

# PicketPanel PS1

Rev: 1.3

Issue Date: 17/02/2025

**Application** 

Engineering specifications & installation details for compliance with NZBC B1, F4 & F9

## BARRIER SPECIFICATION SELECTION GUIDE

Clause F4 'Safety from Falling' of the New Zealand Building Code requires building areas to be constructed to reduce the likelihood of accidental falls. Specifically, barriers are required where people could fall one metre or more.

Barriers need to be designed and constructed so that they are capable of providing the strength and stiffness necessary for the proposed location and occupancy type of the property which they serve. Evidence of the suitability of the barrier system for its proposed use, needs to be provided when making a building consent application. This producer statement provides the assurance that Boundaryline product specifications and installation details have been pre-approved by Chartered Professional Engineers and comply with all NZBC B1, F4, F9 requirements.

It is important that your selected barrier design is appropriate to the specific installation location and intended use. Use this guide to determine your specific barrier design and installation details.

## **Generic Producer Statement:**

This is a generic Producer Statement, issued to Terranota Ltd, which provides the assurance that the proprietary products detailed in this document have been structurally engineered to comply with the New Zealand Building Code and the building code clauses as detailed, and for the application(s) as described in this document.

The fencing components detailed in this Producer Statement are proprietary products, engineered to comply with the requirements of the stated building code clause. Of equal importance is the detail of the fixing method to ensure the correct installation of the proprietary components. To this end, most common installation applications have been illustrated with appropriate details to ensure a safe and compliant fence/balustrade.

The structure (or ground conditions) to which the proprietary components are installed is the responsibility of the installer or end user, and it is recommended that an independent engineer is engaged to confirm the compliance of the structure (or ground condition) with the New Zealand Building Code. Where relevant, and when critical to the compliance of the proprietary components, this producer statement details specific requirements of the structure (or ground conditions) as a minimum standard.

It is the installer or end user's responsibility to ensure the proprietary components are installed accurately to the detail provided. If your particular structure design or application is not covered in the details provided, then this generic producer statement cannot be applied to your installation. In this instance, please contact Boundaryline to discuss a custom-engineered solution that will meet your requirements.

# **Barrier Loading Selection:**

Where a barrier serves multiple occupancies, default to the highest loading requirement from all location scenarios. For more information, please refer to www.building.govt.nz.

Occupancy Type:	Building Code Clause:	Specific Use:	Horizontal Design Loading:	Minimum Overall Barrier Height:
A - Domestic	F9	Pool fence only.	0.33kN	1.2m
A - Domestic	F4	All areas serving one dwelling but excluding balconies, decks, and terraces. For example; walkways, stairs and landings and retaining walls, not adjacent to a deck or terrace.	0.35kN/m	1.0m 0.9m for stairs only
A - Domestic	F4	External balcony, decks, terraces, retaining walls and walkways in a multi-dwelling application, including open public spaces.	0.75kN/m	1.0m single dwelling 1.1m multi dwelling
B & E – Offices and work areas including storage	F4	Access walkways, stairs and landings.	0.35kN/m	1.1m
B & E – Offices and work areas including storage	F4	Areas including balconies, decks and terraces not susceptible to overcrowding.	0.75kN/m	1.1m
C3 – Areas without obstacles for moving people and where people may congregate	F4	Areas including walkways, stairs and landings, balconies, decks and terraces not susceptible to overcrowding, including parks and reserves.	0.75kN/m	1.1m

# Wind Zones:

There are five main Wind Zones in New Zealand: Low, Medium, High, Very High, and Extra High. All details in this Producer Statement have been engineered to Medium and High wind zone's (please see tables below). If your property falls into a higher wind zone, please contact Boundaryline to discuss a custom-engineered solution to meet your requirements.

To identify the wind zone at your site location, search for BRANZ Maps, turn on the 'Wind Regions' layer, and search your site address. If it is unclear what wind zone applies to your site, please contact your engineer to calculate the wind zone for your property.

For properties that fall into a high or very high wind zone, but are in a built-up area, it may be beneficial to engage a Professional Engineer to calculate the specific wind zone for your site, as terrain and adjacent structures can impact the wind zone applicable to your particular site. A means of determining the wind zone for a specific location is in detailed in NZS 3604:2011.

