Manufacturing Statement

This statement, supplied to the Carters customer listed below, has been provided to assist a Building Consent Authority in determining compliance with the NZ Building Code and is issued subject to Carters Standard Terms and Conditions of Sale (available at www.carters.co.nz).

30-November-2023

BARRY CHRISTOPHER WALSH
71 DAVIS ROAD, CUST
CH1387008M2 **(Mitek Job Ref: 387008M2)**

Roof Trusses

Roof trusses supplied by Carters to the above project have been manufactured as per any Producer Statement Design issued by MiTek for consent purposes on the above project using verified timber grades that meet the requirements of NZS 3622 for use with NZS 3603. Any laminated veneer lumber that has been supplied as part of a roof truss has been manufactured in accordance with AS/NZS 4357 with properties determined in accordance with the requirements of NZS 3603. Carters is a licensed MiTek fabricator.

Pre Nailed Wall Frames

Pre-nailed Wall frames supplied by Carters to the above project have been manufactured using verified timber grades, where required, that meet the requirements of NZS 3622 for use with NZS 3064 and NZS 3603. Any laminated veneer lumber lintels that have been supplied as part of a pre-nailed wall frame have been manufactured in accordance with AS/NZS 4357 with properties determined in accordance with the requirements of NZS 3603.

MiTek Flitch Beams

MiTek Flitch Beams supplied by Carters for the above project have been manufactured in accordance with the plans, MiTek fabrication details and/or engineering details supplied. Flitch steel is sourced from MiTek NZ as per MiTek fabricator requirements.

Pre-Fabricated Floor and Roof Cassette

Pre-Fabricated Floor and Roof Cassettes supplied by Carters for the above project have been manufactured in accordance with the plans and/or engineering details supplied. Any plywood and laminated veneer lumber that have been supplied as part of pre-fabricated cassettes have been manufactured in accordance with AS/NZS 2269 and AS/NZS 4357 respectively. All hyJoist products have been manufactured under a third party audited quality controllled scheme to meet the published characteristic values.

Timber Treatment

All treated timber and engineered wood products used in any items manufactured by Carters in the above project, are not less than the minimum levels specified in the plans, specifications and information supplied by the customer.

NZ Standards

NZ Standards listed in this statement are cited as Acceptable Solutions and Verification Methods (B1/AS1 and B1/VM1) for New Zealand Building Code (NZBC) Clause B1 Structure, and Acceptable Solution B2/AS1 for NZBC Clause B2 as a means of assisting in meeting the provisions of the NZBC.

John Bannon
MANUFACTURING MANAGER, CHRISTCHURCH
Carters Building Supplies Limited

ASBUILT TRUSS Ic230501 RECEIVED 01/12/2023

MiTek New Zealand Limited

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.miteknz.co.nz

PRODUCER STATEMENT for MiTek 20/20® TRUSS DESIGN - Version 4.7

ISSUED BY: **MiTek New Zealand Limited**

TO: **CARTERS**

IN RESPECT OF: **MiTek® Truss Designs**

This producer statement covers the MiTek 20/20® truss design and the structural performance of the GANG-NAIL® connector plate for the job reference **387008M2** and may be used by a Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

The MiTek 20/20® truss design program has been developed by MiTek New Zealand Limited for the design of MiTek® timber roof, floor and attic trusses in New Zealand. The truss designs computed by MiTek 20/20 ® 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.

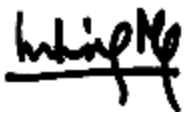
On behalf of MiTek New Zealand Limited, and subject to:

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® 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® 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: Thursday, 30 November 2023**



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

ASBUILT TRUSS bc230501 RECEIVED 01/12/2023

Job: 387008M2 Client: Barry Walsh Site: 71 Davis Rd
Phone: 71 Davis Rd
Description: Cust
Building Consent No.: BC230501 Phone:
MiTek 20/20 Engineering 4.7.346.0 MiTek New Zealand Limited Printed: 10:08:58 30 Nov 2023

MITEK FABRICATOR DESIGN STATEMENT

This statement is issued by MiTek accredited fabricator **CARTERS**, being licensed to use the MiTek 20/20® 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® TRUSS DESIGN DATA

The MiTek 20/20® 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 ® trusses.

Job Details

		Importance Level :	2	Design Working Life :	50 years
Roof Truss					
Timber Group:	MSG8 DDP H1.2	Pitch:	8.000 deg	Nominal Overhang:	300 mm
Roof		**Ceiling**		**Wind**	
Material:	Longrun	Material:	Gib 13mm/Rondo Screwed	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	**Snow**	
Live Load:	Qur = 0.250 kPa	Live Load:	Qc = 1.400 kN	Location:	at 200 m
	Qc = 1.100 kN	**Occupancy Live Load**		Open Ground Load:	1.400 kPa
		Distributed:	Quf = 1.500 kPa	Basic Roof Load:	0.980 kPa
		Concentrated:	Qcf = 1.800 kN		
Attic Floor		**Attic Room Ceiling**		**Attic Wall**	
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® trusses shall be in accordance with B2/AS1 Table 1A and the relevant sections of NZS 3602:2003. The timber for these MiTek ® 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® Truss List

