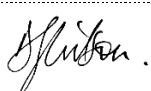


INFILTRATION AND CBR TESTING REPORT FOR
WHITLEY GOLF CLUB, CORSHAM ROAD, WHITLEY, MELKSHAM SN12 8EQ

Report Production Record		
Report No	5643	
Site Name	Whitley Golf Club, Corsham Road, Whitley, Melksham SN12 8EQ	
Client	Whitley Golf Club	
Report on	Infiltration and CBR Testing	
Prepared by	Timothy D Coe BSc (Hons) MSc FGS Principal Geologist	
Approved by	David J Wilson BSc(Geol) CGeol FGS Director	
Report Revision Record		
Issue No.	Date	Revision Details
1	26 February 2026	Initial issue to Client

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Introduction

It is understood that the above site is being considered for redevelopment primarily including an extension to the existing covered driving range teeing area and a new larger permeable gravel car park, plus nominal changes to soft landscaping.

As instructed, this Practice recently attended the above site to undertake 'full-scale' percolation testing to determine the infiltration potential of the natural ground to provide robust data to aid the design (by others) of the drainage strategy. Additionally, representative samples of near surface soil were taken for laboratory recompacted California Bearing Ratio (CBR) testing to aid car park design (again by others). Having now processed the field and laboratory results we report as follows.

This report has been prepared in accordance with quotation reference Q26017 dated 12th January 2026, with instruction confirmed 14th January 2026 by Whitley Golf Club, to whom reliance on this report is presently restricted.

Background Setting

Centred on National Grid Reference 388878, 165981 the site is located off Corsham Road, on the southeastern outskirts of the village of Whitley, Wiltshire approximately 2.8km northwest of Melksham town centre as shown on drawing 5643/1.

British Geological Survey (BGS) mapping indicates that the site is entirely underlain by bedrock of the Oxford Clay Formation (OxC) which usually comprises grey sometimes slightly silty mudstone that weathers near surface to firm plastic clay. No areas of mapped made ground, superficial deposits or geological faulting are shown either on or within potential influencing distance of the site.

Neither this Practice nor the BGS have any intrusive data from either inside or within a useful useable distance of the site.

Site Investigation and Testing

Site work was undertaken on 28th January 2026 by trial pitting. Three trial pits (TP1-3) were excavated using a 5 ton mechanical excavator to depths of 1.60-2.00m at positions selected by the client. The trial pit positions are indicated on existing/proposed development layout drawing 5463/2.

Percolation testing was completed as insitu 'full-scale' tests (in general accordance with BRE DG365 "Soakaway Design" (2016)); this comprised the rapid filling of three machine-excavated trial pits (TP1-3) at positions selected by the client to depths of 1.60-2.00m using clean water delivered via the mains, and monitoring of subsequent outflow.

As per BRE365 guidance it is recommended that three test runs are completed within each pit from which the soil infiltration rate is then calculated. Due to negligible infiltration during the first test run within all three test pits at this site, it has only been possible to complete a single test run in each pit. Graphs showing depth to water against time plus test zone depths are presented on the pit logs attached in Appendix 2 and a summary table of infiltration data is presented as Table 1 below.

A representative sample of soil was acquired from both TP1 and TP2 at 0.45m depth and sent to the laboratory for remoulded CBR testing on unsoaked specimens. CBR results are presented in Table 2 and Appendix 2 with road/pavement design discussed below.

Upon completion of logging, sampling and in-situ testing of the excavations, arisings were used to backfill the pits, compacted with the excavator bucket.

Summary of Ground Conditions

Beneath a thin surface mantle of topsoil, all exploratory holes encountered clay to terminal depths, representing a typical weathering profile of the bedrock OxC. Trial pit logs are included in Appendix 2.

No perched/groundwater was encountered in any of the trial pits during the short time that they remained open; levels are of course subject to seasonal fluctuation according to the prevailing weather conditions, and the situation encountered and described could potentially change in the future, especially in a period of seemingly ever-apparent but unpredictable climate change, which would of course have an effect on soakaway founding depth.

Results

BRE365 calculations suggest infiltration rates as summarised below.

