Boundaryline

Install Guide

SMART**WALL** ™

A step-by-step guide to installing your new fence

Version 1.0

Introduction

Thank you for choosing Boundaryline SmartWall **Fencing. This product will provide you with many years of trouble free protection if installed in accordance with the directions outlined in this document.**

The recommendations detailed in this guide are formulated along the lines of good building practice. They are not intended to be an exhaustive statement of all the relevant data.

If you have any questions, please contact our Technical Team on 0800 003 006. We are always happy to help in any way we can.

Before you start, read this

This guide does not apply to any fences over 1.8m in height. If your fence is greater that 1.8m, please seek further advice from Boundaryline.

- Describe your site details when ordering materials.

- Identify your soil type/ground conditions. Refer to the table in Step 1. This will determine the concrete and footing details required

- Make sure you are aware of underground services before you start digging! These could be gas, electricity, or water mains. Call your local council for more information.

- Check your local council regulations on boundary fencing.

- Check the delivered material for the correct number of components and general condition before beginning your installation.

Tools

- ☐ Tape measure
- ☐ Square
- ☐ Shovel
- ☐ Line marking paint
- ☐ String line
- ☐ Spirit or laser-level
- ☐ Hex drive bit

- ☐ Angle Grinder
- ☐ Drill/driver
- ☐ Post hole digger
- ☐ Circular saw

Safety Gear minimum required

- ☐ Safety boots
- ☐ Gloves
- ☐ Helmet
- ☐ Eye protection
- ☐ Hearing protection
- ☐ Sun protection

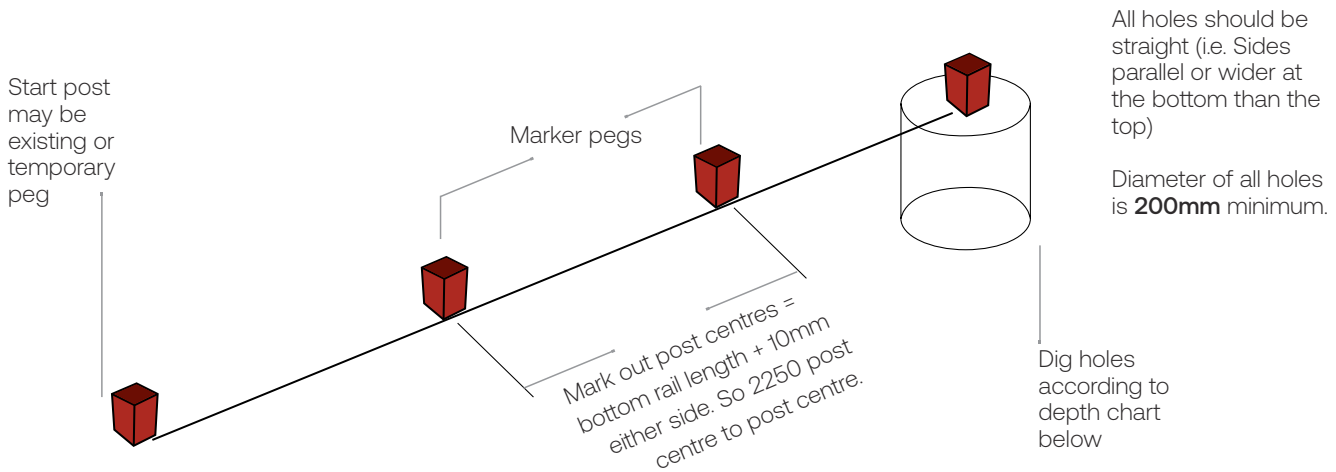Make sure you choose the right tools before you start your fence.

It is recommended that the reader pays particular attention to those items identified as IMPORTANT in this manual to ensure satisfactory long-term performance.

Post Installation

Step 1 | Mark out your post holes

Start post may be existing or temporary peg

Marker pegs

Mark out post centres = bottom rail length + 10mm either side. So 2250 post centre to post centre.

