

BARRIER PS1

Toa Panel
(Fall Restraint)



ISSUED FOR
CONSENT

PANEL SUMMARY							
THE NEW ZEALAND BUILDING CODE (AS/NZS 1170:2000) OPERATES DIFFERENT OCCUPANCY TYPES AND SPECIFIES THE LOAD RATING THAT THE SYSTEM MUST BE CAPABLE OF WITHSTANDING. THE SYSTEM COMPONENTS OF THE PANEL, POST, FININGS AND THE STRUCTURE THAT THE BALUSTRADE IS BEING ATTACHED TO, THESE ARE SUMMARISED IN THE BELOW TABLE (REFER TO THE DRAWINGS ON PAGES 502-509 FOR MORE DETAILS (AS/NZS 1170:2000, TABLE 3.3 OCCUPANCY REFERENCE))							
OCCUPANCY TYPE	SPECIFIC USE	HORIZONTAL DESIGN LOAD	MINIMUM OVERALL BARRIER HEIGHT	HORIZONTAL RAILS	VERTICAL RODS	POST	POST CENTERS (MAX)
A - DOMESTICS	POOL FENCE ONLY	0.35kN/m / 0.6kN	1.2m	50x25 RHS x 3.5 6063-T6 (ALU)	199H5 x 12 6063-T6 (ALU)	659H5 x 5.0 6063-T6 (ALU)	2.4m
A - DOMESTIC	ALL AREAS SERVING ONE DWELLING BUT EXCLUDING TERRACES, E.G. WALKWAYS, STAIRS AND LANDINGS, & AREAS ADJACENT TO A DECK OR TERRACE	0.35kN/m / 0.6kN	1.0m 0.9m FOR STAIRS ONLY	50x25 RHS x 3.5 6063-T6 (ALU)	199H5 x 12 6063-T6 (ALU)	659H5 x 5.0 6063-T6 (ALU)	2.4m
A - DOMESTIC	EXTERNAL BALCONY, DECKS, TERRACES, RETAINING WALLS & MULTIDWELLING APPLICATION, INCLUDING OPEN PUBLIC SPACES	0.75kN/m / 0.6kN	1.0m SINGLE DWELLING 1.1m MULTI DWELLING	50x25 RHS x 3.5 6063-T6 (ALU)	199H5 x 12 6063-T6 (ALU)	659H5 x 5.0 6063-T6 (ALU)	2.4m
B & E - OFFICES & WORK AREAS INCLUDING STORAGE	ACCESS WALKWAYS, STAIRS & LANDINGS	0.35kN/m / 0.6kN	1.1m	50x25 RHS x 3.5 6063-T6 (ALU)	199H5 x 12 6063-T6 (ALU)	659H5 x 5.0 6063-T6 (ALU)	2.4m
B & E - OFFICES & WORK AREAS INCLUDING STORAGE	AREAS INCLUDING BALCONIES, DECKS & TERRACES NOT SUSCEPTIBLE TO OVERCROWDING	0.75kN/m / 0.6kN	1.1m	50x25 RHS x 3.5 6063-T6 (ALU)	199H5 x 12 6063-T6 (ALU)	659H5 x 5.0 6063-T6 (ALU)	2.4m
C - AREAS WITHOUT OBSTACLES INCLUDING AREAS WHERE PEOPLE MIGHT CONGREGATE	AREAS INCLUDING WALKWAYS, STAIRS & TERRACES SUSCEPTIBLE TO OVERCROWDING INCLUDING PARKS AND RESERVES.	0.75kN/m / 0.6kN	1.1m	50x25 RHS x 3.5 6063-T6 (ALU)	199H5 x 12 6063-T6 (ALU)	659H5 x 5.0 6063-T6 (ALU)	2.4m

