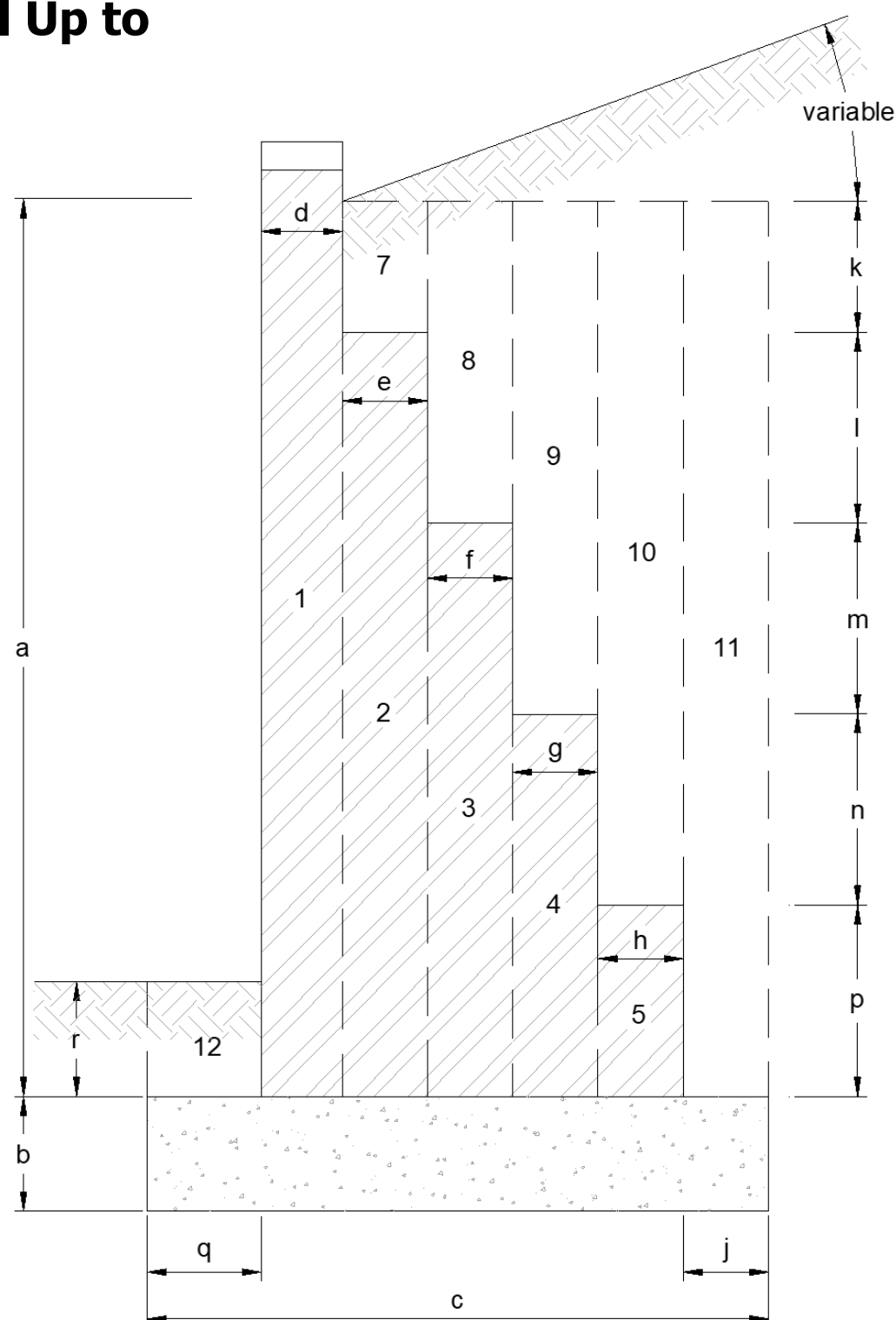


Client: Jehu Projects	Date Prepared: April 2020
Project Title: Coed Darcy, Phase 2	Prepared By: GMcE
Project No: 2432	Date Revised:
Sheet No: 1	Revision:

Surcharge	=	10.00
Parapet	=	0.15
ka	=	0.27
Soil Int. Friction	=	35
Concrete	=	24
Brick/Block	=	16
Fill	=	18
Brick/Block - Fkx	=	0.25
Mat. Str. Factor	=	3.10

a	=	1.800	m
b	=	0.300	m
c	=	1.400	m
d	=	0.215	m
e	=	0.215	m
f	=	0.215	m
g	=	0.215	m
h	=	0.000	m
j	=	0.240	m
k	=	0.450	m
l	=	0.450	m
m	=	0.450	m
n	=	0.450	m
p	=	0.000	m
q	=	0.300	m
r	=	0.300	m



