91A1285

Councillor T. Kitt, T.D.,
3, Pine Valley Drive,
Rathfarnham,
Dublin 16.

DD/MC

2.12.91

Dear Councillor Kitt,

I wish to refer to your recent letter concerning an application for planning permission for the proposed extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

By letter dated the 11th November, 1991 the period for considering this application has been extended up to and including the 12th December, 1991.

I shall inform you of the outcome in this case in due course.

Yours faithfully,

for PRINCIPAL OFFICER

Tom Kitt, T.D., M.C.C.

3, PINE VALLEY DRIVE, RATHFARNHAM, DUBLIN 16.

Tel ; 946507. (Home)
789911 ext. 759/610264 (direct) Dail Eireann

DÁIL ÉIREANN
BAILE ÁTHA CLIATH, 2.
(Dublin, 21.

24/11/89,

Dear Deasún,

Would you please let me know the up-to-date position on this.

I would like to support some

26 NOV

Tom

DAN GALLERY . ARCHITECT

6 MAIN STREET DONNYBROOK DUBLIN 4

01-696588/839995
HOME 01-982759

DAN GALLERY. B.ARCH. MRIAI. RIBA.

Tom Kitt T.D.
3 Pine Valley
Rathfarnham
Dublin 16

23rd October, 1991

Re: Extension and alterations consisting of (a) new restaurant/lounge (b) new toilets (c) conversion of stores to kitchen incorporating new pitched roof (d) new fire excapes and fire doors (e) other ancillary space (f) new signage.

At The Firhouse Inn, Firhouse Road.

For Mr & Mrs H Morton.

Register Reference Nº 91A/1285

Dear Deputy Kitt,

The above application ran into difficulties on grounds of Car Parking and Traffic management. We have been granted a time extension until November 11th.

I have met with Mr Cremins (Planning) and Mr Madden (Roads) and the enclosed submission is the result of these meetings. I feel that the queries have been adequately answered and would be very grateful if you could support this application at the next Belgard Committee Meeting.

Yours sincerely,

DAN GALLERY

DAN GALLERY . ARCHITECT
6 MAIN STREET DONNYBROOK DUBLIN 4
01-2696588/839995
HOME 01-982759

DAN GALLERY. B.ARCH. MRIAI. RIBA.

Dublin County Council
Planning Department
Block 2 Irish Life Centre
Lower Abbey Street
Dublin 1.

23rd October, 1991

Re: Extension and alterations consisting of (a) new restaurant/lounge (b) new toilets (c) conversion of stores to kitchen incorporating new pitched roof (d) new fire excapes and fire doors (e) other ancillary space (f) new signage.

At The Firhouse Inn, Firhouse Road.

For Mr & Mrs H Morton.

Register Reference Nº 91A/1285

UNSOLICITED INFORMATION

Dear Sirs,

Following recent meetings with Mr R. Cremins (Planning Office) and Mr E. Madden (Roads Department) we wish to make the following submission regarding Car Parking and Traffic Management.

1.0 Car Parking Spaces

1.1 We have examined the Car Parking layout afresh and as can be seen from drawing Nº F14/29 we can now accommodate 90 cars without any supervised spaces, all within the cartilage of the site.

1.2 A detailed examination of the floor areas indicate that the total public area of the completed development would be 345 sq m. (see drawing Nº F14/30 enclosed). Table 3.14 of 1983 Development Plan calls for 2 cars per 8 sq m. The required number of cars therefore, is 87. It is worth noting that the 1991 Draft Development Plan lays down the same car parking standard for public houses as the 1983 Plan.

1.3 The adjoining building "The Firhouse Stores" consists of day time uses so that the car parking spaces required can overlap with those of the pub in accordance with paragraph 3.13.9 of the Development Plan.

2.0 Traffic Management

2.1 The proposed Southern Cross Motorway will have a major impact on the Firhouse Inn as follows:-

a) the Firhouse Road will be re-aligned and rise up and cross over the Motorway.

b) the Ballycullen Road will be re-aligned and emerge to join the Firhouse Road opposite the Firhouse Inn.

c) a new access road will be created to serve Mount Carmel Park, The Firhouse Inn and Firhouse Stores, which will reduce the number of access points at this section of the Firhouse Road to one as against two access points at present.

Drawing Nº F14/29 shows the proposed layout referred to above.

2.2 Realistically on-street car parking will occur. The proposed access road may facilitate the creation of controlled on street car parking for 5 cars on lay-bys as shown on drawing Nº F14/29.

As stated in our original letter of application this application is prompted by a desire to address the new circumstances created by the Southern Cross Motorway and the changing trends towards full meals in public houses. We are confident that the revised car parking layout together with the proposed new access road will ensure that the development as proposed will not cause a traffic hazard or damage existing residential amenity.

Yours sincerely,

Dan Gallery

P. H. McCARTHY SON & PARTNERS

For Registration

CONSULTING ENGINEERS
Member Firm of Association of Consulting Engineers of Ireland

Partners
P.C. MacIntyre BE CEng FIEI MICE MIWEM DPM ACIArb
J.C. Forsyth BSc MIEI MIWEM
M.G. Hand BE MBA Eur Ing CEng FIEI MICE FIWEM
Consultants
A.J. Fitzgerald BE CEng MIEI FIWEM
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ROSEMOUNT HALL
DUNDRUM ROAD
DUBLIN 14, IRELAND
TELEPHONE: 01-989377
FAX: 01-989521

Your Ref

Our Ref
488/TCMacI/LB

3rd February, 1992.

91A/1285
1.12.0.2

Building Control Section,
Planning Department,
Dublin County Council,
Block 2, Irish Life Centre,
Lower Abbey Street,
DUBLIN 1.

Re: Building Bye-Laws Application for Proposed Extension and Alterations to the Firhouse Inn, Firhouse Road, Dublin 24.

Reg. Ref. 91A/1285.

Dear Sirs,

We enclose two copies of the following additional structural information as part of the Building Bye-Laws Application:-

Drawing No's 488/1A-6A.

Calculation Sheets 488/1/1A - 488/5/7A.

In relation to Item 5 of your letter of 22/10/91 to Dan Gallery, we confirm that, where necessary, full investigation of existing structural members will be carried out under our supervision and, if found inadequate to take the proposed loading, strengthening works will be incorporated in the proposed scheme. Please refer to enclosed calculations and drawings for further details.

Please do not hesitate to contact us if you require any further information.

Yours faithfully,
P.H. McCarthy Son & Partners.

T.C. MacIntyre
p.p. T.C. MacIntyre.

RECEIVED
04 FEB 1992

c.c. Mr. Dan Gallery, Architect (+ 1 copy Drawings).

Encls.

P.H. Mc CARTHY SON & PARTNERS
CONSULTING ENGINEERS
Rosemount Hall,
Dundrum Road, Dublin 14.
Tel: 01 989377
Fax: 01 989521

Job No.	Sheet No.	Rev
488	1 / 1	A

By	Dates	Rev.	Chkd.
MH	28.1.92	A	

Contract: Firhouse Inn, Firhouse Road, D24.

Structure: STRUCTURAL SCHEME CALCULATIONS. (REVISED SCHEME)

INDEX

REV. A: Chapter 2 (Lateral Stability) omitted.
Sheets 4/1-4 omitted.
Various calc. sheets revised as indicated above.

INTRODUCTION

The proposed works comprise a single storey extension as well as alterations to the existing Firhouse Inn. Alterations include new lightweight pitched timber roofs over the existing r.c. slab at ground floor level while the extension has a similar pitched roof over ground bearing slab.

Wind load is transferred via the roof and ground floor slab to masonry walls which act as shear walls.

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Job No.	Sheet No.	Rev
488	1/2	A

Contract: Firhouse Inn Development.
Structure:

By	Dates	Rev.	Chkd.
AMT	15.7.91 28.1.92	A	

LOADING

Proposed :

	(D.L.)	(I.L.)
Roof:		
A.(slates on battens on rafters on purlins on trusses (on plan)	0.65	
Imposed (snow) load		0.75
	0.65	+ 0.75
Ground Floor;		
150 r.c. slab + 50 screed + finishes (tiles/carpet+services)	5.3	
Imposed load (Bar/Toilets)		5.0/2.0
	5.3 +	5.0/2.0

Existing :

Roof.

Slates on battens on rafters + ceiling	0.95	
Imposed (snow) load		0.75
	0.95 +	0.75

Ground Floor : (conc.)

Assumed 200 o/a slab + finishes (0.3)	5.1	
Imposed load (Bar/Toilets)		5.0/2.0
	5.1 +	5.0/2.0

Ground Floor : (timber)

Boarding on joists on plasterboard	0.5	
Imposed load (Kitchen)		3.0

215	D.C.m. hollow block rendered (0.45) & plastered (0.15)	3.6
140	DCm block plastered	3.1
100	DCm block plastered both sides	2.5
100	DCm block rendered	2.6
(100 + 100)	dcm block cavity wall (2.3+2.6)	4.9

FIRHOUSE INN. — PART PLAN BASEMENT.

TRIAL PIT TO BE DUG TO LEVEL OF UNDERSIDE OF EXISTING FOOTING TO CHECK ADEQUACY OF FOUNDATIONS.

PROVISIONAL.

ALLOW FOR 600 WIDE x 300 THICK UNDERPINNING OVER 11.0m LENGTH WITH 50-75 DRY PACK TO UNDERSIDE OF EXISTING FOOTING.

NEW PIER AS OTHER END

FB 9. OVER.

450 WIDE x 250 THICK MASS CONC. UNDERPIN + DRY PACK UP TO EXISTING 100 BLOCK WALL
CASSUMES WALL HAS NO FOOTING - TO BE CHECKED ON SI

215 SOLID BLOCK WALL BUILT OFF 450 WIDE x 250 THICK MASS CONC. FOOTING.

LOCAL UNDERPIN WITH MINIMUM 50 DRY PACK TO UNDERSIDE OF EXISTING FOOTING.

SEE DRG 488/5 FOR DETAILS OF NEW WALL AND FOOTING.

REVISION AND DATE	A	JAN. 92.
DESCRIPTION	GENERAL REVISIONS & REDRAWN	

488/1/3A

FIRHOUSE INN - PART PLAN BASEMENT

440 x 440 SOLID BLOCK PIER ON 600 x 600 x MIN 300 THICK MASS CONC. PAD FOOTING. PIER CUT TOOTHED AND BONDED TO EXISTING WALL.

450 WIDE x MIN 2501HK MASS CONCRETE STRIP FOOTING. AT AN ASSUMED DEPTH OF 1000 MIN. BELOW EXISTING GROUND LEVEL.

90 x 90 RHS 5.0 ON 450 x 450 x MIN 300 THICK MASS CONC. PAD FOOTING AT AN ASSUMED DEPTH OF 1.0M BELOW GROUND LEVEL.

440 x 440 SOLID BLOCK PIER ON 800 x 800 x MIN. 400 THK. MASS CONCRETE PAD FOOTING.

90 x 90 RHS 5.0 ON 600 x 600 x MIN. 400 THK. MASS CONCRETE PAD FOOTING.

EB6 OVER

EB7 OVER.

90 x 90 RHS 5.0 ON 800 x 800 x MIN. 400 THK MASS CONCRETE PAD FOOTING

100 WIDE x 65 DEEP P.R.C PLANK LINTEL OVER (WITHIN DEPTH OF FLOOR ABOVE).

EB 8 OVER

EB 9 OVER

4

3

FIRHOUSE INN – PART PLAN GROUND FLOOR

MIN. 140 STOCK BRK.

SAW CUT EDGE OF EXISTING R.C. SLAB TO LEAVE 100mm BEARING ON WALL UNDER.

120 R.C. SLAB CAST INSITU.

100 DWARF BLOCK WALL UNDER

EXISTING WALL UNDER

PIER CUT TOOTHED AND BONDED TO EXISTING WALL.

LOCAL UNDERPIN WITH MINIMUM 50 DRY PACK UP TO UNDERSIDE EXISTING FOOTING.

LINTELS OVER 290 CAVITY WALL TO BE 'STEELITE' TYPE A GALV. STEEL LINTELS BY DOYLE CONCRETE LIMITED (6 No. TOTAL). LINTELS TO HAVE MIN. 150 BEARING EACH END.

600 WIDE x MIN. 300 THICK MASS CONC. STRIP FOOTING AT AN ASSUMED DEPTH OF 1200mm BELOW EXISTING GROUND LEVEL.

450 WIDE x 250 THICK MASS CONC. STRIP FOOTING AT AN ASSUMED DEPTH OF 1200mm BELOW EXISTING GROUND LEVEL.

215 WIDE x 68 DEEP PRESTRESSED PLANK LINTEL + MIN. 2 COURSES CONCRETE BRICKWORK OVER

50 SCREED ON 150 R.C. SLAB ON 1000 GAUGE DPM ON 50 CONCRETE BLINDING ON MIN. 150 WELL COMPACTED HARDCORE.

CAVITY WALL:
100 BLOCK (5N/mm²)
90 CAVITY
100 BLOCK (5N/mm²)

LOCAL UNDERPIN AS AT FAR END

REVISION AND DATE	A	JAN. 92.
DESCRIPTION	GENERAL REVISIONS. REDRAWN.	

A B C D 1 2

FIRHOUSE LANE — PART ④ PLAN GROUND FLOOR ③

440 x 440 BLOCK PIER (2 No.)

* EXISTING BEAMS EB1 + EB2 PROPPED UP EITHER SIDE OF NEW BEAM AND SO LONG SECTION CUT OUT TO ALLOW FOR INSERTION OF 203 x 203 UC 46. EXISTING BEAMS RESUPPORTED ON LOWER FLANGE OF 203 x 203 UC 46 WITH WEB CLEATS (4 No TOTAL) WELDED TO NEW AND EXISTING BEAMS TO PROVIDE TORSIONAL RESTRAINT.

NEW GALVANISED STEEL STAIRS BY SPECIALIST SUPPLIER.

215 WIDE x 260 DEEP R.C. BEAM OVER WITH 200 END BEARING EACH END.

90 x 90 RHS 5.0 UNDER.

EXISTING BEAMS EB1 TO EB5 — 152 x 152 UC 23. EXISTING JOISTS EJ1 — 44 x 175 AT 375 CRS.

203 x 203 UC 46 (GB1?)

NEW PIER UNDER

EJ1

EB2

90x90 RHS 5.0

EB3

EB4

EB5

NEW PIER UNDER

225 DEEP BAT TYPE 'SOLBAT' STEEL LINTEL OVER. LINTEL TO HAVE MIN. 150 END BEARING EACH END.

EXISTING WALL UNDER

75 STRUCTURAL TOPPINGS WITH (LAYER A142 MESH OVER EXISTING ROOF SLAB (EXISTING ROOF FINISHES TO BE REMOVED)

PIER AT OTHER END

340 x 340 SOLID

4881/1/A

FIRHOUSE INN — ② — PART PLAN

TRUSS T1

M.S. PLATE SECTIONS TO BE BUTT WELDED AT ALL JOINTS. ALL WELDS TO BE GROUND FLUSH.

200 x 4 MM M.S. FLAT + 50 x 225 TIMBERS EITHER SIDE.

100 x 4 MM M.S. FLAT + 50 x 150 TIMBERS EITHER SIDE

REVISION AND DATE	A	JAN 92
DESCRIPTION	GENERAL REVISIONS & REDRAWN	

900 HIGH x 215 HOLLOW BLOCK WALL BUILT OFF BEAM.

* EXISTING JOISTS (ASSUMED SPAN)

203 x 203 UC46 (RBS)

75 x 175

203 x 203 UB 25 (RBS)

203 x 203 UC46 (RBS)

BP1

BP2

TRUSS T1

TIMBER TRUSSED AT 400 CRS, DOUBLED WHERE SHOWN.

CRANK — RGB STEPS UP 91, 900 mm

ROOF LIGHT

HIP

HIP

BEARING.

A

B

C

D

1

2

RGB

4881/74

FIRHOUSE INN

PART PLAN ROOF

EXISTING 215 BLOCK WALL UNDER TO BE RAISED BY 440 mm ON ALL 3 SIDES. TOP COURSE TO COMPRISE OF 4 BLOCKS WITH R.C. INFILL TO FORM RING BEAM. REINFORCEMENT TO CONSIST OF 2 NO. T12s WITH MIN. 400 mm LAPS.

HIP

HIP

TIMBER TRUSSES AT 600 CRS. (DOUBLED WHERE SHOWN)

BP1

203 x 133 U.B. 25 (RB1)

203 x 133 U.B. 30 (RB2)

203 x 133 U.B. 25 (RB3)

BP2

BP3

TRUSS T1

TRUSS T2

BP1

BP2

BP3

(H1)

(A1)

(P1)

(R1)

* EXISTING JOISTS BACK AND NOT TOP AND BOTT INTO WEB OF TO GIVE MIN. BEARING

488/1/84

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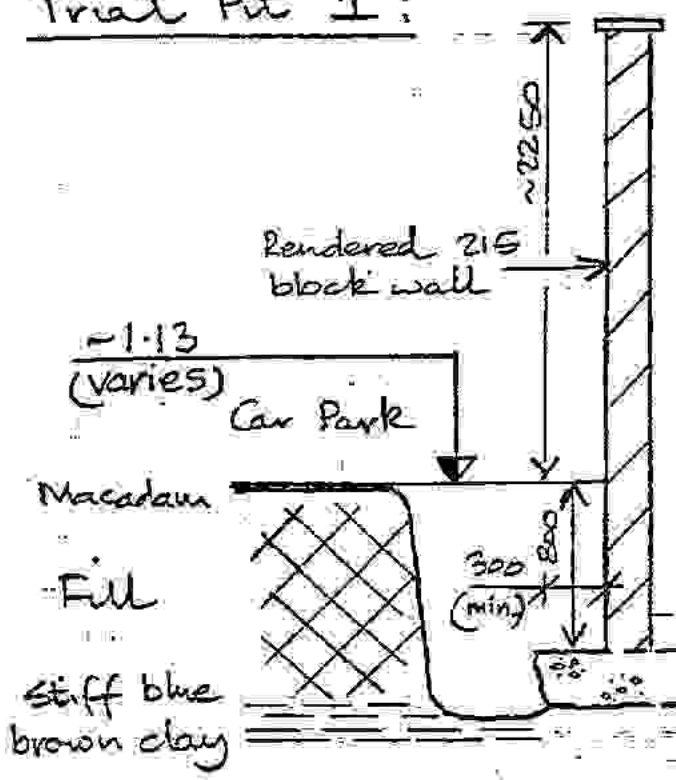
Job No.	Sheet No.	Rev
485	1 / 9	

Contract: Firhouse Inn.

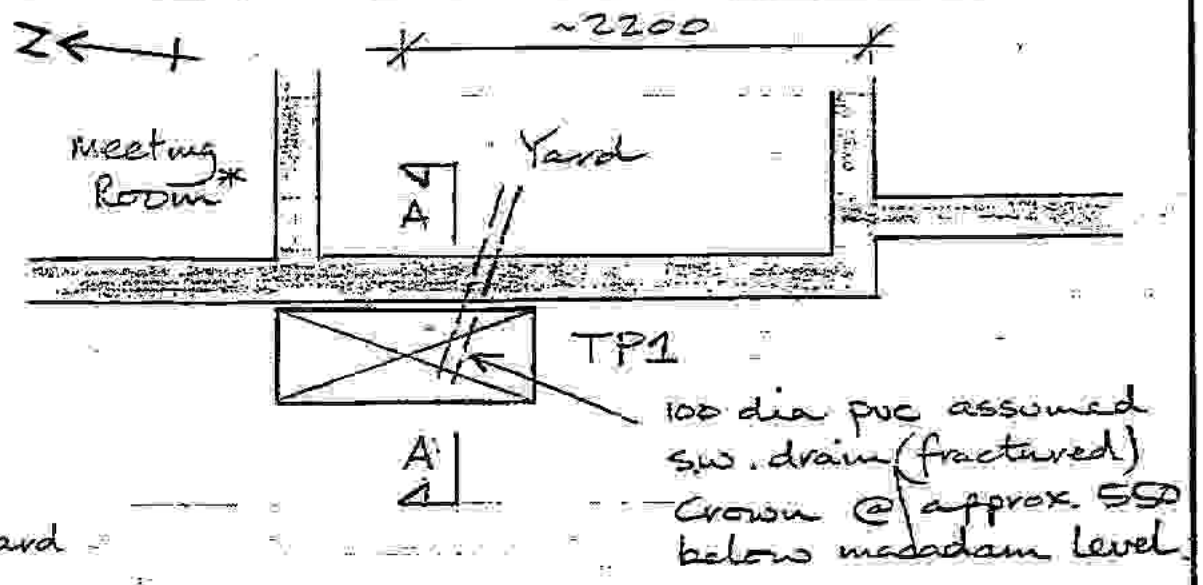
Structure: Trial Pits.

By	Dates	Rev.	Chkd.
CMS	24.6.91 3.7.91		

Trial Pit 1:



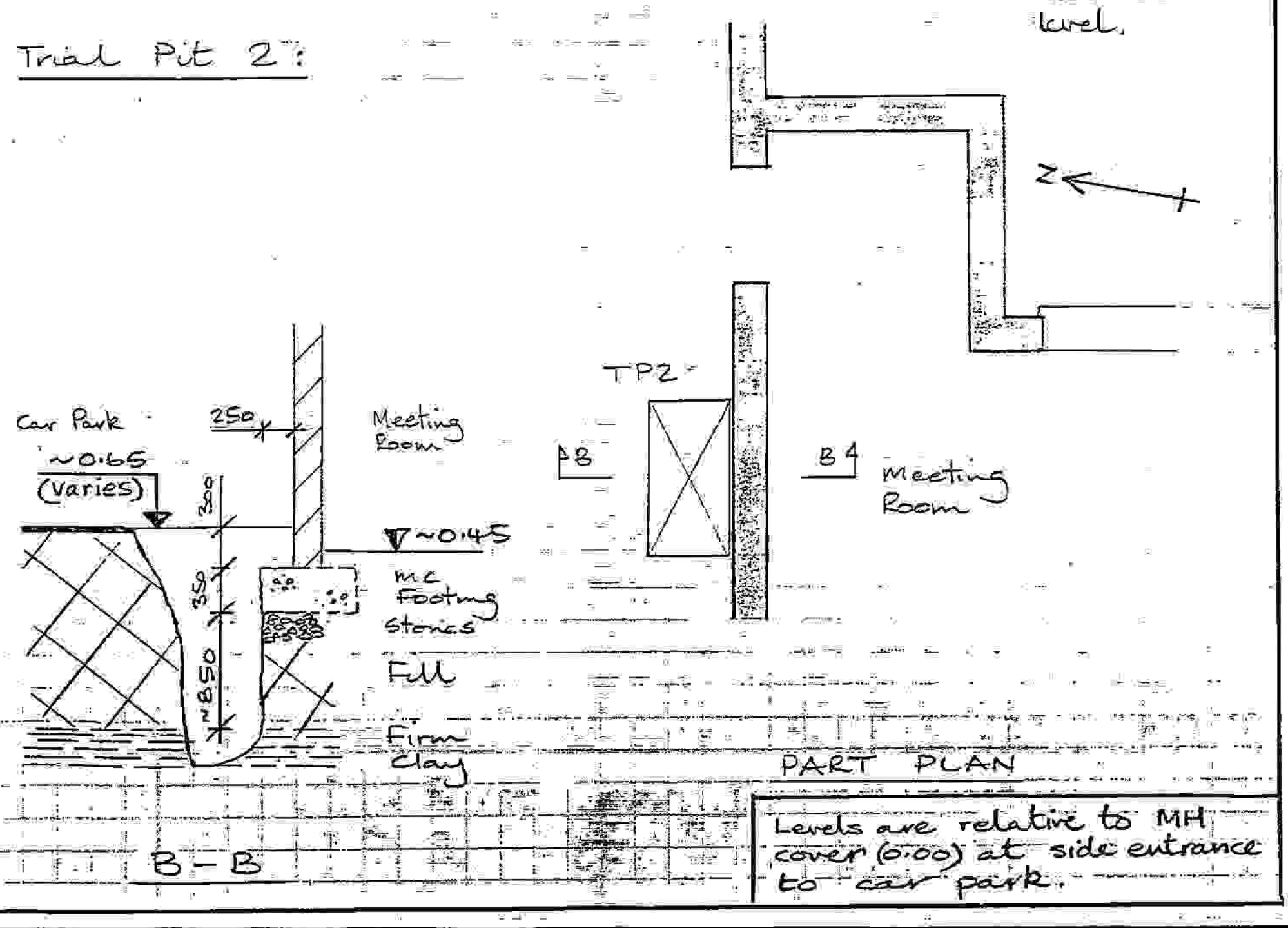
A - A



PART PLAN

* West wall to meeting room: consists of 100 x 215 blocks laid on the flat up to approx. 825 mm above F.F.L. Wall acts as retaining wall below this level.

Trial Pit 2:



Levels are relative to MH cover (0.00) at side entrance to car park.

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Job No.	Sheet No.	Rev
488	3/1	

Contract: Fishouse Inn

Structure: Roof

By	Dates	Rev.	Chkd.
CMT	1·8·91		

Roof over Kitchen :

Roof structure generally consists of timber trusses spanning from existing flank wall onto top flange of beams RB1 and RB2. Timber roof design by others to take (DL + IL) of (0.75 + 0.75) kN/m² (max.)

Flat Roof :

Self wt. ≈ 1.05 kN/m²

max. span = 2200

For 44 x 125's, min SC3, @ 400 crs

load/m = (1.05 + 0.75) x 0.4 = 0.72 kN/m

$M_{max} = 0.72 \times \frac{2.2^2}{8} = 0.44$ kNm

$\sigma_m = \frac{0.44 \times 10^6}{44 \times 125^2/6} = 3.8$ N/mm²

< 5.3 x 1.1 x 1.25 = 7.3 N/mm²

√ O.K.

Deflection and shear OK. by inspection.

Flat roof joists spanning 2200 max.

44 x 125's @ 400 crs. (min. SC3)

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Job No.	Sheet No.	Rev
488	3/2	

Contract: Firhouse Inn

Structure: Roof.

By	Dates	Rev.	Chkd.
CMS	7.8.91		

Beam RB1;

Span ≈ 4000.

Roof load ≈ $\frac{5.2}{2} \times (0.75+0.75)$ (Pitched Roof) $+ \frac{1.8}{2}^{*} \times (1.05+0.75)$ (Flat Roof)

* Average flat roof width

$= 5.5 \text{ kN/m}$

self wt.
≈ 0.3 kN/m

$M_{max} = \frac{5.8 \times 4^2}{8} = 11.6 \text{ kNm}$

Using a 203 x 133 UB25

$f_{bc} = \frac{11.6 \times 10^6}{231.3 \times 10^3} = 50 \text{ N/mm}^2$

$D/T = 26.0$ $\quad l/r = \frac{400}{3.10} = 129$

$\therefore P_{bc} = 126 \text{ N/mm}^2$

✓ O.K.

$\delta_T = \frac{5 \times 5.8 \times 4000^4}{384 \times 0.21 \times 10^6 \times 2356 \times 10^4} = 3.9 \text{ mm}$

✓ O.K. RB1:

End Bearings;

See RB2 calcs.

203 x 133
UB 25

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Job No.	Sheet No.	Rev
488	3/ 3	

Contract: Firhouse Inn.
Structure: Roof.

By	Dates	Rev.	Chkd.
AMJ	7.8.91		

Beam RB2:

span = 5800

Roof load ≈ $\frac{5.2}{2} \times (0.75+0.75) + \frac{0.8}{2} \times (1.05+0.75)$

= 4.6 kN/m

Self wt ≈ 0.3 kN/m

$M_{max} = 4.9 \times \frac{5.8^2}{8} = 20.6$ kNm

Using a 203 x 133 UB 30

$f_{bc} = \frac{20.6 \times 10^6}{279.3 \times 10^3} = 74$ N/mm²

$D/T = 21.5$; $l/r = \frac{580}{3.15} = 183$

$\Rightarrow P_{bc} = 92$ N/mm² ✓ O.K.

$\delta_T = \frac{5 \times 4.9 \times 5800^4}{384 \times 0.21 \times 10^6 \times 2857 \times 10^4} = 11.9$ mm.

$\frac{5800}{360} = 16.1$ mm ✓ O.K.

RB2:
203 x 133
UB 30

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Job No.	Sheet No.	Rev
488	3/4	

Contract: Firhouse Inn.
Structure: Roof.

By	Dates	Rev.	Chkd.
CMC	7.8.91		

End Bearings:

(1) Max. reaction to wall = 14.2 kN (from RB2)

For 100 wide x 400 long x 200 deep mass concrete bearing pad

Brick* Stress = $\frac{14.2 \times 10^3}{100 \times 400} = 0.36 \text{ N/mm}^2$

* Existing gable wall assumed to be 450 brick set in lime mortar.

Permissible stress = $0.42 \times 1.15 = 0.63 \text{ N/mm}^2$

✓ O.K.

(2) Reaction to 215 hollow block wall = 11.6 kN

Ultimate Block Stress = $\frac{1.5 \times 11.6 \times 10^3}{100 \times 400} = 0.44 \text{ N/mm}^2$

For 215 x 215 x 440 hollow blocks, min. 3.0 N/mm^2

$f_{fk} = 1.9^* \text{ N/mm}^2$; $\gamma_m = 3.5$ * 1.5.325, Table 2(b).

Under bearing

Permissible stress = $\frac{1.9}{3.5} \times 1.5^* = 0.81 \text{ N/mm}^2$ * 50% increase under conc. load

✓ OK

0.4 h below bearing:

$\frac{h_{ef}}{t_{ef}} = \frac{2500}{215} = 12$ $e_x \geq 0.25t$

$\Rightarrow \beta = 0.55$

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Job No.	Sheet No.	Rev.
488	3/5	

Contract: Firhouse Inn

Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	8-8-91		

stress due to conc. load $\approx \frac{1.5 \times 11.6 \times 10^3}{1800 \times 215} = 0.04 \text{ N/mm}^2$

stress due to self wt. wall + roof load $+ \frac{6.0^{*} \times 10^3}{215 \times 10^3} = 0.03 \text{ N/mm}^2$ * load < 6kN/m

$\Sigma = 0.07 \text{ N/mm}^2$

Permissible Stress $= \frac{1.9}{3.5} \times 0.55 = 0.30 \text{ N/mm}^2$

Obviously OK. ✓

Bearing Pads: (2 No.)

100 wide x 400 long x 200 deep mass concrete.

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Job No.	Sheet No.	Rev
488	3/6	

Contract: Pirhouse Inn
Structure: Roof.

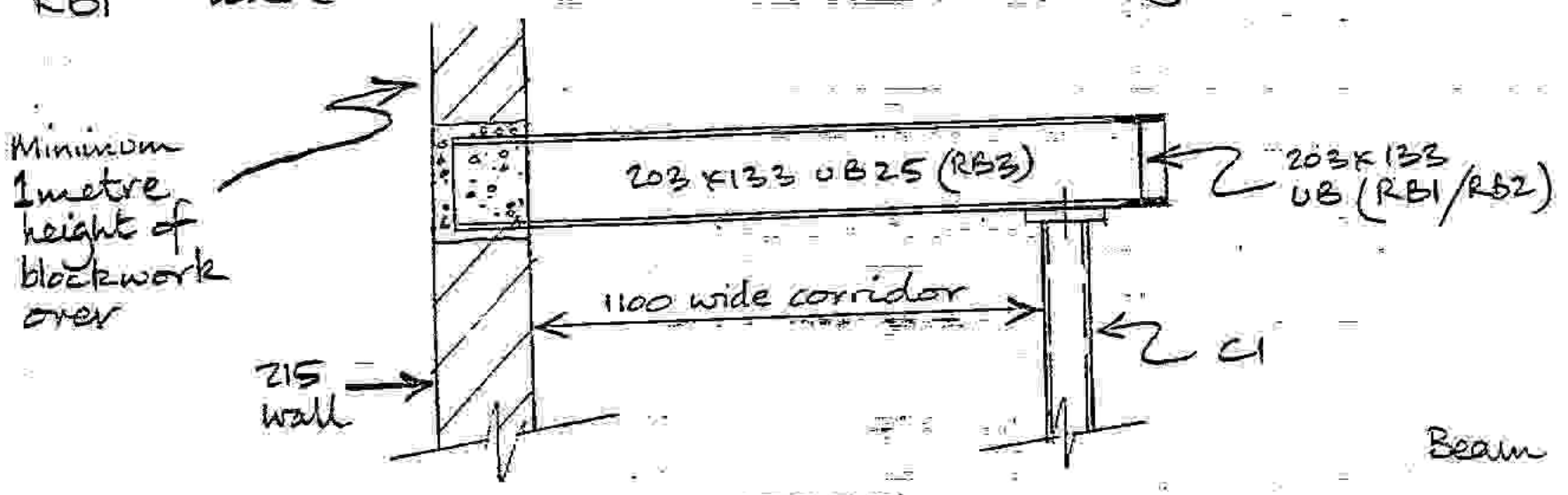
By	Dates	Rev.	Chkd.
CMJ	8.8.91		

Column C1:

Roof load ≈ 11.6 + 14.2 = 25.8 kN

Column is approximately 4.6 m. high and takes roof load only.

RB3 cantilevers approx. 150 mm over C1 to pick up reactions from RB1 and RB2. 203 x 133 UB25 O.K. by inspection

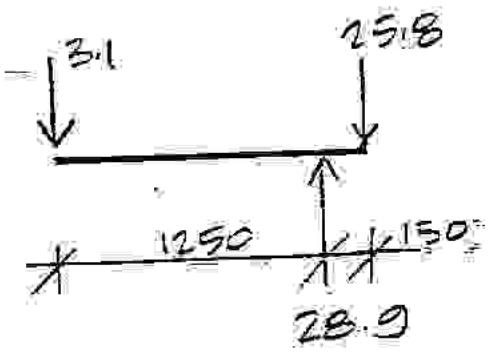


ELEVATION

Beam RB3:

203 x 133 UB 25.

$\frac{25.8 \times 0.15}{1.25} = 3.1$ kN



Load to C1 = 28.9 kN.

Cap connection, $e = \frac{100}{2}^{*} = 50$ mm

* Assume max. 100 sq. RHS.

Moment$_{xx}$ = 28.9 x 0.05 = 1.45 kNm.

RB1: Minimum Reaction ≈ $\frac{11.6}{2} = 5.8$ kN

∴ 14.2 − 5.8 = 8.4 kN

$M_{yy} = \frac{8.4 \times 0.1}{2} = 0.84$ kNm

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Job No.	Sheet No.	Rev
488	3/7	

Contract: Fivhouse Inn
Structure: Roof.

By	Dates	Rev.	Chkd.
ant	8.8.91		

Using a 90 x 90 RHS 5.0

$$f_{bc_{xx}} = \frac{1.45 \times 10^6}{45 \times 10^3} = 33 \text{ N/mm}^2$$

$$f_c = \frac{28.9 \times 10^3}{16.9 \times 10^2} = 18 \text{ N/mm}^2$$

$$f_{bc_{yy}} = \frac{0.84 \times 10^6}{45 \times 10^3} = 19 \text{ N/mm}^2$$

$$l/r = \frac{470}{3.46} = 136 \Rightarrow P_c = 48 \text{ N/mm}^2$$

$$P_{bc} = 180 \text{ N/mm}^2$$

$$\frac{33+19}{180} + \frac{18}{48} = 0.67$$

< 1.0 ✓ O.K.

Column C1:
90 x 90 SHS
5.0.

Foundation:

For 600 square pad footing

$$\text{Bearing Pressure} = \frac{28.9 + 0.7^{*}}{0.6^2} = 83 \text{ kN/m}^2$$

* 4.7 x 0.15 = 0.7 kN.

Bearing assumed to be on firm clay with allowable bearing pressure $\geq 150 \text{ kN/m}^2$ ✓

Pad Footing:
600 x 600 x 400 (min.) thick mass conc. on ground capable of carrying 83 kN/m²

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Job No.	Sheet No.	Rev
488	3/ 8.	A

Contract: Fivhouse Inn Extension & Alterations
Structure: Roof

By	Dates	Rev.	Chkd.
CMT	12.8.91 28.1.92	A	

Roof over Restaurant/Lounge:

A(Combined timber and steel trusses spanning 5.4 ~~7~~ metres onto central downstand beam support roof over open plan area while roof over toilets consists of prefabricated trusses spanning approx. 4.3 metres.
A(~~215 block wall between restaurant/~~
A(~~lounge and toilets is load bearing.~~

Roof over toilets:

Roof (DL+IL) incl. ceiling $\simeq (0.75 + 0.75)\ kN/m^2$

AC Span = 4300

Use timber trussed rafters designed and fabricated by specialist to comply with I.S. 193P! and BS. 5628: Part 3: 1985.

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Job No.	Sheet No.	Rev
488	3/9	A

Contract: Firhouse Inn

Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	29.7.91 28.1.92	A	

Rafters over open plan area:

span ≈ 1500 (max.)

Rafters are continuous over purlins

= load/m² ∴ (0.65 + 0.75) = 1.4 kN/m²

For rafters @ 400 crs

$M_{max} \therefore (1.4 \times 0.4) \times \frac{1.5^2}{8} = 0.16$ kNm

Using 44 x 75's, min SC3,

$$\sigma_m = \frac{0.16 \times 10^6}{44 \times 75^2/6} = 3.9 \text{ N/mm}^2$$

Permissible $\sigma_m = 5.3 \times 1.1^{*} \times 1.25^{**} = 7.3 \text{ N/mm}^2$ ✓ O.K.

$$\tau_{max} = \frac{3}{2} \times \frac{1.5 \times (1.4 \times 0.4) \times 10^3}{44 \times 75} = 0.19 \text{ N/mm}^2$$

< 0.67 N/mm² ✓ OK

For rafters @ 600 crs

$M_{max} \approx 0.24$ kNm

Using 44 x 75's, min SC3,

$\sigma_m = 3.9 \times 1.5 = 5.9$ N/mm² ✓ O.K.