All holes should be straight (i.e. Sides parallel or wider at the bottom than the top)

Diameter of all holes is **200mm** minimum.

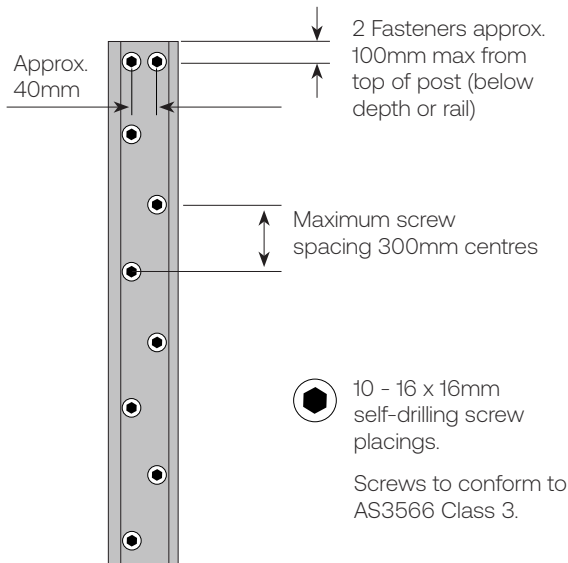Dig holes according to depth chart below

Important:
Vertical Design - 2250 max post centre
Horizontal Design - 1830 max post centre
refer to pages 6 & 7 for technical drawings.

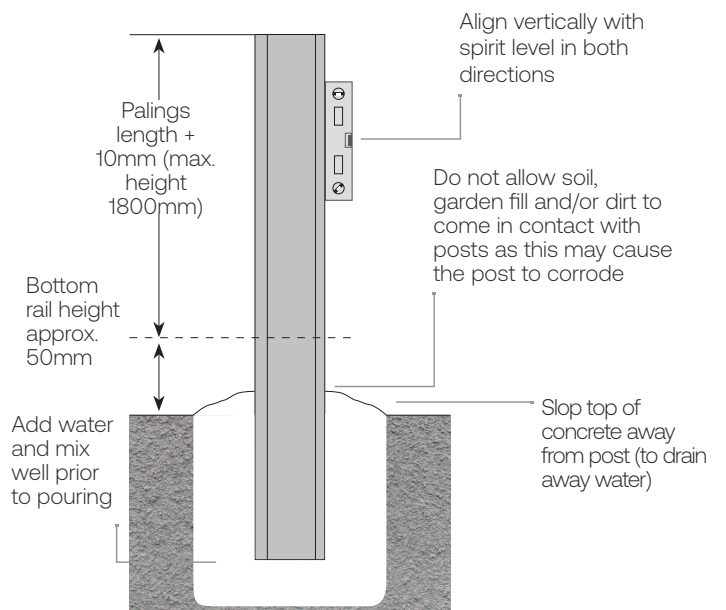Post lengths required will increase accordingly to cater for these ground conditions.

Soil Type	Minimum Hole Depth	Approximate Concrete Required
Rock	300mm	1 bag per hole (20Kg bag)
Clay/Firm Earth	600mm	2 bag per hole (20Kg bags)
Sand/Loose Fill	900mm	3 bag per hole (20Kg bags)

Step 2 | Securing Posts

a. Fastening posts together

Approx. 40mm

2 Fasteners approx. 100mm max from top of post (below depth or rail)

Maximum screw spacing 300mm centres

10 - 16 x 16mm self-drilling screw placings.