Legend: * = detail only, ? = input only, ~~Txx~~ = failed design, Ø = non certified, Unmarked trusses = designed successfully, LB = lateral bracing required
GB = gable brace required

Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)
AT1	8	7190	35.000	900	*FLY2	2	4945	35.000	900	T4	1	4790	35.000	900
AT2	3	8240	35.000	900	*FLY3	1	6195	35.000	900	T4A	1	4790	35.000	900
AT2A	1	8240	35.000	900	*FLY4	1	5390	35.000	900	*T5	1D	1910	0.000	900
AT2B	1D	8240	35.000	900	*FLY5	2	2500	35.000	900	T6	1	8240	35.000	900 LB
AT2E	1	8240	35.000	900	GT1	1	7290	35.000	900 LB	T6A	2	8240	35.000	900 LB
ATE1	1	7190	35.000	900	GT2	1D	8240	35.000	1010	T7	3	8290	35.000	900 LB
*BB2	1D	1010	0.000	900	*OR1	10	1195	0.000	614	T8	2	2150	35.000	1010
*BCR1	1	7290	25.000	900	*OR2	22	1155	0.000	663	*TJ1	21	855	0.000	900
EN1	1	4790	35.000	900 LB GB	PTG1	1	1910	0.000	900	*TJ2	2	710	0.000	900
*ET1	1	4790	35.000	900	*R1	1	2290	35.000	900	*TJ3	2	810	0.000	900
*ET2	1	3500	35.000	900	R2	2D	4098	35.000	637	V1	1	4313	35.000	900
*FJ1	12	4900	0.000	900	S1	10	7290	35.000	900	V2	1	2513	35.000	900
*FJ2	1	2500	0.000	900	T1	1	7290	35.000	900 LB	V3	1	1313	35.000	900
*FJ3	3	4855	0.000	900	T2	3	7290	35.000	704 LB					
*FLY1	2	7790	35.000	900	T3	4	3040	8.000	900					

Total quantity : 139

The computer design input has been carried out by:

MiTek 20/20 Software Operator: Cody Barrow

MiTek Candidate Number and Qualifications:

Accredited Fabricator:

CARTERS
Your Building Partner

Thursday, 30 November 2023

AS BUILT
FINAL LAYOUT

FTMA NEW ZEALAND

For valley/saddle truss fixing unless stated otherwise use a pair of wire dogs at 900mm centres for up to and including a very high wind zone.
Or a pair of CT200's at 900mm centres for extra high wind zone.
This fixing is to meet the minimum requirements as per NZS3604.

