

30/30/30 & 60/60/60 BOUNDARY FIRE WALLS TECHNICAL MANUAL

Edition September 2022

(always refer to the latest manual as set out on www.loxocladding.co.nz)

Head Office: Loxo Cladding NZ Limited PO Box 10176 Christchurch

Tel 64 3 372 3343

Email info@loxocladding.co.nz

www.loxocladding.co.nz





TM Consultants Ltd.

A. 5 Burdale Street. P.O. Box 8874, Christchurch 8440, New Zealand

P. 03 348 6066 F. 03 348 6065 E. info@tmco.co.nz

23 March 2018

File No.: 150619

Loxo Cladding Systems Ltd PO Box 10176 CHRISTCHURCH

Attention: Marcus Stufkens (m.stufkens@loxocladding.co.nz)

RE: LOXO FIRE RATED BOUNDARY WALL SYSTEMS

Dear Marcus,

We are writing to confirm that TM Consultants Ltd has conducted a post fire structural stability assessment for the Loxo Fire Rated Garage Boundary Walls.

This assessment has found that the Loxo fire rated walls described in TM Consultants Ltd Producer Statement Design, Issue A dated 23 March 2018 are capable of resisting an imposed 0.5kPa face loading for load perpendicular to the face of the wall acting toward and away from the boundary.

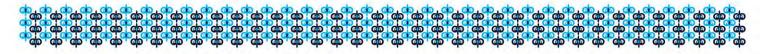
This letter does not address the durability or fire resistance rating requirements of the New Zealand Building Code. TMCO reserves the right at any time to amend or withdraw this letter in the light of new knowledge.

If there are any questions please do not hesitate to contact me.

Yours sincerely,

Matthew Blyth CPEng # 237435

TM CONSULTANTS LIMITED





TM Consultants Ltd.

A. 5 Burdale Street. P.O. Box 8874, Christchurch 8440, New Zealand

P. 03 348 6066 F. 03 348 6065 E. info@tmco.co.nz

PRODUCER STATEMENT - DESIGN (ISSUE A)

File No. 150619

ISSUED BY: TM CONSULTANTS LIMITED

DESIGN ENGINEER: MATTHEW B BLYTH

TO: LOXO CLADDING SYSTEMS LIMITED

TO BE SUPPLIED TO: LOCAL BCA OR TA

IN RESPECT OF: FIRE RATED GARAGE BOUNDARY WALL WITH OVERHANG AND FIRE RATED BOUNDARY WALL WITH REBATE

IN SLAB

AT: VARIOUS LOCATIONS

TM CONSULTANTS LIMITED has been engaged by **LOXO CLADDING SYSTEMS LIMITED** to provide **STRUCTURAL ENGINEERING** services in respect of the requirements of Clause **B1** of the Building Code 2004 for:

☐ All☑ Part only as specified above

of the proposed building work. The design carried out by us has been prepared in accordance with

☑ Compliance Documents issued by Ministry of Business, Innovation & Employment **B1/VM1** and **B1/VM4** of the approved documents

☐ Alternative solution as per the attached schedule

The proposed building work covered by this Producer Statement is described on Loxo Cladding Systems Ltd's drawings titled Fire Rated Garage Boundary Wall, dated 20/03/2018 and numbered Sheets F02 rev D, F03 rev D, F04 rev D, F05 rev B, F06 rev A, F17 rev C, F18 rev C, F19 rev C and F20 rev C together with the specification and other documents set out in the schedule attached to this statement.

On behalf of TM Consultants Ltd, and subject to:

i. All proprietary products meeting their performance specification requirements.

I believe on reasonable grounds that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the building code. and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation: $\square CM1$, $\square CM2$, $\square CM3$, $\square CM4$, $\square CM5$,

This Producer Statement - Design is valid for 1 year only from the date of issue.

I, Matthew B Blyth am CPEng 237435. I am a Member of IPENZ and hold the following qualifications BE(Civil), CMEngNZ(Structural), CPEng, IntPE(NZ), APEC Engineer.

TM Consultants Ltd is a member of ACENZ.

SIGNED BY......ON BEHALF OF TM Consultants Ltd

DATE: 23 March 2018

Original To: Stufkens & Chambers Architects Ltd (via email:mstufkens@scarchitects.co.nz)

TM Consultants Ltd in issuing this statement holds a current policy of Professional Indemnity Insurance no less than \$200,000.

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to TM Consultants Ltd only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of \$200,000.

Construction monitoring site visits required are to be carried out by the local territorial authority.

027 491 5349 john@engenuity.co.nz www.engenuity.co.nz

31 August 2022 Job No: 18013001

Loxo Cladding NZ Limited Attn Marcus Stufkens

Via email: m.stufkens@loxocladding.co.nz

RE: Loxo 30/30/30 Fire Rated Boundary Wall Systems

Dear Marcus,

Following a review of the testing and assessments completed by Warrington Australia Pty Ltd (Report 38259000 R6.3 and Summary 38259000 SOA6.3) and specific discussions with Hans Gerlich (Technical Manager, Building Systems, Winstone Wallboards Ltd), Engenuity Consulting Engineers Limited conclude that the Loxo Boundary Wall Systems detailed in drawings 'Fire Rated Garage Boundary Wall', sheets F02-F04, revision D, dated 08.04.18 and sheets F17-F20, revision D, dated 19.06.18 will provide a 30/30/30 fire resistance rating in accordance with AS 1530.4:2014

No unrated penetrations are permitted through the GIB or Loxo linings. Where penetrations are required, these shall be fire stopped using an appropriate passive fire stopping medium installed strictly in accordance with the manufacturers requirements for the product used.

