

# CONSENT LAYOUT

**CARTERS**

32 Commerce St  
Whangarei  
Ph (09) 430 7714  
Fax (09) 430 7720

**JOB No** 359367C1  
Client: Westmoreland Homes  
Job Name: Fullan  
Address: Lot 8 Longview Street  
Mangawhai

Pitch: 35  
Roof Material: Longrun  
Soffit Overhang: 450  
Wind Area: High  
Ceiling: Gib  
B/chord restraints: 600crs  
Drawn by: Steve Tacon  
Date: 06/12/21

Trusses And Rafters At 900 Centres  
Unless Stated Otherwise.  
This layout is to be read in conjunction  
with the Architectural plans.

PAGE 1 of 2

**FIXINGS** Truss Fixing read in conjunction  
with truss hardware site pack  
supplied with trusses for fixing

A=47x90 JH  
B=47x120 JH  
C=CT200  
D=47x190 JH  
E=95x165 JH  
S=Strut brace  
G=SH-140 Split Hanger  
H=SH-180 Split Hanger  
K=SH-220 Split Hanger  
L=6kn Strap  
M=Multigrip  
N=Nail On Plate  
J=CPC 80  
T=CPC 40 Short {Pair}  
Q=9kn Pack  
P=16kn  
X=24kn uplift

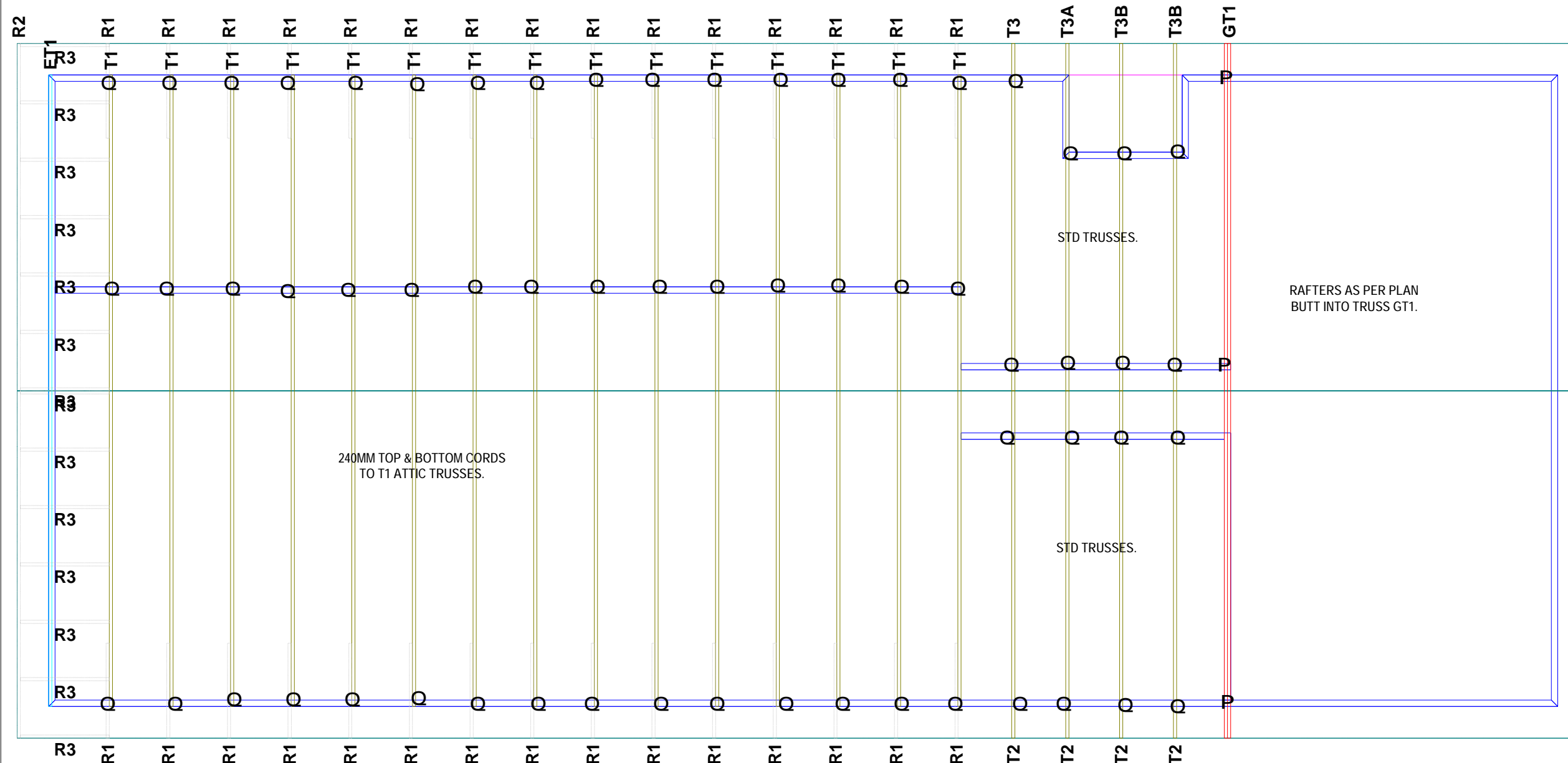
All other truss fixings not indicated as  
above must have two wire dogs