# Maximum Post centres for Picket Panel for 0.35kN/m Loading

Wind Zone		950h	1200h	1500h	1800h
Madium	Atlas	2.49m	2.49m	2.49m	2m
Medium	Juno, Opus, Rondo, Forte	2.505m	2.505m	2m	1.65m
Lliada	Atlas	2.49m	2.49m		
High	Juno, Opus, Rondo, Forte	2.505m	2.505m		
Vary High/Eytra High	Atlas	Please contact Roundarvline for a solution			a adution
Very High/Extra High	Juno, Opus, Rondo, Forte	Please CC	Please contact Boundaryline for a solution		

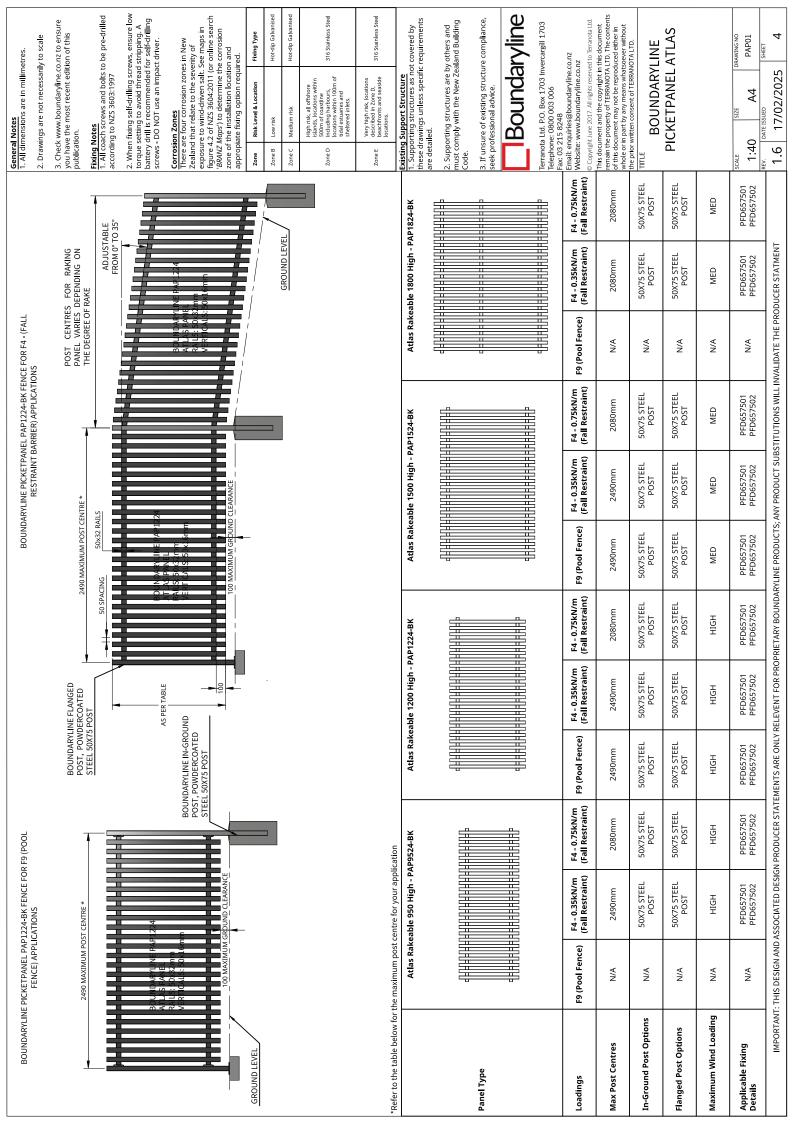
## Maximum Post centres for Picket Panel for 0.75kN/m Loading