Note that this standard detail is not appropriate alone for typical 'side by side' or 'one above another' type terrace housing, and that additional specific fire rated junction/ cavity details are necessary to ensure fire separation between units are achieved.

Take note that this letter does not address the durability or post fire structural stability requirements of the New Zealand Building Code.

Engenuity Consulting Engineers Limited reserves the right at any time to amend or withdraw this letter in the light of new knowledge. In lieu of the above, this letter is valid up to 28 February 2026.

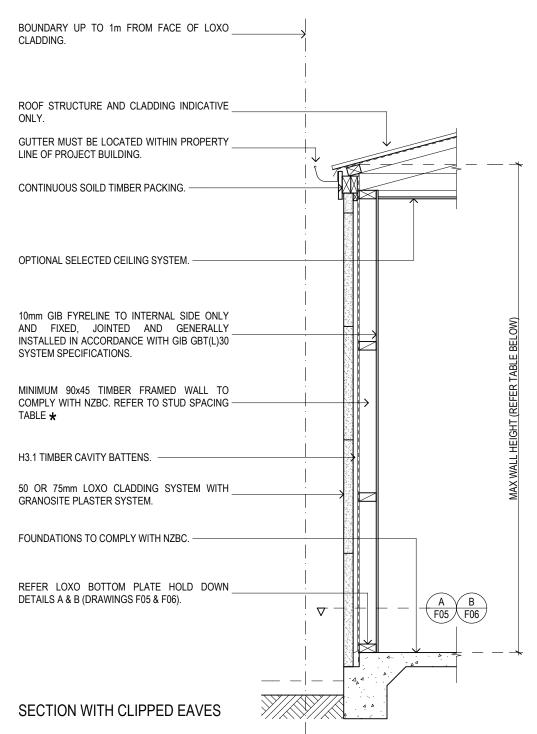
If there are any questions, please do not hesitate to contact me.

Yours sincerely.

Engenuity Consulting Engineers Limited

John Collie

Director, Chartered Fire Engineer



FIRE RATED 30/30/30 - NON VENTED SYSTEM.

NOTES:

SECTIONS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS.

* REFER TO ALLOWABLE STUD SIZE

* REFER TO ALLOWABLE STUD SIZE AND CENTRES FOR THE APPLICABLE MAXIMUM WALL HEIGHT.

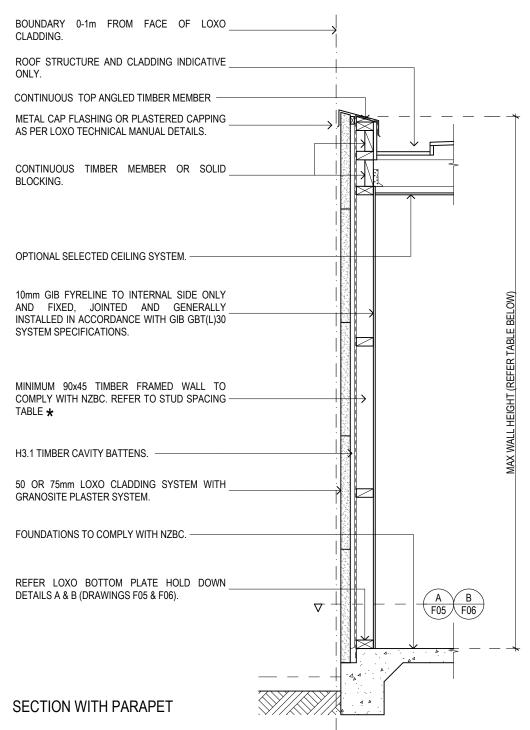
STUD TABLE		
STUD(MSG8, mm)	CENTRES(mm)	MAX. WALL HT.(mm)
90x45	300	3010
90x45	400	2600
90x45	450	2460
140x45	600	3000



TITLE: FIRE RATED GARAGE BOUNDARY WALL

REVISION: D

DATE: 08.04.2018



FIRE RATED 30/30/30 - NON VENTED SYSTEM.

NOTES:

SECTIONS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS.

* REFER TO ALLOWABLE STUD SIZE AND CENTRES FOR THE APPLICABLE MAXIMUM WALL HEIGHT.

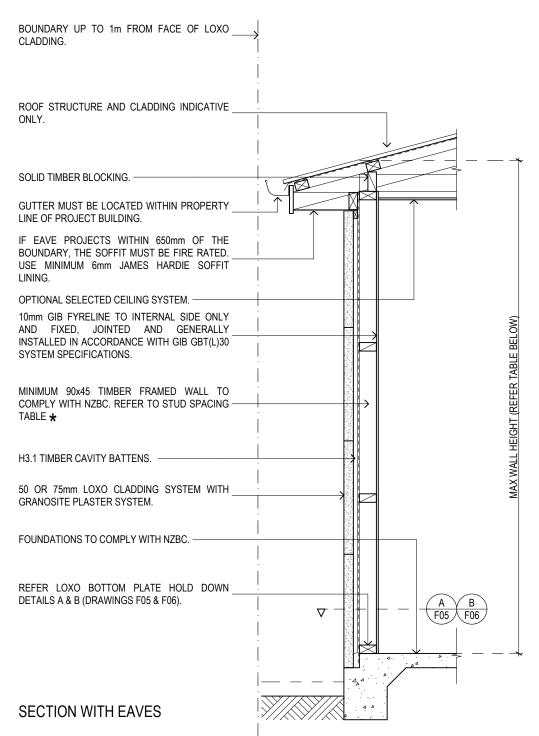
STUD TABLE		
STUD(MSG8, mm)	CENTRES(mm)	MAX. WALL HT.(mm)
90x45	300	3010
90x45	400	2600
90x45	450	2460
140x45	600	3000