**NOTE**

Please contact your local CARTERS  
Manufacturing Branch for any queries  
regarding this layout or if any on site remedial  
work is required.

No modifications to Roof Trusses or Wall Frames  
are to be undertaken without first obtaining  
written authority from CARTERS Manufacturing.

See Page 2 for Dimensions,  
Intel Statement



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with the Architectural plans.

"Note"  
if metal ceiling battens on clips  
are use, bottom chord restraints  
required @ 1800crs

PAGE 2 of 2

These lintels have been sized as per  
the GANGLAM 04/2008 and  
FLITCH BEAM V1.10 June 2011  
selection manuals as provided by  
MiTek NZ Ltd.

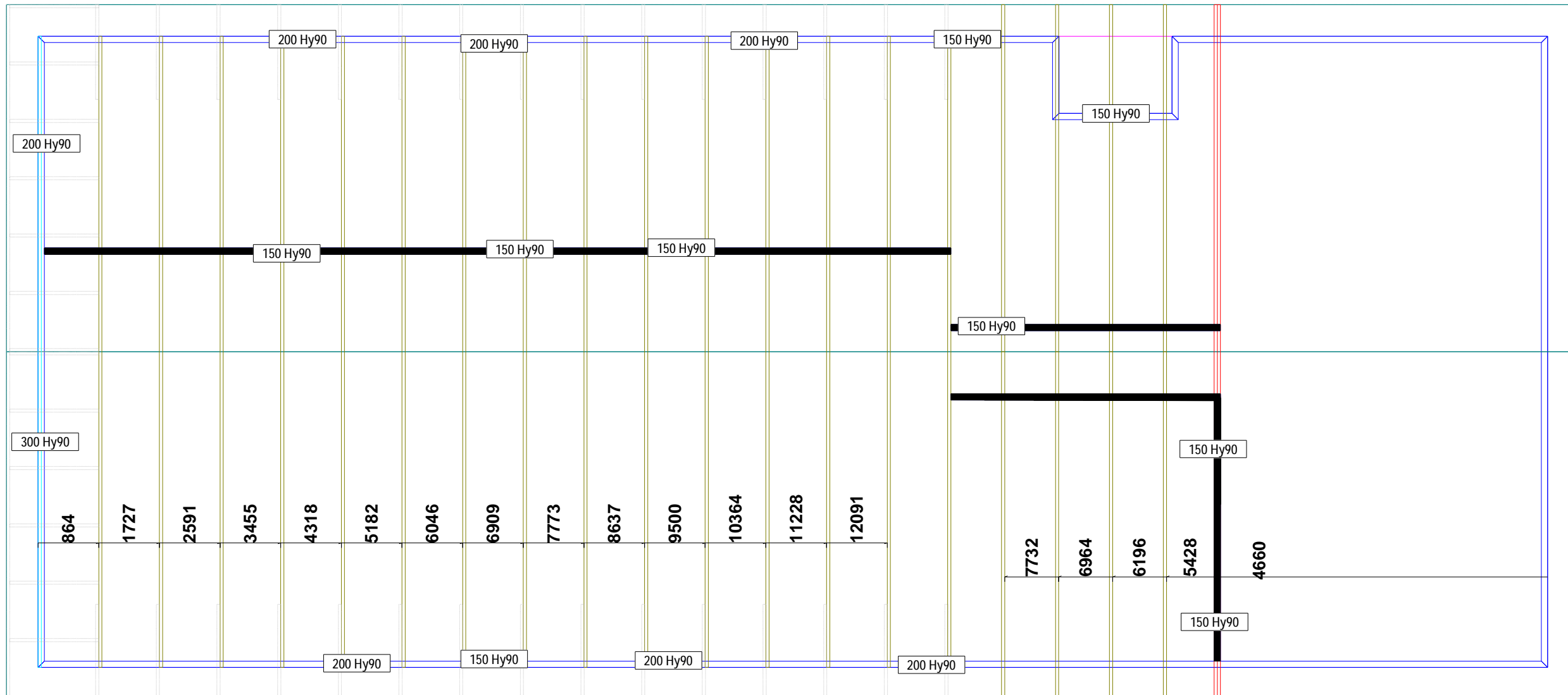
HYSpan and HY90 lintels have been  
sized using designIT v 6.3.19 NZ software or  
selection manuals, HYSpan Edition 3  
and HY90 E08/2006 as provided by  
CHH futurebuild.

Unless otherwise stated all lintels are  
to be selected as per NZS3604 2011.

All walls shown on this layout are  
considered to be load bearing.

All lintels under 1000 are 2x90x45 Msg8  
in load bearing walls  
and patio beams design by others  
unless other wise stated

See Page 1 for  
Truss Layout and  
Fixings



NOTIFICATION OF POINT LOADS TO INTERNAL WALLS  
IN EXCESS OF 10kN  
Ref. Mitek structural fixings on-site guide for building code compliance  
01/ 2018 edition (Revised for NZS 3604:2011)

○ \_kn down  
○ \_kn uplift  