FASTENERS AND CORROSION ZONES		
NEW ZEALAND'S COASTAL CLIMATE MEANS THAT ATTENTION MUST BE PAID TO THE PROXIMITY TO SALT WATER WHEN CHOOSING WHAT FASTENERS TO USE. THE TABLE BELOW IS A GUIDE TO WHERE HOT DIP GALVANISED FASTENERS CAN BE USED, WHILE IT MAY SEEM COUNTER INTUITIVE THAT SHELTERED AREAS ARE MORE SUSCEPTIBLE TO CORROSION, IT IS BECAUSE REGULAR EXPOSURE TO RAINFALL CLEANS THE FASTENERS AND PROLONGS THEIR LIFE.		
ENVIRONMENT	CORROSION CLASSIFICATION	EXPOSED / SHELTERED
WITHIN 500mm OF BEACHING SURF OR 50mm OF CALM SALT WATER	C4	ALL FININGS 304 STAINLESS STEEL ALL FININGS 304 STAINLESS STEEL
WITHIN 500mm OF SALT WATER OR WITHIN 500mm OF CALM SALT WATER ELSEWHERE	C3	ALL FININGS HOT DIP GALVANISED OR 304 STAINLESS STEEL ALL FININGS 304 STAINLESS STEEL
MORE THAN 500mm OF SALT WATER OR WITHIN 500mm OF CALM SALT WATER AND MORE THAN 500mm OF SALT WATER ELSEWHERE	C2	ALL FININGS HOT DIP GALVANISED GALVANISED OR 304 STAINLESS STEEL ALL FININGS HOT DIP GALVANISED OR 304 STAINLESS STEEL
NOTE 1: WHILE HOT DIP GALVANISED FININGS ARE ACCEPTABLE IN INLAND LOCATIONS IT IS SAFER TO USE 304 STAINLESS STEEL.		
NOTE 2: THE TABLE ABOVE IS ONLY A GUIDE, PLEASE REFER TO ENCS 340-3016, FIGURES 1 TO 4 FOR SPECIFIC CORROSIONITY MAPS FOR FURTHER GUIDANCE.		

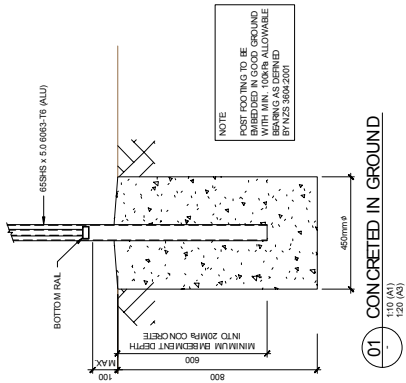
INSPECTION AND MAINTENANCE SCHEDULE	
THIS SCHEDULE OF ONGOING MAINTENANCE OF STRUCTURAL ELEMENTS SHALL BE INCLUDED WITH THE OSM MANUALS AND PROVIDED TO THE OWNER/BODY CORPORATE AND BUILDING MANAGERS.	
TIMEFRAME	INSPECTION / MAINTENANCE
1/2 YEARLY	WASH DOWN ALL EXPOSED METALWORK INCLUDING PANELS, POSTS AND FININGS
10 YEARLY	CHECK PANELS, POSTS AND FININGS FOR SIGNS OF CORROSION. REPAIR PROTECTIVE COATINGS OR REPLACE AS REQUIRED.
25 YEARLY	INSPECT ALL EXPOSED. EXTERNAL REINFORCED CONCRETE FOR SIGNS OF SPALLING AND THE RESULTING EXPOSED REINFORCING FOR CORROSION. REPAIR OR REPLACE AS REQUIRED.
FOLLOWING SEISMIC SHAKING - SLS EVENT	
INSPECT AND REPAIR AS PER THE 1025 YEARLY REQUIREMENTS.	

STANDARD NOTES

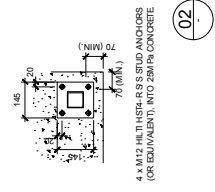
BARRIER FENCING
BARRIER TOA FIXED PANEL 1200mm - CODE - BBATPSB1200
BARRIER TOA RAKING PANEL 1200mm - CODE - BBATPSB1200

No.	Date	Drawn / Approved	Name / Position
1	27/09/23	AM	FOR CONSENT
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-
9	-	-	-
10	-	-	-

