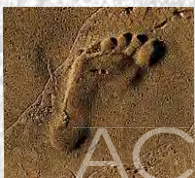
Prepared by:

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On behalf of:  
Wessex Water

Document No: ACW1052/2/0

Date: November 2017



archaeology

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# **CROMHALL STW PHOSPHOUROUS REMOVAL WETLAND:**

## **WESSEX WATER PROJECT: D9750**

### **NGR ST 68543 89460**

## **RESULTS OF ARCHAEOLOGICAL MONITORING OF GEOTECHNICAL TRIAL PITS**

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### **1. INTRODUCTION**

- 1.1** This document sets out the results of archaeological monitoring by AC archaeology Ltd, on behalf of Wessex Water, of geotechnical trial pits at Cromhall STW Phosphorus Removal Wetland site. The archaeological monitoring was carried-out during September 2017. The location of the pits is shown in Appendix 1.
- 1.2** The archaeological monitoring was conducted in accordance with the current Chartered Institute for Archaeologists (CIfA) standard for watching briefs (CIfA 2014).
- 1.3** The underlying geology, Cromhall Sandstone Formation – Sandstone, a sedimentary bedrock formed approximately 329 to 345 million years ago in the Carboniferous Period, in an environment previously dominated by rivers. These sedimentary rocks are fluvial in origin. They are detrital, ranging from coarse- to fine-grained and form beds and lenses of deposits reflecting the channels, floodplains and levees of a river or estuary (BGS).

### **2. ARCHAEOLOGICAL BACKGROUND**

- 2.1** North west of Cromhall STW is a scheduled ancient monument (LEN: 1003045). The monument includes a minor Romano-British villa, situated on the gently-sloping western valley sides of a tributary to the Little Avon River. The villa was excavated by Lord Ducie in 1855 and survives as buried structures and deposits, visible as a slight platform in a cultivated field. It is also visible as a series of parch marks which reveal the underlying buildings on aerial photographs taken in 1976. The main dwelling house was of a winged corridor type with several stone-built outbuilding ranges. The field has produced Roman and coarse Romano-British pottery sherds as chance finds over the years. A tessellated pavement was allegedly found here which measured 5.4m long by 4.5m wide although the pavement may alternatively have come from a Romano-British temple to the north (scheduled separately). A trial excavation in 1980 indicated the easternmost room of the northern wing of the villa had been a later addition.
- 2.2** West of Cromhall STW, there is an ancient woodland and county wildlife site, Jones Wood.

### **3. AIMS OF THE INVESTIGATION**

3.1 The general aims of the archaeological monitoring were:

- To establish the presence/absence, extent, date, nature, function and phasing of the archaeological remains present within the trial pits and to make a full and detailed archaeological record, within safe working constraints;
- To characterise the overall nature of any archaeological remains encountered and to understand the process of their formation, and;
- To contribute to archaeological research framework questions.

### **4. METHODOLOGY**

4.1 The archaeological monitoring was undertaken in accordance with current ClfA standards and guidance.

4.2 Mechanical plant was provided by the principal contractor, Quantum Geotechnical Ltd.

4.3 In total, thirteen trial pits, designated SLP1 to 13, were excavated. SLP2 and SLP7 were hand-dug, maximum depth 0.40m in Made Ground. The excavation of the other eleven pits was carried-out using a mechanical excavator, with toothless buckets, excavated materials were stored alongside each pit, keeping separate the topsoil and subsoil.

4.4 Details of the stratigraphy encountered are included in Appendix 2 - Tables, and a representative selection of images is included as plates, at the end of this report.

4.5 The stratigraphy encountered in each pit was recorded using the full range of the standard AC archaeology *pro forma* recording system.

4.6 The archive has been prepared using the site code ACW1052 and is currently stored at the offices of AC archaeology (Wiltshire).

### **5. RESULTS**

5.1 The hand-dug trial pits, SLP2 and SLP7, measured c.0.30m x 0.30m and 0.60m x 0.60m respectively, to a maximum depth of 0.40m below existing ground level.

5.2 The machine excavated trial pits, SLP's 1, 3, 4, 5, 6, 8, 9, 10, 11, 12 and 13, measured c.2.00m x 0.45m, to depths ranging 0.70m to 2.30m below existing ground level. SLP1 was started with a hand-dug pit to c.1.20mbgl.

