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APPENDIX 3

TEMPORARY WORKS

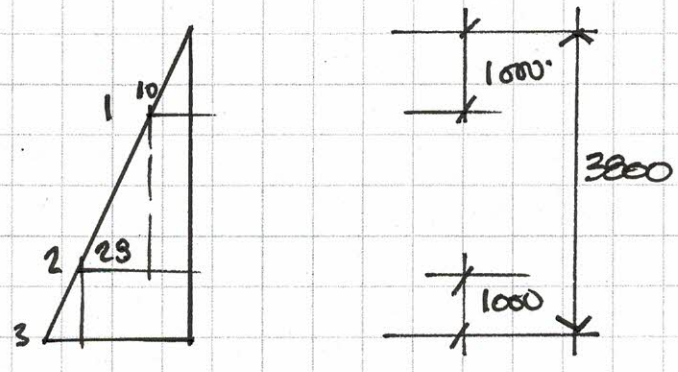
VINCENT & RYMILL

Project: 20 WELL ROAD

Portion: TEMPORARY WORKS

Job No. 17J02
Sheet No. TN1
Made by: TV
Date: OCT 2017
Checked by:

$\gamma = 20$ $K_o = 0.50$

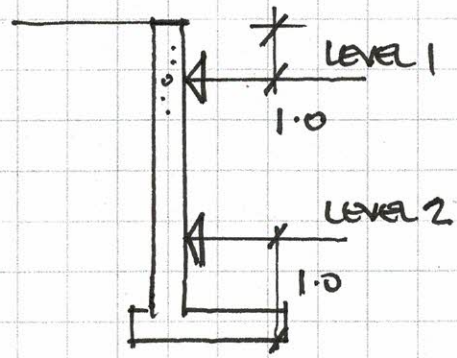


Assume works carried out in single drive

1. $P = 0.5 \times 1.0 \times 20 = 10\,kN/m$
2. $P = 0.5 \times 2.8 \times 20 = 28\,kN/m$
3. $P = 0.5 \times 3.8 \times 20 = 38\,kN/m$

I.L. UDL $= 10 \times 0.5 = 5\,kN/m$

The Following Analysis checks the UDL load at each level.

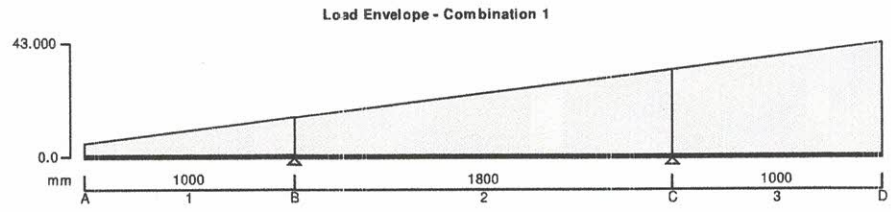


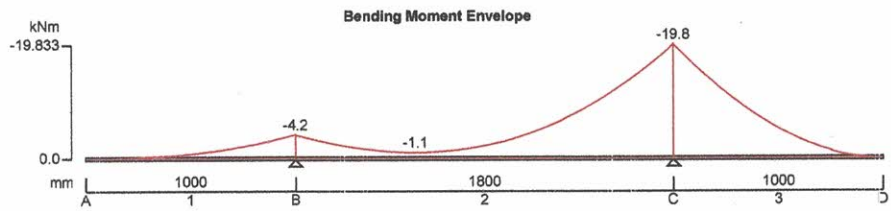
VINCENT & RYMILL LAKESIDE COUNTRY CLUB FRIMLEY GREEN SURREY	Project 20 WELL ROAD				Job Ref. 17J02	
	Section TEMP LATERAL PROPPING				Sheet no./rev. TW 2	
	Calc. by TV	Date 07/11/2017	Chk'd by	Date	App'd by	Date