○ \_no of studs under truss

Internal Loadbearing wall



Correspondence from : **AUCKLAND**  
40 Neales Road, East Tamaki 2013  
PO Box 58-014, Botany 2163  
**Phone: 09 274 7109**  
**Fax: 09 274 7100**

**CHRISTCHURCH**  
14 Pilkington Way, Wigram 8042  
PO Box 8387, Riccarton 8440  
**Phone: 03 348 8691**  
**Fax: 03 348 0314**

[www.mitek.nz.co.nz](http://www.mitek.nz.co.nz)

MiTek 20/20 Engineering 4.7.301.0

Printed: 14:00:20 06 Dec 2021

## PRODUCER STATEMENT for MiTek 20/20<sup>®</sup> TRUSS DESIGN - Version 4.7

ISSUED BY: MiTek New Zealand Limited

TO: CARTERS

IN RESPECT OF: MiTek<sup>®</sup> Truss Designs

This producer statement covers the MiTek 20/20<sup>®</sup> truss design and the structural performance of the GANG-NAIL<sup>®</sup> connector plate for the job reference **359367C1** and may be used by a Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

The MiTek 20/20<sup>®</sup> truss design program has been developed by MiTek New Zealand Limited for the design of MiTek<sup>®</sup> timber roof, floor and attic trusses in New Zealand. The truss designs computed by MiTek 20/20<sup>®</sup> are prepared using sound and widely accepted engineering principles, and in accordance with compliance documents of the New Zealand Building Code and Verification Method B1/VM1; and internationally accepted standard ANSI/TPI 1 - 2002 as an alternative solution, to satisfy the requirements of Clause B1 of the New Zealand Building Code.