5.3 For full details of the stratigraphy encountered in the trial pits refer to tables in Appendix I.

### **6. COMMENT**

6.1 The trial pits, SLPs 1, 2, 12, and including SLP7, within the fenced boundary of the sewage treatment works, in general, revealed no archaeological cut features or deposits and no residual finds were recovered at the time of excavation.

- 6.2** The trial pits, SLPs 3, 4, 5, 6, 8, 9, 10, 11, and 13, within agricultural fields and within the flood zone, in general, revealed no archaeological cut features or deposits and no residual finds were recovered at the time of excavation.
- 6.3** The trial pits within the boundary of the STW had significant thickness of 'Made Ground' overlying natural stratum. In general, the outlying trial pits within agricultural land comprise topsoil/ploughsoil overlying natural stratum.

## **7. REFERENCES**

British Geological Survey, *Geology of Britain Viewer*.  
<http://mapapps.bgs.ac.uk/geologyofbritain/home.html> © NERC

CIfA. 2014. *Standard and guidance for an archaeological watching brief*. Chartered Institute for Archaeologists, Reading

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A representative selection of photographs taken during the archaeological monitoring.



**Plate 1: Overview of STW with SLP1 location on the right**



**Plate 2: South facing section of SLP5**





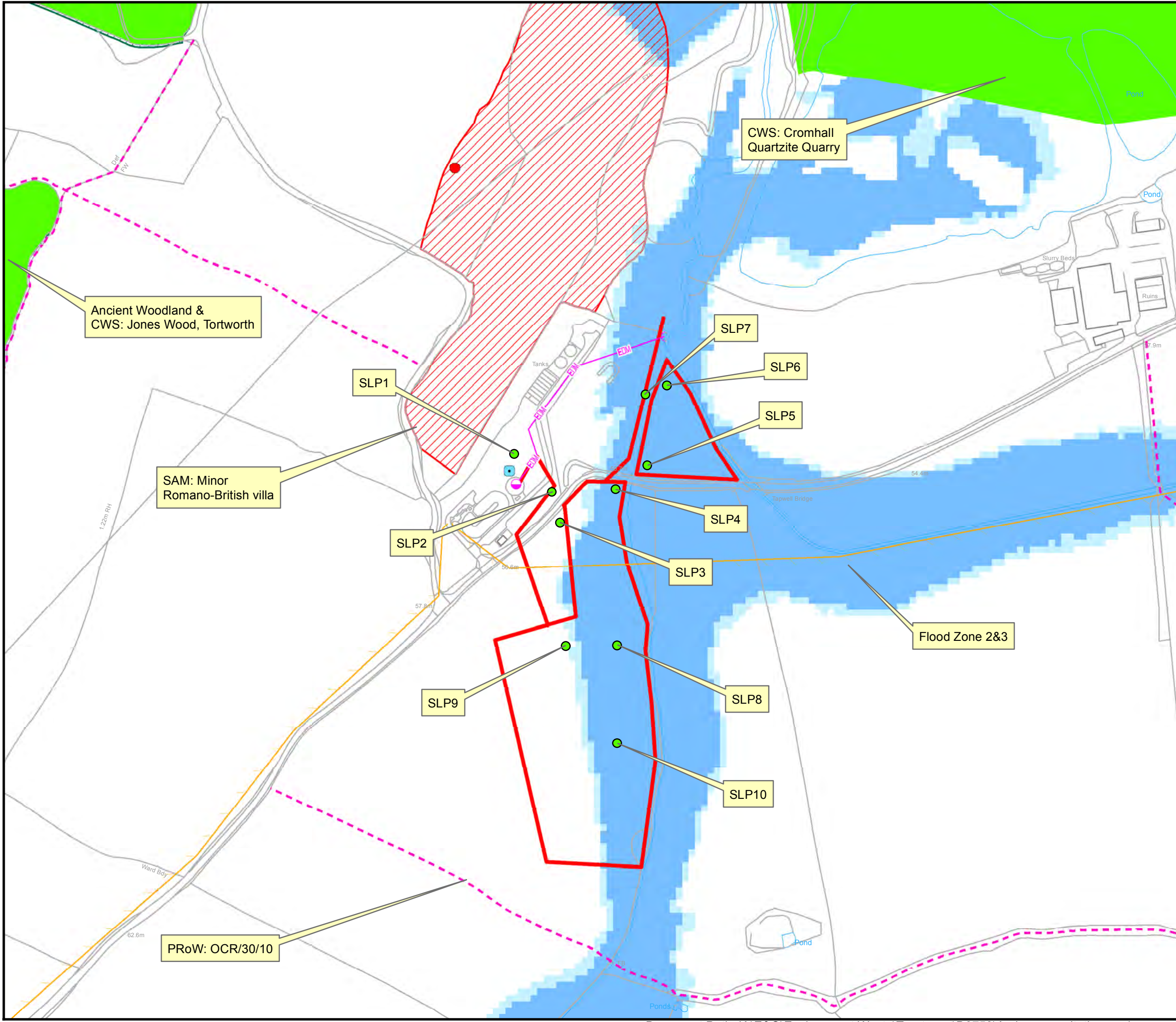
**Plate 3: West facing section of SLP11**