TITLE: FIRE RATED GARAGE BOUNDARY WALL

REVISION: D

DATE: 08.04.2018



FIRE RATED 30/30/30 - NON VENTED SYSTEM.

NOTES:

SECTIONS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS.

* REFER TO ALLOWABLE STUD SIZE AND CENTRES FOR THE APPLICABLE MAXIMUM WALL HEIGHT.

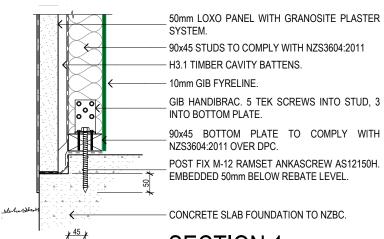
STUD TABLE		
STUD(MSG8, mm)	CENTRES(mm)	MAX. WALL HT.(mm)
90x45	300	3010
90x45	400	2600
90x45	450	2460
140x45	600	3000



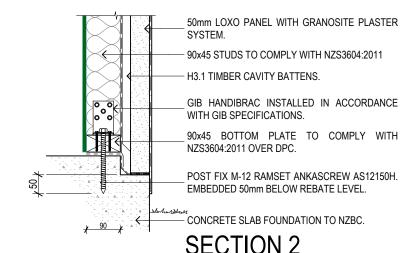
TITLE: FIRE RATED GARAGE BOUNDARY WALL

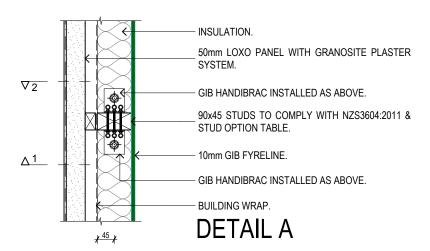
REVISION: D

DATE: 08.04.2018



SECTION 1





LOXO BOTTOM PLATE HOLD DOWN DETAILS

FOR 90mm WIDE STUDS AND BOTTOM PLATES FIRE RATED 30/30/30

NOTES:

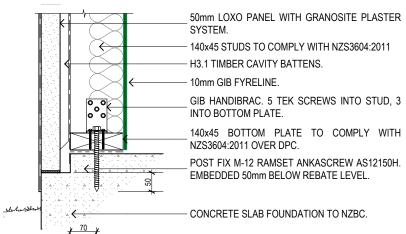
DETAILS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS. DETAILS FOR 90mm STUDS AND BOTTOM PLATES ONLY. FOR STUDS AND BOTTOM PLATE WIDTHS OF 140mm, BOTTOM PLATE HOLD DOWNS ARE TO BE IN ACCORDANCE WITH DETAIL B

LT LOXO
CLADDING SYSTEMS

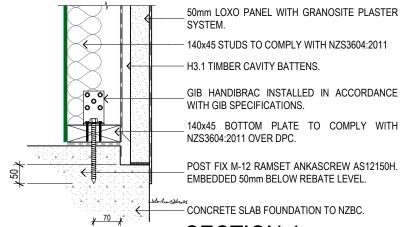
TITLE: FIRE RATED GARAGE BOUNDARY WALL DETAILS

REVISION: B

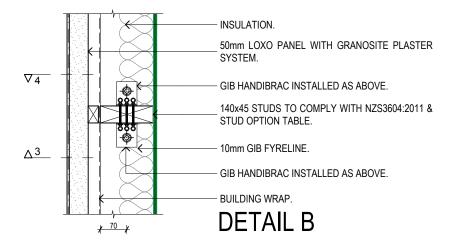
DATE: 08.04.2018



SECTION 3



SECTION 4



LOXO BOTTOM PLATE HOLD DOWN DETAILS

FOR 140mm WIDE STUDS AND BOTTOM PLATES FIRE RATED 30/30/30

NOTES:

