

A303 Amesbury to Berwick Down

**Applicant's provision of technical reports supporting the
Environmental Information Review**

Ground Investigation - Countess Roundabout (2000 data)

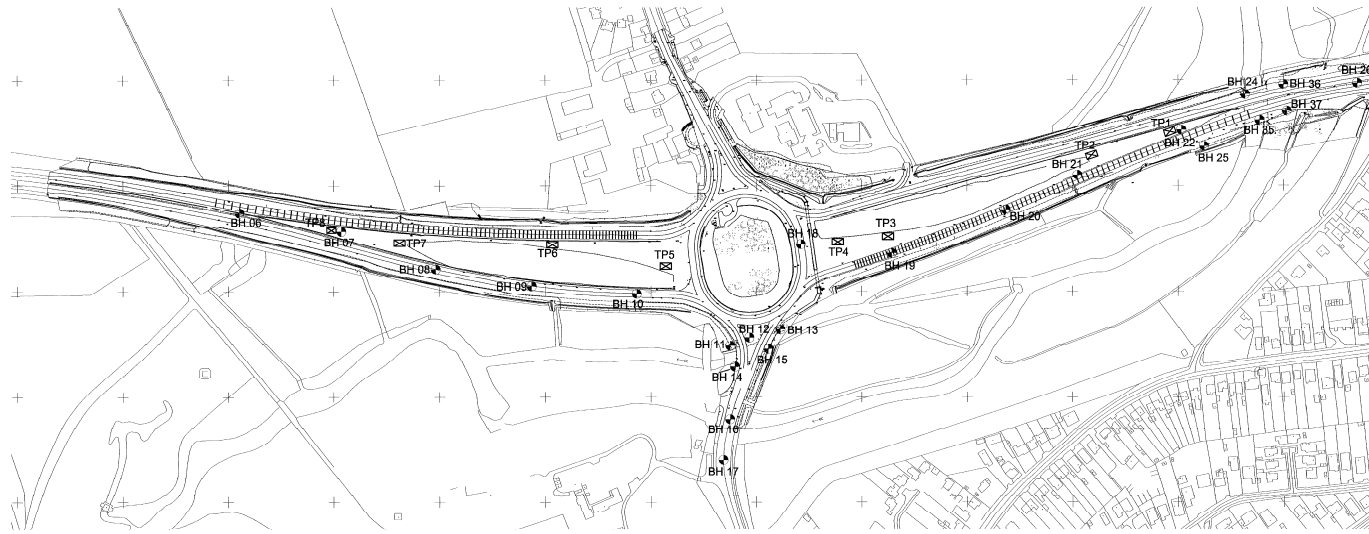
Document reference: Redetermination 2.22

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

February 2022





PLAN
Scale 1:2500

KEY
EXPLORATORY HOLE LOCATIONS

- 1965 Borehole
- 2000 Trial Pit

- SECTIONS**
- Proposed alignment of Grade separated option
 - Existing Ground Level
 - Estimated Original Ground Level

- STRATIGRAPHY**
- TS Topsoil
 - EF Chalk Embankment fill
 - SL Granular Starter layer
 - P Alluvium - Peat
 - AL Alluvium Clays & Silt
 - RD River Deposits - Gravels
 - UC Upper Chalk

- WATER LEVELS IN BOREHOLES / TRIAL PITS**
- Level water rose to
 - Level of strike