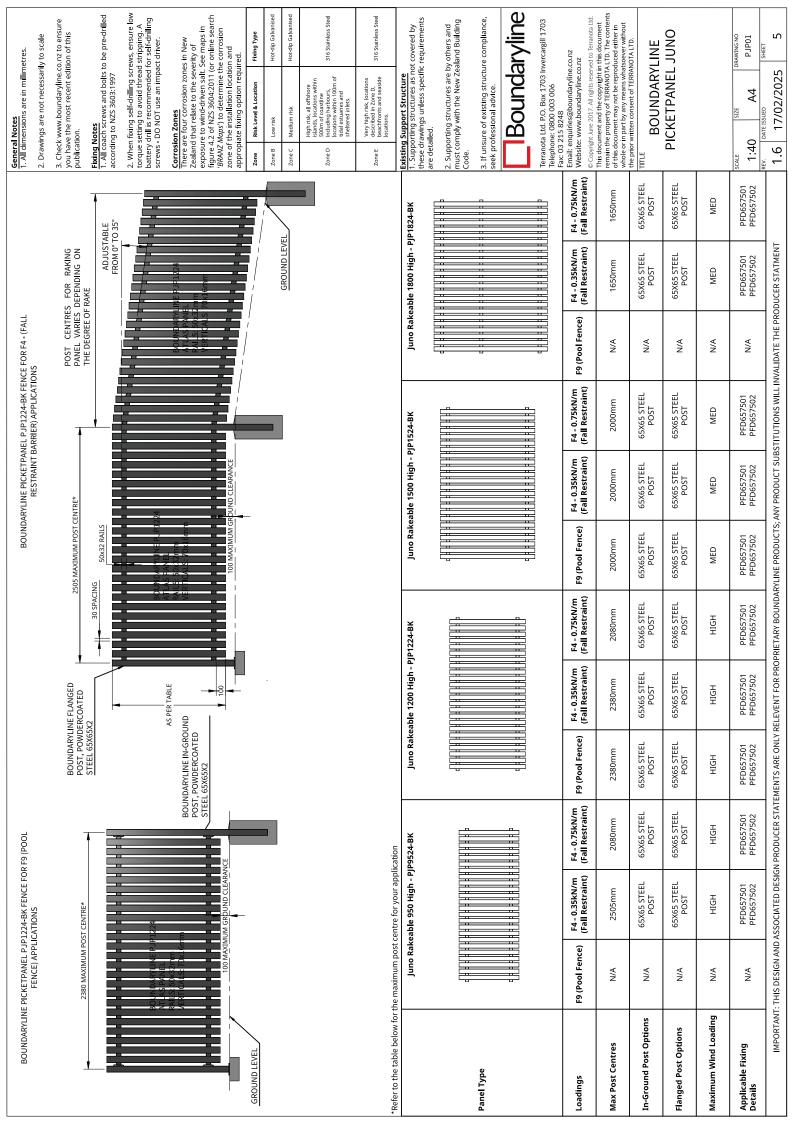
Wind Zone		950h	1200h	1500h	1800h		
Medium	Atlas	2.08m	2.08m	2.08m	2m		
Medium	Juno, Opus, Rondo, Forte	2.08m	2.08m	2m	1.65m		
Lligh	Atlas	2.08m	2.08m				
High	Juno, Opus, Rondo, Forte	2.08m	2.08m				
Vary High/Eytra High	Atlas	Please contact Roundaryline for a solution					
Very High/Extra High	Juno, Opus, Rondo, Forte	Please CC	Please contact Boundaryline for a solution				