$\tau_{max} = 0.28$ N/mm² ✓ O.K.

Deflection O.K. by inspection

(no finishes to underside of rafters)

Rev A:

Span < 1500

Leave rafters unchanged.

* load sharing factor

** Duration of load factor.

Rafters:

44 x 75's @ max. 600 crs, (span ≤ 1500)

Alternative: 44 x 100's, min. SC3.

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Job No.	Sheet No.	Rev
488	3/10	A

Contract: Firhouse Inn.

Structure: Roof.

By	Dates	Rev.	Chkd.
CMJ	28.1.92	A	

Purlins:

Span ≈ 2700 max

max load/m = $\frac{2.7}{2} \times 1.25^{*} \times (0.65+0.75) = 2.4$ kN/m

* Allows for continuity of rafters over purlin

$M_{max} = \frac{2.4 \times 2.7^2}{8} = 2.19$ kNm

For 75 x 200, min. SC3,

$\sigma_m = \frac{2.19 \times 10^6}{75 \times 200^2/6} = 4.4$ N/mm²

Permissible $\sigma_m = 5.3 \times 1.25 = 6.6$ N/mm²

✓ OK

For 75 x 175,

$\sigma_m = \frac{2.19 \times 10^6}{75 \times 175^2/6} = 5.72$ N/mm²

✓ OK

$\delta_y \approx \frac{5 \times 2.4 \times 2700^4}{384 \times 5800 \times 75 \times 175^3/12} = 8.5$ mm

$.003 \times 2700 = 8.1$ mm

No finishes under ∴ acceptable. ✓

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Job No.	Sheet No.	Rev
488	3/11	A

Contract: Firhouse Inn

Structure: Roof

By	Dates	Rev.	Chkd.
MMT	28.1.92	A	

Shear:

Assume purlin to be notched by 50 mm max at bearing

$$\tau_{max} = \frac{3}{2} \times \frac{2.4 \times 2.7 \times 10^3}{75 \times 125} = 0.52 \text{ N/mm}^2$$

$$\tau_{adm.} = \frac{125}{175} \times 0.67 = 0.48 \text{ N/mm}^2$$

$\Rightarrow$ shear stress too high

Limit notch to max 40 mm.

$\tau_{max} = 0.48 \text{ N/mm}^2$

$\tau_{adm} = 0.52 \text{ N/mm}^2$ ✓ O.K.

Purlins:

75 x 175, min SC3

max. notch to be 40 mm.

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Job No.	Sheet No.	Rev
488	3/12	A

Contract: Firhouse Inn.

Structure:

By	Dates	Rev.	Chkd.
MMJ	28.1.92	A	

Hip Rafters:

Span ≈ 3600 max. (on plan)

Conc. load from purlin spanning 2500:

$$\angle \quad 2.4^{*} \times \frac{2.5}{2} = 3.0 \text{ kN}.$$

* see back purlin calcs.

Conc. load from purlin spanning 1250:

$$\angle \quad \frac{1.7}{2} \times \left[(0.65+0.75)\times 1.25\right] \times \frac{1.25}{2} = 0.93 \text{ kN}$$

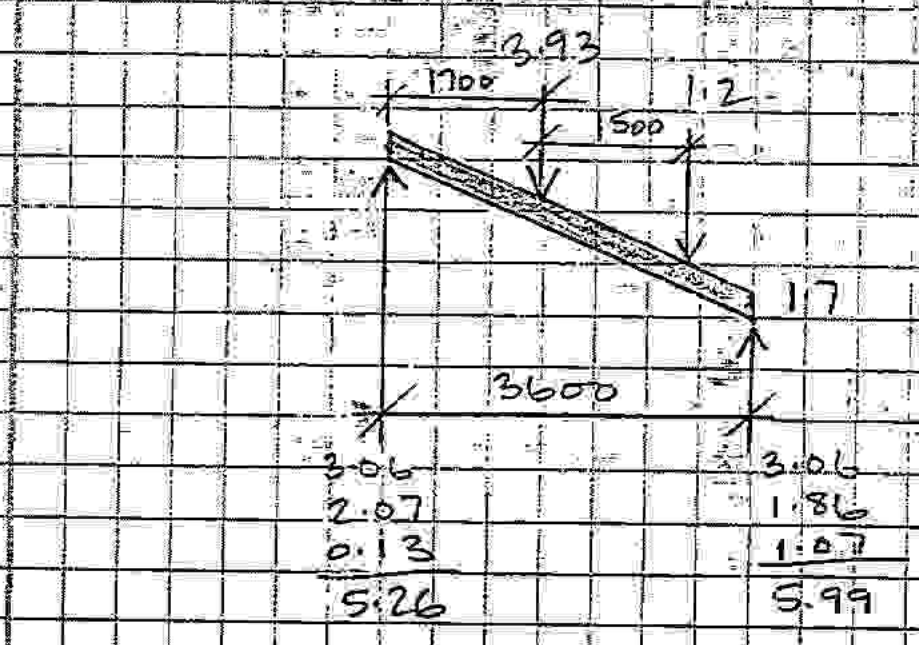
$$\Sigma = 3.93 \text{ kN}.$$

Conc. load from purlin spanning 2400:

$$\angle \quad \frac{1.4}{2} \times (0.65+0.75) \times \frac{2.4}{2} = 1.2 \text{ kN}.$$

Average UDL to hip rafter

$$\approx (.65+.55) \times (0.65+0.75) = 1.7 \text{ kN/m}$$



$$M_{max} \rightarrow 5.26 \times 1.7 - 1.7 \times \frac{1.7^2}{2}$$

$$= 6.5 \text{ kNm}$$

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Job No.	Sheet No.	Rev
488	3/13	A

Contract: Firhouse Inn.
Structure: Roof.

By	Dates	Rev.	Chkd.
AMJ	28·1·92		

Using 2 No. 50 × 250's

$$\sigma_m = \frac{6.5 \times 10^6}{2 \times 50 \times \frac{250^2}{6}} = 6.24 \text{ N/mm}^2$$

Perm. Stress = $5.3 \times 1.25 = 6.6 \text{ N/mm}^2$ ✓ OK

No finishes under .·. deflection not critical

$$\tau_{max} = \frac{3}{2} \times \frac{5.99 \times 10^3}{2 \times 50 \times 250} = 0.36 \text{ N/mm}^2$$

$< 0.67 \text{ N/mm}^2$ ✓ OK

Hip Members:
(8 No.)

2 No. 50 × 250's min SC3, bolted together.

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Job No.	Sheet No.	Rev
488	3/14	A

Contract: Firhouse Inn Development.

Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	2.8.91 28.1.92	A	

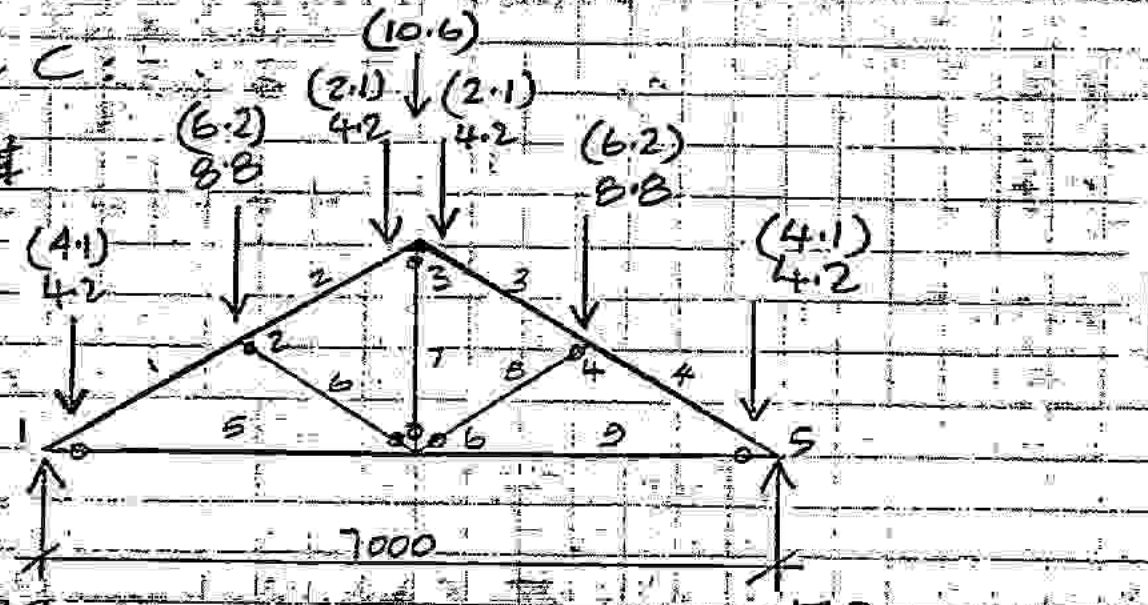
Trusses:

Span = 7000 *

Truss on grid lines B, C & D.

Grid Line C:

(Grid Line B & D Loading in brackets)



* Rev. A:

Span = 5400

∴ Truss as designed obviously O.K.

Leave members unchanged ✓

∴ Computer Analysis (by Enfram)

	X	Y
1	0	0
2	1750	1010
3	3500	2020
4	5250	1010
5	7000	0
6	3500	0

				A (cm²)	I (cm⁴)
M 1	1	2	4 x 200 MS PLATE	8	266.7
M 2	2	3	"	"	"
M 3	3	4	"	"	"
M 4	4	5	"	"	"
M 5	1	6	4 x 100 MS PLATE	4	50
M 6	2	6	4 x 200 MS PLATE	8	266.7
M 7	3	6	4 x 100 MS PLATE	4	50
M 8	4	6	4 x 200 MS PLATE	8	266.7
M 9	5	6	4 x 100 MS PLATE	4	50

∴ All members butt welded at joints to give full continuity.

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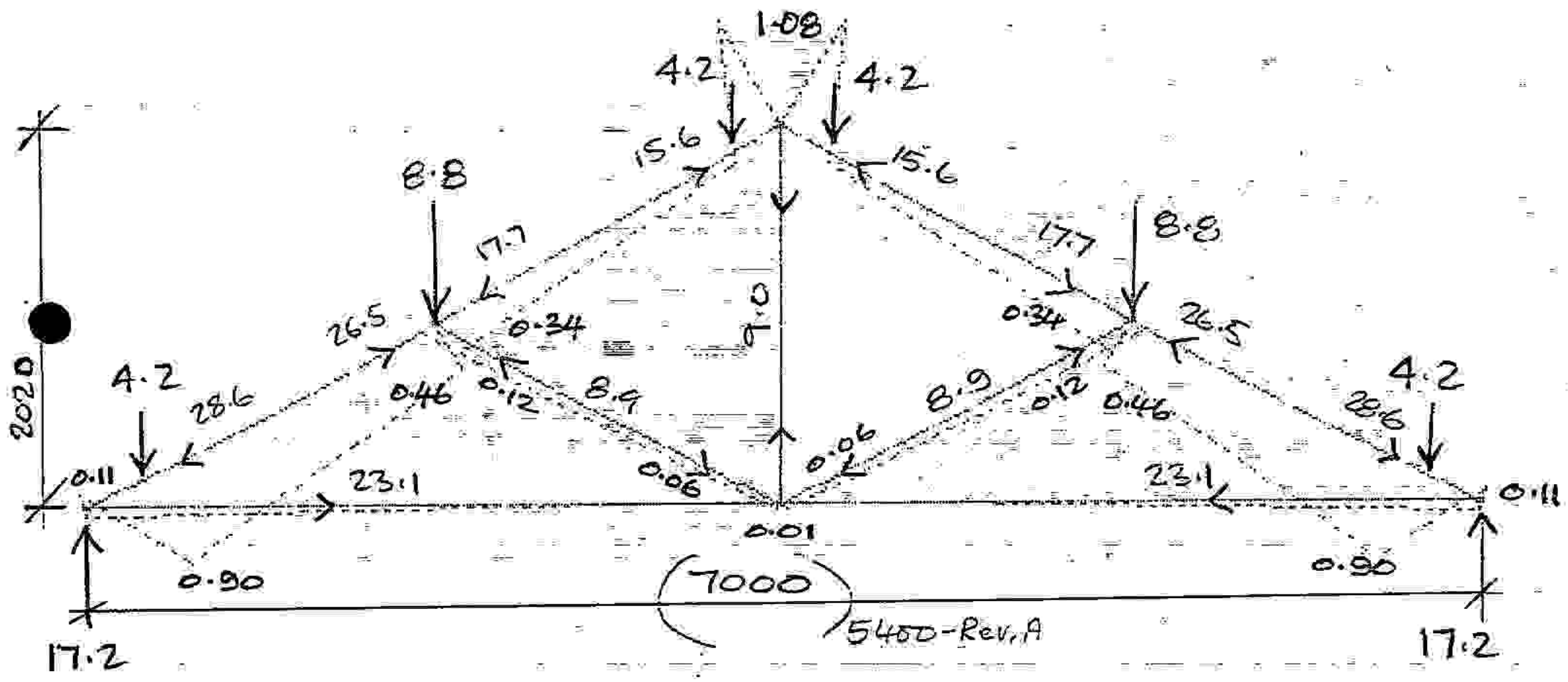
PAGE 3/15 A
JOB NO. 4881A
RUN NO. 1
AUTHOR CMI
DATE 14 8 91

FIRHOUSE INN
TRUSS C

EN10: PLANE FRAME ANALYSIS V3.0 (c) ENCAD SYSTEMS LTD. 1987
Unit: S.I. METRIC (Steel) Data File : 4881a

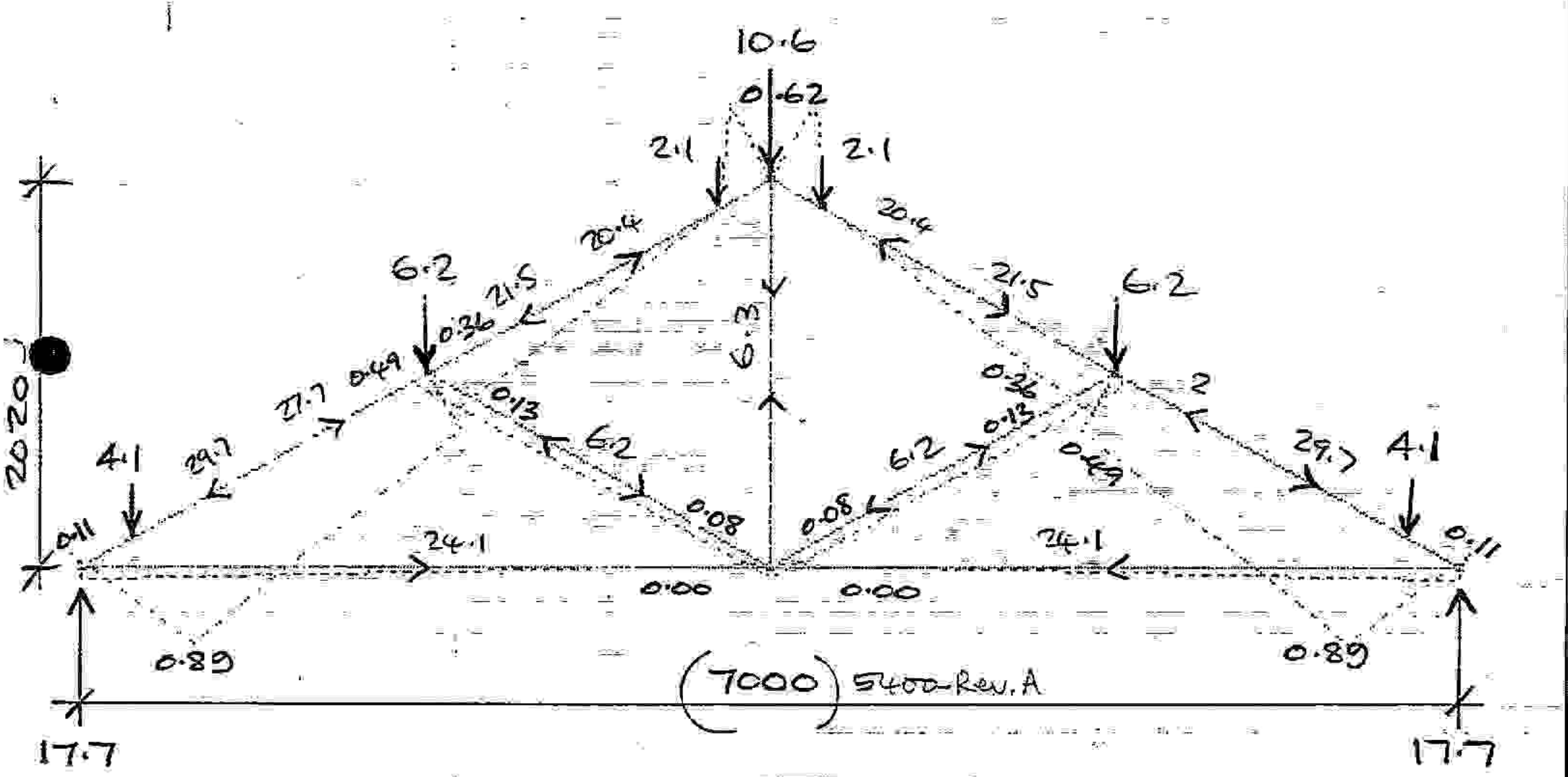


BENDING MOMENT DIAGRAM
(AXIAL LOADS ALSO INDICATED)

		A (cm^2)	I (cm^4)
All Members except ties	4 x 200 ms Plate	8	266.7
Tie Members	4 x 100 ms Plate	4	50

Deflection: $\delta_{x\,max} = \delta_5 = 1.97$ mm. $\delta_2 = 1.24$ mm.
$\delta_{z\,max} = \delta_6 = 3.01$ mm. $\delta_{2,4} = 2.80$ mm.

EN10 PLANE FRAME ANALYSIS V3.0
Units: S.I. METRIC (Steel) Data File : 4881b



BENDING MOMENT DIAGRAM
(AXIAL LOADS ALSO INDICATED)

B1 : DL + IL

My XZ 9.E-001 7.1E-001
XStrXZ 27.49854

FIRHOUSE INN

		A (cm^2)	I (cm^4)
All Members except ties	4 x 200 MS Plate	8	2667
Tie Members	4 x 100 MS Plate	4	50

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Job No.	Sheet No.	Rev
488	3/17	A

Contract: Firhouse Inn.

Structure: Roof.

By	Dates	Rev.	Chkd.
CMJ	14.8.91 28.1.92	A	

'Truss' members to have 50 x 225 timber bolted either side to provide lateral restraint. Timbers will also conceal plate to give traditional timber truss appearance

Max. Axial load in Tension = 24.1 kN to eaves tie member.

Max. moment to eaves tie member = 0.11 kNm

$$f_t = \frac{24.1 \times 10^3}{4 \times 100} = 61 \ N/mm^2$$

$$f_{bt} = \frac{0.11 \times 10^6}{4 \times 100^2/6} = 17 \ N/mm^2$$

$$\frac{61+17}{165} = 0.47$$

< 1.0 ✓

OK.

Tie Members:

4 x 100 MS Plate OK.

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Job No.	Sheet No.	Rev
488	3/18	A

Contract: Firhouse Inn

Structure: Roof.

By	Dates	Rev.	Chkd.
WT	14·8·91 28·1·92	A	

Max. Axial load in compression = 29.7 kN to rafter members.

Coincident Moment = = 0.90 kNm

$$f_c = \frac{29.7 \times 10^3}{4 \times 200} = 38 \text{ N/mm}^2$$

$$f_{bc} = \frac{0.90 \times 10^6}{4 \times 200^2/6} = 34 \text{ N/mm}^2$$

$$\frac{38}{155} + \frac{34}{165} = 0.45$$

✓ OK.

Compression members:

4 x 200 MS Plates.

members to have 50 x 225 timber bolted either side with M16 bolts in pairs @ 400 c/s.

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Job No.	Sheet No.	Rev
488	3/19	A

Contract: Firhouse Inn

Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	28.1.92	A	

Bearings:

Max. Truss End Reaction

$\approx \left[\frac{(2.4+2.7)}{2} \times \frac{5.4}{2}\right] \times (0.65+0.75) \approx 9.6\,kN$

For bearing on RB4/RB7 see calcs. ahead.

Bearing on 215 block wall:

Using a 215 x 440 bearing

Ult. Block stress $= \frac{1.5 \times 9.6 \times 10^3}{215 \times 440} = 0.15\ N/mm^2$

OK. by inspection ✓

Bearing Pads: (3 No.)

215 wide x 440 long x min. 200 deep m.c. + in situ conc. around end of beam

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Job No.	Sheet No.	Rev
488	3/20	A

Contract: Firhouse Inn
Structure: Roof.

By	Dates	Rev.	Chkd.
mts	28.1.92	A	

Beam RB4:

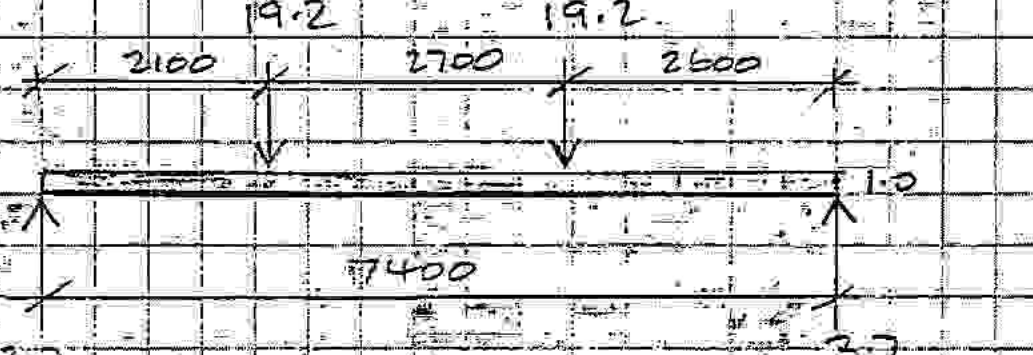
Span = 7400

Conc load (2 No.) from trusses = 2 × 9.6 = 19.2 kN.

U.D.L due to 0.3 m (nominal) width of loading

= 0.3 × (0.65 + 0.75) = 0.4 kN/m

Self wt. = 0.6 kN/m



3.7
3.8
5.7
24.2

3.7
5.4
12.5
21.6

(24.2 − 19.2)/1.0 = 5.0m from LHS

$M_{max} = 24.2 \times 5 - 19.2 \times 2.9 - 1.0 \times \frac{5.0^2}{2}$

= 52.8 kNm

Using a 356 x 171 UB 51.

$f_{bc} = \frac{52.8 \times 10^6}{7962 \times 10^3} = 6.7\ N/mm^2$

$l/r = \frac{740}{3.78} = 196$ D/T = 30.9

$\Rightarrow p_{bc} = 7.4\ N/mm^2$

OK ✓

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Job No.	Sheet No.	Rev
488	3/21	A

Contract: Firhouse Inn
Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	29.1.92	A	

$\delta_T < \frac{35.4\times10^3\times7400^3}{48\times0.21\times10^6\times14156\times10^4} + \frac{5\times1.0\times7400^4}{384\times0.21\times10^6\times14156\times10^4}$

$= 10.9 + 1.3 = 12.2$ mm

$\frac{7400}{360} = 20.6$ mm

Obviously OK. ✓

RB4:
356 x 171 UB51

Bearings:

For 340 x 340 Bearing

Unt. Block Stress $= \frac{1.5\times24.2\times10^3}{340^2} = 0.31\ N/mm^2$

Obviously OK. for 5 N/mm^2 blocks.

(For 440 x 100 x 215 high blocks with a compressive strength of 5 N/mm^2

$f_k = 5.0\ N/mm^2$

Area reduction factor $= 10.7+(1.5\times.34^2) = 0.87$

Slenderness Ratio $= 3000/340 = 8.8$

$\Rightarrow$ Slenderness Reduction Factor $= 0.97$

Permissible ult. block stress for block pier $= \frac{0.97\times0.87\times5.0}{3.5} = 1.21\ N/mm^2$)

Bearings:
(2 No.)
340 x 340
x 150 deep
m.c. bearing
pad + insitu
conc. around
end of beam.

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Job No.	Sheet No.	Rev
488	3/22	A

Contract: Firhouse Inn

Structure: Roof.

By	Dates	Rev.	Chkd.
CMJ	29.1.92	A	

Beam RB5:

span = 4400

UDL from existing flat roof*

≈ $\frac{2.1}{2}$ × (1.25 + 0.75) = 2.1 kN/m

900 high × 215 hollow block rendered & plastered

= 0.9 × 3.6 = 3.25 kN/m

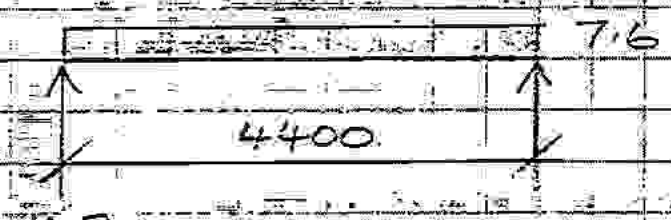
Roof load ≈ $\left(\frac{1.6}{2} + 0.5\right)$ × (0.65 + 0.75) = (max.)

= 1.8 kN/m

self wt. beam

≈ 0.45 kN/m

Σ = 2.1 + 3.25
+ 1.8 + 0.45
= 7.6



$M_{max} = \frac{7.6 \times 4.4^2}{8}$

= 18.4 kNm

203 × 203 UC 46 obviously OK,
by inspection for stress and deflection

(Use 203 wide beam to provide adequate bearing width for 215 blockwork over)

RB5:
203 × 203
UC46

* Assume joists span into beam.
D.L. asphalt roof ≈ 1.25 kN/m²

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Job No.	Sheet No.	Rev
488	3/13	A

Contract: Firhouse Inn.

Structure: Roof.

By	Dates	Rev.	Chkd.
CMJ	29.1.92	A	

. Bearings :

(1) Bearing on wall :

For 215 × 440 bearing

Wk. block stress $\simeq \frac{1.5 \times 16.7 \times 10^3}{215 \times 440} = 0.27 \text{ N/mm}^2$

5 N/mm² blocks ∴ Obviously OK ✓

(2) Beam cleats into web of RBB.

Wall Bearing

215 × 440 × 150 deep mass conc. bearing pad + in-situ conc. around end of beam.

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Job No.	Sheet No.	Rev
488	3/24	A

Contract: Firhouse Inn

Structure: Roof.

By	Dates	Rev.	Chkd.
CMJ	29.1.92	A	

Beam RB6:

Span = 4000

Reaction from RB5 = 16.7 kN.

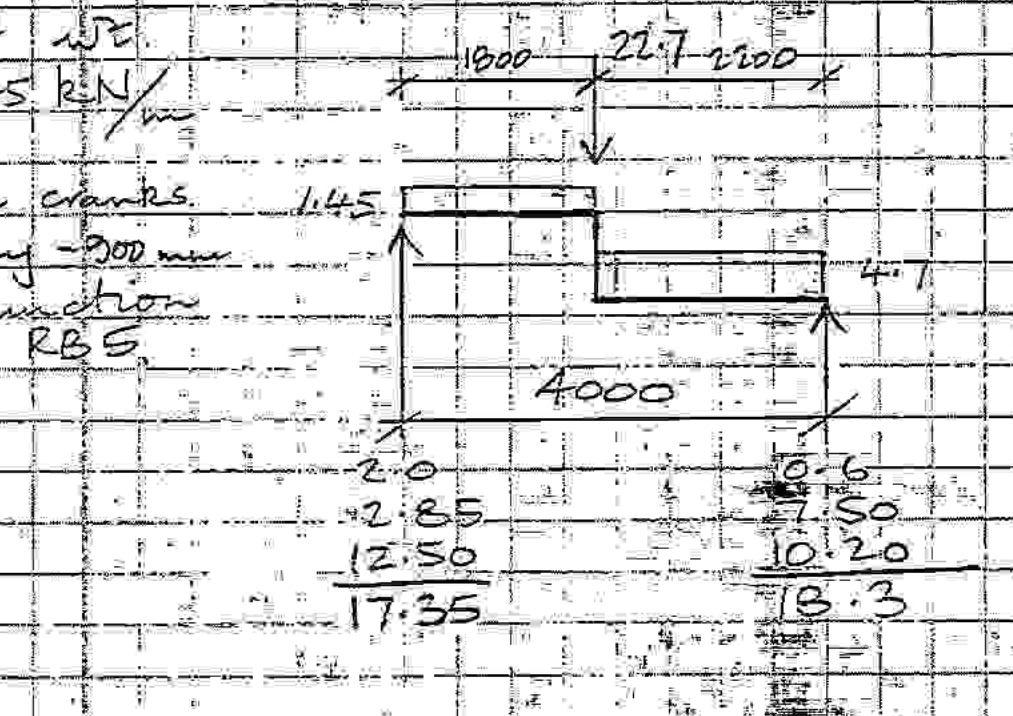
Reaction from Hip Rafter = 6.0 kN

Take nominal 500 width of roof load to beam

= 0.5 x (1.25 + 0.75) = 1.0 kN/m

Assume section of beam at lower level has 900 high x 215 hollow block over (as RB5) = 0.9 x 3.6 = 3.25 kN/m

self wt. ≈ 0.45 kN/m



Beam cranks up by 300 mm at junction with RB5

$$M_{max} = 17.35 \times 1.8 - 1.45 \times \frac{1.8^2}{2}$$

$$= 28.9 \text{ kNm}$$

Use a 203 x 203 UC 46

$$f_{bc} = \frac{28.9 \times 10^6}{4489.2 \times 10^3} = 65 \text{ N/mm}^2$$

$$l/r = \frac{400}{5.11} = 79 \quad D/T = 18.5$$

$$\Rightarrow P_{bc} = 165 \text{ N/mm}^2 \checkmark \text{ OK.}$$

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Job No.	Sheet No.	Rev
488	3/25	A

By	Dates	Rev.	Chkd.
AMOT	29.1.92	A	

Contract: Firhouse Inn.

Structure: Roof.

$$\delta_T < \frac{22.7\times10^3 \times 4000^3}{48\times0.21\times10^6\times4524\times10^4} + \frac{5\times4.7\times4000}{384\times0.21\times10^6\times4564\times10^4}$$

$$= 3.2 + 1.6 = 4.8\text{ mm}$$

Obviously O.K. ✓

RB6:

203×203UC46

Bearings:

(1) For 215 × 440 bearing

$$\text{Ult block stress} = \frac{1.5\times18.3\times10^3}{215\times440} = 0.29\ \text{N/mm}^2$$

✓ ok by inspection

(2) see calcs ahead

Bearing:

215 × 440 × 150 deep N.C. bearing pad + in-situ conc. around end of beam.

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Job No.	Sheet No.	Rev
488	3/26	A

Contract: Firhouse Inn
Structure: Roof.

By	Dates	Rev.	Chkd.
GMT	29.1.92	A	

Beam RB7 :

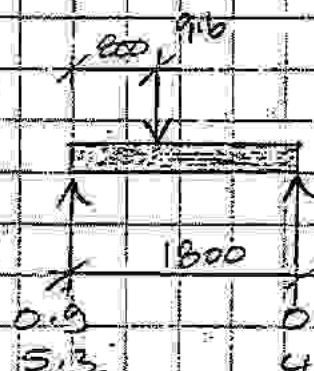
span ≈ 1800

Reaction from truss ≈ 9.6 kN

Take nominal 0.5 m wide roof load

= 0.5 × (0.65 + 0.75) = 0.7 kN/m

self wt ≈ 0.3 kN/m



5.3 + 4.3

6.2 + 5.2

$M_{max} = 6.2 + 0.8 - \frac{1.0 \times 0.8^2}{2} = 4.6$ kNm

Use a 203 × 133 UB25.

Obviously OK by inspection ✓

RB7

203 × 133 UB25

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Job No.	Sheet No.	Rev
488	3/27	A

Contract: Firhouse Inn.
Structure: Roof.

By	Dates	Rev.	Chkd.
AMI	29.1.92	A	

Bearings

(11) Reactions from RB6 + RB7 = 5.2 + 17.35 ≈ 22.6 kN

For a 215 x 440 bearing

Unit Block Stress = $\frac{1.5 \times 22.6 \times 10^3}{215 \times 440}$ = 0.36 N/mm²

OK. by inspection ✓

(12)

For a 100 x 440 bearing

Unit Block Stress = $\frac{1.5 \times 6.2 \times 10^3}{100 \times 440}$ = 0.21 N/mm²

Bearings:

(1) 215 x 440 x 150 deep mc bearing pad + insitu conc. around end of beams

(2) 100 x 440 x 150 deep mc bearing pad + insitu conc around end of beam

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Job No.	Sheet No.	Rev
488	4/5	

Contract: Firhouse Inn.
Structure: Ground Floor.

By	Dates	Rev.	Chkd.
AMT	17.8.91		

Raised Floor in Existing Lounge Area:

Floor level to be raised by approx 700 mm (between grid lines D & E)

125 r.c. slab supported on 550 high x 100 thick dwarf block walls and spanning max. 1500 mm — obviously OK with 1 layer A393 mesh (B).

Existing lounge Floor slab to be checked for adequacy to take additioned loading.

small trial hole to be dug to check slab thickness and bearing capacity of material under.

Raised Floor in existing Lounge Area: 125 rc slab, A393 mesh (B).

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Job No.	Sheet No.	Rev.
488	4/6	

Contract: Firhouse Inn.
Structure: Ground Floor.

By	Dates	Rev.	Chkd.
ams	17.8.91		

Existing Floor Structures:

(a) Floor to Gents & ladies Toilets:

Floor is an r.c. slab cast-in-situ and spanning 4.2m (Gents) and 3.3m (Ladies)

Size and spacing of reinforcement to be checked using cover meter. Also slab thickness and concrete strength to be determined.

slabs to be checked for adequacy to take 5 kN/m² imposed load.

Floor slab to Existing Gents & ladies Toilets:

If inadequate slab spans to be reduced by insertion of steel structure at basement level.

Check for adequacy to take imposed load of 5 kN/m²

(b) Existing r.c. roof slab:

slab is cast-in-situ and continuous over 2 spans of 2.4 and 2.15 metres.

slab should be OK for imposed loading of 5 kN/m² by inspection.

75 structural topping + 1 layer A142 mesh to be cast over slab to ensure slab has top reinforcement.

R.C. Roof Slab:
Add 75 structural topping + 1 layer A142 mesh.

See Basement calculations for strengthening to downstand beams supporting roof slab.

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Job No.	Sheet No.	Rev
488	4/7	

Contract: Firhouse Inn.
Structure: Ground Floor.

By	Dates	Rev.	Chkd.
CMJ	17.8.91		

(c) Steel Beam/Timber Joist Floor.

Joists:

span = 2300 max.

Joists are 44 x 175's @ 375 crs.

Load/m = $0.375 \times (0.5 + 3.0) = 1.3$ kN/m

$M_{max} = 1.3 \times \frac{2.3^2}{8} = 0.86$ kNm

$\sigma_m = \frac{0.86 \times 10^6}{45 \times 175^2/6} = 3.7$ N/mm²

✓ OK.

$\tau_{max} = \frac{3}{2} \times \frac{1.3 \times \frac{2.3}{2} \times 10^3}{45 \times 125^*} = 0.40$ N/mm²

✓ OK.

* Assumed 50 notch in top.

Existing 45 x 175's OK, for imposed load of 3 kN/m²

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Job No.	Sheet No.	Rev
488	4 / 8	

Contract: Firhouse Inn.
Structure: Ground Floor.

By	Dates	Rev.	Chkd.
aw	17.8.91		

Beams:

5 No. existing beams, EB1 – EB5.

All are assumed 152 x 152 UC23's.

EB1: span ≈ 6700

EB2: span ≈ 6500

EB3: span ≈ 5700

EB4: span ≈ 5200

EB5: span ≈ 5000

EB1:

$$\text{load/m} = \left(0.1 + \frac{2.3}{2}\right) \times (0.5 + 3.0) = 4.4 \text{ kN/m}$$

$$M_{max} = (4.4 + 0.3) \times \frac{6.7^2}{8} = 26.4 \text{ kNm}$$

$$f_{bc} = \frac{26.4 \times 10^6}{165.7 \times 10^3} = 160 \text{ N/mm}^2$$

$$\delta_t = \frac{5 \times 4.7 \times 6700^4}{384 \times 0.21 \times 10^6 \times 1263 \times 10^4} = 46.5 \text{ mm}$$

Deflection unacceptable

Bending stress too high unless joists are assumed to provide effective lateral restraint – not a reasonable assumption in this case.

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Job No.	Sheet No.	Rev
483	4/9	

Contract: Firhouse Inn.
Structure: Ground Floor.

By	Dates	Rev.	Chkd.
CMC	17.3.91		

EB2 & EB3:

$$\text{load/m} \approx \frac{4.5}{2} \times (0.5 + 3.0) = 7.9 \text{ kN/m}$$

For EB3:

$$M_{max} = (7.9 + 0.3) \times \frac{5.7^2}{8} = 33.3 \text{ kNm}$$

$$f_{bc} = \frac{33.3 \times 10^6}{165.7 \times 10^3} = 201 \text{ N/mm}^2$$

→ EB2 & EB3 overstressed.

New Pier & Beam:

440 x 440 solid block pier to be built up to underside of EB3 to reduce span to max. 4500*.

