REF. NO.: 91A/0/547 CERTIFICATE NO.: 14609B

PROPOSAL: 12 Leases

LOCATION: Sites 35-55 odd Rd 2 Lands adjacent to WOLFSBROOK House

APPLICANT: Glendorn

	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	£660	660	—		
B	Domestic Ext. (Improvement/ Alts.)	@ £30					
C	Building for office or other comm. purpose	@ £3.50 per M² or £70					
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: _____ Grade: _____ Date: _____

Column 1 Endorsed: Signed: _____ Grade: _____ Date: _____

Columns 2,3,4,5,6 & 7 Certified: Signed: RWBell Grade: S.O Date: 11/4/91

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

RE: LANDS ADJACENT WILLSBROOK HOUSE/ESKER LANE/BALLYOWEN ROAD LUCAN for GLENDORAN LTD.

Breakdown of applications enclosed in overall cheque

1.	Change of approved house type to give optional Conservatory to rear Sites 1-23 Odd incl. Road 1				
	12 no. Houses	12 x £55.00	BBL Fee =	£660.00	£756.00
		12 x £32.00 x¼Pl. Fee=		£96.00	
2.	Bye Laws only for approved Houses on on Sites 18 - 24 Even incl. Road 2				
	4 no. Houses	4 x £55.00	BBL Fee =	£220.00	£220.00
3.	Change of approved house type on Sites 2 - 16 Even incl. Road 2				
	8 no. Houses	8 x £55.00	BBL Fee =	£440.00	
		8 x £32.00 x¼Pl. Fee =		64.00	£504.00
4.	Change of approved house type on Sites 1 - 14 Odd incl. Road 2				
	10 no. Houses	10 x £55.00	BBL Fee =	£550.00	
		10 x £32.00 x¼Pl. Fee		80.00	£630.00
5.	Change of approved House type on Sites 21 - 31 Odd incl. Road 2				
	6 no. Houses	6 x £55.00	BBL Fee =	£330.00	
		6 x £32.00 x¼Pl. Fee =		48.00	£378.00
6.	Change of approved House type on Sites 33 - 55 Odd incl. Road 2				
	12 no. Houses	12 x £55.00	BBL Fee =	£660.00	
		12 x £32.00 x¼Pl. Fee =		96.00	£756.00
			TOTAL		£3,244.00

NOTE:
All reduced Fees are based on previous Permission Reg. Ref. 89A/982.

NOTE
The above amount of £3244.00 is made up of two cheques in the amount of £3288.00 and £16.00.

EF.: 91A/0547 CERTIFICATE NO: 24903

PROPOSAL: Change of house type

LOCATION: Sites 35 - 55 Odd Rd 2. at lands adjacent to Wellsbrook House Esker Lane

APPLICANT: Flancken Ltd

	1	2	3	4	5	6	7
SS	DWELLINGS/AREA LENGTH/STRUCT	RATE	AMT. OF FEE REQ.	AMOUNT LODGED	BALANCE DUE	BALANCE DUE	DATE/ RECEIPT NO
	Dwellings	££32	£96	£96	✓		
		££16					
		£50p per M² in excess of 300M² Min.£40					
	metres²	££1.75 per M² or £40					
	x .1 hect.	££25 per .1 hect. or £250					
	x .1 hect.	££25 per .1 hect or £40					
	x .1 hect	££25 per .1 hect. or £100.					
		££100					
	x metres²	££10 per m² or £40					
	x1,000m²	££25 per 1,000m² or £40					
	x .1 hect.	££5 per .1 hect. or £40					

...lumn 1 Certified: Signed: ―――――― Grade: ―――――― Date: ――――――

...lumn 1 Endorsed: Signed: ―――――― Grade: ―――――― Date: ――――――

...lumns 2,3,4,5,6 & 7 Certified Signed: [signature] Grade: S.O Date: 11/4/91

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

Mr. A. Hinchy,
Senior Executive Draughtsman/Technican

RE: Sites 35-55 Odd Rds lands adjacent to Wellsbrook Phase

REG. REF.: 91A/0547

RE: LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT)(FEES AND AMENDMENT) REGULATIONS, 1983 - ARTICLE 6.1

A reduced fee (i.e. ¾) has been paid in respect of the above application. Please confirm this is the correct fee under Article 6.1 of the Local Government (Planning and Development) (Fees and Amendment) Regulations, 1983. File Reg. Ref.: 89A/982 on which a full fee was paid is attached.

Richard Whelan,
Staff Officer,
Registry Section.

Mr. R. Whelan,
Registry Section.

No alteration to site layout.
J.Y.
15/4/91.

A. Hinchy,
Senior Executive Draughtsman/Technican

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

ASSESSMENT OF FINANCIAL CONTRIBUTION

REG. REF.:

CONT. REG.:

SERVICES INVOLVED: WATER/FOUL SEWER/SURFACE WATER

AREA OF SITE:

FLOOR AREA OF PRESENT PROPOSAL:

MEASURED BY:

CHECKED BY:

METHOD OF ASSESSMENT:

TOTAL ASSESSMENT

MANAGER'S ORDERED NO: P/ /
DATED

ENTERED IN CONTRIBUTIONS REGISTER:

DEVELOPMENT CONTROL ASSISTANT GRADE

r. A. Hinchy.
enior Executive Draughtsman/Technican

RE: Sites 41-55 Old Rd 2 Konis adjacent to Willsbrook House Esker Lane, Ballycumin

REG. REF.: 91A/1444

RE: LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT)(FEES AND AMENDMENT) REGULATIONS, 1983 - ARTICLE 6.1

A reduced fee (i.e. ¼) has been paid in respect of the above application. Please confirm this is the correct fee under Article 6.1 of the Local Government (Planning and Development) (Fees and Amendment) Regulations, 1983. File Reg. Ref.: 91A/0547 on which a full fee was paid is attached.

Richard Whelan,
Staff Officer,
Registry Section.

Mr R. Whelan,
Registry Section.

Overall site - triangular portion at end of cul-de-sac has been excluded - has been altered.
There has also been a change in the number of houses. Originially there were 8no. 8/det houses. In the present proposal there are 12 no. terraced houses. [initials] 16/9/91.

A. Hinchy,
Senior Executive Draughtsman/Technican

SS only.

Register Reference : 91A/0547 Date : 16th April 1991

Development : Change of approved house type

LOCATION : Sites 33-55 odd incl. Road 2 at lands adjacent Wills Brook House, Esker Lane, Ballyowen T.D., Lucan

Applicant : Glendorn

App. Type : PERMISSION/BUILDING BYE-LAW APPROVAL

Planning Officer : M.GALVIN

Date Recd. : 9th April 1991

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

Yours faithfully,

Date received in Sanitary Services .....

DUBLIN Co. COUNCIL
23 APR 1991
SAN SERVICES

DUBLIN CO. COUNCIL
SANITARY SERVICES
PRINCIPAL OFFICER
30 MAY 1991
Returned.

.....

FOUL SEWER

Available to approved system.

.....

SURFACE WATER

Available to approved system

SENIOR ENGINEER,
SANITARY SERVICES DEPARTMENT,
46/49 UPPER O'CONNELL STREET,
DUBLIN 1

GK.

J. Rice
28/5/91

Register Reference : 91A/0547 Date : 16th April 1991

....

ENDORSED ______________________ DATE ____________

WATER SUPPLY Water available. 24 hr storage reqd. for each unit. Connection to existing system swabbing and chlorination by DCC personnel at applicants expense.

J. Loftus 2/5/91.

....

ENDORSED [signature] DATE 28/5/91

P/2327/91

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Register Reference : 91A/0547 Date Received : 9th April 1991

Correspondence Name and Address : Frank Elmes & Co., Architects, 2 Waldemar Terrace, Main Street, Dundrum, Dublin 14.

Development : Change of approved house type (Reg Ref 89A/982)

Location : Sites 33-55 odd incl. Road 2 at lands adjacent Wills Brook House, Esker Lane, Ballyowen T.D., Lucan

GN 3675
Rec 1214

CONTRIBUTION:
Standard: 75240
Roads 1420 per unit
S. Sers
Open Space: 98,000
Other: c/s 48,000
SECURITY:
Bond / C.I.F.: 250,000
Cash: 150,000

Applicant : Glendorn

App. Type : Permission

Zoning : A1

(MG/CM)

Report of the Dublin Planning officer, dated 21st May, 1991.

This is an application for permission for change of approved house type on sites 33-65, Road 2, at land adjacent to Willsbrook House, Esker Lane, Ballyowen, Lucan, for Glendorn.

Reg. Ref. No. 89A/982 refers to the grounding permission for housing (to comprise 102 4-bedroomed and 58 3-bedroomed houses) at this location. This was granted by the Council, and on appeal by An Bord Pleanala following a third party appeal. Construction work has commenced on foot of this grant of permission.

There are current applications for changes to approved house types elsewhere on site under Reg. Ref. Nos. 91A/0543, 91A/0544, 91A/0546, 91A/0549 and 91A/0550. No increase in house numbers or change of layout is proposed under any of these applications.

Under Reg. Ref. No. 89A/982, nos. 33-35, Road 2, were proposed as house type E at 110sq. metres four-bedroomed semi-detached house with a half hipped roof, part brick front and gable over first floor window. Nos. 37-55 were proposed as house type C, a similar sized four bedroomed house with a hipped roof.

The current application provides for a change of house type at sites 33-55 to house type 'FH' a smaller, i.e. 96.8sq. metre three bedroomed house. Lodged plans provide for a hipped roof house with a kitchen extension to the rear. The front elevation is to comprise a part brick finish.

Roads Department reports no objection.

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Reg.Ref: 91A/0547

Page No: 0002

Location: Sites 33-55 odd incl. Road 2 at lands adjacent Wills Brook House, Esker Lane, Ballyowen T.D., Lucan

The proposed development is considered acceptable.

I recommend that a decision to Grant Permission be made under the Local Government (Planning and Development Acts, 1963-1990, subject to the following (9) conditions:-

C O N D I T I O N S / R E A S O N S

01 The development to be carried out in its entirety in accordance with the plans, particulars and specifications lodged with the application save as may be required by the other conditions attached hereto.
REASON:To ensure that the development shall be in accordance with the permission and that effective control be maintained.

02 That before development commences, approval under the Building Bye- Laws be obtained and all conditions of that approval be observed in the development.
REASON:In order to comply with the Sanitary Services Acts, 1878-1964.

03 That each proposed house be used as a single dwelling unit.
REASON:To prevent unauthorised development.

04 That the development shall be carried out in conformity with Condition Nos. 5-12, ~~and~~ 14-16 of An Bord Pleanalas ~~decision to~~ grant planning permission for 160 no. houses at this location, under ~~Reg.~~ Ref. No. ~~89A/982,~~ dated 14th September, 1990, save as amended to conform with the revisions indicated in the plans lodged with Dublin County Council in connection with this application.

04 REASON: In the interest of the proper planning and development of the area.

05 That arrangements be made for the lodgement of security in the form of an approved Insurance Company Bond or letter of Guarantee in the sum of £240,000 or a cash lodgement of £150,000 in respect of the overall development as required by Condition No. 2 of An Bord Pleanalas ~~decision to~~ grant planning permission under Reg. Ref. No. 89A/982, ~~be strictly adhered to in respect of the above proposal.~~

05 REASON: To ensure that a ready sanction may be available to the Council to induce the provision of services and prevent disamenity in the development.

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Reg.Ref: 91A/0547

Page No: 0003

Location: Sites 33-55 odd incl. Road 2 at lands adjacent Wills Brook. House, Esker Lane, Ballyowen T.D., Lucan

06 That arrangements be made for the payment of the financial contribution in the sum of £45260 in respect of the overall development as required by Condition No. 3 of An Bord Pleanalas ~~decision to~~ grant of planning permission under Reg. Ref. No. 89A/982. The arrangement to be made prior to the commencement of this proposal.

06 REASON: To ensure that a ready sanction may be available to the Council to induce the provision of services and prevent disamenity in the development.

07 That arrangements be made for the payment of the financial contribution in the sum of £1420 per house in respect of the overall development as required by Condition No. 4 of An Bord Pleanalas ~~decision to~~ grant of planning permission under Reg. Ref. No. 89A/982. The arrangements to be made prior to the commencement of this proposal.

07 REASON: To ensure that a ready sanction may be available to the Council to induce the provision of services and prevent disamenity in the development.

~~08 That arrangements be made for the payment of the financial contribution in the sum of £_____ in respect of the overall development as required by condition no. 17 of An Bord Pleanalas decision to grant planning permission under Reg. Ref. No. 89A/982.~~

~~08 REASON: To ensure that a ready sanction may be available to the Council to induce the provision of services and prevent disamenity in the development.~~

08 ~~09~~ That a comprehensive landscaping plan is to be submitted for the site (as required by Condition No. 13 of An Bord Pleanalas ~~decision to~~ grant of planning permission under Reg. Ref. No. 89A/982). This is to include inter alia, a programme of tree surgery for the site, a street tree planting scheme, measures to protect trees to be retained during construction and landscaping works to be carried out.

08 REASON: In the interest of visual and residential amenity.

09 ~~10~~ That arrangements be made with regard to the payment of the financial contributions in the sum of (a) £98,000. and (b) £48,000. required in respect of the overall development by condition no. 17 of the planning permission granted under Register Reference 89A/982. The arrangements to be made prior to the commencement of this proposal.

09 ~~10~~ In the interest of the proper planning and development of the area.

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Reg.Ref: 91A/0547

Page No: 0004

Location: Sites 33-55 odd incl. Road 2 at lands adjacent Wills Brook House, Esker Lane, Ballyowen T.D., Lucan

Endorsed:-.....
for Principal officer

.....
for Dublin Planning Officer

Order: A decision pursuant to Section 26(1) of the Local Government (Planning and Development) Acts, 1963-1990 to GRANT PERMISSION for the above proposal subject to the (9) conditions set out above is hereby made.

Dated : 29 May 1991 .....
ASSISTANT CITY AND COUNTY MANAGER

to whom the appropriate powers have been delegated by order of the Dublin City and County Manager dated 26th April, 1991.

DUBLIN COUNTY COUNCIL

REG. REF: 91/A/543, 544, 545, 546 and 547 MG

LOCATION: Willsbrook House, Esker Lane, Ballyowen, Lucan.

APPLICANT: Glendorn

PROPOSAL: Change house type.

DATE LODGED: 9/4/91.

Previous Roads reports dated 20/7/89, 22/11/89, 31/1/90 and 13/3/90 in respect of 89/A/982 refer. Please note in particular report dated 13/3/91 as applied to permission granted. No Roads objections. All conditions of previous approvals to apply.

TB/MM 2/5/91.

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 3/5/91
Time 4.pm

SIGNED: T. Burke

DATE: 2/5/91

ENDORSED:

DATE:

Proj: 24-00JUN File: TYPEA-1 Des: AF Truss Mk: A1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"A" TYPE HOUSE 24-Jun-91 12:52 Page: 1

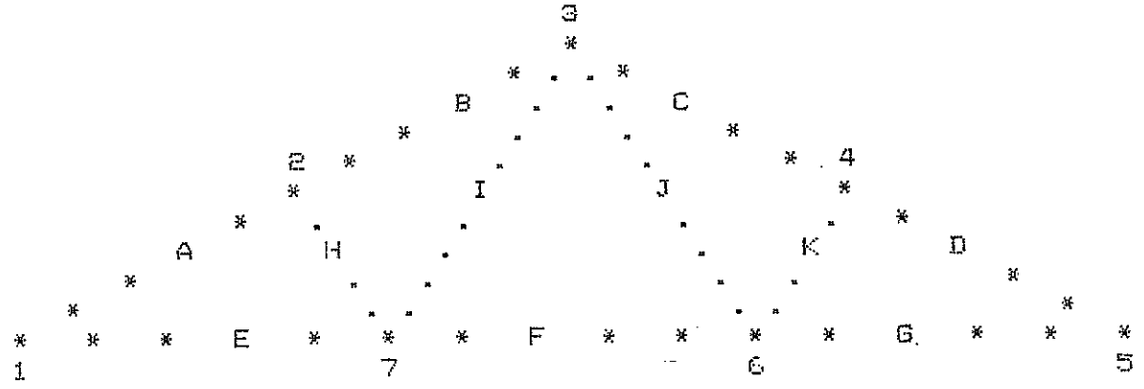
Truss Type : Fink Tested Truss

Hip Type : Standard Setback Hip [2663mm setback] 2 No Hip Ends

Span overall S.O.P's	8925mm	Bottom Chord Grade	VSSERW
Left Top Chord Pitch	30.00deg	Web Grade	VSSERW
Right Top Chord Pitch	30.00deg	Plate File	GN20
No of Trusses	4	Plating Tolerance	5mm
Truss Centres	600mm	Left Heel Joint	Standard
Truss Thickness	34mm	Right Heel Joint	Standard
Top Chord Live Load	750N/m2	Left Overhang	331mm
Top Chord Dead Load	685N/m2	Right Overhang	331mm
Btm Chord Live Load	250N/m2	Left Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Right Overhang Cut	Plumb
Tank Load per Truss	900N	Timber Treatment	Untreated
Top Chord Restraint	360mm	Nominal Bearing	100mm
Top Chord Grade	VSSERW	Design Code	Eire LMS

Top chord 34 *122
Btm chord 34 *112

Web Ref	H	I	J	K
Depth+Braces	72+0	72+0	72+0	72+0



91 A/547
for reg File

Proj: 24-00JUN File: TYPEA-1 Des: AF Truss Mk: A1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:52 Page: 2

Truss Type : Fink Tested Truss

Design in accordance with : I.S. 193 (1986)

Load Sharing Factor : 1.1

TIMBER GRADES & STRESSES (N/mm2)		Bend	Tens	Comp Para	Comp Perp	Shear	Emean
Top Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Btm Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Web	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500

TESTED TRUSSES

The size of the chord members are taken from the full scale test data given in the appropriate code of practice.

Top Chord : 34 * 122
Btm Chord : 34 * 112

APPLIED STRESSES & FORCES			Long Term		Medium Term		Short Term		
Web Member	Depth mm	Length mm	Br	Axial N	CSI	Axial N	CSI	Axial N	CSI	L/R
Web H	72	1422	0	-917	.164	-1787	.301			130Y
Web I	72	2845	0	2467	.174	3337	.188	4116	.194	

DEFLECTION AT JOINT 7 Medium Term 6mm Perm 27mm

REACTIONS	Load Duration			Minimum
Location	Long	Medium	Short	Bearing
Joint 1	3907N	5915N	6590N	75mm
Joint 5	3907N	5915N	6590N	75mm

Contact : Another Trussed Rafter Design by
))))) JAMES McMAHON (DUBLIN) LTD. (((((
Aidan McMahon (01)477644 - Dublin & Drogheda.

Proj: 24-00JUN File: TYPEA-2 Des: AF Truss Mk: HM1 Hip Version 6.20

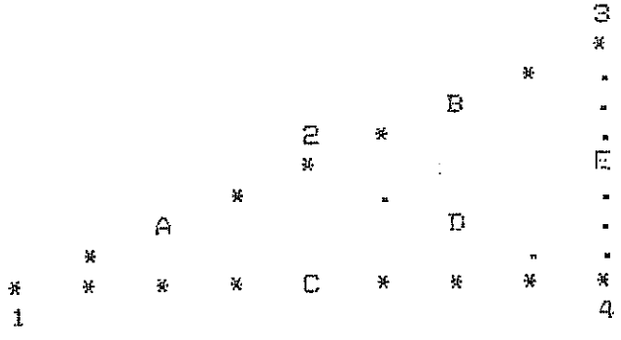
Job Ref: GLENDORAN LTD RE:"PW" TYPE HOUSE 24-Jun-91 12:52 Page: 1

Truss Type : Mono 2:1

Hip Type : Standard Setback Hip [2663mm setback] 2 No Hip Ends

Span overall S.O.P's	2663mm	Web Grade	VSSERW
Left Top Chord Pitch	30.00deg	Plate File	GN20
No of Trusses	14	Plating Tolerance	5mm
Truss Centres	600mm	Left Heel Joint	Standard
Truss Thickness	34mm	Right Heel Joint	End Vert
Top Chord Live Load	750N/m2	Left Overhang	331mm
Top Chord Dead Load	685N/m2	Right Overhang	1799mm
Btm Chord Live Load	250N/m2	Left Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Right Overhang Cut	Plumb
Tank Load per Truss	900N	Timber Treatment	Untreated
Top Chord Restraint	360mm	Nominal Bearing	100mm
Top Chord Grade	VSSERW	Design Code	Eire LMS
Bottom Chord Grade	VSSERW		

Top chord	34 *122	
Btm chord	34 * 97	
Web Ref	D	E
Depth+Braces	72+0	72+0



Proj: 24-00JUN File: TYPEA-2 Des: AF Truss Mk: HM1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:52 Page: 2

Truss Type : Mono 2:1

Design in accordance with : I.S. 193 (1986)

Load Sharing Factor : 1.1

TIMBER GRADES & STRESSES (N/mm2)		Bend	Tens	Comp Para	Comp Perp	Shear	Emean
Top Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Btm Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Web	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500

BENDING MOMENT COEFFICIENTS

	Udl		Man Load	
	Panel	Joint	Panel	Joint
Top Chord	.070	.125	.203	.094
Btm Chord	.125	.000	.250	.000

APPLIED STRESSES & FORCES				Axial	Bending Moments		CSI		Local	
Chord Member	Depth mm	Length mm	Load Duration	Force N	Panel NM	Joint NM	Panel	Joint	Defln mm	L/R
Top A	122	1536	Long	-632	58.84	105.08	.101	.156	.1	34X
			Medium	-1231	114.63	204.70	.159	.243	.3	58Y
			Short	-913	210.74	175.41	.200	.171		
Btm C	97	2663	Long	547	265.93	.00	.564	.030	7.2	
			Medium	1066	265.93	.00	.473	.046	7.2	
			Short	1066	715.32	.00	.996	.038		

				Long Term		Medium Term		Short Term		
Web Member	Depth mm	Length mm	Br	Axial N	CSI	Axial N	CSI	Axial N	CSI	L/R
Web D	72	1440	0	-632	.115	-1231	.212			132Y
Web E	72	1440	0	-316	.058	-616	.106			132Y

REACTIONS	Load Duration			Minimum
Location	Long	Medium	Short	Bearing
Joint 1	1401N	2081N	2756N	75mm
Joint 4	1401N	2081N	2756N	75mm

Contact : Another Trussed Rafter Design by
)))))) JAMES McMAHON (DUBLIN) LTD. ((((((
Aidan McMahon (01)477644 - Dublin & Drogheda.