1	16	x	1.800	x	0.215	=	6.192	Kn	x	0.408	=	2.523	Knm
2	16	x	1.350	x	0.215	=	4.644	Kn	x	0.6225	=	2.891	Knm
3	16	x	0.900	x	0.215	=	3.096	Kn	x	0.838	=	2.593	Knm
4	16	x	0.450	x	0.215	=	1.548	Kn	x	1.053	=	1.629	Knm
5	16	x	0.000	x	0.000	=	0.000	Kn	x	1.160	=	0.000	Knm
6	24	x	0.300	x	1.400	=	10.080	Kn	x	0.700	=	7.056	Knm
7	18	x	0.450	x	0.215	=	1.742	Kn	x	0.6225	=	1.084	Knm
8	18	x	0.900	x	0.215	=	3.483	Kn	x	0.838	=	2.917	Knm
9	18	x	1.350	x	0.215	=	5.2245	Kn	x	1.053	=	5.499	Knm
10	18	x	1.800	x	0.000	=	0.000	Kn	x	1.160	=	0.000	Knm
11	18	x	1.800	x	0.240	=	7.776	Kn	x	1.28	=	9.9533	Knm
12	18	x	0.300	x	0.300		1.62	Kn	x	0.15	=	0.243	Knm

Wall Mass = 45.405 Kn **Rest' Mom** = 36.388 Knm

Pa	0.27	x	18	x	2.10	x	1.05	=	10.716	Kn	x	0.700	=	7.501	Knm
Ps	0.27	x	10.0	x	2.10			=	5.670	Kn	x	1.050	=	5.954	Knm
ph	0.15							=	0.150	Kn	x	2.600	=	0.390	Knm

Sliding = $\overline{16.536}$ Kn **O/T Mom** = $\overline{13.845}$ Knm

Check Overturning	36.388	/	13.845	=	<u>2.628</u>	O.K
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Check Sliding (tan 35° = 0.7)	31.784	/	16.536	=	<u><u>1.922</u></u>	O.K.
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Unit 2, Chapel Barns, Merthyr Mawr,
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Tel:- 01656 656267

Client:	Jehu Projects	Date Prepared:	April 2020
Project Title:	Coed Darcy, Phase 2	Prepared By:	GMcE
Project No:	2432	Date Revised:	
Sheet No:	2	Revision:	

Check Bearing Pressures

Centre of Gravity = Restoring Moment / Mass
36.388 / 45.405 = **0.801 m**

Distance 'X' = Disturbing Moment / Mass
13.845 / 45.405 = **0.305 m**

F.La = 13.845

e = 0.305 - 0.101 = 0.204 m

L/6 = 0.233 m Within Middle Third, O.K

Bearing Stress

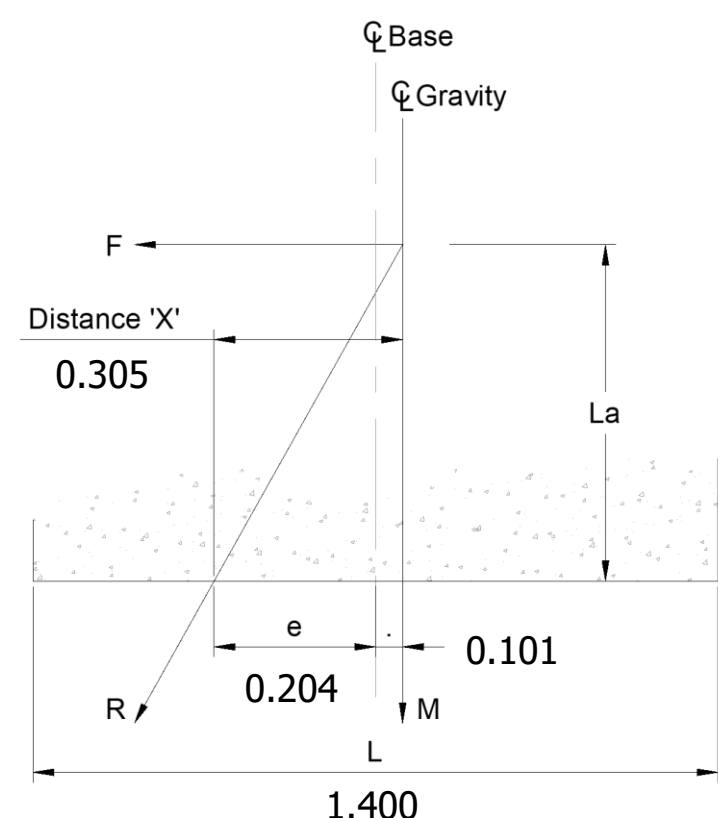
f = k.F / bl

k = 1.872 or 0.128

F = 45.405

b . L = 1.400

Bearing Stress, **f =** **60.718 kn/m² (max)**
or 4.147 kn/m² (min)



Check Section at Top of Base

Distubing Forces

Pa	0.270	x	18.000	x	1.800	x	0.900	=	7.873	x	0.600	=	4.724	Kn
Ps	0.270	x	10.000	x	1.800			=	4.860	x	0.900	=	4.374	Kn
Ph	0.150							=	0.150	x	2.300	=	0.345	Kn

Horizontal Force = 12.883 O/T Mom = 9.443 Kn

Applied design Moment = 9.443 x 1.400 = 13.220 Kn

Moment of Resistance of Masonry section (BS5628)

For Brickwork, **Fkx = 0.250**

Quality Factor, **δm = 3.100**

Gd = Design Vertical load / Area
25.929 / 0.860 = **0.030 n/mm²**

Section Modulus = 1000 x 0.860 x 0.143 = **123.27 x 10⁶ mm²**

Moment of Resistance = 13.286 Kn **O.K**