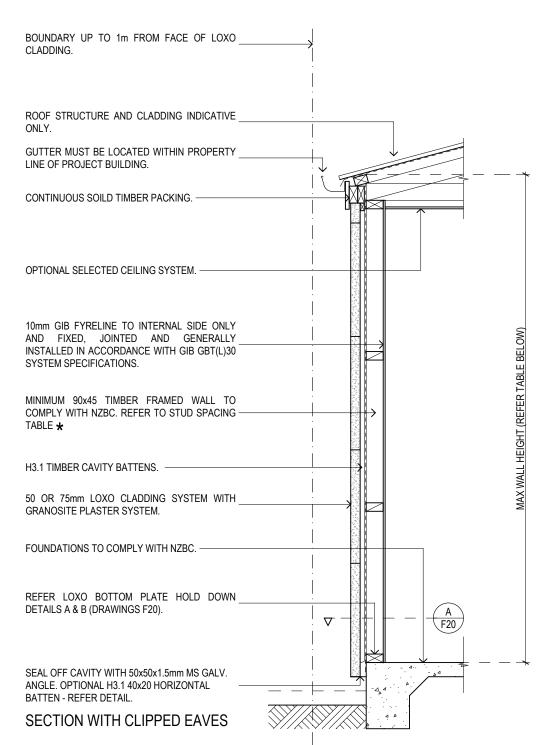
DETAILS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS. DETAILS FOR 140mm STUDS AND BOTTOM PLATES ONLY. FOR STUDS AND BOTTOM PLATE WIDTHS OF 90mm, BOTTOM PLATE HOLD DOWNS ARE TO BE IN ACCORDANCE WITH DETAIL A



TITLE: FIRE RATED GARAGE BOUNDARY WALL DETAILS

REVISION: A

DATE: 08.04.2018



FIRE RATED 30/30/30 - NO VENTS

NOTES:

SECTIONS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTRATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS.

* REFER TO ALLOWABLE STUD SIZE AND CENTRES FOR THE APPLICABLE MAXIMUM WALL HEIGHT.

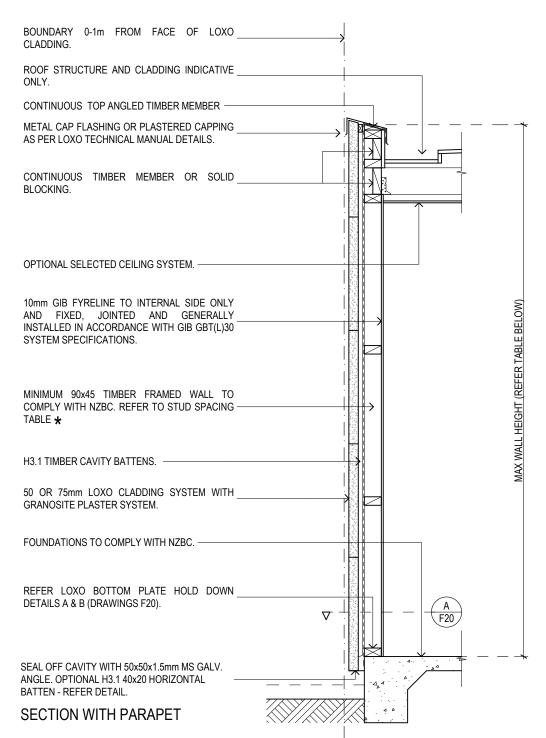
STUD TABLE		
STUD(MSG8, mm)	CENTRES(mm)	MAX. WALL HT.(mm)
90x45	300	2970
90x45	400	2570
90x45	450	2420
140x45	600	3040



TITLE: FIRE RATED GARAGE BOUNDARY WALL - OVERHANGING PANEL

REVISION: D

DATE: 19.06.2018



FIRE RATED 30/30/30 - NO VENTS

NOTES:

SECTIONS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTRATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS.

* REFER TO ALLOWABLE STUD SIZE AND CENTRES FOR THE APPLICABLE MAXIMUM WALL HEIGHT.

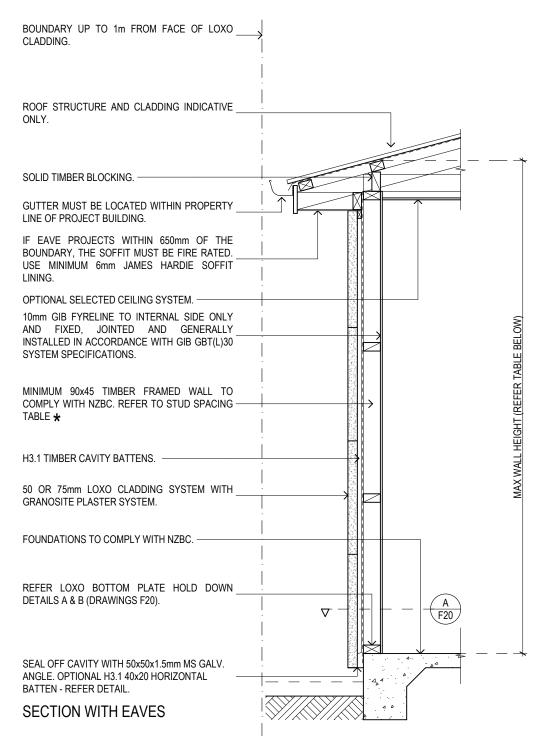
STUD TABLE		
STUD(MSG8, mm)	CENTRES(mm)	MAX. WALL HT.(mm)
90x45	300	2970
90x45	400	2570
90x45	450	2420
140x45	600	3040



TITLE: FIRE RATED GARAGE BOUNDARY WALL - OVERHANGING PANEL

REVISION: D

DATE: 19.06.2018



FIRE RATED 30/30/30 - NO VENTS

NOTES:

SECTIONS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTRATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS.

* REFER TO ALLOWABLE STUD SIZE AND CENTRES FOR THE APPLICABLE MAXIMUM WALL HEIGHT.