* EB3 to be flame cut over pier to ensure no continuity

EB3 spanning 4500:

$$M_{max} = 8.2 \times \frac{4.5^2}{8} = 20.8 \text{ kNm}$$

$$f_{bc} = \frac{20.8 \times 10^6}{165.7 \times 10^3} = 126 \text{ N/mm}^2$$

$$\ell/r = \frac{450}{3.68} = 123 \quad D/T = 22.3 \Rightarrow P_{bc} = 139 \text{ N/mm}^2$$

✓ O.K.

$$\delta_T = \frac{5 \times 8.2 \times 4500^4}{384 \times 0.21 \times 10^6 \times 1263 \times 10^4} = 16.5 \text{ mm}$$

Acceptable as there are no finishes to beam soffit ✓

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Job No.	Sheet No.	Rev
488	4/10	

Contract: Fivhouse Inn

Structure: Ground Floor.

By	Dates	Rev.	Chkd.
ant	17.8.91		

Beam GB1:

span ≈ 4500.

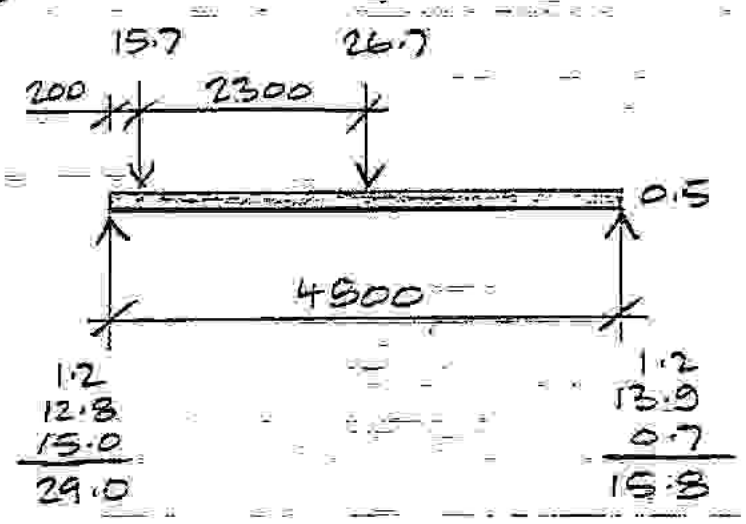
Reaction from EB1

$= \left(\frac{4.5}{2} + \frac{2.2}{2}\right) \times 4.7 = 15.7$ kN.

Reaction from EB2:

$= \left(\frac{4.5}{2} + \frac{2.0}{2}\right) \times 8.2 = 26.7$ kN.

Self wt
≈ 0.5 kN/m



$M_{max} = 15.8 \times 2.3 - 0.5 \times \frac{2.3^2}{2}$

$= 35.0$ kNm

Using a 203 x 203 UC 46

$f_{bc} = \frac{35.0 \times 10^6}{449.2 \times 10^3} = 78$ N/mm²

$l/r = \frac{480}{5.11} = 94$ D/T = 18.5

$\Rightarrow P_{bc} = 165$ N/mm²

✓ O.K.

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Job No.	Sheet No.	Rev
488	4/11	

Contract: Firhouse Inn.
Structure: Ground Floor.

By	Dates	Rev.	Chkd.
CMT	17-8-01		

$\delta_T \approx \frac{267 \times 10^3 \times 4800^3}{48 \times 0.21 \times 10^6 \times 4564 \times 10^4} = 6.4$ mm.

obviously OK. ✓

GB1:

203x203 UC46.

Bearings:

(1) Reaction = 29.0 kN

Using a 440 x 215 bearing pad

Ult Block Stress $\approx \frac{1.5 \times 29 \times 10^3}{440 \times 215} = 0.46$ N/mm²

Under Bearing, for 3 N/mm² hollow blocks

Perm. stress $= \frac{1.9}{3.5} \times 1.5 = 0.61$ N/mm²

0.4h below bearing: ✓ O.K.

stress OK. by inspection.

(2) Reaction = 15.5 kN

Beam bears on bearing pad on new pier. See overleaf for calcs.

Bearings:

(1) 215 wide x 440 long x min 200 deep mc bearing pad + in-situ conc. around end of beam.

(2) Bearing pad on new pier.

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Job No.	Sheet No.	Rev
488	4/12	

Contract: Firhouse Inn
Structure: Ground Floor.

By	Dates	Rev.	Chkd.
KMS	17.8.91		

440^2 Block Pier:

Reaction from GB1 = 15.8 kN.

Reaction from EB3 = $\frac{5.7}{2} \times 8.2 = 23.4$ kN.

$\Sigma = 15.8 + 23.4 = 39.2$ kN

Pier to have 440^2 x min. 150 deep MC bearing pad on ~~top~~ to spread loads.

Self wt. pier $\approx .44^2 \times 21 \times 1.8 = 7.3$ kN

Ult. block stress $= \frac{1.5 \times (39.2+7.3) \times 10^3}{440^2} = 0.36 N/mm^2$

Even for 3 N/mm^2 hollow blocks

perm. stress $\approx \frac{1.9}{3.5} = 0.54 N/mm^2$ ✓

OK.

Pier:

440 x 440 solid block pier with 440^2 x 150 deep mc bearing pad over + in situ conc. around ends of beams

Foundation:

For 800 x 800 footing

Bearing Pressure $= \frac{465}{0.8^2} = 73 kN/m^2$ ✓

Foundation:

800 x 800 x min. 400 thick mc pad footing.

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Job No.	Sheet No:	Rev
488	4/13	

Contract: Firhouse Inn
Structure: Ground Floor

By	Dates	Rev.	Chkd.
CMJ	17.9.91		

Pier under Beam EB4:

215 wide x 880 long block pier will reduce beam span from approx. 5200 to 4400 max.

Span < 4500 ⇒ EB4 O.K. by inspection

Reaction to pier = $5.2^{*} \times \frac{4.4}{2}$ = 18.0 kN. * load/m as for EB2 & EB3.

For 215 x 440 bearing pad

Ult. block stress < $\frac{1.6 \times 18.0 \times 10^3}{440 \times 215}$ = 0.30 N/mm²

O.K. by inspection ✓

Foundation:

self wt. pier ≈ $.215 \times 0.88 \times 21 \times 1.8$ = 7.2 kN.

Σ = 7.2 + 18.0 = 25.2 kN

For a 450 wide x 1000 long strip footing

Bearing Pressure ≈ $\frac{25.2}{.45 \times 1.0}$ = 56 kN/m² ✓ O.K.

Pier under EB4:
215 wide x 880 L solid block pier with 215 x 440 x min. 200 deep HC bearing pad under beam.

Footing:
450 wide x 1000 long x min. 250 thick mass conc.

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Job No.	Sheet No.	Rev
488	4/14	

Contract: Firhouse Inn
Structure: Ground Floor.

By	Dates	Rev.	Chkd.
CMT	17.8.91		

Beam EB5 :

span = 5000

load/m $\approx \left(0.1 + \frac{2.2}{2}\right) \times (0.5 + 3.0) = 4.2$ kN/m

$M_{max} = (4.2 + 0.2) \times \frac{5.0^2}{8} = 13.8$ kNm

$f_{bc} = \frac{13.8 \times 10^6}{1657 \times 10^3} = 8.4$ N/mm²

$l/r = \frac{500}{3.68} = 136$ $\quad D/T = 22.3$

$\Rightarrow P_{bc} = 127$ N/mm²

✓ O.K.

$\delta_T = \frac{5 \times 4.4 \times 5000^4}{384 \times 0.21 \times 10^6 \times 1263 \times 10^4} = 13.5$ mm

✓ O.K.

EB5 O.K. for 3.0 kN/m² imposed load.

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Job No.	Sheet No.	Rev
488	4/15	A

Contract: Firhouse Inn

Structure: Ground Floor

By	Dates	Rev.	Chkd.
MT	27.1.92		

Lintels:

External cavity wall:

max. clear span = 1300.

Use 'Steelite' galvanised steel lintels.

Type 'A' Total allowable U.D.L. = 19.0 kN. ✓

o.k. by inspection ✓

215 Block Internal Walls:

max opening width = 1600. (2 No.)

Use 'Solbat 150/225' steel lintel by BAT.

For 12.1 kg/m lintel

safe working load = 53.0 kN

OK by inspection ✓

1500 wide opening in 215 block external wall:

Use 260 deep r.c. beam comprising 215 + 215 U-block with 45 concrete over.

$d \approx 260 - 40 - 15 - 10 - \frac{16}{2} = 187$ mm (cover, link, ½ bar)

For 2T16s with $z = .775d$

$M_u = 402 \times .87 \times 460 \times (.775 \times 187) \times 10^{-6}$

$= 23.3$ kNm

$w \times \frac{1.8^2}{8} = 23.3 \rightarrow w = 57.5$ kN/m

(Shear to be checked) 260 deep r.c. lintel should be O.K.

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Job No. 488 | Sheet No. 4/16 | Rev

Contract: Firhouse Inn

Structure: Ground Floor.

By	Dates	Rev.	Chkd.
MS	29.1.92		

Ground Floor:

Single Storey Extension:

Slab to be 150 r.c. ground bearing on 50 conc. blinding on min 150 well compacted hardcore

✓ O.K. by inspection

External Wall Foundations:

Cavity wall self wt. = 4.9 kN/m²

Ht of wall ≈ 4.7 m (from top of footing)

(4.7 × 4.9) = 23.0 kN/m

Roof load (max.) = $\frac{5.4}{2} \times [(0.65+0.75)+0.3]$ ← ceiling

= 4.6 kN/m

Σ = 23.0 + 4.6 = 27.6 kN/m

For 600 wide footing

Bearing Pressure = $\frac{27.6}{0.6}$ = 46 kN/m²

Assumed allowable bearing pressure = 100 kN/m² ✓

- Single Storey extension.
- Foundations
- 600 wide x 300 thick mass conc. on ground capable of carrying min. 46 kN/m²

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Job No.	Sheet No.	Rev
488	5/1	A

Contract: Firhouse Inn.

Structure: Basement.

By	Dates	Rev.	Chkd.
AMJ	29.1.92	A	

Existing Beam EB8:

EB8 is a downstand roof beam supporting existing RC roof slab over. Beam to be checked for adequacy to take proposed floor loading.

Exg. span ≈ 4500

Floor load ≈ $\frac{4.5}{2} \times 11^{*} \times (6.9 + 5.0)^{**} = 29.5\ kN/m$

* Allow 10% increase for continuity.

** 75 topping over exg. slab (5.1 + 1.8 = 6.9)

$M_{max} = (29.5 + 0.4) \times \frac{4.5^2}{8} = 75.7\ kNm$

Beam is a 152 × 152 UC 37 (assumed)

$\Rightarrow f_{bc} = \frac{75.7 \times 10^6}{274.2 \times 10^3} = 276\ N/mm^2$

Stress too high.

⇒ Reduce span by introducing column. Also reduces load to existing wall on grid line C.

Single span to be split into two spans of 3300 and 1200.

$M_{max} = \frac{29.9 \times 3.3^2}{8} = 40.7\ kNm$

$\Rightarrow f_{bc} = \frac{40.7 \times 10^6}{274.2 \times 10^3} = 149\ N/mm^2$

$< 165\ N/mm^2$ ✓

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Job No.	Sheet No.	Rev
488	5/21	A

Contract: Firhouse Inn.
Structure: Basement.

By	Dates	Rev.	Chkd.
AMT	31.1.92	A	

Column :

Reaction from EB8

$R = 29.9 \times \left(\frac{4.5}{2} \times 1.25\right) = 84.1$ kN

cap connection using a 90 x 90 SHS

$e = 45$ mm

$29.9 \times \left(\frac{3.3}{2} - \frac{1.2}{2}\right) \times 1.25 = 39.2$ kN

$M_{max} \simeq 39.2 \times 0.045 = 1.77$ kNm

Using a 90 x 90 SHS 5.0

$f_{bc} = \frac{1.77 \times 10^6}{45 \times 10^3} = 40$ N/mm^2

$f_c = \frac{84.1 \times 10^3}{16.9 \times 10^2} = 50$ N/mm^2

$l_e/r = \frac{200}{3.46} = 58 \rightarrow p_c = 127$ N/mm^2

$p_{bc} = 180$ N/mm^2

$\frac{uc}{127} + \frac{50}{180} = 0.60$

< 1.0 ✓

OK. Column under EB8 ✓

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Job No.	Sheet No.	Rev.
488	3/3	A

Contract: Firhouse Inn.

Structure: Basement.

By	Dates	Rev.	Chkd.
EMT	31.1.92	A	

Footing:

Reaction = 84.1 kN.

For 800 x 800 pad footing

Bearing Pressure = $\frac{84.1}{0.82}$ = 132 kN/m²

< 150 ✓ O.K.

Footing:
800 x 800
x min. 400
thick m.c.
on ground
capable of
carrying 150
kN/m²

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Job No.	Sheet No.	Rev
488	5/4	A

Contract: Firhouse Inn

Structure: Basement.

By	Dates	Rev.	Chkd.
AMS	31.1.92	A	

Existing Beam EB7 :

Span ≈ 4500

Floor load ≈ $\left(\frac{2.1}{2} + 0.15\right) \times (6.9 + 5.0) = 14.3$ kN/m *

Conc. load from EB2 :

$= \frac{4.1}{2} \times \left[(0.5 + 3.0) \times \frac{4.5}{2}\right] = 16.1$ kN.

$M_{max} \approx \frac{14.7 \times 4.5^2}{8} + 16.1 \times \frac{3.2 \times 1.3}{4.5}$

$= 52.1$ kNm

For a 152 x 152 UC37

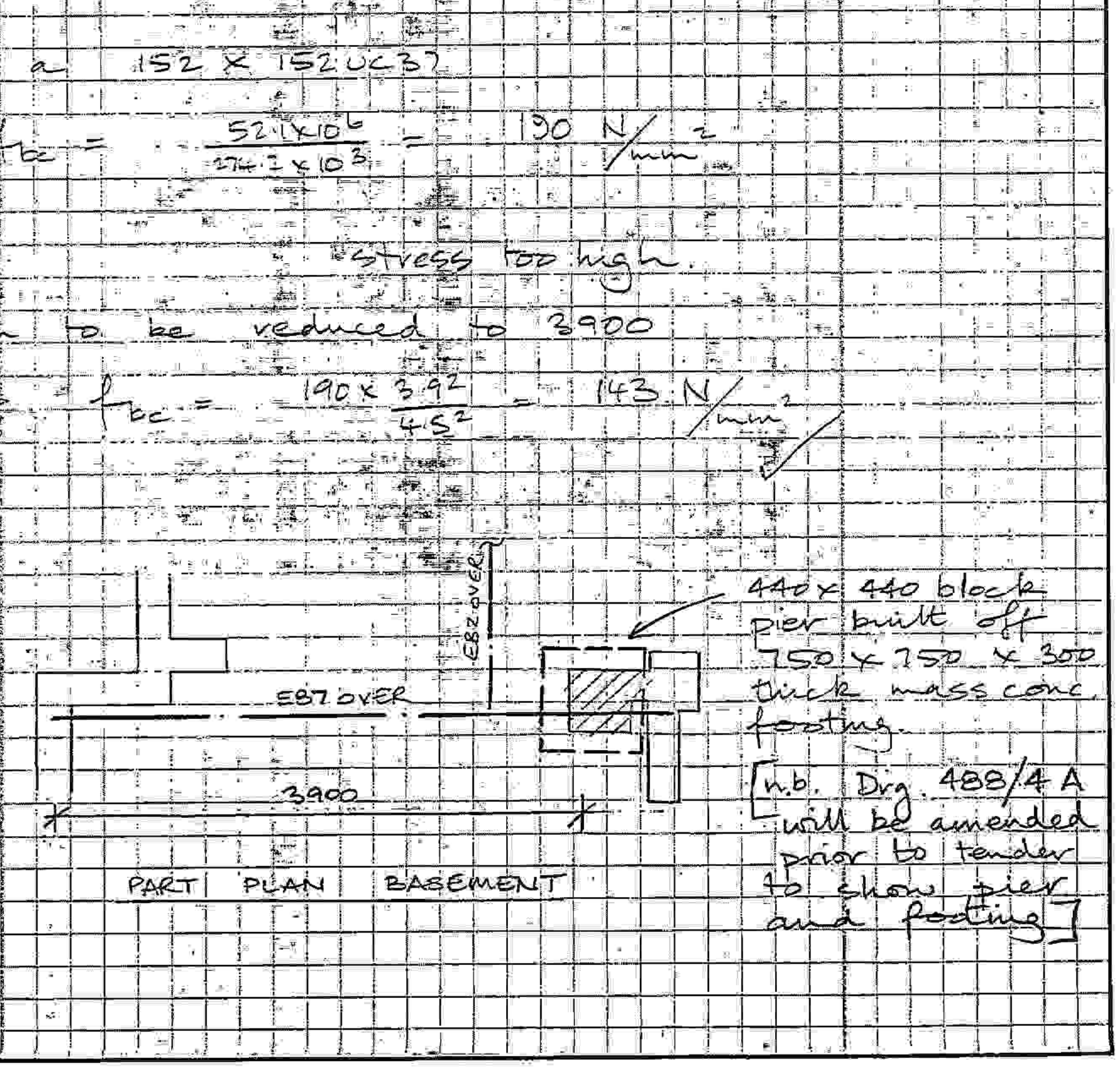
$f_{bc} = \frac{52.1 \times 10^6}{274.1 \times 10^3} = 190$ N/mm²

Stress too high.

Span to be reduced to 3900

$\Rightarrow f_{bc} = \frac{190 \times 3.92}{4.5^2} = 143$ N/mm²

* Assume floor slab does not bear on wall alongside EB7. (conservative)



PART PLAN BASEMENT

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Job No.	Sheet No.	Rev
488	5/5	A

Contract: Firhouse Inn.

Structure: Basement.

By	Dates	Rev.	Chkd.
AMT	31.1.92	A	

Pier:

Reaction to pier

$\simeq \left(\frac{3.9}{2} + \frac{0.6}{2}\right) \times 14.7 + \frac{16.1 \times 3.3}{3.9}$

$= 46.7$ kN.

440² pier adequately OK.

Reaction to pad footing

$\simeq (.44 \times .44 \times 2.0) \times 21 + 46.7 = 54.8$ kN

For 750 square footing

Bearing Pressure $= \frac{54.8}{0.75^2} = 98$ kN/m²

< 150 kN/m² ✓ OK

Support to EB7:

440 x 440 block pier bonded to existing wall and built off 750 x 750 x 300 Thick mass conc. pad footing

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Job No.	Sheet No.	Rev
488	5/6	A

Contract: Firhouse Inn.
Structure: Basement.

By	Dates	Rev.	Chkd.
CMJ	31.1.92	A	

Existing Beam EB9:

span = 4500

Floor load ≈ $\left(\frac{2.4}{2} + 0.1\right) \times (6.9 + 5.0) = 15.5$ kN/m

$M_{max} = \frac{15.9 \times 4.5^2}{8} = 40.2$ kNm

Using a 152 x 152 UC37

$f_{bc} = \frac{40.2 \times 10^6}{274.2 \times 10^3} = 147$ N/mm²

< 165 N/mm² ✓

EB9 OK. for proposed loading.

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Job No.	Sheet No.	Rev
488	5/7	A

Contract: Firhouse Inn.

Structure: Basement.

By	Dates	Rev.	Chkd.
CMT	31.1.92	A	

Foundations to 340² piers:

max. reaction from roof beam RB4
= 24.2 kN.

Ht. of pier ≈ 5.2 m

self wt. ≈ .34² x 21 x 5.2 = 12.6 kN.

Σ = 24.2 + 12.6 = 36.8 kN.

For 800 x 800 footing

$$\text{Bearing Pressure} = \frac{36.8}{0.8^2} = 58 \text{ kN/m}^2$$

< 150 kN/m² ✓

Footings to 340 square piers (2 No.):

800 x 800 x min. 400 thick mass conc. on ground capable of carrying minimum 58 kN/m²

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91A/1285
1.16.0 & 1.12.02
A.I. for BBL

Dublin County Council,
Building Control Section
Irish Life Centre,
Lower Abbey Street,
Dublin 1.

4th January, 1992.

Re: Time Extension / Additional Information for B.B.L Reg. Ref. No. 91A/1285
Extension and Alternation to the Firhouse Inn, Firhouse Road, Dublin 24.

Dear Sir,

Further to your letter dated 27th January, 1992 we now enclose drawing No.'s F44/01A, 02A, 03, 04A, 05, 06, 08, 09 being additional information in respect of the above information.

We confirm that additional information from the Structural Engineers P.H. McCarthy Son and Partners was delivered by Courier yesterday Monday 3rd February.

Regarding your letter dated 22nd October, 1991 we wish to comment as follows:-

(1) The toilets are now at ground floor level and can be drained in accordance with the Building Bye-Laws.

(2&3) Discussions have been hold with Mr. Colm Smyth Environmental Health Officer who will be receiving a set of the above drawings directly. His requirements will be fully complied with. We would also confirm that J.W. Hogan and Associates have been appointed Mechanical and Electrical Consultants (see enclosed letter) and will oversee the design and installation of the ventilation system and kitchen equipment to meet the Eastern Health Board's requirements.

(4) The existing drainage system will, as discussed with Mr. Alan Doran, be exposed when a contractor is on site and any adjustments that are required will be carried out in consultation with the Building Control Inspector.

(5) We would refer you to the letter dated 3rd February 1992, from P.H. McCarthy Son and Partners.

We look forward to a favourable decision.

RECEIVED
04 FEB 1992
REL. BC

P.S. two sets of drawings enclosed.

Yours faithfully,

Dan Gallery.
VAT NO: 4879824 N

Dublin County Council Comhairle Chontae Atha Cliath Planning Department

Enquiries/Personal Callers:
Liffey House
24/28 Tara Street, Dublin 2
Telephone (01) 773066
FAX: 711056

Correspondence:
Building Control Section
Block 2, Irish Life Centre
Lr. Abbey Street, Dublin 1

Principal Officer,
Planning Department,
Building Control Section,
Block 2, Irish Life Centre,
Lr. Abbey St.,
DUBLIN 1.

NOTICE OF AGREEMENT TO 'EXTENSION OF TIME'

B.B.L. APPLICATION DATED: 2/8/1991 REG. REF.: 91A/1285

PROPOSAL: Extn. & Alts. @ The Firhouse Inn, Firhouse Road.

I DAN GALLERY (~~Applicant~~/Agent) agree to the terms, as set out in the Council's letter dated 27/1/92, for the extension of time for considering the above application.

DATED: 4/2/92

N.B. Please forward this Notice to the Council, by return of post, to allow for the due process of the 'Time Extension'.

J. W. Hogan & Associates

Consulting Engineers

Waterford Office
J.W. Hogan & Associates
Kiedenhil
Knockboy
Waterford
Tel: 051-75414

Dublin Office
J.W. Hogan & Associates
62 Ranelagh Village
Dublin 6
Tel 01-978854
Fax 01-978801

Fir1114

4th February 1992

Dublin County Council
Building Control Section
Block 2
Irish Life Centre
Lower Abbey Street
Dublin 2

RE: Extension & Alterations at the Firhouse Inn, Firhouse Road

Dear Sir/Madam,

Further to your letter to Mr Dan Gallery dated 22nd of October 1991, we have been appointed as Mechanical and Electrical Consultants for the above Project. We confirm that the design will incorporate your requirements for points No 2 and 3 of your letter.

If you have any queries please do not hesitate to contact us.

Yours faithfully

Elizabeth Barlow

pp Tom Young
J. W. Hogan & Associates

cc Mr Dan Gallery

Dub./S.

P/4847/92

FINANCIAL CONTRIBUTION :-
AMOUNT £ 2265
F Plus 5 x 800

CN - 92 £4000 ex parking

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Proposed extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton. By order P/5664/91 dated 11.12.91 the Council made a decision to refuse permission for this proposal. On Appeal, An Bord Pleanála made the following order on 17th August, 1992:-

PL6/5/87824

AN BORD PLEANÁLA

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS 1963 TO 1990

County Dublin

Planning Register Reference Number: 91A/1285

APPEAL by H. Morton care of Dan Gallery of Kensington Hall, Grove Park, Rathmines, Dublin against the decision made on the 11th day of December, 1991 by the Council of the County of Dublin to refuse permission for development comprising extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space and (f) new signage at The Firhouse Inn, Firhouse Road, Dublin in accordance with plans and particulars lodged with the said Council:

DECISION: Pursuant to the Local Government (Planning and Development) Acts, 1963 to 1990, it is hereby decided, for the reason set out in the First Schedule hereto, to grant permission for the said development in accordance with the said plans and particulars, subject to the conditions specified in the Second Schedule hereto, the reasons for the imposition of the said conditions being as set out in the said Second Schedule and the said permission is hereby granted subject to the said conditions.

FIRST SCHEDULE

It is considered that the intensification of use of this public house site brought about by the addition of a restaurant will not give rise to an undue increase in traffic hazard or congestion in the area and subject to compliance with the conditions set out in the Second Schedule hereto, the proposed development will improve the appearance of the building and complement the existing use.

SECOND SCHEDULE

1. Prior to the commencement of development, a car park layout shall be submitted to and agreed with the planning authority, which shall provide for access/egress between Firhouse Stores and Firhouse Inn and egress only to the east (Mount Carmel Park), and to include egress details, markings, lighting and landscaping.

   Reason: In the interest of traffic management.

P/4847/92

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

PL 6/5/87824

SECOND SCHEDULE (CONTD.)

2. Before development is commenced, the developer shall pay to Dublin County Council a financial contribution towards the cost of five additional off-street parking spaces which will be made available at the time of the construction of the Southern Cross Route. The amount of the contribution shall be calculated on the basis of the standard rate per car space, and the time and method of payment shall be as agreed between the developer and the said Council or, in default of agreement, shall be determined by An Bord Pleanála.

Reason: It is considered reasonable that the developer should contribute towards road works which facilitate the proposed development.

3. The developer shall pay a sum of money to Dublin County Council as a contribution towards expenditure incurred by the said Council in the provision of a public water supply and piped drainage in the area which will facilitate the proposed development. The amount of the contribution and the arrangements for payment shall be as agreed between the developer and the said Council or, in default of agreement, shall be determined by An Bord Pleanála.

Reason: It is considered reasonable that the developer should contribute towards the expenditure incurred by the said Council in the provision of a public water supply and piped drainage in the area which will facilitate the proposed development.

Member of An Bord Pleanála duly authorised to authenticate the seal of the Board.

Dated this 17th day of August. 1992.

P/1847/92

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

PL6/5/87824

AN BORD PLEANÁLA

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS 1963 TO 1990

County Dublin

Planning Register Reference Number: 91A/1285

With regard to condition no. 2 the financial contribution towards the cost of five additional off-street parking spaces is assessed at £4,000.

With regard to condition no. 3 the financial contribution towards the provision of a public water supply and piped drainage is assessed at £2,205.

Order Noted: E.D.

Dated 25 OCT 1992

ASSISTANT COUNTY MANAGER

to whom the appropriate powers have been delegated by order of the Dublin City and County Manager.

Dated 25th day of Sept. 19 92.

Dan Gallery (Architects),
Kensington Hall,
Grove Park,
Rathmines,
Dublin 6.

Our Ref. ND/GC
Date; 28/4/92

Re; Extensions - alterations consisting of a) new restaurant/lounge b) new toilets c) conversion of stores to kitchen incorporating new pitched roof, d) new fire escape and fire doors, e) new signage at The Firhouse Inn, Firhouse Road, for Mr. & Mrs. H. Morton. Reg.Ref. 91A/2024

Dear Sir,

I refer to your letter dated 8/4/92 requesting a refund of part of planning application fee paid in respect of the above application.

Article 10 Subarticle (2C) of the Local Government (Planning and Development) (Fees) Regulations 1984 provides that in order to qualify for a refund the period between the withdrawl or determination of the first application and the making of the subsequent application must not exceed 12 months.

As the subsequent application (Reg. Ref. 91A/2024) was lodged on 20/12/91 and the first application (Reg. Ref. 91A/1285) has not yet been determined, the above condition cannot be satisfied and accordingly no refund can be made on foot of this claim.

Yours faithfully,

for PRINCIPAL OFFICER

DAN GALLERY ARCHITECTS

E0'H

KENSINGTON HALL,
GROVE PARK, RATHMINES,
DUBLIN 6.

TEL: 01-961215
01-961219
FAX: 01-973335

DAN GALLERY, B. Arch., MRIAI, RIBA.

Dublin County Council
Planning Department
Block 2
Irish Life Centre
Lower Abbey Street
DUBLIN 1

8th April 1992

RE: Refund of Planning Fee
The Firhouse Inn - Mr. and Mrs. Morton
Reg. Ref. 91A/2024

Dear Sirs,

We wish to apply, on behalf of our Client Mr. and Mrs. H. Morton, in accordance with Section 10 of the Local Government (Planning and Development) (Fees) Regulations 1984 S.I. No. 358 of 1984 for a refund of the planning fee paid in respect of the above application. The details are as follows:-

a. The original application reg. ref. 91A/1285 (lodged on 2.8.91) was refused by the Planning Authority and is currently on appeal.

b. The Applicant, due to commercial presure, had no choice but to lodge a second application for a reduced scale of development Reg. Ref. 91A/2024 lodged 20th December 12th 1991. A decision to Grant was issued on 18th February 1992. This Decision was appealed due to some unacceptable conditions.

c. The total fee paid in respect of the second application (91A/2024) was £622.25 in two stages £292.25 on lodgement and £330.00 on 5th February 1992 on foot of your letter dated 7th January 1992.

We feel this case is within the provisions of Section 10 and would accordingly claim a refund of $\frac{3}{4}$ of £622.25.

Yours faithfully,

DAN GALLERY

DUBLIN COUNTY COUNCIL
10 APR 1992

VAT NO: 4879824 N

Order No. P/5664/91

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Proposed extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

Dan Gallery, Architect,
6 Main Street,
Donnybrook,
Dublin 4.

Reg. Ref. 91A/1285
Appl. Rec'd: 2/8/91
Floor Area: 273sq. m. incl. internal alterations
Site Area: 3075sq. m.
Zoning: 'G'
T. Ext. Up to: 12.12.1991

Report of the Dublin Planning Officer, dated 10th December 1991

This is an application for **PERMISSION** for extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

The property is zoned 'G' in the Development Plan - "to protect and improve high amenity areas". ~~The existing land users on this site are non conforming.~~ The surrounding zoning is primarily residential, with the objective to improve and protect residential amenity.

By Order No. PL6/5/47038, dated 11th April, 1980, Reg. Ref. SA.467, permission was refused for a two storey office development on the site.

By Order No. PL6/5/58573, dated 16th September, 1983, Reg. Ref. WA.1667, permission was refused for a shop and office development on the site.

By Order No. P/4373/85, dated 12th December, 1985, Reg. Ref. 85A/1346, permission was refused for retention of an advertising hoarding. Appeal was refused by An Bord Pleanala, PL6/5/70660, on 15th April, 1991.

By Order No. P/3600/89, dated 29th September, 1986, permission was granted for reconstruction of an extension to Bookmakers Premises on this site, Reg. Ref. 86A/1121. This was not built.

Contd/.....

Order No. P/5664/91

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Proposed extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

By Order No. P/2452/87, dated 17th July, 1987, Reg. Ref. No. 87A/420, a Material Contravention of the 1983 County Development Plan was approved to permit demolition of the existing Bookmakers shop and offices and replacement with a commercial development of 235sq. metres. The proposed development included two shops and office space. This development was built and a site visit on 26th September, 1991, suggests that the current use is three shops and a residence.

The proposal would generally improve the appearance of the building. However, the proposed extension would cause serious problems due to lack of car parking provision.

Assessment of parking requirement spaces.

		SPACES
Restaurant/bar/lounge	345 sq. m.	86.2
Residence		1.5
Video SHop (Vacant)	31 sq. m.	1.5
Meeting room c. 28 sq. m. at 2 per 8 sq. m.		7
Total required for Firhouse Inn building excluding solicitor's office and Firhouse Stores (3 shops plus 1 residence).	=	96.2

By Unsolicited additional information dated 23rd October, 1991, total proposed is 90 but only 78 could realistically be achieved - this 78 figure includes 4 kerbside spaces in front of the Firhouse Stores.

Allowing for dual use of parking spaces by the Firhouse Stores and Firhouse Inn still results in a shortage of 18 spaces (23%). I understand from the Road Engineers that they require egress at Mount Carmel Park partly to facilitate circulation, but also to allow cars to park in this area when the car park is full. As there is already a problem of cars from the Firhouse Inn parking on public open space and conflicting with the residential amenity of theses cottages, this is unacceptable from a planning viewpoint.

I consider that any proposed extension to the Firhouse Inn should have adequate on site car parking and that the access point to Mount Carmel Road should be blocked up in order to help separate the commercial development from the houses.

Contd/.....

Order No. P/5664/91

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Proposed extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

Planning Comment

The applicant is seeking further expansion of an existing non-conforming use, The Firhouse Inn, located on the Firhouse Road, Firhouse, Dublin 24. The proposed expansion involves the addition of a first floor restaurant/lounge area, new kitchen and food storage areas, and new bathrooms. In addition to the existing bar and lounge on the first floor, the second floor houses a residence and Solicitors Office.

On 24th September, 1991, this application was discussed at the Housing and Planning Committee - Belgard.

The overall application provides for a more intense use of the site. The existing site does not provide adequate parking.

It is considered that the situation will be capable of some relief when the Southern Cross Route and ~~necessitated~~ associated road improvements are in prospect. In the meantime the proposed development is considered to be premature.

I recommend that a decision to **Refuse Permission** be made under the Local Government (Planning and Development) Acts, 1963-1990, for the following (3) reasons:-

1. Development of the kind proposed would be premature by reference to the constraint of the existing deficiency in the road network serving the area and the period within which this constraint may reasonably be expected to cease by way of arrangements for the construction of the Southern Cross Route Motorway and associated road improvements.

2. The additional traffic turning movements generated by the increased scale of development on this restricted site, with inadequate parking provision, would endanger ~~traffic~~ public safety by reason of traffic hazard.

3. The proposed development does not make adequate provision for off-street parking and circulation to Development Plan standards and consequently is likely to be seriously injurious to the amenities of ~~the adjacent residential properties~~ property in the vicinity and would be contrary to the proper planning and development of the area.

Contd/.....

Order No. P/5664/91

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Proposed extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

(RC/BB)

EC.

Endorsed:- _____
for Principal Officer

Richard Cremins STP
For Dublin Planning Officer

10.12.91

Order:- Pursuant to Section 26(1) to the Local Government (Planning and Development) Acts, 1963-1990 a decision to **REFUSE PERMISSION** for the above proposal is hereby made by the Council for the (3) reasons set out above and **PERMISSION** is **REFUSED** accordingly.

Dated: 11th December, 1991.

_____
Asst. County Manager

to whom the appropriate powers have been delegated by Order of the Dublin City and County Manager, dated 15th December 1991.

PLANNING DEP
DEVELOPMENT CONTROL
Date ..... 11.11.91 .....
Time ..... 3.00 .....

DUBLIN COUNTY COUNCIL

REG. REF: 91A/1285.

DEVELOPMENT: Ext. and alts. of new restaurant/lounge

LOCATION: At The Firhouse Inn, Firhouse Road.

APPLICANT: Mr & Mrs H. Morton.

DATE LODGED: Unsolicited A.I. 23.10.91.

This is Unsolicited Additional Information on original submission. Applicant has undertaken a comprehensive car parking requirement study. It is reasonable to allow "showing" of proposed spaces as peak times of the different uses on the site do not coincide.

The layout as shown is in agreement with the proposals for the Southern Cross Route.

If permission is being contemplated it should be subject to:-

1. Car park layout to be agreed with the Roads Department to provide for a one way system through the car park with access between Firhouse Stores and Firhouse Inn and egress north of the Firhouse Inn. Details of this layout to be agreed prior to commencement of development. This will include access details, egress details, markings, lighting etc.

2. A financial contribution, in the sum of money equivalent to the value of £11,000 as on 1st January, 1991, updated in accordance with the Wholesale Price Index-Building and Construction (Capital Goods) as published by the Central Statistics Office to the value pertaining at the time of payment shall be paid by the developer to Dublin County Council towards the cost of road improvements and Traffic Management proposals in the area serving this site.

Note: Contribution is towards landscaping and provision of additional off-street parking on construction of S.C.R. as well as traffic management as stated.

EM/BMcC
7.11.91.

SIGNED: _____ **ENDORSED:** SEO/A fr EM

DATE: _____ **DATE:** _____

Order No. P/4598/91

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Proposed extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

Dan Gallery, Architect,
Kensington Hall,
Grove Park,
Rathmines,
Dublin 6.

Reg. Ref. 91A/1285
Appl. Rec'd: 2/8/91
Floor Area: 273sq. m.
T.X. Let Recd. 07.11.91
T.X. up to & incl. 12.12.91

Report dated 30 September 1991.

This is an application for **PERMISSION** for extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

In accordance with Section 26(4A) of the Local Government (Planning and Development) Act, 1963, as amended by Section 39(F) of the Local Government (Planning and Development) Act, 1976, the applicant has furnished his consent in writing to the extension by the Council of the period for considering this application within the meaning of subsection (4A) of Section 26, up to and including **12 December 1991.**

I recommend that the period to be extended accordingly.

Reason: To facilitate full consideration of the application.

for Principal Officer.

Order: A decision pursuant to Section 26(4A) to extend the period for considering the application as recommended is hereby made.

Dated: 6th November, 1991.

Assistant County Manager

to whom the appropriate powers have been delegated by order of the Dublin City and County Manager dated 6th November 1991.

NOTE: I have checked that the necessary entry has been made recording details of the period as extended.

SENIOR STAFF OFFICER.

DUBLIN COUNTY COUNCIL

REG. REF: 91A/1285.

DEVELOPMENT: Ext. and alts. of new restaurant/lounge

LOCATION: At The Firhouse Inn, Firhouse Road.

APPLICANT: Mr & Mrs H. Morton.