TABLE 1: SOIL INFILTRATION TEST DATA

Trial Pit No.	Test Zone Depth (m)	Approximate Soil Infiltration Rate (m/sec)	Time to drain to 50% storage
TP1	0.97-2.0	Negligible	>24hours
TP2	0.6-1.6	Negligible	>24hours
TP3	0.55-1.8	Negligible	>24hours

All geology in test zone is OxC bedrock

TABLE 2: SUMMARY OF CBR TEST RESULTS

TP No	Depth (m)	Sample of	Bulk Density (mg/m ³)	Dry Density (mg/m ³)	Moisture Content (%)	CBR Value (%)	
						Top of Sample	Bottom of Sample
TP1	0.45	OxC	4.03	3.01	33.8	3.5	3.8
TP2	0.45	OxC	1.78	1.28	39.2	3.1	3.2

OxC = Oxford Clay Formation

Implications

Considering soakaway drainage, it will be seen on the logs and in Table 1 that since negligible infiltration was recorded, the time to drain to 50% storage capacity is therefore greater than the BRE365 limit of 24 hours. Ground conditions (at the specific test locations at least) are eminently unsuitable for the adoption of soakaway (SUDS) drainage for on-site disposal of surface water, and based on the recorded geology, the findings are considered representative of the entire site due to the proportion of cohesive material within near surface soil. . It is understood that these results will be provided to the drainage consultant for their use in design of the site drainage strategy.

The field-testing methodology and subsequent data-processing and calculations have been undertaken in accordance with BRE DG365, so in the event of local authority consultation the results enclosed should be acceptable. The digest includes a requirement to consider ground contamination, although no such evidence was forthcoming from our observations, which given the absence of made ground suggests a negligible risk.

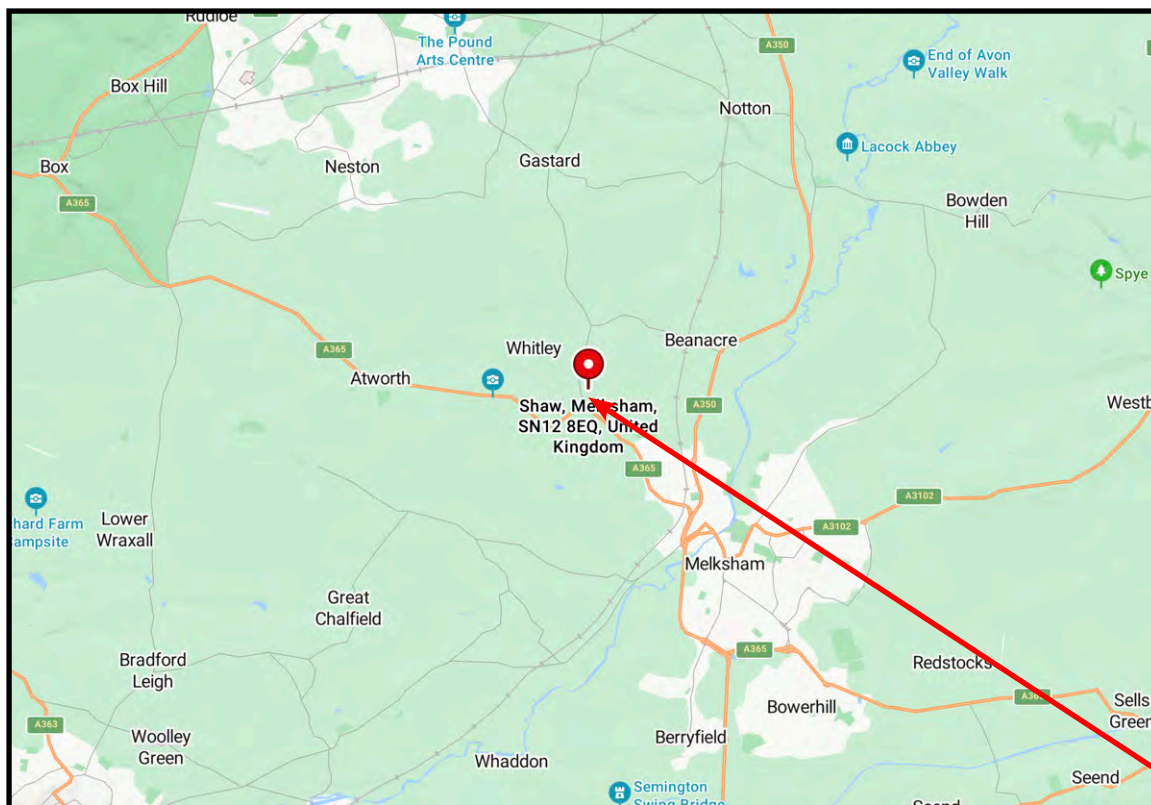
With regard to road/pavement design, the results in Tables 2 indicate that a minimum CBR of 3.1% can be achieved. The soils encountered are unlikely to be frost-susceptible, although the Local Authority should be able to advise based upon their previous experience in the area.