Proj: 24-00JUN File: TYPEA-3 Des: AF Truss Mk: TG1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FK" TYPE HOUSE 24-Jun-91 12:52 Page: 1

Profile Truss : Hip Truss 12 Girder *** Double Truss ***

The truss parameters on this header sheet are for the unmodified truss.
Refer to the truss co-ordinates or the truss drawing for the final configuration

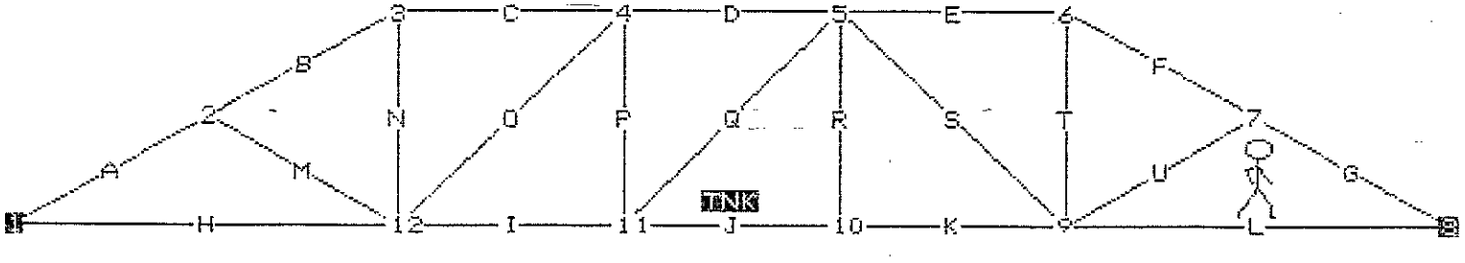
Hip Type : Standard Setback Hip [2663mm setback] 2 No Hip Ends

Span overall S.O.P's	8925mm	Top Chord Grade	VSSERW
Return Span	600mm	Bottom Chord Grade	VSSERW
Truss Depth	1497mm	Web Grade	VSSERW
Left Top Chord Pitch	30.00deg	Plate File	GN20
Right Top Chord Pitch	30.00deg	Plating Tolerance	5mm
Horiz Dist of 1st Pitch	2594mm	Left Heel Joint	Standard
No of Girders	2	Right Heel Joint	Standard
Truss Centres	600mm	Left Overhang	331mm
Truss Thickness	34mm	Right Overhang	331mm
Top Chord Live Load	750N/m2	Left Overhang Cut	Plumb
Top Chord Dead Load	685N/m2	Right Overhang Cut	Plumb
Btm Chord Live Load	250N/m2	Timber Treatment	Untreated
Btm Chord Dead Load	250N/m2	Nominal Bearing	100mm
Tank Load per Truss	900N	Design Code	Eire LMS
Top Chord Restraint	360mm		

Hip Intermediate Centres	600	Hip Intermediates & Girders	4 + 4
Flat Top Chord Restraint	623mm	Flying Rafter	Yes

Top chord	34 *122
Btm chord	34 *147

Web Ref	M	N	O	P	Q	R	S	T	U
Depth+Braces	72+0	72+0	72+0	72+0	72+0	72+0	72+0	72+0	72+0



Proj: 24-00JUN File: TYPEA-3 Des: AF Truss Mk: TG1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE: FA TYPE HOUSE 24-Jun-91 12:52 Page: 2

Design in accordance with : I.S. 193 (1986)

PERMISSIBLE STRESSES (N/sq.mm) THICKNESS = 34mm PERMISSIBLE DEFLECTION = 26.77 mm

	GRADE	COMPRESSION	TENSION	BENDING	BSS	SPTG	E(mean)	E(min)
TCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
BCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
WEBS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00

++++++++++++++++++++++++++++++++ LONG TERM load case - duration factor = 1.00 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.233		11398	11555		75
2	1212.9	700.2							1.4	-3.4	-.097					
3	2381.6	1375.0					-2297N		1.7	-4.6	-.013					
4	3783.6	1375.0							1.3	-6.0	-.036					
5	5141.4	1375.0							.9	-6.1	.032					
6	6543.4	1375.0					-2297N		.5	-4.6	.015					
7	7712.1	700.2							.7	-3.4	.098					
8	8925.0	.0		DY = 0 mm					2.2	.0	.233		11398	11555		75
9	6543.4	.0							1.7	-4.9	.069					
10	5141.4	.0					-450N		1.3	-6.2	.028					
11	3783.6	.0					-450N		.9	-6.2	-.032					
12	2381.6	.0							.5	-4.8	-.066					

LONG TERM SLIP FACTOR = 1.35 AT JOINT 11 MAX NODAL DEFLECTION AT JOINT 11 = -8.3

MEMBER	START JOINT	SHDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin	-.475	2 fix	-.475		0	122D	20689	-20401	299	200	0	70	.4	126	840	1400	.46 50b
B	2 fix	-.475	3 fix	-.475		0	122D	20185	-19908	189	292	-70	-0	.5	120	530	1350	.45 50b
C	3 pin	-.100	4 fix	-.100		0	122D	17386	-17386	104	36	0	47	.1	54	1039	1402	.40 63b
D	4 fix	-.100	5 fix	-.100		0	122D	21496	-21496	80	56	-47	64	.2	79	801	1350	.51 63b
E	5 fix	-.100	6 pin	-.100		0	122D	17390	-17390	24	116	-64	0	.1	67	245	1402	.41 63b
F	6 fix	-.475	7 fix	-.475		0	122D	19912	-20189	292	189	-0	70	.5	120	820	1350	.45 50b
G	7 fix	-.475	8 pin	-.475		0	122D	20405	-20693	200	299	-70	0	.4	126	561	1400	.47 50b
H	1 fix	-.816	12 fix	-.816		0	147D	-17767	17767	795	1148	0	-420	.5	387	974	2382	.52
I	12 fix	-2.581	11 fix	-2.581		0	147D	-21496	21496	1898	1725	420	-302	.3	274	734	1402	.59
J	11 fix	-2.581	10 fix	-2.581		0	147D	-21463	21463	1774	1730	302	-272	.3	308	608	1350	.54
K	10 fix	-2.581	9 fix	-2.581		0	147D	-21463	21463	1699	1919	272	-426	.3	288	659	1402	.60
L	9 fix	-.816	8 fix	-.816		0	147D	-17771	17771	1150	793	426	-0	.4	385	1410	2382	.53
M	2 pin		12 pin			0	72D	444	-444	-0	0	0	0	.0	--	--	1362	.02 63b
N	12 pin		3 pin			0	72D	-7301	7301	0	0	0	0	.0	--	--	1375	.26
O	12 pin		4 pin			0	72D	5757	-5757	0	-0	0	0	.0	--	--	1964	.41 120b
P	11 pin		4 pin			0	72D	-3915	3915	0	0	0	0	.0	--	--	1375	.14
Q	11 pin		5 pin			0	72D	-48	48	0	-0	0	0	.0	--	--	1982	.00
R	10 pin		5 pin			0	72D	-3879	3879	0	0	0	0	.0	--	--	1375	.14
S	5 pin		9 pin			0	72D	5704	-5704	0	-0	0	0	.0	--	--	1964	.41 120b

Proj: 24-00JON File: TYPEA-3 Des: AF Truss Mk: TG1 Hip Version 6.20

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Design in accordance with : I.S. 193 (1986)

T	9 pin	6 pin	0	72D	-7291	7291	0	0	0	0	.0	--	--	1375	.26	
U	9 pin	7 pin	0	72D	444	-444	0	-0	0	0	.0	--	--	1362	.02	83b

++++++++++++++++++++++++++++++++MEDIUM TERM load case - duration factor = 1.25 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.299		18130	18436		75
2	1212.9	700.2							2.3	-5.4	-.157					
3	2381.6	1375.0					-4474N		2.7	-7.4	-.018					
4	3783.6	1375.0							2.1	-9.7	-.058					
5	5141.4	1375.0							1.4	-9.9	.051					
6	6543.4	1375.0					-4474N		.8	-7.5	.020					
7	7712.1	700.2							1.2	-5.5	.159					
8	8925.0	.0		DY = 0 mm					3.5	.0	.300		18130	18436		75
9	6543.4	.0							2.7	-7.9	.152					
10	5141.4	.0					-450N		2.1	-10.1	.031					
11	3783.6	.0					-450N		1.5	-9.9	-.038					
12	2381.6	.0							.9	-7.8	-.147					

MEDIUM TERM SLIP FACTOR = 1.22 AT JOINT 11 MAX NODAL DEFLECTION AT JOINT 11 = -12.1

MEMBER	START JOINT	SHDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM LOC (Nm)	SPAN BM LOC (mm)	LENGTH (mm)	MAX L/R CSI	BR
A	1 pin	-.925	2 fix	-.925		0	122D	33749	-33188	546	425	0	85	.5	215	788	1400	.62	50b
B	2 fix	-.925	3 fix	-.925		0	122D	32727	-32187	405	531	-85	0	.8	203	584	1350	.60	50b
C	3 pin	-.100	4 fix	-.100		0	122D	28140	-28140	132	8	0	87	.2	87	1319	1402	.55	63b
D	4 fix	-.100	5 fix	-.100		0	122D	34735	-34735	88	48	-87	114	.3	125	878	1350	.68	63b
E	5 fix	-.100	6 pin	-.100		0	122D	28146	-28146	-11	151	-114	0	.2	--	--	1402	.54	63b
F	6 fix	-.925	7 fix	-.925		0	122D	32194	-32734	531	405	-0	85	.9	203	766	1350	.60	50b
G	7 fix	-.925	8 pin	-.925		0	122D	33195	-33756	425	546	-85	0	.6	215	613	1400	.62	50b
H	1 fix	-.816	12 fix	-.816		0	147D	-28954	28954	782	1161	0	-451	.2	375	959	2382	.60	
I	12 fix	-4.254	11 fix	-4.254		0	147D	-34735	34735	2910	3054	451	-551	.6	545	684	1402	.72	
J	11 fix	-4.254	10 fix	-4.254		0	147D	-34680	34680	2924	2852	551	-502	.5	454	687	1350	.72	
K	10 fix	-4.254	9 fix	-4.254		0	147D	-34680	34680	3013	2951	502	-459	.7	565	708	1402	.73	
L	9 fix	-.816	8 fix	-.816		0	147D	-28960	28960	1164	779	459	-0	.2	372	1427	2382	.60	
M	2 pin		12 pin			0	72D	949	-949	-0	0	0	0	.0	--	--	1362	.04	83b
N	12 pin		3 pin			0	72D	-11027	11027	0	0	0	0	.0	--	--	1375	.31	
O	12 pin		4 pin			0	72D	9238	-9238	0	-0	0	0	.0	--	--	1964	.62	120b
P	11 pin		4 pin			0	72D	-6372	6372	0	0	0	0	.0	--	--	1375	.18	
Q	11 pin		5 pin			0	72D	-79	79	0	-0	0	0	.0	--	--	1382	.00	
R	10 pin		5 pin			0	72D	-6315	6315	0	0	0	0	.0	--	--	1375	.18	
S	5 pin		9 pin			0	72D	9152	-9152	0	-0	0	0	.0	--	--	1964	.61	120b
T	9 pin		6 pin			0	72D	-11011	11011	0	0	0	0	.0	--	--	1375	.31	
U	9 pin		7 pin			0	72D	949	-949	0	-0	0	0	.0	--	--	1362	.04	83b

Proj: 24-00JUN File: TYPEA-3 Des: AF Truss Mk: TG1 Hip Version 6.20

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Design in accordance with : I.S. 193 (1986)

++++++++++++++++++++++++++++++++ SHORT TERM load case - duration factor = 1.50 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.302		18250	18556		75
2	1212.9	700.2							2.3	-5.5	-.159					
3	2381.6	1375.0					-4474N		2.7	-7.5	-.019					
4	3783.6	1375.0							2.1	-9.8	-.059					
5	5141.4	1375.0							1.4	-10.0	.051					
6	6543.4	1375.0					-4474N		.8	-7.6	.020					
7	7712.1	700.2							1.2	-5.6	.162					
8	8925.0	.0		DY = 0 mm					3.6	.0	.391		18910	19216		75
9	6543.4	.0							2.7	-8.1	.109					
10	5141.4	.0					-450N		2.1	-10.2	.041					
11	3783.6	.0					-450N		1.5	-10.1	-.041					
12	2381.6	.0							.9	-7.9	-.148					

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.925	2 fix		-.925	0	122D	33984	-33424	548	423	0	87	.6	216	790	1400	.53	50b
B	2 fix		-.925	3 fix		-.925	0	122D	32964	-32424	403	532	-87	-0	.9	204	582	1350	.52	50b
C	3 pin		-.100	4 fix		-.100	0	122D	28346	-28346	133	7	0	80	.2	88	1328	1402	.48	68b
D	4 fix		-.100	5 fix		-.100	0	122D	35074	-35074	87	49	-80	114	.3	126	869	1358	.60	68b
E	5 fix		-.100	6 pin		-.100	0	122D	28902	-28902	-11	151	-114	0	.2	--	--	1402	.49	68b
F	6 fix		-.925	7 fix		-.925	0	122D	33064	-33604	536	400	0	92	.9	207	773	1350	.53	50b
G	7 fix		-.925	8 pin		-.925	0	122D	34060	-34621	420	551	-92	0	.6	219	606	1400	.54	50b
H	1 fix		-.816	12 fix		-.816	0	147D	-29157	29157	783	1159	-0	-448	.2	376	960	2382	.50	
I	12 fix		-4.254	11 fix		-4.254	0	147D	-35074	35074	2899	3065	448	-564	.6	540	682	1402	.61	
J	11 fix		-4.254	10 fix		-4.254	0	147D	-35083	35083	2981	2796	564	-438	.5	480	701	1358	.61	
K	10 fix		-4.254	9 fix		-4.254	0	147D	-35083	35083	2786	3178	438	-713	.5	474	655	1402	.65	
L	9 fix		-.816	8 fix		-.816	-900	147D	-29707	29707	1721	1122	713	-0	.9	758	1191	2382	.60	
M	2 pin			12 pin			0	72D	946	-946	-0	0	0	0	.0	--	--	1362	.03	83b
N	12 pin			3 pin			0	72D	-11144	11144	0	0	0	0	.0	--	--	1375	.26	
O	12 pin			4 pin			0	72D	9424	-9424	0	-0	0	0	.0	--	--	1964	.60	120b
P	11 pin			4 pin			0	72D	-6504	6504	0	0	0	0	.0	--	--	1375	.15	
Q	11 pin			5 pin			0	72D	12	-12	0	-0	0	0	.0	--	--	1932	.00	118b
R	10 pin			5 pin			0	72D	-6032	6032	0	0	0	0	.0	--	--	1375	.14	
S	5 pin			9 pin			0	72D	8657	-8657	0	-0	0	0	.0	--	--	1964	.55	120b
T	9 pin			6 pin			0	72D	-11442	11442	0	0	0	0	.0	--	--	1375	.27	
U	9 pin			7 pin			0	72D	938	-938	0	-0	0	0	.0	--	--	1362	.03	83b

Proj: 24-00JUN File: TYPEA-4 Des: AF Truss Mk: TS1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE: "FR" TYPE HOUSE 24-Jun-91 12:53 Page: 1

Profile Truss : Hip Truss 12

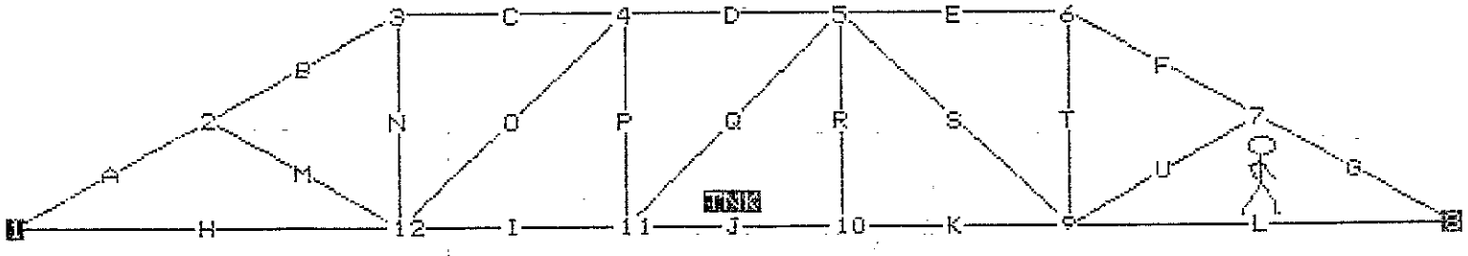
The truss parameters on this header sheet are for the unmodified truss.
Refer to the truss co-ordinates or the truss drawing for the final configuration

Hip Type : Standard Setback Hip [2663mm setback] 2 No Hip Ends

Span overall S.O.P's	8925mm	Top Chord Grade	VSSERW
Truss Depth	1497mm	Bottom Chord Grade	VSSERW
Left Top Chord Pitch	30.00deg	Web Grade	VSSERW
Right Top Chord Pitch	30.00deg	Plate File	GN20
Horiz Dist of 1st Pitch	2594mm	Plating Tolerance	5mm
No of Trusses	4	Left Heel Joint	Standard
Truss Centres	600mm	Right Heel Joint	Standard
Truss Thickness	34mm	Left Overhang	331mm
Top Chord Live Load	750N/m2	Right Overhang	331mm
Top Chord Dead Load	685N/m2	Left Overhang Cut	Plumb
Btm Chord Live Load	250N/m2	Right Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Timber Treatment	Untreated
Tank Load per Truss	900N	Nominal Bearing	100mm
Top Chord Restraint	360mm	Design Code	Eire LMS
Hip Intermediate Centres	600	Hip Intermediates & Girders	4 + 4
Flat Top Chord Restraint	623mm	Flying Rafter	Yes

Top chord	34 *122
Btm chord	34 *147

Web Ref	M	N	O	P	Q	R	S	T	U
Depth+Braces	72+0	72+0	72+1	72+0	72+0	72+0	72+1	72+0	72+0



Design in accordance with : I.S. 193 (1986)

PERMISSIBLE STRESSES (N/sq.mm) THICKNESS = 34mm PERMISSIBLE DEFLECTION = 26.77 mm

	GRADE	COMPRESSION	TENSION	BENDING	BSS	SPTG	E(mean)	E(min)
TCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
BCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
WEBS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00

++++++++++++++++++++++++++++++++ LONG TERM load case - duration factor = 1.00 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.129		3981	4138		75
2	1212.9	700.2							.7	-1.6	-.045					
3	2381.6	1375.0					-854N		.8	-2.2	.009					
4	3783.6	1375.0							.6	-2.8	-.012					
5	5141.4	1375.0							.4	-2.8	.011					
6	6543.4	1375.0					-854N		.2	-2.2	-.009					
7	7712.1	700.2							.3	-1.7	.046					
8	8925.0	.0		DY = 0 mm					1.0	.0	.129		3981	4138		75
9	6543.4	.0							.8	-2.3	.010					
10	5141.4	.0					-450N		.6	-2.9	.018					
11	3783.6	.0					-450N		.4	-2.8	-.019					
12	2381.6	.0							.3	-2.3	-.009					

LONG TERM SLIP FACTOR = 1.78 AT JOINT 10 MAX NODAL DEFLECTION AT JOINT 10 = -5.1

MEMBER	START JOINT	SHDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin	-.475	2 fix	-.475		0	122	6954	-6667	226	272	0	-32	.1	72	635	1400	.35	50b
B	2 fix	-.475	3 fix	-.475		0	122	6368	-6091	264	216	32	-0	.3	66	742	1350	.32	50b
C	3 pin	-.100	4 fix	-.100		0	122	5383	-5383	70	70	0	-0	.0	24	699	1402	.27	63b
D	4 fix	-.100	5 fix	-.100		0	122	6323	-6323	70	66	0	2	.1	24	699	1358	.31	63b
E	5 fix	-.100	6 pin	-.100		0	122	5384	-5384	68	72	-2	0	.0	26	683	1402	.27	63b
F	6 fix	-.475	7 fix	-.475		0	122	6092	-6369	216	264	-0	-32	.3	66	607	1350	.32	50b
G	7 fix	-.475	8 pin	-.475		0	122	6667	-6955	272	226	32	0	.1	72	765	1400	.35	50b
H	1 fix	-.300	12 fix	-.300		0	147	-5910	5910	308	406	0	-117	.5	158	1027	2382	.37	
I	12 fix	-.300	11 fix	-.300		0	147	-6323	6323	291	130	117	-4	.0	24	970	1402	.34	
J	11 fix	-.300	10 fix	-.300		0	147	-6317	6317	207	200	4	1	.1	68	691	1358	.30	
K	10 fix	-.300	9 fix	-.300		0	147	-6317	6317	126	295	-1	-118	.0	27	419	1402	.34	
L	9 fix	-.300	8 fix	-.300		0	147	-5910	5910	407	308	118	-0	.5	158	1356	2382	.37	
M	2 pin		12 pin			0	72	614	-614	-0	0	0	0	.0	--	--	1362	.16	125b
N	12 pin		3 pin			0	72	-1934	1934	0	0	0	0	.0	--	--	1375	.14	
O	12 pin		4 pin			0	72	1316	-1316	0	-0	0	0	.0	--	--	1964	.14	90b 1
P	11 pin		4 pin			0	72	-781	781	0	0	0	0	.0	--	--	1375	.06	
Q	11 pin		5 pin			0	72	-8	8	0	-0	0	0	.0	--	--	1982	.00	
R	10 pin		5 pin			0	72	-776	776	0	0	0	0	.0	--	--	1375	.05	
S	5 pin		9 pin			0	72	1307	-1307	0	-0	0	0	.0	--	--	1964	.14	90b 1

Design in accordance with : I.S. 193 (1986)

T	9 pin	6 pin	0	72	-1933	1933	0	0	0	0	.0	—	--	1375	.14	
U	9 pin	7 pin	0	72	614	-614	0	-0	0	0	.0	--	—	1362	.10	125b

++++++++++++++++++++++++++++++++MEDIUM TERM load case - duration factor = 1.25 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.158		5863	6169		75
2	1212.9	700.2							1.0	-2.4	-.064					
3	2381.6	1375.0					-1664N		1.1	-3.1	.024					
4	3783.6	1375.0							.9	-3.9	-.016					
5	5141.4	1375.0							.6	-3.9	.015					
6	6543.4	1375.0					-1664N		.4	-3.2	-.024					
7	7712.1	700.2							.5	-2.4	.064					
8	8925.0	.0		DY = 0 mm					1.5	.0	.158		5863	6169		75
9	6543.4	.0							1.1	-3.3	.022					
10	5141.4	.0					-450N		.9	-4.0	.019					
11	3783.6	.0					-450N		.6	-3.9	-.020					
12	2381.6	.0							.4	-3.3	-.022					

MEDIUM TERM SLIP FACTOR = 1.56 AT JOINT 10 MAX NODAL DEFLECTION AT JOINT 10 = -6.2

MEMBER	START JOINT	SHDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB	VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Na)	LOC (mm)	LENGTH (mm)	MAX L/R CSI	BR
A	1 pin	-.925	2 fix	-.925		0	122		10357	-9796	423	548	0	-87	.0	129	610	1400	.45	50b
B	2 fix	-.925	3 fix	-.925		0	122		9196	-8655	533	403	87	0	.5	117	768	1350	.40	50b
C	3 pin	-.100	4 fix	-.100		0	122		7697	-7697	74	66	0	5	.0	27	737	1402	.31	63b
D	4 fix	-.100	5 fix	-.100		0	122		8647	-8647	69	66	-5	7	.1	29	695	1358	.35	63b
E	5 fix	-.100	6 pin	-.100		0	122		7698	-7698	65	75	-7	0	.0	28	649	1402	.31	63b
F	6 fix	-.925	7 fix	-.925		0	122		8656	-9196	403	533	0	-87	.5	117	581	1350	.40	50b
G	7 fix	-.925	8 pin	-.925		0	122		9797	-10358	548	423	87	0	.0	129	790	1400	.45	50b
H	1 fix	-.300	12 fix	-.300		0	147		-8758	8758	318	397	-0	-94	.4	168	1059	2382	.38	
I	12 fix	-.300	11 fix	-.300		0	147		-8647	8647	277	143	94	-0	.0	34	924	1402	.33	
J	11 fix	-.300	10 fix	-.300		0	147		-8642	8642	207	201	0	4	.1	71	689	1358	.31	
K	10 fix	-.300	9 fix	-.300		0	147		-8642	8642	140	281	-4	-95	.0	36	467	1402	.33	
L	9 fix	-.300	8 fix	-.300		0	147		-8758	8758	397	317	95	-0	.4	168	1324	2382	.38	
M	2 pin		12 pin			0	72		1236	-1236	-0	0	0	0	.0	--	--	1362	.19	125b
N	12 pin		3 pin			0	72		-2241	2241	0	0	0	0	.0	—	--	1375	.13	
O	12 pin		4 pin			0	72		1330	-1330	0	-0	0	0	.0	—	—	1964	.12	90b 1
P	11 pin		4 pin			0	72		-795	795	0	0	0	0	.0	--	—	1375	.04	
Q	11 pin		5 pin			0	72		-6	6	0	-0	0	0	.0	--	--	1932	.00	
R	10 pin		5 pin			0	72		-791	791	0	0	0	0	.0	—	--	1375	.04	
S	5 pin		9 pin			0	72		1323	-1323	0	-0	0	0	.0	—	—	1964	.12	90b 1
T	9 pin		6 pin			0	72		-2240	2240	0	0	0	0	.0	—	--	1375	.13	
U	9 pin		7 pin			0	72		1236	-1236	0	-0	0	0	.0	--	—	1362	.19	125b

Design in accordance with : I.S. 193 (1986)

++++++++++++++++++++++++++++++++ SHORT TERM load case - duration factor = 1.50 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.161		5953	6259		75
2	1212.9	700.2							1.0	-2.4	-.066					
3	2381.6	1375.0					-1664N		1.2	-3.2	.023					
4	3783.6	1375.0							.9	-4.0	-.017					
5	5141.4	1375.0							.6	-4.1	.014					
6	6543.4	1375.0					-1664N		.4	-3.3	-.024					
7	7712.1	700.2							.5	-2.5	.068					
8	8925.0	.0		DY = 0 mm					1.5	.0	.262		6448	6754		75
9	6543.4	.0							1.1	-3.5	-.027					
10	5141.4	.0					-450N		.9	-4.1	.031					
11	3783.6	.0					-450N		.6	-4.1	-.024					
12	2381.6	.0							.4	-3.4	-.023					

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.925	2 fix		-.925	0	122	10534	-9973	424	547	0	-86	.0	130	612	1400	.39	50b
B	2 fix		-.925	3 fix		-.925	0	122	9373	-8833	532	404	86	-0	.5	118	767	1350	.35	50b
C	3 pin		-.100	4 fix		-.100	0	122	7852	-7852	74	66	0	6	.0	28	744	1402	.28	63b
D	4 fix		-.100	5 fix		-.100	0	122	8901	-8901	69	67	-6	7	.1	30	688	1358	.32	63b
E	5 fix		-.100	6 pin		-.100	0	122	8265	-8265	65	75	-7	0	.0	28	649	1402	.29	63b
F	6 fix		-.925	7 fix		-.925	0	122	9308	-9849	407	529	0	-82	.5	119	587	1350	.36	50b
G	7 fix		-.925	8 pin		-.925	0	122	10445	-11006	544	427	82	0	.0	131	785	1400	.40	50b
H	1 fix		-.300	12 fix		-.300	0	147	-8910	8910	319	396	-0	-92	.4	169	1062	2382	.33	
I	12 fix		-.300	11 fix		-.300	0	147	-8901	8901	269	152	92	-10	.0	29	897	1402	.28	
J	11 fix		-.300	10 fix		-.300	0	147	-8945	8945	249	159	10	51	.2	93	829	1358	.28	
K	10 fix		-.300	9 fix		-.300	0	147	-8945	8945	-30	450	-51	-285	.1	--	--	1402	.40	
L	9 fix		-.300	8 fix		-.300	-675	147	-9318	9318	815	575	285	0	1.6	472	1191	2382	.52	
M	2 pin			12 pin			0	72	1234	-1234	-0	0	0	0	.0	--	--	1362	.19	125b
N	12 pin			3 pin			0	72	-2328	2328	0	0	0	0	.0	--	--	1375	.11	
O	12 pin			4 pin			0	72	1470	-1470	0	-0	0	0	.0	--	--	1964	.13	90b 1
P	11 pin			4 pin			0	72	-894	894	0	0	0	0	.0	--	--	1375	.04	
Q	11 pin			5 pin			0	72	62	-62	0	-0	0	0	.0	--	--	1982	.02	177b
R	10 pin			5 pin			0	72	-579	579	0	0	0	0	.0	--	--	1375	.03	
S	5 pin			9 pin			0	72	952	-952	0	-0	0	0	.0	--	--	1964	.08	90b 1
T	9 pin			6 pin			0	72	-2563	2563	0	0	0	0	.0	--	--	1375	.12	
U	9 pin			7 pin			0	72	1228	-1228	0	-0	0	0	.0	--	--	1362	.18	125b