DATE LODGED: Unsolicited A.I. 23.10.91.

This is Unsolicited Additional Information on original submission. Applicant has undertaken a comprehensive car parking requirement study. It is reasonable to allow "showing" of proposed spaces as peak times of the different uses on the site do not coincide.

The layout as shown is in agreement with the proposals for the Southern Cross Route.

If permission is being contemplated it should be subject to:-

1. Car park layout to be agreed with the Roads Department to provide for a one way system through the car park with access between Firhouse Stores and Firhouse Inn and egress north of the Firhouse Inn. Details of this layout to be agreed prior to commencement of development. This will include access details, egress details, markings, lighting etc.

2. A financial contribution, in the sum of money equivalent to the value of £11,000 as on 1st January, 1991, updated in accordance with the Wholesale Price Index-Building and Construction (Capital Goods) as published by the Central Statistics Office to the value pertaining at the time of payment shall be paid by the developer to Dublin County Council towards the cost of road improvements and Traffic Management proposals in the area serving this site.

Note: Contribution is towards landscaping and provision of additional off-street parking on construction of S.C.R. as well as traffic management as stated.

EM/BMCC
7.11.91.

SIGNED: _____ ENDORSED: _____

DATE: _____ DATE: _____

DUBLIN COUNTY COUNCIL

REG. REF: 91A/1285.

DEVELOPMENT: Ext. and alts. of new restaurant/lounge

LOCATION: At The Firhouse Inn, Firhouse Road.

APPLICANT: Mr & Mrs H. Morton.

DATE LODGED: Unsolicited A.I. 23.10.91.

This is Unsolicited Additional Information on original submission. Applicant has undertaken a comprehensive car parking requirement study. It is reasonable to allow "showing" of proposed spaces as peak times of the different uses on the site do not coincide.

The layout as shown is in agreement with the proposals for the Southern Cross Route.

If permission is being contemplated it should be subject to:-

1. Car park layout to be agreed with the Roads Department to provide for a one way system through the car park with access between Firhouse Stores and Firhouse Inn and egress north of the Firhouse Inn. Details of this layout to be agreed prior to commencement of development. This will include access details, egress details, markings, lighting etc.

2. A financial contribution, in the sum of money equivalent to the value of £11,000 as on 1st January, 1991, updated in accordance with the Wholesale Price Index-Building and Construction (Capital Goods) as published by the Central Statistics Office to the value pertaining at the time of payment shall be paid by the developer to Dublin County Council towards the cost of road improvements and Traffic Management proposals in the area serving this site.

Note: Contribution is towards landscaping and provision of additional off-street parking on construction of S.C.R. as well as traffic management as stated.

EM/BMcC
7.11.91.

SIGNED: _____ **ENDORSED:** SP/A for EM

DATE: _____ **DATE:** _____

DUBLIN COUNTY COUNCIL

REG. REF: 91A/1285.

DEVELOPMENT: Extension and alterations to restaurant.

LOCATION: The Firhouse Inn, Firhouse Road.

APPLICANT: Mr. & Mrs Morton.

DATE LODGED: 2.8.91.

The proposal is for an additional restaurant/lounge at Mortons Public House, Firhouse. The car park provides 73 off-street car parking spaces. There are an additional 10 on street spaces available in front of the premises on the public road. The applicant states that another 16 spaces would be available in the car park at peak times by way of supervision (i.e. cars could park blocking other cars and when required, a staff member would request that the car be moved).

89 off-street car parking spaces would be required to comply with the Development Plan. 73 standard spaces are to be provided. While it is accepted that the additional parking would alleviate the situation to some degree it cannot be construed to be in accordance with Development Plan Standards.

It is also noted that Ballycullen Road is to be realigned in conjunction with the construction of the Southern Cross Motorway. It's future junction with the Firhouse Road will be immediately east of the public house access onto Firhouse Road. The generation of on-street parking at this location would be hazardous.

Roads require additional information showing how the proposed car parking spaces comply with the Development Plan Standards. It should be noted that if additional car parking spaces cannot be provided that a reduction in floor space may be necessary.

GC/BMcC
3.9.91.

PLANNING DEPT.
DEVELOPMENT CONTROL SECT.
Date 30.09.91
Time 12.15

SIGNED: Garrett Cuna
DATE: 25/9/91

ENDORSED: E o'Sadde
DATE: 27th Sept '91

Geraldine Bottmar.

DUBLIN COUNTY COUNCIL

PLANNING AND BUILDING CONTROL DEPARTMAENT

Senior Environmental Health Officer,
33 Gardiner Place.

Register Reference : 91A/1285 Date : 6th August 1991

Development : Extension and alterations consisting of (a) new restaurant/lounge (b) new toilets (c) conversion of stores to kitchen incorporating new pitched roof (d) new fire escapes and fire doors (e) other ancillary space (f) new signage

LOCATION : The Firhouse Inn, Firhouse Road

Applicant : Mr R. Morton

App. Type : PERMISSION/BUILDING BYE-LAW APPROVAL

Planning Officer :

Date Recd. : 2nd August 1991

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 12.09.91
Time 2.30

Attached is a copy of the application for the above development .Please ensure that your report is received within 5 weeks from 2nd August 1991.

Yours faithfully,

for PRINCIPAL OFFICER

These proposals are unacceptable to this section for the following reasons

1/ The proposed use of the meeting room not indicated.
2/ Air changes per hour rate not provided for meeting room
3/ Floor to ceiling height of meeting room < 8ft.
4/ Detailed plans of the proposed ventilation system & the entire premises not provided.
5/ Proposed maximum number of persons not indicated.
6/ The nature & extent of the food business is not indicated
7/ The number & sex of staff not indicated
8/ The layout of the kitchen showing siting of - layout of equipment not provided
9/ Staff cloakroom & changing facilities not indicated
10/ The floor to ceiling height of kitchen < 8ft.
11/ Compliance with the Food Hygiene Regulations 1950-89

i/a Devine
for John O'Reilly SEHO
11/9/91

the Smyth EHO
13/9/91.

Geraldine Boothman.

SS CWD

DUBLIN COUNTY COUNCIL

PLANNING AND BUILDING CONTROL DEPARTMAENT

Senior Engineer,
Sanitary Services Dept.

Register Reference : 91A/1285 Date : 6th August 1991

Development : Extension and alterations consisting of (a) new restaurant/lounge (b) new toilets (c) conversion of stores to kitchen incorporating new pitched roof (d) new fire escapes and fire doors (e) other ancillary space (f) new signage

LOCATION : The Firhouse Inn, Firhouse Road

Applicant : Mr H. Morton

App. Type : PERMISSION/BUILDING BYE-LAW APPROVAL

Planning Officer :

Date Recd. : 2nd August 1991

DUBLIN CO. COUNCIL
SANITARY SERVICES
20 AUG 1991
20 AUG 1991
SAN SERVICES

Attached is a copy of the application for the above development. Your report would be appreciated within the next 28 days.

DUBLIN CO. COUNCIL
SANITARY SERVICES
- 5 SEP 1991
Returned

Date received in Sanitary Services .....

.....

FOUL SEWER

Available - existing system.
Suitable & adequate grease interceptor to be installed on outlet from kitchen

.....

SURFACE WATER

Available - existing system.

PLANNING DEPT.
DEVELOPMENT CONTROL SECT.
Date 10.09.91
Time 9-30

.....

E. Sullivan 30/8/91.

L. R.
2/9/91

Register Reference : 91A/1285 Date : 6th August 1991

ENDORSED _____ DATE _____

WATER SUPPLY..... Available for Zoned use 24 hours.....
Storage to be provided
Refer to E.H.O.

21/8/91

ENDORSED _____ DATE 2/9/91

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 10.09.91
Time 9.30

Geraldine Boothman

DUBLIN COUNTY COUNCIL

REG. REF: 91A/1285.

DEVELOPMENT: Extension and alterations to restaurant.

LOCATION: The Firhouse Inn, Firhouse Road.

APPLICANT: Mr. & Mrs Morton.

DATE LODGED: 2.8.91.

The proposal is for an additional restaurant/lounge at Mortons Public House, Firhouse. The car park provides 73 off-street car parking spaces. There are an additional 10 on street spaces available in front of the premises on the public road. The applicant states that another 16 spaces would be available in the car park at peak times by way of supervision (i.e. cars could park blocking other cars and when required, a staff member would request that the car be moved).

89 off-street car parking spaces would be required to comply with the Development Plan. 73 standard spaces are to be provided. While it is accepted that the additional parking would alleviate the situation to some degree it cannot be construed to be in accordance with Development Plan Standards.

It is also noted that Ballycullen Road is to be realigned in conjunction with the construction of the Southern Cross Motorway. It's future junction with the Firhouse Road will be immediately east of the public house access onto Firhouse Road. The generation of on-street parking at this location would be hazardous.

Roads require additional information showing how the proposed car parking spaces comply with the Development Plan Standards. It should be noted that if additional car parking spaces cannot be provided that a reduction in floor space may be necessary.

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 08.10.91
Time 3.30

GC/BMcC
3.9.91.

SIGNED: Garrett Cuna **ENDORSED:** E Madden

DATE: 25/9/91 **DATE:** 27th Sept '91

Order No. P/4598/91

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Proposed extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage, at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

Dan Gallery, Architect,
6 Main Street,
Donnybrook,
Dublin 4.

Reg. Ref. 91A/1285
Appl. Rec'd: 2/8/91
Time Ext. let. rec'd: 30/9/91
Time Ext. up to: 11/11/91

Report of the Dublin Planning Officer, dated 30 September 1991

This is an application for permission for extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage, at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

In accordance with Section 26(4A) of the Local Government (Planning and Development) Act, 1963, as amended by Section 39(F) of the Local Government (Planning and Development) Act, 1976, the applicant has furnished his consent in writing to the extension by the Council of the period for considering this application within the meaning of subsection (4A) of Section 26, up to and including 11th November, 1991.

I recommend that the period to be extended accordingly.

Reason: To facilitate full consideration of the application.

for Principal Officer.

Order: A decision pursuant to Section 26(4A) to extend the period for considering the application as recommended is hereby made.

Dated: 30th September, 1991

to whom the appropriate powers have been delegated by order of the Dublin City and County Manager dated 27th Sept 1991

NOTE: I have checked that the necessary entry has been made recording details of the period as extended.

for SENIOR STAFF OFFICER.

4

APPEALS DECISIONS

APPEALS CHECK LIST

REG. REF. NO. 91A 1285

1	ENTERED IN OBJECTORS BOOK	✓
2	ENTERED IN BLUE FOLDER	✓
3	ENTERED IN APPEALS BOOK	✓
4	ENTERED IN PLANAPS: I.E.:	✓
	APPEALS DECISION AP	✓
	CHANGE STATUS 62	✓
	APPEALS DATE 17/8/92	✓
5	COPY OF DECISION FOR WEEKLY LIST (MARY/LAURA)	✓
6	DECISION CIRCULATED TO LISTED PERSONS	✓
7	TO BONDS & CONTRIBUTIONS FOR FINANCIAL ASSESSMENT	✓
8	TO L. DOYLE FOR NOTING	
9		
10		

CHANGE STATUS IN PLANAPS:

REFUSAL.....55
GRANT.....62
WITHDRAWN.....54
CONDITIONS.....53

APPEALS

NEW APPEALS

APPEALS CHECK LIST

REG. REF. NO. 91A-1285

1	ENTERED IN OBJECTORS REGISTER	✓
2	ENTERED IN BLUE FOLDER	✓
3	ENTERED IN APPEALS REGISTER	✓
4	ENTERED IN APPEALS INDEX	✓
5	ENTER PAGE No. OF APPEALS REGISTER IN OBJECTORS REGISTER	✓
6 ENTER IN PLANAPS	Appeal Notified:	✓
	Appeal Type/Appellant Type:	✓
	Bord Pleanal Ref:	✓
	DOCS SENT TO AN BORD: (CHANGE STATUS TO 52)	✓
7	WRITTEN UP ON WEEKLY LIST FOR MARY/LAURA	✓
8	OBJECTORS NOTIFIED	
9	BREAKDOWN OF CALCULATIONS REQUIRED - YES/NO	
10		
11		

FILE DISCUSSED AT COUNCIL/COMMITTEE MEETING

FILE REF: 91A 1285

MEETING	COMMENTS	NOTED IN DEV. CONTROL	NOTED BY
Belgard 24/2/94 31/10/91	Noted by Cllrs Muldoon: J. Hanna A Ormonde } Re Permission B. Cass Re Refusal.		

Cllr Hanna feels with new information - now makes sense. Dev't will probably be beneficial to area

Cllr Ormonde - Problem for residents of Mt Carmel Cottages - with Cars Parking + noise from Inn.

Cllr Cass Against - grounds of Road Safety + Nuisance

eg. To get to Mt Carmel Park Cars must go there' Pub grounds this is unacceptable hours to be based by 2 M. Very steep gradient

FILE MEMO - REG. REF. NO. 9/A 1285

See Draft Report on this Application prepared 30/9/91
in Cabinet.

FILE DISCUSSED AT COUNCIL/COMMITTEE MEETING

FILE REF: 91A/1285

MEETING	COMMENTS	NOTED IN DEV. CONTROL	NOTED BY
Belgard 24/9/91	Clrs Muldoon, Hannon & ORmonde concerning about patrons using grass margins & local open space to park. Clr ORmonde rec		refused

BYE LAW APPLICATION FEES

REF. NO.: 91A/1285 CERTIFICATE NO.: 1595[redacted]3

PROPOSAL: Extension + alterations to provide lounge / restaurant

LOCATION: Le Firhouse Inn, Firhouse Road, D24

APPLICANT: H. Morton

	1	2	3	4	5	6	7
CLASS	DWELLINGS/AREA LENGTH/STRUCTURE	RATE	AMT. OF FEE REQUIRED	AMT. LODGED	BALANCE DUE	RED. FEE APPL.	AMT. OF RED. FEE
A	Dwelling (Houses/Flats)	@ £55					
B	Domestic Ext. (Improvement/ Alts.)	@ £30					
C	Building for office or other comm. purpose 273 m²	@ £3.50 per M² or £70	£955.50	£955.50			
D	Building or other structure for purposes of agriculture	@ £1.00 per M² in excess of 300 M² Min. £70					
E	Petrol Filling Station	@ £200					
F	Dev. of prop. not coming within any of the forgoing classes	£70 or £9 per .1 hect. whichever is the greater					

Column 1 Certified: Signed: [signature] Grade: SEO Date: 6-8-91

Column 1 Endorsed: Signed: [signature] Grade: Date: 8/8/91

Columns 2,3,4,5,6 & 7 Certified: Signed: [signature] Grade: E.O Date:

Columns 2,3,4,5,6 & 7 Endorsed: Signed: Grade: Date:

PLANNING APPLICATION FEES

Reg. Ref. 91A/1285 Cert. No. 26253

PROPOSAL Extension + Alterations to Provide Lounge/Restaurant

LOCATION The Firlease Inn, Firlease Road D.27

APPLICANT H. Morton

CLASS	DWELLINGS/AREA LENGTH/STRUCT.	RATE	AMT. OF FEE REC.	AMOUNT LODGED	BALANCE DUE	BALANCE PAID
1	Dwellings	@£32				
2	Domestic,	@£16				
3	Agriculture	@50p per m2 in excess of 300m2. Min. £40				
4	Metres 2 73 m	@£1.75 per m2 or £40	£477.75	£477.75		
5	x .1 hect.	@£25 per .1 hect. or £250				
6	x .1 hect.	@£25 per .1 hect. or £40				
7	x .1 hect.	@£25 per .1 hect. or £100				
8		@£100				
9	x metres	@£10 per m2 or £40				
10	x 1,000m	@£25 per £1000m or £40				
11	x .1 hect.	@£5 per .1 hect. or £40				

Column 1 Certified:Signed: ..... Grade SEO Date 5-8-91

Column 1 Endorsed:Signed: ..... Grade ..... Date .....

Columns 2,3,4,5,6 & 7 Certified:Signed: ..... Grade S.O. Date 9/8/91

Columns 2,3,4,5,6 & 7 Endorsed:Signed: ..... Grade ..... Date .....

LOCATION GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1982

ASSESSMENT OF FINANCIAL CONTRIBUTION

EG. REF.: 91B/1265

CAT. REG.:

ERVICES INVOLVED: WATER/FOUL SEWER/SURFACE WATER

REA OF SITE:

OOR AREA OF PRESENT/PROPOSAL: 2,940 Sq ft

EASURED BY: A Brett, 8-8-91

ECKED BY:

ETHOD OF ASSESSMENT:

OTAL ASSESSMENT: £m @ £70/100

ANAGER'S ORDER NO. P/
DATED

NTERED IN CONTRIBUTIONS REGISTER:

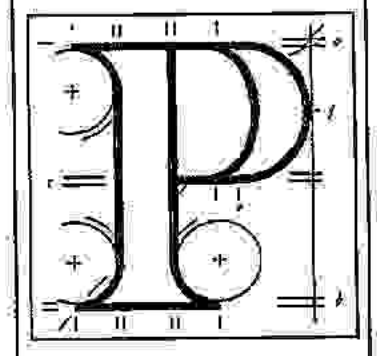
~ 1265.

VALUATION CONTROL ASSISTANT GRADE

ED14

Our Ref: PL 6/5/87824
P.A. Ref: 91A/1285

An Bord Pleanála



Floor 3 Blocks 6 & 7
Irish Life Centre
Lower Abbey Street
Dublin 1
tel (01) 728011

Dublin County Council,
Planning Department,
Block 2,
Irish Life Centre.

Date: 17 AUG 1992

Appeal re: Extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escape and fire doors, (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, County Dublin.

Dear Sir,

An order has been made by An Bord Pleanála determining the above-mentioned appeal under the Local Government (Planning and Development) Acts, 1963 to 1990. A copy of the order is enclosed.

Yours faithfully,

M Baxter
Miriam Baxter.

Encl.

BP 352

DEVELOPMENT
19 AUG 1992
CONTROL

DUBLIN COUNTY COUNCIL
PLANNING DEPT.
18 AUG 1992
RECEIVED

PL 6/5/87824

AN BORD PLEANÁLA

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1990

County Dublin

Planning Register Reference Number: 91A/1285

APPEAL by H. Morton care of Dan Gallery of Kensington Hall, Grove Park, Rathmines, Dublin against the decision made on the 11th day of December, 1991 by the Council of the County of Dublin to refuse permission for development comprising extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space and (f) new signage at The Firhouse Inn, Firhouse Road, Dublin in accordance with plans and particulars lodged with the said Council:

DECISION: Pursuant to the Local Government (Planning and Development) Acts, 1963 to 1990, it is hereby decided, for the reason set out in the First Schedule hereto, to grant permission for the said development in accordance with the said plans and particulars, subject to the conditions specified in the Second Schedule hereto, the reasons for the imposition of the said conditions being as set out in the said Second Schedule and the said permission is hereby granted subject to the said conditions.

FIRST SCHEDULE

It is considered that the intensification of use of this public house site brought about by the addition of a restaurant will not give rise to an undue increase in traffic hazard or congestion in the area and subject to compliance with the conditions set out in the Second Schedule hereto, the proposed development will improve the appearance of the building and complement the existing use.

SECOND SCHEDULE

1. Prior to the commencement of development, a car park layout shall be submitted to and agreed with the planning authority, which shall provide for access/egress between Firhouse Stores and Firhouse Inn and egress only to the east (Mount Carmel Park), and to include egress details, markings, lighting and landscaping.

   Reason: In the interest of traffic management.

Dan

Our Ref: PL 6/5/87824
P.A. Reg. Ref: 91A/1285

EOH

An Bord Pleanála

Floor 3 Blocks 6 & 7
Irish Life Centre
Lower Abbey Street
Dublin 1
tel (01) 728011

The Secretary,
Dublin County Council,
Planning Department,
Block 2,
Irish Life Centre.

Date: 27th March 1992.

Appeal re: Proposed development at The Firhouse Inn, Firhouse Road, County Dublin.

Dear Sir/Madam,

Enclosed for your information is a copy of correspondence received in relation to the above-mentioned appeal. While it is not necessary for you to furnish any comments on the correspondence, you may do so if you wish. Any such comments should be forwarded within fourteen days from the date of this letter to ensure that they will be taken into consideration in the determination of the appeal.

Please quote the above appeal reference number in any further correspondence.

Yours sincerely,

Suzanne Lacey

Suzanne Lacey
BP 553A

DUBLIN COUNTY COUNCIL
PLANNING DEPT.
RECEIVED
27 MAR 1992

DEVELOPMENT
31 MAR 1992
CONTROL

DAN GALLERY ARCHITECTS

KENSINGTON HALL,
GROVE PARK, RATHMINES,
DUBLIN 6.

TEL: 01-961215
01-961219
FAX: 01-973335

DAN GALLERY, B. Arch., MRIAI, RIBA.

Your Ref: PL 6/5/87824
Date: 6th March 1992

An Bord Pleanala
Floor 3
Blocks 6 & 7
Irish Life Centre
Lower Abbey Street
Dublin 1

Re: Our Client: H Morton
P.A. Reg. Ref: 91A/1285
Appeal re: Extension and alterations comprising (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space and (f) new signage at The Firhouse Inn, Firhouse Road

Dear Sirs

Having inspected the Local Authority documents relevant to the above Decision our observations are as follows:-

1) The Report of the Roads Department dated 7/11/91 on foot of our Submission of Unsolicited Information dated 23rd October 1991 indicated that the Roads Department were not opposed to a Decision to Grant being issued and details of proposed conditions were included in this Report. In view of the fact that all three grounds for refusal were based on traffic considerations it is puzzling to say the least that the Roads Department seemed in favour of a permission being granted.

We wish to make the additional point that there is hardly a Public House in the entire City or County of Dublin which has sufficient space on site to accommodate all cars at peak times which is approximately two hours on Saturday and Sunday nights. When compared to most Public Houses the Car Park to the Firhouse Inn is very extensive.

We would reiterate our previous point that the Firhouse Inn the longest established premises in the area is being unfairly treated in deference to more recent developments (the adjoining housing) and indeed future developments (the Motorway).

We wish to state that we have no further observations to make unless the Board circulates us with comments from other parties which may require a response.

Yours faithfully

DAN GALLERY

VAT NO: 4879824 N

COMHAIRLE CHONTAE ATHA CLIATH

Tel.: 724755
Ext. 268/269

Planning Department,
Irish Life Centre,
Lr. Abbey Street,
Dublin 1.

Your Ref.: PL675/ 87824

Our Ref.: 910/1285

An Bord Pleanala,
Blocks 6 and 7,
Irish Life Centre,
Lr. Abbey Street,
Dublin 1.

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1983

Proposal: Ext walls consisting of (a) new restaurant lounge (b) new toilets (c) Conversion of slurs to kitchen incorporating new pitched roof (d) new fire escapes, fire doors (e) other ancillary space (f) new signage at the Firhouse Inn.

Applicant: M. Morton.

Dear Sir,

With reference to your letter dated 13/1/92 I enclose herewith:-

(1) & (2) A copy of the application which indicated the applicant's interest in the land or structure.

(3) A copy of the public notice given, i.e Irish Press 29/7/91.

(4) The plan(s) received from the applicant on 2/8/91.

(6) & (7) A certified copy of Manager's Order P/5664/91 DATED, 11/12/91. together with technical reports in connection with the application.

(8) Histories to follow.

Yours faithfully,

R. Farrell

for Principal Officer.
Encls.

Our Ref: PL 6/5/87824
P.A. Reg. Ref: 91A/1285

An Bord Pleanála

Floor 3 Blocks 6 & 7
Irish Life Centre
Lower Abbey Street
Dublin 1
tel (01) 728011

The Secretary,
Dublin County Council,
Planning Section,
Block 2,
Irish Life Centre,
Dublin 1.

RECD 16/1.
16 JAN 92

Date: 13th January 1992

Planning authority decision re: Extension and alterations comprising (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space and (f) new signage at The Firhouse Inn, Firhouse Road.

Dear Sir/Madam,

Enclosed is a copy of an appeal under the Local Government (Planning and Development) Acts, 1963 to 1990, in relation to the above-mentioned decision. So that consideration of the appeal may proceed, you are requested to forward to the Board within two weeks:

(1) The application made to the planning authority.
(2) Particulars of the applicant's interest in the land or structure, as supplied to the planning authority.
(3) A copy of the public notice, whether published in a newspaper or on the site.
(4) Any drawings, maps, particulars, information, evidence or written study received or obtained from the applicant, including the ordnance survey number.
(5) Copies of requests (if any) to the applicant for further information relating to the application under appeal and copies of reply and documents (if any) submitted in response to such requests.
(6) A certified copy of the relevant Manager's Order.
(7) Copies of any technical or other reports relevant to the decision on the application.
(8) Particulars and relevant documents relating to previous decisions affecting the same site or relating to applications for similar development close by.

Please note that the other party/parties to the appeal are being notified that copies of the planning authority documents relevant to the decision which gave rise to the above-mentioned appeal will be available for inspection at your offices after the expiration of a period of fourteen days from the date of this letter. It would be appreciated if parties could be facilitated in this regard.

Copies of the representations or observations made to the planning authority in relation to the application should not be sent to the Board. It is assumed that the planning authority has notified observers of the decision made and of the right of appeal.

The planning authority may make to the Board, in writing, such observations on the appeal as it thinks fit. Where practicable, any such observations should be submitted with the documents listed above but the furnishing of the documents should not be held up until observations are available. In any event, to ensure that they will be taken into account in the determination of the appeal, any such observations should be furnished **within one month** of the date of this letter.

Please quote the above appeal reference number in any further correspondence.

Yours faithfully,

Patricia Tobin

Encl.

BP 005

An Bord Pleanála

Floor 3 Blocks 6 & 7
Irish Life Centre
Lower Abbey Street
Dublin 1
tel (01) 728011

DAN GALLERY ARCHITECTS

KENSINGTON HALL,
GROVE PARK, RATHMINES,
DUBLIN 6.

TEL: 01-961215
01-961219
FAX: 01-973335

DAN GALLERY, B. Arch., MRIAI, RIBA.

An Bord Pleanala
Irish Life Centre
Lower Abbey Street
Dublin 1.

8th January, 1992

Re: Proposed extension and alteration to the Firhouse Inn for Mr & Mrs H Morton. Dublin County Council Reg Ref 91A/1285

Dear Sirs,

We wish to appeal on behalf of the applicant Mr & Mrs H Morton against the decision by Dublin County Council to refuse Planning Permission for the above proposal. Our grounds of appeal are as follows:-

1. Reason 1 of the refusal notice refers to this development being premature due to the deficiency of the existing road network.

   This in our view is an astonishing statement. To any reasonable observer the Firhouse Road is a first class road from Templeogue Bridge to Oldbawn Road. The new Bridge over the River Dodder links to the Western Parkway Motorway and to the Tallaght By-Pass - a dual carriageway. It is hard to fathom how such a road network could be described as deficient.

   Regarding the question of the proposal being premature, it is our view that the completion of the Southern Cross Route Motorway will have a very adverse impact on the Firhouse Inn due to the fact that the Firhouse Road will fly over the new Motorway with the result that customers who wish to come to the Firhouse Inn will have to travel on to the Scholarstown interchange and drive back along the new Ballycullen Road to arrive at the Firhouse Inn.

   The primary reason why this application is being made now is to establish a fresh customer base who will have built up a loyalty to the revamped facilities on offer and thus, will be prepared to make the extra effort to travel to the Firhouse Inn when the new Motorway is completed. It is our view therefore, that this proposal is not premature but, is a prudent attempt to address changing circumstances before it is too late.

VAT NO: 4879824 N

By Hand LAH. H.
9/1/92
£100 ehq
Receipt No. R 21399

2. Reason 2 of the refusal notice concerns traffic management. In our opinion the proposed Southern Cross Motorway will have a major impact on the Firhouse Inn as follows:-

a) the Firhouse Road will be re-aligned and rise up and cross over the Motorway.

b) the Ballycullen Road will be re-aligned and emerge to join the Firhouse Road opposite the Firhouse Inn.

c) a new access road will be created to serve Mount Carmel Park, The Firhouse Inn and Firhouse Stores, which will reduce the number of access points at this section of the Firhouse Road to one as against two access points at present.

Our drawing Nº F14/29 as submitted on 23rd October, 1991 illustrates the proposed layout referred to above.

3. Reason 3 of the refusal notice concerns car parking. In our submission of 23rd October, 1991 to Dublin County Council our drawing Nº F14/29 indicated that we can accommodate 90 cars as against a Development Plan requirement of 87. In our view the Car Parking provision compares favourably with the majority of public houses in County Dublin.

4. In our opinion the reasons given for refusal appear contrary to the principals of natural justice in the following respects:-

(i) the Firhouse Inn has stood on this site for almost 150 years.

(ii) the nearby houses were built by Dublin County Council in the mid 1950's.

(iii) the Southern Cross Route is a Dublin County Council proposal.

(iv) this modest proposal to extend the Firhouse Inn is being refused by Dublin County Council who are the Sponsoring Authority for (ii) & (iii) above. surely it is unfair that the development of the Firhouse Inn as the oldest premises in the neighbourhood is being blocked in deference to more recent developments.

In support of the proposal we wish to make the following additional observations:-

- The provision of a Restaurant/Lounge is in response to public demand for more variety of service in Public Houses and a move away from drink/driving by the provision of full scale meals.

- The proposal also attempts to present a more attractive facade to the proposed motorway and Firhouse Road flyover.

- This proposal conforms to paragraph 3.1.7 of the 1983 Development Plan.

- The proposed development is restricted to the area within the existing building and walled yard so that, there is no loss of car parking area.

- The new toilets are replacing existing toilets which (especially in the case of the ladies) are inadequate.

- The kitchen is being provided by converting existing stores. A pitched roof is being provided to this area to enable it to blend visually with the rest of the building as viewed from the future motorway.

- The meeting room at basement level is being re-built to a higher structural standard and the adjoining yard area is to be converted to a store to compensate for the loss of the stores mentioned above.

- The boundary wall adjacent to the stores to the East of the premises is to be removed and the space landscaped as an amenity space.

We wish to state that we may submit additional grounds of appeal in due course.

We enclose cheque for £100 to cover the appeal fee and look forward to a favourable decision.

Yours faithfully,

Dan Gallery

DUBLIN COUNTY COUNCIL

Tel. 724755 (ext. 262/264)

PLANNING DEPARTMENT,
BLOCK 2,
IRISH LIFE CENTRE,
LR. ABBEY STREET,
DUBLIN 1.

NOTIFICATION OF A DECISION TO REFUSE:

[redacted]: PERMISSION: [redacted]

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963–1983

To Dan Gallery, Architect,
[redacted], Kensington Hall
[redacted], Grove Park
[redacted], Rathmines
D6.

Register Reference No. 91A/1285
Planning Control No.
Application Received 02.08.1991
Additional Information Received

Applicant Mr. H. Morton

In pursuance of its functions under the above-mentioned Acts, the Dublin County Council, being the Planning Authority for the County Health District of Dublin, did by order, P/ 5664/91 dated 11.12.1991 decided to refuse:

[redacted] PERMISSION [redacted]

For Proposed extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

for the following reasons:-

1. Development of the kind proposed would be premature by reference to the constraint of the existing deficiency in the road network serving the area and the period within which this constraint may reasonably be expected to cease by way of arrangements for the construction of the Southern Cross Route Motorway and associated road improvements.

2. The additional traffic turning movements generated by the increased scale of development on this restricted site, with inadequate parking provision, would endanger public safety by reason of traffic hazard.

3. The proposed development does not make adequate provision for off-street parking and circulation to Development Plan standards and consequently is likely to be seriously injurious to the amenities of property in the vicinity and would be contrary to the proper planning and development of the area.

Signed on behalf of the Dublin County Council .....
for PRINCIPAL OFFICER

Date 11th December, 1991.

IMPORTANT:

NOTE: (1) An appeal against the decision may be made to An Bord Pleanala. The applicant may appeal within one month from the date of receipt by him of this notification. The appeal shall be in writing and shall state the subject matter of the appeal and grounds of appeal and should be addressed to *An Bord Pleanala, Irish Life Centre, Lower Abbey Street, Dublin 1.* An appeal lodged by an applicant or his agent with An Bord Pleanala will be invalid unless accompanied by a fee of £36. (Thirty-six pounds). (2) A party to an appeal making a request to An Bord Pleanala for an oral hearing of an appeal must, in addition to (1) above, pay to An Bord Pleanala a fee of £36. (Thirty-six pounds). (3) A person who is not a party to an appeal must pay a fee of £10 (Ten pounds) to An Bord Pleanala in *relation to an appeal. When an appeal has been duly made and has not been withdrawn,* An Bord Pleanala will determine the application for permission as if it had been made to them in the first instance.

DUBLIN COUNTY COUNCIL

Tel. 724755 (ext. 262/264)

PLANNING DEPARTMENT,
BLOCK 2,
IRISH LIFE CENTRE,
LR. ABBEY STREET,
DUBLIN 1.

NOTIFICATION OF A DECISION TO REFUSE:

~~OUTLINE PERMISSION~~: PERMISSION: ~~APPROVAL~~

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963-1983

To ....Dan Gallery, Architect,..... Register Reference No. 91A/1285

.....~~6 Main Street~~, Kensington Hall Planning Control No. .....

.....~~Dalkey~~, Grove Park Application Received 02.08.1991

.....~~Dublin 4~~. Rathmines Additional Information Received .....

Dec 6.

Applicant .....Mr. H. Morton.....

In pursuance of its functions under the above-mentioned Acts, the Dublin County Council, being the Planning Authority for the County Health District of Dublin, did by order, P/ ...5664/91..... dated.....11.12.1991... decided to refuse:

~~OUTLINE PERMISSION~~ PERMISSION ~~APPROVAL~~

For ....Proposed extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

for the following reasons:-

1. Development of the kind proposed would be premature by reference to the constraint of the existing deficiency in the road network serving the area and the period within which this constraint may reasonably be expected to cease by way of arrangements for the construction of the Southern Cross Route Motorway and associated road improvements.

2. The additional traffic turning movements generated by the increased scale of development on this restricted site, with inadequate parking provision, would endanger public safety by reason of traffic hazard.

3. The proposed development does not make adequate provision for off-street parking and circulation to Development Plan standards and consequently is likely to be seriously injurious to the amenities of property in the vicinity and would be contrary to the proper planning and development of the area.

Signed on behalf of the Dublin County Council .....
for PRINCIPAL OFFICER

Date ....11th December, 1991.

IMPORTANT:

NOTE: (1).An appeal against the decision may be made to An Bord Pleanala. The applicant may appeal within one month from the date of receipt by him of this notification. The appeal shall be in writing and shall state the subject matter of the appeal and grounds of appeal and should be addressed to *An Bord Pleanala, Irish Life Centre, Lower Abbey Street, Dublin 1.* An appeal lodged by an applicant or his agent with An Bord Pleanala will be invalid unless accompanied by a fee of £36. (Thirty-six pounds). (2) A party to an appeal making a request to An Bord Pleanala for an oral hearing of an appeal must, in addition to (1) above, pay to An Bord Pleanala a fee of £36. (Thirty-six pounds). (3) A person who is not a party to an appeal must pay a fee of £10 (Ten pounds) to An Bord Pleanala in relation to an appeal. When an appeal has been duly made and has not been withdrawn, An Bord Pleanala will determine the application for permission as if it had been made to them in the first instance.

FORM G — FUTURE PRINT LTD.

Dan Gallery, Architect,
Kensington Hall,
Grove Park,
Rathmines,
Dublin 6.

Reg. Ref. 91A-1285

11 November 1991

Re: Proposed extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

Dear Sir,

With reference to your planning application received here on 2nd August, 1991, (letter for extension period received 7th November, 1991), in connection with the above, I wish to inform you that:-

In accordance with Section 26(4A) of the Local Government (Planning and Development) Act, 1963, as amended by Section 39(F) of the Local Government (Planning and Development) Act, 1976, the period for considering this application within the meaning of subsection (4A) of Section 26 has been extended up to and including 12th December, 1991.

Yours faithfully,

for Principal Officer.

DAN GALLERY • ARCHITECTS

KENSINGTON HALL, GROVE PARK
RATHMINES, DUBLIN 6.

DAN GALLERY, B.ARCH, MRIAI, RIBA.

01 - 961215 / 961219
FAX: 01 - 973335

Dublin County Council
Building Control Section
Block 2, Irish Life Centre
Lr Abbey Street
Dublin 1.

16th December, 1991

Attention: Mr Alan Doran

Re: The Firhouse Inn Extension and Alterations Reg. 91A/1285
Time Extension / Additional Information

Dear Sirs,

Further to your letter of 21st November, 1991, the position is now as follows:-

1) On 11th December, 1991 our Planning Application was refused.
2) We propose to lodge a revised application for Planning Permission this week (before 20th December, 1991).
3) As this revised scheme is a simplified and scaled down version of the original proposal, we request that it be treated as additional information under the original Bye Law application 91A/1285, when the matters referred to in your letter of 22nd October, 1991 will be dealt with.
4) We would estimate that this additional information would be lodged on or around the 17th January, 1992, so that a time extension up to 17th March would be appropriate.

We look forward to hearing from you.

Yours sincerely,

DAN GALLERY

DEVELOPMENT 17 CONTROL

DEVELOPMENT 23 DEC 1991 CONTROL

DAN GALLERY • ARCHITECTS

KENSINGTON HALL, GROVE PARK
RATHMINES, DUBLIN 6.

01 - 961215 / 961219
FAX: 01 - 973335

DAN GALLERY, B.ARCH, MRIAI, RIBA.