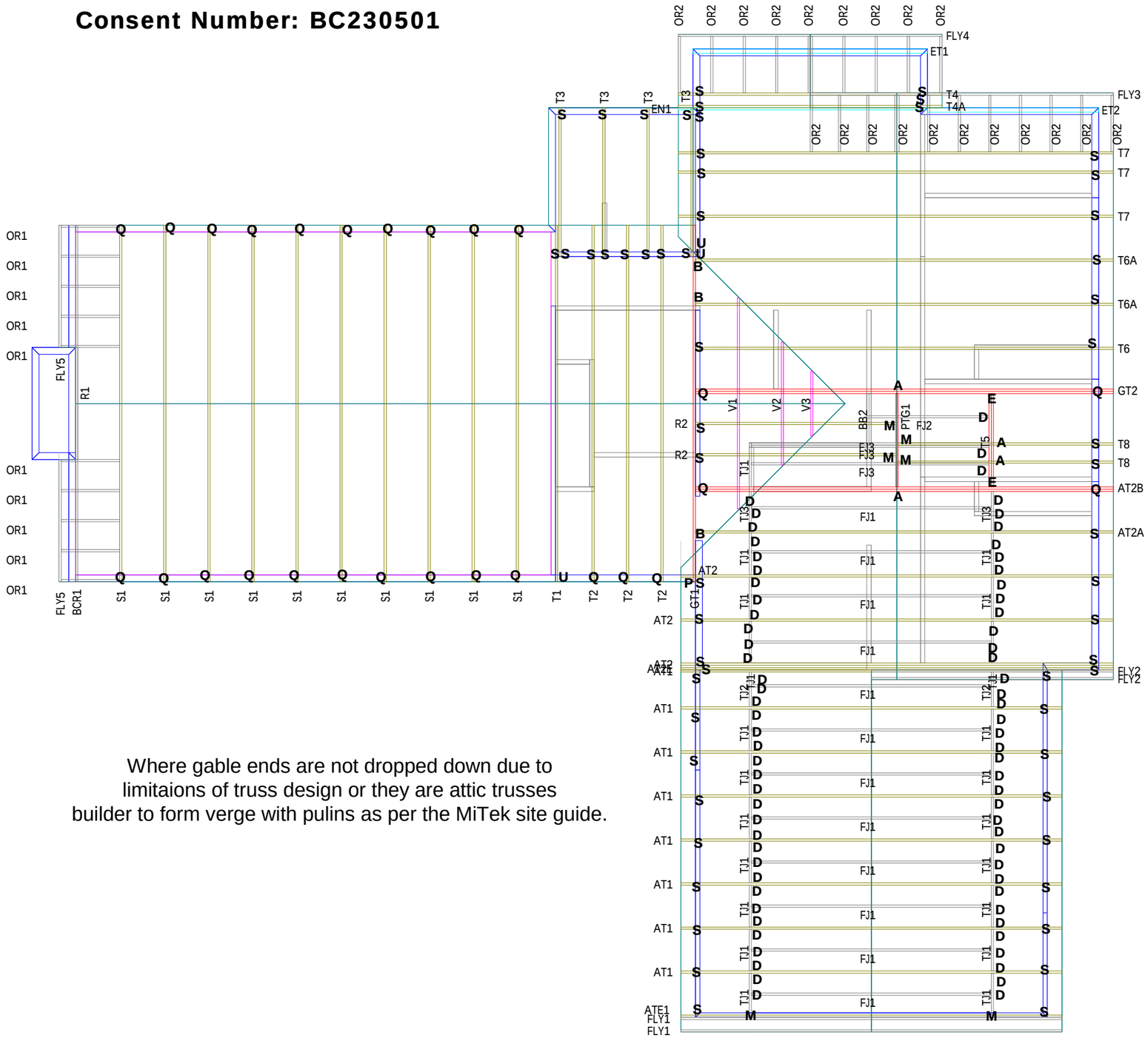
AS BUILT TRUSS bc230501

CARTERS

Your Building Partner

RECEIVED 01/12/2023

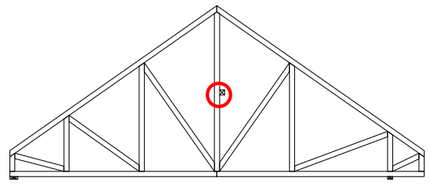
Consent Number: BC230501



Where gable ends are not dropped down due to limitaions of truss design or they are attic trusses builder to form verge with pulins as per the MiTek site guide.

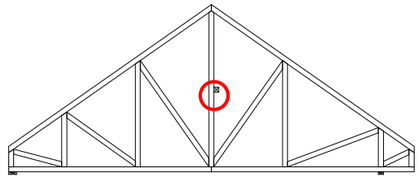
Builder to install web bracing at the mid points of webs where highlighted by the red circles for the trusses noted below.

T1



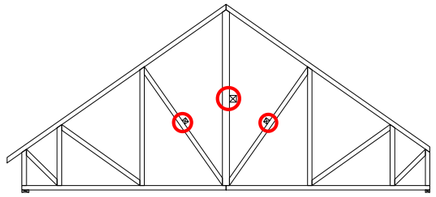
1NO

T2



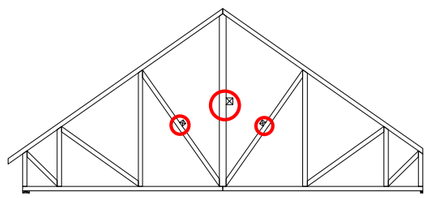
3NO

T6



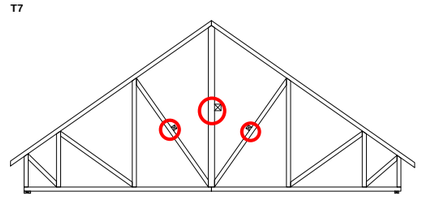
1NO

T6A



2NO

T7



3NO

If a gable truss requires a windbeam brace, the type of MiTek brace will be noted as such on the layout. The truss fixings can be substituted for other fixings of the same or greater capacity. All verge framing to be fixed according to the MiTek On-Site Guide if not covered by NZS3604. If bottom chord restraints are 35mm Metal battens, then they must be fixed with either two nails or screws. If the metal battens are fixed with a single nail or screw then 90x45mm bottom chords restraints will be required at 1800mm centres.

Any roof loads as stated on this layout over 16kN uplift are outside the scope of NZS3604, and the architect / draughtsperson is responsible for the design to transfer the loads to the ground.

All Loads shown on this page regarding the truss fixings are characteristic loads

CARTERS
Carters National Office
0800 Carters

JOB No **387008M2**

Client: Barry Walsh
Job: 71 Davis Rd
Site: 71 Davis Rd
Cust

Pitch: 8 & 35deg
Roof Type: Longrun
Overhang: 300mm
Wind Area: High
Roof Snow: 0.490kPa
Ceiling Restraint Centres: 600mm

Trusses and rafters at 900mm max centres unless stated otherwise. This layout is to be read in conjunction with the Architectural plans.