Proj: 24-00JUN File: TYPEF~1 Des: Truss Mk: A1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE: "A" TYPE HOUSE 24-Jun-91 12:54 Page: 1

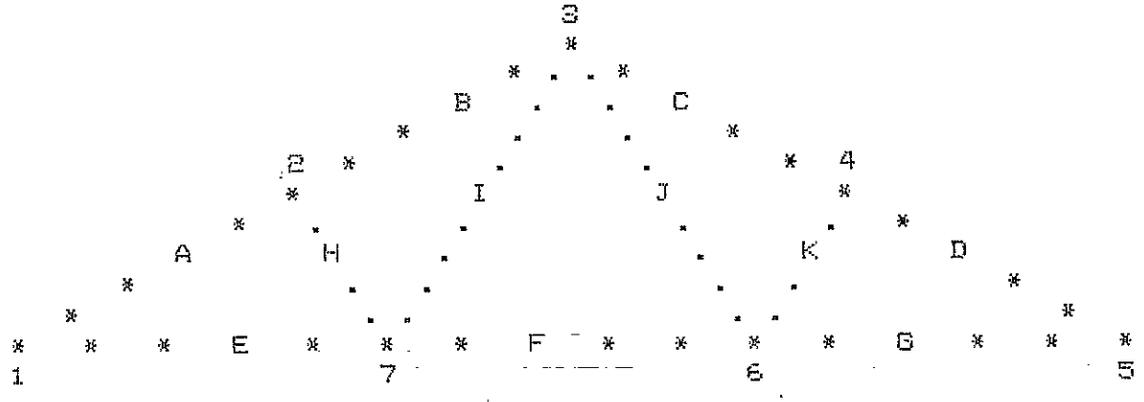
Truss Type : Fink Tested Truss

Hip Type : Dutch Hip [1200mm setback] 2 No Hip Ends

Span overall S.O.P's	8900mm	Bottom Chord Grade	VSSERW
Left Top Chord Pitch	27.50deg	Web Grade	VSSERW
Right Top Chord Pitch	27.50deg	Plate File	GN20
No of Trusses	14	Plating Tolerance	5mm
Truss Centres	600mm	Left Heel Joint	Standard
Truss Thickness	34mm	Right Heel Joint	Standard
Top Chord Live Load	750N/m2	Left Overhang	356mm
Top Chord Dead Load	685N/m2	Right Overhang	356mm
Btm Chord Live Load	250N/m2	Left Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Right Overhang Cut	Plumb
Tank Load per Truss	900N	Timber Treatment	Untreated
Top Chord Restraint	360mm	Nominal Bearing	100mm
Top Chord Grade	VSSERW	Design Code	Eire LMS

Top chord	34 *122
Btm chord	34 *112

Web Ref	H	I	J	K
Depth+Braces	72+0	72+0	72+0	72+0



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Proj: 24-00JUN File: TYPEF-1 Des: - Truss Mk: A1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"A3" TYPE HOUSE 24-Jun-91 12:54 Page: 2

Truss Type : Fink Tested Truss

Design in accordance with : I.S. 193 (1986)

Load Sharing Factor : 1.1

TIMBER GRADES & STRESSES (N/mm2)		Bend	Tens	Comp Para	Comp Perp	Shear	Emean
Top Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Btm Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Web	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500

TESTED TRUSSES

The size of the chord members are taken from the full scale test data given in the appropriate code of practice.

Top Chord : 34 * 122
Btm Chord : 34 * 112

APPLIED STRESSES & FORCES				Long Term		Medium Term		Short Term		
Web Member	Depth mm	Length mm	Br	Axial N	CSI	Axial N	CSI	Axial N	CSI	L/R
Web H	72	1308	0	-918	.143	-1810	.265			119Y
Web I	72	2617	0	2509	.177	3401	.192	4202	.198	

DEFLECTION AT JOINT 7 Medium Term 7mm Perm 27mm

REACTIONS	Load Duration			Minimum
Location	Long	Medium	Short	Bearing
Joint 1	3846N	5849N	6524N	75mm
Joint 5	3846N	5849N	6524N	75mm

Contact : Another Trussed Rafter Design by
)))))) JAMES McMAHON (DUBLIN) LTD. ((((((
Aidan McMahon (01)477644 - Dublin & Drogheda.

Proj: 24-00JUN File: TYPEF-2 * Des: Truss Mk: TS1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"A?" TYPE HOUSE 24-Jun-91 12:55 Page: 1

Profile Truss : Hip Truss 17

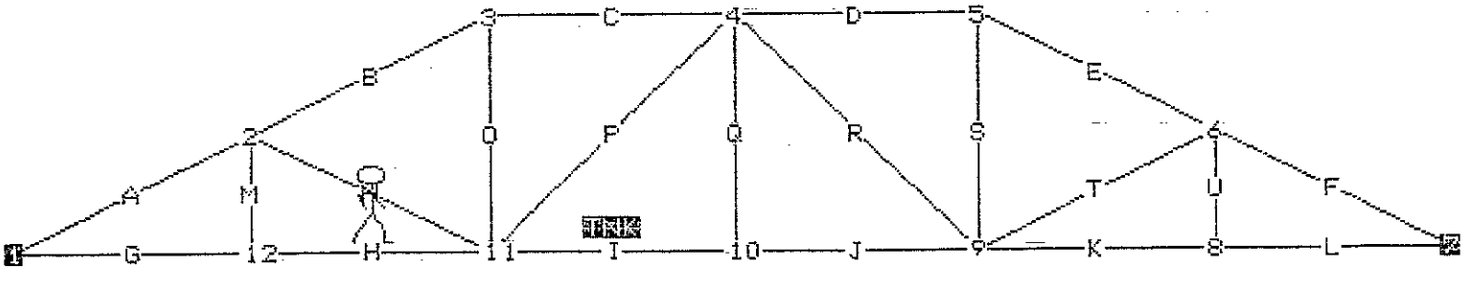
The truss parameters on this header sheet are for the unmodified truss.
Refer to the truss co-ordinates or the truss drawing for the final configuration

Hip Type : Dutch Hip [1200mm setback] 2 No Hip Ends

Span overall S.O.P's	8900mm	Top Chord Grade	VSSERW
Truss Depth	1652mm	Bottom Chord Grade	VSSERW
Left Top Chord Pitch	27.50deg	Web Grade	VSSERW
Right Top Chord Pitch	27.50deg	Plate File	GN20
Horiz Dist of 1st Pitch	3173mm	Plating Tolerance	5mm
No of Trusses	4	Left Heel Joint	Standard
Truss Centres	600mm	Right Heel Joint	Standard
Truss Thickness	34mm	Left Overhang	356mm
Top Chord Live Load	750N/m2	Right Overhang	356mm
Top Chord Dead Load	685N/m2	Left Overhang Cut	Plumb
Btm Chord Live Load	250N/m2	Right Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Timber Treatment	Untreated
Tank Load per Truss	900N	Nominal Bearing	100mm
Top Chord Restraint	360mm	Design Code	Eire LMS
Flat Top Chord Restraint	638mm	Flying Rafter	Yes

Top chord	34 *122
Btm chord	34 *112

Web Ref	M	N	O	P	Q	R	S	T	U
Depth+Braces	72+0	72+0	72+0	72+1	72+0	72+1	72+0	72+0	72+0



Proj: 24-00JUN File: TYPEF-2 Des: Truss Mk: TS1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE: "AD" TYPE HOUSE 24-Jun-91 12:55 Page: 2

Design in accordance with : I.S. 193 (1986)

PERMISSIBLE STRESSES (N/sq.mm) THICKNESS = 34mm PERMISSIBLE DEFLECTION = 26.70 mm

	GRADE	COMPRESSION	TENSION	BENDING	BSS	SPTG	E(mean)	E(min)
TCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
BCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
WEBS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00

++++++++++++++++++++++++++++++++ LONG TERM load case - duration factor = 1.00 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.140		3930	4095		75
2	1469.4	764.9							.9	-2.3	-.050					
3	2939.1	1530.0					-556N		.9	-2.8	.040					
4	4450.0	1530.0							.7	-3.2	.001					
5	5960.9	1530.0					-556N		.5	-2.7	-.038					
6	7430.6	764.9							.5	-2.2	.049					
7	8900.0	.0		DY = 0 mm					1.4	.0	.137		3777	3942		75
8	7430.6	.0							1.2	-2.3	.045					
9	5960.9	.0							.9	-2.8	.017					
10	4450.0	.0					-450N		.7	-3.2	.002					
11	2939.1	.0					-450N		.5	-2.9	-.016					
12	1469.4	.0							.2	-2.3	-.046					

LONG TERM SLIP FACTOR = 1.65 AT JOINT 10 MAX NODAL DEFLECTION AT JOINT 10 = -5.3

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.463	2 fix		-.463	0	122	7551	-7236	263	341	0	-65	.0	95	721	1657	.42	57b
B	2 fix		-.463	3 fix		-.463	0	122	6306	-5992	341	263	65	-0	.5	95	936	1657	.37	57b
C	3 pin		-.100	4 fix		-.100	0	122	5436	-5436	76	75	0	0	.1	29	759	1511	.28	65b
D	4 fix		-.100	5 pin		-.100	0	122	5144	-5144	75	76	-0	0	.0	29	752	1511	.27	65b
E	5 fix		-.463	6 fix		-.463	0	122	5663	-5977	261	343	0	-67	.5	94	717	1657	.36	57b
F	6 fix		-.463	7 pin		-.463	0	122	6911	-7225	343	261	67	0	.0	94	940	1657	.41	57b
G	1 fix		-.300	12 fix		-.300	0	112	-6576	6576	210	230	-0	-15	.0	74	702	1469	.43	
H	12 fix		-.300	11 fix		-.300	0	112	-6576	6576	188	253	15	-63	.2	44	625	1470	.41	
I	11 fix		-.300	10 fix		-.300	0	112	-5791	5791	246	208	63	-34	.2	38	819	1511	.37	
J	10 fix		-.300	9 fix		-.300	0	112	-5791	5791	206	247	34	-65	.1	37	688	1511	.37	
K	9 fix		-.300	8 fix		-.300	0	112	-6288	6288	254	187	65	-16	.2	42	845	1470	.40	
L	8 fix		-.300	7 fix		-.300	0	112	-6288	6288	231	209	16	0	.0	73	771	1469	.41	
M	12 pin			2 pin			0	72	-418	418	0	0	0	0	.0	--	--	765	.03	
N	2 pin			11 pin			0	72	1285	-1285	-0	0	0	0	.0	--	--	1657	.30	152b
O	11 pin			3 pin			0	72	-1902	1902	0	0	0	0	.0	--	--	1530	.13	
P	11 pin			4 pin			0	72	505	-505	-0	0	0	0	.0	--	--	2150	.06	99b 1
Q	10 pin			4 pin			0	72	-864	864	0	0	0	-0	.0	--	--	1530	.06	
R	4 pin			9 pin			0	72	921	-921	0	-0	0	0	.0	--	--	2150	.11	99b 1
S	9 pin			5 pin			0	72	-1751	1751	0	0	0	0	.0	--	--	1530	.12	

Proj: 24-00JUN File: TYPEF-2 Des: Truss Mk: TS1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE: "AD" TYPE HOUSE 24-Jun-91 12:55 Page: 3

Design in accordance with : I.S. 193 (1986)

T	9 pin	6 pin	0	72	1290	-1290	-0	0	0	0	.0	--	--	1657	.30	152b	
U	8 pin	6 pin	0	72	-419	419	0	0	0	0	.0	--	--	765	.03		

++++++++++++++++++++++++++++++MEDIUM TERM load case - duration factor = 1.25 load sharing = 1.10 ++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.190		5793	6118		75
2	1469.4	764.9							1.3	-3.4	-.072					
3	2939.1	1530.0					-1096N		1.3	-4.1	.077					
4	4450.0	1530.0							1.0	-4.5	.001					
5	5960.9	1530.0					-1096N		.7	-4.0	-.076					
6	7430.6	764.9							.7	-3.3	.071					
7	8900.0	.0		DY = 0 mm					2.0	.0	.186		5640	5965		75
8	7430.6	.0							1.7	-3.3	.069					
9	5960.9	.0							1.3	-4.1	.020					
10	4450.0	.0					-450N		1.0	-4.6	.002					
11	2939.1	.0					-450N		.7	-4.2	-.019					
12	1469.4	.0							.4	-3.4	-.071					

MEDIUM TERM SLIP FACTOR = 1.46 AT JOINT 10 MAX NODAL DEFLECTION AT JOINT 10 = -6.7

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.913	2 fix		-.913	0	122	11093	-10474	500	691	0	-159	.1	174	695	1657	.55	57b
B	2 fix		-.913	3 fix		-.913	0	122	9092	-8473	691	500	159	-0	.9	174	962	1657	.48	57b
C	3 pin		-.100	4 fix		-.100	0	122	7746	-7746	81	70	0	8	.1	33	809	1511	.33	65b
D	4 fix		-.100	5 pin		-.100	0	122	7454	-7454	70	81	-8	0	.0	33	702	1511	.31	65b
E	5 fix		-.913	6 fix		-.913	0	122	8144	-8764	498	693	0	-161	.9	173	693	1657	.47	57b
F	6 fix		-.913	7 pin		-.913	0	122	10148	-10768	692	498	161	0	.2	173	964	1657	.54	57b
G	1 fix		-.300	12 fix		-.300	0	112	-9609	9609	227	213	-0	10	.2	86	758	1469	.47	
H	12 fix		-.300	11 fix		-.300	0	112	-9609	9609	168	273	-10	-67	.3	57	561	1470	.45	
I	11 fix		-.300	10 fix		-.300	0	112	-8089	8089	252	201	67	-28	.2	39	841	1511	.39	
J	10 fix		-.300	9 fix		-.300	0	112	-8089	8089	200	253	28	-68	.2	39	666	1511	.39	
K	9 fix		-.300	8 fix		-.300	0	112	-9321	9321	273	168	68	9	.2	56	910	1470	.44	
L	8 fix		-.300	7 fix		-.300	0	112	-9321	9321	214	226	-9	0	.1	85	715	1469	.46	
M	12 pin			2 pin			0	72	-382	382	0	0	0	0	.0	--	--	765	.02	
N	2 pin			11 pin			0	72	2100	-2100	-0	0	0	0	.0	--	--	1657	.46	152b
O	11 pin			3 pin			0	72	-2292	2292	0	0	0	0	.0	--	--	1530	.13	
P	11 pin			4 pin			0	72	489	-489	0	-0	0	0	.0	--	--	2150	.05	99b 1
Q	10 pin			4 pin			0	72	-851	851	0	0	0	0	.0	--	--	1530	.05	
R	4 pin			9 pin			0	72	905	-905	0	-0	0	0	.0	--	--	2150	.10	99b 1
S	9 pin			5 pin			0	72	-2142	2142	0	0	0	0	.0	--	--	1530	.12	
T	9 pin			6 pin			0	72	2105	-2105	-0	0	0	0	.0	--	--	1657	.46	152b
U	8 pin			6 pin			0	72	-382	382	0	0	0	0	.0	--	--	765	.02	

Proj: 24-00JUN File: TYPEF-2 Des: Truss Mk: TS1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"AD" TYPE HOUSE 24-Jun-91 12:55 Page: 4

Design in accordance with : I.S. 193 (1986)

++++++++++++++++++++++++++++++++ SHORT TERM load case - duration factor = 1.50 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.181		6301	6626		75
2	1469.4	764.9							1.4	-3.7	-.078					
3	2939.1	1530.0					-1096N		1.4	-4.4	.081					
4	4450.0	1530.0							1.1	-4.8	.003					
5	5960.9	1530.0					-1096N		.8	-4.2	-.074					
6	7430.6	764.9							.8	-3.4	.075					
7	8900.0	.0		DY = 0 mm					2.1	.0	.193		5807	6132		75
8	7430.6	.0							1.8	-3.5	.072					
9	5960.9	.0							1.4	-4.3	.026					
10	4450.0	.0					-450N		1.1	-4.9	-.009					
11	2939.1	.0					-450N		.8	-4.5	.031					
12	1469.4	.0							.4	-3.7	-.127					

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.913	2 fix		-.913	0	122	12275	-11655	506	685	0	-148	.1	178	704	1657	.51	57b
B	2 fix		-.913	3 fix		-.913	0	122	9882	-9262	685	506	148	-0	1.0	178	958	1657	.44	57b
C	3 pin		-.100	4 fix		-.100	0	122	8449	-8449	82	69	0	10	.1	34	821	1511	.31	65b
D	4 fix		-.100	5 pin		-.100	0	122	7779	-7779	69	82	-10	0	.0	34	690	1511	.29	65b
E	5 fix		-.913	6 fix		-.913	0	122	8510	-9129	500	691	0	-158	1.0	174	695	1657	.41	57b
F	6 fix		-.913	7 pin		-.913	0	122	10502	-11121	691	500	158	0	.1	174	961	1657	.47	57b
G	1 fix		-.300	12 fix		-.300	0	112	-10655	10655	184	257	-0	-54	.4	56	613	1469	.40	
H	12 fix		-.300	11 fix		-.300	-675	112	-10655	10655	495	621	54	-146	.9	229	735	1470	.57	
I	11 fix		-.300	10 fix		-.300	0	112	-8560	8560	319	134	146	-6	.0	24	1064	1511	.42	
J	10 fix		-.300	9 fix		-.300	0	112	-8560	8560	182	272	6	-74	.2	49	605	1511	.35	
K	9 fix		-.300	8 fix		-.300	0	112	-9634	9634	279	162	74	12	.2	56	931	1470	.38	
L	8 fix		-.300	7 fix		-.300	0	112	-9634	9634	212	229	-12	0	.2	87	707	1469	.39	
M	12 pin			2 pin			0	72	-752	752	0	0	0	0	.0	--	--	765	.04	
N	2 pin			11 pin			0	72	2486	-2486	-0	0	0	0	.0	--	--	1657	.53	152b
O	11 pin			3 pin			0	72	-2650	2650	0	0	0	0	.0	--	--	1530	.12	
P	11 pin			4 pin			0	72	158	-158	0	-0	0	0	.0	--	--	2150	.02	99b 1
Q	10 pin			4 pin			0	72	-766	766	0	0	0	0	.0	--	--	1530	.04	
R	4 pin			9 pin			0	72	1112	-1112	-0	0	0	0	.0	--	--	2150	.11	99b 1
S	9 pin			5 pin			0	72	-2308	2308	0	0	0	0	.0	--	--	1530	.11	
T	9 pin			6 pin			0	72	2091	-2091	-0	0	0	0	.0	--	--	1657	.45	152b
U	8 pin			6 pin			0	72	-374	374	0	0	0	0	.0	--	--	765	.02	

Proj: 24-00JUN File: TYPEA-1 Des: AF Truss Mk: A1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE: "A" TYPE HOUSE 24-Jun-91 12:52 Page: 1

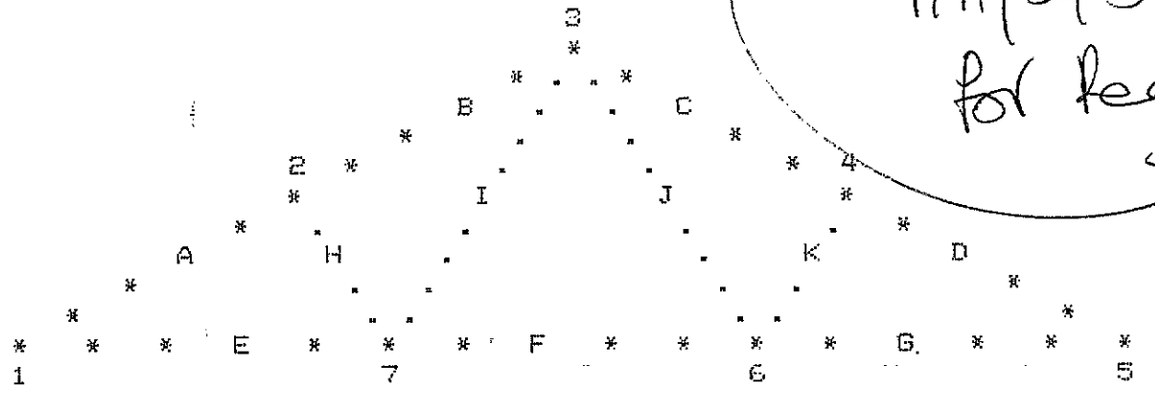
Truss Type : Fink Tested Truss

Hip Type : Standard Setback Hip [2663mm setback] 2 No Hip Ends

Span overall S.O.P's	8925mm	Bottom Chord Grade	VSSERW
Left Top Chord Pitch	30.00deg	Web Grade	VSSERW
Right Top Chord Pitch	30.00deg	Plate File	GN20
No of Trusses	4	Plating Tolerance	5mm
Truss Centres	600mm	Left Heel Joint	Standard
Truss Thickness	34mm	Right Heel Joint	Standard
Top Chord Live Load	750N/m2	Left Overhang	331mm
Top Chord Dead Load	685N/m2	Right Overhang	331mm
Btm Chord Live Load	250N/m2	Left Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Right Overhang Cut	Plumb
Tank Load per Truss	900N	Timber Treatment	Untreated
Top Chord Restraint	360mm	Nominal Bearing	100mm
Top Chord Grade	VSSERW	Design Code	Eire LMS

Top chord	34 *122
Btm chord	34 *112

Web Ref	H	I	J	K
Depth+Braces	72+0	72+0	72+0	72+0



91A/545 for Reg File

Proj: 24-00JUN File: TYPEA-1 Des: AF Truss Mk: A1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:52 Page: 2

Truss Type : Fink Tested Truss

Design in accordance with : I.S. 193 (1986)

Load Sharing Factor : 1.1

TIMBER GRADES & STRESSES (N/mm2)		Bend	Tens	Comp Para	Comp Perp	Shear	Emean
Top Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Btm Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Web	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500

TESTED TRUSSES

The size of the chord members are taken from the full scale test data given in the appropriate code of practice.

Top Chord : 34 * 122
Btm Chord : 34 * 112

APPLIED STRESSES & FORCES Web Member	Depth mm	Length mm	Br	Long Term Axial N	Long Term CSI	Medium Term Axial N	Medium Term CSI	Short Term Axial N	Short Term CSI	L/R
Web H	72	1422	0	-917	.164	-1787	.001			130Y
Web I	72	2845	0	2467	.174	3337	.180	4116	.194	

DEFLECTION AT JOINT 7 Medium Term 6mm Perm 27mm

REACTIONS Location	Load Duration Long	Medium	Short	Minimum Bearing
Joint 1	3907N	5915N	6590N	75mm
Joint 5	3907N	5915N	6590N	75mm

Contact : Another Trussed Rafter Design by
)))))) JAMES McMAHON (DUBLIN) LTD. (((((
Aidan McMahon (01)477644 - Dublin & Drogheda.