7.11.1991

DUBLIN COUNTY COUNCIL
BLOCK 2 IRISH LIFE CENTRE
LR ABBEY ST
DUBLIN 1

TO FAX Nº 724896

DEVELOPMENT AT THE FIREHOUSE INN
FOR MR + MRS H. MORTON
REG. REF: 91A/1285

ATTN: MR RICHARD CEMING
MR. PAT KENNY

DEAR SIRS

ON BEHALF OF MR + MRS H. MORTON WE WISH TO APPLY FOR A FUTHER TIME EXTENSION. WE REQUEST THEREFORE THAT IN ACCORDANCE WITH THE RELEVANT PROVISIONS OF THE PLANNING ACTS THE PERIOD FOR CONSIDERING THE ABOVE APPLICATION BE FUTHER EXTENDED UP TO AND INCLUDING THE 12th DECEMBER 1991.

YOURS FAITHFULLY

DAN GALLERY

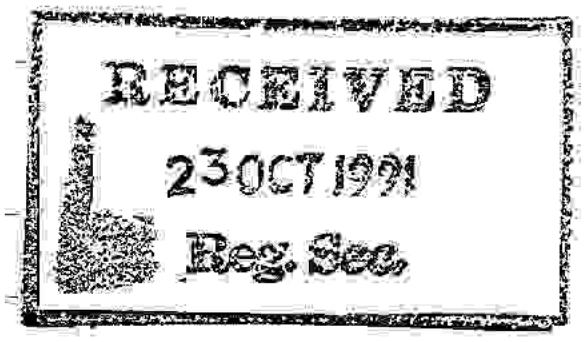
P.S. PLEASE NOTE NEW ADDRESS

DAN GALLERY · ARCHITECT
6 MAIN STREET DONNYBROOK DUBLIN 4
HOME 01-982759

DAN GALLERY. B.ARCH. MRIAI. RIBA.

961215 961219
~~01269658818399995~~

91A/1285
1.16.0
W.J A.L.



Dublin County Council
Planning Department
Block 2 Irish Life Centre
Lower Abbey Street
Dublin 1.

23rd October, 1991

Re: Extension and alterations consisting of (a) new restaurant/lounge (b) new toilets (c) conversion of stores to kitchen incorporating new pitched roof (d) new fire excapes and fire doors (e) other ancillary space (f) new signage.

At The Firhouse Inn, Firhouse Road.

For Mr & Mrs H Morton.

Register Reference Nº 91A/1285

UNSOLICITED INFORMATION

Dear Sirs,

Following recent meetings with Mr R. Cremins (Planning Office) and Mr E. Madden (Roads Department) we wish to make the following submission regarding Car Parking and Traffic Management.

1.0 Car Parking Spaces

1.1 We have examined the Car Parking layout afresh and as can be seen from drawing Nº F14/29 we can now accommodate 90 cars without any supervised spaces, all within the cartilage of the site.

1.2 A detailed examination of the floor areas indicate that the total public area of the completed development would be 345 sq m. (see drawing Nº F14/30 enclosed). Table 3.14 of 1983 Development Plan calls for 2 cars per 8 sq m.. The required number of cars therefore, is 87. It is worth noting that the 1991 Draft Development Plan lays down the same car parking standard for public houses as the 1983 Plan.

1.3 The adjoining building "The Firhouse Stores" consists of day time uses so that the car parking spaces required can overlap with those of the pub in accordance with paragraph 3.13.9 of the Development Plan.

2.0 Traffic Management

2.1 The proposed Southern Cross Motorway will have a major impact on the Firhouse Inn as follows:-

a) the Firhouse Road will be re-aligned and rise up and cross over the Motorway.

b) the Ballycullen Road will be re-aligned and emerge to join the Firhouse Road opposite the Firhouse Inn.

c) a new access road will be created to serve Mount Carmel Park, The Firhouse Inn and Firhouse Stores, which will reduce the number of access points at this section of the Firhouse Road to one as against two access points at present.

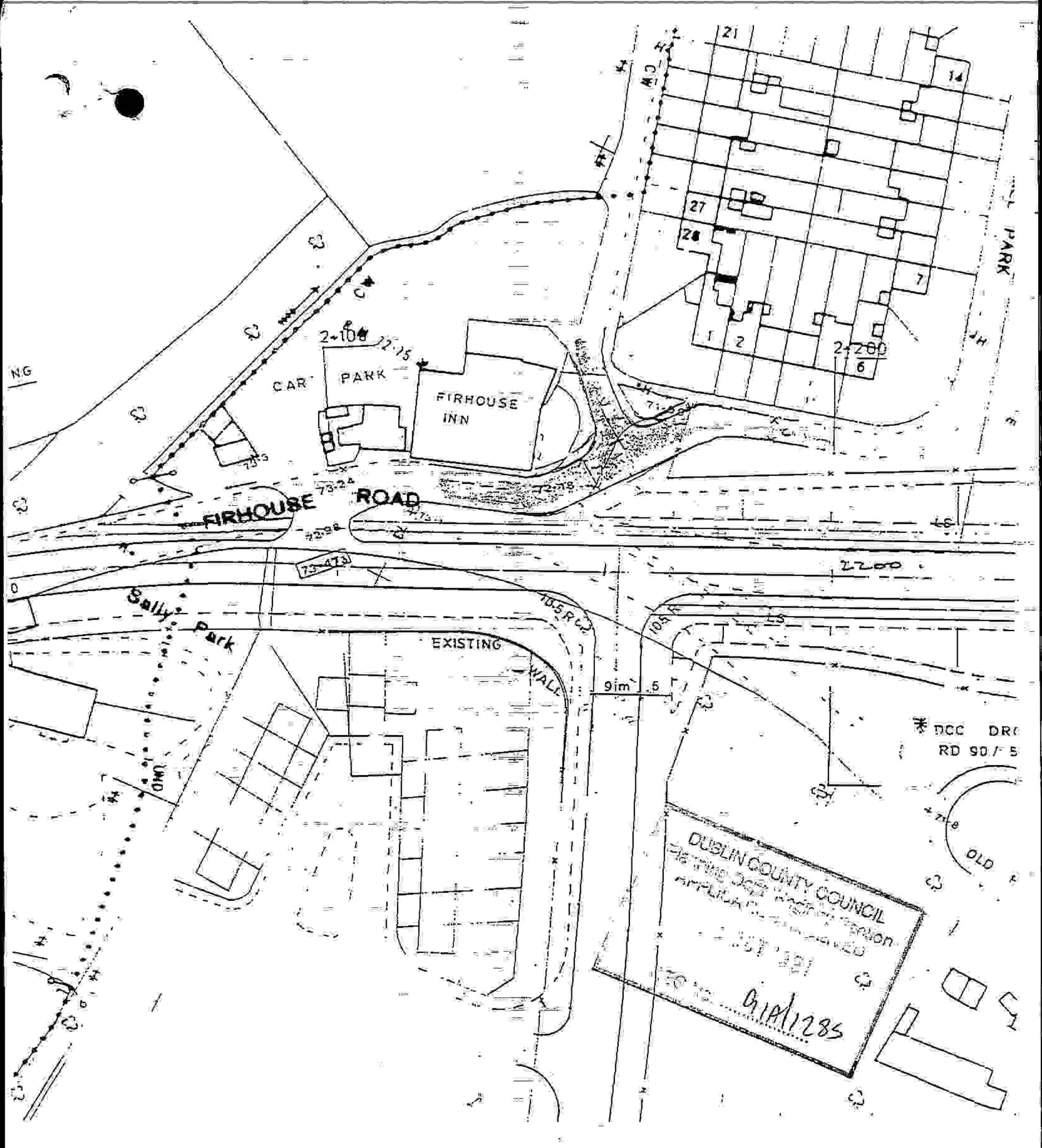
Drawing Nº F14/29 shows the proposed layout referred to above.

2.2 Realistically on-street car parking will occur. The proposed access road may facilitate the creation of controlled on street car parking for 5 cars on lay-bys as shown on drawing Nº F14/29.

As stated in our original letter of application this application is prompted by a desire to address the new circumstances created by the Southern Cross Motorway and the changing trends towards full meals in public houses. We are confident that the revised car parking layout together with the proposed new access road will ensure that the development as proposed will not cause a traffic hazard or damage existing residential amenity.

Yours sincerely,

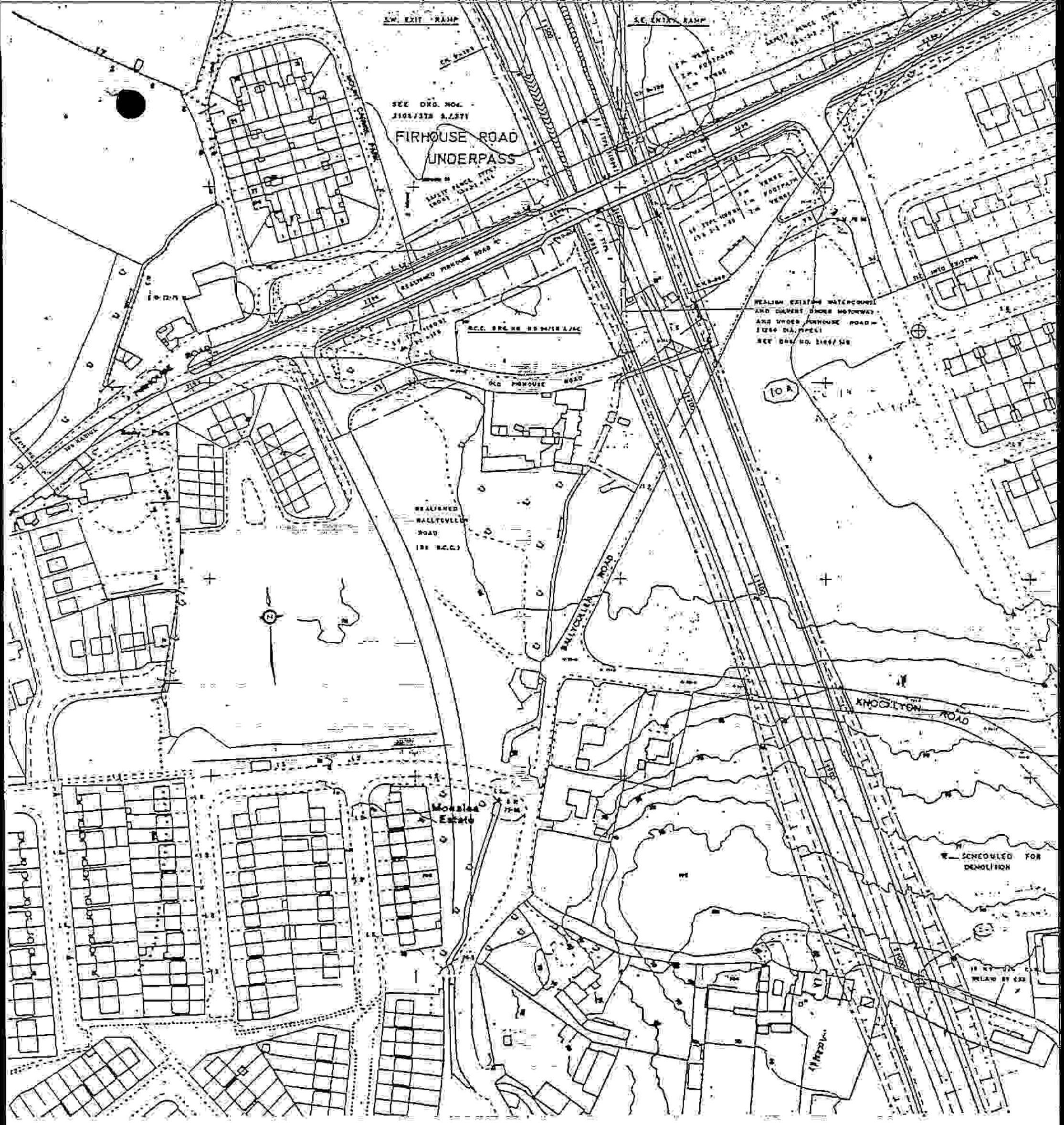
Dan Gallery



NOTE :-

ACCESS ROAD LAYOUT IS AS PROPOSED BY DUBLIN COUNTY COUNCIL TO PLANNING CONSULTANT ACTING FOR MR AND MRS MORTON AT PUBLIC INQUIRY INTO C.P.O FOR SOUTHERN CROSS MOTORWAY. 7/10/1991.

REG REF 91A/1285



ACCESS ROAD LAYOUT

AS ORIGINALLY DESIGNED

REG REF 91A/1285

Dan Gallery, Architect,
6 Main Street,
Donnybrook,
Dublin 4.

91A/1285

30 September 1991

RE: Proposed extension and alterations consisting of (a) new restaurant/lounge, (b) new toilets, (c) conversion of stores to kitchen incorporating new pitched roof, (d) new fire escapes and fire doors, (e) other ancillary space, (f) new signage, at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

Dear Sir,

With reference to your planning application received here on 2nd August, 1991, (letter for extension period received 30th September, 1991), in connection with the above, I wish to inform you that:-

In accordance with Section 26(4A) of the Local Government (Planning and Development) Act, 1963, as amended by Section 39(F) of the Local Government (Planning and Development) Act, 1976, the period for considering this application within the meaning of subsection (4A) of Section 26 has been extended up to and including 11th November, 1991.

Yours faithfully,

J. de Barra

for Principal Officer.

DAN GALLERY . ARCHITECT
6 MAIN STREET DONNYBROOK DUBLIN 4
961215 961219.
~~01-6695951/6695~~
HOME 01-982759

DAN GALLERY, B.ARCH. MRIAI. RIBA.

4598

Dublin County Council
Block 2
Irish Life Centre
Lower Abbey Street
Dublin 1.

To Fax No
724896
AND BY HAND
ATTN. MR PAT KENNY

27th September 1991

RE: Extension and alterations consisting of (a) new restaurant/lounge (b) new toilets (c) conversion of stores to kitchen incorporating new pitched roof (d) new fire escapes and fire doors (e) other ancillary space (f) new signage.

At the Firhouse Inn, Firhouse Road.

For Mr & Mrs H Morton.

Register Reference Nº 91A/1285

Dear Sirs,

On behalf of our client Mr & Mrs H Morton we wish to request that in accordance with Section 26 (4A) of the Local Government (Planning and Development) Act, 1963, as amended by Section 39 (F) of the Local Government (Planning and Development) Act, 1976, the period for considering this application within the meaning of subsection (4A) of Section 26 be extended up to and including the 11th November, 1991.*

We are seeking this time extension to allow us to examine further the provision of car parking.

Yours faithfully,

DAN GALLERY

* NOVEMBER ELEVENTH 1991

DAN GALLERY · ARCHITECT

6 MAIN STREET DONNYBROOK DUBLIN 4

01-2696588/839995
HOME 01-982759

DAN GALLERY, B.ARCH. MRIAI. RIBA.

Dublin County Council
Block 2
Irish Life Centre
Lower Abbey Street
Dublin 1.

To FAX N° 724896
AND BY HAND.
ATTN. MR PAT KENNY

27th September, 1991

RE: Extension and alterations consisting of (a) new restaurant/lounge (b) new tollets (c) conversion of stores to kitchen incorporating new pitched roof (d) new fire escapes and fire doors (e) other ancillary space (f) new signage.

At the Firhouse Inn, Firhouse Road.

For Mr & Mrs H Morton.

Register Reference Nº 91A/1285

Dear Sirs,

On behalf of our client Mr & Mrs H Morton we wish to request that in accordance with Section 26 (4A) of the Local Government (Planning and Development) Act, 1963, as amended by Section 39 (F) of the Local Government (Planning and Development) Act, 1976, the period for considering this application within the meaning of subsection (4A) of Section 26 be extended up to and including the 11th November, 1991.* DS.

We are seeking this time extension to allow us to examine further the provision of car parking.

Yours faithfully,

DAN GALLERY

* NOVEMBER ELEVENTH 1991 DS.

P. H. McCARTHY SON & PARTNERS

CONSULTING ENGINEERS
Member Firm of Association of Consulting Engineers of Ireland

Partners
P.C. MacIntyre BE CEng FIEI MICE MIWEM DPM ACIArb
J.C. Forsyth BSc MIEI MIWEM
M.G. Hand BE MBA Eur Ing CEng FIEI MICE FIWEM
Consultants
A.J. Fitzgerald BE CEng MIEI FIWEM
D.A. Riordan BE CEng FIEI MIWEM AMICE

ROSEMOUNT HALL
DUNDRUM ROAD
DUBLIN 14, IRELAND
TELEPHONE: 01-989377
FAX: 01-989521

Your Ref

Our Ref 488/TMI/OF

16th August, 1991.

Registry Section,
Planning Department,
Dublin County Council,
Block 2, Irish Life Centre,
Lower Abbey Street,
DUBLIN 1.

RE: Building Bye-Laws Application for Proposed Extension and Alterations to the Firhouse Inn, Firhouse Road, Dublin 24
Reg. Ref: 91A/1285.

Dear Sirs,

Following the submission of drawings for Planning Permission and Building Bye-Laws approval by Dan Gallery, Architect, on 2nd August 1991, we enclose two copies of the following structural information as part of the Building Bye-Laws Application:

Drawings: 488/1 - 6

Calculation Sheets: 488/1/1 - 488/5/10

Please do not hesitate to contact us if you require any further information.

Yours faithfully,
P.H. McCarthy Son & Partners.

Ciarán mac Intyre
T.C. MacIntyre.

Encl.

cc: Dan Gallery, Architect (+ 1 copy drgs.)

Under A-I for BBC
1.12-2
91A/1285

P.H. Mc CARTHY SON & PARTNERS
CONSULTING ENGINEERS
Rosemount Hall,
Dundrum Road, Dublin 14.
Tel: 01 989377
Fax: 01 989521

Job No. 488 | Sheet No. 1

Drawing Register & Issue Record

Issued By :

Project Title :
EXTENSION & ALTERATIONS,
FIRHOUSE INN,
FIRHOUSE ROAD,
DUBLIN 24.

Issue Date.
16
8
91

Distribution

DAN GALLERY, ARCHITECT	1
DUBLIN COUNTY COUNCIL	2

Drawing Status
Preliminary (P) Tender (T) Contract (C) Working (W) For Approval (A) — P

Drawing Title :	Drawing No.		
BASEMENT EXISTING STRUCTURE	488/ 1	✓	
GROUND FLOOR. EXISTING STRUCTURE	2	✓	
ROOF. EXISTING STRUCTURE	3	✓	
BASEMENT. PROPOSED STRUCTURE	4	✓	
GROUND FLOOR. PROPOSED STRUCTURE	5	✓	
ROOF. PROPOSED STRUCTURE	6	✓	

DUBLIN COUNTY COUNCIL
Planning Deptl. Registry Section
APPLICATION RECEIVED
19 AUG 1991
REG No. 91A/1285

P.H. Mc CARTHY SON & PARTNERS
CONSULTING ENGINEERS
Rosemount Hall,
Dundrum Road, Dublin 14.
Tel: 01 989377
Fax: 01 989521

Job No.	Sheet No.	Rev
488	1/1	

Contract: Firhouse Inn, Firhouse Rd., D.24.

Structure: Structural Scheme Calculations.

By	Dates	Rev.	Chkd.
CMcT	16.8.91		

INDEX

INTRODUCTION :

The proposed works comprises a two storey extension as well as alterations to the existing Firhouse Inn, Firhouse Road, Dublin 24.

The extension has lightweight pitched timber roofs over r.c. ground floor formed with precast concrete units acting compositely with a structural topping and spanning between loadbearing masonry walls at basement level.

The stability of the structure is achieved by plate action through the ground floor slab which transfers horizontal loads to the masonry walls. These act as shear walls.

P.H. Mc CARTHY SON & PARTNERS
CONSULTING ENGINEERS
Rosemount Hall,
Dundrum Road, Dublin 14.
Tel: 01 989377
Fax: 01 989521

Job No.	Sheet No.	Rev
488	1/2.	

Contract: Firhouse Inn Development.
Structure:

By	Dates	Rev.	Chkd.
amt	15.7.91		

LOADING

	(D.L)	(I.L)
Proposed:		
Roof: slates on battens on rafters on purlins on trusses (on plan)	0.75	
Imposed (snow) load		0.75
	0.75	+0.75
Ground Floor: 150 r.c. slab + 50 screed + finishes (tiles/carpet+services)	5.3	
Imposed load (Bar/Toilets)		5.0/2.0
	5.3 +	5.0/2.0
Existing:		
Roof. slates on battens on rafters + ceiling	0.95	
Imposed (snow) load		0.75
	0.95 +	0.75
Ground floor: (conc.)	5.1	
Assumed 200 o/a slab + finishes (0.3)		
Imposed load (Bar/Toilets)		5.0/2.0
	5.1 +	5.0/2.0
Ground Floor: (timber)	0.5	
Boarding on joists on plasterboard		
Imposed load (Kitchen)		3.0

215	D.C.m.	hollow block rendered(0.45) & plastered(0.15)	3.6
140	DCm	block plastered both sides	3.1
100	DCm	block plastered	2.5
100	DCm	block rendered	2.6

BOTH SIDES

150 x 125 UC 23 OVER (CONCRETE ENCASED)

EB 7 OVER.

90 x 90 RHS 5.0 ON 800 x 800 x MIN. 400 THK MASS CONCRETE PAD FOOTING

EB 8 OVER.

1600

4000 approx

LOCAL UNDERPINNING x MIN. 50 DRY PACK UP TO UNDERSIDE EXISTING FOOTING.

203 x 203 UC 46 OVER x 50 DRY PACK TO U/S OF SLAB.

CUT, TOOTH AND DOWEL TO EXISTING.

3

STRAIGHT JOINT.

EB 9 OVER.

50 SCREED ON 150 R.C. SLAB ON D.P.M. ON 50 BLINDING ON MIN. 150 WELL COMPACTED H/CORE

125 x 440 SOLID BLOCK PIER ON 800 x 600 x MIN. 300 THK. MASS CONCRETE PAD FOOTING.

3500

800 WIDE x MIN. 300 THICK MASS CONCRETE STRIP FOOTING.

2

IPE 180 x 76 UB 13 BOLTED TO SOFFIT OF R.C. SLAB OVER WITH 15 MIN. DRY PACK BETWEEN BEAM TOP FLANGE AND SOFFIT OF SLAB. BEAM CANTILEVERS OVER BLOCK WALL TO SUPPORT SLAB TO BAY WINDOW ABOVE.

600 WIDE x MIN. 250 THK. MASS CONCRETE STRIP FOOTING.

3500

BPL

BPL

1

EXISTING 800 WIDE x 300 THICK MASS CONCRETE STRIP FOOTING.
EXISTING 125 SOLID BLK. RETAINING WALL RETAINED OVER 800 HEIGHT.

300 WIDE x 300 THK. M.C. STRIP FOOTING ALONG SIDE EXISTING. 600 WIDE x 250 THK. M.C. STRIP CAST OVER EXISTING AND NEW FOOTING. WALL BUILT OFF COMBINED NEW/EXISTING FOOTING.

3500 3500 3500 3500

A B C D E

FIRHOUSE INN.

PART PLAN
BASEMENT

4881/1/3

FIRHOUSE INN

450 WIDE x MIN 1250 THK MASS CONCRETE STRIP FOOTING.

450 WIDE x MIN. 1250 THICK. MASS CONCRETE STRIP FOOTING.

STRAIGHT JOINT.

600 WIDE x 1700 LONG x MIN. 300 THICK M.C. BASE TO STAIRS.

440 x 440 SOLID BLOCK PIER ON 800 x 800 x MIN. 400 THK. MASS CONCRETE PAD FOOTING.

440 x 440 SOLID BLK. PIER ON 600 WD. x 1100 LG. x MIN. 300 THK. MASS CONCRETE FOOTING/ UNDERPINNING WITH MIN. 50 DRY PACK UP TO UNDERSIDE EXISTING FOOTING.

90 x 90 RHS 5.0 ON 600 x 600 x MIN. 400 THK. MASS CONCRETE PAD FOOTING.

CRACK CONTROL JOINT 12 THK. FLEXCELL + POLYSULPHIDE SEALANT BOTH SIDES. (4)

BPR

150 x 150 UC 30 OVER. (CONCRETE ENCASED)

EB.7 OVER.

EB.6 OVER.

90 x 90 RHS 5.0 ON 800 x 800 x MIN. 400 THK MASS CONCRETE PAD FOOTING

EB.8 OVER.

600

4000 approx.

LOCAL UNDERPINNING x MIN. 50 DRY PACK.

203 x 203 UC 46 OVER

CUT TOOTH AND

PART PLAN BASEMENT

4868/1/4

FIRHOUSE INN

CUT, 100TH AND BOND TO EXISTING

75 STRUCTURAL TOPPING WITH 1 LAYER A142 MESH OVER EXISTING ROOF SLAB.

215 BLOCK WALL UNDER.

SAW CUT EDGE OF EXISTING R.C. SLAB TO GIVE 100MM BEARING ON WALL UNDER.

175 R.C. SLAB CAST IN-SITU

100 R.C. SLAB CAST INSITU OVER TO P.C.C. UNITS.

EXISTING WALL UNDER.

BEAMS UNDER

EXISTING WALL UNDER.

100 DWARF BLOCK WALL UNDER.

170 R.C. SLAB CAST IN-SITU.

150 x 150 UC 37

150 x 150 UC 37

150 x 150 UC 37

150 x 150 UC 37

④

③

②

①

PART PLAN GROUND FLOOR

4881/1/5

EXISTING BEAMS EB1 TO EB5 – 152 x 152 UC 23. EXISTING JOISTS EJ1 – 44 x 175 AT 375 CRS.

* EXISTING BEAMS EB1 + EB2 PROPPED UP EITHER SIDE OF NEW BEAM AND SO LONG SECTION CUT OUT TO ALLOW FOR INSERTION OF 203 x 203 UC 46. EXISTING BEAMS RESUPPORTED ON LOWER FLANGE OF 203 x 203 UC 46. WITH WEB CLEATS (4 No. TOTAL) WELDED TO NEW AND EXISTING BEAMS (TO PROVIDE TORSIONAL RESTRAINT)

203x 203 UC 46 (GB1).

NEW PIER UNDER

EJ1

EB3

EB2

EB4

EB5

100 R.C. SLAB/WAIST CAST IN-SITU.

90x90 CHS. 5.0

NEW PIER UNDER.

CUT, TOOTH AND BOND TO EXISTING

75 STRUCTURAL TOPPING WITH 1 LAYER A142 MESH OVER EXISTING ROOF SLAB

215 BLOCK WALL UNDER.

SAW CUT EDGE OF

4

3

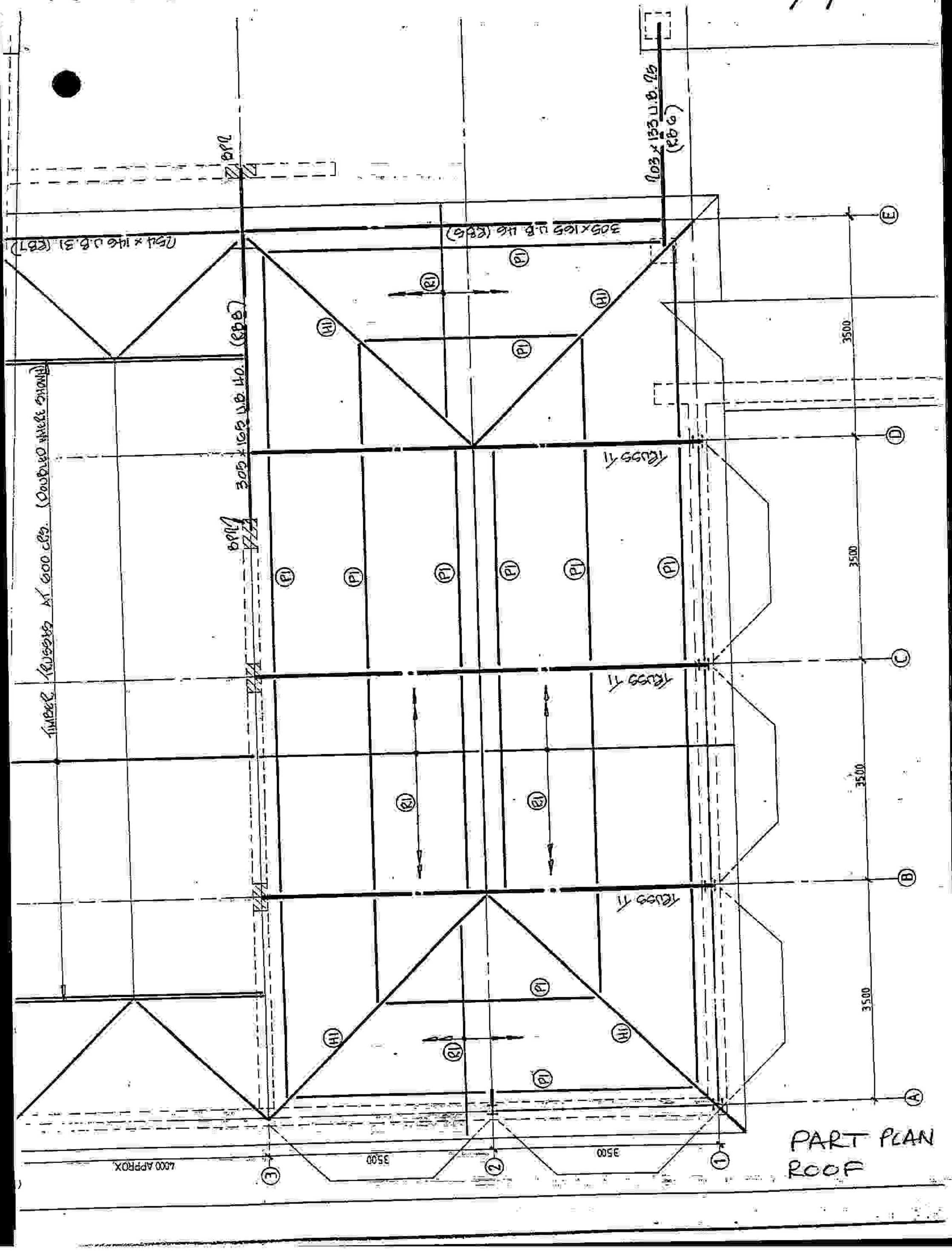
PART PLAN GROUND FLOOR

FIRHOUSE INN

484/1/6

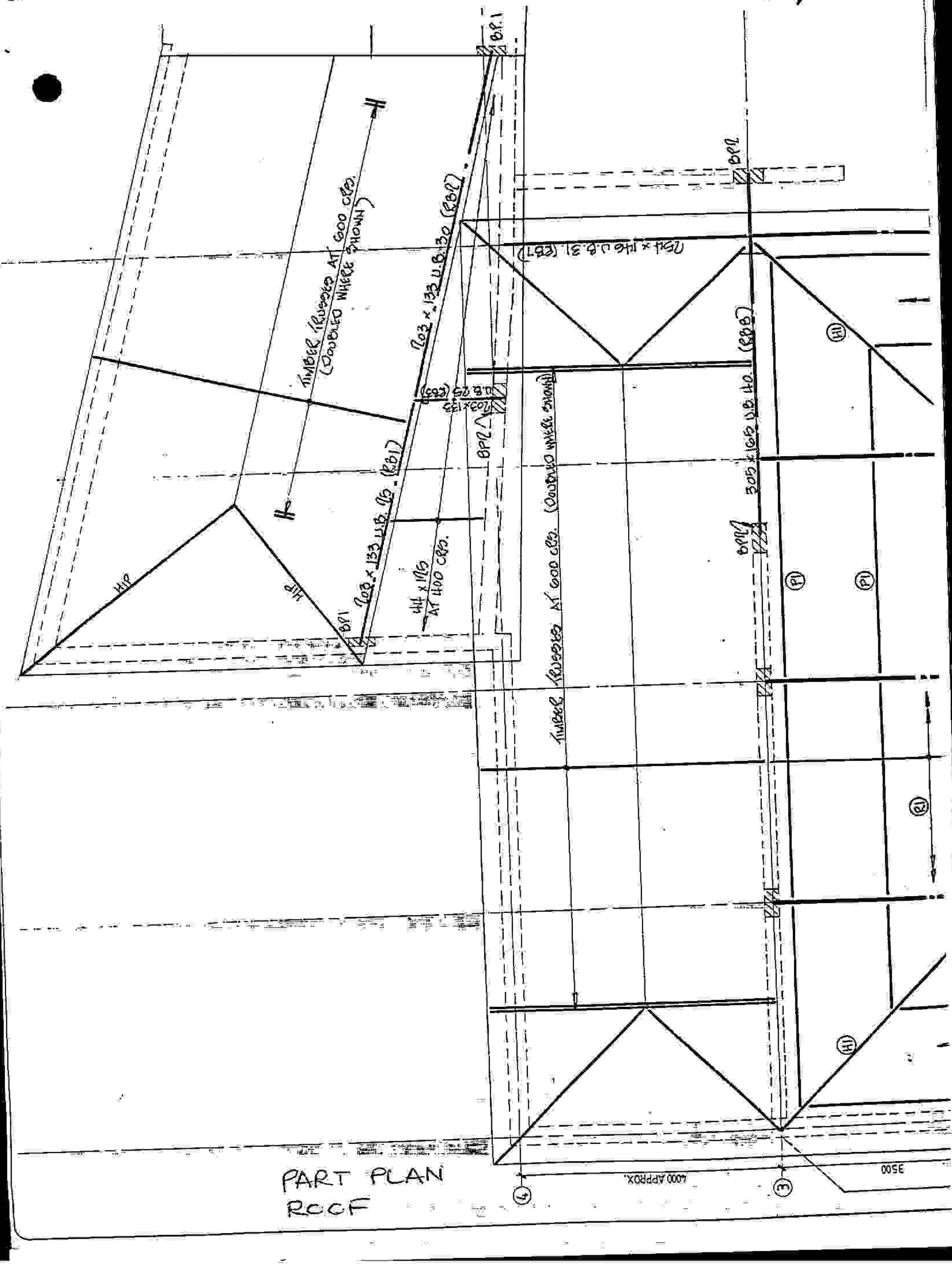
. FIRHOUSE - INN

488/1/7



FIRHOOSE INN

488/1/8



PART PLAN
ROOF

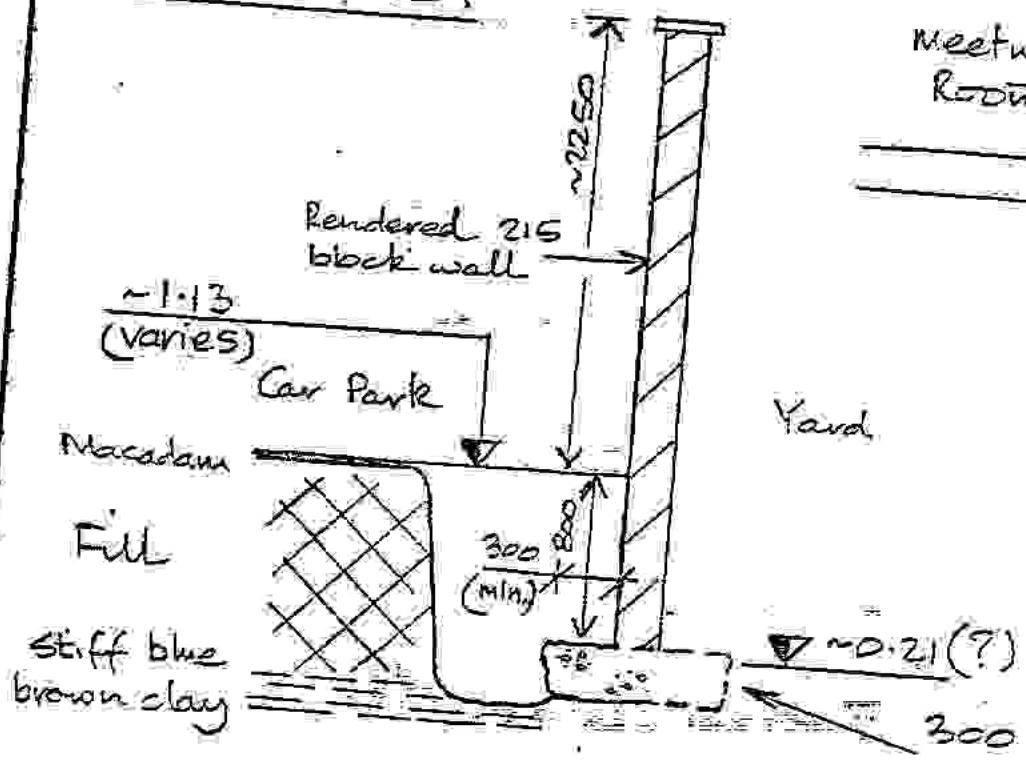
P.H. Mc CARTHY SON & PARTNERS
CONSULTING ENGINEERS
Rosemount Hall,
Dundrum Road, Dublin 14.
Tel: 01 989377
Fax: 01 989521

Job No.	Sheet No.	Rev
488	1:/ 9	

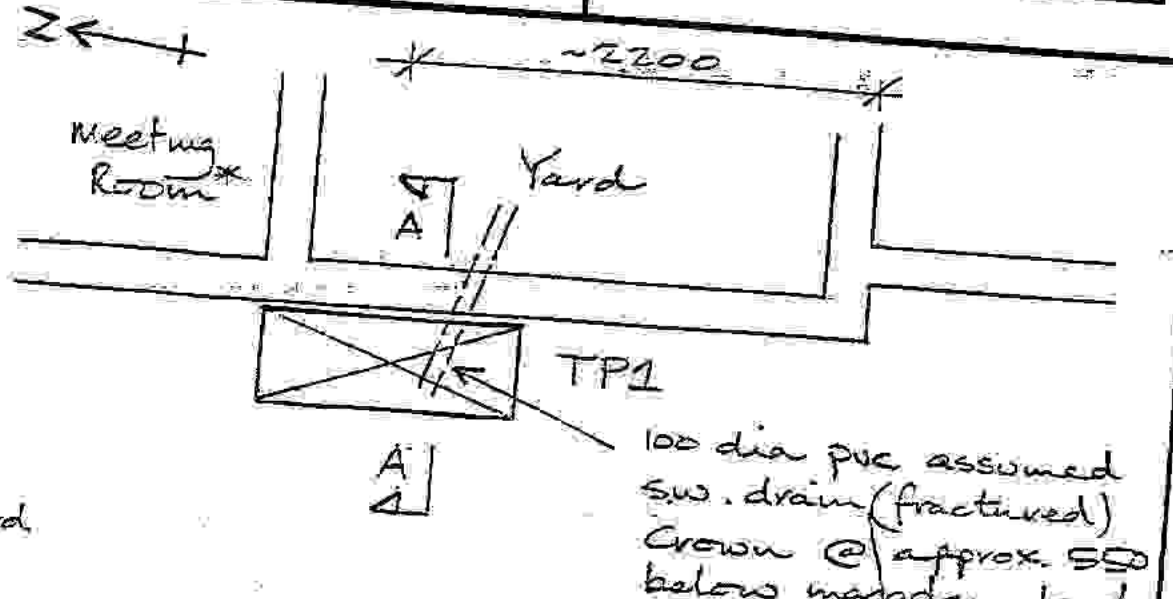
Contract: Firhouse Inn.
Structure: Trial Pits.