On behalf of MiTek New Zealand Limited, and subject to:

- i) All proprietary products meeting their performance specification requirements
- ii) The provision of adequate roof bracing and overall building stability
- iii) Correct selection and placement of GANG-NAIL connector plates
- iv) Correct input of Truss Design Data as shown in the Fabricator Design Statement for this job
- v) The design being undertaken by the accredited fabricator under the terms of the software licence
- vi) Timber is graded to the requirements of NZS 3603:1993
- vii) Minimum timber treatment for these MiTek<sup>®</sup> trusses shall be in accordance with B2/AS1 Table 1A and the relevant sections of NZS 3602:2003

I believe on reasonable grounds that the trusses, if constructed in accordance with the MiTek 20/20<sup>®</sup> truss design and shop drawings, will comply with the relevant provisions of the New Zealand Building Code.

MiTek New Zealand Limited holds a current policy of Professional Indemnity Insurance no less than \$500,000.

On behalf of MiTek New Zealand Limited,

Date: Monday, 6 December 2021

In Ling Ng, BE (Hons), CPEng, IntPE, MIPENZ (ID: 146585)  
TECHNICAL SERVICES MANAGER, MiTek New Zealand Limited

Job: 359367C1  
 Description: Fullan  
 Building Consent No.:  
 MiTek 20/20 Engineering 4.7.301.0

Client: Westmoreland Homes  
 Phone:

Site: Fullan  
 Lot 8 Longview St  
 Mangawhai

Phone:  
 Printed: 14:00:21 06 Dec 2021

MiTek New Zealand Limited

## MITEK FABRICATOR DESIGN STATEMENT

This statement is issued by MiTek accredited fabricator **CARTERS**, being licensed to use the MiTek 20/20<sup>®</sup> software, to the client listed above and may be used by the Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

### MiTek 20/20<sup>®</sup> TRUSS DESIGN DATA

The MiTek 20/20<sup>®</sup> computer design for this job is based on the following design parameters entered into the program. The Fabricator shall ensure that these job details are current and relevant to the project for the design of the MiTek<sup>®</sup> trusses.

<b>Job Details</b>	Importance Level : 2	Design Working Life : 50 years
<b>Roof Truss</b>		
Timber Group: MSG8 DDP H1.2	Pitch: 35.000 deg	Nominal Overhang: 450 mm
<b>Roof</b>	<b>Ceiling</b>	<b>Wind</b>
Material: Longrun	Material: Rondo screwed to BC	Area: High (44.0 m/s )
Dead Load: 0.210 kPa	Dead Load: 0.200 kPa	Pressure Coeff: Cpe = varies; Cpi = -0.30, 0.20
Restraints: 900 mm centres	Restraints: 600 mm centres	
Live Load: Q <sub>ur</sub> = 0.250 kPa	Live Load: Q <sub>c</sub> = 1.400 kN	
Q <sub>c</sub> = 1.100 kN	<b>Occupancy Live Load</b>	
	Distributed: Q <sub>uf</sub> = 1.500 kPa	
	Concentrated: Q <sub>cf</sub> = 1.800 kN	
<b>Attic Floor</b>	<b>Attic Room Ceiling</b>	<b>Attic Wall</b>
Material: 20mm Particle Board	Material: Gib Board 12mm	Material: Gib Board
Dead Load: 0.200 kPa	Dead Load: 0.200 kPa	Dead Load: 0.300 kPa
Restraints: Continuous	Restraints: 600 mm centres	Restraints: Continuous

The minimum timber treatment for these MiTek<sup>®</sup> trusses shall be in accordance with B2/AS1 Table 1A and the relevant sections of NZS 3602:2003. The timber for these MiTek<sup>®</sup> trusses shall be graded to the requirements of NZS 3603:1993. Proprietary fixings and timber connectors shall be selected in accordance with NZS3604:2011 Section 4 - Durability.