**Plate 4: South-east facing section of SLP13**

# Appendix 1





- ### Legend
- Wessex Water Sites
  - - - Public Rights of Way
  - Proposed Works
  - Proposed Works
  - World Heritage Site
  - Scheduled Ancient Monument (Point)
  - Scheduled Ancient Monument (Polygon)
  - Conservation Area
  - reg\_cons
  - Listed Building
  - Historic Park and Garden
  - Ramsar Site
  - Special Area of Conservation (SAC)
  - Special Protection Area (SPA)
  - Site of Special Scientific Interest (SSSI)
  - National Park
  - National Nature Reserve (NNR)
  - County Wildlife Site (CWS)
  - Local Nature Reserve (LNR)
  - Ancient Woodland
  - Registered Common Land
  - CROW Open Access Land
  - Marine Conservation Zone (MCZ)
  - Green Belt
  - Area of Outstanding Natural Beauty (AONB)
  - Heritage Coast
  - Main Rivers
  - Flood Zone 3
  - Flood Zone 2
  - Zone I - Inner Protection Zone
  - Zone II - Outer Protection Zone
  - Zone III - Total Catchment
  - Zone of Special Interest

**Cromhall STW Phosphorus  
Removal Wetland  
Archaeological consultation**

<b>Grid Reference:</b> ST6854389460	<b>Date:</b> 31/8/2017
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<b>Drawing Number</b> D9750/ENV/101/REV A	<b>Scale</b> 1:2,808	<b>N</b> ↑
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*This map may be used for Wessex Water Projects only*

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County Wildlife Sites :The County Wildlife Site Project is provided by the Environmental Records Centre. Further information on these sites are available from the relevant Records Centre.

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# Appendix 2

## Appendix I - Tables

SLP1			
Context	Depth (m)	Thickness (mm)	Description
100	0.0-1.40	1400	red-brown SILT/CLAY, with pockets of yellow sand, cobbles and boulders of sandstone, contains glazed pipe, plastic, wood and roots.  <i>"made ground": excavated material from previous construction works</i>
101	1.40-1.80	400	grey dark, grey-black flecks SILT/CLAY with cobbles and boulders of sandstone, organic odour  <i>capping layer</i>
102	1.80-2.30	>500	blue-grey, streaked/flecks orange-brown CLAY  <i>natural</i>
SLP2			
Context	Depth (m)	Thickness (mm)	Description
200	0.0-0.40	>400	brown sandy SILT with abundant cobbles and boulders of sandstone, very compact  <i>"made ground": excavated material from previous construction works</i>
SLP3			
Context	Depth (m)	Thickness (mm)	Description
300	0.0-0.30	300	light red-brown sandy SILT with cobbles of sandstone  <i>topsoil/ploughsoil</i>
301	0.30-0.40	100	orange-brown sandy SILT  <i>sub-soil</i>
302	0.40-0.75	350	pale yellow-brown SILT/CLAY with gravel
303	0.75-1.60	>850	mottled pale grey and red, orange-brown flecks SILT/CLAY with cobbles and boulders of sandstone  <i>natural</i>
SLP4			
Context	Depth (m)	Thickness (mm)	Description
400	0.0-0.20	200	brown loamy SILT  <i>topsoil</i>
401	0.20-0.30	100	mottled grey and red SILT/CLAY with cobbles of sandstone and lumps of concrete  <i>"made ground": dumped material, close to field access gate</i>
402	0.30-0.40	100	grey-brown, dark grey-black flecks SILT/CLAY, organic
403	0.40-0.65	250	bluish-grey, orange-brown flecks silty CLAY
404	0.65-0.90	250	COBBLES/BOULDERS of sandstone
405	0.90-1.30	400	yellow-brown slightly sandy SILT/CLAY
406	1.30-1.85	>550	mottled grey and red, orange-brown flecks CLAY with relict roots
SLP5			
Context	Depth (m)	Thickness (mm)	Description