This report is subject to our standard terms and conditions.



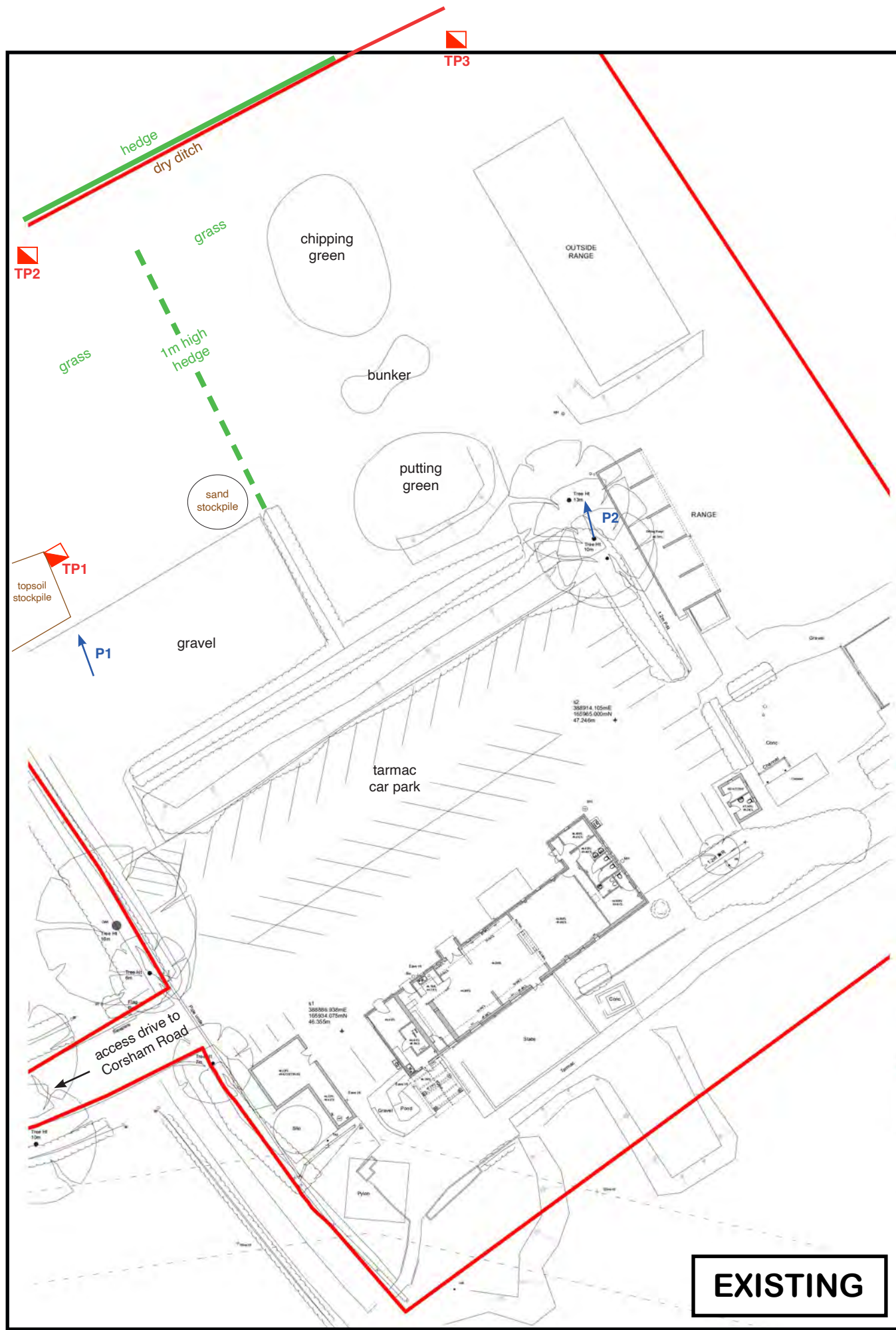
Wilson Associates
Consulting Engineering Geologists & Geo-Environmental Engineers