DRAWN Brent Yellowlees | 29 Nov,2023

FIXINGS

A = 47x90 Joist Hanger
B = 47x120 Joist Hanger
C = CT200 (pair)
D = 47x190 Joist Hanger
E = 95x165 Joist Hanger
F = SH-140 Split Hanger
G = SH-180 Split Hanger
H = SH-220 Split Hanger
J = 2x6kN Strap (12kN Total)
K = 6kN Strap
L = Multigrip (single)
M = Multigrips (pair)
N = Nailon Plate (240x110x1)
P = 16kN Pack
Q = 9kN Pack
S = CPC 40 Single Cleat
T = CPC 40 Short (pair)
U = CPC 80 Single Cleat
V = 16kN Uplift

Unless otherwise indicated, all specified truss fixings are to use L/Lok product nail fasteners or Type 17 - 14g Hex Head Screws (as per the MiTek On-Site Guide)

All truss to frame fixings require 2 additional 2/90x3.15dia skew nails.

All truss fixings not indicated as above must have 2 wire dogs for cross joints and 2/90x3.15dia nails for butt joins.

Fixings shown are for fixing trusses to the top plate. Any other point load uplift fixings down through the framing stud to top plate, stud to bottom plate, bottom plate to floor remain the responsibility of the architect / draughtsman.

Truss Layout

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.

AS BUILT
FINAL LAYOUT

FTMA NEW ZEALAND

ASBUILT TRUSS bc230501

Consent Number: BC230501

CARTERS

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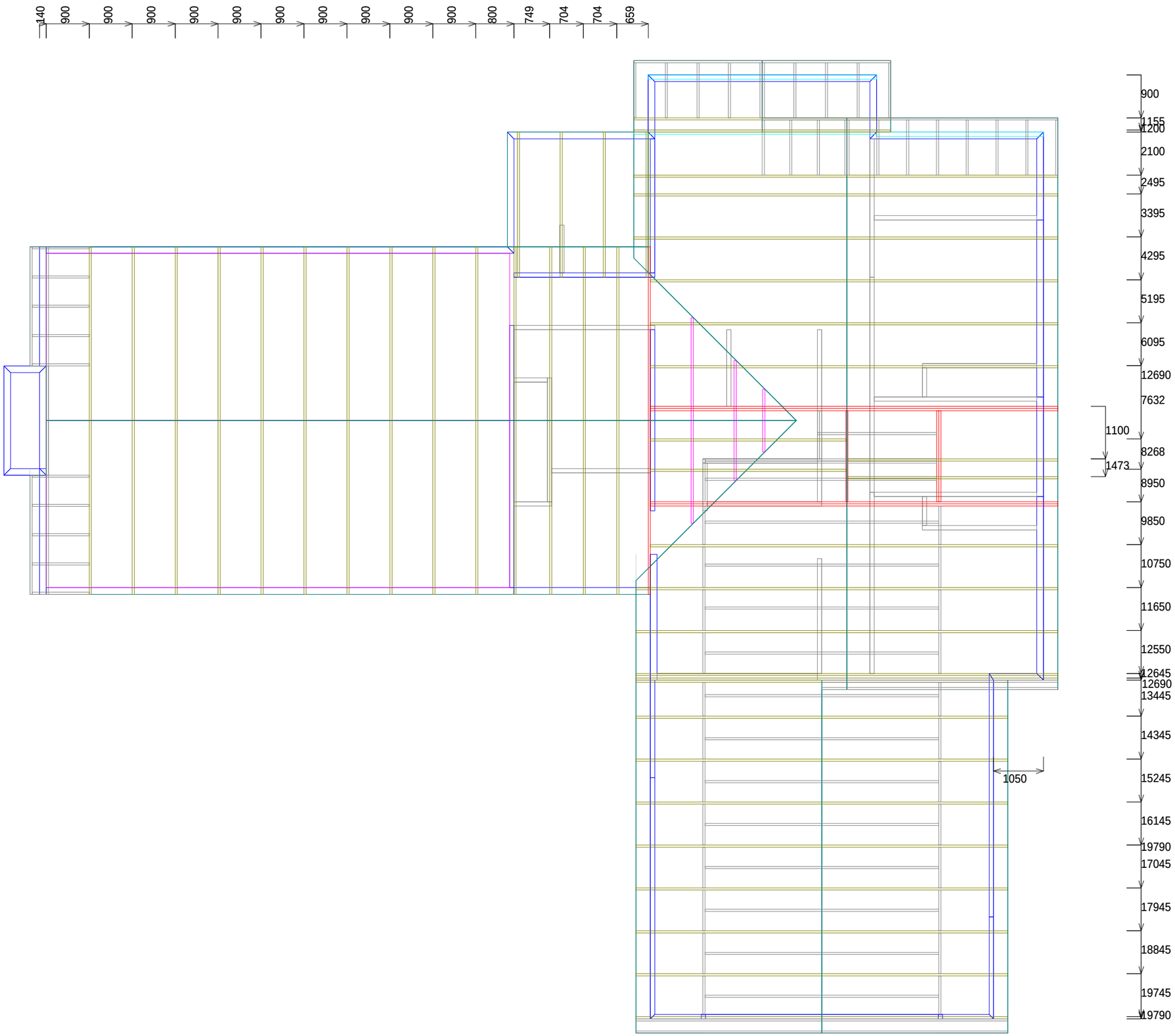
RECEIVED 01/12/2023



CARTERS
Carters National Office
0800 Carters

JOB No **387008M2**

Client: Barry Walsh
Job: 71 Davis Rd
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Roof Type: Longrun
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Wind Area: High
Roof Snow: 0.490kPa
Ceiling Restraint Centres:600mm

Trusses and rafters at900mm max centres unless stated otherwise. This layout is to be read in conjunction with the Architectural plans.