Revision	By	Checked	Approved	Date	Description

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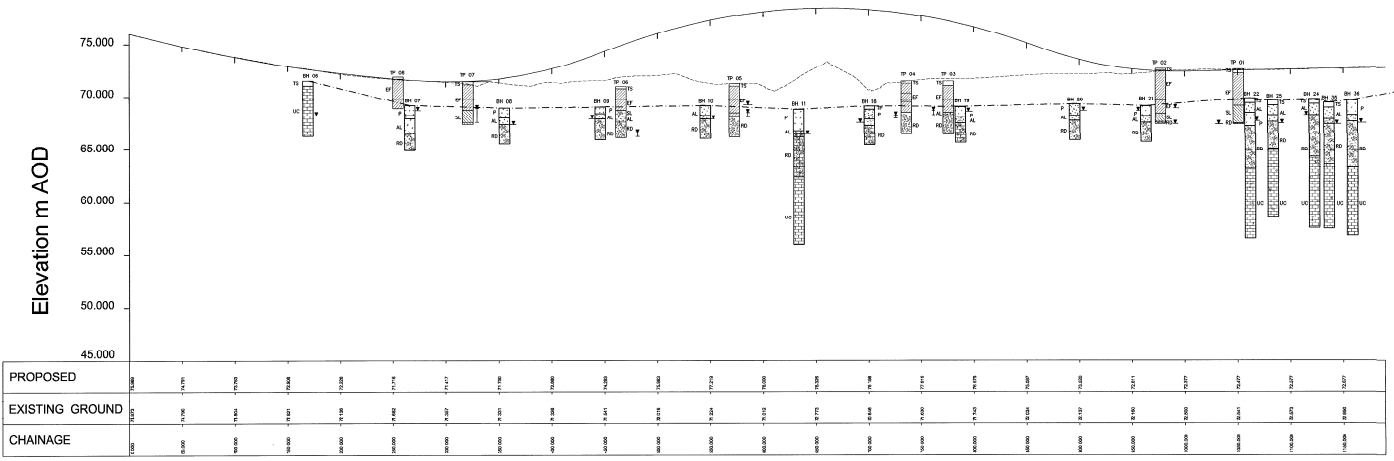
Project
A303 STONEHENGE

Drawing
COUNTLESS ROUNDABOUT BOREHOLES AND TRIAL PITS

Drawn by **EYJ** Date: **31/05/00**
 Checked by **Guy Green** Date:
 Authorised by Date:

Drawing No. **FIGURE 4** Revision

Drawing Scale: **As Shown**
 CAD Filename: **figm04** Plot Scale: **1:1**



LONG SECTION
 Scale H.1:2500 , V. 1:250

SCHEME A303 Countess Roundabout		CO ORDINATES E 415792 N 142151	TRIAL FIT No. 1
CLIENT Halcrow Swindon		MADE BY B D Pida	JOB NO. HLD/00/177
WEATHER Warm and humid		CHAINAGE	DATE MADE 09/05/00
		STABILITY Stable	DATE INFILLED 09/05/00

CBR	Cu % kN/m ²	DEPTH TO WATER m	SAMPLES			LEG- END	DEPTH m	REDUCED LEVEL	DESCRIPTION OF STRATA
			DEPTH						
			FROM m	TO m					
			0.2	1.2	B01	0.15	72.45	<p>Creamy brown friable topsoil beneath a moss and rough grassland rootmat</p> <p>(Topsoil)</p>	
			1.0	2.0	B02	1.40	71.20	<p>Stiff creamy white chalk FILL with occasional flint nodules and very occasional ferrous staining around flint nodules.</p> <p>(EMBANKMENT FILL)</p>	
			2.0	3.0	B03			<p>Dense greyish white chalk FILL with occasional lumps of wood</p> <p>Slight smell of rotten eggs.</p> <p>(EMBANKMENT FILL)</p>	
			3.5		B04	3.50	69.10	<p>Dense greyish CHALK with abundant flints up to cobble size.</p> <p>(Possible granular starter layer for embankment fill)</p>	
			4.3		B05			<p>As above but with small pockets of dark brown amorphous material and green sands, becoming damp.</p> <p>(Original river deposits?)</p>	
		5.20				5.1 5.2	67.50 67.40		

REMARKS Water strike brown, slight inflow Generally hard digging through chalk fill	METHOD OF EXCAVATION Hydraulic Excavator
CBR value determined using a Farnell hand held MEXE probe. Shear strength determined using a hand held shear vane	

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SCHEME A303 Countess Roundabout		CO ORDINATES E 415718 N 142129	TRIAL PIT No. 2
CLIENT Halcrow Swindon		MADE BY B D Piedo	JOB NO HLD/00/177
WEATHER Warm and humid		CHAINAGE	DATE MADE 09/05/00
		STABILITY Slightly unstable	DATE FILLED 09/05/00

