

PS1

SMARTWALL



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1. Producer Statement – PS1 – Design

BUILDING CODE CLAUSE(S): B1, F4, F9

JOB NUMBER: 213679

ISSUED BY: Hadley Consultants Ltd

PS1#: 213679-3

(Engineering Design Firm)

TO: Terranota Limited

(Owner/Developer)

TO BE SUPPLIED TO:

(Building Consent Authority)

IN RESPECT OF: Boundaryline Smartwall Fences subject to 0.35kN/m and 0.75kN/m balustrade loading

(Description of Building Work)

AT:

(Address, Town/City)

LEGAL DESCRIPTION:

or

N/A

We have been engaged by the owner/developer referred to above to provide (Extent of Engagement):

Specific Engineering design for the Boundaryline Smartwall Fences for loading up to 0.75kN/m loading (excluding areas susceptible to overcrowding), and located greater than 1km from the coast at various locations throughout New Zealand, subject to the attached schedule and BCA verification of the location and applicability. Note: BCA, address and legal description details above not entered by Hadley Consultants.

in respect of the requirements of the Clause(s) of the Building Code specified above for All, 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/VM1, B1/VM4, F4/AS1, F9/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: Refer attached schedule.
- All proprietary products meeting their performance specification requirements;
- Conditions per the attached schedule at Section 2.

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 a CM2 level of **construction monitoring**.

I, Nick Calvert, am:

(Name of Engineering Design Professional)

- CPEng number 242062

And hold the following qualifications BE(Hons), CMEngNZ, IntPE, CPEng

The Engineering Design Firm holds a current policy of Professional Indemnity Insurance no less than \$200,000

The Engineering Design Firm is a member of ACENZ.

SIGNED BY (Name of Engineering Design Professional): Nick Calvert
(Signature below):

ON BEHALF OF (Engineering Design Firm): Hadley Consultants Ltd Date: 14/10/2022

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.

2. Schedule To PS1

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

The attached PS1 is subject to:

1. This statement is based on generic design of the specified products, without specific knowledge of the location or intended use of the product at the site referred to. The Owner/Developer and Building Consent Authority must be satisfied the specified product and the corresponding Producer Statement and manufacturer's specifications are applicable to the situation in which the product is to be used,
2. Any ground at the site directly supporting the balustrade providing an allowable working bearing capacity of 100kPa minimum and meeting the definition of good ground as set out in NZS3604,
3. Any structure supporting the balustrade to be in accordance with the Building Code Acceptable Solutions or subject to specific design,
4. The work covered by this statement being carried out in accordance with the manufacturer's installation specifications,
5. all reinforced concrete work being carried out in accordance with NZS 3109 and NZS 3114, and
6. all structural steelwork work being carried out in accordance with NZS 3404, and
7. the engineering work covered by this statement being inspected at appropriate times during construction by the Building Consent Authority as recommended in the schedule of inspections below.

Referenced documents: Drawings numbered 213679 SK102 revision A, dated 14/10/2022

Alternative Solutions: None

Part only Schedule: N/A

B2 Durability

The design life of structural elements is 50 years. There is no effective verification method for B2 contained within the Building Code. Durability provisions of structural elements covered under B1 are achieved as follows:

- **Concrete** Concrete covers in accordance with NZS 3101, Part 1, Section 3.
- **Timber** Supporting timber structure by others.
- **Steel** All structural members are 6063 T5 aluminium and fixings are stainless steel if in corrosion zone D or E otherwise hot dip galvanised.

Maintenance

This schedule of ongoing inspection and maintenance of structural elements shall be included with the O&M manuals and provided to the Owner/Body Corporate and building managers.

INSPECTION/MAINTENANCE TIMEFRAME AND ITEM	
(a) Half-yearly	Wash down all exposed steelwork that is not in a fully interior environment.
(b) 10-yearly	Check exposed timber fixings for corrosion; repair as required.
	Check all exposed steelwork that is not in a fully interior environment for signs of corrosion. Repair protective coatings as required.
(c) 25-yearly	Inspect all exposed, external reinforced concrete for signs of spalling and the resulting exposed reinforcing for corrosion. Repair as required.
Following any loading condition that is considered greater than SLS level or results in a permanent deflection.	Inspections and repair as per b) and c) above.

Recommended Inspections

We recommend that the following elements are specifically inspected by a Building Inspector from the Local Authority:

INSPECTION SCHEDULE			
No	Description	Date Inspected	Carried Out By
1	Subgrade inspections once all topsoil and organic material have been removed from the excavation confirming good ground	TBC	Building Inspector
2	Pre-pour inspection of concrete foundations	TBC	Building Inspector
3	Steel/Timber connectors Inspection	TBC	Building Inspector