### MiTek<sup>®</sup> Truss List

Legend: \* = detail only, ? = input only, ✕ = failed design, Ø = non certified, Unmarked trusses = designed successfully, LB = lateral bracing required  
 GB = gable brace required, CF = Chemical Free Treatment

#### Roof Truss

Treatment: Top Chords - H1.2		Bottom Chords - H1.2		Webs - H1.2					
Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)
ET1	1	9000	35.000	900 GB	T3B	2	4200	35.000	768
GT1	1D	9000	35.000	900	*VNG	20	855	0.000	900
*R1	30	1350	35.000	864					
*R2	1	9900	35.000	900					
*R3	14	1269	0.000	818					
T2	4	3900	35.000	768					
T3	1	4200	35.000	768					
T3A	1	4200	35.000	768					

Roof Truss quantity : 75

#### Attic Truss

Treatment: Top Chords - H1.2		Bottom Chords - H1.2		Webs - H1.2		Wall Webs - H1.2		Collar Tie - H1.2	
Attic	Qty	Span (mm)	Pitch (deg)	Spacing (mm)					
T1	15	9000	35.000	864					

Attic Truss quantity : 15

Total quantity : 90

The computer design input has been carried out by:

MiTek 20/20 Software Operator: Steven Tacon

MiTek Candidate Number and Qualifications: 10391 - MiTek 101, 201, 301, COC

Accredited Fabricator:



Job: 359367C1

Client: Westmoreland Homes  
Phone:

Site: Fullan  
Lot 8 Longview St  
Mangawhai

Description: Fullan  
Building Consent No.:  
MiTek 20/20 Engineering 4.7.301.0

MiTek New Zealand Limited

Phone:  
Printed: 14:00:25 06 Dec 2021

**TRUSS FIXING SELECTION REPORT - Characteristic Loads**

Fixings are selected from the LUMBERLOK Brochure 08/2014 (Timber Connectors Characteristic Loadings Data)

**MiTek® Truss List**

Legend: \* = detail only, ? = input only, ~~xxx~~ = failed design, Ø = non certified, Unmarked trusses = designed successfully

Truss	Qty	Span (mm)	Joint	Down (kN)	Uplift (kN)	Bearing	----- Fixing -----	
							Qty	Selected
ET1	1	9000	R	5.083	4.256	Cross	1	CT200 pair
			AH	5.083	4.256	Cross	1	CT200 pair
GT1	1D	9000	B	5.540	4.204	Cross	1	CT200 pair
			P			Wide		No fixing selected
			M	4.178	3.668	Cross	1	CT200 pair
T2	4	3900	B	2.651	1.563	Cross	4	Pair of Wire Dog Staples
			G	3.579	1.246	Cross	4	Pair of Wire Dog Staples
T3	1	4200	B	2.736	1.735	Cross	1	Pair of Wire Dog Staples
			G	4.023	1.268	Cross	1	Pair of Wire Dog Staples
T3A	1	4200	B	2.587	1.679	Cross	1	Pair of Wire Dog Staples
			F	0.449	0.077	Cross	1	Pair of Wire Dog Staples
			H	3.901	1.247	Cross	1	Pair of Wire Dog Staples
T3B	2	4200	F	3.780	1.087	Cross	2	Pair of Wire Dog Staples
			H	3.816	1.708	Cross	2	Pair of Wire Dog Staples
T1	15	9000	J	5.621	1.901	Cross	15	Pair of Wire Dog Staples
			R	8.530	2.407	Cross	15	Pair of Wire Dog Staples
			N	9.030	1.135	Cross	15	Pair of Wire Dog Staples
*R1	30	1350						Refer NZS3604:2011 Tables 10.1 & 10.14
*R2	1	9900						Refer NZS3604:2011 Tables 10.1 & 10.14
*R3	14	1269						Refer NZS3604:2011 Tables 10.1 & 10.14
*VNG	20	855						Refer NZS3604:2011 Tables 10.1 & 10.14