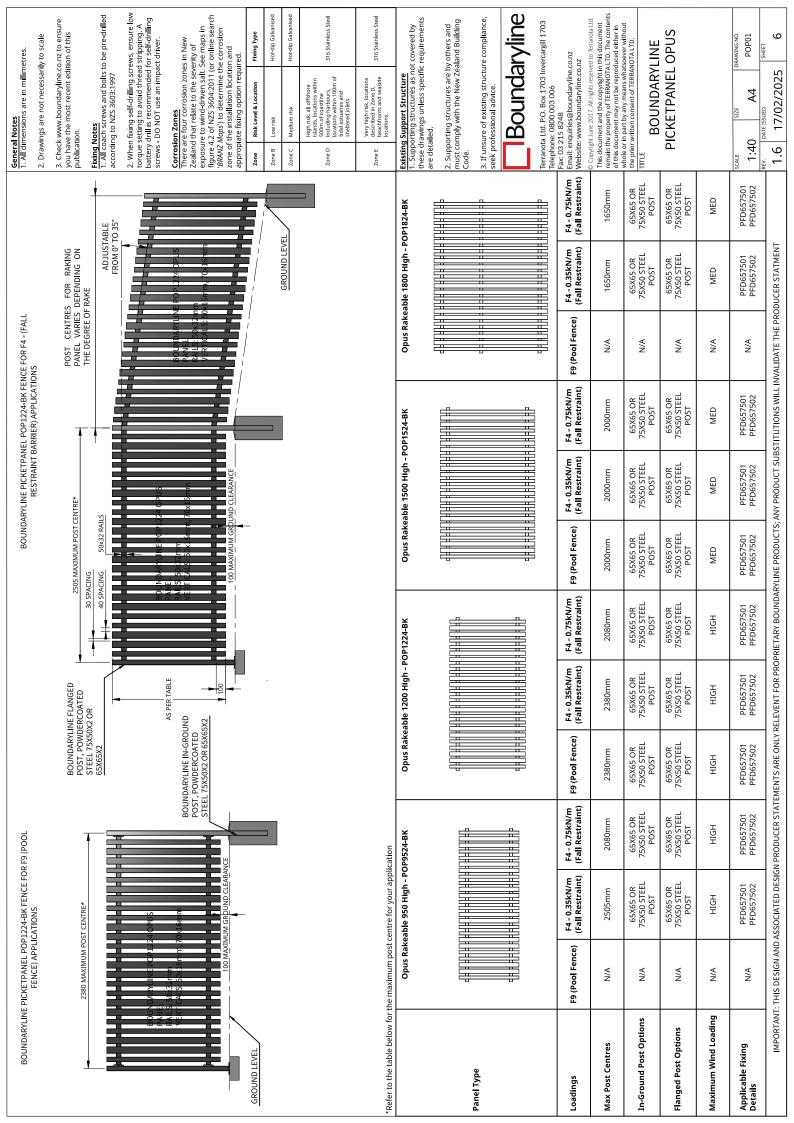
# **Fixing Types**

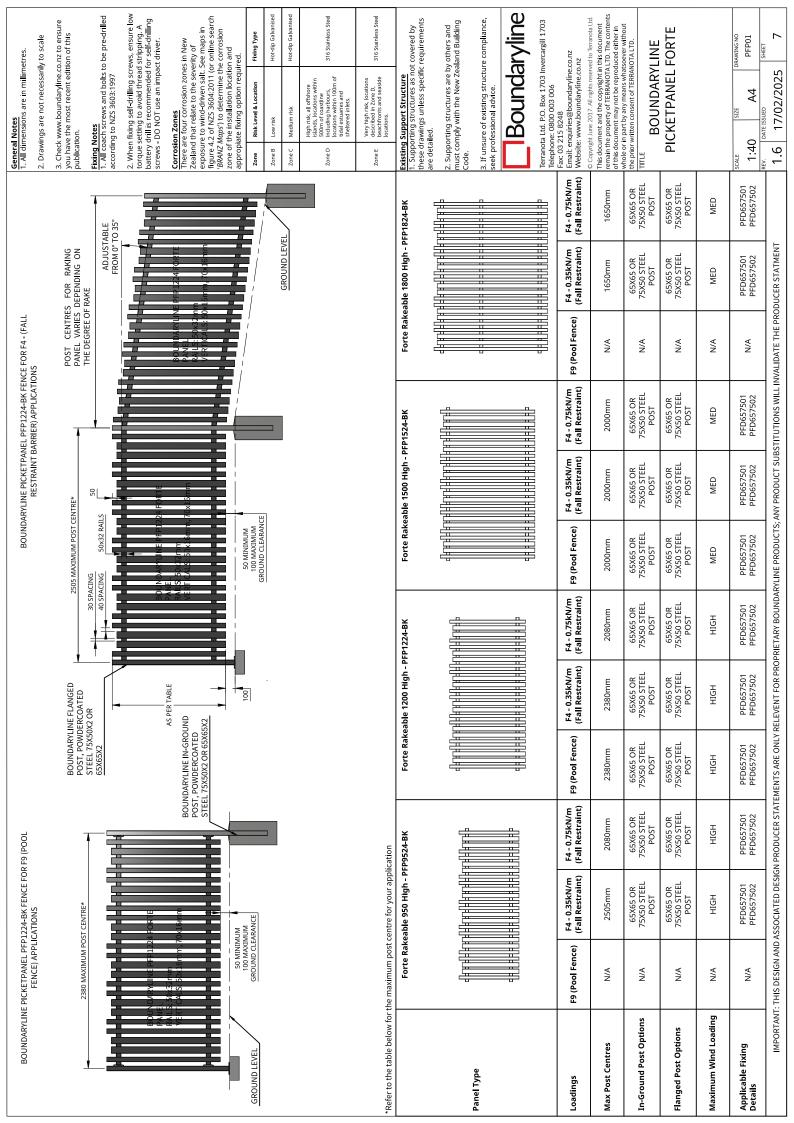
There are four corrosion zones in New Zealand that relate to the severity of exposure to wind-driven salt. To determine the corrosion zone of your installation location, please check maps in Figure 4.2 in NZS3604:2011 (or online search 'BRANZ Maps'). Use the table below to determine the appropriate fixing types required for your particular location.