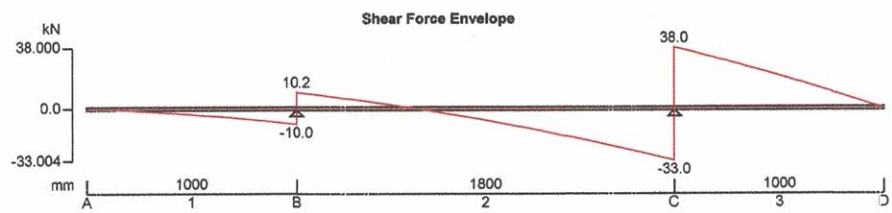
RC BEAM ANALYSIS & DESIGN (BS8110)

RC BEAM ANALYSIS & DESIGN BS8110

TEDDS calculation version 2.1.12







Support conditions

Support A	Vertically free
	Rotationally free
Support B	Vertically restrained
	Rotationally free
Support C	Vertically restrained
	Rotationally free
Support D	Vertically free
	Rotationally free

Applied loading

	Imposed full UDL 5 kN/m
Span 1 loads	Dead VDL 0.000 kN/m at 0 mm to 10.000 kN/m at 1000 mm
Span 2 loads	Dead UDL 10.000 kN/m from 0 mm to 1800 mm
	Dead VDL 0.000 kN/m at 0 mm to 18.000 kN/m at 1800 mm
Span 3 loads	Dead UDL 28.000 kN/m from 0 mm to 1000 mm
	Dead VDL 0.000 kN/m at 0 mm to 10.000 kN/m at 1000 mm

Load combinations

Load combination 1	Support A	Dead × 1.00
		Imposed × 1.00

	Span 1	Dead × 1.00
		Imposed × 1.00
	Support B	Dead × 1.00
		Imposed × 1.00
	Span 2	Dead × 1.00
		Imposed × 1.00
	Support C	Dead × 1.00
		Imposed × 1.00
	Span 3	Dead × 1.00
		Imposed × 1.00
	Support D	Dead × 1.00
		Imposed × 1.00

Analysis results

Maximum moment support A	M_{A_max} = **0** kNm	M_{A_red} = **0** kNm
Maximum moment span 1 at support	M_{s1_max} = **0** kNm	M_{s1_red} = **0** kNm
Maximum moment support B	M_{B_max} = **-4** kNm	M_{B_red} = **-4** kNm
Maximum moment span 2 at 571 mm	M_{s2_max} = **-1** kNm	M_{s2_red} = **-1** kNm
Maximum moment support C	M_{C_max} = **-20** kNm	M_{C_red} = **-20** kNm
Maximum moment span 3 at support	M_{s3_max} = **0** kNm	M_{s3_red} = **0** kNm
Maximum moment support D	M_{D_max} = **0** kNm	M_{D_red} = **0** kNm
Maximum shear support A	V_{A_max} = **0** kN	V_{A_red} = **0** kN
Maximum shear support A span 1 at 450 mm	$V_{A\_s1\_max}$ = **-3** kN	$V_{A\_s1\_red}$ = **-3** kN
Maximum shear support B	V_{B_max} = **10** kN	V_{B_red} = **10** kN
Maximum shear support B span 1 at 550 mm	$V_{B\_s1\_max}$ = **-4** kN	$V_{B\_s1\_red}$ = **-4** kN
Maximum shear support B span 2 at 450 mm	$V_{B\_s2\_max}$ = **2** kN	$V_{B\_s2\_red}$ = **2** kN
Maximum shear support C	V_{C_max} = **38** kN	V_{C_red} = **38** kN
Maximum shear support C span 2 at 1350 mm	$V_{C\_s2\_max}$ = **-19** kN	$V_{C\_s2\_red}$ = **-19** kN
Maximum shear support C span 3 at 450 mm	$V_{C\_s3\_max}$ = **22** kN	$V_{C\_s3\_red}$ = **22** kN
Maximum shear support D	V_{D_max} = **0** kN	V_{D_red} = **0** kN
Maximum shear support D span 3 at 550 mm	$V_{D\_s3\_max}$ = **18** kN	$V_{D\_s3\_red}$ = **18** kN
Maximum reaction at support A	R_A = **0** kN	
Maximum reaction at support B	R_B = **20** kN	
Maximum reaction at support C	R_C = **71** kN	
Maximum reaction at support D	R_D = **0** kN	