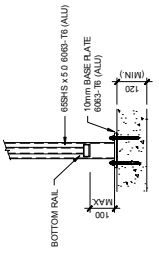
Drawing No.	669243-STR-D001
Sheet No.	01
Issue	A
A1 SCALE	NTS



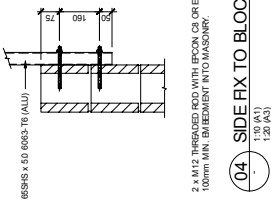
01 CONCRETED IN GROUND
1:10 (A1)
1:20 (A2)



02 TOP FIX TO CONCRETE
1:10 (A1)
1:20 (A2)

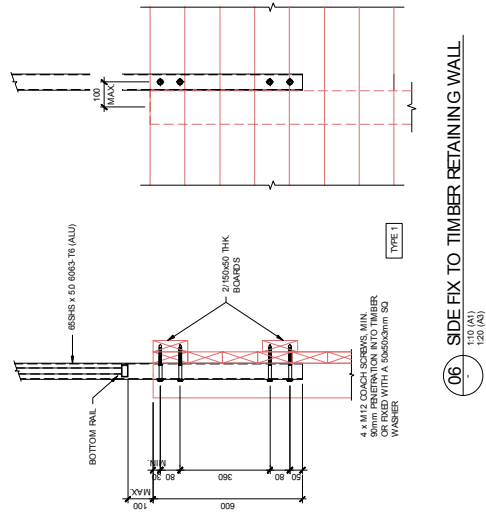


03 SIDE FIX TO CONCRETE
1:10 (A1)
1:20 (A2)

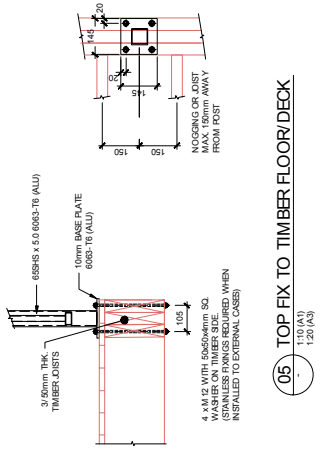


04 SIDE FIX TO BLOCK WALL
1:10 (A1)
1:20 (A2)

ISSUED FOR CONSENT



06 SIDE FIX TO TIMBER RETAINING WALL
1:10 (A1)
1:20 (A2)



05 TOP FIX TO TIMBER FLOOR/DECK
1:10 (A1)
1:20 (A2)

Drawing No.	668243-STR-D001
Sheet No.	02
Issue	A
A1 SCALE:	1:10

TYPICAL SAFETY FENCE DETAILS
RESIDENTIAL

BARRIER FENCING
BARRIER TOA FIXED PANEL - 1200mm - CODE - BBATPSB1200
BARRIER TOA RAKING PANEL - 1200mm - CODE - BBATOPSB1200

No.	Date	Drawn	Approved	Issue/Revision
A	20.11.25	WM	WM	FOR CONSENT
B	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

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association of
consulting and
engineering



PRODUCER STATEMENT – PS1 DESIGN

BUILDING CODE CLAUSE(S): [B1, B2, F4] **JOB NUMBER:** [669243]
ISSUED BY: [STRATUM CONSULTANTS LTD]
(Engineering Design Firm)
TO: [BARRIER IMPORTS LIMITED]
(Owner/Developer)
TO BE SUPPLIED TO: [LOCAL COUNCIL AUTHORITY]
(Building Consent Authority)
IN RESPECT OF: [ALUMINIUM BARRIER DESIGN_TYPE C3 OCCUPANCY LOADS (0.75KN/m UDL + 0.6kN PT LOAD)]
(Description of Building Work)
AT: [VARIOUS LOCATIONS]
(Address, Town/City)
LEGAL DESCRIPTION: [VARIOUS LOCATIONS] **N/A**

We have been engaged by the owner/developer referred to above to provide *(Extent of Engagement):*
 ENGINEERING DESIGN OF PROPOSED FENCING AS STATED IN DESIGN FEATURES REPORT
 in respect of the requirements of the Clause(s) of the Building Code specified above for Part only , as specified in the
 Schedule, of the proposed building work.