By	Dates	Rev.	Chkd.
CMT	24.6.91 3.7.91		

Trial Pit 1:



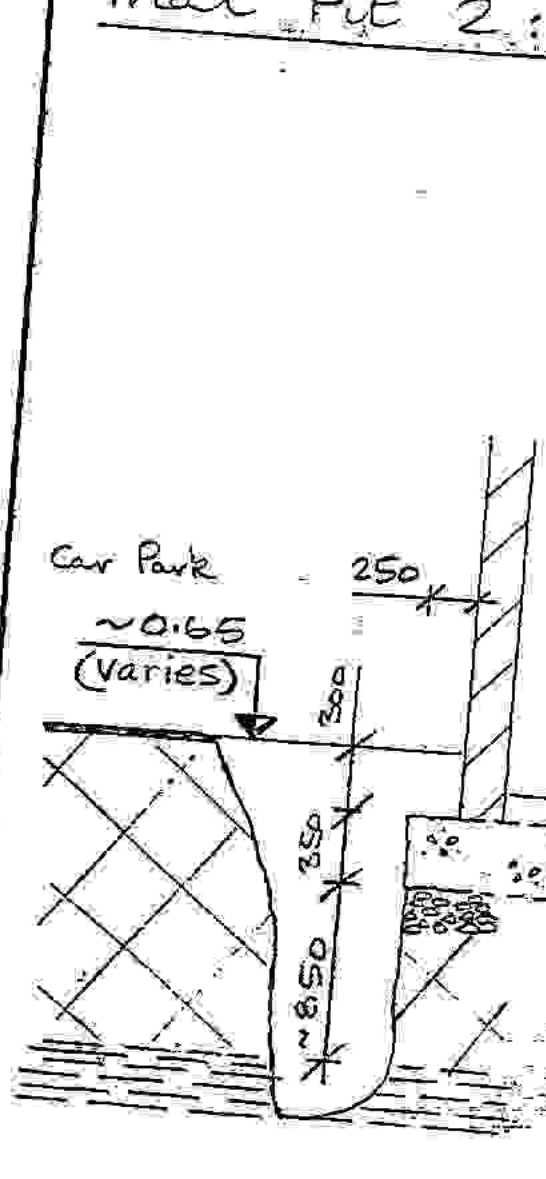
A-A



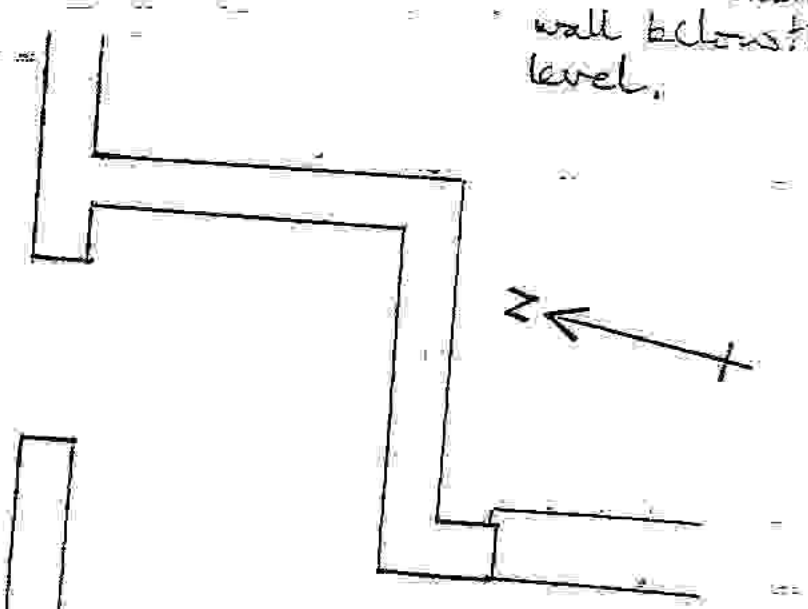
PART PLAN

* West wall to meeting room consists of 100 x 215 blocks laid on the flat up to approx. 625 mm above F.F.L. Wall acts as retaining wall below this level.

Trial Pit 2:



B-B



PART PLAN

Levels are relative to MH cover (0.00) at side entrance to car park.

P.H. Mc CARTHY SON & PARTNERS
CONSULTING ENGINEERS
Rosemount Hall,
Dundrum Road, Dublin 14.
Tel: 01 989377
Fax: 01 989521

Job No.	Sheet No.	Rev
488	2/1	

Contract: Fyrhouse Inn

Structure: Lateral Stability

By	Dates	Rev.	Chkd.
MJ	14·8·91		

Wind Loading:

Basic Wind Speed = 46 m/s

Ground Roughness Category 3, Class B.

$\Rightarrow S_2 = 0.65$, $H \leq 5$ m.

Design wind speed $V_s = 0.65 \times 46 = 29.9$ m/s

$q = 0.613 (29.9)^2 \times 10^{-3} = 0.55$ kN/m²

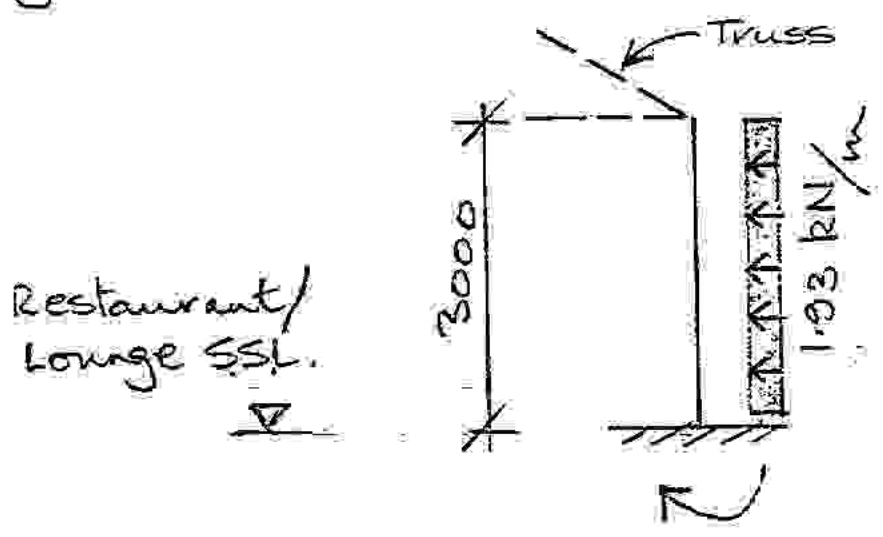
STABILITY OF FACADES ABOVE GROUND FLOOR LEVEL

West Facade : (Grid Line 1)

Stanchions (3 No.) at 3.5 m crs. on Grid Line

$3.5 \times 0.55 = 1.93$ kN/m. ht.

Stanchions are 3 m. high above ground floor slab level



$1.93 \times 3.0 = 5.79$ kN

$1.93 \times \frac{3.0^2}{2} = 8.7$ kNm

Assume stanchion alone resists wind loading.

P.H. Mc CARTHY SON & PARTNERS
CONSULTING ENGINEERS
Rosemount Hall,
Dundrum Road, Dublin 14.
Tel: 01 989377
Fax: 01 989521

Job No.	Sheet No.	Rev
488	2/2	

Contract: Firhouse Inn

Structure: Lateral Stability

By	Dates	Rev.	Chkd.
CMN	14.8.91		

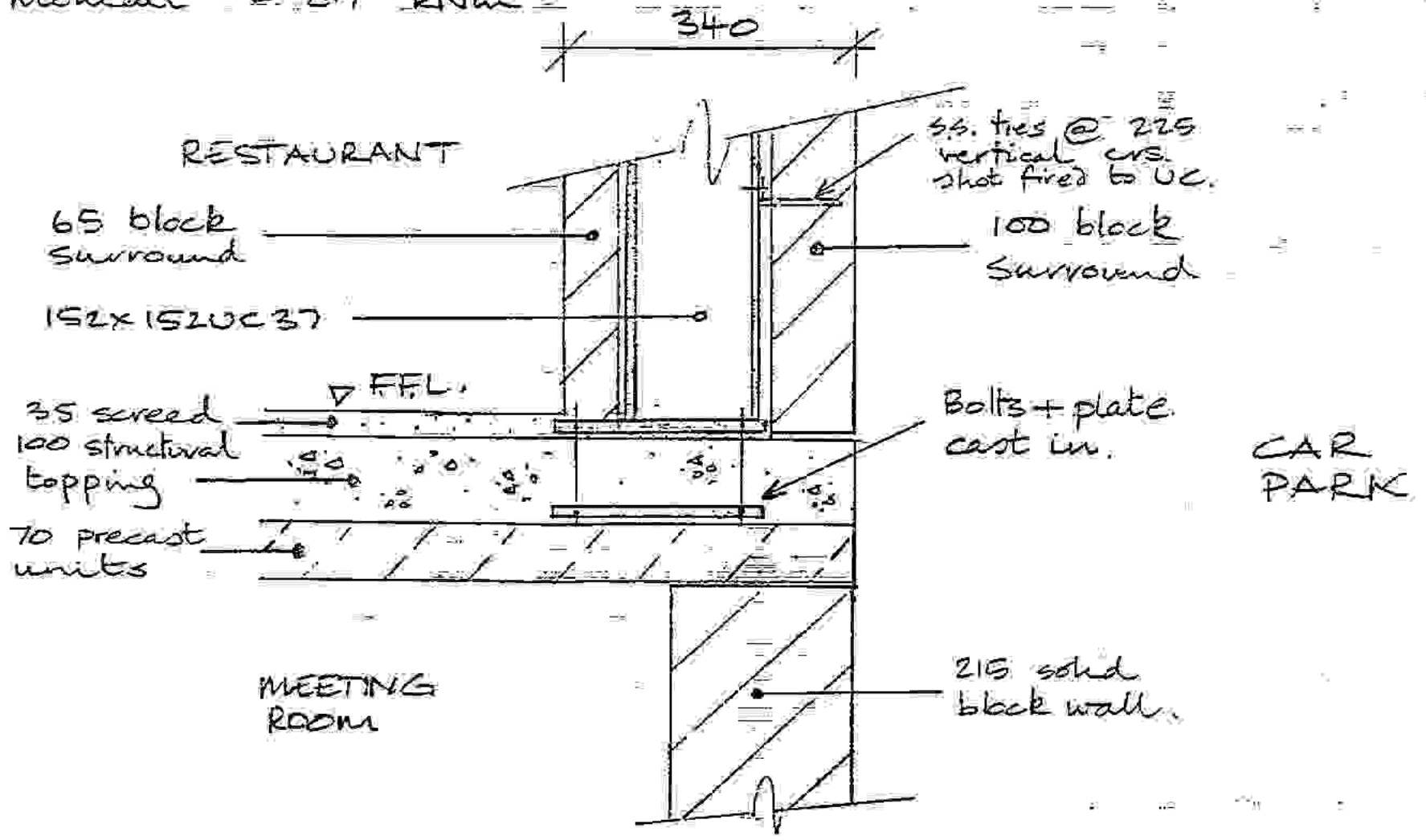
Using a 152 x 152 UC 37

$$\delta_T = \frac{5.79 \times 10^3 \times 3000^3}{8 \times 0.21 \times 10^6 \times 2218 \times 10^4} = 4.2 \text{ mm}$$

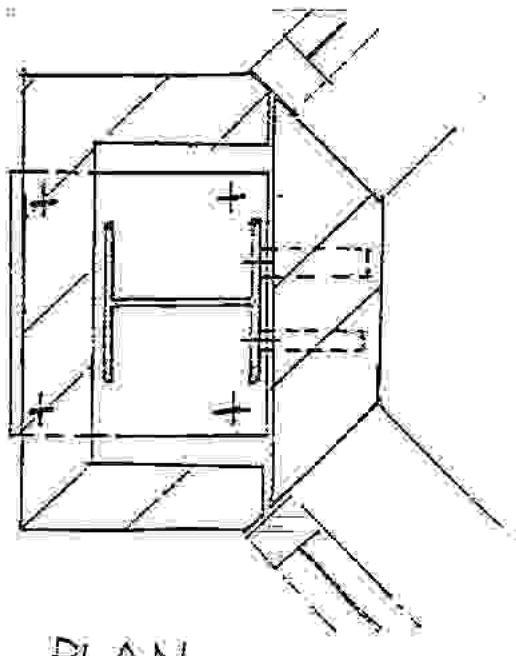
$$\frac{3000}{500} = 6.0 \text{ mm} \quad \delta_T \text{ OK.} \checkmark$$

Base Fixity

Moment = 8.7 kNm



COLUMN BASE FIXING DETAIL



PLAN

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Job No.	Sheet No.	Rev
488	2/3	

Contract: Firhouse Inn

Structure: Lateral Stability

By	Dates	Rev.	Chkd.
AMT	14.8.91		

For bolts at 200 centres (in pairs)

Load per bolt = $\frac{8.7}{0.2 \times 2}$ = 21.8 kN.

M16, grade 8.8

Tensile load capacity = $1.57 \times 280 \times 10^{-1}$

= 44.0 kN ✓ O.K.

Detailed design to be provided by fabricator.

North Facade: (Grid Line A)

As for west facade use 152 x 152 UC 37.

1 No. on Grid Line 2/A intersection.

East Facade: (Grid Line 4)

Lateral Stability provided by return walls which are minimum 100 block x min. 4 metres long.

Stanchions required for lateral stability:

152 x 152 UC 37.*

STABILITY OF FACADES BELOW GROUND FLOOR LEVEL:

Walls generally span vertically between slabs at ground and basement floor levels.

* stanchions also to be checked for adequacy to take vertical loads.

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Job No.	Sheet No.	Rev
488	3/1	

Contract: Firhouse Inn

Structure: Roof.

By	Dates	Rev.	Chkd.
AMJ	1·8·91		

Roof over Kitchen :

Roof structure generally consists of timber trusses spanning from existing flank wall onto top flange of beams RB1 and RB2. Timber roof design by others to take (DL + IL) of (0.75 + 0.75) kN/m² (max.)

Flat Roof :

self wt. ≯ 1.05 kN/m²

max. span ≈ 2200

For 44 × 125's, min SC3, @ 400 c/c

load/m = (1.05 + 0.75) × 0.4 = 0.72 kN/m

$M_{max} = 0.72 \times \frac{2.2^2}{8} = 0.44$ kNm

$\sigma_m = \frac{0.44 \times 10^6}{44 \times 125^2/6} = 3.8$ N/mm²

< 5.3 × 1.1 × 1.25 = 7.3 N/mm²

✓ O.K.

Deflection and Shear OK. by inspection

Flat roof joists spanning 2200 max.

44 × 125's @ 400 c/c (min. SC3)

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Job No.	Sheet No.	Rev
488	3/2	

Contract: Firhouse Inn
Structure: Roof

By	Dates	Rev.	Chkd.
AMS	7.8.91		

Beam RB1 ;

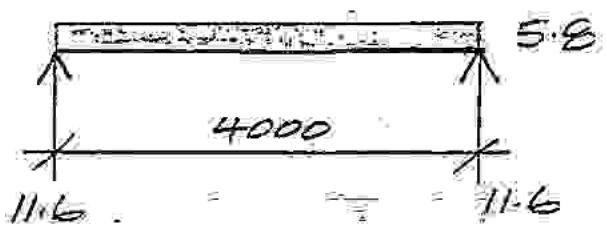
Span ≈ 4000

Roof load ≈ $\frac{5.2}{2} \times (0.75+0.75) + \frac{1.8}{2}^{*} \times (1.05+0.75)$ (Pitched Roof; Flat Roof)

* Average flat roof width

= 5.5 kN/m

self wt
≈ 0.3 kN/m



$M_{max} = 5.8 \times \frac{4^2}{8} = 11.6$ kNm

Using a 203 x 133 UB25

$f_{bc} = \frac{11.6 \times 10^6}{231.9 \times 10^3} = 50$ N/mm²

$D/T = 26.0$ $l/r = \frac{400}{3.10} = 129$

$\Rightarrow P_{bc} = 126$ N/mm²

✓ OK.

$\delta_T = \frac{5 \times 5.8 \times 4000^4}{384 \times 0.21 \times 10^6 \times 2356 \times 10^4} = 3.9$ mm

✓ OK. RB1:

End Bearings: 203 x 133 UB 25

See RB2 calcs.

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Job No.	Sheet No.	Rev
488	3/ 3	

Contract: Firhouse Inn.
Structure: Roof.

By	Dates	Rev.	Chkd.
CMJ	7.8.91		

Beam RB2:

span ≈ 5800

Roof load ≈ $\frac{5.2}{2} \times (0.75+0.75) + \frac{0.8}{2} \times (1.05+0.75)$

= 4.6 kN/m

Self wt
≈ 0.3 kN/m

$M_{max} \approx 4.9 \times \frac{5.8^2}{8} = 20.6$ kNm

Using a 203 x 133 UB 30

$f_{bc} = \frac{20.6 \times 10^6}{279.3 \times 10^3} = 74$ N/mm²

$D/T = 21.5$ $l/r = \frac{580}{3.16} = 183$

$\Rightarrow P_{bc} = 92$ N/mm²

✓ O.K.

$\delta_T = \frac{5 \times 4.9 \times 5800^4}{384 \times 0.21 \times 10^6 \times 2887 \times 10^4} = 11.9$ mm.

$\frac{5800}{360} = 16.1$ mm

✓ O.K.

RB2:

203 x 133
UB 30.

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Job No.	Sheet No.	Rev
488	3/4	

Contract: Firhouse Inn.
Structure: Roof.

By	Dates	Rev.	Chkd.
CME	7.8.91		

End Bearings:

(1). Max. reaction to wall = 14.2 kN (from RB2)

For 100 wide x 400 long x 200 deep mass concrete bearing pad

Brick* Stress = $\frac{14.2 \times 10^3}{100 \times 400} = 0.36 N/mm^2$

Permissible stress = $0.42 \times 1.5 = 0.63 N/mm^2$ ✓ O.K.

* Existing gable wall assumed to be 450 brick set in lime mortar.

(2) Reaction to 215 hollow block wall = 11.6 kN

Ultimate Block Stress = $\frac{1.5 \times 11.6 \times 10^3}{100 \times 400} = 0.44 N/mm^2$

For 215 x 215 x 440 hollow blocks, min. $3.0 N/mm^2$

$f_{fk} = 1.9^* N/mm^2$, $\gamma_m = 3.5$

* 1.5.325, Table 2(b).

Under bearing

Permissible stress = $\frac{1.9}{3.5} \times 1.5^* = 0.81 N/mm^2$

* 50% increase under conc. load

0.4 h below bearing ✓ OK

$\frac{h_{ef}}{t_{ef}} = \frac{2500}{215} = 12$, $e_x \neq 0.25t$

$\Rightarrow \beta = 0.55$

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Job No.	Sheet No.	Rev
488	3/5	

Contract: Firhouse Inn

Structure: Roof.

By	Dates	Rev.	Chkd.
aej	8-8-91		

Stress due to conc. load $\simeq \frac{1.5 \times 11.6 \times 10^3}{1800 \times 215} = 0.04\ N/mm^2$

stress due to self wt. wall + roof load $+ \frac{6.0^{*} \times 10^3}{215 \times 10^3} = 0.03\ N/mm^2$ * load < 6kN/m

$\Sigma = 0.07\ N/mm^2$

Permissible stress $= \frac{1.9}{3.5} \times 0.55 = 0.30\ N/mm^2$

Obviously OK. ✓

Bearing Pads: (2 No.)

100 wide x 400 long x 200 deep mass concrete.

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Job No.	Sheet No.	Rev
488	3/6	

Contract: Pirhouse Inn
Structure: Roof.

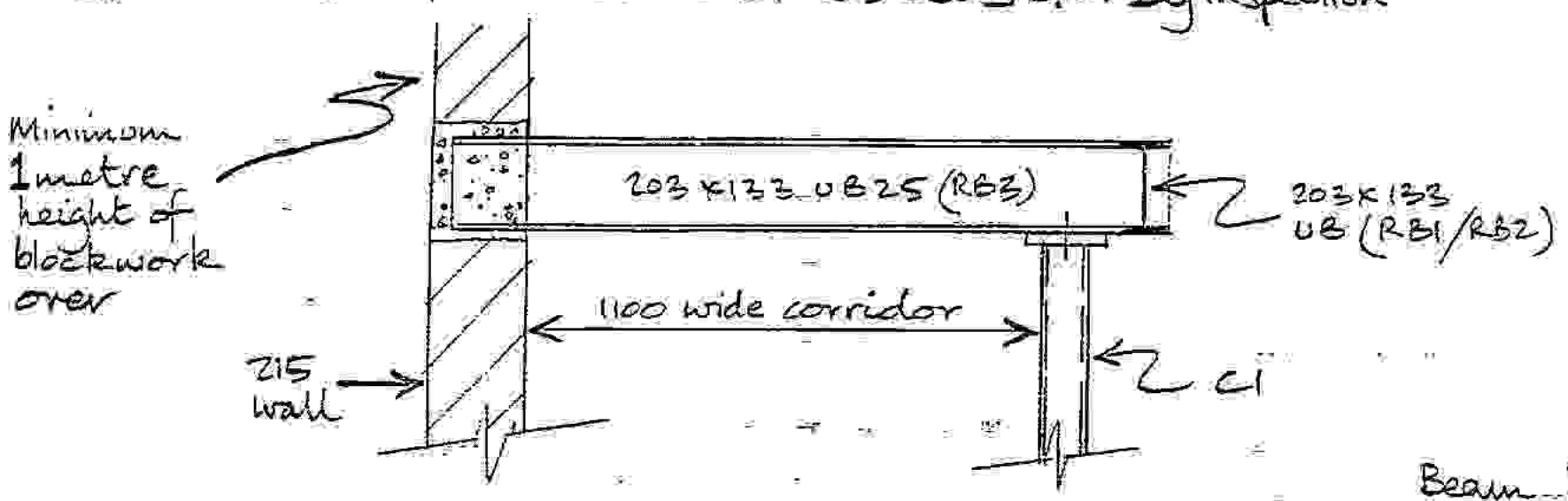
By	Dates	Rev.	Chkd.
CMJ	8-8-91		

Column C1 :

Roof load ≈ 11.6 + 14.2 = 25.8 kN.

Column is approximately 4.6 m. high and takes ~~roof~~ load only.

RB3 cantilevers approx. 150 mm over C1 to pick up reactions from RB1 and RB2. 203 x 133 UB25 O.K. by inspection

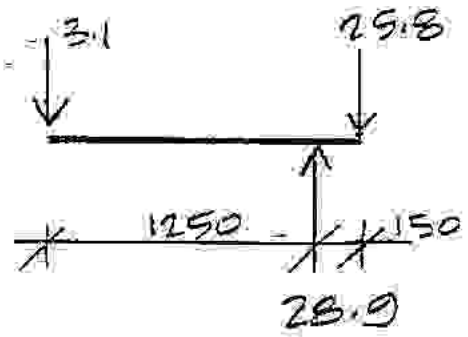


ELEVATION

Beam RB3:

203 x 133 UB 25.

$\frac{25.8 \times 0.15}{1.25} = 3.1$ kN



Load to C1 = 28.9 kN.

Cap connection, e = ≯ $\frac{100}{2}$* = 50 min

* Assume max. 100 sq. RHS.

Moment$_{xx}$ = 28.9 x 0.05 = 1.45 kNm.

RB1 : Minimum Reaction ≈ $\frac{11.6}{2}$ = 5.8 kN.

14.2 − 5.8 = 8.4 kN.

M_{yy} ≯ 8.4 x 0.1 = 0.84 kNm

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Job No.	Sheet No.	Rev
488	3/ 7	

Contract: Firhouse Inn
Structure: Roof.

By	Dates	Rev.	Chkd.
anJ	8.8.91		

Using a 90 x 90 RHS 5.0

$$f_{bc_{xx}} = \frac{1.45 \times 10^6}{45 \times 10^3} = 33 \text{ N/mm}^2$$

$$f_c = \frac{28.9 \times 10^3}{16.9 \times 10^2} = 18 \text{ N/mm}^2$$

$$f_{bc_{yy}} = \frac{0.84 \times 10^6}{45 \times 10^3} = 19 \text{ N/mm}^2$$

$$\ell/r = \frac{470}{3.46} = 136 \Rightarrow P_c = 48 \text{ N/mm}^2$$

$$P_{bc} = 180 \text{ N/mm}^2$$

$$\frac{33+19}{180} + \frac{18}{48} = 0.67$$

$$< 1.0 \quad \checkmark \text{ O.K.}$$

Column C1:

Foundation : 90 x 90 SHS 5.0.

For 600 square pad footing

$$\text{Bearing Pressure} = \frac{25.9 + 0.7^*}{0.6^2} = 83 \text{ kN/m}^2$$

* 4.7 x 0.15 = 0.7 kN.

Bearing assumed to be on firm clay with allowable bearing pressure ≥ 150 kN/m² ✓

Pad Footing:

600 x 600 x 400 (min.) thick mass conc. on ground capable of carrying 83 kN/m²

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Job No.	Sheet No.	Rev
488	3/ 8	

Contract: Fivhouse Inn. Extension & Alterations

Structure: Roof

By	Dates	Rev.	Chkd.
CMT	12-8-91		

Roof over Restaurant/Lounge :

Combined timber and steel trusses spanning 7 metres support roof over main open plan area while roof over toilets consists of prefabricated trusses spanning approx. 4 metres. 215 block wall between restaurant/lounge and toilets is loadbearing.

Roof over toilets :

Roof (DL+IL) incl. ceiling $\simeq (0.75 + 0.75)\ kN/m^2$

Span = 4000

Use timber trussed rafters designed and fabricated by specialist to comply with I.S. 193P and B.S. 5628: Part 3 : 1985.

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Job No.	Sheet No.	Rev
488	3/9	

Contract: Firhouse Inn

Structure: Roof

By	Dates	Rev.	Chkd.
CMT	29.7.91		

Rafters over open plan area:

span ≈ 1500 (max.)

Rafters are continuous over purlins

load/m² ≯ (0.65 + 0.75) = 1.4 kN/m²

For rafters @ 400 crs

M_{max} ≯ $\frac{(1.4 \times 0.4) \times 1.5^2}{8}$ = 0.16 kNm

Using 44 x 75's, min SC3,

$\sigma_m = \frac{0.16 \times 10^6}{44 \times 75^2/6} = 3.9$ N/mm²

Permissible $\sigma_m = 5.3 \times 1.1^{*} \times 1.25^{**} = 7.3$ N/mm² ✓ O.K.

* load sharing factor

** Duration of load factor.

$\tau_{max} = \frac{3}{2} \times \frac{1.5 \times (1.4 \times 0.4) \times 10^3}{44 \times 75} = 0.19$ N/mm²

< 0.67 N/mm² ✓ OK

For rafters @ 600 crs

M_{max} ≈ 0.24 kNm

Using 44 x 75's, min SC3,

$\sigma_m = 3.9 \times 1.5 = 5.9$ N/mm² ✓ O.K.

$\tau_{max} = 0.28$ N/mm² ✓ O.K.

Deflection O.K. by inspection
(no finishes to underside of rafters)

Rafters:

44 x 75's @ max. 600 crs. (span ≯ 1500)

Alternative: 44 x 100's, min. SC3.

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Job No.	Sheet No.	Rev
488	3/10	

Contract: Firhouse Inn
Structure: Roof

By	Dates	Rev.	Chkd.
CMcI	30.7.91		

Purlins:

span ≈ 3500

load/m ≈ $\frac{2.9}{2} \times 1.25 \times (0.75 + 0.75) = 2.72 \text{ kN/m}$ (max) *

* Allows for continuity of rafters over purlin

$2.72 \times \frac{3.5^2}{8} = 4.2 \text{ kNm}$

For 75 x 225 min SC3,

$\sigma_m = \frac{4.2 \times 10^6}{75 \times 225^2/6} = 6.6 \text{ N/mm}^2$

Permissible $\sigma_m = 5.3 \times 1.25 = 6.6 \text{ N/mm}^2$
stress right on the limit

For 2 No 50 x 225's

$\sigma_m = \frac{4.2 \times 10^6}{2 \times 50 \times \frac{225^2}{6}} = 5.0 \text{ N/mm}^2$

For tegral slates on battens on felt on rafters, self wt. (on plan) $\geq 0.65 \text{ kN/m}^2$

$\Rightarrow$ load/m ≈ $\frac{2.9}{2} \times 1.25 \times (0.65 + 0.75) = 2.54 \text{ kN/m}$

$M_{max} = 2.54 \times \frac{3.5^2}{8} = 3.9 \text{ kNm}$

For 75 x 225 min SC3,

$\sigma_m = \frac{3.9 \times 10^6}{75 \times \frac{225^2}{6}} = 6.2 \text{ N/mm}^2$

$< 6.6 \text{ N/mm}^2$ ✓ O.K.

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Job No.	Sheet No.	Rev
488	3/11	*

Contract: Fivhouse Inn

Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	30.7.91		

$$\delta_T = \frac{5 \times 2.5 \times 3500^4}{384 \times 5800 \times 75 \times \frac{225^3}{12}} = 11.8 \text{ mm}$$

No finishes under purlin ∴ acceptable ✓

Shear:

Assume purlin to be notched by max. 75 mm at bearing

$$\tau_{max} = \frac{3}{2} \times \frac{2.5 \times \frac{3.5}{2} \times 10^3}{75 \times 150} = 0.58 \text{ N/mm}^2$$

$$\tau_{adm} = \frac{150}{225} \times 0.67 = 0.45 \text{ N/mm}^2$$

⇒ shear stress too high

Reduce notch to max. 50 mm

$$\tau_{max} = \frac{3}{2} \times \frac{2.5 \times \frac{3.5}{2} \times 10^3}{75 \times 175} = 0.50 \text{ N/mm}^2$$

$$\tau_{adm} = \frac{175}{225} \times 0.67 = 0.52 \text{ N/mm}^2$$

✓ O.K.

Purlins:
(roof self wt. + 0.65 kN/m²)

75 x 225, min. SC3

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Job No.	Sheet No.	Rev
488	3/12	

Contract: Firhouse Inn
Structure: Roof.

By	Dates	Rev.	Chkd
amt	1.8.91		

Hip Rafters:

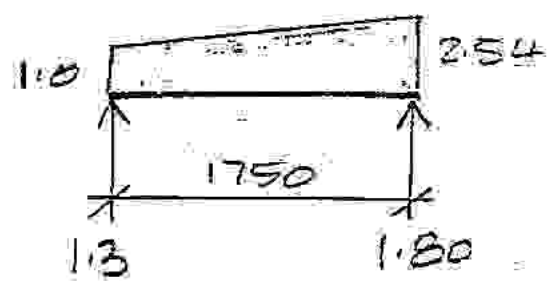
span ≈ 5000 (on plan)

Conc. load from purlin spanning 1750:

UDL (1) * $\frac{1.45}{2}$ x (0.65 + 0.75) = 1.0 kN/m

UDL (2) * $\frac{2.9}{2}$ x 1.25* x (0.65+0.75) = 2.54 kN/m

* Increase load due to continuity of rafters over purlins.



$R_A = 1.0 \times \frac{1.75}{2} + 1.54 \times 1.75 \times \frac{1}{2} \times \frac{1}{3}$

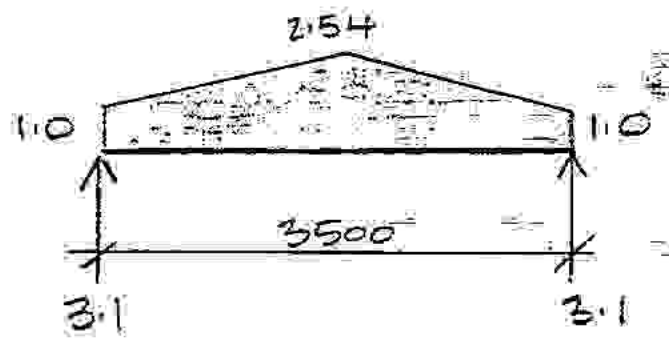
$= 1.3$ kN

$R_B = (1.77 \times 1.75) - 1.3 = 1.80$ kN

Conc. load from purlin spanning 3500:

Min. UDL = 1.0 kN/m

Max. UDL = 2.54 kN/m

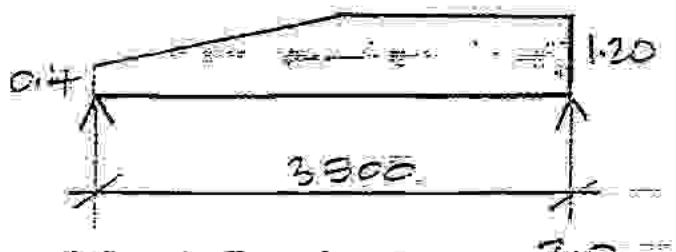


$1.0 \times \frac{3.5}{2} + 1.54 \times 1.75 \times \frac{1}{2} = 3.1$ kN.

Conc. load from purlin spanning 3500 at eaves level:

UDL (1) = 0.3 x (0.65+0.75) = 0.4 kN/m

UDL (2) = (0.3 + 1.45 x 0.375) x (1.4) = 1.20 kN/m



$0.4 \times 1.75 + (0.5 \times 1.75 \times \frac{1}{2}) \times \frac{3.5 - 1.17}{3.5}$
$+ 0.8 \times 1.75 \times \frac{1}{4}$
$= 1.5$ kN

$3.5 - 1.5 = 2.0$ kN

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Job No.	Sheet No.	Rev.
488	3/13	

Contract: Firhouse Inn Development

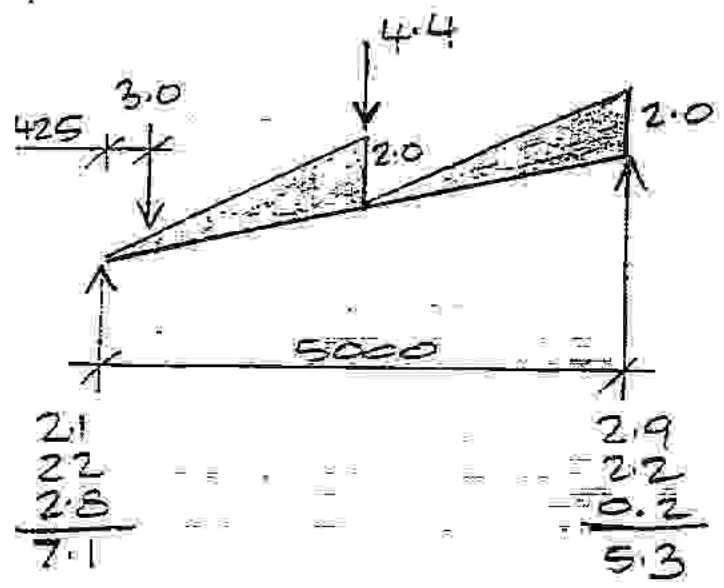
Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	1.8.91		

Conc. load (1) to hip member = 3.1 + 1.3 = 4.4 kN

Conc. load (2) to hip member = 1.5 x 2 = 3.0 kN.

DDL (1) = $2 \times \frac{1.45}{2} \times (0.65 + 0.75) = 2.0$ kN/m



$M_{max} = 7.1 \times 2.5 - 3.0 \times 2.05 - (2.0 \times 2.5 \times \frac{1}{2}) \times \frac{2.5}{3}$

$= 9.5$ kNm

Using 2 No. 50 x 250's, min SC4

$\sigma_m = \frac{9.5 \times 10^6}{2 \times 50 \times \frac{250^2}{6}} = 9.1$ N/mm²

σ_m permissible = $7.5 \times 1.25 = 9.4$ N/mm²

✓ O.K.

No finishes under ∴ deflection not critical.

$\tau_{max} = \frac{3}{2} \times \frac{7.1 \times 10^3}{2 \times 50 \times 250} = 0.43$ N/mm²

< 0.71 N/mm²

✓ O.K.

Hip Members: (4 No.)

2 No. 50 x 250's, min. SC4 bolted together.

(Imported Timber, SCC, equivalent to SC4)

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Job No.	Sheet No.	Rev
488	3/14	

Contract: Firhouse Inn - Development.
Structure: Roof.