Proj: 24-00JUN File: TYPEA-2 Des: AF Truss Mk: HM1 Hip Version 6.20

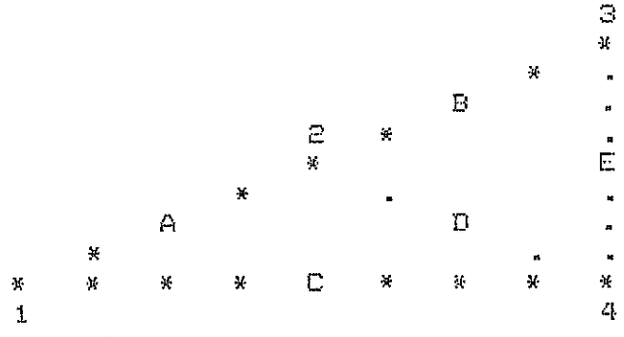
Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:52 Page: 1

Truss Type : Mono 2:1

Hip Type : Standard Setback Hip [2663mm setback] 2 No Hip Ends

Span overall S.O.P's	2663mm	Web Grade	VSSERW
Left Top Chord Pitch	30.00deg	Plate File	GN20
No of Trusses	14	Plating Tolerance	5mm
Truss Centres	600mm	Left Heel Joint	Standard
Truss Thickness	34mm	Right Heel Joint	End Vert
Top Chord Live Load	750N/m2	Left Overhang	331mm
Top Chord Dead Load	635N/m2	Right Overhang	1799mm
Btm Chord Live Load	250N/m2	Left Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Right Overhang Cut	Plumb
Tank Load per Truss	900N	Timber Treatment	Untreated
Top Chord Restraint	360mm	Nominal Bearing	100mm
Top Chord Grade	VSSERW	Design Code	Eire LMS
Bottom Chord Grade	VSSERW		

Top chord	34 *122	
Btm chord	34 * 97	
Web Ref	D	E
Depth+Braces	72+0	72+0



Proj: 24-00JUN File:"TYPEA-2 Des: AF Truss Mk: HM1 "Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:52 Page: 2

Truss Type : Mono 2:1

Design in accordance with : I.S. 193 (1986)

Load Sharing Factor : 1.1

TIMBER GRADES & STRESSES (N/mm2)		Bend	Tens	Comp Para	Comp Perp	Shear	Emean
Top Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Btm Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Web	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500

BENDING MOMENT COEFFICIENTS

	----- Udl -----		Man Load	
	Panel	Joint	Panel	Joint
Top Chord	.070	.125	.203	.094
Btm Chord	.125	.000	.250	.000

APPLIED STRESSES & FORCES				Axial	Bending Moments		---- CSI ----		Local	
Chord Member	Depth mm	Length mm	Load Duration	Force N	Panel NM	Joint NM	Panel	Joint	Defln mm	L/R
Top A	122	1536	Long	-632	58.84	105.08	.101	.156	.1	34X
			Medium	-1231	114.63	204.70	.159	.243	.3	53Y
			Short	-913	210.74	175.41	.208	.171		
Btm C	97	2663	Long	547	265.93	.00	.564	.030	7.2	
			Medium	1066	265.93	.00	.473	.046	7.2	
			Short	1066	715.32	.00	.996	.038		

				Long Term		Medium Term		Short Term		
Web Member	Depth mm	Length mm	Br	Axial N	CSI	Axial N	CSI	Axial N	CSI	L/R
Web D	72	1440	0	-632	.115	-1231	.212			132Y
Web E	72	1440	0	-316	.058	-616	.106			132Y

REACTIONS	-------- Load Duration -------			Minimum
Location	Long	Medium	Short	Bearing
Joint 1	1481N	2081N	2756N	75mm
Joint 4	1481N	2081N	2756N	75mm

Contact : Another Trussed Rafter Design by
)))))) JAMES McMAHON (DUBLIN) LTD. ((((((
Aidan McMahon (01)477644 - Dublin & Drogheda.

Proj: 24-00JUN File: TYPEA-3 --Des: AF Truss Mk: TG1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:52 Page: 1

Profile Truss : Hip Truss 12 Girder *** Double Truss ***

The truss parameters on this header sheet are for the unmodified truss.
Refer to the truss co-ordinates or the truss drawing for the final configuration

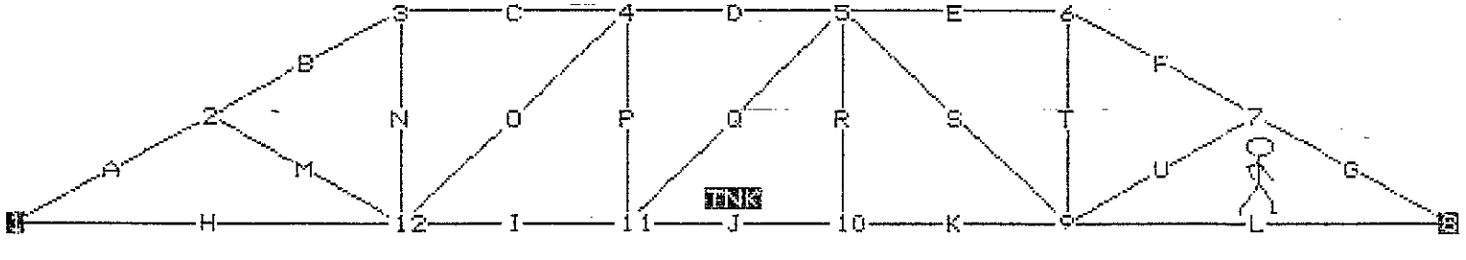
Hip Type : Standard Setback Hip [2663mm setback] 2 No Hip Ends

Span overall S.O.P's	8925mm	Top Chord Grade	VSSERW
Return Span	600mm	Bottom Chord Grade	VSSERW
Truss Depth	1497mm	Web Grade	VSSERW
Left Top Chord Pitch	30.00deg	Plate File	GN20
Right Top Chord Pitch	30.00deg	Plating Tolerance	5mm
Horiz Dist of 1st Pitch	2594mm	Left Heel Joint	Standard
No of Girders	2	Right Heel Joint	Standard
Truss Centres	600mm	Left Overhang	331mm
Truss Thickness	34mm	Right Overhang	331mm
Top Chord Live Load	750N/m2	Left Overhang Cut	Plumb
Top Chord Dead Load	685N/m2	Right Overhang Cut	Plumb
Btm Chord Live Load	250N/m2	Timber Treatment	Untreated
Btm Chord Dead Load	250N/m2	Nominal Bearing	100mm
Tank Load per Truss	900N	Design Code	Eire LMS
Top Chord Restraint	360mm		

Hip Intermediate Centres	600	Hip Intermediates & Girders	4 + 4
Flat Top Chord Restraint	623mm	Flying Rafter	Yes

Top chord	34 *122
Btm chord	34 *147

Web Ref	M	N	O	P	Q	R	S	T	U
Depth+Braces	72+0	72+0	72+0	72+0	72+0	72+0	72+0	72+0	72+0



Proj: 24-00JUN File: TYPEA-3 Des: AF Truss Mk: TG1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE: FR" TYPE HOUSE 24-Jun-91 12:52 Page: 2

Design in accordance with : I.S. 193 (1986)

PERMISSIBLE STRESSES (N/sq.mm) THICKNESS = 34mm PERMISSIBLE DEFLECTION = 26.77 mm

	GRADE	COMPRESSION	TENSION	BENDING	BSS	SPTG	E(mean)	E(min)
TCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
BCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
WEBS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00

++++++++++++++++++++++++++++++++ LONG TERM load case - duration factor = 1.00 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.233		11398	11555		75
2	1212.9	700.2							1.4	-3.4	-.097					
3	2381.6	1375.0					-2297N		1.7	-4.6	-.013					
4	3783.6	1375.0							1.3	-6.0	-.036					
5	5141.4	1375.0							.9	-6.1	.032					
6	6543.4	1375.0					-2297N		.5	-4.6	.015					
7	7712.1	700.2							.7	-3.4	.098					
8	8925.0	.0		DY = 0 mm					2.2	.0	.233		11398	11555		75
9	6543.4	.0							1.7	-4.9	.069					
10	5141.4	.0					-450N		1.3	-6.2	.028					
11	3783.6	.0					-450N		.9	-6.2	-.032					
12	2381.6	.0							.5	-4.8	-.066					

LONG TERM SLIP FACTOR = 1.35 AT JOINT 11 MAX NODAL DEFLECTION AT JOINT 11 = -8.3

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB	VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.475	2 fix		-.475	0	122D		20689	-20401	299	200	0	70	.4	126	840	1400	.46	50b
B	2 fix		-.475	3 fix		-.475	0	122D		20185	-19908	189	292	-70	-0	.5	120	530	1350	.45	50b
C	3 pin		-.100	4 fix		-.100	0	122D		17586	-17386	104	36	0	47	.1	54	1039	1402	.40	63b
D	4 fix		-.100	5 fix		-.100	0	122D		21496	-21496	80	56	-47	64	.2	79	801	1358	.51	63b
E	5 fix		-.100	6 pin		-.100	0	122D		17390	-17390	24	116	-64	0	.1	67	245	1402	.41	63b
F	6 fix		-.475	7 fix		-.475	0	122D		19912	-20189	292	189	-0	70	.5	120	820	1350	.45	50b
G	7 fix		-.475	8 pin		-.475	0	122D		20405	-20693	200	299	-70	0	.4	126	561	1400	.47	50b
H	1 fix		-.816	12 fix		-.816	0	147D		-17767	17767	795	1148	0	-420	.5	387	974	2382	.52	
I	12 fix		-2.581	11 fix		-2.581	0	147D		-21496	21496	1893	1725	420	-302	.3	274	734	1402	.59	
J	11 fix		-2.581	10 fix		-2.581	0	147D		-21463	21463	1774	1730	302	-272	.3	308	608	1350	.54	
K	10 fix		-2.581	9 fix		-2.581	0	147D		-21463	21463	1699	1919	272	-426	.3	288	659	1402	.60	
L	9 fix		-.816	8 fix		-.816	0	147D		-17771	17771	1150	793	426	-0	.4	385	1410	2382	.53	
M	2 pin			12 pin			0	72D		444	-444	-0	0	0	0	.0	--	--	1362	.02	83b
N	12 pin			3 pin			0	72D		-7301	7301	0	0	0	0	.0	--	--	1375	.26	
O	12 pin			4 pin			0	72D		5757	-5757	0	-0	0	0	.0	--	--	1964	.41	120b
P	11 pin			4 pin			0	72D		-3915	3915	0	0	0	0	.0	--	--	1375	.14	
Q	11 pin			5 pin			0	72D		-48	48	0	-0	0	0	.0	--	--	1932	.00	
R	10 pin			5 pin			0	72D		-3879	3879	0	0	0	0	.0	--	--	1375	.14	
S	5 pin			9 pin			0	72D		5704	-5704	0	-0	0	0	.0	--	--	1964	.41	120b

Proj: 24-00JUN File: TYPEA-S Des: AF Truss Mk: TG1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:52 Page: 3

Design in accordance with : I.S. 193 (1986)

T	9 pin	6 pin	0	72D	-7291	7291	0	0	0	0	.0	--	--	1375	.26	
U	9 pin	7 pin	0	72D	444	-444	0	-0	0	0	.0	--	--	1362	.02	83b

++++++++++++++++++++++++++++++MEDIUM TERM load case - duration factor = 1.25 load sharing = 1.10 ++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.299		13130	18436		75
2	1212.9	700.2							2.3	-5.4	-.157					
3	2381.6	1375.0					-4474N		2.7	-7.4	-.018					
4	3783.6	1375.0							2.1	-9.7	-.058					
5	5141.4	1375.0							1.4	-9.9	.051					
6	6543.4	1375.0					-4474N		.8	-7.5	.020					
7	7712.1	700.2							1.2	-5.5	.159					
8	8925.0	.0		DY = 0 mm					3.5	.0	.300		18130	18436		75
9	6543.4	.0							2.7	-7.9	.152					
10	5141.4	.0					-450N		2.1	-10.1	.031					
11	3783.6	.0					-450N		1.5	-9.9	-.038					
12	2381.6	.0							.9	-7.8	-.147					

MEDIUM TERM SLIP FACTOR = 1.22 AT JOINT 11 MAX NODAL DEFLECTION AT JOINT 11 = -12.1

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.925	2 fix		-.925	0	122D	33749	-33188	546	425	0	85	.5	215	788	1400	.62	50b
B	2 fix		-.925	3 fix		-.925	0	122D	32727	-32187	405	531	-85	0	.8	203	584	1350	.60	50b
C	3 pin		-.100	4 fix		-.100	0	122D	28140	-28140	132	8	0	87	.2	87	1319	1402	.55	63b
D	4 fix		-.100	5 fix		-.100	0	122D	34735	-34735	88	48	-87	114	.3	125	878	1353	.68	63b
E	5 fix		-.100	6 pin		-.100	0	122D	28146	-28146	-11	151	-114	0	.2	--	--	1402	.54	63b
F	6 fix		-.925	7 fix		-.925	0	122D	32194	-32734	531	405	-0	85	.9	203	766	1350	.60	50b
G	7 fix		-.925	8 pin		-.925	0	122D	33195	-33756	425	546	-85	0	.6	215	613	1400	.62	50b
H	1 fix		-.816	12 fix		-.816	0	147D	-28354	28954	782	1161	0	-451	.2	375	959	2382	.60	
I	12 fix		-4.254	11 fix		-4.254	0	147D	-34735	34735	2910	3054	451	-551	.6	545	684	1402	.72	
J	11 fix		-4.254	10 fix		-4.254	0	147D	-34680	34680	2924	2852	551	-502	.5	454	637	1353	.72	
K	10 fix		-4.254	9 fix		-4.254	0	147D	-34680	34680	3013	2951	502	-459	.7	565	708	1402	.73	
L	9 fix		-.816	8 fix		-.816	0	147D	-28960	28960	1164	779	459	-0	.2	372	1427	2382	.60	
M	2 pin			12 pin			0	72D	949	-949	-0	0	0	0	.0	--	--	1362	.04	83b
N	12 pin			3 pin			0	72D	-11027	11027	0	0	0	0	.0	--	--	1375	.31	
O	12 pin			4 pin			0	72D	9238	-9238	0	-0	0	0	.0	--	--	1964	.62	120b
P	11 pin			4 pin			0	72D	-6372	6372	0	0	0	0	.0	--	--	1375	.18	
Q	11 pin			5 pin			0	72D	-79	79	0	-0	0	0	.0	--	--	1982	.00	
R	10 pin			5 pin			0	72D	-6315	6315	0	0	0	0	.0	--	--	1375	.18	
S	5 pin			9 pin			0	72D	9152	-9152	0	-0	0	0	.0	--	--	1964	.61	120b
T	9 pin			6 pin			0	72D	-11011	11011	0	0	0	0	.0	--	--	1375	.31	
U	9 pin			7 pin			0	72D	949	-949	0	-0	0	0	.0	--	--	1362	.04	83b

Proj: 24-00JUN File: TYPEA-3 Des: AF Truss Mk: TG1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:52 Page: 4

Design in accordance with : I.S. 193 (1986)

++++++++++++++++++++++++++++++++ SHORT TERM load case - duration factor = 1.50 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.302		18250	18556		75
2	1212.9	700.2							2.3	-5.5	-.159					
3	2381.6	1375.0					-4474N		2.7	-7.5	-.019					
4	3783.6	1375.0							2.1	-9.8	-.059					
5	5141.4	1375.0							1.4	-10.0	.051					
6	6543.4	1375.0					-4474N		.8	-7.6	.020					
7	7712.1	700.2							1.2	-5.6	.162					
8	8925.0	.0		DY = 0 mm					3.6	.0	.391		18910	19216		75
9	6543.4	.0							2.7	-8.1	.109					
10	5141.4	.0					-450N		2.1	-10.2	.041					
11	3783.6	.0					-450N		1.5	-10.1	-.041					
12	2381.6	.0							.9	-7.9	-.148					

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.925	2 fix		-.925	0	122D	33984	-33424	548	423	0	87	.6	216	790	1400	.53	50b
B	2 fix		-.925	3 fix		-.925	0	122D	32964	-32424	408	532	-87	-0	.9	204	582	1350	.52	50b
C	3 pin		-.100	4 fix		-.100	0	122D	28346	-28346	133	7	0	88	.2	88	1328	1402	.48	63b
D	4 fix		-.100	5 fix		-.100	0	122D	35074	-35074	87	49	-88	114	.3	126	869	1358	.60	63b
E	5 fix		-.100	6 pin		-.100	0	122D	28902	-28902	-11	151	-114	0	.2	--	--	1402	.49	63b
F	6 fix		-.925	7 fix		-.925	0	122D	33064	-33604	536	400	0	92	.9	207	773	1350	.53	50b
G	7 fix		-.925	8 pin		-.925	0	122D	34060	-34621	420	551	-92	0	.6	219	606	1400	.54	50b
H	1 fix		-.816	12 fix		-.816	0	147D	-29157	29157	783	1159	-0	-448	.2	376	960	2382	.50	
I	12 fix		-4.254	11 fix		-4.254	0	147D	-35074	35074	2899	3065	448	-564	.6	540	682	1402	.61	
J	11 fix		-4.254	10 fix		-4.254	0	147D	-35083	35083	2981	2796	564	-438	.5	480	701	1358	.61	
K	10 fix		-4.254	9 fix		-4.254	0	147D	-35083	35083	2786	3178	438	-713	.5	474	655	1402	.65	
L	9 fix		-.816	8 fix		-.816	-900	147D	-29707	29707	1721	1122	713	-0	.9	758	1191	2382	.60	
M	2 pin			12 pin			0	72D	946	-946	-0	0	0	0	.0	--	--	1362	.03	83b
N	12 pin			3 pin			0	72D	-11144	11144	0	0	0	0	.0	--	--	1375	.26	
O	12 pin			4 pin			0	72D	9424	-9424	0	-0	0	0	.0	--	--	1964	.60	120b
P	11 pin			4 pin			0	72D	-6504	6504	0	0	0	0	.0	--	--	1375	.15	
Q	11 pin			5 pin			0	72D	12	-12	0	-0	0	0	.0	--	--	1932	.00	118b
R	10 pin			5 pin			0	72D	-6032	6032	0	0	0	0	.0	--	--	1375	.14	
S	5 pin			9 pin			0	72D	8657	-8657	0	-0	0	0	.0	--	--	1964	.55	120b
T	9 pin			6 pin			0	72D	-11442	11442	0	0	0	0	.0	--	--	1375	.27	
U	9 pin			7 pin			0	72D	938	-938	0	-0	0	0	.0	--	--	1362	.03	83b

Proj: 24-00JUN File: TYPEA-4 Des: AF Truss Mk: TS1 Hip Version 6.20

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Profile Truss : Hip Truss 12

The truss parameters on this header sheet are for the unmodified truss.
Refer to the truss co-ordinates or the truss drawing for the final configuration

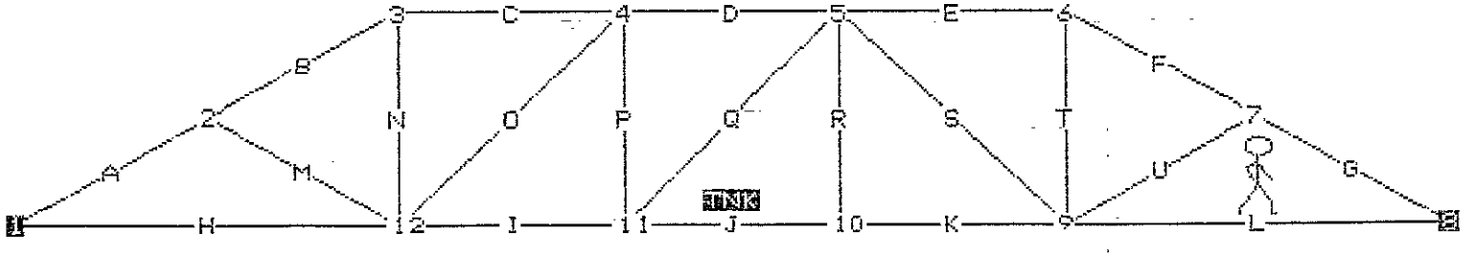
Hip Type : Standard Setback Hip [2663mm setback] 2 No Hip Ends

Span overall S.O.P's	8925mm	Top Chord Grade	VSSERW
Truss Depth	1497mm	Bottom Chord Grade	VSSERW
Left Top Chord Pitch	30.00deg	Web Grade	VSSERW
Right Top Chord Pitch	30.00deg	Plate File	GN20
Horiz Dist of 1st Pitch	2594mm	Plating Tolerance	5mm
No of Trusses	4	Left Heel Joint	Standard
Truss Centres	600mm	Right Heel Joint	Standard
Truss Thickness	34mm	Left Overhang	331mm
Top Chord Live Load	750N/m2	Right Overhang	331mm
Top Chord Dead Load	685N/m2	Left Overhang Cut	Plumb
Btm Chord Live Load	250N/m2	Right Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Timber Treatment	Untreated
Tank Load per Truss	900N	Nominal Bearing	100mm
Top Chord Restraint	360mm	Design Code	Eire LMS

Hip Intermediate Centres	600	Hip Intermediates & Girders	4 + 4
Flat Top Chord Restraint	623mm	Flying Rafter	Yes

Top chord	34 *122
Btm chord	34 *147

Web Ref	M	N	O	P	Q	R	S	T	U
Depth+Braces	72+0	72+0	72+1	72+0	72+0	72+0	72+1	72+0	72+0



Proj: 24-00JUN File: TYPEA-4 Des: AF Truss Mk: TS1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:53 Page: 2

Design in accordance with : I.S. 193 (1986)

PERMISSIBLE STRESSES (N/sq.mm) THICKNESS = 34mm PERMISSIBLE DEFLECTION = 26.77 mm

	GRADE	COMPRESSION	TENSION	BENDING	BSS	SPTG	E(mean)	E(min)
TCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
BCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
WEBS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00

++++++++++++++++++++++++++++++++ LONG TERM load case - duration factor = 1.00 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.129		3981	4138		75
2	1212.9	700.2							.7	-1.6	-.045					
3	2381.6	1375.0					-854N		.8	-2.2	.009					
4	3783.6	1375.0							.6	-2.8	-.012					
5	5141.4	1375.0							.4	-2.8	.011					
6	6543.4	1375.0					-854N		.2	-2.2	-.009					
7	7712.1	700.2							.3	-1.7	.046					
8	8925.0	.0		DY = 0 mm					1.0	.0	.129		3981	4138		75
9	6543.4	.0							.8	-2.3	.010					
10	5141.4	.0					-450N		.6	-2.9	.018					
11	3783.6	.0					-450N		.4	-2.3	-.019					
12	2381.6	.0							.3	-2.3	-.009					

LONG TERM SLIP FACTOR = 1.78 AT JOINT 10 MAX NODAL DEFLECTION AT JOINT 10 = -5.1

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.475	2 fix		-.475	0	122	6954	-6667	226	272	0	-32	.1	72	635	1400	.35	50b
B	2 fix		-.475	3 fix		-.475	0	122	6368	-6091	264	216	32	-0	.3	66	742	1350	.32	50b
C	3 pin		-.100	4 fix		-.100	0	122	5383	-5383	70	70	0	-0	.0	24	699	1402	.27	63b
D	4 fix		-.100	5 fix		-.100	0	122	6323	-6323	70	66	0	2	.1	24	699	1358	.31	63b
E	5 fix		-.100	6 pin		-.100	0	122	5384	-5384	68	72	-2	0	.0	26	683	1402	.27	63b
F	6 fix		-.475	7 fix		-.475	0	122	6092	-6369	216	264	-0	-32	.3	66	607	1350	.32	50b
G	7 fix		-.475	8 pin		-.475	0	122	6667	-6955	272	226	32	0	.1	72	765	1400	.35	50b
H	1 fix		-.300	12 fix		-.300	0	147	-5910	5910	308	406	0	-117	.5	158	1027	2382	.37	
I	12 fix		-.300	11 fix		-.300	0	147	-6323	6323	291	130	117	-4	.0	24	970	1402	.34	
J	11 fix		-.300	10 fix		-.300	0	147	-6317	6317	207	200	4	1	.1	68	691	1358	.30	
K	10 fix		-.300	9 fix		-.300	0	147	-6317	6317	126	295	-1	-118	.0	27	419	1402	.34	
L	9 fix		-.300	8 fix		-.300	0	147	-5910	5910	407	308	118	-0	.5	158	1356	2382	.37	
M	2 pin			12 pin			0	72	614	-614	-0	0	0	0	.0	--	--	1362	.10	125b
N	12 pin			3 pin			0	72	-1934	1934	0	0	0	0	.0	--	--	1375	.14	
O	12 pin			4 pin			0	72	1316	-1316	0	-0	0	0	.0	--	--	1964	.14	90b 1
P	11 pin			4 pin			0	72	-781	781	0	0	0	0	.0	--	--	1375	.06	
Q	11 pin			5 pin			0	72	-8	8	0	-0	0	0	.0	--	--	1932	.00	
R	10 pin			5 pin			0	72	-776	776	0	0	0	0	.0	--	--	1375	.05	
S	5 pin			9 pin			0	72	1307	-1307	0	-0	0	0	.0	--	--	1964	.14	90b 1

Design in accordance with : I.S. 193 (1986)

T	9 pin	6 pin	0	72	-1933	1933	0	0	0	0	.0	--	--	1375	.14	
U	9 pin	7 pin	0	72	614	-614	0	-0	0	0	.0	--	--	1362	.10	125b

++++++++++++++++++++++++++++++++MEDIUM TERM load case = duration factor = 1.25 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.158		5863	6169		75
2	1212.9	700.2							1.0	-2.4	-.064					
3	2381.6	1375.0					-1664N		1.1	-3.1	.024					
4	3783.6	1375.0							.9	-3.9	-.016					
5	5141.4	1375.0							.6	-3.9	.015					
6	6543.4	1375.0					-1664N		.4	-3.2	-.024					
7	7712.1	700.2							.5	-2.4	.064					
8	8925.0	.0		DY = 0 mm					1.5	.0	.158		5863	6169		75
9	6543.4	.0							1.1	-3.3	.022					
10	5141.4	.0					-450N		.9	-4.0	.019					
11	3783.6	.0					-450N		.6	-3.9	-.020					
12	2381.6	.0							.4	-3.3	-.022					