The design carried out by us has been prepared in accordance with:

- Compliance documents issued by the Ministry of Business, Innovation & Employment *(Verification method/acceptable solution)* [B1/ AS1+VM1+VM4, B2/AS1, F4/AS1] and/or;
- Alternative solution as per the attached Schedule.

The proposed building work covered by this producer statement is described on the drawings specified in the Schedule, together with the specification, and other documents set out in the Schedule.

On behalf of the Engineering Design Firm, and subject to:

- Site verification of the following design assumptions: [GROUND CONDITIONS AS NOTED IN THE DFR]
- All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that:

- the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the Schedule, will comply with the relevant provisions of the Building Code and that;
- the persons who have undertaken the design have the necessary competency to do so.

I recommend the CM 3 level of **construction monitoring**.

I, *(Name of Engineering Design Professional)* STEPHEN BOS , am:

- CPEng number [154367]
and hold the following qualifications NZCE, BE, CMEngNZ, CPEng

The Engineering Design Firm holds a current policy of Professional Indemnity Insurance no less than \$200,000
 The Engineering Design Firm is not a member of ACE New Zealand.

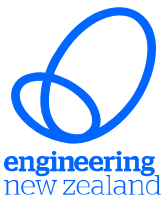
SIGNED BY *(Name of Engineering Design Professional):* STEPHEN BOS
(Signature below):

ON BEHALF OF *(Engineering Design Firm):* STRATUM CONSULTANTS LTD

Date: 03/03/2025

Note: This statement has been prepared solely for the Building Consent Authority named above and shall not be relied upon by any other person or entity. Any liability in relation to this statement accrues to the Engineering Design Firm only. As a condition of reliance on this statement, the Building Consent Authority accepts that the total maximum amount of liability of any kind arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in tort or otherwise, is limited to the sum of \$200,000.

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.



CERTIFICATE OF DESIGN WORK MEMORANDUM FROM LICENSED BUILDING PRACTITIONER

Section 30C and Section 45, Building Act 2004

The Building			
Street address	Various		
Suburb		Town/city	
Postcode		Building consent no.	
The Owner			
Name(s)	Barrier Imports Limited		
Email		Phone	
Address			

Basis for providing this memorandum

I am providing this memorandum in my role as the **specialist** designer who carried out or supervised specific Primary structure elements of restricted building work (RBW) design work as described in this memorandum. Other designers will provide memoranda covering the remaining RBW design work. Refer also to the attached PSI.

Identification of restricted building work (RBW) design work

I, **Stephen Bos** carried out or supervised the following RBW design work:

Primary structure: B1

Design work that is RBW		Description (as required) and reference to plans and specifications	Carried out or supervised
Foundations and subfloor framing	✓	Cantilevered footing to support barrier fencing	Supervised
Retaining walls	✗		Supervised
Beams	✓	Aluminum barrier fencing	Supervised
Portal	✗		Supervised
Bracing	✗		Supervised
Other (primary)	✗		Supervised

Note: SED = Elements subject to Specific Engineering Design outside of the scope of NZS3604:2011, unless otherwise noted.

Initial SJB Date 27/11/2024

Waivers and modifications

Are waivers or modifications of the Building Code required?

No

If yes, please provide details of the waivers or modifications:

Building Code clause	Waiver/modification required
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Issued by

Name	STEPHEN BOS	Design entity/company	STRATUM CONSULTANTS LTD
Chartered status	CPEng	Chartered no.	154367
Email	stephen.bos@stratumnz.co.nz	Website	
Phone (daytime)	(07) 571 4500	Phone (after hours)	
Mobile			
Postal address	PO Box 13651, Tauranga 3141		
Physical address	Level 1, Rydal House, 29 Grey Street, Tauranga 3141		

Declaration

I, Stephen Bos, LBP state that I have applied the skills and care reasonably required of a competent design professional in carrying out or supervising the RBW described in this memorandum and that based on this, I certify that the RBW described in this memorandum:

- complies with the Building Code; or
- complies with the Building Code subject to any waiver or modification of the Building Code described in this memorandum.

Signature



Date 27/11/2024



Premium Fence Solutions

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