**Fixing List**

Qty	Selected Fixing	Cost
4	CT200 pair	6.24
62	Pair of Wire Dog Staples	31.62
1	No fixing selected	
Total		37.86

**Note:**

- 1) Fixings have been selected based on loading only. Please check that selected fixings are practical for each situation and that appropriate nailing can be applied on site.
- 2) Fixings are selected from the LUMBERLOK Brochure 08/2014 (Timber Connectors Characteristic Loadings Data) with down and uplift characteristic loads of at least the values shown for each joint.

## 7.3 WALLS

Design Deflection Limits:

D.L.	L.L.
SPAN/300	SPAN/360
OR 10 mm	OR 10 mm

TABLE 14: LINTELS – UPPER/SINGLE STOREY

Section D x B (mm)	Product	Light Roof And Ceiling									
		Roof Load Width 'RLW' (m)									
		1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2
Maximum Span (m)											
90 x 45	hyCHORD®	1.7	1.5	1.3	1.2	1.1	1.1	1.0	1.0	0.9	0.8
2/90 x 45	hyCHORD	2.3	2.0	1.8	1.7	1.5	1.5	1.4	1.3	1.3	1.2
140 x 45	hyCHORD	2.7	2.5	2.4	2.3	2.1	2.0	1.8	1.8	1.7	1.6
150 x 45	hySPAN®	3.0	2.8	2.7	2.5	2.4	2.4	2.3	2.1	2.0	2.0
150 x 63	hySPAN	3.2	3.0	2.9	2.7	2.6	2.5	2.5	2.4	2.4	2.3
2/140 x 45	hyCHORD	3.2	3.0	2.8	2.7	2.6	2.5	2.5	2.4	2.4	2.3
150 x 90	hy90®	3.2	3.0	2.9	2.7	2.6	2.5	2.5	2.4	2.4	2.3
170 x 45	hySPAN	3.3	3.1	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.4
190 x 45	hyCHORD	3.4	3.2	3.0	2.9	2.8	2.7	2.6	2.5	2.5	2.4
2/150 x 45	hySPAN	3.5	3.3	3.1	3.0	2.9	2.8	2.7	2.6	2.6	2.5
200 x 45	hySPAN	3.7	3.5	3.3	3.1	3.0	2.9	2.8	2.8	2.7	2.6
2/170 x 45	hySPAN	3.8	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.8
200 x 63	hySPAN	4.0	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9
2/190 x 45	hyCHORD	4.0	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9
200 x 90	hy90	4.0	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9
240 x 45	hySPAN	4.2	4.0	3.8	3.6	3.5	3.3	3.3	3.2	3.1	3.0
2/200 x 45	hySPAN	4.4	4.1	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1
240 x 63	hySPAN	4.6	4.3	4.1	3.9	3.7	3.6	3.5	3.4	3.4	3.3
240 x 90	hy90	4.6	4.3	4.0	3.9	3.7	3.6	3.5	3.4	3.4	3.3
2/240 x 45	hySPAN	5.0	4.7	4.5	4.2	4.1	4.0	3.8	3.7	3.7	3.6
300 x 45	hySPAN	5.0	4.8	4.5	4.2	4.1	4.0	3.8	3.7	3.7	3.6 ■
240 x 90	hyONE®	5.2	4.9	4.7	4.5	4.3	4.1	4.0	3.9	3.8	3.7
300 x 90	hy90	5.3	5.0	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9
300 x 63	hySPAN	5.4	5.1	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9
360 x 45	hySPAN	5.7	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2 ■	4.0 ■
2/300 x 45	hySPAN	5.8	5.4	5.2	5.0	4.9	4.8	4.6	4.5	4.4	4.2