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Project: 20 WELL ROAD

Portion: TEMPORARY WORKS

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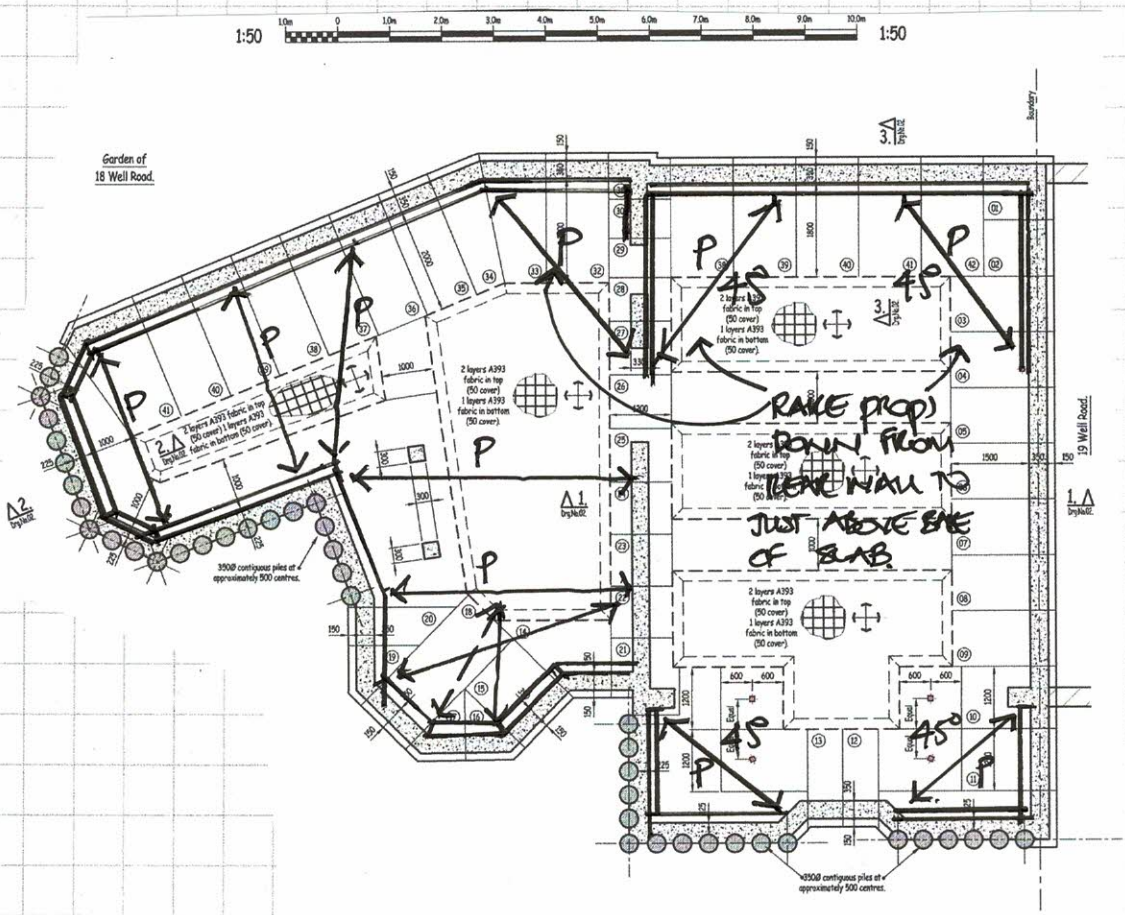


Proposed Basement Plan Showing Proposed Underpinning Plan.
Scale 1:50 (at A1)

AT 2.50 MAX PC/C.

WALES LEVEL 1. $BM = 20 \times 2.5^2/8 = 15.6$ KN.

$Z_{REQ} = 156 \times 10^6 / 0.18 = 86\ cm^3$

SUMLITE $Z = 161\ cm^3$

LEVEL 2 $BM = 71 \times 2.5^2/8 = 55.5$ KN.m.