Screws to conform to AS3566 Class 3.

b. Fixing post in ground

Palings length + 10mm (max. height 1800mm)

Bottom rail height approx. 50mm

Add water and mix well prior to pouring

Align vertically with spirit level in both directions

Do not allow soil, garden fill and/or dirt to come in contact with posts as this may cause the post to corrode

Slop top of concrete away from post (to drain away water)

- Place first post in hole
- Adjust to correct height
- Support post with temporary brace
- Fill hole with fully mixed, wet concrete
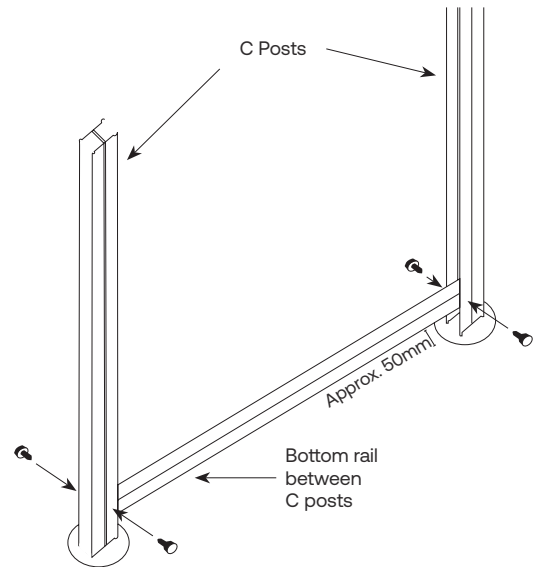- Vibrate and compact the concrete to remove voids.

Important:
If it isn't possible to fix posts as proposed here, please contact us for further information

Step 3 | Installing Rails | Installing Palings

C Posts

a. Bottom Rail

- Insert bottom rail between posts.

- Adjust bottom rail to correct height - it is important to maintain a minimum gap of 50mm between bottom of rail and ground.

- Screw fix the bottom rail at this stage.

NOTE
SmartWall Vertical fence system is supplied with a Rail Support and this is to be inserted inside the bottom rail prior to it being installed.
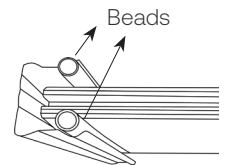
Approx. 50mm

Bottom rail between C posts

b. Palings

For SmartWall Vertical

- Slide the first paling into the bottom rail with the groove in end of paling to the bottom.

- Ensure a 15mm gap is between the edge of paling and the inside face of the post and push down firmly into the bottom rail. A rubber mallet can be used if required.

- Continue to insert all palings, ensuring the tongue and groove joint is in place correctly.

- Once all palings are installed it is time to fit your top rail.

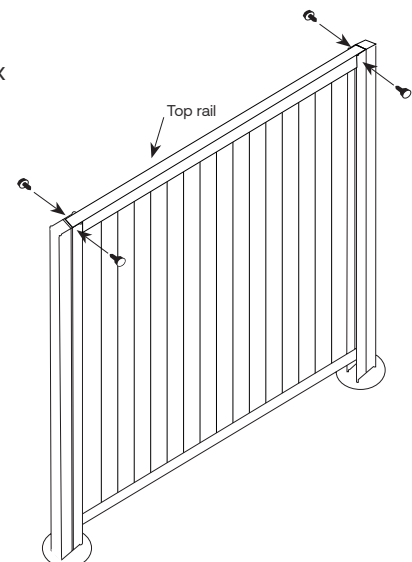### For SmartWall Horizontal

- Slide the first paling into the bottom rail with the tongue in edge of paling to the top.

- Ensure a 15mm gap is between the end of paling and the inside face of the post and push down firmly into the bottom rail. A rubber mallet can be used if required.

- Continue to insert all palings, ensuring the tongue and groove joints are in place correctly.

Beads

- Once all palings are installed it is time to insert the beads into the posts by feeding down both beads on each side of the post at the same time.
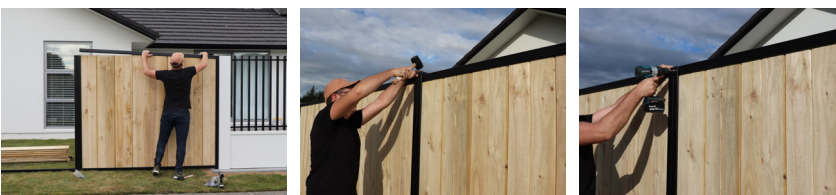
Note: the half-palings with a groove to be installed at top of panel and half-paling with a tongue to be installed at bottom of panel.

c. Top Rail

- Place over the top of the palings, and tap down into the C post. Once in place, fix both sides of the rail to the C post using the tech screws provided. The top of the rail should be 15mm from the top of the post.

