

Job Name: 21 GIBB AVENUE DARLINGTON.

Consider the proposed structural alterations.

Basic loads

pitched roof	D	0.85	} 1.49	} 1.99
	S	0.64		
ceiling	D	0.25	} 0.5	
	S	0.25		
ls	D	0.6	} 2.10	
	S	1.5		

Cavity wall alter 2.3 } 3.9
inner 1.6

nb Current openings in rear wall unchanged.
Returns on new extension. 1018 ✓
However opening exceeds 2/3 (73.8%).
← need to consider pier adequacy / vertical capacity



(a) Span. 3.8

C 400⁴c w. 1.5 = 3.8 = 0.4
2.3 k.

M. 1.08

Slope length 4.0

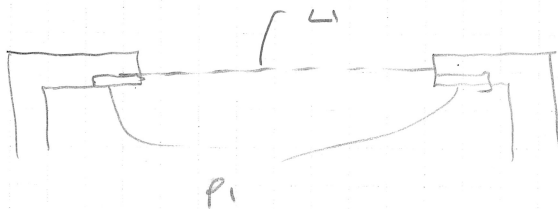
Normal to slope. 2.2 k.

Job Name:

$E_x 200 \times 50 \quad \rightarrow \quad 3.0 \checkmark$

$S = 2200 \times 4000^3 \times 12 / 384 \times 6500 \times 45 = 195 \quad 7.5 \checkmark$

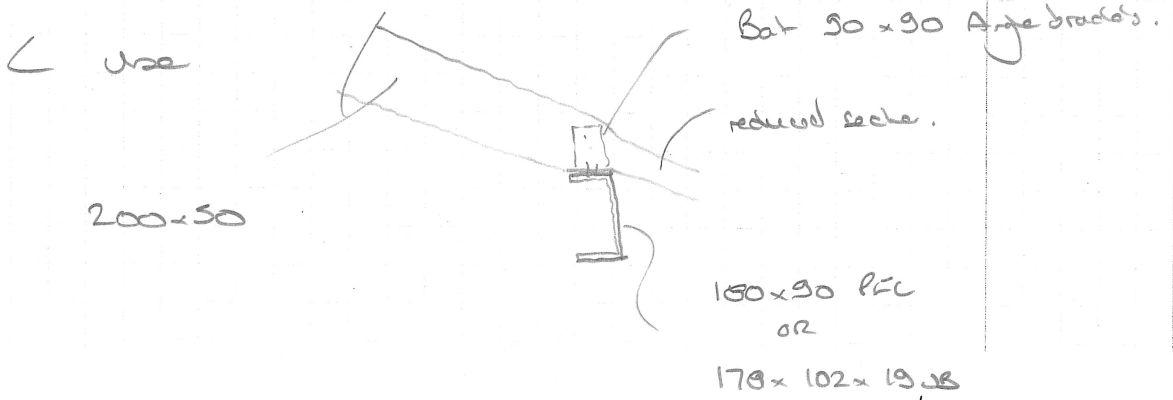
Use 200 x 50 C16 @ 400



<u>L1</u>	Rad.	2 x 15 (max)	3.0	} 3.4 DL
	Wall	0.3 - 3.5	0.0	
	Sell.		0.4	

Design span: 6.0 W: 20.4 M: 153

Z180 . 85 I360 . 1640.



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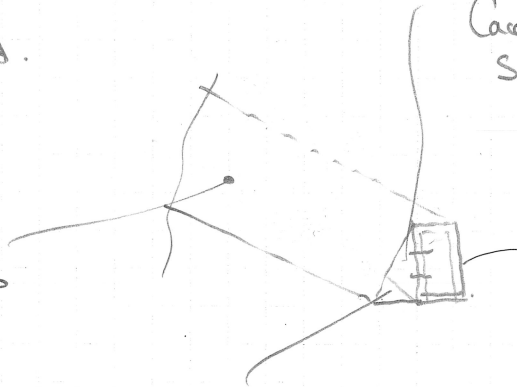
OR to reduce depth:

Unstirred.

but $P_{2c} = 180$

200 x 50 C16 @ 400

Case fixed (2+2 6m Tex screws)
Simpson Strongtie hanger.



200 x 100 x 6.3
RUS

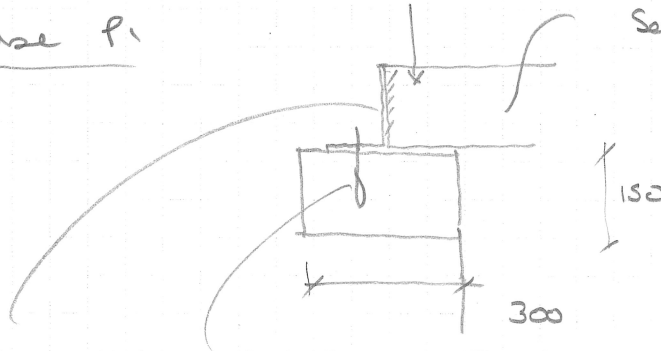
Birdsmark

R = 10.2 Ser 16 ulk

← Use P1

150

See option 1



150 x 50 x 10 RSA
x 90 wide

(M12 x 150 main order)

(or equivalent)
Catharated plate

$$16 \times 10^3 / 300 \times 100 = 0.53 \text{ nl} < 1.50$$

← pier/return clearly adequate