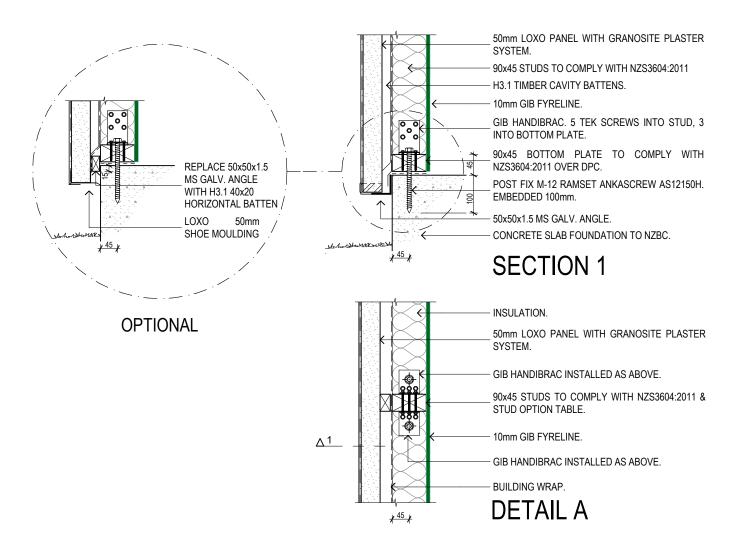
STUD TABLE		
STUD(MSG8, mm)	CENTRES(mm)	MAX. WALL HT.(mm)
90x45	300	2970
90x45	400	2570
90x45	450	2420
140x45	600	3040



TITLE: FIRE RATED GARAGE BOUNDARY WALL - OVERHANGING PANEL

REVISION: D

DATE: 19.06.2018



LOXO BOTTOM PLATE HOLD DOWN DETAILS

FOR 90mm WIDE STUDS AND BOTTOM PLATES FIRE RATED 30/30/30

NOTES:

DETAILS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTRATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS. DETAILS FOR 90mm STUDS AND BOTTOM PLATES ONLY. FOR STUDS AND BOTTOM PLATE WIDTHS OF 140mm, BOTTOM PLATE HOLD DOWNS ARE TO BE LOCATED AT 70mm SLAB EDGE DISTANCE.



TITLE: FIRE RATED GARAGE BOUNDARY WALL DETAILS - OVERHANGING PANEL

REVISION: D

DATE: 19.06.2018

027 491 5349 john@engenuity.co.nz www.engenuity.co.nz

31 August 2022 Job No: 18013001

Loxo Cladding NZ Limited Attn Marcus Stufkens

Via email: m.stufkens@loxocladding.co.nz

RE: Loxo 60/60/60 Fire Rated Boundary Wall Systems

Dear Marcus,

Following a review of the testing and assessments completed by Warrington Australia Pty Ltd (Report 38259000 R6.3 and Summary 38259000 SOA6.3) and specific discussions with Hans Gerlich (Technical Manager, Building Systems, Winstone Wallboards Ltd), Engenuity Consulting Engineers Limited conclude that the Loxo Boundary Wall Systems detailed in drawings 'Fire Rated Garage Boundary Wall', sheets F21-F29, dated 19.06.18 will provide a 60/60/60 fire resistance rating in accordance with AS 1530.4.

No unrated penetrations are permitted through the GIB or Loxo linings. Where penetrations are required, these shall be fire stopped using an appropriate passive fire stopping medium installed strictly in accordance with the manufacturers requirements for the product used.

Note that this standard detail is not appropriate alone for typical 'side by side' or 'one above another' type terrace housing, and that additional specific fire rated junction/ cavity details are necessary to ensure fire separation between units are achieved.

Take note that this letter does not address the durability or post fire structural stability requirements of the New Zealand Building Code.

Engenuity Consulting Engineers Limited reserves the right at any time to amend or withdraw this letter in the light of new knowledge. In lieu of the above, this letter is valid up to 28 February 2026.

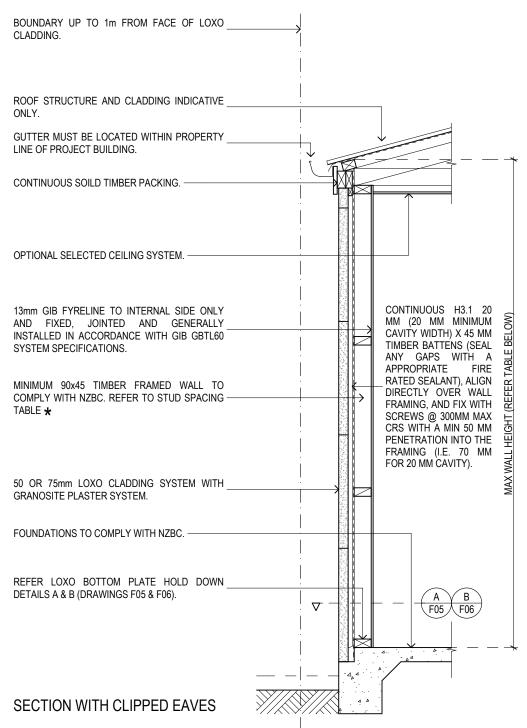
If there are any questions, please do not hesitate to contact me.

Yours sincerely.

Engenuity Consulting Engineers Limited

John Collie

Director, Chartered Fire Engineer



FIRE RATED 60/60/60 - NON VENTED SYSTEM.

NOTES:

SECTIONS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS.