Top rail

d. Check Installation

Step 4 | Installing post caps

All ColourPanel™ caps are supplied as a 'double' cap, which are designed to be snapped in half to create two single caps where required. Please note, only black double caps are available.
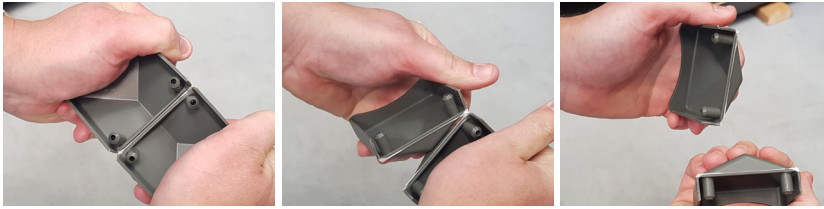
1

Cut each side of the cap in line with the centre ridge. Use end-nippers – do not use a knife as this is dangerous and difficult to achieve a straight cut.

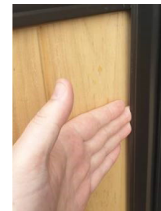Ensure the 'nose' of the end nippers is pushed all the way in before cutting.

2

Bend the cap along the centre ridge to snap it, and pull apart to create two single caps.
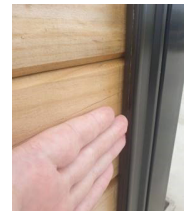
Notes:

If the cap is not a tight fit, place a small amount of silicone up inside the cap to secure it. Make sure the silicone is a small bead on the inside corner of the sides only. Also ensure you keep the correct distance from the top of the post to the top of the rail (see page 6)

SmartWall in Playcentres or Schools

When you are installing a vertical paling design in a playcentre or school, or any other area that needs to be 'child-safe' – we recommend that include the TVB1617-BK vertical bead to close the gap between the post and the paling where this could potentially be a trap for children's fingers.
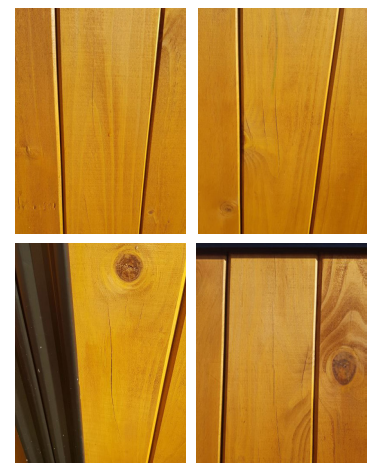
Without TVB1617-BK   With TVB1617-BK

Surface Checking

Timber is a natural product and no two pieces are the same. After installation and when the timber has been exposed to the sun, wind and/ or rain, the occurence of 'checking' (or small splits) on the surface of the paling is a normal and natural releasing of tension in the timber.

A common timber fence with individual palings will react by warping and twisting, and the overall appearance of will continually look worse as it degrades over time. However, the SmartWall paling is 'laminated' (several pieces glued together) which provides structural integrity and will ensures your fence remains straight and strong for many years.

A laminated paling has an increased potential for 'checking' due to the boards being glued together and their inability to move independently, however, this is a good trade-off for a stable fence that will stay straight and be overall more aesthetically pleasing for the duration of its life.