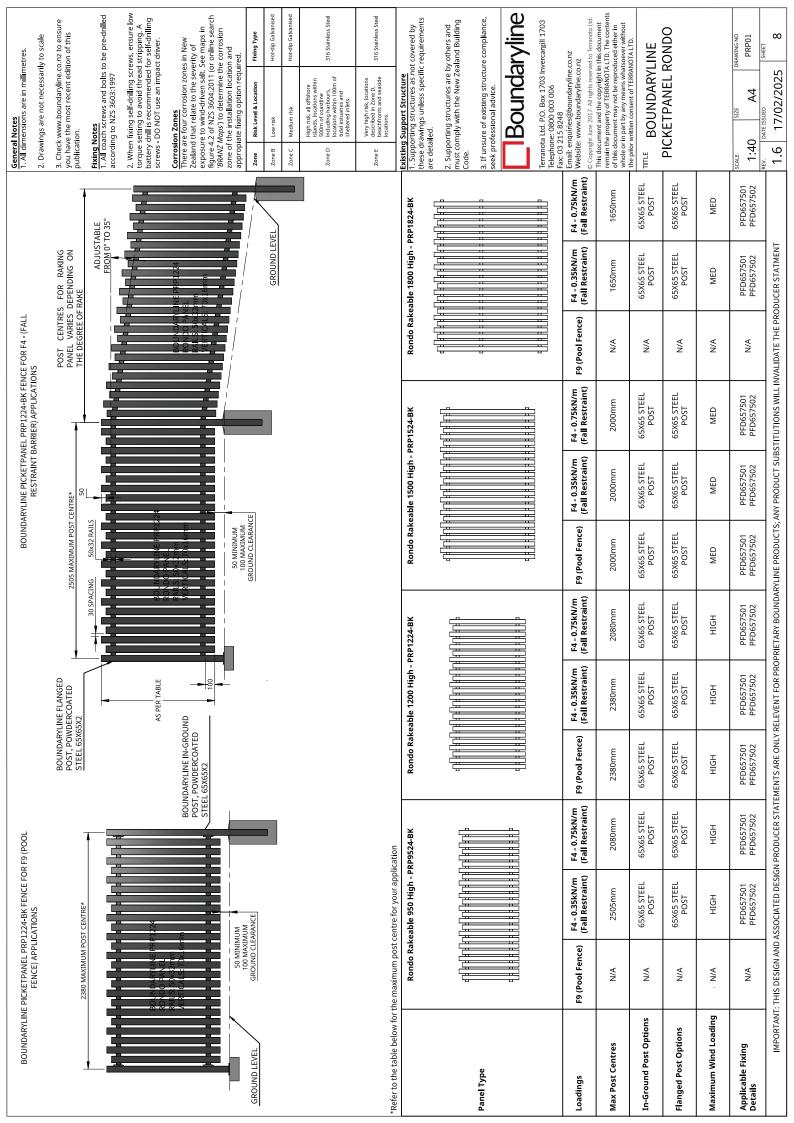
Zone	Risk Level & Location	Fixing Type
Zone B	Low risk	Hot-dip Galvanised
Zone C	Medium risk	Hot-dip Galvanised
Zone D	High risk, all offshore islands, locations within 500m of coastline including harbours, locations within 100m of tidal estuaries and sheltered inlets	316 Stainless Steel
Zone D	Very high risk, locations described in Zone D, beach fronts and seaside locations	316 Stainless Steel