MEDIUM TERM SLIP FACTOR = 1.56 AT JOINT 10 MAX NODAL DEFLECTION AT JOINT 10 = -6.2

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.925	2 fix		-.925	0	122	10357	-9796	423	548	0	-87	.0	129	610	1400	.45	50b
B	2 fix		-.925	3 fix		-.925	0	122	9196	-8655	533	403	87	0	.5	117	768	1350	.40	50b
C	3 pin		-.100	4 fix		-.100	0	122	7697	-7697	74	66	0	5	.0	27	737	1402	.31	63b
D	4 fix		-.100	5 fix		-.100	0	122	8647	-8647	69	66	-5	7	.1	29	695	1358	.35	63b
E	5 fix		-.100	6 pin		-.100	0	122	7698	-7698	65	75	-7	0	.0	28	649	1402	.31	63b
F	6 fix		-.925	7 fix		-.925	0	122	8656	-9196	403	533	0	-87	.5	117	581	1350	.40	50b
G	7 fix		-.925	8 pin		-.925	0	122	9797	-10358	548	423	87	0	.0	129	790	1400	.45	50b
H	1 fix		-.300	12 fix		-.300	0	147	-8758	8758	318	397	-0	-94	.4	168	1059	2382	.38	
I	12 fix		-.300	11 fix		-.300	0	147	-8647	8647	277	143	94	-0	.0	34	924	1402	.33	
J	11 fix		-.300	10 fix		-.300	0	147	-8642	8642	207	201	0	4	.1	71	689	1358	.31	
K	10 fix		-.300	9 fix		-.300	0	147	-8642	8642	140	281	-4	-95	.0	36	467	1402	.33	
L	9 fix		-.300	8 fix		-.300	0	147	-8758	8758	397	317	95	-0	.4	168	1324	2382	.38	
M	2 pin			12 pin			0	72	1236	-1236	-0	0	0	0	.0	--	--	1362	.19	125b
N	12 pin			3 pin			0	72	-2241	2241	0	0	0	0	.0	--	--	1375	.13	
O	12 pin			4 pin			0	72	1330	-1330	0	-0	0	0	.0	--	--	1964	.12	90b 1
P	11 pin			4 pin			0	72	-795	795	0	0	0	0	.0	--	--	1375	.04	
Q	11 pin			5 pin			0	72	-6	6	0	-0	0	0	.0	--	--	1932	.00	
R	10 pin			5 pin			0	72	-791	791	0	0	0	0	.0	--	--	1375	.04	
S	5 pin			9 pin			0	72	1323	-1323	0	-0	0	0	.0	--	--	1964	.12	90b 1
T	9 pin			6 pin			0	72	-2240	2240	0	0	0	0	.0	--	--	1375	.13	
U	9 pin			7 pin			0	72	1236	-1236	0	-0	0	0	.0	--	--	1362	.19	125b

Proj: 24-00JUN File: TYPEA-4 Des: AF Truss Mk: TS1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE: "F" TYPE HOUSE 24-Jun-91 12:53 Page: 4

Design in accordance with : I.S. 193 (1986)

++++++++++++++++++++++++++++++++ SHORT TERM load case - duration factor = 1.50 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.161		5953	6259		75
2	1212.9	700.2							1.0	-2.4	-.066					
3	2381.6	1375.0					-1664N		1.2	-3.2	.023					
4	3783.6	1375.0							.9	-4.0	-.017					
5	5141.4	1375.0							.6	-4.1	.014					
6	6543.4	1375.0					-1664N		.4	-3.3	-.024					
7	7712.1	700.2							.5	-2.5	.068					
8	8925.0	.0		DY = 0 mm					1.5	.0	.262		6448	6754		75
9	6543.4	.0							1.1	-3.5	-.027					
10	5141.4	.0					-450N		.9	-4.1	.031					
11	3783.6	.0					-450N		.6	-4.1	-.024					
12	2381.6	.0							.4	-3.4	-.023					

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R	BR
A	1 pin		-.925	2 fix		-.925	0	122	10534	-9973	424	547	0	-86	.0	130	612	1400	.39		50b
B	2 fix		-.925	3 fix		-.925	0	122	9873	-8833	532	404	86	-0	.5	118	767	1350	.35		50b
C	3 pin		-.100	4 fix		-.100	0	122	7852	-7852	74	66	0	6	.0	28	744	1402	.28		63b
D	4 fix		-.100	5 fix		-.100	0	122	8901	-8901	69	67	-6	7	.1	30	688	1358	.32		63b
E	5 fix		-.100	6 pin		-.100	0	122	8265	-8265	65	75	-7	0	.0	28	649	1402	.29		63b
F	6 fix		-.925	7 fix		-.925	0	122	9308	-9849	407	529	0	-82	.5	119	587	1350	.36		50b
G	7 fix		-.925	8 pin		-.925	0	122	10445	-11006	544	427	82	0	.0	131	785	1400	.40		50b
H	1 fix		-.300	12 fix		-.300	0	147	-8910	8910	319	396	-0	-92	.4	169	1062	2382	.33		
I	12 fix		-.300	11 fix		-.300	0	147	-8901	8901	269	152	92	-10	.0	29	897	1402	.28		
J	11 fix		-.300	10 fix		-.300	0	147	-8945	8945	249	159	10	51	.2	93	829	1358	.28		
K	10 fix		-.300	9 fix		-.300	0	147	-8945	8945	-30	450	-51	-285	.1	--	--	1402	.40		
L	9 fix		-.300	8 fix		-.300	-675	147	-9318	9318	815	575	285	0	1.6	472	1191	2382	.52		
M	2 pin			12 pin			0	72	1234	-1234	-0	0	0	0	.0	--	--	1362	.19		125b
N	12 pin			3 pin			0	72	-2328	2328	0	0	0	0	.0	--	--	1375	.11		
O	12 pin			4 pin			0	72	1470	-1470	0	-0	0	0	.0	--	--	1964	.13		90b 1
P	11 pin			4 pin			0	72	-894	894	0	0	0	0	.0	--	--	1375	.04		
Q	11 pin			5 pin			0	72	62	-62	0	-0	0	0	.0	--	--	1932	.02		177b
R	10 pin			5 pin			0	72	-579	579	0	0	0	0	.0	--	--	1375	.03		
S	5 pin			9 pin			0	72	952	-952	0	-0	0	0	.0	--	--	1964	.03		90b 1
T	9 pin			6 pin			0	72	-2563	2563	0	0	0	0	.0	--	--	1375	.12		
U	9 pin			7 pin			0	72	1228	-1228	0	-0	0	0	.0	--	--	1362	.18		125b

Proj: 24-00JUN File: TYPEA~1 Des: AF Truss Mk: A1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"A" TYPE HOUSE 24-Jun-91 12:52 Page: 1

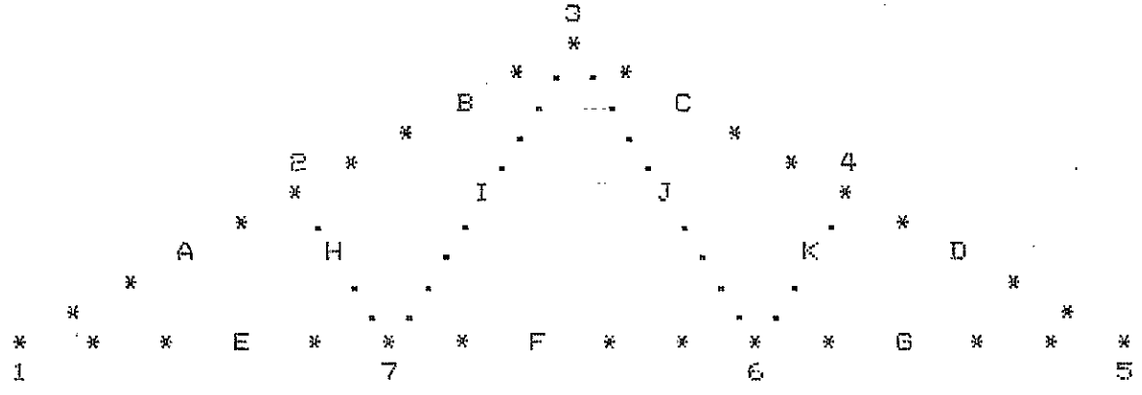
Truss Type : Fink Tested Truss

Hip Type : Standard Setback Hip [2660mm setback] 2 No Hip Ends

Span overall S.O.P's	8925mm	Bottom Chord Grade	VSSERW
Left Top Chord Pitch	30.00deg	Web Grade	VSSERW
Right Top Chord Pitch	30.00deg	Plate File	GN20
No of Trusses	4	Plating Tolerance	5mm
Truss Centres	600mm	Left Heel Joint	Standard
Truss Thickness	34mm	Right Heel Joint	Standard
Top Chord Live Load	750N/m2	Left Overhang	331mm
Top Chord Dead Load	685N/m2	Right Overhang	331mm
Btm Chord Live Load	250N/m2	Left Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Right Overhang Cut	Plumb
Tank Load per Truss	900N	Timber Treatment	Untreated
Top Chord Restraint	360mm	Nominal Bearing	100mm
Top Chord Grade	VSSERW	Design Code	Eire LMS

Top chord 34 *122
Btm chord 34 *112

Web Ref	H	I	J	K
Depth+Braces	72+0	72+0	72+0	72+0



91A/543

A1 for Reg File

Proj: 24-00JUN File: TYPEA~1 Des: AF Truss Mk: A1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:52 Page: 2

Truss Type : Fink Tested Truss

Design in accordance with : I.S. 193 (1986)

Load Sharing Factor : 1.1

TIMBER GRADES & STRESSES (N/mm2)		Bend	Tens	Comp Para	Comp Perp	Shear	Emean
Top Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Btm Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Web	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500

TESTED TRUSSES

The size of the chord members are taken from the full scale test data given in the appropriate code of practice.

Top Chord : 34 * 122
Btm Chord : 34 * 112

APPLIED STRESSES & FORCES				Long Term		Medium Term		Short Term		
Web Member	Depth mm	Length mm	Br	Axial N	CSI	Axial N	CSI	Axial N	CSI	L/R
Web H	72	1422	0	-917	.164	-1787	.301			130Y
Web I	72	2845	0	2467	.174	3337	.188	4116	.194	

DEFLECTION AT JOINT 7 Medium Term 6mm Perm 27mm

REACTIONS	Load Duration			Minimum
Location	Long	Medium	Short	Bearing
Joint 1	3907N	5915N	6590N	75mm
Joint 5	3907N	5915N	6590N	75mm

Contact : Another Trussed Rafter Design by
))))) JAMES McMAHON (DUBLIN) LTD. (((((
Aidan McMahon (01)477644 - Dublin & Drogheda.

Proj: 24-00JUN File: TYPEA-2 Des: AF Truss Mk: HM1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"SH" TYPE HOUSE 24-Jun-91 12:52 Page: 1

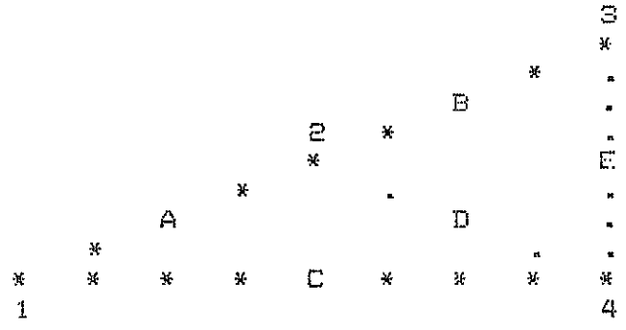
Truss Type : Mono 2:1

Hip Type : Standard Setback Hip [2663mm setback] 2 No Hip Ends

Span overall S.O.P's	2663mm	Web Grade	VSSERW
Left Top Chord Pitch	30.00deg	Plate File	**GN20**
No of Trusses	14	Plating Tolerance	5mm
Truss Centres	600mm	Left Heel Joint	Standard
Truss Thickness	34mm	Right Heel Joint	End Vert
Top Chord Live Load	750N/m2	Left Overhang	331mm
Top Chord Dead Load	685N/m2	Right Overhang	1799mm
Btm Chord Live Load	250N/m2	Left Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Right Overhang Cut	Plumb
Tank Load per Truss	900N	Timber Treatment	**Untreated**
Top Chord Restraint	360mm	Nominal Bearing	100mm
Top Chord Grade	VSSERW	Design Code	Eire LMS
Bottom Chord Grade	VSSERW		

Top chord	34	*122
Btm chord	34	* 97

Web Ref	D	E
Depth+Braces	72+0	72+0



Proj: 24-00JUN File: TYPEA-2 Des: AF Truss Mk: HM1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:52 Page: 2

Truss Type : Mono 2:1

Design in accordance with : I.S. 193 (1986)

Load Sharing Factor : 1.1

TIMBER GRADES & STRESSES (N/mm2)		Bend	Tens	Comp Para	Comp Perp	Shear	Emean
Top Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Btm Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Web	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500

BENDING MOMENT COEFFICIENTS

	---- Udl ----		Man Load	
	Panel	Joint	Panel	Joint
Top Chord	.070	.125	.203	.094
Btm Chord	.125	.000	.250	.000

APPLIED STRESSES & FORCES				Axial	Bending Moments		---- CSI ----		Local	
Chord Member	Depth mm	Length mm	Load Duration	Force N	Panel NM	Joint NM	Panel	Joint	Defln mm	L/R
Top A	122	1536	Long	-632	58.84	105.08	.101	.156	.1	34X
			Medium	-1231	114.63	204.70	.159	.243	.3	53Y
			Short	-913	210.74	175.41	.200	.171		
Btm C	97	2663	Long	547	265.93	.00	.564	.030	7.2	
			Medium	1066	265.93	.00	.473	.046	7.2	
			Short	1066	715.32	.00	.996	.088		

				Long Term		Medium Term		Short Term		
Web Member	Depth mm	Length mm	Br	Axial N	CSI	Axial N	CSI	Axial N	CSI	L/R
Web D	72	1440	0	-632	.115	-1231	.212			132Y
Web E	72	1440	0	-316	.058	-616	.106			132Y

REACTIONS	---------- Load Duration ----------			Minimum
Location	Long	Medium	Short	Bearing
Joint 1	1481N	2081N	2756N	75mm
Joint 4	1481N	2081N	2756N	75mm

Contact : Another Trussed Rafter Design by
)))))) JAMES McMAHON (DUBLIN) LTD. ((((((
Aidan McMahon (01)477644 - Dublin & Drogheda.

Proj: 24-00JUN File: TYPEA-3 Des: AF Truss Mk: TG1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:52 Page: 1

Profile Truss : Hip Truss 12 Girder - *** Double Truss ***

The truss parameters on this header sheet are for the unmodified truss.
Refer to the truss co-ordinates or the truss drawing for the final configuration

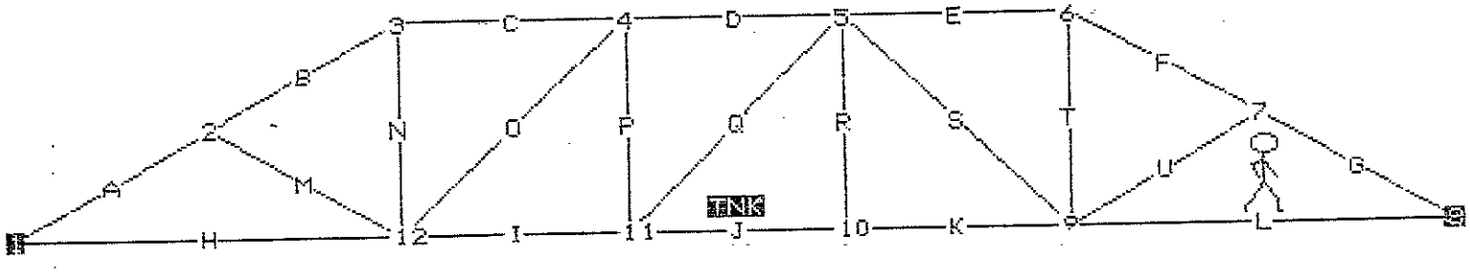
Hip Type : Standard Setback Hip [2663mm setback] 2 No Hip Ends

Span overall S.O.P's	8925mm	Top Chord Grade	VSSERW
Return Span	600mm	Bottom Chord Grade	VSSERW
Truss Depth	1497mm	Web Grade	VSSERW
Left Top Chord Pitch	30.00deg	Plate File	GN20
Right Top Chord Pitch	30.00deg	Plating Tolerance	5mm
Horiz Dist of 1st Pitch	2594mm	Left Heel Joint	Standard
No of Girders	2	Right Heel Joint	Standard
Truss Centres	600mm	Left Overhang	331mm
Truss Thickness	34mm	Right Overhang	331mm
Top Chord Live Load	750N/m2	Left Overhang Cut	Plumb
Top Chord Dead Load	685N/m2	Right Overhang Cut	Plumb
Btm Chord Live Load	250N/m2	Timber Treatment	Untreated
Btm Chord Dead Load	250N/m2	Nominal Bearing	100mm
Tank Load per Truss	900N	Design Code	Eire LMS
Top Chord Restraint	360mm		

Hip Intermediate Centres	600	Hip Intermediates & Girders	4 + 4
Flat Top Chord Restraint	623mm	Flying Rafter	Yes

Top chord	34 *122
Btm chord	34 *147

Web Ref	M	N	O	P	Q	R	S	T	U
Depth+Braces	72+0	72+0	72+0	72+0	72+0	72+0	72+0	72+0	72+0



Proj: 24-00JUN File: TYPEA-3 Des: AF"- Truss Mk: TG1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE: FH" TYPE-HOUSE 24-Jun-91 12:52 Page: 2

Design in accordance with : I.S. 193 (1986)

PERMISSIBLE STRESSES (N/sq.mm) THICKNESS = 34mm PERMISSIBLE DEFLECTION = 26.77 mm

GRADE	COMPRESSION	TENSION	BENDING	BSS	SPTG	E(mean)	E(min)
TCS VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
BCS VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
WEBS VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00

++++++++++++++++++++++++++++++++ LONG TERM load case - duration factor = 1.00 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.233		11398	11555		75
2	1212.9	700.2							1.4	-3.4	-.097					
3	2381.6	1375.0					-2297N		1.7	-4.6	-.013					
4	3783.6	1375.0							1.3	-6.0	-.036					
5	5141.4	1375.0							.9	-6.1	.032					
6	6543.4	1375.0					-2297N		.5	-4.6	.015					
7	7712.1	700.2							.7	-3.4	.098					
8	8925.0	.0		DY = 0 mm					2.2	.0	.233		11398	11555		75
9	6543.4	.0							1.7	-4.9	.069					
10	5141.4	.0					-450N		1.3	-6.2	.028					
11	3783.6	.0					-450N		.9	-6.2	-.032					
12	2381.6	.0							.5	-4.8	-.066					

LONG TERM SLIP FACTOR = 1.35 AT JOINT 11 MAX NODAL DEFLECTION AT JOINT 11 = -8.3

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.475	2 fix		-.475	0	122D	20689	-20401	299	200	0	70	.4	126	840	1400	.46	50b
B	2 fix		-.475	3 fix		-.475	0	122D	20185	-19908	189	292	-70	-0	.5	120	530	1350	.45	50b
C	3 pin		-.100	4 fix		-.100	0	122D	17386	-17386	104	36	0	47	.1	54	1039	1402	.40	63b
D	4 fix		-.100	5 fix		-.100	0	122D	21496	-21496	80	56	-47	64	.2	79	801	1358	.51	63b
E	5 fix		-.100	6 pin		-.100	0	122D	17390	-17390	24	116	-64	0	.1	67	245	1402	.41	63b
F	6 fix		-.475	7 fix		-.475	0	122D	19912	-20189	292	189	-0	70	.5	120	820	1350	.45	50b
G	7 fix		-.475	8 pin		-.475	0	122D	20405	-20693	200	299	-70	0	.4	126	561	1400	.47	50b
H	1 fix		-.816	12 fix		-.816	0	147D	-17767	17767	795	1148	0	-420	.5	387	974	2382	.52	
I	12 fix		-2.581	11 fix		-2.581	0	147D	-21496	21496	1893	1725	420	-302	.3	274	734	1402	.59	
J	11 fix		-2.581	10 fix		-2.581	0	147D	-21463	21463	1774	1730	302	-272	.3	308	603	1358	.54	
K	10 fix		-2.581	9 fix		-2.581	0	147D	-21463	21463	1699	1919	272	-426	.3	288	659	1402	.60	
L	9 fix		-.816	8 fix		-.816	0	147D	-17771	17771	1150	793	426	-0	.4	385	1410	2382	.53	
M	2 pin			12 pin			0	72D	444	-444	-0	0	0	0	.0	--	--	1362	.02	83b
N	12 pin			3 pin			0	72D	-7301	7301	0	0	0	0	.0	--	--	1375	.26	
O	12 pin			4 pin			0	72D	5757	-5757	0	-0	0	0	.0	--	--	1964	.41	120b
P	11 pin			4 pin			0	72D	-3915	3915	0	0	0	0	.0	--	--	1375	.14	
Q	11 pin			5 pin			0	72D	-48	48	0	-0	0	0	.0	--	--	1932	.00	
R	10 pin			5 pin			0	72D	-3879	3879	0	0	0	0	.0	--	--	1375	.14	
S	5 pin			9 pin			0	72D	5704	-5704	0	-0	0	0	.0	--	--	1964	.41	120b

T	9 pin	6 pin	0	72D	-7291	7291	0	0	0	0	.0	--	--	1375	.26	
U	9 pin	7 pin	0	72D	444	-444	0	-0	0	0	.0	--	--	1362	.02	83b

++++++++++++++++++++++++++++++MEDIUM TERM load case - duration factor = 1.25 load sharing = 1.10 ++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.299		18130	18436		75
2	1212.9	700.2							2.3	-5.4	-.157					
3	2381.6	1375.0					-4474N		2.7	-7.4	-.018					
4	3783.6	1375.0							2.1	-9.7	-.058					
5	5141.4	1375.0							1.4	-9.9	.051					
6	6543.4	1375.0					-4474N		.8	-7.5	.020					
7	7712.1	700.2							1.2	-5.5	.159					
8	8925.0	.0		DY = 0 mm					3.5	.0	.300		18130	18436		75
9	6543.4	.0							2.7	-7.9	.152					
10	5141.4	.0					-450N		2.1	-10.1	.031					
11	3783.6	.0					-450N		1.5	-9.9	-.038					
12	2381.6	.0							.9	-7.8	-.147					

MEDIUM TERM SLIP FACTOR = 1.22 AT JOINT 11 MAX NODAL DEFLECTION AT JOINT 11 = -12.1

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.925	2 fix		-.925	0	122D	33749	-33188	546	425	0	85	.5	215	788	1400	.62	50b
B	2 fix		-.925	3 fix		-.925	0	122D	32727	-32187	405	531	-85	0	.8	203	584	1350	.60	50b
C	3 pin		-.100	4 fix		-.100	0	122D	28140	-28140	132	8	0	87	.2	87	1319	1402	.55	63b
D	4 fix		-.100	5 fix		-.100	0	122D	34735	-34735	88	48	-87	114	.3	125	878	1350	.68	63b
E	5 fix		-.100	6 pin		-.100	0	122D	28146	-28146	-11	151	-114	0	.2	--	--	1402	.54	63b
F	6 fix		-.925	7 fix		-.925	0	122D	32194	-32734	531	405	-0	85	.9	203	766	1350	.60	50b
G	7 fix		-.925	8 pin		-.925	0	122D	33195	-33756	425	546	-85	0	.6	215	613	1400	.62	50b
H	1 fix		-.816	12 fix		-.816	0	147D	-28954	28954	782	1161	0	-451	.2	375	959	2382	.60	
I	12 fix		-4.254	11 fix		-4.254	0	147D	-34735	34735	2910	3054	451	-551	.6	545	684	1402	.72	
J	11 fix		-4.254	10 fix		-4.254	0	147D	-34680	34680	2924	2852	551	-502	.5	454	687	1350	.72	
K	10 fix		-4.254	9 fix		-4.254	0	147D	-34680	34680	3013	2951	502	-459	.7	565	708	1402	.73	
L	9 fix		-.816	8 fix		-.816	0	147D	-28960	28960	1164	779	459	-0	.2	372	1427	2382	.60	
M	2 pin			12 pin			0	72D	949	-949	-0	0	0	0	.0	--	--	1362	.04	83b
N	12 pin			3 pin			0	72D	-11027	11027	0	0	0	0	.0	--	--	1375	.31	
O	12 pin			4 pin			0	72D	9238	-9238	0	-0	0	0	.0	--	--	1964	.62	120b
P	11 pin			4 pin			0	72D	-6372	6372	0	0	0	0	.0	--	--	1375	.18	
Q	11 pin			5 pin			0	72D	-79	79	0	-0	0	0	.0	--	--	1932	.00	
R	10 pin			5 pin			0	72D	-6315	6315	0	0	0	0	.0	--	--	1375	.18	
S	5 pin			9 pin			0	72D	9152	-9152	0	-0	0	0	.0	--	--	1964	.61	120b
T	9 pin			6 pin			0	72D	-11011	11011	0	0	0	0	.0	--	--	1375	.31	
U	9 pin			7 pin			0	72D	949	-949	0	-0	0	0	.0	--	--	1362	.04	83b

Design in accordance with : I.S. 193 (1986)

++++++++++++++++++++++++++++++++ SHORT TERM load case - duration factor = 1.50 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.302		18250	18556		75
2	1212.9	700.2							2.3	-5.5	-.159					
3	2381.6	1375.0					-4474N		2.7	-7.5	-.019					
4	3783.6	1375.0							2.1	-9.8	-.059					
5	5141.4	1375.0							1.4	-10.0	.051					
6	6543.4	1375.0					-4474N		.8	-7.6	.020					
7	7712.1	700.2							1.2	-5.6	.162					
8	8925.0	.0		DY = 0 mm					3.6	.0	.391		18910	19216		75
9	6543.4	.0							2.7	-8.1	.109					
10	5141.4	.0					-450N		2.1	-10.2	.041					
11	3783.6	.0					-450N		1.5	-10.1	-.041					
12	2381.6	.0							.9	-7.9	-.148					