* REFER TO ALLOWABLE STUD SIZE AND CENTRES FOR THE APPLICABLE MAXIMUM WALL HEIGHT.

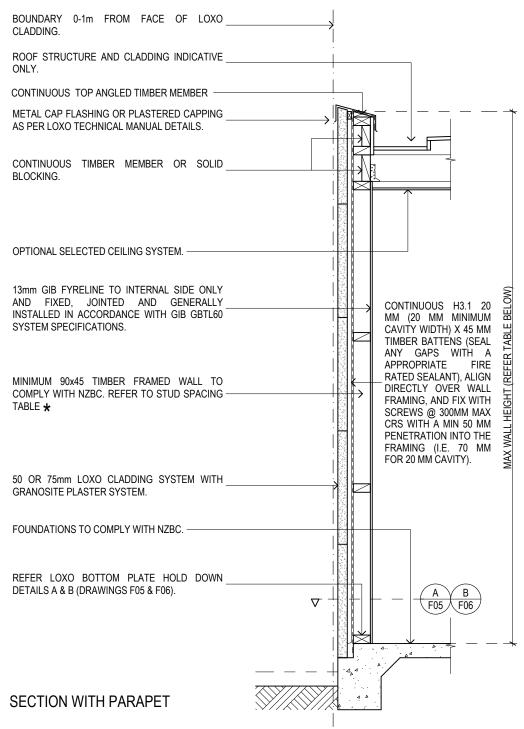
STUD TABLE		
STUD(MSG8, mm)	CENTRES(mm)	MAX. WALL HT.(mm)
90x45	300	3010
90x45	400	2600
90x45	450	2460
140x45	600	3000



TITLE: 60/60/60 FIRE RATED BOUNDARY WALL

REVISION:

DATE: 19.06.2018



FIRE RATED 60/60/60 - NON VENTED SYSTEM.

NOTES:

SECTIONS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS.

* REFER TO ALLOWABLE STUD SIZE AND CENTRES FOR THE APPLICABLE MAXIMUM WALL HEIGHT.

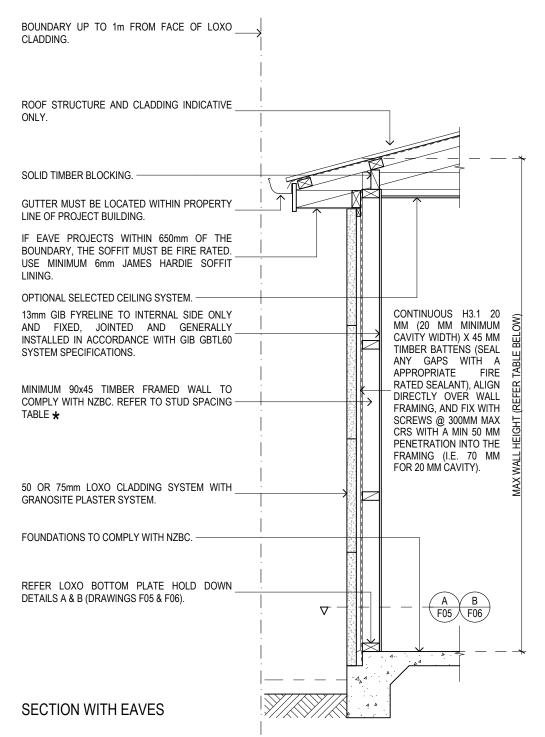
STUD TABLE		
STUD(MSG8, mm)	CENTRES(mm)	MAX. WALL HT.(mm)
90x45	300	3010
90x45	400	2600
90x45	450	2460
140x45	600	3000



TITLE: 60/60/60 FIRE RATED BOUNDARY WALL

REVISION:

DATE: 19.06.2018



FIRE RATED 60/60/60 - NON VENTED SYSTEM.

NOTES:

SECTIONS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS.

* REFER TO ALLOWABLE STUD SIZE AND CENTRES FOR THE APPLICABLE MAXIMUM WALL HEIGHT.

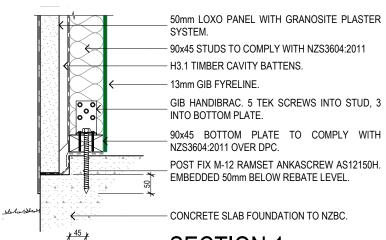
STUD TABLE		
STUD(MSG8, mm)	CENTRES(mm)	MAX. WALL HT.(mm)
90x45	300	3010
90x45	400	2600
90x45	450	2460
140x45	600	3000



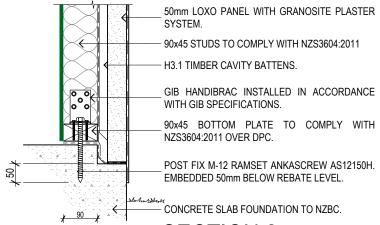
TITLE: 60/60/60 FIRE RATED BOUNDARY WALL

REVISION:

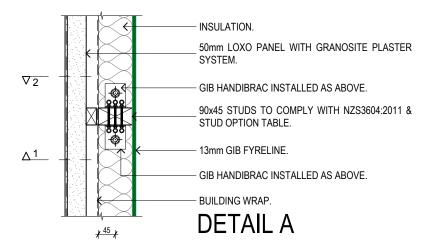
DATE: 19.06.2018



SECTION 1



SECTION 2



LOXO BOTTOM PLATE HOLD DOWN DETAILS

FOR 90mm WIDE STUDS AND BOTTOM PLATES FIRE RATED 60/60/60

NOTES:

