Boundaryline

# PS1

## DURAPANEL™

Producer **Statement - PS1**

Issue Date: 24/05/2023

Revision No. 1.05

FOR: **POOL FENCING & RETAINING WALL FENCING**

(With minimum 1.2m set-back from Retaining Wall)

# 1. Producer Statement – PS1 – Design

**BUILDING CODE CLAUSE(S):** B1, F9 **JOB NUMBER:** 213679

**ISSUED BY:** Hadley Consultants Limited

(Engineering Design Firm)

**TO:** Terranota Limited

(Owner/Developer)

**TO BE SUPPLIED TO:**

(Building Consent Authority)

**IN RESPECT OF:** Boundaryline Durapanel Pool Fencing and Retaining Wall Fencing with min. 1.2m setback.

(Description of Building Work)

**AT:**

(Address, Town/City)

**LEGAL DESCRIPTION:** N/A ☐

We have been engaged by the owner/developer referred to above to provide (Extent of Engagement):
Structural design checking for the Boundaryline Durapanel fence system, refer to attached schedule
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/VM1, F9/AS1
- ☐ 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;

**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 CM1 level of **construction monitoring**.

I, James Hadley, am:
(Name of Engineering Design Professional)

- ☒CPEng number 189829

And hold the following qualifications B.E (hons), CMEngNZ, 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): James Hadley
(Signature below):

**ON BEHALF OF** (Engineering Design Firm): Hadley Consultants Ltd Date: 24/05/2023

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.

# SCHEDULE to PS1

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

Description of Building Works Designed:

The structural design checking for the Boundaryline Durapanel fencing system for standard pool fencing and situations where used above retaining walls with a minimum set-back of 1.2m from the top of the retaining wall and as referenced below. Note, set-back fencing from the top of retaining walls which is closed off to all ends and prevents access to the top of the retaining wall avoids the requirement for a fall protection barrier on the retaining wall in accordance with NZBC Clause F4 as the area above the wall could be considered non-accessible. We note for pool fencing the top of the fence must be 1.2m min from adjacent ground level, at any angle.

The applicable requirements of the New Zealand Building Code, in particular, Clauses B1 and F9 have, where the provisions of these Clauses are applicable, been met in the design. The structural design has been prepared using the following New Zealand Standards as Verification Methods and/or Acceptable Solutions as set out in the Building Code. These New Zealand Standards are NZS1170, NZS3603, NZS3101, NZS8500 and general engineering principles.

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:

ConcreteConcrete covers in accordance with NZS 3101, Part 1, Section 3.
TimberSupporting timber structure by others.
SteelAll structural members are 6063 T5 aluminium and fixings are stainless steel if in corrosion zone D or E otherwise hot dip galvanised.

Schedule of Documentation:

Attached product installation sheet titled 'Boundaryline Durapanel Specifications – for Producer Statement and Installation: For pool fencing and retaining wall situations (min 1.2m set-back from retaining wall)'

Conditions:

The attached PS1 is also 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 in accordance with the Building Code Acceptable Solutions or subject to specific design and approval by others,
4.The work covered by this statement being carried out in accordance with the manufacturer's installation specifications,
5.The work covered by this statement being inspected at appropriate times during construction by an approved Council Building Inspector as part of a typical inspection regime,

# GUIDANCE ON USE OF PRODUCER STATEMENTS

Information on the use of Producer Statements and Construction Monitoring Guidelines can be found on the Engineering New Zealand website
https://www.engineeringnz.org/engineer-tools/engineering-documents/producer-statements/

Producer statements were first introduced with the Building Act 1991. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects (NZIA), Institution of Professional Engineers New Zealand (now Engineering New Zealand), Association of Consulting and Engineering New Zealand (ACE NZ) in consultation with the Building Officials Institute of New Zealand (BOINZ). The original suite of producer statements has been revised at the date of this form to ensure standard use within the industry.

The producer statement system is intended to provide Building Consent Authorities (BCAs) with part of the reasonable grounds necessary for the issue of a Building Consent or a Code Compliance Certificate, without necessarily having to duplicate review of design or construction monitoring undertaken by others.

