

# C.R. BARROW & ASSOCIATES LTD.

Structural and Architectural Technicians

Job ALTERATIONS -

Ref No. 1482

Studio 1  
Manor Nursery  
Lagness Road  
Chichester  
PO20 1LJ

47 IVY LANE,

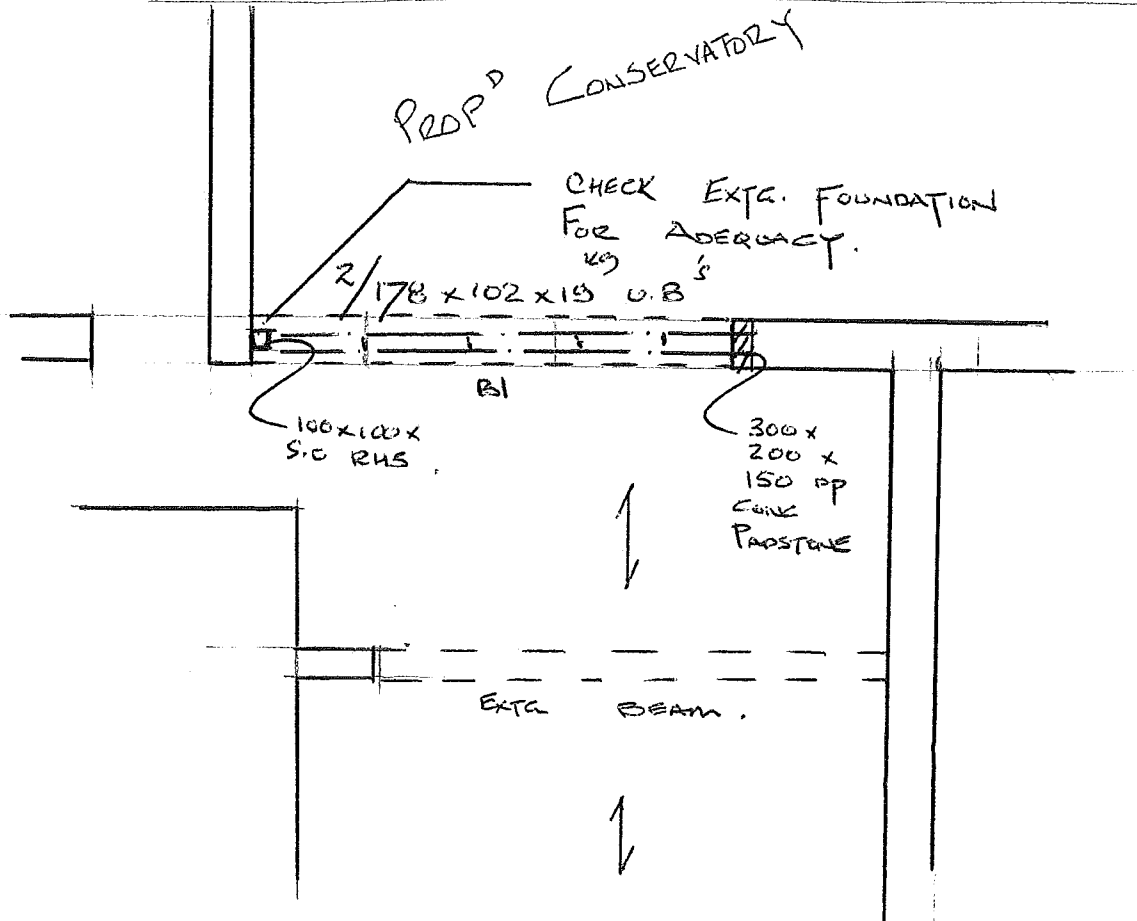
Sheet No. 1

WESTGATE,

Scale 1:50

W/SX - POZO 3RE.

Date FEB 18'



PART GROUND FLOOR PLAN

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Job ALTERATIONS -Ref No. 148247 Ivy Lane,Sheet No. 2WESTGATE,Scale -W/SX - PO20 3RE.Date FEB 18'LOADINGS

PITCHED ROOF @ 1.85  $\text{KN/m}^2$  [D+L]

CAVITY WALL @ 3.80  $\text{KN/m}^2$

FIRST FLOOR @ 2.20  $\text{KN/m}^2$  [D+L]

Bl. [SPAN 3.2m]

|       |      |         |   |     |   |     |   |      |   |          |
|-------|------|---------|---|-----|---|-----|---|------|---|----------|
| L.D.L | FROM | P. ROOF | = | 3.2 | X | 2.0 | X | 1.85 | = | 11.84 kN |
| "     | "    | C. WALL | = | 3.2 | X | 3.0 | X | 3.80 | = | 36.48 kN |
| "     | "    | F. FLE  | = | 3.2 | X | 1.0 | X | 2.20 | = | 7.04 kN  |

55.36 kN

Say 56.00 kN <sup>TS</sup>/<sub>7</sub>

MAX. B.M. =  $56.0 \times 3.2 / 8.0 = 22.4 \text{ kNm}$

$I_{xx} \text{ REQ'D} = 2.23 \times 17.5 \times 3.2^3 = 1278.7 \text{ cm}^4$

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Sheet No. 3

Scale -

Date FEB 18'

Try 2/152 x 89<sup>v</sup> U.B.<sup>s</sup>

[ BEAMS CONNECTED VIA CHANNEL  
SECTIONS @ MAX 1.2 m c/c.  
2 BOLTS PER CHANNEL. ]

$$L/r = \frac{3200}{21.0} = 152.3 \quad \frac{D}{T} = 19.7$$

$$P_{bc} = 98.0 \text{ N/mm}^2$$

$$= \frac{22.4 \times 10^6}{110.0 \times 10^3 \times 2.0} = 101.8$$

UNSATISFACTORY

Adopt 2/178 x 102 x 19<sup>kg</sup> U.B.<sup>s</sup>

CONNECTED THE SAME.

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WESTEASE,

W/SX - PO20 3RE.

Ref No. 1482

Sheet No. 4

Scale -

Date FEB 18'

$\underline{\underline{Pos}} = [L_t \text{ approx} = 2.5m]$

$\square = 28.0 \text{ kN}$

TOTAL AXIAL LOAD  
 $= 29.0 \text{ kN}$

By INSPECTION of S.L TABLES  
100 x 100 x 5.0 RHS POST WITH  
CAP PLT DETAIL + BASE PLT.  
BOLTED TO EXTG FOOTING IF  
ADEQUATE. IF NOT SATISFACTORY  
ADOPT NEW 600 x 600 SQ BASE.