Appendix 1 Drawings

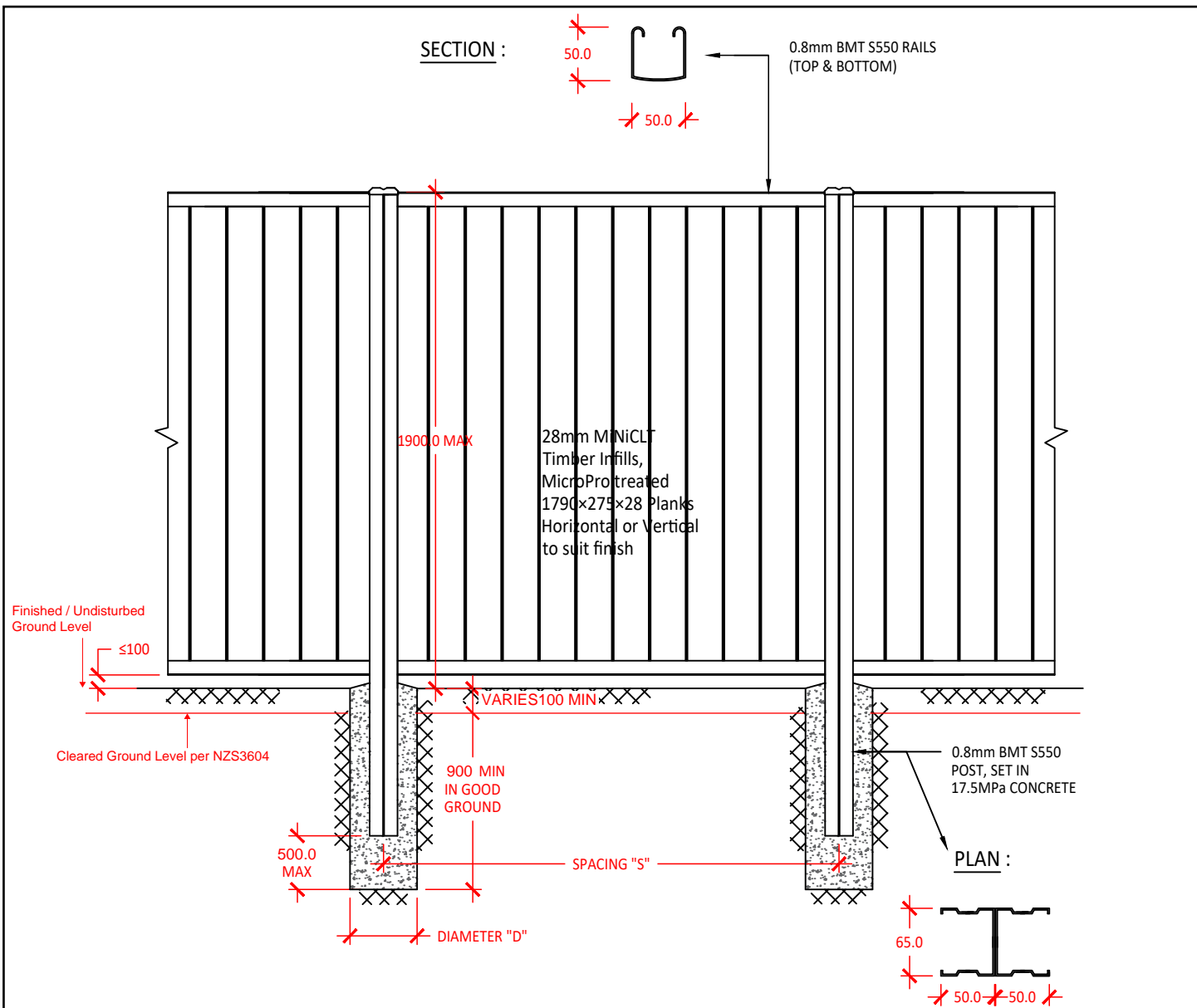


TABLE :

Wind Zone:	Barrier Load:	Spacing "S" (mm)	Diameter "D" (mm)
Low & Medium	0.35kN/m	≤2080*	≥300
	0.75kN/m	≤1940	≥300
High	0.35kN/m & 0.75kN/m	≤1390	≥300

*Planks vertical if spacing > 1.8m

NOTES :

- 0.35kN/m, Type A, B & E, for access areas only, not adjacent decks or fences.
- 0.75kN/m, Type A, B, C3 & E, not suitable for non-residential susceptible to over crowding.
- SmartWall fence to be installed in strict accordance with Boundaryline Installation guide.
- Fence ends to have 65x65x2mm steel posts, or alternatively be ≤1.2m high or alternatively to have end spacing ≤1.2m.

A	Building Consent	NMC	14/10/2022
Issue	Description	By	Date

Project: Boundaryline Barriers	<p>CONSULTING ENGINEERS STRUCTURAL / CIVIL / PROJECT MANAGEMENT / GEOTECHNICAL</p> <p>44 Robins Road, PO Box 1356, Queenstown, New Zealand, P. +64 3 450 7140, F. +64 3 441 3513, W. www.hadleys.co.nz</p>	<p>This drawing is supplied on the understanding that the information contained hereon will not be passed to any other party without written permission first being obtained from Hadley Consultants Ltd.</p>				
Title: Smartwall Specification						
Client: Terranota Limited	Drawn: NMC	Checked:	Scale: NTS	Drawing No. Project: 213679	Sheet: SK102	Issue: A