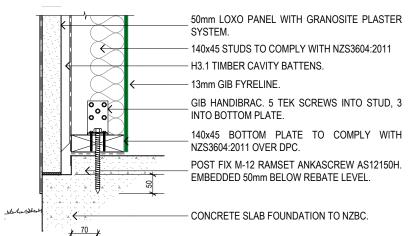
DETAILS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS. DETAILS FOR 90mm STUDS AND BOTTOM PLATES ONLY. FOR STUDS AND BOTTOM PLATE WIDTHS OF 140mm, BOTTOM PLATE HOLD DOWNS ARE TO BE IN ACCORDANCE WITH DETAIL B

LT LOXO
CLADDING SYSTEMS

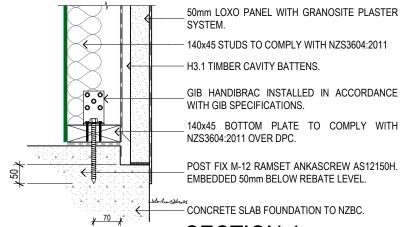
TITLE: 60/60/60 FIRE RATED BOUNDARY WALL DETAILS

REVISION:

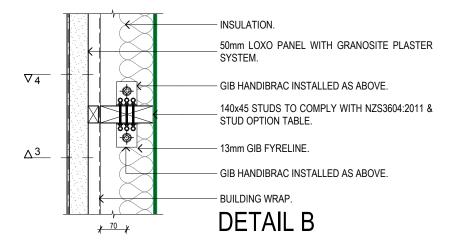
DATE: 19.06.2018 DRAWING NUMBER: F24



SECTION 3



SECTION 4



LOXO BOTTOM PLATE HOLD DOWN DETAILS

FOR 140mm WIDE STUDS AND BOTTOM PLATES FIRE RATED 60/60/60

NOTES:

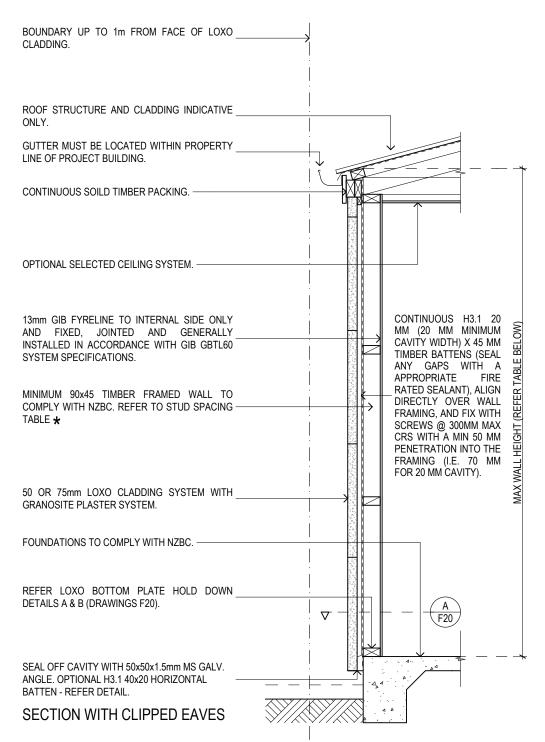
DETAILS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS. DETAILS FOR 140mm STUDS AND BOTTOM PLATES ONLY. FOR STUDS AND BOTTOM PLATE WIDTHS OF 90mm, BOTTOM PLATE HOLD DOWNS ARE TO BE IN ACCORDANCE WITH DETAIL A



TITLE: 60/60/60 FIRE RATED BOUNDARY WALL DETAILS

REVISION:

DATE: 19.06.2018



FIRE RATED 60/60/60 - NO VENTS

NOTES:

SECTIONS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTRATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS.

* REFER TO ALLOWABLE STUD SIZE AND CENTRES FOR THE APPLICABLE MAXIMUM WALL HEIGHT.

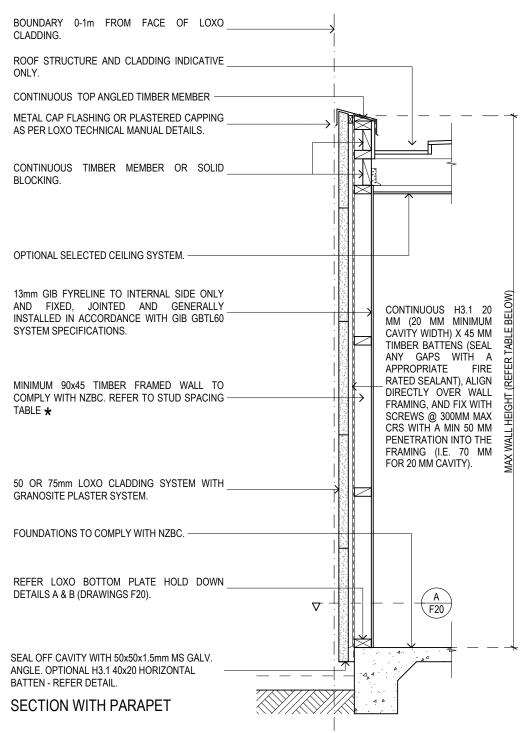
STUD TABLE		
STUD(MSG8, mm)	CENTRES(mm)	MAX. WALL HT.(mm)
90x45	300	2970
90x45	400	2570
90x45	450	2420
140x45	600	3040



TITLE: 60/60/60 FIRE RATED BOUNDARY WALL - OVERHANGING PANEL

REVISION:

DATE: 19.06.2018



FIRE RATED 60/60/60 - NO VENTS

NOTES:

SECTIONS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTRATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS.