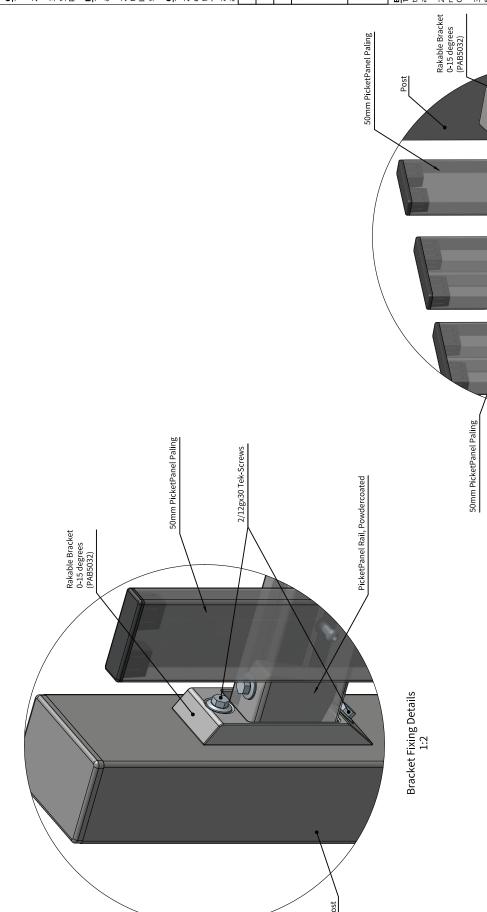


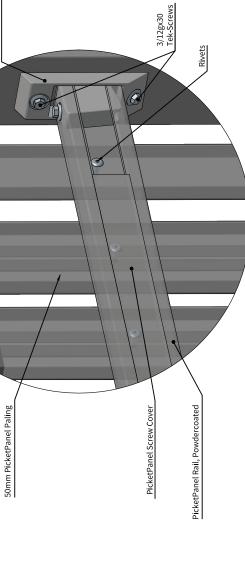












Picket - Rail Fixing Details

IMPORTANT: THIS DESIGN AND ASSOCIATED DESIGN PRODUCER STATEMENTS ARE ONLY RELEVENT FOR PROPRIETARY BOUNDARYLINE PRODUCTS; ANY PRODUCT SUBSTITUTIONS WILL INVALIDATE THE PRODUCER STATMENT

- General Notes

  1. All dimensions are in millimetres.
- 2. Drawings are not necessarily to scale
- 3. Check www.boundaryline.co.nz to ensure you have the most recent edition of this publication.

- Fixing Notes
  1. All coach screws and bolts to be pre-drilled according to NZS 3603:1997
- 2. When fixing self-drilling screws, ensure low torque setting to avoid thread stripping. A battery drill is recommended for self-drilling screws - DO NOT use an impact driver.

figure 4.2 of NZS 3604:2011 (or online search 'BRANZ Morgs) to determine the corrosion zone of the installation location and appropiate fixing option required. exposure to wind-driven salt. See maps in Corrosion Zones
There are four corrosion zones in New
Zealand that relate to the severity of

Zone	Risk Level & Location	Fixing Type
Zone B	Low risk	Hot-dip Galvanised
Zone C	Medium risk	Hot-dip Galvanised
Zone D	High risk, all offshore Islands, locations within 500m of coastline including harbours, locations within 100m of tidal estuaries and sheltered inlets.	316 Stainless Steel
Zone E	Very high risk, locations described in Zone D, beachfronts and seaside locations.	316 Stainless Steel

1. Supporting structures as not covered by these drawings unless specific requirements **Existing Support Structure** are detailed.

- 2. Supporting structures are by others and must comply with the New Zealand Building Code.
- - 3. If unsure of existing structure compliance, seek professional advice.

Boundaryline

Terranota Ltd. P.O. Box 1703 Invercargill 1703 Telephone: 0800 003 006 Fax: 03 215 8248 Email: enquiries@boundaryline.co.nz

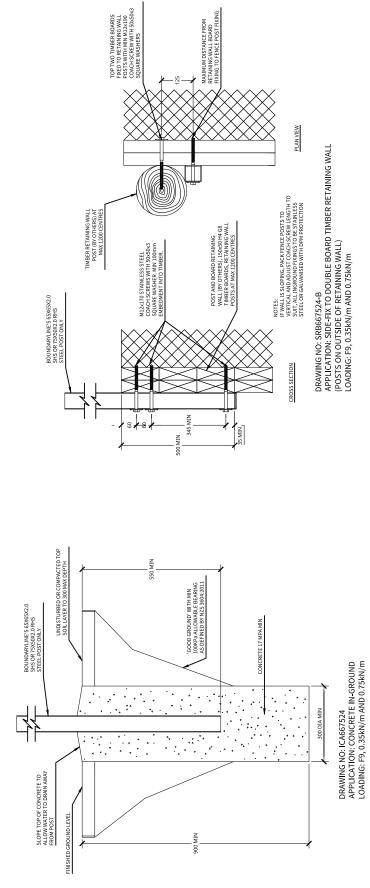
- Website: www.boundaryline.co.nz
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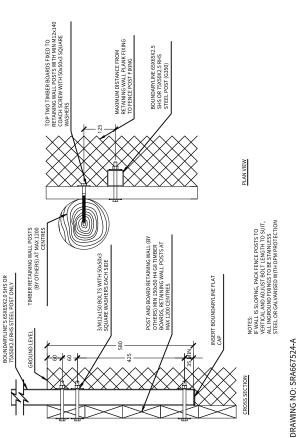
TITLE BOUNDARYLINE

PICKETPANEL FIXING DETAILS

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≃	REV.		DATE ISSUED	SUED	SHEET
	_	G	17	17/02/2025	σ

1.0 1.102/2025





APPLICATION: SIDE-FIX TO TIMBER RETAINING WALL (POST ON INSIDE OF RETAINING WALL) LOADING: F9, 0.35kN/m AND 0.75kN/m

# General Notes 1. All dimensions are in millimetres.

- 2. Drawings are not necessarily to scale
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# Fixing Notes

 All coach screws and bolts to be pre-drilled according to NZS 3603:1993 2. When fixing self-drilling screws, ensure low battery drill is recommended for self-drilling torque setting to avoid thread stripping. A screws - DO NOT use an impact driver.