DRAWN Brent Yellowlees | 29 Nov,2023

Dn kN | Up kN — Ultimate Limit State Loads

Notification of point loaded lintels or point loads on internal walls where the downward load is higher than 8kN (85mm raft type slab) or 10kN (100mm standard slab), or the upward load is greater than 10kN.

No allowance for any loading within the truss space has been allowed for including storage unless specifical stated.

If no loads are shown, no thickening is required.

Coloured Lines Indicate Left Hand Side of Truss

Truss Dimensions

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.

As Built Final Layout

FTMA NEW ZEALAND

ASBUILT TRUSS bc230501

CARTERS Your Building Partner

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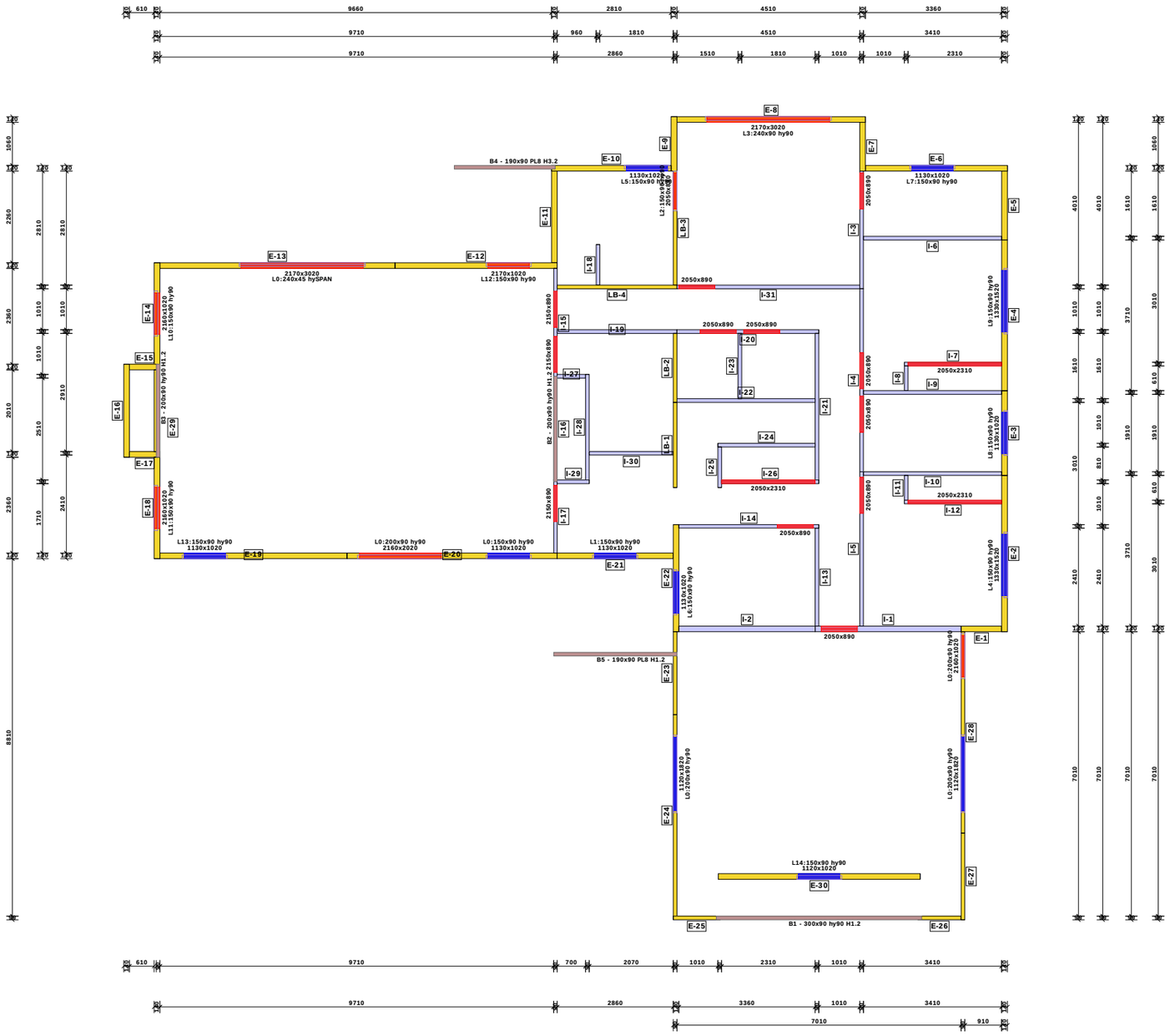
BC230501



MiTek SAPPHIRE™ Every Facet an Advantage.

