NIGEL CHALLIS

Consulting Civil and Structural Engineer

STRUCTURAL CALCULATIONS FOR SCREWPILE FOUNDATION LOADS FOR NEW CLASSROOM AT ST ANDREWS SCHOOL, NUTHURST, HORSHAM, RH13 6LH

Job No. 1098

Stagbury View
Furzley Road, Bramshaw, Hampshire
SO43 7JH

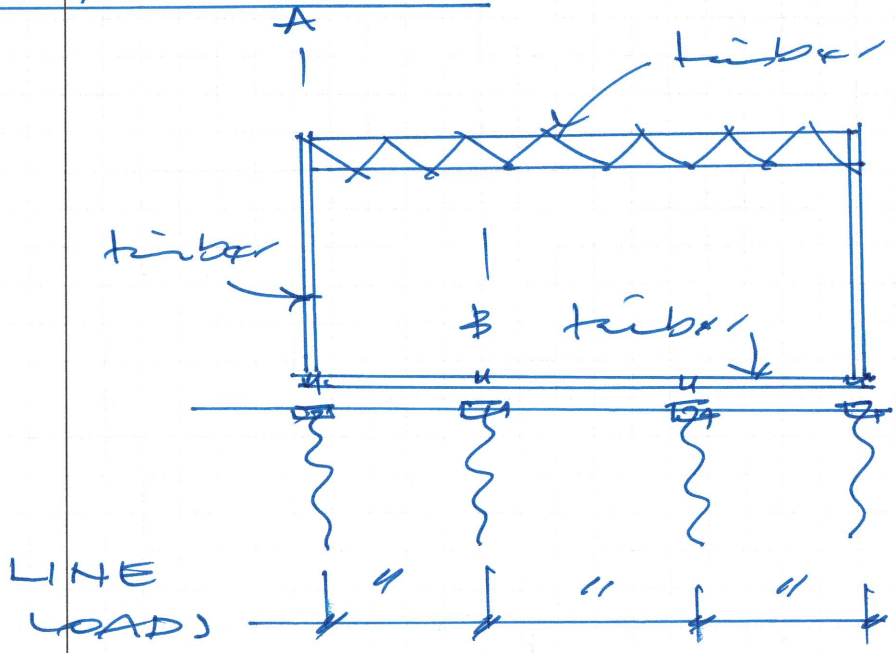
Tel: 07970 532236

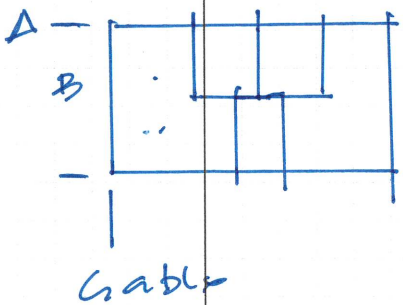
Date: February 2025

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Consulting Civil & Structural Engineer
T: 07970 532236
E: nigelchallis@hotmail.co.uk

PROJECT	S.t Andrews	JOB N°	1098	SHEET N°	02	REV
ELEMENT	Loads	DATE	02.25	BY	—	CHECKED

X Section





Row A

roof	9.5/2 × 1.35	=	6.4
wall	3.0 × 0.6	=	1.8
floor	9.5/4 × 3.4	=	5.4
			13.6 kN/m

Row B

floor	9.5/2 × 3.4	=	10.8 kN/m

Gable

floor	0.4 × 3.4	=	1.4
wall	3.0 × 0.6	=	1.8
roof	0.4 × 1.35	=	0.6
			3.8 kN/m

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PROJECT St. Andrews St.	JOB Nº 1098	SHEET Nº 01	REV
ELEMENT Loads	DATE 02.25	BY	CHECKED

Roof

membrane	0.02
board	0.09
insulation	0.02
board	0.09
truss rafters	0.15
clg.	0.05
services	0.05
	0.40
live	0.75
say	1.35 kN/m²

Walls

cedar cladding	0.12
board & battens	0.12
stud	0.10
plaster	0.20
insulation	0.02
	0.600 kN/m²

Floor

board	0.12
joists	0.20
insulation	0.05
	0.40
live	3.00
	3.40 kN/m²

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PROJECT St. Andrews	JOB N° 1098	SHEET N°	REV
ELEMENT Loads	DATE 02.25	BY	CHECKED

∴ screw pile spacing = 3.0m × 3.1m

Row A. (Corner)

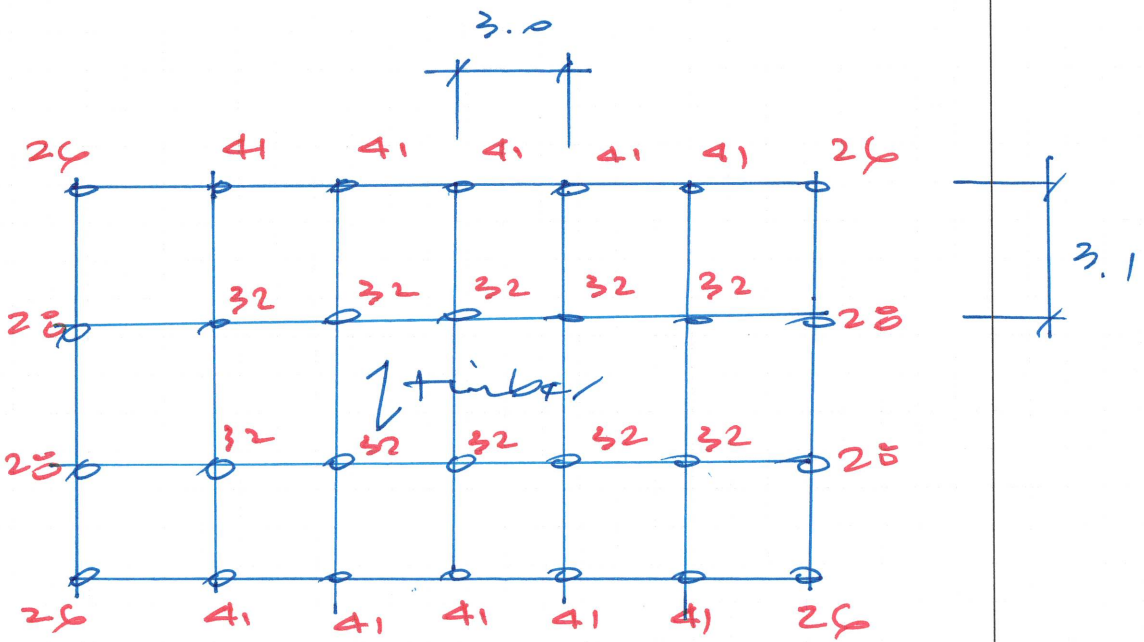
corner = 13.2 × 3.0/2 = 20
gable = 3.8 − 3.1/2 = 6
Row A = 26 kN

Row A

Line = 13.2 × 3.0 = 41 kN

Gable

floor = 10.8 × 3.0/2 = 16.2
wall = 3.8 × 3.1 = 12.0
28.0



screw pile loads (kN)
SWL.