**PS1 DESIGN** Intended for use by a suitably qualified independent engineering design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;

**PS2 DESIGN REVIEW** Intended for use by a suitably qualified independent engineering design review professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;

**PS3 CONSTRUCTION** Forms commonly used as a certificate of completion of building work are Schedule 6 of NZS 3910:2013 or Schedules E1/E2 of NZIA's SCC 2011[2]

**PS4 CONSTRUCTION REVIEW** Intended for use by a suitably qualified independent engineering construction monitoring professional who either undertakes or supervises construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.

This must be accompanied by a statement of completion of building work (Schedule 6).

The following guidelines are provided by ACE New Zealand and Engineering New Zealand to interpret the Producer Statement.

**Competence of Engineering Professional**
This statement is made by an engineering firm that has undertaken a contract of services for the services named, and is signed by a person authorised by that firm to verify the processes within the firm and competence of its personnel.

The person signing the Producer Statement on behalf of the engineering firm will have a professional qualification and proven current competence through registration on a national competence-based register such as a Chartered Professional Engineer (CPEng).

Membership of a professional body, such as Engineering New Zealand provides additional assurance of the designer's standing within the profession. If the engineering firm is a member of ACE New Zealand, this provides additional assurance about the standing of the firm.

Persons or firms meeting these criteria satisfy the term "suitably qualified independent engineering professional".

**Professional Indemnity Insurance**
As part of membership requirements, ACE New Zealand requires all member firms to hold Professional Indemnity Insurance to a minimum level.

The PI Insurance minimum stated on the front of this form reflects standard practice for the relationship between the BCA and the engineering firm.

**Professional Services during Construction Phase**
There are several levels of service that an engineering firm may provide during the construction phase of a project (CM1-CM5 for engineers[3]). The building Consent Authority is encouraged to require that the service to be provided by the engineering firm is appropriate for the project concerned.

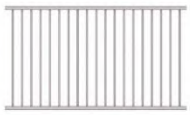
**Requirement to provide Producer Statement PS4**
Building Consent Authorities should ensure that the applicant is aware of any requirement for producer statements for the construction phase of building work at the time the building consent is issued as no design professional should be expected to provide a producer statement unless such a requirement forms part of the Design Firm's engagement.

**Refer Also:**

1. Conditions of Contract for Building & Civil Engineering Construction NZS 3910: 2013
2. NZIA Standard Conditions of Contract SCC 2011
3. Guideline on the Briefing & Engagement for Consulting Engineering Services (ACE New Zealand/Engineering New Zealand 2004)
4. PN01 Guidelines on Producer Statements

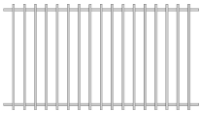
www.acenz.org.nz
www.engineeringnz.org

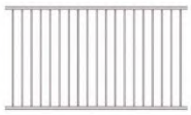
**Boundaryline Specifications: For Pool Fencing, and Retaining Walls with 1.2m set-back.**