Drawn:	Brent Yellowlees
Date:	30/11/2023

Job No: **387008M2**
Customer: Barry Walsh
Job Name: 71 Davis Road
Address: 71 DAVIS ROAD
Cust, Waimakariri District

Level 1 Frames

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.

The lintels have been sized using one of the following:

The MiTek SAPPHIRE Component Design Software.

hy90, hyONE and hySPAN lintels have been sized using the designIT for houses - New Zealand series 6 software.

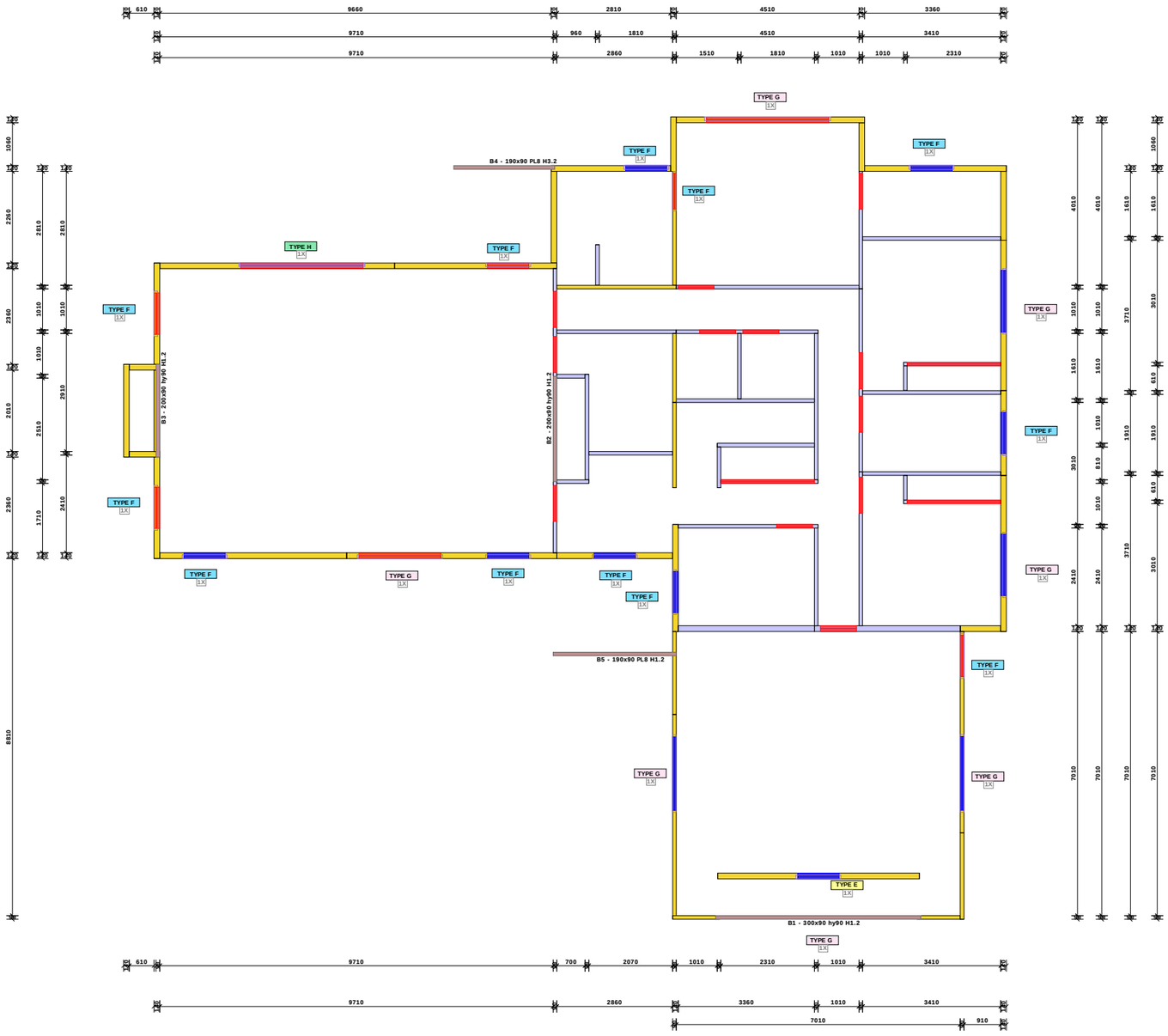
GANGLAM and FLITCH BEAMS have been sized using the MiTek Beam Program V1.10 June 2011.

Unless otherwise stated the timber grade for all lintels is SG8. Lintels not shown are to be selected as per NZS3604: 2011 or designed by an engineer as required.