- Indicates minimum bearing at end supports = 90 mm
- Minimum bearing at end supports 45 mm, except where indicated otherwise
- Double sections built-up by vertical lamination – see section 5.4

Design Deflection Limits:

D.L. SPAN/300  
OR 10 mm

L.L. SPAN/360  
OR 10 mm

TABLE 14 CONTINUED: LINTELS – UPPER/SINGLE STOREY

Section D x B (mm)	Product	Heavy Roof And Ceiling									
		Roof Load Width 'RLW' (m)									
		1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2
		Maximum Span (m)									
90 x 45	hyCHORD®	1.4	1.3	1.2	1.2	1.1	1.0	1.0	0.9	0.9	0.8
2/90 x 45	hyCHORD	1.7	1.5	1.4	1.4	1.3	1.2	1.2	1.2	1.2	1.1
140 x 45	hyCHORD	2.0	1.8	1.7	1.6	1.5	1.5	1.4	1.4	1.4	1.3
150 x 45	hySPAN®	2.4	2.2	2.0	1.8	1.7	1.7	1.6	1.5	1.5	1.4
150 x 63	hySPAN	2.6	2.4	2.2	2.0	1.9	1.9	1.8	1.7	1.7	1.6
170 x 45	hySPAN	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.7	1.7	1.6
2/140 x 45	hyCHORD	2.6	2.4	2.2	2.0	1.9	1.8	1.8	1.7	1.6	1.6
150 x 90	hy90°	2.6	2.4	2.2	2.0	1.9	1.9	1.8	1.7	1.7	1.6
190 x 45	hyCHORD	2.8	2.6	2.4	2.2	2.1	2.0	1.9	1.8	1.8	1.7
2/150 x 45	hySPAN	2.9	2.6	2.5	2.4	2.2	2.1	2.0	1.9	1.9	1.8
200 x 45	hySPAN	3.0	2.8	2.6	2.5	2.4	2.3	2.2	2.1	2.0	1.9
2/170 x 45	hySPAN	3.2	3.0	2.8	2.6	2.5	2.4	2.3	2.3	2.2	2.1
200 x 63	hySPAN	3.4	3.1	2.9	2.7	2.6	2.5	2.4	2.4	2.3	2.2
2/190 x 45	hyCHORD	3.4	3.1	2.9	2.7	2.6	2.5	2.4	2.4	2.3	2.2
200 x 90	hy90	3.3	3.1	2.9	2.7	2.6	2.5	2.4	2.4	2.3	2.2
240 x 45	hySPAN	3.5	3.3	3.1	2.9	2.8	2.7	2.6	2.5	2.4	2.4
2/200 x 45	hySPAN	3.6	3.4	3.2	3.0	2.9	2.8	2.7	2.6	2.6	2.5
240 x 63	hySPAN	3.8	3.6	3.4	3.2	3.1	3.0	2.9	2.8	2.7	2.6
240 x 90	hy90	3.8	3.6	3.4	3.2	3.1	3.0	2.9	2.8	2.7	2.6
2/240 x 45	hySPAN	4.1	3.8	3.7	3.5	3.4	3.2	3.2	3.1	3.0	2.9
300 x 45	hySPAN	4.1	3.8	3.7	3.5	3.4	3.2	3.1	3.1	3.0	2.9 ■
240 x 90	hyONE®	4.3	4.0	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.1
300 x 63	hySPAN	4.5	4.2	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2
300 x 90	hy90	4.4	4.2	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2
360 x 45	hySPAN	4.8	4.4	4.2	4.0	3.8	3.8	3.7	3.6	3.5 ■	3.4 ■
2/300 x 45	hySPAN	4.9	4.6	4.3	4.1	4.0	3.8	3.8	3.7	3.6	3.5

- Indicates minimum bearing at end supports = 90 mm
- Minimum bearing at end supports 45 mm, except where indicated otherwise
- Double sections built-up by vertical lamination – see section 5.4