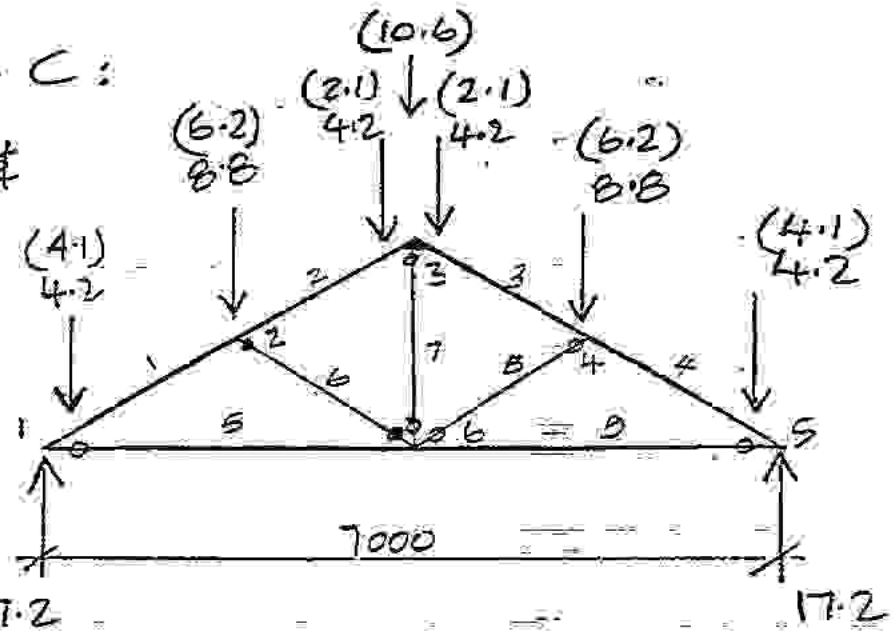
By	Dates	Rev.	Chkd.
CMS	2.8.91		

Trusses :

span = 7000

Truss on grid lines B, C & D.

Grid Line C:
(Grid Line B & D Loading in brackets)



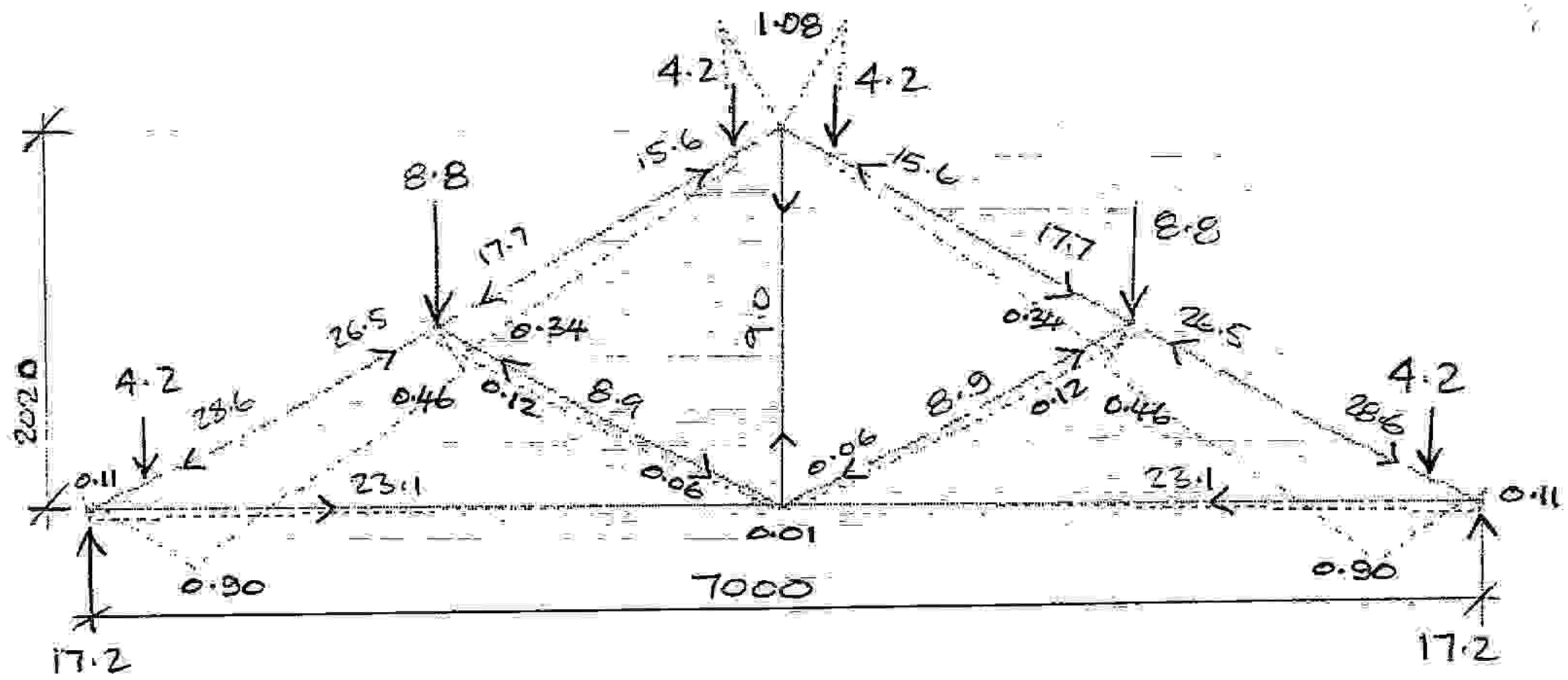
Computer Analysis (by Enfram)

	x	y
1	0	0
2	1750	1010
3	3500	2020
4	5250	1010
5	7000	0
6	3500	0

				A (cm^2)	I (cm^4)
M 1	1	2	4 x 200 MS PLATE	8	266.7
M 2	2	3	"	"	"
M 3	3	4	"	"	"
M 4	4	5	"	"	"
M 5	1	6	4 x 100 MS PLATE	4	50
M 6	2	6	4 x 200 MS PLATE	8	266.7
M 7	3	6	4 x 100 MS PLATE	4	50
M 8	4	6	4 x 200 MS PLATE	8	266.7
M 9	5	6	4 x 100 MS PLATE	4	50

All members butt welded at joints to give full continuity.

E[illegible]02: PLANE FRAME ANALYSIS V3.0 (c) ENCAD SYSTEMS LTD. 1987
Units: S.I. METRIC (Steel) Data File : 4881a



BENDING MOMENT DIAGRAM
(AXIAL LOADS ALSO INDICATED)

X E1 ; DL +LL

MY XZ 5 18.
XSt XZ 4.
FIRHOUSE INN

5.8E-01
27.4954

		A (cm^2)	I (cm^4)
All Members except ties	4 x 200 MS Plate	8	266.7
Tie Members	4 x 100 MS Plate	4	50

Deflection: $\delta_{x_{max}} = \delta_5 = 1.97$ mm. $\delta_2 = -1.124$ mm.
$\delta_{z_{max}} = \delta_6 = 3.01$ mm. $\delta_{2,4} = -2.80$ mm.

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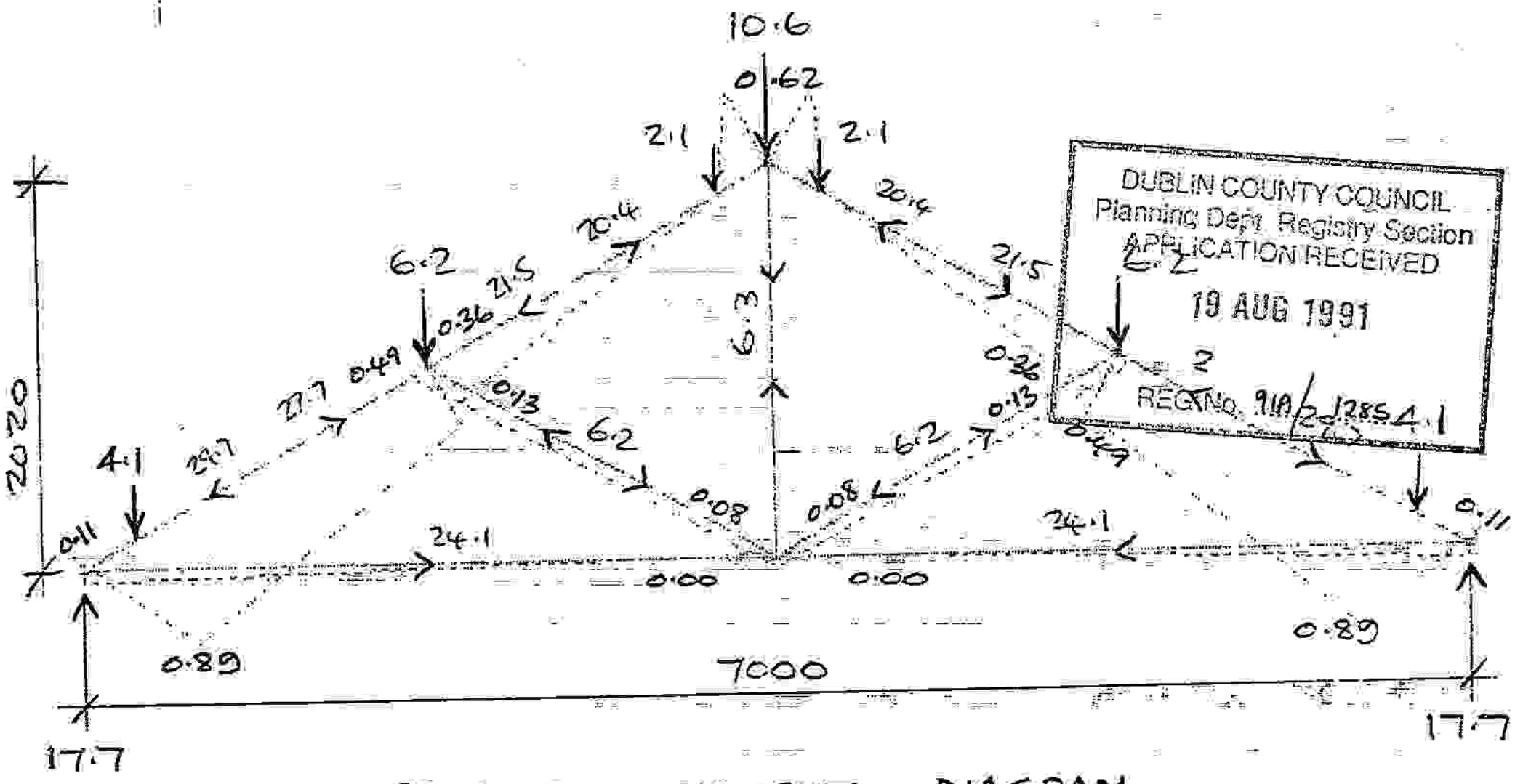
PAGE
JOB NO. 4881B
RUN NO. 1
AUTHOR DM
DATE 14 8 91

FIRHOUSE INN
LOADS B & D

EN102: PLANE FRAME ANALYSIS V3.0 (c) ENCAD SYSTEMS LTD. 1987
Units: S.I. METRIC (Steel) Data File : 4881b



DUBLIN COUNTY COUNCIL
Planning Dept. Registry Section
APPLICATION RECEIVED
19 AUG 1991
REGTNo. 91A/2285 4.1

BENDING MOMENT DIAGRAM
(AXIAL LOADS ALSO INDICATED)

B1 : DC + IL

My XZ 8.E-001

FIRHOUSE INN

		A (cm^2)	I (cm^4)
All Members except ties	4 x 200 ms Plate	8	266.7
Tie Members	4 x 100 ms Plate	4	50

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Job No.	Sheet No.	Rev
488	3/17	

Contract: Firhouse Inn.

Structure: Roof.

By	Dates	Rev.	Chkd.
CMJ	14.8.91		

'Truss' members to have 50 x 225 timber bolted either side to provide lateral restraint. Timbers will also conceal plate to give traditional timber truss appearance

Max. Axial load in Tension = 24.1 kN to eaves tie member.

max. moment to eaves tie member = 0.11 kNm

$$f_t = \frac{24.1 \times 10^3}{4 \times 100} = 61 \ N/mm^2$$

$$f_{bt} = \frac{0.11 \times 10^6}{4 \times 100^2/6} = 17 \ N/mm^2$$

$$\frac{61+17}{165} = 0.47$$

< 1.0 ✓

OK.

Tie Members:

4 x 100 MS Plate OK.

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Job No.	Sheet No.	Rev
488	3/18	

Contract: Fivehouse Inn

Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	14·8·91		

Max. Axial load in compression = 29.7 kN
to rafter members.

Coincident Moment = 0.90 kNm

$$f_c = \frac{29.7 \times 10^3}{4 \times 200} = 38 \text{ N/mm}^2$$

$$f_{bc} = \frac{0.90 \times 10^6}{4 \times 200^2/6} = 34 \text{ N/mm}^2$$

$$\frac{38}{155} + \frac{34}{165} = 0.45$$

✓ OK.

Compression members:

4 x 200 ms Plates.

members to have 50 x 225 timber bolted either side with M16 bolts in pairs @ 400 crs.

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Job No.	Sheet No.	Rev
488	3/ 19	

Contract: Firhouse Inn

Structure: Roof

By	Dates	Rev.	Chkd.
AMT	14.8.91		

Bearings:

Max. Reaction = 17.7 kN.

For bearing on steel beam/column refer calcs. ahead.

Bearing on 215 Block Wall:

Using a 215 x 440 Bearing

$$\text{Ult. Block Stress} = \frac{1.5 \times 17.7 \times 10^3}{215 \times 440} = 0.28 \text{ N/mm}^2$$

O.K. by inspection ✓

Bearing Pads: (2 No.)

215 wide x 440 long x min. 200 deep M.C.

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Job No.	Sheet No.	Rev
488	3/20	

Contract: Firhouse Inn

Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	13-8-91		

Beam RB5:

span ≈ 7000

load from new roof ≈ $\left(\frac{1.42}{2}+0.6\right)\times(0.65+0.75) = 1.9$ kN/m (max.)

load from 215 hollow block = $0.675 \times 3.7 = 2.5$ kN/m.

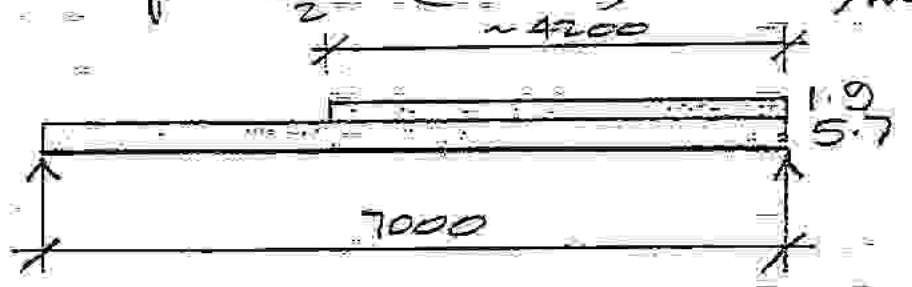
(1) load from existing flat roof* = $\frac{0.9}{2}\times(1.05+0.75) = 0.8$ kN/m

(2) load from existing flat roof** = $\frac{3.0}{2}\times(1.05+0.75) = 2.7$ kN/m

* Asphalt over timber decking

** Assumed loading; span of roof joists to be checked on site.

self wt. = 0.5 kN/m
0.5 + 1.9 + 2.5 + 0.8
= 5.7 kN/m
(5.7 + 1.9 = 7.8)



20.0 + 2.4 = 22.4

20.0 + 5.6 = 25.6

$s_o = \frac{25.6}{7.8} = 3.28$

$M_{max} = 25.6 \times 3.28 - 7.8 \times \frac{3.28^2}{2} = 42.0$ kNm

Using a 305 x 165 UB 40

$f_{bc} = \frac{42.0 \times 10^6}{561.2 \times 10^3} = 75$ N/mm²

$l/r = \frac{700}{3.85} = 182$ $D/T = 29.9$

$\Rightarrow p_{bc} = 79$ N/mm²

f_{bc} close to limit ∴ use 305 x 165 UB 46

$\delta_T = \frac{5 \times 5.7 \times 7000^4}{384 \times 0.21 \times 10^6 \times 8546 \times 10^4} = 8.5$ mm

$\delta < \frac{span}{500} = 14$ mm ✓ O.K

RB5:
305 x 165
UB46

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Job No.	Sheet No.	Rev
488	3/21	

Contract: Firhouse Inn
Structure: Roof.

By	Dates	Rev.	Chkd.
cmj	13.8.91		

End Bearings:

End Beam cleats into RB6 at one end and RB7 at the other.

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Job No.	Sheet No.	Rev
488	3/22	

Contract: Firhouse Inn
Structure: Roof.

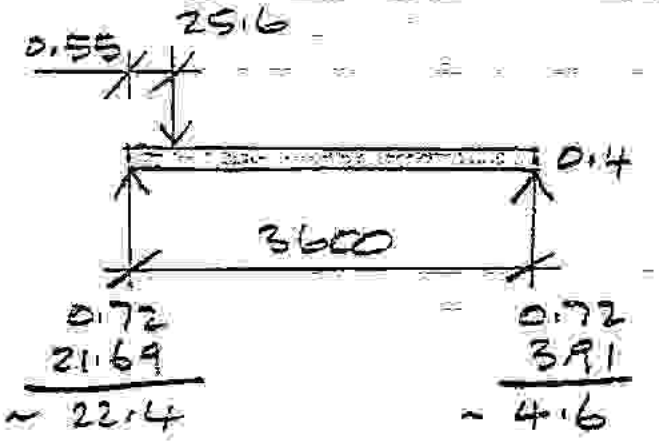
By	Dates	Rev.	Chkd.
CMH	13.8.91		

Beam RB6 :

Span ≈ 3600

Conc. load from RB5 = 25.6 kN.

(existing roof structure to be checked on site to confirm that RB6 does not take any load from existing roof)



$M_{max} = 22.4 \times 0.55 - 0.4 \times \frac{0.55^2}{2}$

$= 12.3$ kNm

Using 203 x 133 UB25

$f_{bc} = \frac{12.3 \times 10^6}{231.9 \times 10^3} = 53$ N/mm²

$l/r = \frac{360}{3.10} = 116$ $D/T = 26.0$

$\Rightarrow P_{bc} = 140$ N/mm² ✓ O.K.

Deflection O.K. by inspection

RB6 :
203 x 133.
UB 25.

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Job No.	Sheet No.	Rev
488	3/23	

Contract: Firhouse Inn
Structure: Roof.

By	Dates	Rev.	Chkd.
CMS	13-8-91		

End Bearings:

Beam bears on existing column/pier both ends.
Columns/piers to be checked for additional loading. Foundations also to be checked.

Provisional:

New steel stanchion on new mc pad footing.
Calculations to be provided if existing structure found to be inadequate

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Job No.	Sheet No.	Rev
468	3/24	

Contract: Fivhouse Inn.
Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	13.8.91		

Beam RB7:

span ≈ 3800.

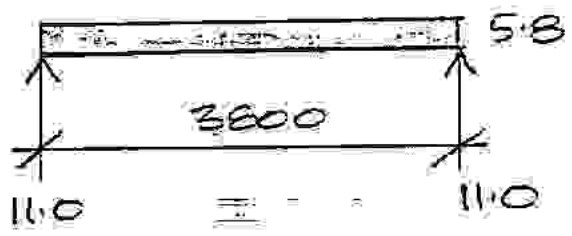
max. roof load ≈ $\left(\frac{2.0}{2}+0.4\right)\times(0.75+0.75)$ = 2.1 kN/m

load from 215 hollow block = 0.675 × 3.7 = 2.5 kN/m

load from existing flat roof = $\frac{0.9}{2}\times(1.05+0.75)$ = 0.8 kN/m

self wt. ≈ 0.4 kN/m

2.1 + 2.5 + 0.8 + 0.4
= 5.8



$M_{max} = 5.8 \times \frac{3.8^2}{8} = 10.5$ kNm

Using a 254 × 146 UB 31

$f_{bc} = \frac{10.5\times10^6}{353.1\times10^3} = 30$ N/mm²

Obviously OK ✓

(146 wide beam chosen to provide adequate bearing for 215 block work)

Deflection O.K. by inspection.

RB7:

254 x 146
UB31

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Job No.	Sheet No.	Rev
488	3/25	

Contract: Fivhouse Inn.
Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	13-8-91		

End Bearings:

(1) At one end beam cleats into RBB

(2) Beam bears on 215 masonry wall.

Assume wall is 215 brick

End reaction = 11.0 kN.

For 215² bearing

Bearing stress = $\frac{11 \times 10^3}{215^2} = 0.24\ N/mm^2$

✓ O.K.

Bearing Pad:

215 x 215 x (min) 150 deep mass concrete + in situ conc. around end of beam.

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Job No.	Sheet No.	Rev
488	3/26	

Contract: Firhouse Inn

Structure: Roof

By	Dates	Rev.	Chkd.
AMJ	13.8.91		

Beam RB8

span = 5600

Conc. load from Truss = 17.7 kN.

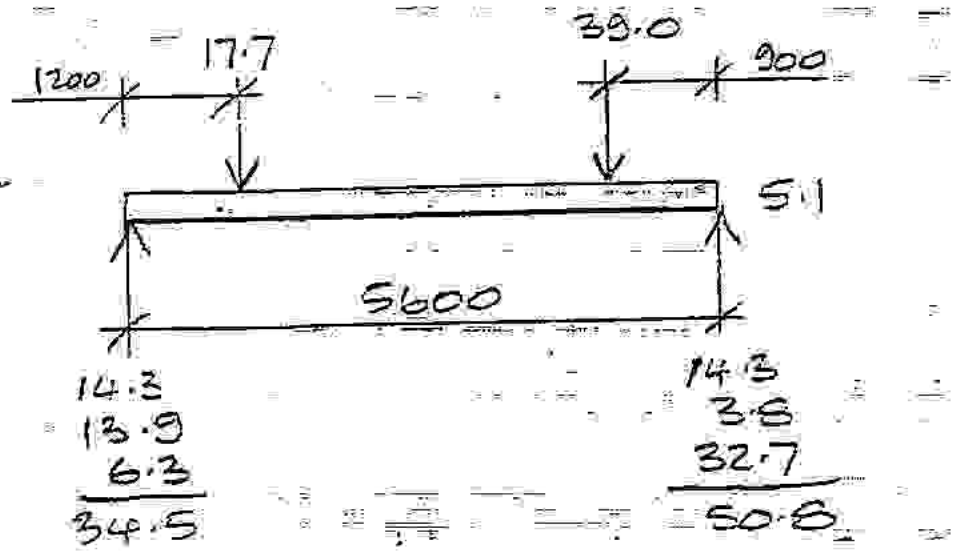
Conc. load from Hip Beam = 5.6* kN. * (7.1 − 1.5) = 5.6

Conc. load from RB5 & RB7 = 22.4 + 11.0 = 33.4 kN.

Roof load (max) ≈ $\frac{4.0}{2}$ × (0.75 + 0.75) = 3.0 kN/m

self wt. ≈ 0.6 kN/m

self wt. 450 high × 25 hollow block
= 0.45 × 3.3
= 1.5 kN/m



s_o = (34.5 − 17.7)/5.1 = 3.29 m from L.H.S.

M_{max} = 34.5 × 3.29 − 17.7 × 2.09 − 4.0 × $\frac{3.29^2}{2}$

= 50.0 kNm

Using a 305 × 165 UB40

f_{bc} = $\frac{50.0 \times 10^6}{561.2 \times 10^3}$ = 89 N/mm²

ℓ/r = $\frac{560}{3.85}$ = 146 D/T = 29.9

⇒ P_{bc} = 109 N/mm² ✓ ok. RB5:

$\delta_T \approx \frac{5 \times (34.5 + 50.8) \times 10^3 \times 5600^3}{384 \times 0.21 \times 10^6 \times 8523 \times 10^4}$ = 10.9 mm

305 × 165 UB 40.

✓ OK.

$\frac{5600}{500}$ = 11.2 mm.

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Job No.	Sheet No.	Rev
488	3/27	

Contract: Firhouse Inn
Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	13.8.91		

Bearings:

(1) End reaction = 50.8 kN.

bearing on assumed 215 hollow block wall.

Ultimate reaction ≈ 1.5 × 50.8 = 76.2 kN.

For 215 × 440 bearing

ult. block stress = $\frac{76.2 \times 10^3}{215 \times 440}$ = 0.81 N/mm²

For 215 × 215 × 440 hollow blocks, min. 3.0 N/mm²

f_k = 1.9 N/mm², γ_m = 3.5

Under bearing,

permissible stress = $\frac{1.9}{3.5} \times 1.5^*$ = 0.81 N/mm²

* 50% increase under conc. load.

Just OK. ✓

0.4h below bearing;

stress OK: by inspection

(load spreads at 45° in both directions

(1)
Bearing on existing wall:

215 wide × 440 long × 215 deep mass conc. bearing pad + insitu conc. around end of beam.

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488	3/ 28	

Contract: Firhouse Inn.
Structure: Roof

By	Dates	Rev.	Chkd.
CMT	13-8-91		

(2) End reaction = 34.5 kN.

bearing on new 215 hollow block wall.

For 215 x 440 bearing

Ult. block stress = $\frac{1.5 \times 34.5 \times 10^3}{215 \times 440} = 0.55 \equiv N/mm^2$

Perm. stress = $\frac{3.2^*}{3.5} \times 1.5 = 1.37\ N/mm^2$

* 5 N/mm² blocks

✓ OK.

(2) Bearing on 215 hollow block wall:

215 wide x 440 long x 215 deep mass conc. bearing pad + insitu conc. around end of beam.

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Job No.	Sheet No.	Rev
488	3/29	

Contract: Firhouse Inn
Structure: Roof.

By	Dates	Rev.	Chkd.
CMT	14·8·91		

Columns :

Columns 1/A, 1/B, 1/C and 2/C :

Max. truss reaction (to 1/B) = 17.7 kN.

Loading to lintels over bay windows

Roof load ≈ 0.6 × (0.65+0.75) = 0.9 kN/m

Wall load ≈ 1.0 × (3.1+2.6)* = 5.7 kN/m

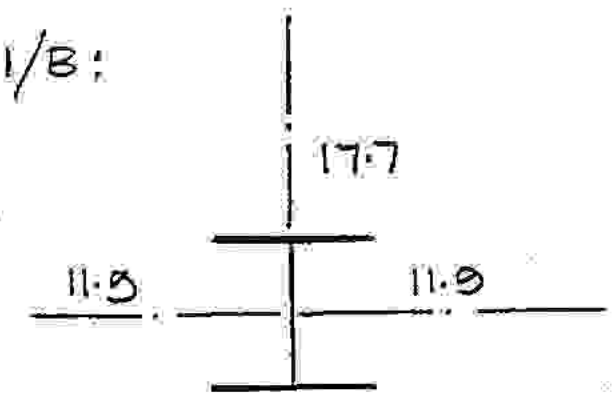
*(140+100) block cavity wall.

self wt. lintel ≈ 0.2 kN/m

∴ lintel load/m. run = 6.8 kN/m

Reaction to column from lintel = $6.8 \times \frac{3.5}{2} = 11.9$ kN

1/B:



$\Sigma R = 17.7 + 11.9 \times 2$
$= 41.5$ kN.

Truss to have cap connection on column

$\Rightarrow M_{xx} \approx 17.7 \times 0.08 = 1.4$ kNm

$l^{*}_{xx} = 1.5 \times 3000 = 4500$

$l_{yy} = 0.75 \times 1600^{**} = 1200$

* See BS449, Figure 16

** = ht. of bay window (Above & below window block leafs restrain column laterally)

Column to be minimum 152 × 152 UC 37 for lateral stability purposes (- see back. lateral stability calcs.)

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Job No.	Sheet No.	Rev
488	3/30	

Contract: Firhouse Inn
Structure: Roof

By	Dates	Rev.	Chkd.
CMT	14·8·91		

$$\frac{l_{xx}}{r_{xx}} = \frac{450}{6.84} = 66$$

$$\frac{l_{yy}}{r_{yy}} = \frac{120}{3.87} = 31$$

$\Rightarrow$ $P_b = 165 \text{ N/mm}^2$

$P_c = 120 \text{ N/mm}^2$

At head of column

$$f_{bc_{xx}} = \frac{1.4 \times 10^6}{274.2 \times 10^3} = 6 \text{ N/mm}^2$$

$$f_c = \frac{41.5 \times 10^3}{47.4 \times 10^2} = 9 \text{ N/mm}^2$$

$$\frac{6}{165} + \frac{9}{120} << 1.0 \quad \checkmark \text{ O.K.}$$

At base of column

$$f_{bc_{xx}} = \frac{8.7^{*} \times 10^6}{274.2 \times 10^3} = 32 \text{ N/mm}^2$$

$$\frac{32}{165} + \frac{9}{120} << 1.0 \quad \checkmark \text{ O.K.}$$

* See back lateral stability calcs for derivation of Moment.

For other columns loading less 152 x 152 UC 37 O.K. by Inspection.

Refer lateral stability calcs for base fixing detail.

Columns 1/A, 1/B, 1/C and 2/C:
152x152UC37

Eaves Tie Beams:
127x64 [.

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Job No.	Sheet No.	Rev
488	4/ 1	

Contract: Firhouse Inn
Structure: Ground Floor

By	Dates	Rev.	Chkd.
AMJ	15·8·91		

Ground Floor:

Floor to extension:

Floor generally consists of 100 r.c. slab cast-in-situ over 70 precast concrete units (1200 wide) to give 170 (overall) slab.

Floor load * 5.1 + 5.0 = 10.1 kN/m²

Slab continuous over 2 spans of 3.5 m.

Detailed design to be provided by precast units manufacturer.

Cantilever:

span = 1000 max. (at centre of window bays)

Wall load = 0.8 × (3.1 + 2.6)* = 4.6 kN/m

Glazing load ≈ 0.6 × 1.5 = 0.9 kN/m

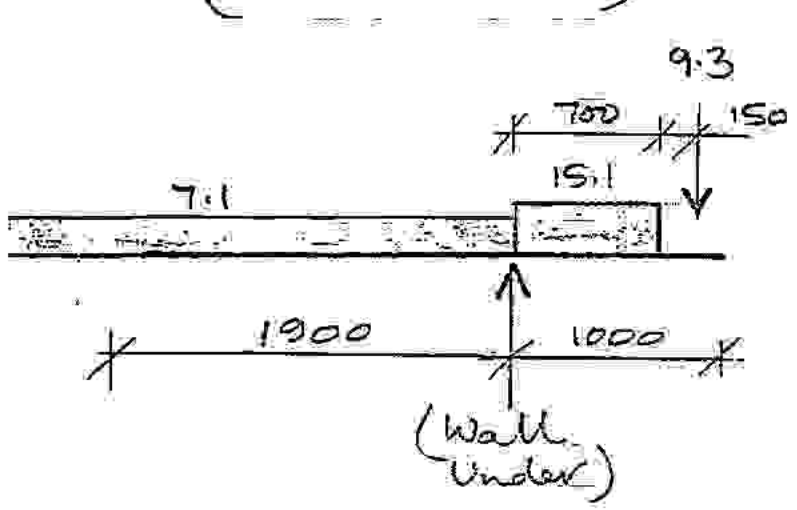
Roof load * $\frac{0.9}{2}$ × (0.75 + 0.75) = 0.7 kN/m

Σ = 4.6 + 0.9 + 0.7 = 6.2 kN/m

Ult. load < 1.5 × 6.2 = 9.3 kN/m

Floor ult. load = (1.4 × 5.1 + 1.6 × 5.0) = 15.1 kN/m

* Allow for 140 block + 100 block cavity wall, conservative as inner leaf may be 100 block.



9.3 × 0.85 + 15.1 × 0.7²/2 = 11.6

7.1 × $\frac{1.9^2}{2}$ = 12.8 kNm

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Job No.	Sheet No.	Rev
488	4 / 2	

Contract: Firhouse Inn

Structure: Ground Floor.

By	Dates	Rev.	Chkd.
AMC	16.5.91		

$M_{ult} = 9.3 \times 0.85 + 15.1 \times \frac{0.7^2}{2}$

$= 11.6 \text{ kNm/m.}$

Assume 25 cover, $\Rightarrow d = 170 - 25 - \frac{16}{2} = 137 \text{ mm}$

$K = \frac{11.6 \times 10^6}{10^3 \times 137^2 \times 35} = 0.018$

$< 0.042 \Rightarrow z \quad 0.95 d = 130 \text{ mm}$

$A_s \text{ required} = \frac{11.6 \times 10^6}{.87 \times 460 \times 130} = 223 \text{ mm}^2$

A393 mesh = $393 \text{ mm}^2/\text{m}$

✓ OK.

Shear OK by inspection.

Deflection:

Basic $l/d = \frac{1000}{137} = 7.3$

$\frac{M}{bd^2} = \frac{11.6 \times 10^6}{10^3 \times 137^2} = 0.62 \Rightarrow$

$\Rightarrow$ modification Factor $\times$ 1.59*

* Table 3.11, BS 8110

$1.59 \times 7 = 11.1 =$ Allowable l/d ratio

$7.3 < 11.1$ ✓ OK.

Cantilevered Bays:

170 slab OK. with A393 mesh top.

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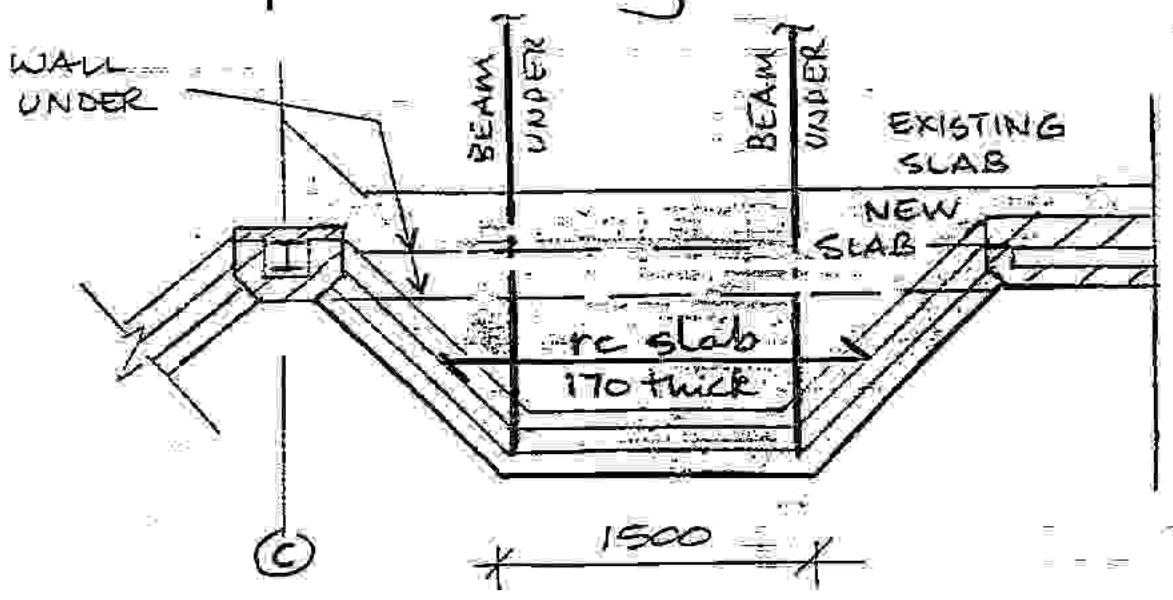
Job No.	Sheet No.	Rev
486	4/ 3	

Contract: Firhouse Inn.
Structure: Ground Floor.

By	Dates	Rev.	Chkd.
CMT	16.8.91		

Cantilever from Existing Slab:



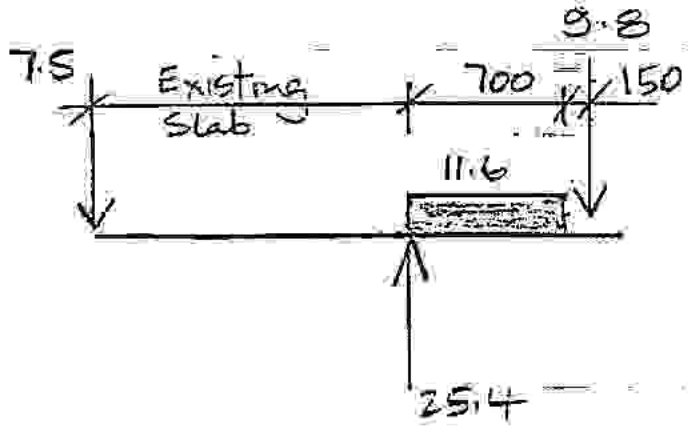
PART PLAN GROUND FLOOR

Steel beams (2 No.) bolted to soffit of existing r.c. floor slab cantilever over 215 block wall (at basement level) to support r.c. slab to window bay.

Load to beams:

Conc. load $= \left(\frac{1.5}{2} + \frac{1.2}{2}\right) \times \underset{\text{wall load per metre}}{6.2} + \underset{\text{self wt. slab}}{0.3 \times 4.8} = 9.8\ kN$

UDL $= \frac{0.8+1.5}{2} \times (5.1+5.0) = 11.6\ kN/m$



(7.5 + 9.8 + 11.6 × 0.7)

$= 25.4\ kN$

$M_{support} = 9.8 \times 0.85 + 11.6 \times \frac{0.7^2}{2}$

$= -11.2\ kNm$

$\frac{11.2}{1.5} = 7.5\ kN$

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Job No.	Sheet No.	Rev
488	4/4	

Contract: Firhouse Inn
Structure: Ground Floor

By	Dates	Rev.	Chkd.
CMJ	16.8.91		

Using a 127 x 76 UB 13

$$f_{bc} = \frac{111.2 \times 10^6}{75 \times 10^3} = 150 \text{ N/mm}^2$$

$$l/r = \frac{1000}{18.3} = 55$$

$$\Rightarrow p_{bc} = 165 \text{ N/mm}^2 \checkmark$$

$$\delta_T \approx \frac{9.8 \times 10^3 \times 850^3}{3 \times 0.21 \times 10^6 \times 477 \times 10^4} + \frac{11.6 \times 700^4}{8 \times 0.21 \times 10^6 \times 477 \times 10^4}$$

$$= 2.0 + 0.35 = 2.35 \text{ mm.}$$

✓

Slab:

Slab spans across beams which are approx. 1400 mm apart.