Job No.	Drawing No.	Scale:	Date:
5643	5643/1	NTS	13-01-26



THE SITE





EXISTING



PROPOSED



Number and direction of
photograph (Appendix 1)
P1

- 1 Driving range
- 2 Car park
- 3 Club house
- 4 Practice area
- 5 Short game area
- 6 Putting green
- 7 Teeing area
- 8 Children's play area
- 9 Bicycle park
- 10 Waste & recycling

WHITLEY GOLF CLUB, CORSHAM ROAD, WHITLEY,
MELKSHAM SN12 8EQ



EXISTING / PROPOSED SITE PLANS (based on Arel dtd. 734 3 01, dated January 2025)
SHOWING SITE WALKOVER NOTES AND INVESTIGATION LOCATIONS

Job No. 5643

Drawing No. 5643/2

Scale: 1:500 @ A3

Date: 26-02-26

APPENDIX 1

SITE PHOTOGRAPHS



Photograph **P1**

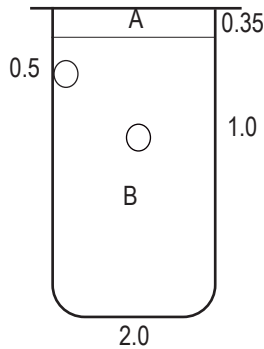


Photograph **P2**

APPENDIX 2

TRIAL PIT LOGS WITH PHOTOGRAPHS

Site: WHITLEY GOLF CLUB, CORSHAM ROAD, WHITLEY, MELKSHAM SN12 8EQ				TRIAL PIT No. TP1
Job No. 28-01-26	Date 28-02-26	Ground Level (c.m, AOD) 48m	Co-Ordinates (c.) E 388,862 N 165,984	



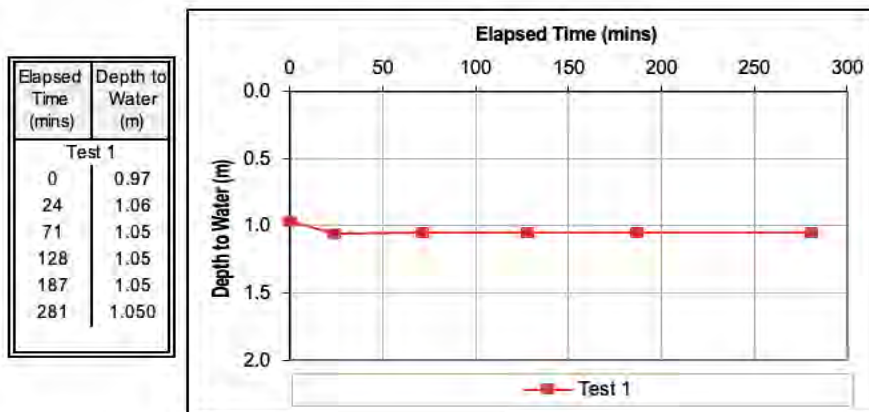
DETAILS OF SUBSOIL

- A TOPSOIL: probable soft, dark brown, organic, plastic CLAY with many roots from overlying grass
- B CLAY: probable firm, light brown and locally mottled orangish-brown, plastic CLAY
- 0.5m : white plastic pipe
- 1.0m : red clay pipe



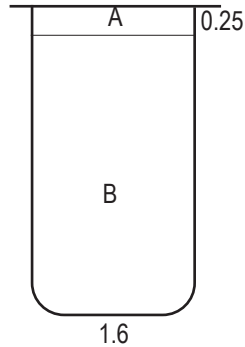
NOTES

- Pit logged from surface
- Pit dry and stable
- Soil sample taken at 0.45m depth
- Falling head testing carried out:
Pit dimensions 1.4 x 0.5 x 2.0m (LxWxD)