CBR	Cu kN/m ²	DEPTH TO WATER m	SAMPLES		LEG- END	DEPTH m	REDUCED LEVEL	DESCRIPTION OF STRATA
			DEPTH					
			FROM m	TO m				
								GROUND LEVEL 72.636
			0.2	1.0	B06	0.15	72.48	<p>Creamy brown friable topsoil beneath a moss and rough grassland rootmat</p> <p>(Topsoil)</p>
			2.0		B07			<p>Stiff creamy white chalk FILL with occasional flint nodules and very occasional ferrous staining around flint nodules. Material is dry.</p> <p>(EMBANKMENT FILL)</p>
		3.75	3.0		B08	3.0	69.63	<p>Stiff darker creamy white chalk FILL with occasional flint nodules. Chalk is damper than above. Trial pit slightly unstable below 3.3m</p> <p>(EMBANKMENT FILL)</p>
			4.25		B09	4.25	68.38	<p>Very pale greenish yellow SAND and fine to coarse GRAVEL with chalk nodules. Length of steel wire rope found.</p> <p>(Possible granular starter layer for embankment fill)</p>
		5.20	5.0		B10	5.0	67.63	<p>Soft greenish grey silty CLAY with pockets of brown amorphous matter green sand and flint gravels</p> <p>(Original river deposits?)</p>
						5.2	67.43	

REMARKS Water strike at 3.75 water white, slight inflow Trial pit slightly unstable above water table and unstable below water table Moderate seepage into pit whilst excavating below water table Water brown at base of pit Generally hard digging through chalk fill CBR value determined using a Farnell hand held MEXE probe. Shear strength determined using a hand held shear vane	METHOD OF EXCAVATION Hydraulic Excavator
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SCHEME A303 Countess Roundabout		CO ORDINATES E 415525 N 142052	TRIAL PIT No. 3
CLIENT Halcrow Swindon		MADE BY B D Piedad	JOB NO HLD/00/177
WEATHER Warm and humid		CHAINAGE	DATE MADE 09/05/00
		STABILITY Slightly unstable	DATE INFILLED 09/05/00

CBR %	Cu kN/m2	DEPTH TO WATER m	SAMPLES		LEG- END	DEPTH m	REDUCED LEVEL	DESCRIPTION OF STRATA
			DEPTH					
			FROM m	TO m				
			0.5	1.5	B1	0.45	71.02	<p>GROUND LEVEL 71.471</p> <p>Creamy brown friable topsoil beneath a moss and rough grassland rootmat with frequent tree roots to 1cm diameter.</p> <p>(Topsoil)</p>
			1.5	2.5	B2			<p>Stiff dense white chalk FILL with some flint nodules</p> <p>(EMBANKMENT FILL)</p>
		3.20	3.0		B3	3.0	68.47	<p>Pale ochre brown SAND with much silt and clay with sand, gravel, and greensand.</p> <p>(Possible granular starter layer for embankment fill or river gravels)</p>
						3.2	68.27	
						5.0	66.47	<p>Fine to coarse sub rounded GRAVEL</p> <p>(Possible granular starter layer for embankment fill or river gravels)</p>

<p>REMARKS</p> <p>Depths below water table uncertain, seepage into pit equalled excavation.</p> <p>Trial pit probably unstable below water table.</p> <p>Water strike at 3.2m rising to 2.8m after 5 minutes.</p> <p>Generally hard digging through chalk fill</p> <p>CBR value determined using a Farnell hand held MEXE probe.</p> <p>Shear strength determined using a hand held shear vane</p>	<p>METHOD OF EXCAVATION</p> <p>Hydraulic Excavator</p>
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SCHEME A303 Countess Roundabout		CO ORDINATES E 415477 ^N 142047	TRIAL PIT No. 4
CLIENT Halcrow Swindon		MADE BY B D Piedad	JOB NO HLD/00/177
WEATHER Warm and humid		CHAINAGE	DATE MADE 09/05/00
		STABILITY Unstable	DATE INFILLED 09/05/00