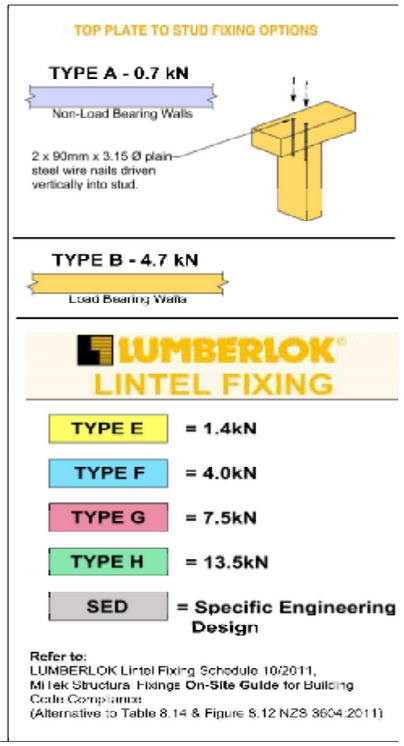
RECEIVED 01/12/2023

As Built Final Layout

BC230501



Lintel and Stud to Top Pale fixing details are included with the reports



If Barrier Ply or Rab Board is used and nailed in accordance with it's Installation Guide, it replaces the need for the Stud to Top Plate Fixings Type B

MiTek SAPPHIRE™ Every Facet an Advantage.

Drawn:	Brent Yellowlees
Date:	**30/11/2023**

Job No: **387008M2**
Customer: Barry Walsh
Job Name: 71 Davis Road
Address: 71 DAVIS ROAD
Cust, Waimakariri District

Level 1 Frames

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AS BUILT and BUILDABLE CONSENT DETAILS PAGE

FTMA NEW ZEALAND

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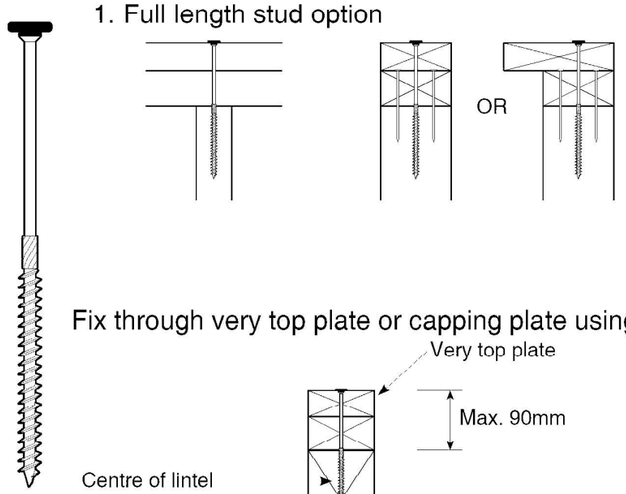
STUD-LOK SL170 - Blue Head

Fix through very top plate or capping plate

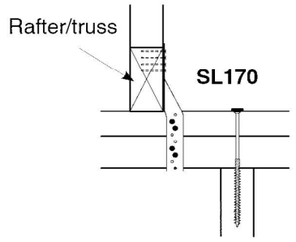
1. Full length stud option



OR

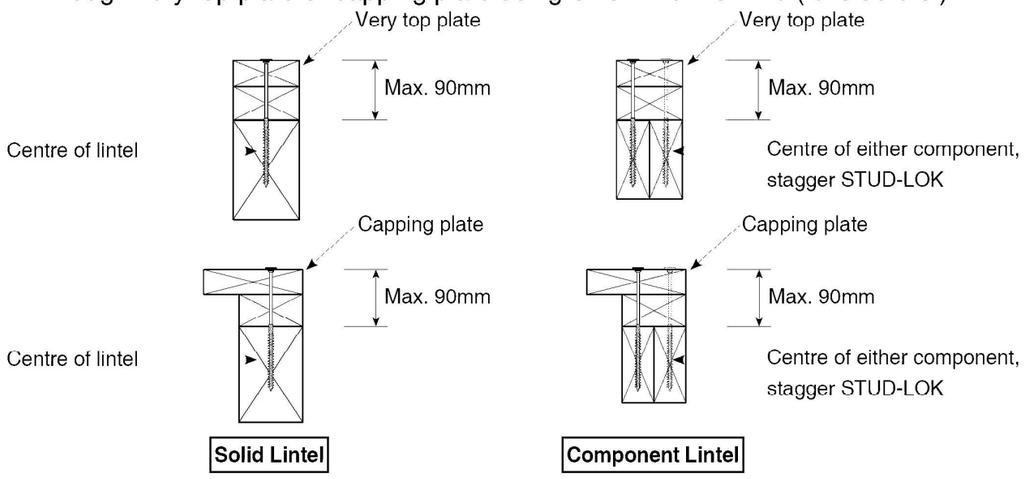
Max. 90mm

Rafter/truss can be fixed to either top plates



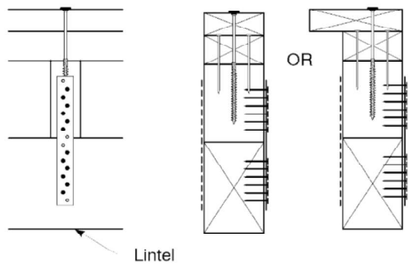
Single SL170
plus 2/ 90mm x 3.15 dia. nails

Fix through very top plate or capping plate using STUD-LOK SL170 (@ stud crs.)