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R	BR
A	1 pin		-.925	2 fix		-.925	0	122D	33984	-33424	546	423	0	87	.6	216	790	1400	.53		50b
B	2 fix		-.925	3 fix		-.925	0	122D	32964	-32424	403	532	-87	-0	.9	204	582	1350	.52		50b
C	3 pin		-.100	4 fix		-.100	0	122D	28346	-28346	133	7	0	88	.2	88	1328	1402	.48		63b
D	4 fix		-.100	5 fix		-.100	0	122D	35074	-35074	87	49	-88	114	.3	126	869	1358	.60		63b
E	5 fix		-.100	6 pin		-.100	0	122D	28902	-28902	-11	151	-114	0	.2	--	--	1402	.49		63b
F	6 fix		-.925	7 fix		-.925	0	122D	33064	-33604	536	400	0	92	.9	207	773	1350	.53		50b
G	7 fix		-.925	8 pin		-.925	0	122D	34060	-34621	420	551	-92	0	.6	219	606	1400	.54		50b
H	1 fix		-.816	12 fix		-.816	0	147D	-29157	29157	783	1159	-0	-448	.2	376	960	2382	.50		
I	12 fix		-4.254	11 fix		-4.254	0	147D	-35074	35074	2899	3065	448	-564	.6	540	682	1402	.61		
J	11 fix		-4.254	10 fix		-4.254	0	147D	-35083	35083	2981	2796	564	-438	.5	480	701	1358	.61		
K	10 fix		-4.254	9 fix		-4.254	0	147D	-35083	35083	2786	3178	438	-713	.5	474	655	1402	.65		
L	9 fix		-.816	8 fix		-.816	-900	147D	-29707	29707	1721	1122	713	-0	.9	758	1191	2382	.60		
M	2 pin			12 pin			0	72D	946	-946	-0	0	0	0	.0	--	--	1362	.03		83b
N	12 pin			3 pin			0	72D	-11144	11144	0	0	0	0	.0	--	--	1375	.26		
O	12 pin			4 pin			0	72D	9424	-9424	0	-0	0	0	.0	--	--	1964	.60		120b
P	11 pin			4 pin			0	72D	-6504	6504	0	0	0	0	.0	--	--	1375	.15		
Q	11 pin			5 pin			0	72D	12	-12	0	-0	0	0	.0	--	--	1932	.00		118b
R	10 pin			5 pin			0	72D	-6032	6032	0	0	0	0	.0	--	--	1375	.14		
S	5 pin			9 pin			0	72D	8657	-8657	0	-0	0	0	.0	--	--	1964	.55		120b
T	9 pin			6 pin			0	72D	-11442	11442	0	0	0	0	.0	--	--	1375	.27		
U	9 pin			7 pin			0	72D	938	-938	0	-0	0	0	.0	--	--	1362	.03		83b

Proj: 24-00JUN File: TYPEA-4 Des: AF Truss Mk: TS1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE:"FH" TYPE HOUSE 24-Jun-91 12:53 Page: 1

Profile Truss : Hip Truss 12

The truss parameters on this header sheet are for the unmodified truss.
Refer to the truss co-ordinates or the truss drawing for the final configuration

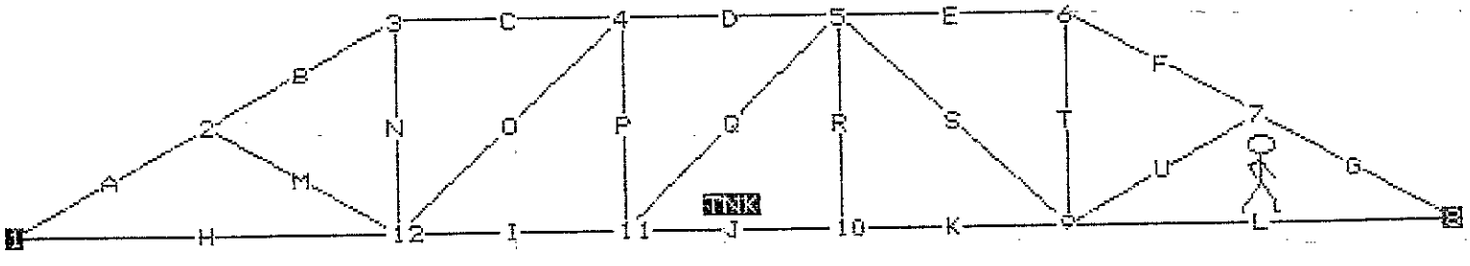
Hip Type : Standard Setback Hip [2663mm setback] 2 No Hip Ends

Span overall S.O.P's	8925mm	Top Chord Grade	VSSERW
Truss Depth	1497mm	Bottom Chord Grade	VSSERW
Left Top Chord Pitch	30.00deg	Web Grade	VSSERW
Right Top Chord Pitch	30.00deg	Plate File	GN20
Horiz Dist of 1st Pitch	2594mm	Plating Tolerance	5mm
No of Trusses	4	Left Heel Joint	Standard
Truss Centres	600mm	Right Heel Joint	Standard
Truss Thickness	34mm	Left Overhang	331mm
Top Chord Live Load	750N/m2	Right Overhang	331mm
Top Chord Dead Load	685N/m2	Left Overhang Cut	Plumb
Btm Chord Live Load	250N/m2	Right Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Timber Treatment	Untreated
Tank Load per Truss	900N	Nominal Bearing	100mm
Top Chord Restraint	360mm	Design Code	Eire LMS

Hip Intermediate Centres	600	Hip Intermediates & Girders	4 + 4
Flat Top Chord Restraint	623mm	Flying Rafter	Yes

Top chord	34 *122
Btm chord	34 *147

Web Ref	M	N	O	P	Q	R	S	T	U
Depth+Braces	72+0	72+0	72+1	72+0	72+0	72+0	72+1	72+0	72+0



Design in accordance with : I.S. 193 (1986)

PERMISSIBLE STRESSES (N/sq.mm) THICKNESS = 34mm PERMISSIBLE DEFLECTION = 26.77 mm

	GRADE	COMPRESSION	TENSION	BENDING	BSS	SPTG	E(mean)	E(min)
TCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
BCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
WEBS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00

++++++++++++++++++++++++++++++++ LONG TERM load case - duration factor = 1.00 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.129		3981	4138		75
2	1212.9	700.2							.7	-1.6	-.045					
3	2381.6	1375.0					-854N		.8	-2.2	.009					
4	3783.6	1375.0							.6	-2.8	-.012					
5	5141.4	1375.0							.4	-2.8	.011					
6	6543.4	1375.0					-854N		.2	-2.2	-.009					
7	7712.1	700.2							.3	-1.7	.046					
8	8925.0	.0		DY = 0 mm					1.0	.0	.129		3981	4138		75
9	6543.4	.0							.8	-2.3	.010					
10	5141.4	.0					-450N		.6	-2.9	.018					
11	3783.6	.0					-450N		.4	-2.8	-.019					
12	2381.6	.0							.3	-2.3	-.009					

LONG TERM SLIP FACTOR = 1.78 AT JOINT 10 MAX NODAL DEFLECTION AT JOINT 10 = -5.1

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.475	2 fix		-.475	0	122	6954	-6667	226	272	0	-32	.1	72	635	1400	.35	50b
B	2 fix		-.475	3 fix		-.475	0	122	6368	-6091	264	216	32	-0	.3	66	742	1350	.32	50b
C	3 pin		-.100	4 fix		-.100	0	122	5383	-5383	70	70	0	-0	.0	24	699	1402	.27	63b
D	4 fix		-.100	5 fix		-.100	0	122	6323	-6323	70	66	0	2	.1	24	699	1353	.31	63b
E	5 fix		-.100	6 pin		-.100	0	122	5384	-5384	68	72	-2	0	.0	26	683	1402	.27	63b
F	6 fix		-.475	7 fix		-.475	0	122	6092	-6369	216	264	-0	-32	.3	66	607	1350	.32	50b
G	7 fix		-.475	8 pin		-.475	0	122	6667	-6955	272	226	32	0	.1	72	765	1400	.35	50b
H	1 fix		-.300	12 fix		-.300	0	147	-5910	5910	308	406	0	-117	.5	153	1027	2382	.37	
I	12 fix		-.300	11 fix		-.300	0	147	-6323	6323	291	130	117	-4	.0	24	970	1402	.34	
J	11 fix		-.300	10 fix		-.300	0	147	-6317	6317	207	200	4	1	.1	68	691	1353	.30	
K	10 fix		-.300	9 fix		-.300	0	147	-6317	6317	126	295	-1	-118	.0	27	419	1402	.34	
L	9 fix		-.300	8 fix		-.300	0	147	-5910	5910	407	308	118	-0	.5	153	1356	2382	.37	
M	2 pin			12 pin			0	72	614	-614	-0	0	0	0	.0	--	--	1362	.10	125b
N	12 pin			3 pin			0	72	-1934	1934	0	0	0	0	.0	--	--	1375	.14	
O	12 pin			4 pin			0	72	1316	-1316	0	-0	0	0	.0	--	--	1964	.14	90b 1
P	11 pin			4 pin			0	72	-781	781	0	0	0	0	.0	--	--	1375	.06	
Q	11 pin			5 pin			0	72	-8	8	0	-0	0	0	.0	--	--	1932	.00	
R	10 pin			5 pin			0	72	-776	776	0	0	0	0	.0	--	--	1375	.05	
S	5 pin			9 pin			0	72	1307	-1307	0	-0	0	0	.0	--	--	1964	.14	90b 1

Design in accordance with : I.S. 193 (1986)

T	9 pin	6 pin	0	72	-1933	1933	0	0	0	0	.0	--	--	1375	.14	
U	9 pin	7 pin	0	72	614	-614	0	-0	0	0	.0	--	--	1362	.10	125b

++++++++++++++++++++++++++++++++MEDIUM TERM load case - duration factor = 1.25 load sharing = 1.10 ++++++++++++++++++++++++++++++++

								DEFLECTIONS			REACTIONS				
JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	HORIZ (mm)	VERT (mm)	ROTA (degrees)	HORIZ (N)	VERT (N)	V+OVH (N)	ROTA (NM)	BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.158		5863	6169		75
2	1212.9	700.2							1.0	-2.4	-.064					
3	2381.6	1375.0					-1664N		1.1	-3.1	.024					
4	3783.6	1375.0							.9	-3.9	-.016					
5	5141.4	1375.0							.6	-3.9	.015					
6	6543.4	1375.0					-1664N		.4	-3.2	-.024					
7	7712.1	700.2							.5	-2.4	.064					
8	8925.0	.0		DY = 0 mm					1.5	.0	.158		5863	6169		75
9	6543.4	.0							1.1	-3.3	.022					
10	5141.4	.0					-450N		.9	-4.0	.019					
11	3783.6	.0					-450N		.6	-3.9	-.020					
12	2381.6	.0							.4	-3.3	-.022					

MEDIUM TERM SLIP FACTOR = 1.56 AT JOINT 10 MAX NODAL DEFLECTION AT JOINT 10 = -6.2

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R	BR
A	1 pin		-.925	2 fix		-.925	0	122	10357	-9796	423	548	0	-87	.0	129	610	1400	.45		50b
B	2 fix		-.925	3 fix		-.925	0	122	9196	-8655	533	403	87	0	.5	117	768	1350	.40		50b
C	3 pin		-.100	4 fix		-.100	0	122	7697	-7697	74	66	0	5	.0	27	737	1402	.31		63b
D	4 fix		-.100	5 fix		-.100	0	122	8647	-8647	69	66	-5	7	.1	29	695	1358	.35		63b
E	5 fix		-.100	6 pin		-.100	0	122	7698	-7698	65	75	-7	0	.0	28	649	1402	.31		63b
F	6 fix		-.925	7 fix		-.925	0	122	8656	-9196	403	533	0	-87	.5	117	581	1350	.40		50b
G	7 fix		-.925	8 pin		-.925	0	122	9797	-10358	548	423	87	0	.0	129	790	1400	.45		50b
H	1 fix		-.300	12 fix		-.300	0	147	-8758	8758	318	397	-0	-94	.4	168	1059	2382	.38		
I	12 fix		-.300	11 fix		-.300	0	147	-8647	8647	277	143	94	-0	.0	34	924	1402	.33		
J	11 fix		-.300	10 fix		-.300	0	147	-8642	8642	207	201	0	4	.1	71	689	1358	.31		
K	10 fix		-.300	9 fix		-.300	0	147	-8642	8642	140	281	-4	-95	.0	36	467	1402	.33		
L	9 fix		-.300	8 fix		-.300	0	147	-8758	8758	397	317	95	-0	.4	168	1324	2382	.38		
M	2 pin			12 pin			0	72	1236	-1236	-0	0	0	0	.0	--	--	1362	.19		125b
N	12 pin			3 pin			0	72	-2241	2241	0	0	0	0	.0	--	--	1375	.13		
O	12 pin			4 pin			0	72	1330	-1330	0	-0	0	0	.0	--	--	1964	.12		90b 1
P	11 pin			4 pin			0	72	-795	795	0	0	0	0	.0	--	--	1375	.04		
Q	11 pin			5 pin			0	72	-6	6	0	-0	0	0	.0	--	--	1932	.00		
R	10 pin			5 pin			0	72	-791	791	0	0	0	0	.0	--	--	1375	.04		
S	5 pin			9 pin			0	72	1323	-1323	0	-0	0	0	.0	--	--	1964	.12		90b 1
T	9 pin			6 pin			0	72	-2240	2240	0	0	0	0	.0	--	--	1375	.13		
U	9 pin			7 pin			0	72	1236	-1236	0	-0	0	0	.0	--	--	1362	.19		125b

Design in accordance with : I.S. 193 (1986)

++++++++++++++++++++++++++++++ SHORT TERM load case - duration factor = 1.50 load sharing = 1.10 ++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.161		5953	6259		75
2	1212.9	700.2							1.0	-2.4	-.066					
3	2381.6	1375.0					-1664N		1.2	-3.2	.023					
4	3783.6	1375.0							.9	-4.0	-.017					
5	5141.4	1375.0							.6	-4.1	.014					
6	6543.4	1375.0					-1664N		.4	-3.3	-.024					
7	7712.1	700.2							.5	-2.5	.068					
8	8925.0	.0		DY = 0 mm					1.5	.0	.262		6448	6754		75
9	6543.4	.0							1.1	-3.5	-.027					
10	5141.4	.0					-450N		.9	-4.1	.031					
11	3783.6	.0					-450N		.6	-4.1	-.024					
12	2381.6	.0							.4	-3.4	-.023					

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.925	2 fix		-.925	0	122	10534	-9973	424	547	0	-86	.0	130	612	1400	.39	50b
B	2 fix		-.925	3 fix		-.925	0	122	9373	-8833	532	404	86	-0	.5	118	767	1350	.35	50b
C	3 pin		-.100	4 fix		-.100	0	122	7852	-7852	74	66	0	6	.0	28	744	1402	.28	63b
D	4 fix		-.100	5 fix		-.100	0	122	8901	-8901	69	67	-6	7	.1	30	688	1358	.32	63b
E	5 fix		-.100	6 pin		-.100	0	122	8265	-8265	65	75	-7	0	.0	28	649	1402	.29	63b
F	6 fix		-.925	7 fix		-.925	0	122	9308	-9849	407	529	0	-82	.5	119	587	1350	.36	50b
G	7 fix		-.925	8 pin		-.925	0	122	10445	-11006	544	427	82	0	.0	131	785	1400	.40	50b
H	1 fix		-.300	12 fix		-.300	0	147	-8910	8910	319	396	-0	-92	.4	169	1062	2382	.33	
I	12 fix		-.300	11 fix		-.300	0	147	-8901	8901	269	152	92	-10	.0	29	897	1402	.28	
J	11 fix		-.300	10 fix		-.300	0	147	-8945	8945	249	159	10	51	.2	98	829	1358	.28	
K	10 fix		-.300	9 fix		-.300	0	147	-8945	8945	-30	450	-51	-285	.1	—	—	1402	.40	
L	9 fix		-.300	8 fix		-.300	-675	147	-9318	9318	815	575	285	0	1.6	472	1191	2382	.52	
M	2 pin			12 pin			0	72	1234	-1234	-0	0	0	0	.0	—	—	1362	.19	125b
N	12 pin			3 pin			0	72	-2328	2328	0	0	0	0	.0	—	—	1375	.11	
O	12 pin			4 pin			0	72	1470	-1470	0	-0	0	0	.0	—	—	1964	.13	90b i
P	11 pin			4 pin			0	72	-894	894	0	0	0	0	.0	—	—	1375	.04	
Q	11 pin			5 pin			0	72	62	-62	0	-0	0	0	.0	—	—	1932	.02	177b
R	10 pin			5 pin			0	72	-579	579	0	0	0	0	.0	—	—	1375	.03	
S	5 pin			9 pin			0	72	952	-952	0	-0	0	0	.0	—	—	1964	.03	90b 1
T	9 pin			6 pin			0	72	-2563	2563	0	0	0	0	.0	—	—	1375	.12	
U	9 pin			7 pin			0	72	1228	-1228	0	-0	0	0	.0	—	—	1362	.18	125b

Proj: 24-00JUN File: TYPEE-1 Des: Truss Mk: A1 Hip Version 6.20

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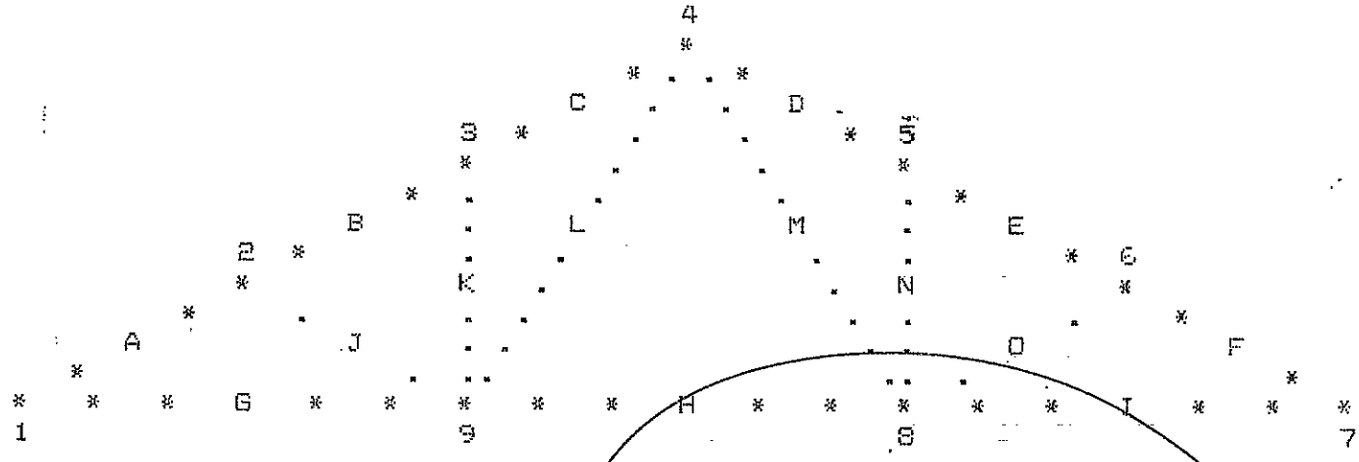
Truss Type : Fan

Hip Type : Dutch Hip [1200mm setback] 2 No Hip Ends

Span overall S.O.P's	10175mm	Bottom Chord Grade	VSSERW
Left Top Chord Pitch	27.50deg	Web Grade	VSSERW
Right Top Chord Pitch	27.50deg	Plate File	GN20
No of Trusses	16	Plating Tolerance	5mm
Truss Centres	600mm	Left Heel Joint	Standard
Truss Thickness	34mm	Right Heel Joint	Standard
Top Chord Live Load	750N/m2	Left Overhang	356mm
Top Chord Dead Load	685N/m2	Right Overhang	356mm
Btm Chord Live Load	250N/m2	Left Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Right Overhang Cut	Plumb
Tank Load per Truss	900N	Timber Treatment	Untreated
Top Chord Restraint	360mm	Nominal Bearing	100mm
Top Chord Grade	VSSERW	Design Code	Eire LMS

Top chord 34 * 97
Btm chord 34 *122

Web Ref	J	K	L	M	N	O
Depth+Braces	72+0	72+0	72+0	72+0	72+0	72+0



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Proj: 24-00JUN File: TYPEE-1 Des: Truss Mk: A1 Hip Version 6.20

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Truss Type : Fan

Design in accordance with : I.S. 193 (1986)

Load Sharing Factor : 1.1

TIMBER GRADES & STRESSES (N/mm2)		Bend	Tens	Comp Para	Comp Perp	Shear	Emean
Top Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Btm Chord	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500
Web	VSS European Red/Whitewood	7.5	4.5	7.9	2.80	.82	10500

BENDING MOMENT COEFFICIENTS

	---- Udl ----		Man Load	
	Panel	Joint	Panel	Joint
Top Chord	.080	.100	.200	.100
Btm Chord	.080	.100	.200	.100

APPLIED STRESSES & FORCES				Axial	Bending Moments		---- CSI ----		Local	
Chord Member	Depth mm	Length mm	Load Duration	Force N	Panel NM	Joint NM	Panel	Joint	Defln mm	L/R
Top A	97	1910	Long	-7431	106.46	133.08	.633	.575	.7	54X
			Medium	-11563	209.89	262.37	.894	.817	1.4	66Y
			Short	-7939	297.06	228.38	.739	.531		
Btm G	122	3391	Long	6592	276.03	345.03	.650	.740	2.9	
			Medium	10257	276.03	345.03	.649	.721	2.9	
			Short	11121	733.81	573.93	.964	.825		

				Long Term		Medium Term		Short Term		
Web Member	Depth mm	Length mm	Br	Axial N	CSI	Axial N	CSI	Axial N	CSI	L/R
Web J	72	1823	0	-850	.232	-1676	.439			167Y
Web K	72	1684	0	-786	.187	-1549	.352			154Y
Web L	72	2999	0	3142	.222	4501	.254	5302	.249	

DEFLECTION AT JOINT 9 Medium Term 9mm Perm 31mm

REACTIONS	-------- Load Duration --------			Minimum
Location	Long	Medium	Short	Bearing
Joint 1	4333N	6622N	7297N	81mm
Joint 7	4333N	6622N	7297N	81mm

Contact : Another Trussed Rafter Design by
))))) JAMES McMAHON (DUBLIN) LTD. (((((
Aidan McMahon (01)477644 - Dublin & Drogheda.