Scale: NTS	Client: Whitley Golf Club	Logged By: TC
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Site: WHITLEY GOLF CLUB, CORSHAM ROAD, WHITLEY, MELKSHAM SN12 8EQ				TRIAL PIT No. TP2
Job No. 28-01-26	Date 28-02-26	Ground Level (c.m, AOD) 48m	Co-Ordinates (c.) E 388,861 N 166,007	

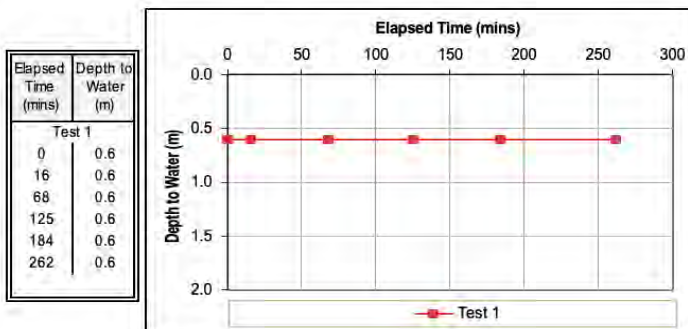


DETAILS OF SUBSOIL

- A TOPSOIL: probable soft, dark brown, organic, plastic CLAY with many roots from overlying grass and rare golf ball
- B CLAY: probable firm, mottled light brown and orangish-brown and grey, plastic CLAY
0.75m : initially desiccated
0.75 - 0.8m : grading to visually normally hydrated plastic CLAY

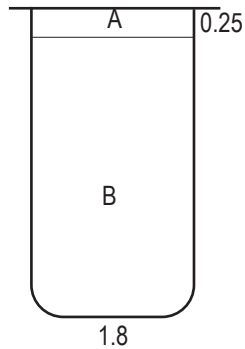
NOTES

- Pit logged from surface
- Pit dry and stable
- Soil sample taken at 0.45m depth
- Falling head testing carried out:
Pit dimensions 1.5 x 0.5 x 1.6m (LxWxD)



Scale: NTS	Client Whitley Golf Club	Logged By: TC
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Site: WHITLEY GOLF CLUB, CORSHAM ROAD, WHITLEY, MELKSHAM SN12 8EQ				TRIAL PIT No. TP3
Job No. 28-01-26	Date 28-02-26	Ground Level (c.m, AOD) 49m	Co-Ordinates (c.) E 388,900 N 166,029	

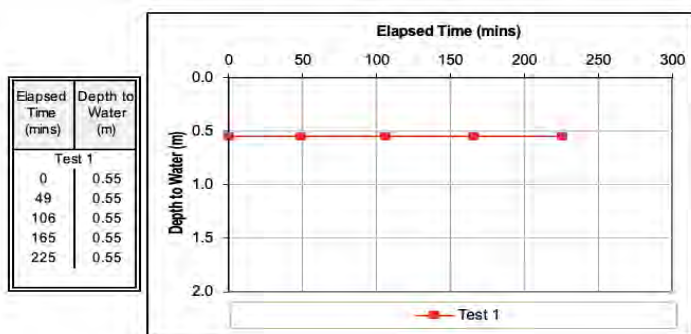


DETAILS OF SUBSOIL

- A TOPSOIL: probable soft, dark brown, organic, plastic CLAY with rare coarse gravel of limestone, rare golf ball and frequent roots
- B CLAY: probable firm, mottled light brown and light grey, plastic CLAY
1.5m : with many gypsum crystals

NOTES

- Pit logged from surface
- Pit dry and stable
- Falling head testing carried out:
Pit dimensions 1.3 x 0.5 x 1.8m (LxWxD)



Scale: NTS	Client: Whitley Golf Club	Logged By: TC
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APPENDIX 3