CBR	Cu KN/m2	DEPTH TO WATER m	SAMPLES		LEG- END	DEPTH m	REDUCED LEVEL	DESCRIPTION OF STRATA
			DEPTH					
			FROM m	TO m				
								GROUND LEVEL 71.496
			0.6		B4	0.25	71.24	Creamy brown friable topsoil with many tree roots beneath a moss and rough grassland rootmat (Topsoil)
			1.2	2.0	B5	1.18	70.31	Creamy white chalk FILL with occasional becoming frequent pockets of tar bound road materials, possibly the old road surface broken up and combined with the new engineering fill. (EMBANKMENT FILL)
			2.0		B6	2.0	69.49	Very dense / stiff dark creamy chalk FILL (EMBANKMENT FILL)
								Very dense white chalk FILL (EMBANKMENT FILL)
		3.53				3.0	68.49	Pale ochre brown SAND with fine to coarse GRAVEL and pockets of greenish silty clay. Grades to a fine to coarse sub angular to sub rounded GRAVEL and SAND below the water table. (Possible granular starter layer or river gravets)
						5.0	66.49	

REMARKS Depths below water table uncertain, seepage into pit equalled excavation. Trial pit unstable below water table. Groundwater stike at 3.53m rising to 3.35m after 5 minutes Generally hard digging through chalk fill CBR value determined using a Farnell hand held MEXE probe. Shear strength determined using a hand held shear vane	METHOD OF EXCAVATION Hydraulic Excavator
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SCHEME A303 Countess Roundabout		CO ORDINATES E 415314 ^N 142024	TRIAL PIT No. 5
CLIENT Halcrow Swindon		MADE BY B D Pida	JOB NO HLD/00/177
WEATHER Warm and humid		CHAINAGE	DATE MADE 09/05/00
		STABILITY Unstable	DATE INFILLED 09/05/00

CBR %	Cu kN/m ²	DEPTH TO WATER m	SAMPLES		LEG- END	DEPTH m	REDUCED LEVEL	DESCRIPTION OF STRATA
			DEPTH					
			FROM m	TO m				
			0.2	1.2	B7	0.2	71.00	GROUND LEVEL 71.207 Creamy brown friable topsoil beneath a moss and rough grassland rootmat (Topsoil)
		2.00	1.2	2.0	B8			Very dense creamy chalk FILL with occasional flint nodules. (EMBANKMENT FILL)
			2.75	3.00	B9	2.75	68.45	Very dense dark creamy chalk FILL with much fine to coarse sub rounded gravel. (EMBANKMENT FILL)
		3.10				3.1	68.10	Pale ochre brown SAND with fine to coarse GRAVEL and cobbles. Grades to a fine to coarse sub angular to sub rounded GRAVEL and SAND below the water table. (Possible river gravels)
						5.0	66.20	

REMARKS Trial pit on west side of roundabout Trial pit unstable from approximately 1.8m. Groundwater stike at 2.00m static, white water Groundwater stike at 3.10m rose to 2.74m in 5 minutes, brown water Generally hard digging through chalk fill CBR value determined using a Farnell hand held MEXE probe. Shear strength determined using a hand held shear vane	METHOD OF EXCAVATION Hydraulic Excavator
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SCHEME A303 Countess Roundabout		CO ORDINATES E 415207 ^N 142045		TRIAL PIT No. 6
CLIENT Halcrow Swindon		MADE BY B D Pida		JOB NO HLD/00/177
WEATHER Warm and humid		CHAINAGE		DATE MADE 09/05/00
		STABILITY Unstable		DATE INFILLED 09/05/00