Corrosion Zones There are four co

four corrosion zones in New Zealand wind-driven saft. See maps in figure 4.2 of NZS 3604:2011 (or online search 'BRANZ Maps') to determine the corrosion zone of the that relate to the severity of exposure to

option r	nstation required.	piate lixilig
Zone	Risk Level & Location	Fixing Type
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# Existing Support Sturcture

rting structure by others and must 1. All supporting structure by others and mus comply with the New Zealand Building Code 2. If unsure of existing structure compliance, seek professional advice.

# Boundaryline

Terranota Ltd. P.O. Box 1703 Invercargill 1703

Email: enquiries@boundaryline.co.nz Website: www.boundaryline.co.nz

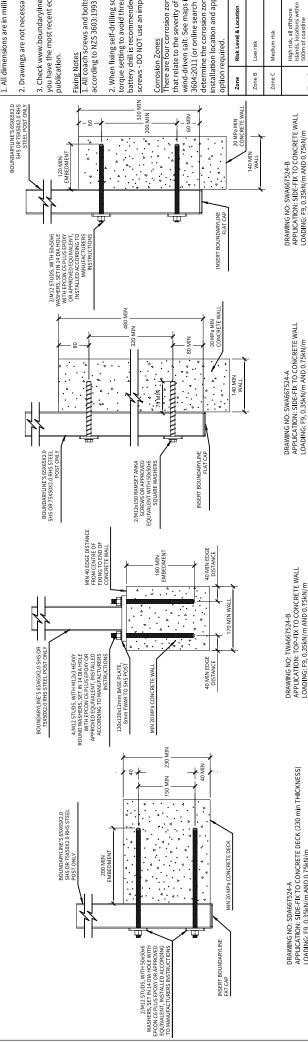
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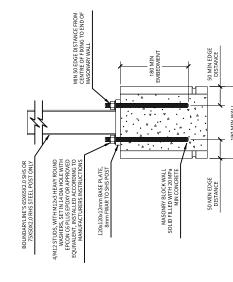
BARRIER FIXING DESIGNS FOR: **BOUNDARYLINE PICKETPANEL** - CONCRETE IN-GROUND

FOR 0.35 & 0.75kN/m HORIZONTAL LOADING (REFER TO BARRIER SPECIFICATION GUIDE FOR RELEVANT OCUPANCY TYPES) - TIMBER RETAINING WALL

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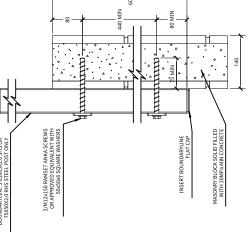


120x120x12mm BASE PLATE, 8mm FWAR TO SHS POST

4/M12x150 RAMSET ANKA SCREWS OR APPROVED EQUIVALENT, WITH M12x3

MIN 20 MPa CONCRETE DECK

BOUNDARYLINE'S 65X65X2.0 SHS OR 75X50X2.0 RHS STEEL POST ONLY



DRAWING NO: TMA667524 APPLICATION: TOP-FIX TO MASONARY WALL LOADING: F9, 0.35kN/m AND 0.75kN/m

DRAWING NO: TDA667524-C APPLICATION: TOP-FIX TO CONCRETE DECK LOADING: F9, 0.35kN/m AND 0.75kN/m

BOUNDARYLINE'S 65X65X2.0 SHS OR 75X50X2.0 RHS STEEL POST ONLY

APPLICATION: SIDE-FIX TO MASONARY WALL (15 SERIES) LOADING: F9, 0.35kn/m AND 0.75kn/m DRAWING NO: SMA667524

# .. All dimensions are in millimetres. General Notes

2. Drawings are not necessarily to scale

3. Check www.boundaryline.co.nz to ensure you have the most recent edition of this Fixing Notes 1. All coach screws and bolts to be pre-drilled

2. When fixing self-drilling screws, ensure low battery drill is recommended for self-drilling torque setting to avoid thread stripping. A screws - DO NOT use an impact driver. four corrosion zones in New Zealand that relate to the severity of exposure to wind-driven salt. See maps in figure 4.2 of NZS 3604:2011 (or online search 'BRANZ Maps') to

Risk Level & Location Fixing Type
one Risk Lo

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Zone E	Very high risk, locations described in Zone D, beachfronts and seaside	316 Stainless Steel

DRAWING NO: TWA667524-B APPLICATION: TOP-FIX TO CONCRETE WALL LOADING: F9, 0.35kn/m AND 0.75kn/m

DRAWING NO: SDA667524-A APPLICATION: SIDE-FIX TO CONCRETE DECK (230 min THICKNESS) LOADING: F9, 0.35kN/m AND 0.75kN/m

# Existing Support Sturcture

ting structure by others and must comply with the New Zealand Building Code 2. If unsure of existing structure compliance, seek professional advice.