500	0.0-0.20	200	brown loamy SILT <i>topsoil</i>
501	0.20-0.60	400	pale grey-brown, orange-brown flecks SILT/CLAY, root disturbance
502	0.60-1.05	450	COBBLES/BOULDERS of sandstone with yellow-brown, occasionally streaked pink-red sandy silt
503	1.05-1.25	200	red gravelly sandy SILT with some cobbles, water seepage
504	1.25-1.85	>600	mottled red and grey, orange-brown flecks CLAY
<b>SLP6</b>			
Context	Depth (m)	Thickness (mm)	Description
600	0.0-0.10	100	grey-brown, orange-brown flecks clayey SILT <i>up-cast material from adjacent ditch clearance</i>
601	0.10-0.40	300	light grey-brown, orange-brown flecks silty CLAY <i>[buried] topsoil</i>
602	0.40-1.10	700	GRAVEL/COBBLES/BOULDERS of sandstone with yellow-brown sandy silt
603	1.10-2.15	>1000	mottled red and grey, orange-brown flecks CLAY
<b>SLP7</b>			
Context	Depth (m)	Thickness (mm)	Description
700	0.0-0.40	>400	Brown sandy SILT with abundant cobbles and boulders of sandstone, very compact  <i>'made ground': excavated material from previous construction works</i>
<b>SLP8</b>			
Context	Depth (m)	Thickness (mm)	Description
800	0.0-0.25	250	light yellowish red-brown sandy SILT <i>topsoil/ploughsoil</i>
801	0.25-0.70	450	yellow-brown, orange-brown flecks slightly sandy SILT, manganese oxide noted  @-0.65m lens of pale cream-grey silty fine sand
802	0.70	?	pale pink CLAY  <i>natural, only just exposed</i>
<b>SLP9</b>			
Context	Depth (m)	Thickness (mm)	Description
900	0.0-0.30	300	light yellowish red-brown sandy SILT <i>topsoil/ploughsoil</i>
901	0.30-0.90	600	yellow-brown, orange-brown flecks sandy SILT with sandstone cobbles, manganese oxide noted
902	0.90	?	red sandy CLAY, abundant manganese oxide  <i>natural, only just exposed</i>
<b>SLP10</b>			
Context	Depth (m)	Thickness (mm)	Description
1000	0.0-0.30	300	light yellowish red-brown sandy SILT <i>topsoil/ploughsoil</i>

1001	0.30-0.50	200	yellow-brown, orange-brown flecks sandy SILT with gravel of sandstone, abundant manganese oxide
1002	0.50-0.80	>300	pale yellow-brown sandy SILT, manganese oxide becoming darker with increasing depth <i>natural</i>
<b>SLP11</b>			
<b>Context</b>	<b>Depth (m)</b>	<b>Thickness (mm)</b>	<b>Description</b>
1100	0.0-0.20	200	yellowish red-brown sandy SILT <i>topsoil/ploughsoil</i>
1101	0.20-0.45	250	yellow sandy SILT with gravel and cobbles of sandstone, manganese oxide
1102	0.45-0.85	>400	red gravelly sandy CLAY with some cobbles of sandstone, manganese oxide <i>natural</i>
<b>SLP12</b>			
<b>Context</b>	<b>Depth (m)</b>	<b>Thickness (mm)</b>	<b>Description</b>
1200	0.0-0.60	600	pale yellowish brown sandy SILT with gravel and cobbles of sandstone <i>'made ground'</i>
1201	0.60-1.10	>500	mottled red and grey sandy CLAY with gravel and cobbles of sandstone <i>natural</i>
<b>SLP13</b>			
<b>Context</b>	<b>Depth (m)</b>	<b>Thickness (mm)</b>	<b>Description</b>
1300	00-0.30	300	reddish-brown slightly sandy SILT with occasional gravel <i>topsoil/ploughsoil</i>
1301	0.30-0.50	200	orange-brown gravelly, sandy SILT
1302	0.50-1.20	>700	weathered SANDSTONE <i>natural</i>

**Table 1. Stratigraphy encountered in geotechnical test pits.**



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