170 r.c. slab O.K. by inspection with A393 mesh top & bottom.

Cantilever Beams: (2No.)

127 x 76 UB 13 extending for 1500 mm under existing slab and bolted to soffit of existing slab with 25 dry pack between beam top flange and soffit of slab.

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Contract: Firhouse Inn.

Structure: Ground Floor.

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cmj	17.8.91		

Raised Floor in Existing Lounge Area:

Floor level to be raised by approx 700 mm (between grid lines D & E)

125 r.c. slab supported on 550 high x 100 thick dwarf block walls and spanning max. 1500 mm — obviously OK with 1 layer A393 mesh (B).

Existing Lounge Floor slab to be checked for adequacy to take additional loading

small trial hole to be dug to check slab thickness and bearing capacity of material under.

Raised Floor in existing Lounge Area:
125 rc slab, A393 mesh (B).

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Contract: Firhouse Inn.
Structure: Ground Floor.

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Existing Floor Structures:

(a) Floor to Gents & Ladies Toilets:

Floor is an r.c. slab cast-in-situ and spanning 4.2m (Gents) and 3.3m (Ladies)

Size and spacing of reinforcement to be checked using cover meter. Also slab thickness and concrete strength to be determined.

Slabs to be checked for adequacy to take 5 kN/m² imposed load.

Floor slab to Existing Gents & Ladies Toilets:

IF inadequate slab spans to be reduced by insertion of steel structure at basement level.

Check for adequacy to take imposed load of 5 kN/m²

(b) Existing r.c. roof slab:

Slab is cast-in-situ and continuous over 2 spans of 2.4 and 2.15 metres.

Slab should be OK for imposed loading of 5 kN/m² by inspection.

75 structural topping + 1 layer A142 mesh to be cast over slab to ensure slab has top reinforcement.

R.C. Roof Slab:
Add 75 structural topping + 1 layer A142 mesh.

See Basement calculations for strengthening to downstand beams supporting roof slab.

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(c) Steel Beam / Timber Joist Floor.

Joists;

span = 2300 max.

Joists are 44 x 175's @ 375 crs.

Load/m = 0.375 x (0.5 + 3.0) = 1.3 kN/m

$M_{max} = 1.3 \times \frac{2.3^2}{8} = 0.86$ kNm

$\sigma_m = \frac{0.86 \times 10^6}{45 \times 175^2/6} = 3.7$ N/mm²

✓ O.K.

$\tau_{max} = \frac{3}{2} \times \frac{1.3 \times \frac{2.3}{2} \times 10^3}{45 \times 125^*} = 0.40$ N/mm²

✓ O.K.

* Assumed 50 notch in top.

Existing 45 x 175's O.K. for imposed load of 3 kN/m²

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Beams:

5 No. existing beams = EB1 - EB5.

All are assumed 152 x 152 UC23's.

EB1 : span ≈ 6700

EB2 : span ≈ 6500

EB3 : span ≈ 5700

EB4 : span ≈ 5200

EB5 : span ≈ 5000

EB1 :

$$\text{load/m} = \left(0.1 + \frac{2.3}{2}\right) \times (0.5 + 3.0) = 4.4 \text{ kN/m}$$

$$M_{max} = (4.4 + 0.3) \times \frac{6.7^2}{8} = 26.4 \text{ kNm}$$

$$f_{bc} = \frac{26.4 \times 10^6}{165.7 \times 10^3} = 160 \text{ N/mm}^2$$

$$\delta_t = \frac{.5 \times 4.7 \times 6700^4}{384 \times 0.21 \times 10^6 \times 1263 \times 10^4} = 46.5 \text{ mm}$$

Deflection unacceptable

Bending stress too high unless joists are assumed to provide effective lateral restraint — not a reasonable assumption in this case.

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EB2 & EB3:

$$\text{load/m} \approx \frac{4.5}{2} \times (0.5 + 3.0) = 7.9 \text{ kN/m}$$

For EB3:

$$M_{max} = (7.9 + 0.3) \times \frac{5.7^2}{8} = 33.3 \text{ kNm}$$

$$f_{bc} = \frac{33.3 \times 10^6}{165.7 \times 10^3} = 201 \text{ N/mm}^2$$

⟹ EB2 & EB3 overstressed.

New Pier & Beam;

440 x 440 solid block pier to be built up to underside of EB3 to reduce span to max. 4500*.

* EB3 to be flame cut over pier to ensure no continuity.

EB3 spanning 4500:

$$M_{max} = 8.2 \times \frac{4.5^2}{8} = 20.8 \text{ kNm}$$

$$f_{bc} = \frac{20.8 \times 10^6}{165.7 \times 10^3} = 126 \text{ N/mm}^2$$

$$e/r = \frac{450}{3.68} = 123 \quad D/T = 22.3 \Rightarrow P_{bc} = 139 \text{ N/mm}^2$$

✓ OK.

$$\delta_T = \frac{5 \times 8.2 \times 4500^4}{384 \times 0.21 \times 10^6 \times 1263 \times 10^4} = 16.5 \text{ mm}$$

Acceptable as there are no finishes to beam soffit ✓

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Contract: Firhouse Inn
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Beam GB1:

span ≈ 4800.

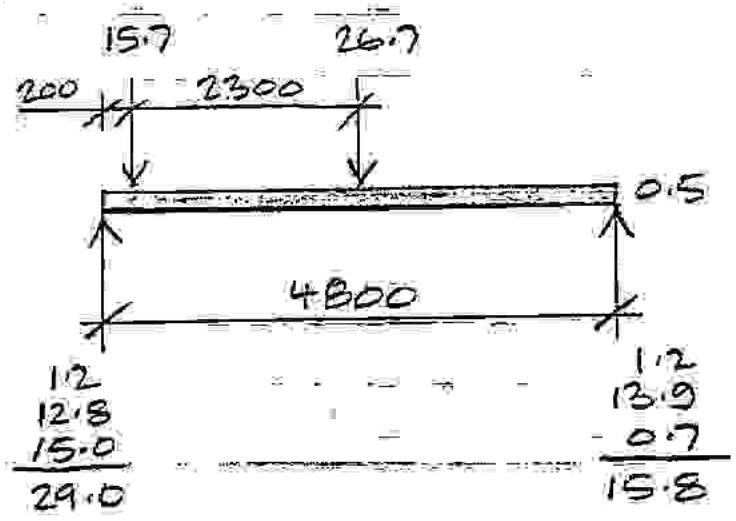
Reaction from EB1

$= \left(\frac{4.5}{2} + \frac{2.2}{2}\right) \times 4.7 = 15.7$ kN.

Reaction from EB2:

$= \left(\frac{4.5}{2} + \frac{2.0}{2}\right) \times 8.2 = 26.7$ kN.

Self wt
≈ 0.5 kN/m



$M_{max} = 15.8 \times 2.3 - 0.5 \times \frac{2.3^2}{2}$

$= 35.0$ kNm

Using a 203 x 203 UC 46

$f_{bc} = \frac{35.0 \times 10^6}{449.2 \times 10^3} = 78$ N/mm²

$l/r = \frac{460}{5.11} = 94$ $D/T = 18.5$

$\Rightarrow p_{bc} = 165$ N/mm²

✓ OK.

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$\delta_T \approx \frac{26.7 \times 10^3 \times 4800^3}{48 \times 0.21 \times 10^6 \times 4564 \times 10^4} = 6.4$ mm.

obviously OK. ✓

GB1:

203x203
UC46

Bearings:

(1) Reaction = 29.0 kN.

Using a 440 x 215 bearing pad

Ult Block Stress $\approx \frac{1.5 \times 29 \times 10^3}{440 \times 215} = 0.46$ N/mm²

Under Bearing, for 3 N/mm² hollow blocks

Perm. stress $= \frac{1.9}{3.5} \times 1.5 = 0.81$ N/mm²

0.4h below bearing: ✓ O.K.

Stress O.K. by inspection.

(2) Reaction = 15.8 kN

Beam bears on bearing pad on new pier. See overleaf for calcs.

Bearings:

(1) 215 wide x 440 long x min 200 deep mc bearing pad + in-situ conc. around end of beam.

(2) Bearing pad on new pier.

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440^2 Block Pier:

Reaction from GB1 = 15.8 kN

Reaction from EB3 = $\frac{5.7}{2} \times 8.2 = 23.4$ kN.

Σ = 15.8 + 23.4 = 39.2 kN

Pier to have 440^2 x min. 150 deep mc bearing pad on ~~top~~ to spread loads.

self wt. pier $\approx .44^2 \times 21 \times 1.8 = 7.3$ kN

Ult. block Stress = $\frac{1.5 \times (39.2+7.3) \times 10^3}{440^2} = 0.36 N/mm^2$

Even for 3 N/mm^2 hollow blocks

perm. stress $\approx \frac{1.9}{3.5} = 0.54 N/mm^2$ ✓

OK

Pier:

440 x 440 solid block pier with 440^2 x 150 deep mc bearing pad over + in situ conc. around ends of beams

Foundation:

For 800 x 800 ~~footing~~

Bearing Pressure = $\frac{46.5}{0.8^2} = 73 kN/m^2$ ✓

Foundation:

800 x 800 x min. 400 thick mc pad footing.

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Pier under Beam EB4:

215 wide x 880 long block pier will reduce beam span from approx. 5200 to 4400 max.

Span < 4500 ⇒ EB4 O.K. by inspection

Reaction to pier = $5.2^{*} \times \frac{4.4}{2} = 18.0$ kN. * load/m as for EB2 & EB3.

For 215 x 440 bearing pad

Ult. block stress < $\frac{1.6 \times 18.0 \times 10^3}{440 \times 215} = 0.30$ N/mm²

O.K. by inspection ✓

Foundation:

self wt. pier ≈ $.215 \times 0.88 \times 21 \times 18 = 7.2$ kN.

$\Sigma = 7.2 + 18.0 = 25.2$ kN

For a 450 wide x 1000 long strip footing

Bearing Pressure ≈ $\frac{25.2}{.45 \times 1.0} = 56$ kN/m².

✓ O.K.

Pier under EB4:

215 w x 880 L solid block pier with 215 x 440 x min. 200 deep mc bearing pad under beam.

Footing:

450 wide x 1000 long x min. 250 thick mass conc.

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Structure: Ground Floor.

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Beam EB5:

span = 5000

load/m $\simeq \left(0.1 + \frac{2.2}{2}\right) \times (0.5 + 3.0) = 4.2$ kN/m

$M_{max} = (4.2 + 0.2) \times \frac{5.0^2}{8} = 13.8$ kNm

$f_{bc} = \frac{13.8 \times 10^6}{165.7 \times 10^3} = 84$ N/mm^2

$f_y = \frac{500}{3.68} = 136$ $\quad D/T = 22.3$

$\Rightarrow P_{bc} = 127$ N/mm^2

✓ O.K.

$\delta_T = \frac{5 \times 4.4 \times 5000^4}{384 \times 0.21 \times 10^6 \times 1263 \times 10^4} = 13.5$ mm

✓ O.K.

EB5 OK, for 3.0 kN/m^2 imposed load.

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Contract: Firhouse Inn
Structure: Ground Floor

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CMT	17.8.91		

Lintels:

Main lintels are lintels over bay windows.

Span = 3500.

Load/m. run = 6.8* kN/m

* See back column calcs.

'Steelite' type galvanised steel lintel to be used with safe working load exceeding 6.8 kN/m.
(Total 5 No.)

Lintels over bay windows:

Galvanised Steel by 'Steelite' Ltd.

(5 No. total)

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Contract: Firhouse Inn

Structure: Basement.

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Beam on GL. 3 :

span = 3700.

Roof load (Average) $\simeq \frac{4.0}{2} \times (0.75+0.75) + \frac{7.0}{2} \times (0.65+0.75)$

$= 7.9$ kN/m

215 hollow block wall* $\simeq 3.4 \times 3.2 = 10.9$ kN/m

Floor load $\simeq \frac{2.4}{2} \times (6.9^{**} + 5.0) = 14.3$ kN/m

$\Sigma = 7.9 + 10.9 + 14.3 = 33.1$ kN/m

self wt. $\simeq 0.5$ kN/m

* Assume applies over full length of beam. (conservative)

** 75 topping over exg. slab = 5.1 + 1.8 = 6.9.

$M_{max} = 33.6 \times \frac{3.7^2}{8} = 57.5$ kNm

Using a 203 x 203 UC 46

$f_{bc} = \frac{57.5 \times 10^6}{449.2 \times 10^3} = 128$ N/mm^2

$l/r = \frac{370}{5.11} = 73 \Rightarrow p_{bc} = 165$ N/mm^2

✓ O.K.

$\delta_T = \frac{5 \times 33.6 \times 3700^4}{384 \times 0.21 \times 10^6 \times 4504 \times 10^4} = 8.6$ mm

Acceptable ✓

Beam on GL 3: 203 x 203 UC 46.

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Contract: Firhouse Inn
Structure: Basement.

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CMT	17.8.91		

Bearings:

(1) Reaction = 622 kN (2) Similar.

At both ends beam bears on 215 wide x 440 long solid block pier (min. 5 N/mm²)

For 215 wide x 440 long bearing

Ult. Block Stress $\approx \frac{1.5 \times 622 \times 10^3}{215 \times 440} = 0.99 \text{ N/mm}^2$

Perm. stress at bearing $= \frac{3.2}{3.5} \times 1.5 = 1.37 \text{ N/mm}^2$

✓ O.K.

Bearings:

440 x 215 x min. 200 deep mass conc. bearing pad (2 No.)

Foundation:

Worst case is under 800 x 600 pad footing.

Bearing Pressure $= \frac{622 + 20^*}{0.8 \times 0.6} = 134 \text{ kN/m}^2$

* self wt, pier

$< 150 \text{ kN/m}^2$ ✓ O.K.

Foundations:

(1) 800 x 600 x min. 300 thick RC pad footing

(2) 600 wide x min. 250 thick strip footing.

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Beam on G.L, 4 :

Span = 3000.

Roof load ≈ $\frac{4.0}{2} \times (0.75+0.75) =$ 3.0 kN/m.

Wall load ≈ 3.4 x 3.6* = 12.2 kN/m

* Hollow Block rendered.

Nominal ½ metre floor load = 0.5x(5.3+5.0)** = 5.2 kN/m

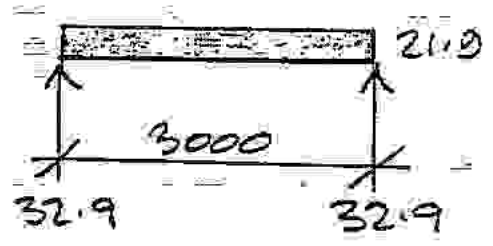
** Conservative as I.L. = 2.0 for toilets.

Self wt beam encased in conc. ≈ 1.5 kN/m

Σ = 3.0 + 12.2 + 5.2 + 1.5 = 21.9 kN/m

$M_{max} = 21.9 \times \frac{3.0^2}{8}$

= 24.6 kNm



Using a 152 x 152 UC 30

$f_{bc} = \frac{24.6 \times 10^6}{221.2 \times 10^3} =$ 112 N/mm²

$l/r = \frac{3000}{3.82} = 79 \Rightarrow P_{bc} =$ 165 N/mm²

✓ O.K.

$\delta_T = \frac{5 \times 21.9 \times 3000^4}{384 \times 0.21 \times 10^6 \times 1742 \times 10^4} =$ 6.3 mm

$= \frac{Span}{476}$ Acceptable ✓

Beam on G.L, 4:
152 x 152 UC 30
(conc. encased)

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Bearings:

As for beam on GL. 3 use 215 wide x 440 long bearing pads.

✓ O.K. by inspection

Bearings:
215 w x 440 l x min. 200 deep mc bearing pad (2 No.)

Foundations:

worst case is under 600 wide x 1200 long pad ~~footing~~/underpinning

Even if load only spread over minimum 600 length

$$\text{Bearing Pressure} = \frac{32.9 + 3.6^{*}}{0.6^2} = 102\ kN/m^2$$

* self wt. pier

< 150 ✓ O.K.

Foundations

(1) 600 x 1200 x min 300 thick mc footing/ underpinning

(2) 600 wide x min. 250 thick strip footing.

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Existing Beam EB8:

EB8 is a downstand beam supporting exg. r.c. roof slab over.

Beam to be checked for adequacy to take proposed ground floor loading.

Exg. span = 4500

Floor load ≈ $\frac{3.8}{2} \times 1.1^{*} \times (6.9 + 5.0)^{**}$

= 24.9 kN/m

$M_{max} = (24.9 + 0.4) \times \frac{4.5^2}{8} = 64.0$ kNm

* Allow 10% increase for continuity

** See back calcs. for beam on G.L. 3 for derivation.

Beam is a 152 x 152 UC37 (assumed)

$\Rightarrow \quad f_{bc} = \frac{64 \times 10^6}{274.2 \times 10^3} = 234$ N/mm²

stress Too high

⇒ Reduce span by introducing column. (Also helps in reducing load to existing wall on grid line C)

Single span to be altered to two spans of 3600 and 900.

$M_{max} \approx 25.3 \times \frac{3.6^2}{8} = 41.0$ kNm

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$$\Rightarrow f_{bc} = \frac{41.0 \times 10^6}{274.2 \times 10^3} = 150 \text{ N/mm}^2$$

$< 165 \text{ N/mm}^2$ ✓ O.K.

Column :

Reaction from EBB $< 25.3 \times \frac{4.5}{2} \times 1.25 = 71.2 \text{ kN}$

Cap, connection, $e \approx 45 \text{ mm}$

$25.3 \times \frac{0.9}{2} \times 1.25 = 14.2 \text{ kN}$

$25.3 \times \frac{3.6}{2} \times 1.25 = 57.0 \text{ kN}$

$M_{max} \approx (57 - 14.2) \times 0.045 = 1.9 \text{ kNm}$

Using a 90 x 90 SHS 5.0

$f_{bc} = \frac{1.9 \times 10^6}{45 \times 10^3} = 43 \text{ N/mm}^2$

$f_c = \frac{71.2 \times 10^3}{16.9 \times 10^2} = 43 \text{ N/mm}^2$

$l/r = \frac{200}{3.46} = 58 \Rightarrow p_c = 127 \text{ N/mm}^2$

$p_{bc} = 180 \text{ N/mm}^2$

Column under EBB:
90 x 90 SHS 5.0

$\frac{43}{127} + \frac{43}{180} = 0.58$

< 1.0 ✓ O.K.

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Footing :

Reaction $\approx$ 72 kN.

For 800 x 800 pad footing

Bearing Pressure $= \frac{72}{0.8^2} = 113 \text{ kN/m}^2$

< 150 ✓ O.K.

Footing :

800 x 800 x min. 400 thick mC pad footing.

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Contract: Firhouse Inn.
Structure: Basement.

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Escape Stairs:

Span ≈ 4000 (on plan)

Self wt. (max) = $0.2 \times 24 \times \frac{1}{\cos 36.5^{\circ}} + \frac{0.185}{2} \times 24$ * $\tan^{-1}\frac{185}{250} = 36.5^{\circ}$

= 8.2 kN/m²

Ult. load = $(1.4 \times 8.2) + (1.6 \times 5.0)$ = 19.5 kN/m²

$M_{ult} = 19.5 \times \frac{4.0^2}{8} = 39.0$ kNm

$d \simeq 200 - 40 - \frac{20}{2} = 150$ mm

$K = \frac{39 \times 10^6}{10^3 \times 150^2 \times 30} = 0.058$

$z = 150\left(0.5 + \sqrt{.25 - \frac{.058}{0.9}}\right) = 140$ mm

Required $A_s = \frac{39.0 \times 10^6}{.87 \times 460 \times 140} = 696$ mm²

T16's @ 200 CRS. = 1010 mm² ✓
OK.

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Deflection Check:

$$\frac{\text{Span}}{d} = \frac{4000}{150} = 26.7 > 20$$

$$\frac{M}{bd^2} = \frac{39 \times 10^6}{10^3 \times 150^2} = 1.73$$

$$f_s \simeq \frac{696}{1010} \times 288 = 199 \text{ N/mm}^2$$

$\Rightarrow$ Modification Factor $= 1.44$ *

* Table 3.11, BS 8110.

Allowable $\frac{\text{span}}{d} = 20 \times 1.44 = 28.8$

> 26.7 ✓ O.K.

Shear:

O.K. by inspection

RC stairs:
200 waist,
T16s @ 200(B)

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Job No.	Sheet No.	Rev
488	5/10	

Contract: Firhouse Inn.
Structure: Basement.

By	Dates	Rev.	Chkd.
AMT	17·8·91		

Foundations :

From trial pits (refer 488/1/9 for details) proposed founding stratum is a firm to stiff clay with a safe bearing capacity not less than 150 kN/m².

with the exception of the footing to the yard boundary wall all footings are minimum 600 wide.

Allowable load to 600 wide mc strip footing
= 150 × 0.6 = 90 kN/m.run

Max ht. of any 215 wall = 6.5 m. above footing level

For 6.5m high solid* block wall (GL3) * conservative
self wt. ≯ 6.5 × 4.6 = 31.2 kN/m
Roof load (average) ≯ $\left(\frac{7.0}{2}+\frac{4.0}{2}\right)\times(0.75+0.75)$ = 8.3 kN/m
Floor load < $2\times\frac{3.5}{4}\times(5.3+5.0)$ = 27.3 kN/m

≤ 31.2 + 8.3 + 27.3 = 66.8 kN/m
< 90 ✓

⇒ 600 wide strip footing under all 215 block walls C.K. by inspection, assuming bearing capacity of founding stratum exceeds 150 kN/m²

Strip Footings:
Min. 600 wide × 250 thick on ground capable of carrying 150 kN/m²

Dublin County Council Comhairle Chontae Atha Cliath

Planning Department

Bloc 2, Ionad Bheatha na hEireann,
Block 2, Irish Life Centre,
Sraid na Mainistreach Iacht,
Lower Abbey Street,
Baile Atha Cliath 1.
Dublin 1.
Telephone. (01)724755
Fax. (01)724896

Building Control Department,
Liffey House,
Tara Street,
Dublin 1.
Telephone:773066

Register Reference : 91A/1285

Date : 6th August 1991

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1990

Dear Sir/Madam,

DEVELOPMENT : Extension and alterations consisting of (a) new restaurant/lounge (b) new toilets (c) conversion of stores to kitchen incorporating new pitched roof (d) new fire escapes and fire doors (e) other ancillary space (f) new signage

LOCATION : The Firhouse Inn, Firhouse Road

APPLICANT : Mr H. Morton

APP. TYPE : PERMISSION/BUILDING BYE-LAW APPROVAL

With reference to the above, I acknowledge receipt of your application received on 2nd August 1991.

Yours faithfully,

.....

for PRINCIPAL OFFICER

Dan Callery, Architect,
6 Main Street,
Donnybrook,
Dublin 4.

Dublin County Council
Comhairle Chontae Átha Cliath

Planning Application Form/
Bye - Law Application Form

PLEASE READ INSTRUCTIONS AT BACK BEFORE COMPLETING FORM. ALL QUESTIONS MUST BE ANSWERED.

1. Application for Permission [✓] Outline Permission [ ] Approval [ ] Place ✓ in appropriate box.
Approval should be sought only where an outline permission was previously granted. Outline permission may not be sought for the retention of structures or continuances of uses.

2. Postal address of site or building THE FIRHOUSE INN
(If none, give description sufficient to identify) FIRHOUSE ROAD DUBLIN 24 — FEE LAW APPLICATION.

3. Name of applicant (Principal not Agent) MR. & MRS H. MORTON — Fee No. £955.50

Address FIRHOUSE INN FIRHOUSE RD. DUBLIN 24 — Tel. No. N 45460

4. Name and address of person or firm responsible for preparation of drawings DAN GALLERY - ARCHITECT 6 MAIN ST. DONNYBROOK DUBLIN 4 Tel. No 2696588

5. Name and address to which notifications should be sent DAN GALLERY - ARCHITECT 6 MAIN ST. DONNYBROOK DUBLIN 4

6. Brief description of proposed development EXTENSION & ALTERATIONS TO PROVIDE RESTAURANT LOUNGE

7. Method of drainage TO EXISTING PUBLIC SEWER 8. Source of Water Supply MAINS

9. In the case of any building or buildings to be retained on site, please state:-
(a) Present use of each floor or use when last used PUBLIC HOUSE & RESIDENCE
(b) Proposed use of each floor RESTAURANT / LOUNGE, EX-LOUNGE, EX. BAR & EX RESIDENCE

10 Does the proposal involve demolition, partial demolition or change of use of any habitable house or part thereof? NO

11.(a) Area of Site 3075 Sq. m.
(b) Floor area of proposed development 273 Sq. m.
(c) Floor area of buildings proposed to be retained within site 427.25 792 Sq. m.

Grith Pmts 29/7/91 — 2/8

12.State applicant's legal interest or estate in site (i.e. freehold, leasehold, etc.) FREEHOLD — N 02422

13.Are you now applying also for an approval under the Building Bye Laws?
Yes [✓] No [ ] Place ✓ in appropriate box.

14.Please state the extent to which the Draft Building Regulations have been taken in account in your proposal:
IT IS OUR PRACTISE TO TAKE ACCOUNT OF THE BUILDING REGS. THIS HOWEVER DOES NOT GUARANTEE THAT THE REGS. HAVE BE COMPLIED WITH IN FULL.

15.List documents and plans submitted with this application DRG NOS E14/01A, 04, 05, 16, 18, 24, 25, 26+27 OUTLINE SPEC., LETTER, PAGE FROM I. PLANS NOTICE CHEQUE, ENGINEER'S DRGS + CALCS TO FOLLOW SHORTLY

CO. DUBLIN Permission is sought for an extension and alterations consisting of a) new restaurant/lounge b) new toilets c) conversion of stores to kitchen incorporating new pitched roof d) new fire escapes and fire doors e) other ancillary space f) new signage at The Firhouse Inn, Firhouse Road, for Mr. H. Morton.

16.Gross floor space of proposed development (See back) 273 Sq. m.

No of dwellings proposed (if any) N/A Class(es) of Development 4 - C.

Fee Payable £ 1433-25 Basis of Calculation 273 x £5.25 (£1.75 + £3.50)

If a reduced fee is rendered details of previous relevant payment should be given N/A

Signature of Applicant (or his Agent) [signature] Date 2/8/91

FOR OFFICE USE ONLY 2/8

Application Type P.BBL
Register Reference 91A/1285
Amount Received £ 2.364.
Receipt No
Date 22/9

RECEIPT CODE

COMHAIRLE CHONTAE ÁTHA CLIATH

DUBLIN COUNTY COUNCIL
46/49 UPPER O'CONNELL STREET.
DUBLIN 1.

BYE LAW APPLICATION

REC. No. N 45460

PAID BY
CASH
CHEQUE ✓
M.O.
B.L.
I.T.

£ 955.50

2nd day of August 1991

Received this

from Dan Cullen
6 Main St
Donnybrook

the sum of nine hundred fifty five Pounds
fifty Pence, being fee for
bye-law application at Fishouse Rd

Madeleen Deane Cashier

S. CAREY
Principal Officer

COMHAIRLE CHONTAE ÁTHA CLIATH
DUBLIN COUNTY COUNCIL
46/49 UPPER O'CONNELL STREET
DUBLIN 1

PAID BY
CASH
CHEQUE
M.O.
B.L.
T.

RECEIPT CODE

Issue of this receipt is not an acknowledgement that the fee tendered is the prescribed application fee

N 47422

Received this 5th day of August 19 97

from John Gerard Mc Carthy

the sum of Four Hundred Pounds

Pence being Fee for Extension of Duration of Planning Application 97/0201

Cashier

S. CAREY
Principal Officer

DAN GALLERY • ARCHITECT

6 MAIN STREET DONNYBROOK DUBLIN 4 — 01-696588/839995
HOME 01-982759

DAN GALLERY. B.ARCH. MRIAI. RIBA.

Dublin County Council
Planning Department
Block 2 Irish Life Centre
Lower Abbey Street
Dublin 1.

2-8-91

Re: Proposed Extension and Alterations to the Firhouse Inn, Firhouse Road, Dublin 24 for Mr & Mrs H Morton.

Dear sirs,
We wish to apply on behalf of our clients Mr & Mrs H Morton for Planning Permission and Building Bye-Laws approval for the above development.

In support of this proposal, we wish to make the following observations:

(i) The major road proposals for the immediate area and the public demand for a greater variety of service and facilities in Public Houses makes it imperative that this development takes place as soon as possible.

(ii) The new Southern Cross motorway will pass under Firhouse Road, thus doing away with the existing nearby junction at Firhouse Bridge. In order to drive to the Firhouse Inn from the new motorway, it will be necessary to exit at the Knocklyon junction and approach via the re-routed Ballycullen Road. This development is intended to maintain customers who will be prepared to make the extra effort to get to the premises to avail of the wider range of service in the form of high quality meals.

(iii) The provision of a Restaurant/Lounge is in response to public demand for more variety of service in Public Houses and a move away from drink/driving by the provision of full scale meals.

(iv) The proposal also attempts to present a more attractive facade to the proposed motorway and Firhouse Road flyover.

(v) This proposal conforms to paragraph 3.1.7 of the 1983 Development Plan.

(vi) The proposed development is restricted to the area within the existing building and walled yard so that, there is no loss of car parking spaces.

(vii) The total public space , existing and new , amounts to 354 sq m which translates to 89 car parking spaces in accordance with the Development Plan. Table 3.14 (2 spaces / 8sq m). As can be seen from site plan. 73 cars can be parked with ease. An additional 16 cars at least can be parked on a supervised basis that is where a staff member is in attendance and seeks out a customer who is blocking in another car. This is a very common feature of pub car parks, which of course, is only required at peak times, normally week-end nights. In addition at least 10 cars can be parked in front of the site where there is a layby and also a considerable set back from the main lane of the Firhouse Road. The car parking can be readily shared with the adjoining building which is primarily used during the day.

(viii) The new toilets are replacing existing toilets which (especially in the case of the ladies) are inadequate.

(ix) The kitchen is being provided by converting existing stores. A pitched roof is being provided to this area to enable it to blend visually with the rest of the building as viewed from the future motorway.

(x) The meeting room at basement level is being re-built to a higher structural standard and the adjoining yard area is to be converted to a store to compensate for the loss of the stores at (ix) above.

(xi) The boundary wall adjacent to the stores to the East of the premises is to be removed and the space landscaped as an amenity space.

We enclose application form together with the necessary documentation and cheque to cover Planning Permission and Bye Law fee. Engineers drawings and calculations will follow shortly.

We look forward to a favourable decision.

Yours faithfully,

DAN GALLERY

OUTLINE SPECIFICATION

of

WORK TO BE DONE

and

MATERIALS TO BE USED

in

EXTENSION AND ALTERATIONS

at

THE FIRHOUSE INN
FIRHOUSE ROAD
DUBLIN 24

for

MR & MRS H MORTON

DAN GALLERY, ARCHITECT
6 MAIN STREET
DONNYBROOK
DUBLIN 4

TELEPHONE: 2696588

P.H. MCCARTHY SON & PARTNERS
CONSULTING ENGINEERS
ROSEMOUNT HALL
DUNDRUM ROAD
DUBLIN 14

TELEPHONE: 989377

1 FOUNDATIONS

1.1 All foundations are subject to site conditions and may be varied as works proceed.

1.2 All foundations are subject to the approval of the Local Authority. No bases are to be cast without notifying the Local Authority and the Engineer. The Engineer may require to inspect the formation of any base prior to blinding or concrete work.

1.3 Following approval of the founding surface the excavation shall be bottomed out as necessary and foundation cast immediately or blinded immediately with 50mm Grade C7.5.

2 CONCRETE

2.1 All concrete shall be Grade C35 or prescribed mix.

2.2 Lean mix concrete shall be Grade C7.5.

2.3 Ready mixed concrete may be used provided that it shall be produced at an approved depot. All constituents for each mix shall be added at the manufacturer's depot. No extra water or other material shall be added after the concrete has left the depot.

2.4 Calcium chloride or admixtures containing calcium chloride will not be permitted.

2.5 Acceptable safe load tables must be provided by the supplier of any concrete lintols.

2.6 All reinforcement marked 'T' shall be high yield, high bond bars complying with BS 4449 or BS 4461;
reinforcement marked 'R' shall be mild steel complying with BS 4449.

2.7 Reinforcement fabric shall comply with BS 4483.

2.8 All reinforced concrete shall be well vibrated in its formwork using mechanical poker vibrators of appropriate type.

2.9 All materials and workmanship shall comply with BS 8110.

2.10 Approval must be obtained for the position of any construction joint required by the Contractor and for the methods of forming and preparing the joints before the work starts on site.

2.11 When directed all tests on wet or hardened concrete shall be carried out in accordance with BS 1881.

3 STRUCTURAL STEELWORK

3.1 All structural steel shall be grade 43A (SHS Grade 43C) unless otherwise noted.

3.2 The structural steelwork supplier shall take all site dimensions necessary, produce shop fabrication drawings and submit them to the Engineer for his inspection. No fabrication to be carried out without the Engineer's agreement. Unless otherwise shown on the drawings the contractor shall be responsible for the design of the connections to satisfy the loads shown on the drawings or calculable from the information given.

3.3 All welding shall be carried out by appropriately certificated welders.

3.4 All bolts shall be Grade 4.6 black bolts unless noted otherwise.

3.5 All beams with end cast into concrete shall be supplied with 2 Nº. 50 x 50 4 r.s.a. end cleats welded to their webs.

3.6 All structural steelwork shall be cleaned of all rust, millscale, grease, etc.

3.7 Unless noted otherwise, all structural steelwork, including bolts and connections, except that which is to be cased in concrete, shall be painted with 2 coats zinc phosphate primer or similar approved.

3.8 All materials and workmanship shall comply with BS 449 or BS 5950.

4 BRICKWORK

4.1 Nominal mortar mixes by volume are appropriate for sand graded to BS 1200.

4.2 Blocks

5.0 N/mm^2 bricks in 1: 1: 6 or BS 5628

4.3 The laying of single frog units frog down shall not be permitted in load bearing walling. Double frogged units shall be laid with the larger frog uppermost.

4.4 All materials and workmanship shall comply with BS 5628 Parts 1 and 3.

4.5 Wall ties to be double triangle stainless steel type at max 450 vertical and 900 horizontal centres. Provide additional ties at 225 vertical centres either side of openings.

5 TIMBER

5.1 All timber except when noted otherwise shall be min. SC3. service m/c not exceeding 18%. On erection the moisture content shall be within 3% of the service m/c.

5.2 All roof timbers shall be treated with organic solvent by double vacuum process.

5.3 All timber in contact with masonry external walls shall be treated as in 5.2.

5.4 Joists hangers built into new blockwork shall be cavity wall type hangers. All joists hangers shall be to BS 6178 Part 1.

5.5 All double joists shall be bolted together with 12mm diameter bolts at 450 centres staggered top and bottom .

5.6 All materials and workmanship to comply with BS 5268 Parts 2 and 3.

6 FLOORS

See drawings.

7 **EXTERNAL & INTERNAL WALLS**

See drawings.

8 **WINDOWS**

Hardwood double glazed with "Sadolins" or similar finish.

9 **DOORS**

Internal doors to be solid core flush doors or panelled. Fire doors where indicated on drawings.

10 **DAMP PROOF COURSES**

Provide damp proof courses of approved type in the following locations:

(a) In all rising walls 150mm above ground level.

(b) Under ground floor slab.

(c) Under and turned up at ends and back of window sills.

(d) Stepped outwards over lintels in cavity walls.

(e) At jambs of all opes in cavity walls.

(f) Under all copings.

11 **ROOF**

See drawings.

12 **PAINTING WOODWORK**

Woodwork generally primed and finished with two undercoats and one finish coat oil paint.
Hardwood finished with "Sadolins" or similar.

13 **WALL AND CEILING FINISHES**

Generally three coats of emulsion paint or anaglypta paper.

14 **EXTERNAL WALL FINISH**

Existing and new plasterwork finishes to a map finish and painted "Dulux Weathershield" or similar.

15 **SANITARY FITTINGS**

Vitreous china wash hand basin and WCs.

16 **PLUMBING**

Generally carried out in copper, water supply from existing nearby public main. Heating to be LPHW, Radiators, Oil fired boiler, copper pipework - insulated.

Water storage to comply with Local Authority requirements.

17 **DRAINAGE**

Drainage system to be P.V.C. laid on a concrete bed connecting to existing public sewer.

18 **ELECTRICS**

Electric installation to the standards of the ESB, the IEE and the ETCI.

19 **VENTILATION**

Mechanical Ventilation by specialist sub-contractor to all areas.

20 **CEMENT**

Normal Portland Cement shall be in accordance with I.S.I. and stored under dry conditions.

21 **LIME**

Hydrated lime to be to I.S. 8.

22 **WATER**

Water shall be clean and free from harmful impurities.

23 **SAND AND AGGREGATES**

Fine aggregates shall be clean, sharp pit or river sand free from all impurities and in accordance with I.S.5. Coarse aggregates shall be suitably graded hard clean pit gravel or crushed stone in accordance with I.S.5. and to sizes set out below.

24 **CEMENT MORTAR**

Shall be 1 part cement to 3 parts sand.

25 **LIME MORTAR**

Shall be 1 part hydrated lime to 6 parts sand.

26 **GAUGED MORTAR**

Shall be 10 parts lime mortar mixed with 1 part cement just before use.

27 **STRONG GAUGED MORTAR**

Shall be 5 parts lime mortar mixed with 1 part cement immediately before use.

28 **ADDITIVES**

Plasticisers, waterproofers, sealers and bonding agents, if used, shall be used in accordance with manufacturer's instructions.