Fix through very top plate or capping plate

Jack stud option



Single SL170
plus 2/ 90mm x 3.15 dia. nails

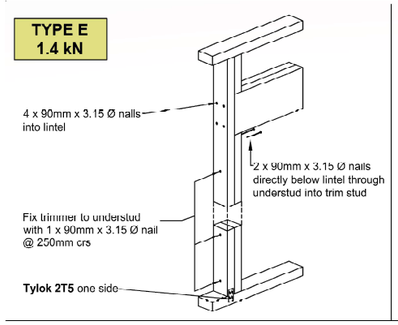
Max. 90mm

Jack Stud
Min. 80mm

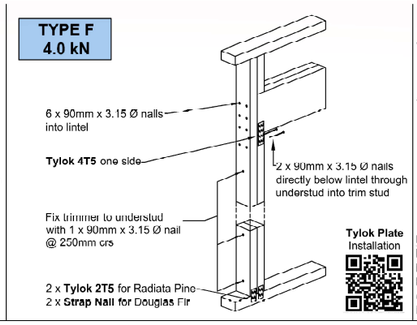
Note: Connect jack stud to lintel with LUMBERLOK® Sheet Brace Strap 200mm on one side with 6 x LUMBERLOK® Product Nails 30mm x 3.15 dia. each end, **OR** a pair of Tylok 6T5 (one each side)

LINTEL FIXING OPTIONS

TYPE E 1.4 kN



TYPE F 4.0 kN

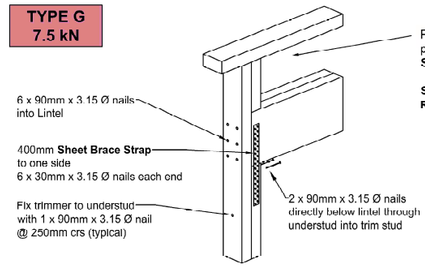


NOTES:

- For fixing of jack studs to lintel and top plate, refer to **Stud to Top Plate Fixing Schedule**
- **Stud numbers indicative only. Refer to Table 8.5 NZS 3604:2011**

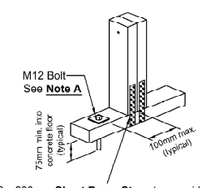
Refer to:
LUMBERLOK Lintel Fixing Schedule 10/2011, MiTek Structural Fixings **On-Site Guide** for Building Code Compliance (Alternative to Table 8.14 & Figure 8.12 NZS 3604:2011)

TYPE G 7.5 kN

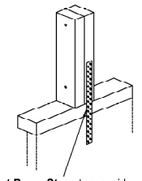


Note A:
M12 proprietary concrete fixing bolt with 50x50x3mm square washer
or
M12 x 150mm coach screw with 50x50x3mm square washer into timber joist/bearer

OR

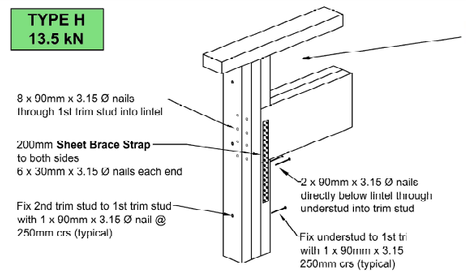


2 x 200mm **Sheet Brace Strap** to one side.
Each Strap to have 3 x 30mm x 3.15 Ø nails into stud & 3 x 30mm x 3.15 Ø nails into bottom plate

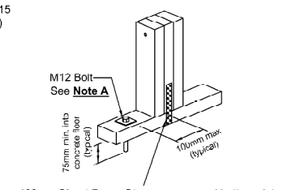


400mm **Sheet Brace Strap** to one side.
6 x 30mm x 3.15 Ø nails into stud.
3 x 30mm x 3.15 Ø nails into bottom plate.
6 x 30mm x 3.15 Ø nails into timber joist/bearer

TYPE H 13.5 kN

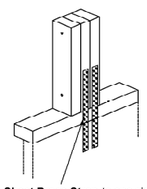


Note A:
M12 proprietary concrete fixing bolt with 50x50x3mm square washer
or
M12 x 150mm coach screw with 50x50x3mm square washer into timber joist/bearer



400mm **Sheet Brace Strap** wrap around bottom plate and up the other side.
6 x 30mm x 3.15 Ø nails into each side of stud.
3 x 30mm x 3.15 Ø nails into each side of bottom plate.

OR



2 x 400mm **Sheet Brace Strap** to one side.
6 x 30mm x 3.15 Ø nails into stud.
3 x 30mm x 3.15 Ø nails into bottom plate.
6 x 30mm x 3.15 Ø nails into timber joist/bearer

NOTE: These fixings are suggested fixings only. Alternative fixings may be used provided the indicated hold-down is achieved. For alternative fixings, refer to the "MiTek Structural Fixings On-Site Guide 2012 Edition" or "NZStandards3604-2011".