Proj: 24-00JUN File: TYPEE-2 Des: Truss Mk: TS1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE: "E" TYPE HOUSE 24-Jun-91 12:54 Page: 1

Profile Truss : Hip Truss 17 *** Double Truss ***

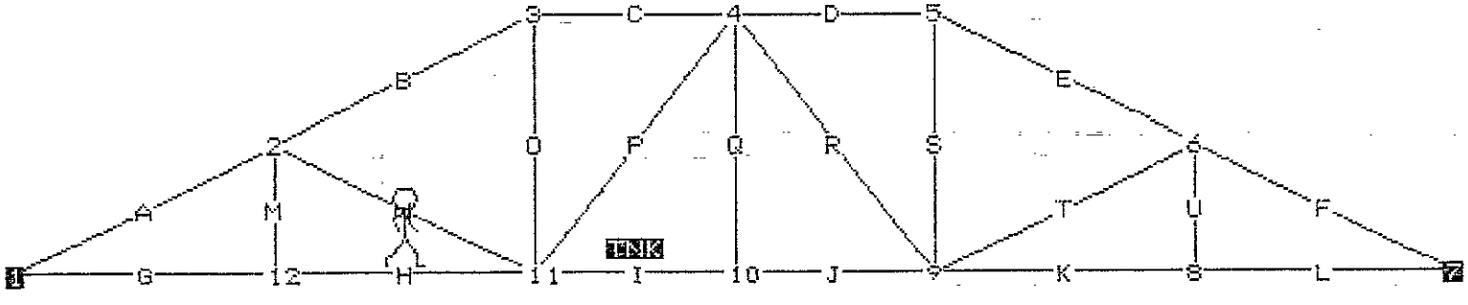
The truss parameters on this header sheet are for the unmodified truss.
Refer to the truss co-ordinates or the truss drawing for the final configuration

Hip Type : Dutch Hip [1200mm setback] 2 No Hip Ends

Span overall S.O.P's	10175mm	Top Chord Grade	VSSERW
Truss Depth	1983mm	Bottom Chord Grade	VSSERW
Left Top Chord Pitch	27.50deg	Web Grade	VSSERW
Right Top Chord Pitch	27.50deg	Plate File	GN20
Horiz Dist of 1st Pitch	3810mm	Plating Tolerance	5mm
No of Trusses	4	Left Heel Joint	Standard
Truss Centres	600mm	Right Heel Joint	Standard
Truss Thickness	34mm	Left Overhang	356mm
Top Chord Live Load	750N/m2	Right Overhang	356mm
Top Chord Dead Load	685N/m2	Left Overhang Cut	Plumb
Btm Chord Live Load	250N/m2	Right Overhang Cut	Plumb
Btm Chord Dead Load	250N/m2	Timber Treatment	Untreated
Tank Load per Truss	900N	Nominal Bearing	100mm
Top Chord Restraint	360mm	Design Code	Eire LMS
Flat Top Chord Restraint	639mm	Flying Rafter	Yes

Top chord	34 * 72	C D
	34 * 97	A B E F
Btm chord	34 *122	

Web Ref	M	N	O	P	Q	R	S	T	U
Depth+Braces	72+0	72+0	72+0	72+0	72+0	72+0	72+0	72+0	72+0



Proj: 24-00JUN File: TYPEE-2 Des: Truss Mk: TS1 Hip Version 6.20

Job Ref: GLENDORAN LTD RE: "E" TYPE HOUSE 24-Jun-91 12:54 Page: 2

Design in accordance with : I.S. 193 (1986)

PERMISSIBLE STRESSES (N/sq.mm) THICKNESS = 34mm PERMISSIBLE DEFLECTION = 30.52 mm

	GRADE	COMPRESSION	TENSION	BENDING	BSS	SPTG	E(mean)	E(min)
TCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
BCS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00
WEBS	VSS European Red/Whitewood	7.90	4.50	7.50	2.80	.82	10500.00	7000.00

++++++++++++++++++++++++++++++++ LONG TERM load case - duration factor = 1.00 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.087		4438	4603		81
2	1835.9	955.7							.6	-1.7	-.029					
3	3671.0	1911.0					-556N		.6	-2.1	.074					
4	5087.5	1911.0							.4	-2.2	.001					
5	6504.0	1911.0					-556N		.2	-2.0	-.073					
6	8339.1	955.7							.2	-1.7	.028					
7	10175.0	.0		DY = 0 mm					.8	.0	.036		4312	4477		81
8	8339.1	.0							.7	-1.7	.026					
9	6504.0	.0							.5	-2.1	.004					
10	5087.5	.0					-450N		.4	-2.3	.001					
11	3671.0	.0					-450N		.3	-2.1	-.003					
12	1835.9	.0							.2	-1.7	-.027					

LONG TERM SLIP FACTOR = 1.91 AT JOINT 10 MAX NODAL DEFLECTION AT JOINT 10 = -4.3

MEMBER	START JOINT	SHDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin	-.463	2 fix	-.463		0	97D	8496	-8104	297	458	0	-166	.5	121	814	2070	.36 72b
B	2 fix	-.463	3 fix	-.463		0	97D	6858	-6465	457	297	166	-0	.9	121	1255	2069	.31 72b
C	3 pin	-.100	4 fix	-.100		0	72D	5872	-5872	57	84	0	-19	.1	16	574	1416	.24 65b
D	4 fix	-.100	5 pin	-.100		0	72D	5632	-5632	84	57	19	0	.1	16	842	1416	.23 65b
E	5 fix	-.463	6 fix	-.463		0	97D	6195	-6588	296	458	-0	-167	.9	120	813	2069	.31 32e
F	6 fix	-.463	7 pin	-.463		0	97D	7835	-8227	458	297	167	0	.5	121	1256	2070	.36 72b
G	1 fix	-.300	12 fix	-.300		0	122D	-7399	7399	251	300	.0	-45	.0	105	837	1836	.23
H	12 fix	-.300	11 fix	-.300		0	122D	-7399	7399	259	291	45	-74	.2	67	864	1835	.21
I	11 fix	-.300	10 fix	-.300		0	122D	-6107	6107	254	171	74	-15	.0	33	846	1416	.18
J	10 fix	-.300	9 fix	-.300		0	122D	-6107	6107	169	255	15	-76	.0	32	565	1416	.18
K	9 fix	-.300	8 fix	-.300		0	122D	-7161	7161	292	259	76	-46	.2	66	973	1835	.21
L	8 fix	-.300	7 fix	-.300		0	122D	-7161	7161	300	250	46	-0	.0	104	1001	1836	.23
M	12 pin		2 pin			0	72D	-559	559	0	0	0	0	.0	--	--	956	.02
N	2 pin		11 pin			0	72D	1722	-1722	-0	0	0	0	.0	--	--	2069	.13 126b
O	11 pin		3 pin			0	72D	-2109	2109	0	0	0	0	.0	--	--	1911	.07
P	11 pin		4 pin			0	72D	396	-396	0	-0	0	0	.0	--	--	2379	.04 145b
Q	10 pin		4 pin			0	72D	-791	791	0	0	0	0	.0	--	--	1911	.03
R	4 pin		9 pin			0	72D	798	-798	-0	0	0	0	.0	--	--	2379	.08 145b
S	9 pin		5 pin			0	72D	-1984	1984	0	0	0	0	.0	--	--	1911	.07

Design in accordance with : I.S. 193 (1986)

T	9 pin	6 pin	0	72D	1724	-1724	0	-0	0	0	.0	--	--	2069	.13	126b
U	8 pin	6 pin	0	72D	-559	559	0	0	0	0	.0	--	--	956	.02	

++++++++++++++++++++++++++++++++MEDIUM TERM load case - duration factor = 1.25 load sharing = 1.10 ++++++++++++++++++++++++++++++++

								DEFLECTIONS			REACTIONS				
JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	HORIZ (mm)	VERT (mm)	ROTA (degrees)	HORIZ (N)	VERT (N)	V+OVH (N)	ROTA (NM)	BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.118		6630	6955		81
2	1835.9	955.7							.9	-2.5	-.042					
3	3671.0	1911.0					-1096N		.8	-3.0	.144					
4	5087.5	1911.0							.6	-3.2	.001					
5	6504.0	1911.0					-1096N		.4	-3.0	-.143					
6	8339.1	955.7							.3	-2.5	.042					
7	10175.0	.0		DY = 0 mm					1.2	.0	.117		6504	6830		81
8	8339.1	.0							1.0	-2.5	.042					
9	6504.0	.0							.7	-3.1	.005					
10	5087.5	.0					-450N		.6	-3.3	.001					
11	3671.0	.0					-450N		.5	-3.1	-.004					
12	1835.9	.0							.2	-2.5	-.042					

MEDIUM TERM SLIP FACTOR = 1.63 AT JOINT 10 MAX NODAL DEFLECTION AT JOINT 10 = -5.3

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LDC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.913	2 fix		-.913	0	97D	12666	-11892	578	909	0	-342	1.0	233	805	2070	.49	72b
B	2 fix		-.913	3 fix		-.913	0	97D	10053	-9279	909	578	342	-0	1.6	233	1264	2069	.45	33d
C	3 pin		-.100	4 fix		-.100	0	72D	8498	-8498	59	83	0	-17	.1	17	586	1416	.29	65b
D	4 fix		-.100	5 pin		-.100	0	72D	8258	-8258	83	59	17	0	.1	17	830	1416	.28	65b
E	5 fix		-.913	6 fix		-.913	0	97D	9010	-9784	578	909	-0	-343	1.6	232	804	2069	.45	33e
F	6 fix		-.913	7 pin		-.913	0	97D	11623	-12397	909	578	343	0	1.0	232	1265	2070	.49	72b
G	1 fix		-.300	12 fix		-.300	0	122D	-10968	10968	268	283	-0	-13	.1	120	894	1836	.26	
H	12 fix		-.300	11 fix		-.300	0	122D	-10968	10968	240	310	13	-77	.2	83	801	1835	.24	
I	11 fix		-.300	10 fix		-.300	0	122D	-8728	8728	261	164	77	-9	.0	36	869	1416	.19	
J	10 fix		-.300	9 fix		-.300	0	122D	-8728	8728	163	262	9	-79	.0	35	542	1416	.20	
K	9 fix		-.300	8 fix		-.300	0	122D	-10729	10729	311	240	79	-14	.2	81	1036	1835	.23	
L	8 fix		-.300	7 fix		-.300	0	122D	-10729	10729	283	268	14	-0	.1	119	944	1836	.25	
M	12 pin			2 pin			0	72D	-523	523	0	0	0	0	.0	--	--	956	.01	
N	2 pin			11 pin			0	72D	2785	-2785	-0	0	0	0	.0	--	--	2069	.20	126b
O	11 pin			3 pin			0	72D	-2617	2617	0	0	0	0	.0	--	--	1911	.07	
P	11 pin			4 pin			0	72D	386	-386	0	-0	0	0	.0	--	--	2379	.04	145b
Q	10 pin			4 pin			0	72D	-777	777	0	0	0	0	.0	--	--	1911	.02	
R	4 pin			9 pin			0	72D	788	-788	-0	0	0	0	.0	--	--	2379	.07	145b
S	9 pin			5 pin			0	72D	-2493	2493	0	0	0	0	.0	--	--	1911	.07	
T	9 pin			6 pin			0	72D	2786	-2786	0	-0	0	0	.0	--	--	2069	.20	126b
U	8 pin			6 pin			0	72D	-523	523	0	0	0	0	.0	--	--	956	.01	

Design in accordance with : I.S. 193 (1986)

++++++++++++++++++++++++++++++++ SHORT TERM load case - duration factor = 1.50 load sharing = 1.10 ++++++++++++++++++++++++++++++++

JOINT NUMBER	X-COORD (mm)	Y-COORD (mm)	HORIZONTAL CONSTRAINT	VERTICAL CONSTRAINT	ROTATIONAL CONSTRAINT	HORIZ LOAD	VERT LOAD	ROTA LOAD	DEFLECTIONS HORIZ (mm)	DEFLECTIONS VERT (mm)	DEFLECTIONS ROTA (degrees)	REACTIONS HORIZ (N)	REACTIONS VERT (N)	REACTIONS V+OVH (N)	REACTIONS ROTA (NM)	REACTIONS BRG (mm)
1	.0	.0	DX = 0 mm	DY = 0 mm					.0	.0	-.112		7122	7447		81
2	1835.9	955.7							1.0	-2.7	-.045					
3	3671.0	1911.0					-1096N		.9	-3.2	.146					
4	5087.5	1911.0							.6	-3.4	.002					
5	6504.0	1911.0					-1096N		.4	-3.1	-.143					
6	8339.1	955.7							.3	-2.6	.044					
7	10175.0	.0		DY = 0 mm					1.3	.0	.121		6687	7012		81
8	8339.1	.0							1.0	-2.6	.044					
9	6504.0	.0							.8	-3.2	.009					
10	5087.5	.0					-450N		.7	-3.5	-.004					
11	3671.0	.0					-450N		.5	-3.3	.021					
12	1835.9	.0							.3	-2.8	-.074					

MEMBER	START JOINT	SHDL (N/mm)	SVDL (N/mm)	END JOINT	EHDL (N/mm)	EVDL (N/mm)	MB VL	DEPTH (mm)	S AX (N)	E AX (N)	S SH (N)	E SH (N)	S BM (Nm)	E BM (Nm)	LDEF (mm)	SPAN BM (Nm)	LOC (mm)	LENGTH (mm)	MAX CSI	L/R BR
A	1 pin		-.913	2 fix		-.913	0	97D	13820	-13046	581	907	0	-338	1.0	235	803	2070	.46	72b
B	2 fix		-.913	3 fix		-.913	0	97D	10819	-10045	907	580	338	-0	1.6	234	1262	2069	.39	72b
C	3 pin		-.100	4 fix		-.100	0	72D	9178	-9178	59	83	0	-17	.1	17	589	1416	.27	65b
D	4 fix		-.100	5 pin		-.100	0	72D	8613	-8613	83	59	17	0	.1	17	828	1416	.25	65b
E	5 fix		-.913	6 fix		-.913	0	97D	9409	-10183	578	908	-0	-342	1.6	233	805	2069	.38	33e
F	6 fix		-.913	7 pin		-.913	0	97D	12012	-12786	909	579	342	0	1.0	233	1265	2070	.43	72b
G	1 fix		-.300	12 fix		-.300	0	122D	-11991	11991	226	325	0	-91	.3	85	752	1836	.22	
H	12 fix		-.300	11 fix		-.300	-675	122D	-11991	11991	559	666	91	-189	.7	296	918	1835	.30	
I	11 fix		-.300	10 fix		-.300	0	122D	-9198	9198	360	64	189	20	.1	27	1202	1416	.22	
J	10 fix		-.300	9 fix		-.300	0	122D	-9198	9198	137	287	-20	-86	.1	52	458	1416	.17	
K	9 fix		-.300	8 fix		-.300	0	122D	-11074	11074	317	234	86	-10	.2	81	1055	1835	.20	
L	8 fix		-.300	7 fix		-.300	0	122D	-11074	11074	281	270	10	-0	.1	121	937	1836	.22	
M	12 pin			2 pin			0	72D	-885	885	0	0	0	0	.0	--	--	956	.02	
N	2 pin			11 pin			0	72D	3171	-3171	-0	0	0	0	.0	--	--	2069	.22	126b
O	11 pin			3 pin			0	72D	-2969	2969	0	0	0	0	.0	--	--	1911	.07	
P	11 pin			4 pin			0	72D	34	-34	0	-0	0	0	.0	--	--	2379	.00	145b
Q	10 pin			4 pin			0	72D	-652	652	0	0	0	0	.0	--	--	1911	.02	
R	4 pin			9 pin			0	72D	984	-984	-0	0	0	0	.0	--	--	2379	.03	145b
S	9 pin			5 pin			0	72D	-2676	2676	0	0	0	0	.0	--	--	1911	.06	
T	9 pin			6 pin			0	72D	2776	-2776	0	-0	0	0	.0	--	--	2069	.19	126b
U	8 pin			6 pin			0	72D	-515	515	0	0	0	0	.0	--	--	956	.01	

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

NOTIFICATION OF DECISION TO GRANT PERMISSION
LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT)ACTS 1963-1990.

Decision Order Number : P/ 2327 /91 Date of Decision : 29th May 1991

Register Reference : 91A/0547 Date Received : 9th April 1991

Applicant : Glendorn

Development : Change of approved house type

Location : Sites 33-55 odd incl. Road 2 at lands adjacent Wills Brook House, Esker Lane, Ballyowen T.D., Lucan

Time Extension(s) up to and including :

Additional Information Requested/Received : //

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 dated as above make a decision to GRANT PERMISSION in respect of the above proposal.

Subject to the Conditions on the attached Numbered Pages.

NUMBER OF CONDITIONS:- ...9....ATTACHED.

Signed on behalf of the Dublin County Council...Rose Flemming.....
for Principal Officer

Date:..31.5.91.....

Frank Elmes & Co., Architects,
2 Waldemar Terrace,
Main Street,
Dundrum,
Dublin 14.

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

C O N D I T I O N S / R E A S O N S

01 The development to be carried out in its entirety in accordance with the plans, particulars and specifications lodged with the application save as may be required by the other conditions attached hereto.
REASON:To ensure that the development shall be in accordance with the permission and that effective control be maintained.

02 That before development commences, approval under the Building Bye- Laws be obtained and all conditions of that approval be observed in the development.
REASON:In order to comply with the Sanitary Services Acts, 1878-1964.

03 That each proposed house be used as a single dwelling unit.
REASON:To prevent unauthorised development.

04 That the development shall be carried out in conformity with Condition Nos. 5-12, 14-16 and 17(c) of An Bord Pleanalas grant of planning permission for 160 no. houses at this location, under Ref. No. PL 6/5/81895, dated 14th September, 1990, Reg. Ref. 89A-0982 save as amended to conform with the revisions indicated in the plans lodged with Dublin County Council in connection with this application.

04 REASON: In the interest of the proper planning and development of the area.

05 That arrangements be made for the lodgement of security in the form of an approved Insurance Company Bond or letter of Guarantee in the sum of £240,000 or a cash lodgement of £150,000 in respect of the overall development as required by Condition No. 2 of An Bord Pleanalas grant of planning permission under Ref. PL 6/5/81895 Reg. Ref. No. 89A-0982. The arrangements to be made prior to the commencement of this proposal.

05 REASON: To ensure that a ready sanction may be available to the Council to induce the provision of services and prevent disamenity in the development.

06 That arrangements be made for the payment of the financial contribution in the sum of £75,240 in respect of the overall development as required by Condition No. 3 of An Bord Pleanalas grant of planning permission under Ref. PL 6/5/81895, Reg. Ref. No. 89A/982. The arrangements to be made prior to the commencement of this proposal.

06 REASON: To ensure that a ready sanction may be available to the Council to induce the provision of services and prevent disamenity in the development.

07 That arrangements be made for the payment of the financial contribution in the sum of £1,420 per house in respect of the overall development as

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

required by Condition No. 4 of An Bord Pleanalas grant of planning permission under Ref. PL 6/5/81895 Reg. Ref. No. 89A/982. The arrangements to be made prior to the commencement of this proposal.

07 REASON: To ensure that a ready sanction may be available to the Council to induce the provision of services and prevent disamenity in the development.

08 That a comprehensive landscaping plan is to be submitted for the site (as required by Condition No. 13 of An Bord Pleanalas decision to grant planning permission under Ref. PL 6/5/81895 Reg. Ref. No. 89A/982). This is to include inter alia, a programme of tree surgery for the site, a street tree planting scheme, measures to protect trees to be retained during construction and landscaping works to be carried out.
REASON: In the interest of visual and residential amenity.

09 That arrangements be made with regard to the payment of the financial contributions in the sum of (a) £98,000 and (b) £48,000 required in respect of the overall development by condition no. 17 of the planning permission granted under Ref. PL 6/5/81895 Register Reference 89A-0982. The arrangements to be made prior to the commencement of this proposal.

09 REASON: In the interest of the proper planning and development of the area.

Dublin County Council Comhairle Chontae Atha Cliath **Planning Department**

Building Control Department,
Liffey House,
Tara Street,
Dublin 1.
Telephone:773066

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

Register Reference : 91A/0547 Date : 10th April 1991

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

Dear Sir/Madam,

DEVELOPMENT : Change of approved house type

LOCATION : Sites 33-55 odd incl. Road 2 at lands adjacent Wills Brook House, Esker Lane, Ballyowen T.D., Lucan

APPLICANT : Glendorn

APP. TYPE : PERMISSION/BUILDING BYE-LAW APPROVAL

With reference to above, I acknowledge receipt of your application received on 9th April 1991.

Yours faithfully,

.....

PRINCIPAL OFFICER

Frank Elmes & Co., Architects,
2 Waldemar Terrace,
Main Street,
Dundrum,
Dublin 14.

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 SITES 33-55 000 INCL. ROAD 2 AT LANDS ADJACENT
(If none, give description sufficient to identify) WILLS BROOK HOUSE, ESKER LANE, BALLYOWEN TD. LUCAN

3. Name of applicant (Principal not Agent) GLENDORN

Address C/O NO 4 BELOW Tel. No.

4. Name and address of FRANK ELMES + CO. ARCHITECTS, 2 WAINSEMAR TCE
person or firm responsible for preparation of drawings MAIN ST DUNDRUM DUBLIN 14 Tel. No 951314/15

5. Name and address to which AS AT NO 4 ABOVE
notifications should be sent

6. Brief description of proposed development CHANGE OF APPROVED HOUSE TYPE 89A/982

7. Method of drainage AS APPROVED 8. Source of Water Supply AS APPROVED

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. N/A
(b) Proposed use of each floor N/A

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 2566 SQM
(b) Floor area of proposed development 1161 SQM
(c) Floor area of buildings proposed to be retained within site N/A Sq. m.

12. State applicant's legal interest or estate in site (i.e. freehold, leasehold, etc.) FREEHOLD

13. Are you now applying also for an approval under the Building Bye Laws?
Yes ☑ No ☐ Place ✓ in appropriate box. YES

14. Please state the extent to which the Draft Building Regulations have been taken in account in your proposal:
WHERE APPLICABLE

15. List of documents enclosed with CHEQUE / NEWSPAPER NOTICE / COVERING LETTER
+ X OUTLINE SPEC. FEE BREAKDOWN
+ X DRG. NOS EL 1/01-02 EL 1/06-13

DUBLIN — Permission sought for change of approved house type (Reg. Ref. 89A/982) on sites 33 to 55 (all incl.) road 2, at lands adjacent Wills Brook House, Esker Lane, Ballyowen T.D., Lucan — Glendorn

16. Gross floor space of proposed development (See back) 1161 SQ M Sq. m.

No of dwellings proposed (if any) 12 No. Class(es) of Development CLASS 1

Fee Payable £ 756.00 Basis of Calculation (12 x 55.00) BBLS + (12 x 52.00 x ½) PL
If a reduced fee is tendered details of previous relevant payment should be given
89A/982

Signature of Applicant (or his Agent) Frank Elmes. Date 4-4-91

Application Type P/BBL
Register Reference 91A/0547
Amount Received £
Receipt No
Date 17/6/7

FOR OFFICE USE ONLY
2.10.4

RECEIVED
9 APR 1991
REG. SEC.

F. H. 4/4/91
SITE 660 N35439
96. N/A
N35147

LOCAL GOVERNMENT (PLANNING & DEVELOPMENT) REGULATIONS 1977 to 1984.

Outline of requirements for applications for permission or Approval under the Local Government (Planning & Development) Acts 1963 to 1983. The Planning Acts and Regulations made thereunder may be purchased from the Government Publications Sales Office, Sun Alliance House, Molesworth Street, Dublin 2.

1. Name and Address of applicant.

2. Particulars of the interest held in the land or structure, i.e. whether freehold, leasehold, etc.

3. The page of a newspaper, circulating in the area in which the land or structure is situate, containing the required statutory notice. The newspaper advertisement should state after the heading Co. Dublin.

   (a) The address of the structure or the location of the land.
   (b) The nature and extent of the development proposed. If retention of development is involved, the notice should be worded accordingly. Any demolition of habitable accommodation should be indicated.
   (c) The name of the applicant.

   NB. Applications must be received within 2 weeks from date of publication of the notice.

4. Four (4) sets of drawings to a stated scale must be submitted. Each set to include a layout or block plan, proposed and existing services to be shown on this drawing, location map, and drawings of relevant floor plans, elevations, sections, details of type and location of septic tank (if applicable) and such other particulars as are necessary to identify the land and to describe the works or structure to which the application relates (new work to be coloured or otherwise distinguished from any retained structures). Buildings, roads, boundaries and other features bounding the structure or other land to which the application relates shall be shown on site plans or layout plans. The location map should be of scale not less than 1: 2500 and should indicate the north point. The site of the proposed development must be outlined in red. Plans and drawings should indicate the name and address of the person by whom they were prepared. Any adjoining lands in which the applicant has an interest must be outlined in blue.

5. In the case of a proposed change of use of any structure or land, requirements in addition to 1, 2, & 3 are.
   (a) a statement of the existing use and the proposed use, or, where appropriate, the former use and the use proposed.

   (b) (i) Four (4) sets of the drawings to a stated scale must be submitted. Each set to consist of a plan or location map (marked or coloured in red so as to identify the structure or land to which the application relates) to a scale of not less than 1:2500 and to indicate the North point. Any adjoining lands in which the application has an interest must be outlined in blue.

   (ii) A layout and a survey plan of each floor of any structure to which the application relates.

   (c) Plans and drawings should indicate the name and address of the person by whom they were prepared.

6. Applications should be addressed to: Dublin County Council, Planning Department, Irish Life Centre, Lr. Abbey Street, Dublin 1, Tel. 724755.

SEPTIC TANK DRAINAGE: Where drainage by means of a septic tank is proposed, before a planning application is considered, the applicant may be required to arrange for a trial hole to be inspected and declared suitable for the satisfactory percolation of septic tank effluent. The trial hole to be dug seven feet deep at or about the site of the septic tank. Septic tanks are to be in accordence with I.I.R.S. S.R. 6:75.

INDUSTRIAL DEVELOPMENT:

The proposed use of an industrial premises should, where possible, be stated together with the estimated number of employees, (male and female). Details of trade effluents, if any, should be submitted.

Applicants to comply in full with the requirements of the Local Government (Water Pollution) Act,1977 in particular the licencing provisions of Sections 4 and 16.

PLANNING APPLICATIONS

CLASS NO.	DESCRIPTION	FEE
1.	Provision of dwelling — House/Flat.	£32.00 each
2.	Domestic extensions/other improvements.	£16.00
3.	Provision of agricultural buildings (See Regs.)	£40.00 minimum
4.	Other buildings (i.e. offices, commercial, etc.)	£1.75 per sq. metre (Min. £40.00)
5.	Use of land (Mining, deposit or waste)	£25.00 per 0.1 ha (Min £250.00)
6.	Use of land (Camping, parking, storage)	£25.00 per 0.1 ha (Min. £40.00)
7.	Provision of plant/machinery/tank or other structure for storage purposes.	£25.00 per 0.1 ha (Min. £100.00)
8.	Petrol Filling Station.	£100.00
9.	Advertising Structures.	£10.00 per m² (min £40.00)
10.	Electricity transmission lines.	£25.00 per 1,000m (Min. £40.00)
11.	Any other development.	£5.00 per 0.1 ha (Min. £40.00)

BUILDING BYE-LAW APPLICATIONS

CLASS NO.	DESCRIPTION	FEE
A	Dwelling (House/Flat)	£55.00 each
B	Domestic Extension (improvement/alteration)	£30.00 each
C	Building — Office/ Commercial Purposes	£3.50 per m² (min. £70.00)
D	Agricultural Buildings/Structures	£1.00 per m² In excess of 300 sq. metres (min. - £70.00) (Max. - £300.00)
E	Petrol Filling Station	£200.00
F	Development or Proposals not coming within any of the foregoing classes.	£9.00 per 0.1 ha (£70.00 min.) Min. Fee £30.00 Max. Fee £20,000

Cheques etc. should be made payable to: Dublin County Council.