$Z_{REQ} = 55.5/0.18 = 308\ cm^3$

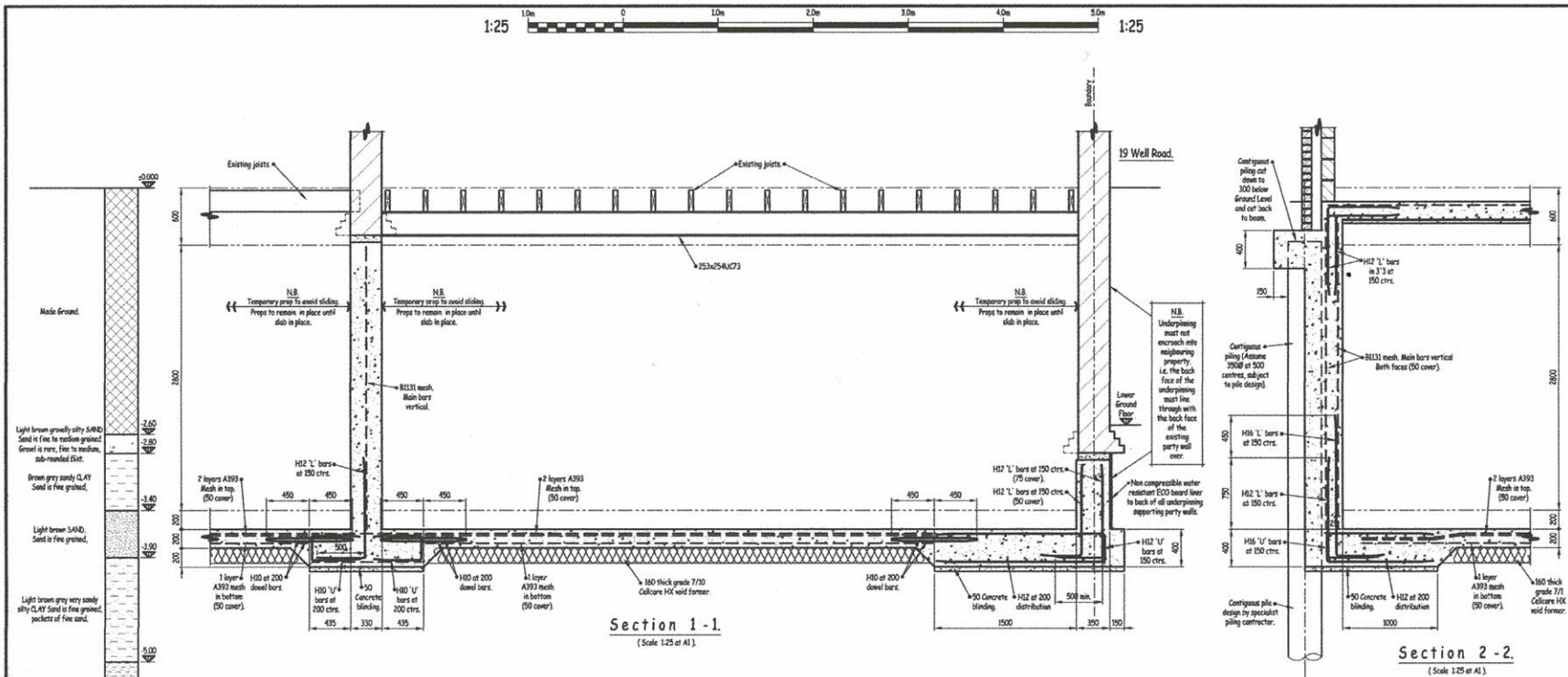
203 x 46 $Z = 454\ cm^3$

PROPS LEVEL 1. PROP FORCE $= 20 \times 2.5 = 50$KN

SUMLITE.

LEVEL 2 PROP FORCE $= 71 \times 2.5 = 178$ KN.

203 x 46 SLT 411KN.



Notes

1. See drawings 17J02 / 01 and 03 for location of sections.

TN 5

Rev	Details	Date
A	Updated.	06.11.17

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Job

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Title

Basement and Ground Floor Sections

Scale at A1	Date	Job No	Drg No	Rev
1:25	Oct. 2017	17J02	02	A

A1