CBR	Cu	DEPTH TO WATER	SAMPLES		LEG- END	DEPTH	REDUCED LEVEL	DESCRIPTION OF STRATA
			DEPTH					
			FROM	TO				
%	KN/m2	m	m	m	m			
								GROUND LEVEL 70.952
					0.2	70.75		Creamy brown friable topsoil beneath a moss and wild flower grassland rootmat (Topsoil)
			1.2	2.0	Æ0	1.1	69.85	Creamy chalk FILL with pockets of tar bound road material. (EMBANKMENT FILL)
								Very dense white chalk FILL (EMBANKMENT FILL)
			2.5		Æ1	2.25	68.70	Very dense pale greenish grey SAND with much silt and clay with silt and fine to coarse gravel and cobbles becoming soft to firm near base.
						2.8	68.15	(Possible granular starter layer for embankment fill or river gravels)
						3.35	67.60	Soft to firm dark brown amorphous organic CLAY
	4.70					4.8	66.15	ochre fine to coarse sub angular to sub rounded GRAVEL with a little sand and occasional pockets of green grey sandy clay, amorphous organic clay. Strata becomes creamy with depth and has fewer flints than in TP 5 (Granular starter layer for embankment fill or river gravels?)

REMARKS Trial pit unstable from approximately 3.35m. Groundwater stike at 4.70m rose to 4.35m in 5 minutes, creamy water Generally hard digging through chalk fill	METHOD OF EXCAVATION Hydraulic Excavator
CBR value determined using a Farnell hand held MEXE probe. Shear strength determined using a hand held shear vane	

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SCHEME A303 Countess Roundabout		CO ORDINATES E 415062 ^N 142046	TRIAL PIT No. 7
CLIENT Halcrow Swindon		MADE BY B. D. PIEDA	JOB NO HLD/00/177
WEATHER Warm and humid		CHAINAGE	DATE MADE 09/05/00
		STABILITY Unstable	DATE INFILLED 09/05/00

CBR	Cu	DEPTH TO WATER	SAMPLES		LEG- END	DEPTH	REDUCED LEVEL	DESCRIPTION OF STRATA
			DEPTH					
			FROM	TO				
%	kN/m ²	m	m	m		m		GROUND LEVEL 71.418
						0.3	71.11	<p>Creamy brown friable topsoil beneath a moss and wild flower grassland rootmat</p> <p>(Topsoil)</p>
			2.7	B22		2.7	68.71	<p>Very stiff white chalk FILL with occasional flint nodules upto cobble size.</p> <p>(EMBANKMENT FILL)</p>
		3.80	3.8	B23		3.8	67.61	<p>Stiff dark creamy silty CLAY with flint and chalk nodules. Flint nodules up to cobble size.</p> <p>(Possible starter layer?)</p>
						4.0	67.41	<p>Stiff dark creamy CLAY with much silt and grey green fine SAND with much clay, flint and chalk nodules. Flint nodules up to cobble size.</p> <p>(Possible starter layer)</p>

REMARKS
 Trial pit unstable from water strike
 Groundwater stike at 3.80m rose to 2.54m in 5 minutes,
 Water entered rapidly from eastern face of trial pit.
 Generally hard digging through chalk fill

CBR value determined using a Farnell hand held MEXE probe.
 Shear strength determined using a hand held shear vane