Gross Floor space is to be taken as the total floor space on each floor measured from the inside of the external walls.

For full details of Fees and Exemptions see Local Government (Planning and Development) (Fees) Regulations 1984.

RECEIPT CODE

COMHAIRLE CHONTAE ÁTHA CLIATH

PAID BY
CASH
CHEQUE
B.L.
I.T.

DUBLIN COUNTY COUNCIL
46/49 UPPER O'CONNELL STREET
DUBLIN 1.

Issue of this receipt is not an acknowledgement that the fee tendered is the prescribed application fee.

Nº 35147

£96.00

Received this 10th day of April 1991

from Aldborn

c/o 2 Waldemar Tce

Dundrum

the sum of ninety six Pounds

Pence, being fee for

planning application at 33-35 Old Kilmacud Rd,

Willbrook House

Moelie Doune Cashier

S. CAREY
Principal Officer

RECEIPT CODE

COMHAIRLE CHONTAE ÁTHA CLIATH

DUBLIN COUNTY COUNCIL
46/49 UPPER O'CONNELL STREET,
DUBLIN 1.

BYE LAW APPLICATION.

REC. No. N 35439

PAID BY

CASH
CHEQUE /
B.L.
I.T.

£660.00

Received this 10th day of April 1991

from Glendorn,
c/o 2 Waldemar Tce.
Dundrum

the sum of six hundred and sixty Pounds
Pence, being fee for
bye-law application at 33-55 Rd. 2,
Willsbrook Drive

S. CAREY
Principal Officer

Moelee Deane Cashier

10/4/91 AX12

AIB Bank

09-04-1991

93-31-20

10 MAIN STREET DUNDRUM DUBLIN 14

Pay Dublin County Council or order

Sixteen pounds only IR£ 16.00

FRANK ELMES
NO 2 ACCOUNT

Allied Irish Banks, p.l.c.

⑈600323⑈ 93⑆3120⑆ 04833155⑈ 02

AIB Bank

24th March 1991

93-20-78

62 ST BRIGID'S ROAD ARTANE DUBLIN 5

Pay Dublin County Council or order

Three thousand two hundred and twenty eight pounds IR£ 3228.00

MCGREEVY TAYLOR MCKIERNAN
MCGREEVY T/A GLENDORN

Allied Irish Banks, p.l.c.

⑈500007⑈ 93⑆2078⑆ 09463077⑈ 02

FRANK ELMES & Co.
ARCHITECTS
PLANNING CONSULTANTS

No, 2 WALDEMAR TERRACE,
MAIN STREET, DUNDRUM,
DUBLIN 14.
TELEPHONE : 951514 / 5
FAX No. : 951703

date : 8/4/91

your ref :

our ref :

Dublin County Council,
Planning Dept.
Irish life Centre,
Lower Abbey St.
DUBLIN 1.

RE: Change of Approved House type (Reg. Ref. 89A/982) on sites 33 - 55 odd incl. Rd. 2 at lands adjacent Wills Brook House Esker Lane, Ballyowen T.D. Lucan for Glendorn.

Dear Sirs,

Further to the above application we would point out that this application is for Change of Approved House type only and does not involve any change in the layout.

All site works are as previously approved and submitted.

Water main layout is as approved except where revisions were required by BBL Approvals 2693/89, and 4650/89.

Accordingly we hope that a favourable Decision will issue in early course. However, if you have any queries, please do not hesitate to contact us.

Yours faithfully,

W. Plunkett

Wm. Plunkett
FRANK ELMES & CO.

FRANK ELMES & Co.
ARCHITECTS & ENGINEERS,
PLANNING CONSULTANTS.

NO. 2 WALDE[illegible] TERRACE,
MAIN STREE[illegible]DRUM,
DUBLIN 14.
TELEPHONE [illegible]

OUTLINE SPECIFICATION
WHERE APPLICABLE
for
Proposed residental development
at Wills, Brook, Lucan, Co, Dublin.
For
GLENDORN LTD

FOUNDATIONS Excavate to depth and width as shown on section or to the requirement of the Local Authority, Engineer, concrete to be not leaner than 1:7.

RISING WALLS To be in solid blockwork to D.P.C. level, min 150mm finished ground level.

Cavities of half brick front walling to be drained min 225mm below D.P.C. level.

GROUND FLOOR Remove 225mm vegetation layer.
Slab to be 150mm deep sanded 6:1 clean pit gravel and cement on 25mm aeroboard insulation on 1000 gauge [illegible] visqueen on 50mm sand blinding on 150mm well compacted hardcore.
Visqueen brought vertical and lapped over D.P.C. in walls.

FIRST FLOOR: SEE SECTION.

BLOCKWORK 225mm hollow conc blocks to external walls as shown laid on 215mm wide D.P.C. min 150mm above finished ground level. 225mm solid blockwork in all party walls. ½ brick front to be 275mm cavity (100mm outer leaf, 50mm cavity, 25mm insulation, 100mm inner leaf With ties every 450mm vertical and 750mm horizontall with D.P.C. 150mm above F.G.L. in inner and outer leaf. D.P.C. to be carried around jambs of opes in cavity walling.

Permanent: Ventilation 225 x 225mm to all habitable rooms without fireplaces.
Cover of flues to fireplaces to be at least 112.5mm on flanks and 225mm on ends, Min 50mm cavity, min 225mm separation to be provided between flues of adjoining properties.
Cement mortar to be not leaner than 1:4 and gauged morter to be not leaner than 1 cement/lime to 4 sand.

RAINWATER To be 100mm Ø, half round block p.v.c. gutters, swan necks, down pipes and fittings to G.T's to A.[illegible] to surface water sewer.

FOUL DRAINS Drains to be laid on concrete beds haunched to pipes and encased in min 150mm conc. under buildings and bridged over at intersections with walls.

Vent pipe to head of drain where branch may exceed [illegible]m.

Toilets to be perm. ventilated to the outside air.

FRANK ELMES & Co.
ARCHITECTS & ENGINEERS,
PLANNING CONSULTANTS.

NO. 2 WALDEMAR TERRAC
MAIN STREET, DUNDRUM,
DUBLIN 14.

TELEPHONE: 951514 / 5

FOUL DRAINS contd.

Ground floor waste pipes to deliver to gully trap to A.J. to foul drain.
Soil and waste pipes to be accessible throughout entire length.

W.C.'s to single stack soil vent pipe (to B.S. 5572-1978) to A.J. to M.H. to foul sewer. W.H.B.'s & baths to single stack S.V.P. to A.J. foul drain.

Rodding facilites to be provided at all intersection of drains.

JOINERY — All joinery to standard specification treated against rot, primed undercoated and gloss finished.

Hardwood to be varnished or oiled.

External windows and doors as above or "Sadolins" to all external timber work.

FINISHES — External plaster - Skud, scratch and float with sand and cement, tyrolean and nap finish.

Reveals to all opes.

Internal plaster - Gypsum undercoat and skim to internal walls only. 9.5 gypsum foil backed plasterboard on 50 x 25mm battens at 600 c/c with 50mm fiberglass to inside face of all external walls.

Ceilings to be slabbed and skimmed.

PITCHED ROOF — Selected concrete roof tiles on 50 x 50mm roofing battens on untearable roofing felt on approved pre-fabricated roof trusses to I.S. 193 (1986) @ 600mm c/c, with 100 x 25 windbracing at rafter and ceiling level galvanised straps to trusses at 1.2M centres at gable walls to be fixed across 2 No trusses over blocking pieces fixed between trusses.

Trusses to be laid and braced strictly in accordance with I.S. 193 (1986), 175 x 25mm soffit & facia.

FIRST FLOOR — Chipboard on Joists.

NOTE: (1) Where any discrepancy occurs between spec. and dwg., Architect is to be consulted and his decision is final.

(2) All levels, dimensions and sizes to be checked and verified by Contractor prior to the commencement of any work.

(3) The Developer reserves the right to alter the above spec.

Housing Estate

LEGEND

- Type "A" 3 Bed N° 24
- Type AD 3 Bed No.6
- Type "B" 3 Bed N° 1
- Type "F" 3 Bed N° 26
- Type FH 3 Bed No. 28
- Type "C" 4 Bed N° 30 — Optional conservatorys
- Type "G" 4 Bed N° 1
- Type D 4 Bed N° 1
- Type "H" 3 Bed N° 1
- Type "E" 4 Bed N° 42 — Optional conservatory's

Total N° of houses 160

ROAD 1 · ROAD 2 · ROAD 3 · ROAD 4 · ESKER LANE · EMBANKMENT

NOTE:

All landscaping to be carried out to the requirments of Dublin County Council Parks Dept.

All development works to be carried out in accordance with Guideline specification for development works in housing and industrial estates and the requirments of Dublin County Council Building and Development Control Dept.

LEGEND

- Surface water sewer (aj — manhole — road gully)
- Foul sewer (aj — manhole)

EXISTING Co. Co. FOUL & S/W SEWERS.

09 APR 1991

rev		no.	date	by

FRANK ELMES
ARCHITECT LTD.
PLANNING CONSULTANT

2, WALDEMAR TCE.
DUNDRUM,
DUBLIN 14.
951514/5

CLIENT Glendorn Ltd.

PROJECT
Residential development at
Wills Brook Esker lane
Lucan Co Dublin

DRAWING TYPE
Site layout
Drainage layout

DRAWN	JOB N°	DRAWING N°
DATE 03.89	8903	EL/91/01
SCALE 1:500		

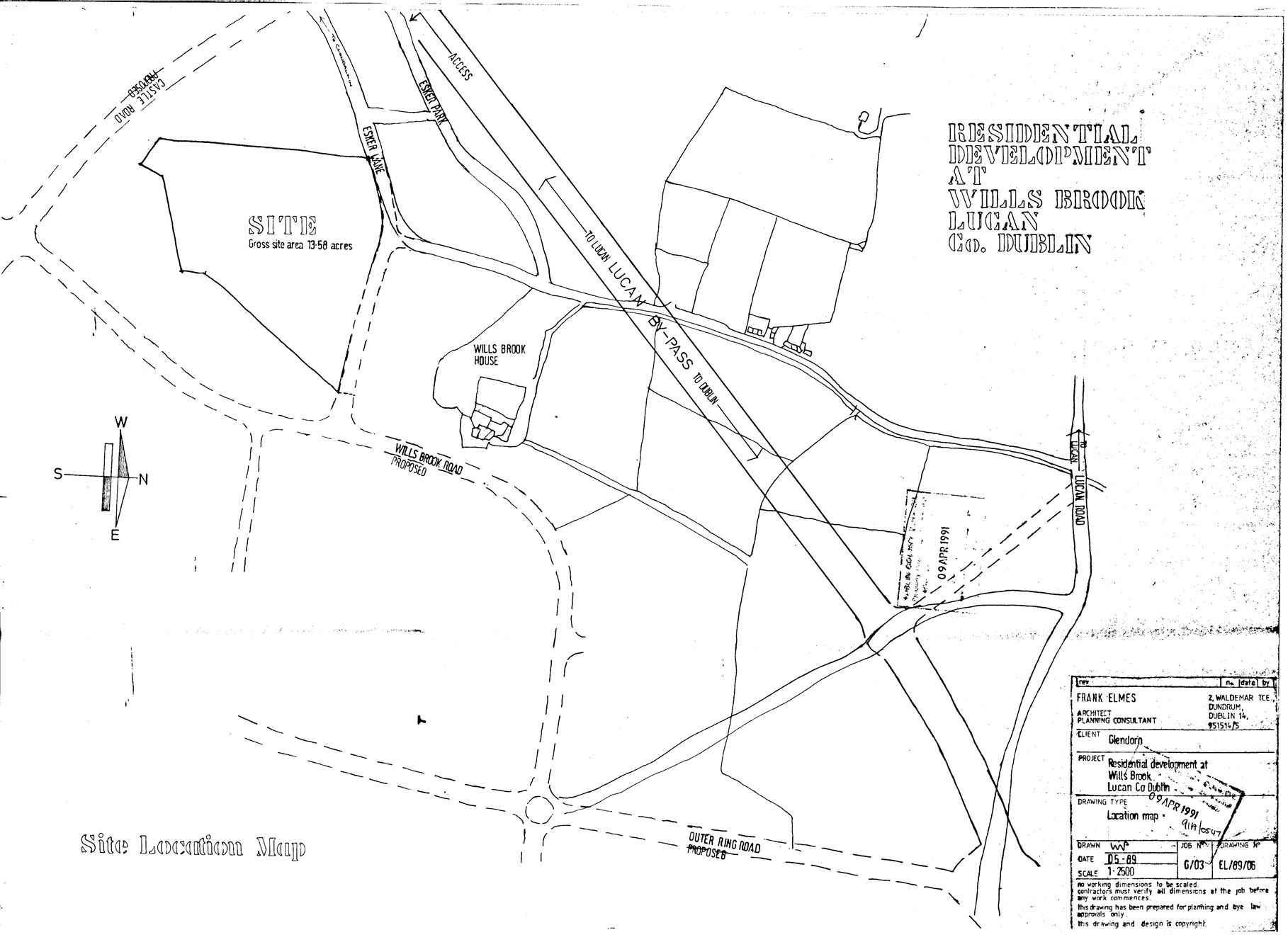
no working dimensions to be scaled.
contractors must verify all dimensions at the job before any work commences. If in doubt ask.
this plan has been prepared for planning and bye law approvals only.
this drawing and design is copyright.

LAND SURVEYS (LYNWOOD) LTD.
Lynwood House, Ballinteer Road,
Dublin 16. Phone: 988587 / 951773

Wills Brook, Lucan.

FRANK ELMES & COMPANY

Scale 1/500
Contour 0.5m
Datum O.S. Malin Head
File c89-03-23/1



RESIDENTIAL DEVELOPMENT AT WILLS BROOK LUCAN Co. DUBLIN

Site Location Map

rev	no.	date	by

FRANK ELMES
ARCHITECT
PLANNING CONSULTANT
2, WALDEMAR TCE.,
DUNDRUM,
DUBLIN 14.
9515145

CLIENT Glendorn

PROJECT Residential development at Wills Brook Lucan Co Dublin

09APR1991
91A/1547

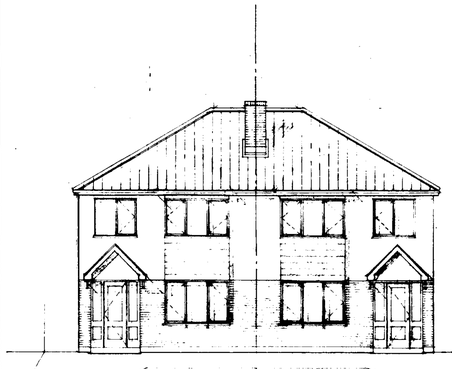
DRAWING TYPE Location map

DRAWN	JOB N°	DRAWING N°
DATE 05-89	G/03	EL/89/06
SCALE 1·2500		

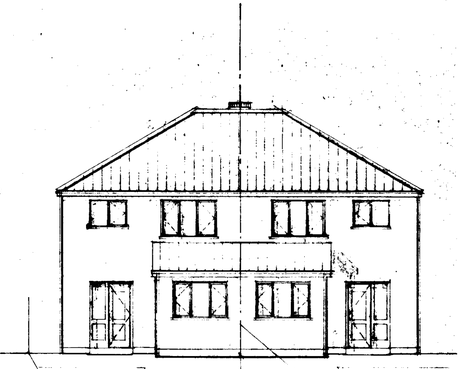
no working dimensions to be scaled.
contractors must verify all dimensions at the job before any work commences.
this drawing has been prepared for planning and bye law approvals only.

NOTE;
Foul and surface water drains for first 2 houses to be 100 ϕ at 1/40 and 150 ϕ at 1/60 for the remainder

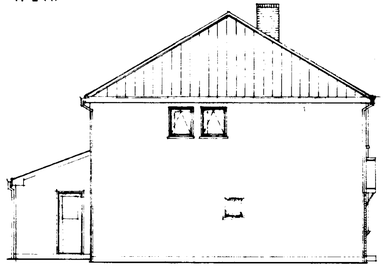
NOTE
This floor plan to be used for house type's "F" and "H" (3 Bed detached)



Front elevation
TYPE FH



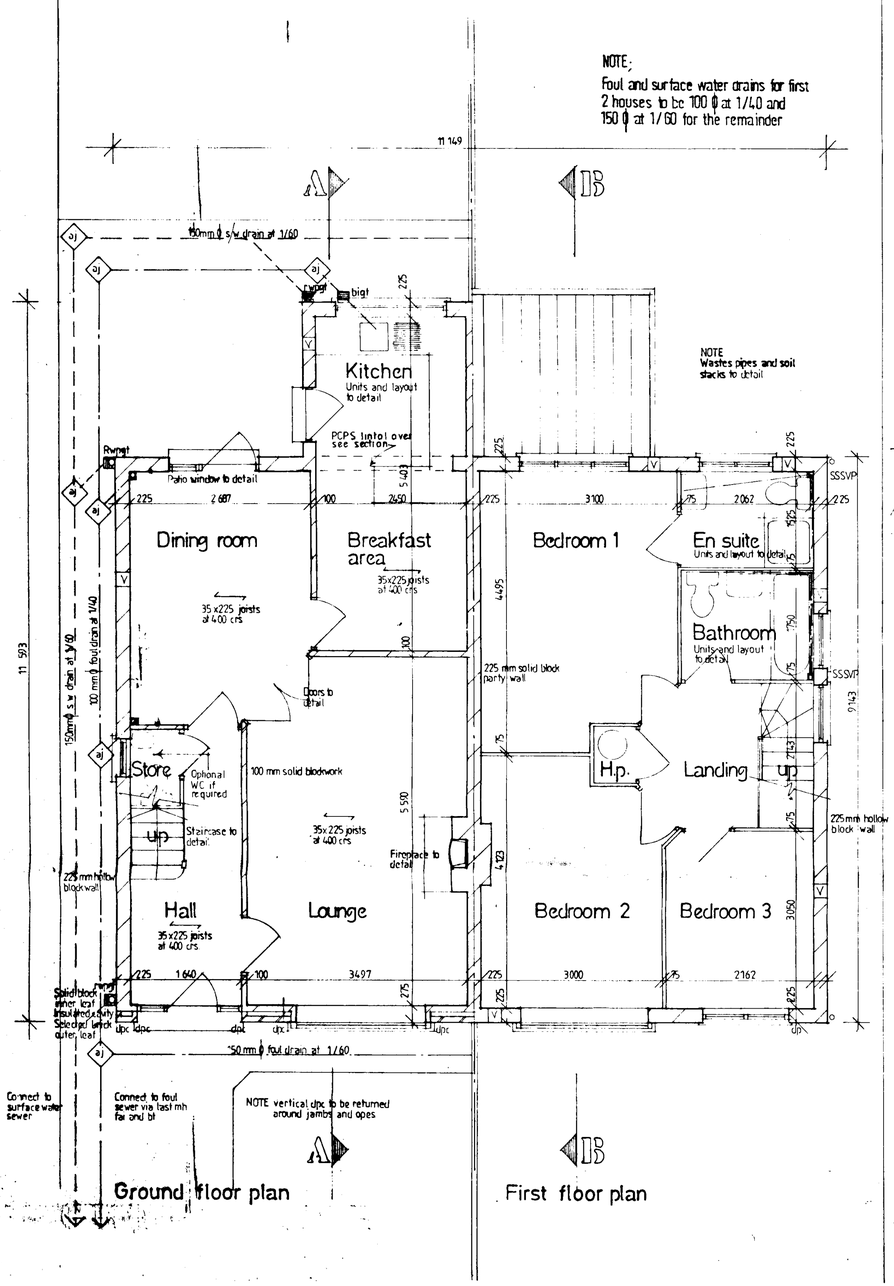
Rear elevation
TYPE FH



Gable elevation (typical) TYPE FH

NOTE
This drg may be handed
Drainage shown diagramatically
Drains to be encased in conc. where they pass beneath house and external walls to be bridged
Waiver sought for BBLs no 96 97 98 with regard to single stack system to BS 5572 (1978)
All habitable rooms to have permanent ventilation via 225 x 225 mm vents set into walls or via vents set into windows
All windows to satisfy BBL no 76
Floor joists to be strength class A and bridged at 1350 crs. and to satisfy SR 11 1988

Floor area 96·80 sq.m.



Rev	No	date	by

FRANK ELMES
ARCHITECT
PLANNING CONSULTANT
2, WALDEMAR TCE.,
DUNDRUM,
DUBLIN 14,
951514/5

CLIENT Glendorry Ltd

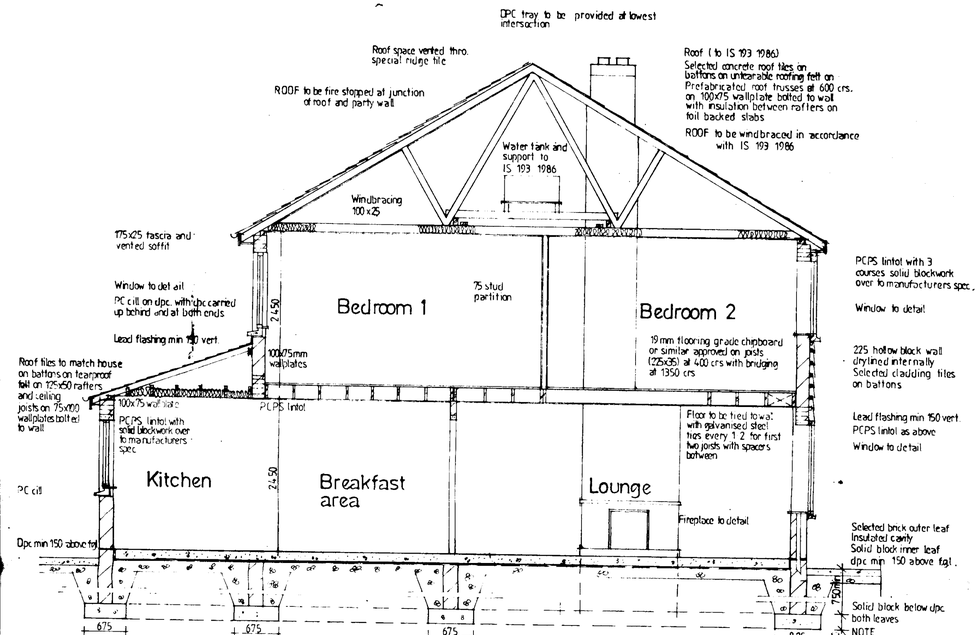
PROJECT Willsbrook
Lucan
Co/Dublin

09 APR 1991

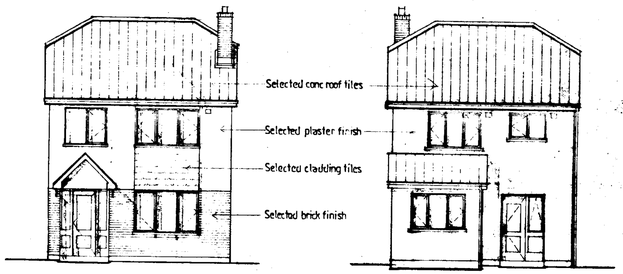
DRAWING TYPE
Floor plans and elevations
3 bed semi detached

DRAWN	JOB N°	DRAWING N°
DATE 03/91	G/03	EL/91/02
SCALE 1:50/1:100		

no working dimensions to be scaled
contractors must verify all dimensions at the job before any work commences. if in doubt ask.
this drawing has been prepared for planning and bye law approvals only.

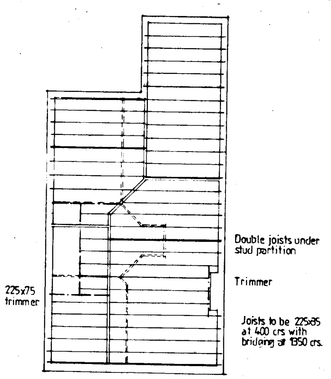


SECTION A A B B

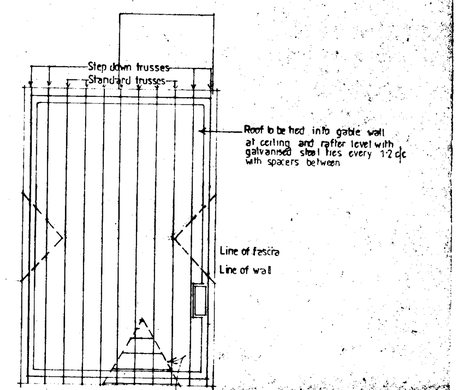


Front elevation
TYPE H

Rear elevation
TYPE H



Joist layout



Roof layout

Floor area 96·80 sq.m.

NOTE
For floor plans see drwg N° EL/91/02

Rev	No.	date	by

FRANK ELMES
ARCHITECT
PLANNING CONSULTANT
2, WALDEMAR TCE.,
DUNDRUM,
DUBLIN 14,
9515145

CLIENT
Glendorm Ltd.

PROJECT
Willsbrook
Lucan
Co Dublin

09 APR 1991

DRAWING TYPE
Section A-A; B-B detached elevation, layouts
3 bed house

DRAWN	WP	JOB N°	DRAWING N°
DATE	09/89	C/03	EL/89/13
SCALE	1:50/1:100		

no working dimensions to be scaled.
contractors must verify all dimensions at the job before any work commences.
this drawing has been prepared for planning and bye law approvals only