CERTIFIED CBR TEST RESULTS

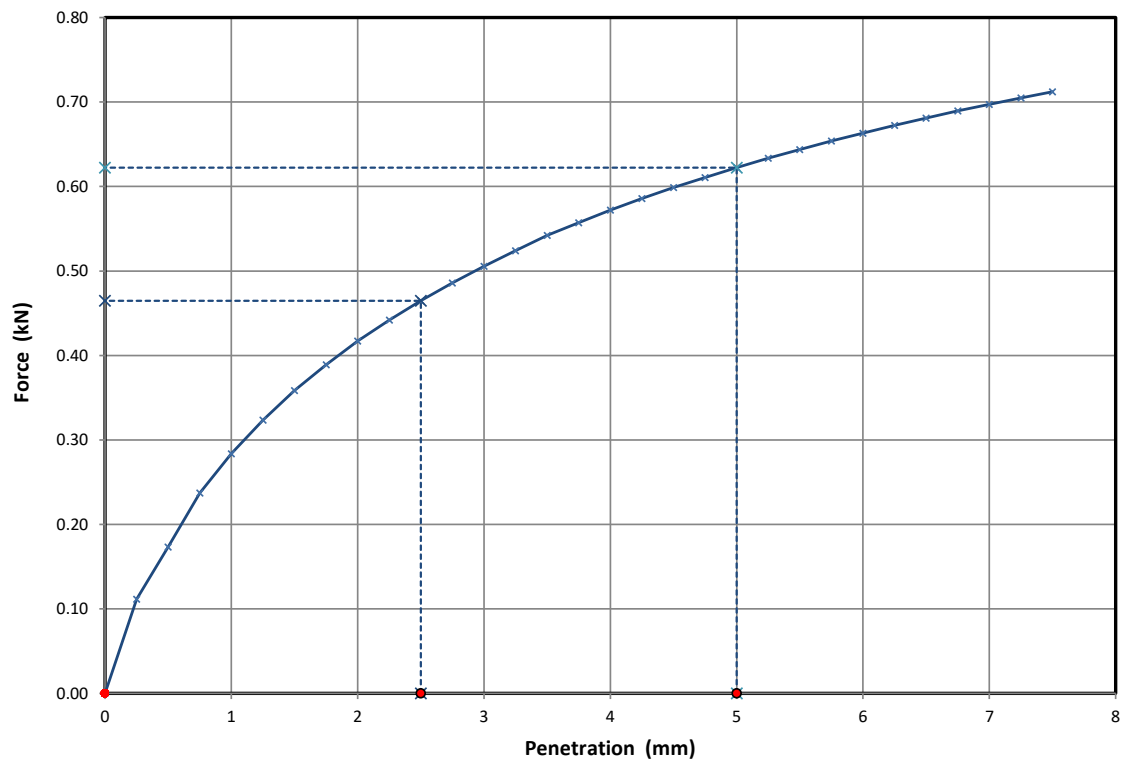
**Determination of California Bearing Ratio (CBR)
BS 1377-2:2022 Clause 15**

Contract Number 84290

Borehole/Pit No. TP1

Project Name	Whitley Golf Club	Sample No.	
Soil Description	Brown silty CLAY	Depth Top	0.45
Compaction Method	2.5 Kg Rammer	Depth Base	
Material Retained on 20mm Sieve Removed (%)	0	Sample Type	B
Date Tested	00/01/1900		

—x— top data —●— base data - -x- - 2.5top - -●- - 2.5base
 - -x- - 5.0top - -●- - 5.0base — top correction — base correction



Initial Sample Conditions	
Water Content (%)	33.8
Water Content Top (%)	34.5
Water Content Base (%)	
Bulk Density (Mg/m3)	4.03
Dry Density (Mg/m3)	3.01

Specified Testing Parameters	
Surcharge Applied (Kg)	2
Soaking Time (Days)	N/A
Amount of Swelling recorded (mm)	N/A
Final Sample Conditions After Soaking	
Dry Density (Mg/m3)	N/A

Curve Correction Applied	
Top	Base
No	No

CBR Test Values			
2.5mm Top	3.5	2.5mm Base	
5mm Top	3.1	5mm Base	
CBR Value %	3.5	CBR Value %	