METHOD OF EXCAVATION
 Hydraulic Excavator

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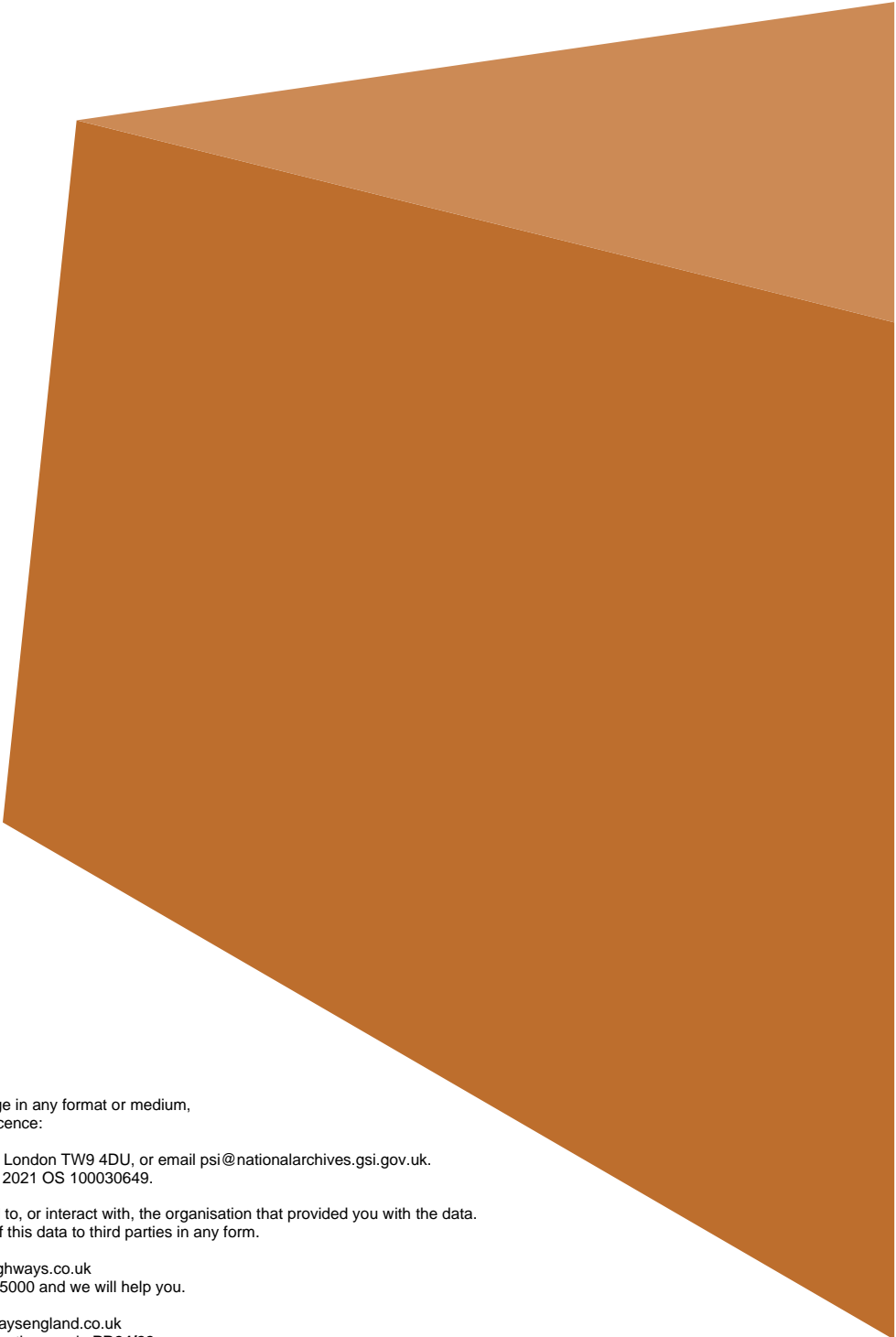
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SCHEME A303 Countess Roundabout		CO ORDINATES E 414998 N 142058		TRIAL PIT No. 8
CLIENT Halcrow Swindon		MADE BY B D Pieda		JOB NO HLD/00/177
WEATHER Warm and humid		CHAINAGE		DATE MADE 09/05/00
		STABILITY Stable		DATE INFILLED 09/05/00

CBR	Cu	DEPTH TO WATER	SAMPLES		LEG- END	DEPTH	REDUCED LEVEL	DESCRIPTION OF STRATA
			DEPTH					
			FROM	TO				
%	kN/m2	m	m	m		m		GROUND LEVEL 71.888
						0.2	71.68	Creamy brown friable topsoil beneath a moss and wild flower grassland rootmat (Topsoil)
						3.0	68.88	Very dense white chalk FILL with occasional flint nodules up to cobble size (EMBANKMENT FILL)

REMARKS Trial pit aborted when hydraulic hose split on JCB, probably due to extremely compact nature of the chalk fill - hard digging	METHOD OF EXCAVATION Hydraulic Excavator
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CBR value determined using a Farnell hand held MEXE probe. Shear strength determined using a hand held shear vane	Halcrow Laboratories Unit 2 The Furlong Berry Hill Ind Est Droitwich WR9 9AH	APPENDIX
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