Terranota Ltd. P.O. Box 1703 Invercargill 1703

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BOUNDARYLINE PICKETPANEL

HORIZONTAL LOADING (REFER TO BARRIER SPECIFICATION GUIDE FOR RELEVANT OCCUPANCY TYPES) BARRIER FIXING DESIGNS FOR: MASONARY WALL - CONCRETE WALL FOR 0.75kN/m

¥ 1:10

PFD657502

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14/02/25 4. IMPORTANT: THIS DESIGN AND ASSOCIATED DESIGN PRODUCER STATEMENTS ARE ONLY RELEVENT FOR PROPRIETARY BOUNDARYLINE PRODUCTS; ANY PRODUCT SUBSTITUTIONS WILL INVALIDATE THE PRODUCER STATMENT





01/03/25 EXPIRES

Date: 28/02/26

# **PRODUCER STATEMENT – PS1 DESIGN**

BUILDING CODE CLAUSE(S): B1 F4 F9	JOB NUMBER:   S89-0242	
ISSUED BY: STUDIO89 GROUP PTY LTD		
(Engineering Design Firm)		1
TO: BOUNDARYLINE		
(Owner/Developer)	_	1
TO BE SUPPLIED TO: VARIOUS COUNCILS ACROSS NEW ZEALAN	D	
(Building Consent Authority)  IN RESPECT OF:   BALUSTRADE AND FENCING (PICKETPANEL)		1
(Description of Building Work)		
AT: VARIOUS LOCATIONS ACROSS NEW ZEALAND		
(Address, Town/City)		I
LEGAL DESCRIPTION:	N/A	
We have been engaged by the owner/developer referred to abov VERIFICATION OF PICKETPANEL MEMBERS AND FIXINGS	re to provide (Extent of Engagement):	
in respect of the requirements of the Clause(s) of the Building Con Schedule, of the proposed building work.	de specified above for Part only , as sp	ecified in the
The design carried out by us has been prepared in accordance wit	th:	
<ul> <li>Compliance documents issued by the Ministry of Busi solution) B1/VM1 F4/AS1</li> </ul>	ness, Innovation & Employment (Verification n	nethod/acceptable and/or;
Alternative solution as per the attached Schedule.		
The proposed building work covered by this producer statement with the specification, and other documents set out in the Sched		chedule, together
On behalf of the Engineering Design Firm, and subject to:  • Site verification of the following design assumptions: SE	SE ATTACHED DOCUMENTS	1
All proprietary products meeting their performance specials.		ŀ
I believe on reasonable grounds that:		
<ul> <li>the building, if constructed in accordance with the draw</li> <li>Schedule, will comply with the relevant provisions of the</li> <li>the persons who have undertaken the design have the r</li> </ul>	e Building Code and that;	ided or listed in the
I recommend the CM2 level of construction monitoring.	,	
<ul> <li>(Name of Engineering Design Professional) TINUS SMITH</li> <li>CPEng number 1163700</li> </ul>	, am:	
and hold the following qualifications B.ENG, M.ENG		
The Engineering Design Firm holds a current policy of Professional The Engineering Design Firm is not a member of ACE New 2		
SIGNED BY (Name of Engineering Design Professional): TINUS SN	1ITH	
(Signature below):		
Membership no: 1163700 engineering new zealand		
te ao ranganau		04/02/2E EVDIDES

ON BEHALF OF (Engineering Design Firm): STUDIO89 GROUP PTY LTD

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.

Page 1 of 3 November 2021

# **SCHEDULE to PS1**

Please include an itemised list of all referenced documents, drawings, or other supporting materials in relation to this producer statement below:

PS1 VALID FROM 01 MARCH 2025 TO 28 FEBRUARY 2026

P.1 - Cover Page

P.2 - Barrier specification selection guide
P.3 - Specification (Wind, Fixing Types)
P.4 to P.11 - Drawings and Details
P.12 to P.14 - PS1



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