Remarks

Operator

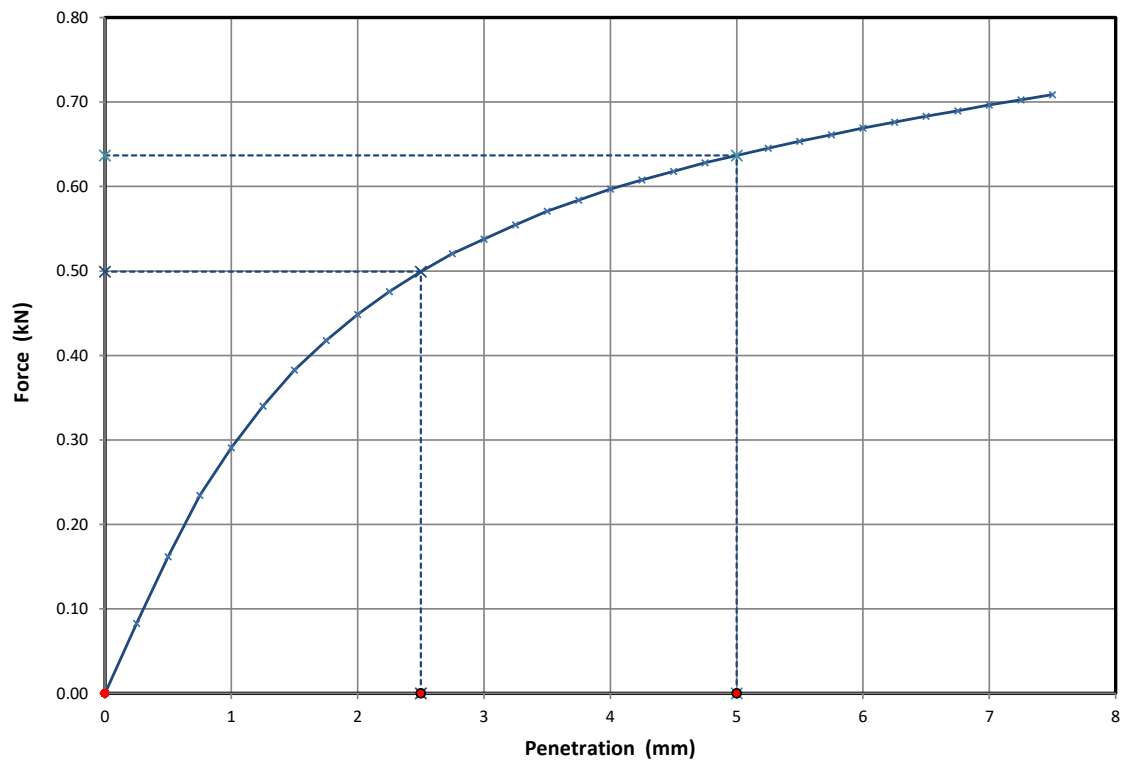
**Determination of California Bearing Ratio (CBR)
BS 1377-2:2022 Clause 15**

Contract Number 84290

Borehole/Pit No. TP2

Project Name	Whitley Golf Club	Sample No.	
Soil Description	Brown silty CLAY	Depth Top	0.45
Compaction Method	2.5 Kg Rammer	Depth Base	
Material Retained on 20mm Sieve Removed (%)	0	Sample Type	B
Date Tested	12/02/2026		

—x— top data —●— base data - - -x- - - 2.5top - - -●- - - 2.5base
 - - -x- - - 5.0top - - -●- - - 5.0base — top correction — base correction



Initial Sample Conditions	
Water Content (%)	39.2
Water Content Top (%)	38.6
Water Content Base (%)	
Bulk Density (Mg/m3)	1.78
Dry Density (Mg/m3)	1.28

Specified Testing Parameters	
Surcharge Applied (Kg)	2
Soaking Time (Days)	N/A
Amount of Swelling recorded (mm)	N/A
Final Sample Conditions After Soaking	
Dry Density (Mg/m3)	N/A

Curve Correction Applied	
Top	Base
No	No

CBR Test Values			
2.5mm Top	3.8	2.5mm Base	
5mm Top	3.2	5mm Base	
CBR Value %	3.8	CBR Value %	

Remarks

Operator

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- 14 The Consultant's liability under this Agreement shall be limited to £500,000 (five hundred thousand pounds). The Consultant shall maintain professional indemnity insurance in this amount providing that such insurance cover is available at commercially reasonable rates.
- 15 To comply with the General Data Protection Regulation (GDPR) 2018, we will only request contact details sufficient to complete our project with you, name/job title, address/postcode/email. Any data collected will be used only by authorised personnel in the context of that project. We are committed to ensuring that your information is secure and in order to prevent unauthorised access or disclosure, we have put in place suitable physical, electronic and managerial procedures to safeguard and secure the information we collect. We will not share your information with third parties.