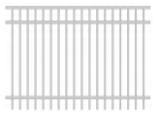

**DuraPanel Delta**


**DuraPanel Vecta**


**DuraPanel Polo**

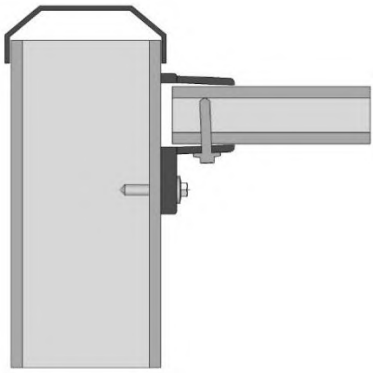

**DuraPanel Axis**


**SentryPanel FlatTop**


**SentryPanel School Panel**

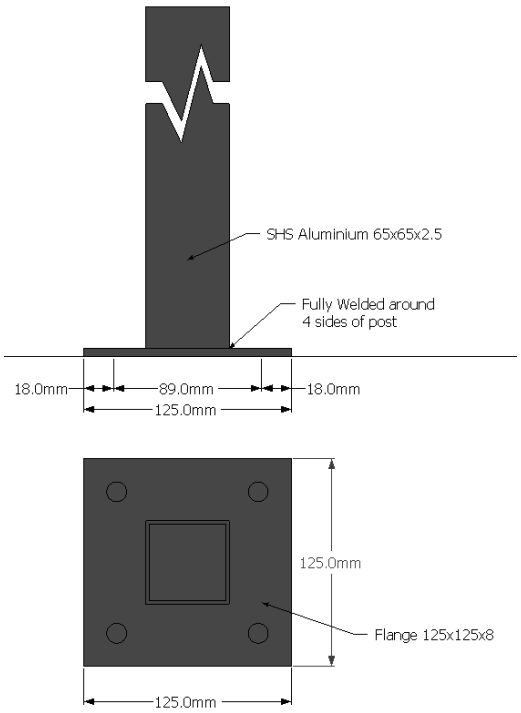
| Panel Code, Name, Height | Maximum Post Spacing (centre-to-centre) | Component Specifications |
|---|---|---|
| DDP1222 Delta 1200<br>DDR1222 Delta 1200 Raking | 2300mm | Top Rail: 40x40x1.6 SHS<br>Vertical: 19x19x1.2 SHS<br>Post Size: 50x50x2.0 SHS |
| DVP1222 Vecta 1200<br>DVP1522 Vecta 1500 | 2300mm | Top Rail: 40x40x1.6 SHS<br>Vertical: 19x19x1.2 SHS<br>Post Size: 50x50x2.0 SHS |
| DPP1222 Polo 1200<br>DPP1522 Polo 1500 | 2300mm<br>2320mm | Top Rail: 40x40x1.6 SHS<br>Vertical: 19x19x1.2 SHS<br>Post Size: 50x50x2.0 SHS |
| DXP1222 Axis 1200 | 2300mm | Top Rail: 25x25x2.5 SHS<br>Vertical: 50x25x1.2 SHS<br>Post Size: 50x25x2.0 RHS |
| SAF1522 FlatTop Panel 1500 | 2320mm | Top Rail: 40x40x1.6 SHS<br>Vertical: 25x25x1.6 SHS<br>Post Size: 65x65x2.5 SHS |
| SAE1522 School Panel 1500<br>SAE1822 School Panel 1800 | 2320mm | Top Rail: 40x40x1.6 SHS<br>Vertical: 25x25x1.6 SHS<br>Post Size: 65x65x2.5 SHS |

**Panel to Post fixing:**
Rail Bracket DAB4040
Rail bracket DAB2525 (Axis)
Bracket screwed to post through holes provided with self-drilling screws.
Bracket screwed to rail with one self-drilling screw through underside of bracket and into rail as shown.

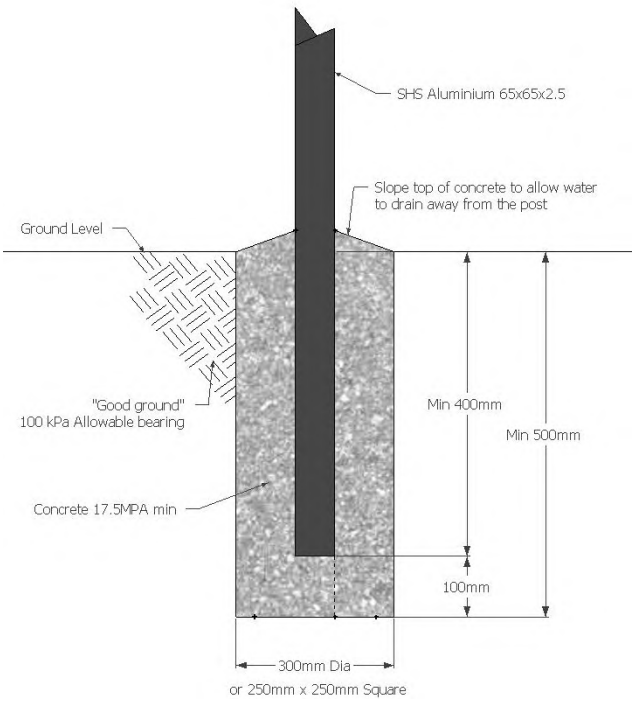


All panels, posts, and brackets are manufactured from aluminium.

**Bolt-down Post:**
DAF5013 or DAF5016
DAF5213 (Axis only)




**In-ground Post:**
DAP5018 or DAP5012 or DAP6519 or DAP6522 or DAP6525
DAP5218 (Axis only)




**Fixings:**
In concrete: 4 x M12 HILTI HST stud anchor or similar with min 70mm embedment.
In timber: 4 x 12mm coachscrews with min 70mm embedment.

**Note:**
Posts to be installed in “Good ground” as defined by NZS3604