* REFER TO ALLOWABLE STUD SIZE AND CENTRES FOR THE APPLICABLE MAXIMUM WALL HEIGHT.

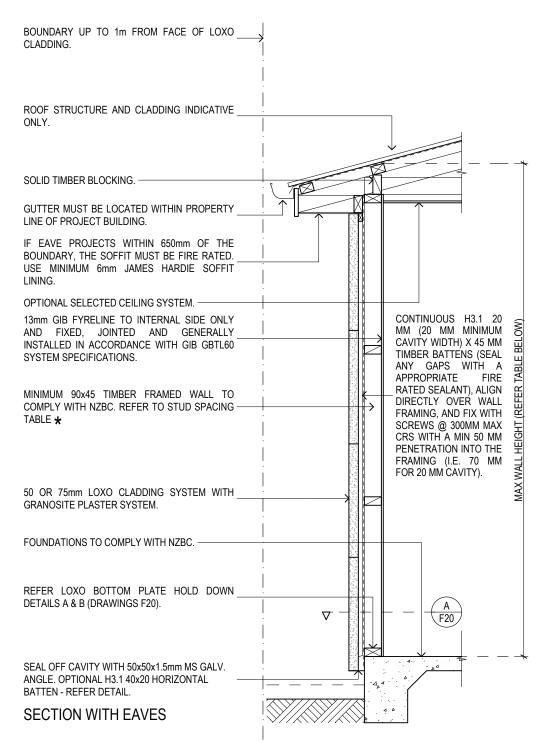
STUD TABLE		
STUD(MSG8, mm)	CENTRES(mm)	MAX. WALL HT.(mm)
90x45	300	2970
90x45	400	2570
90x45	450	2420
140x45	600	3040



TITLE: 60/60/60 FIRE RATED BOUNDARY WALL - OVERHANGING PANEL

REVISION:

DATE: 19.06.2018



FIRE RATED 60/60/60 - NO VENTS

NOTES:

SECTIONS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTRATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS.

* REFER TO ALLOWABLE STUD SIZE AND CENTRES FOR THE APPLICABLE MAXIMUM WALL HEIGHT.

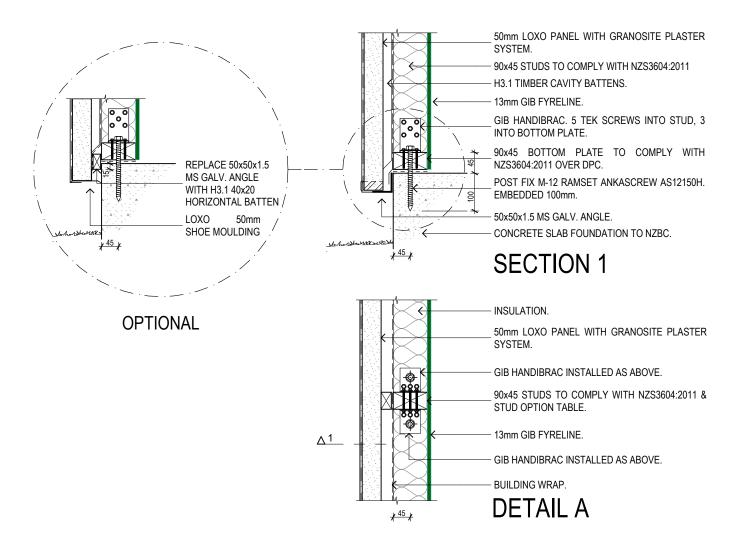
STUD TABLE		
STUD(MSG8, mm)	CENTRES(mm)	MAX. WALL HT.(mm)
90x45	300	2970
90x45	400	2570
90x45	450	2420
140x45	600	3040



TITLE: 60/60/60 FIRE RATED BOUNDARY WALL - OVERHANGING PANEL

REVISION:

DATE: 19.06.2018



LOXO BOTTOM PLATE HOLD DOWN DETAILS

FOR 90mm WIDE STUDS AND BOTTOM PLATES FIRE RATED 60/60/60

NOTES:

DETAILS INDICATIVE AND INTENDED FOR THE FIRE RATED SYSTEM ILLUSTRATION ONLY. REFER TO LOXO TECHNICAL MANUAL IN ALL CASES FOR SPECIFIC JUNCTION DETAILS. DETAILS FOR 90mm STUDS AND BOTTOM PLATES ONLY. FOR STUDS AND BOTTOM PLATE WIDTHS OF 140mm, BOTTOM PLATE HOLD DOWNS ARE TO BE LOCATED AT 70mm SLAB EDGE DISTANCE.

LT LOXO CLADDING SYSTEMS

TITLE: 60/60/60 FIRE RATED BOUNDARY WALL DETAILS - OVERHANGING PANEL

REVISION:

DATE: 19.06.2018