'Checking' in palings - a normal and natural releasing of tension in the timber
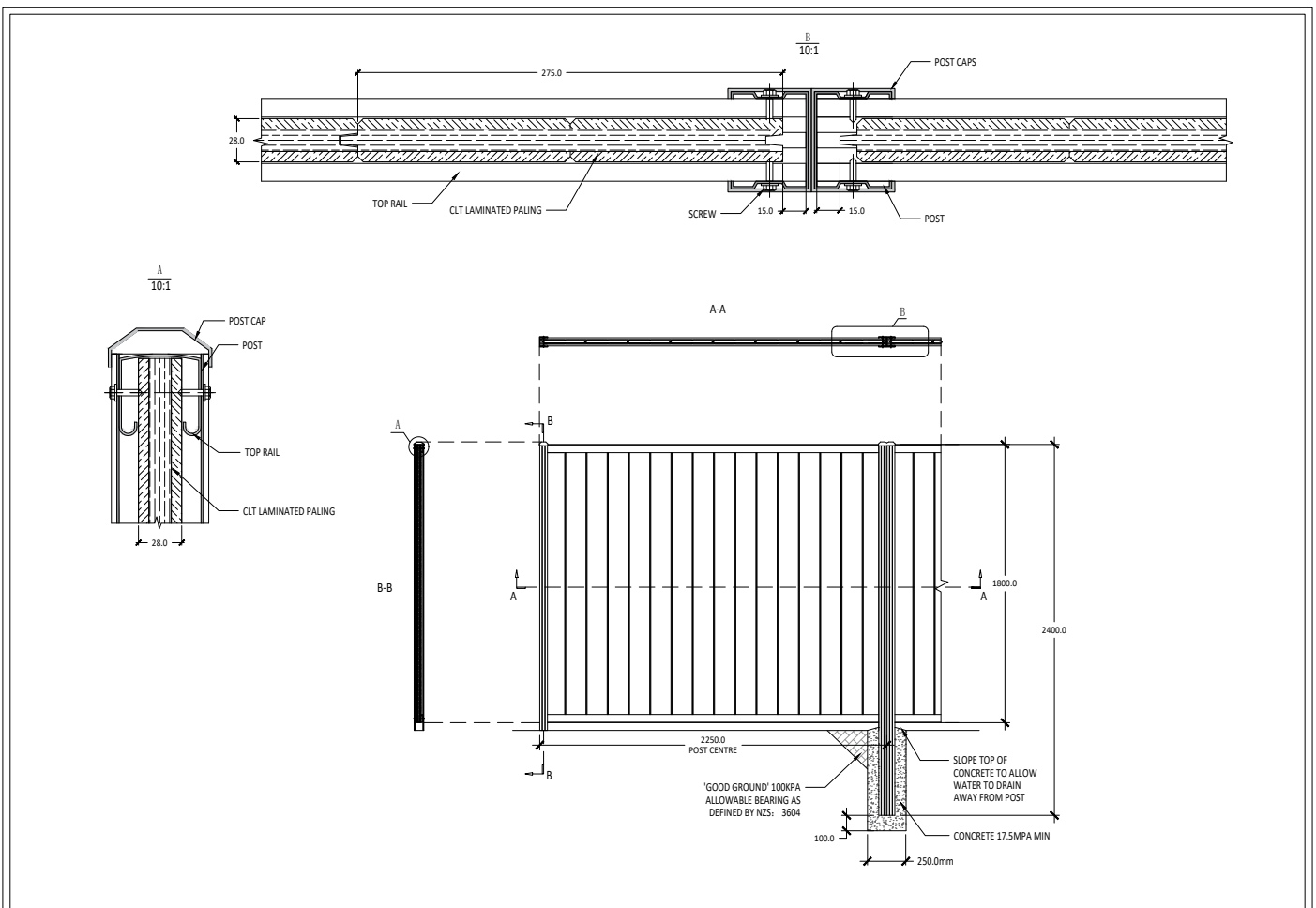
Maintenance and Warranty of your fence

1. To keep your fence looking its best, a soft broom down every few months should be sufficient to remove any cobwebs. Pay particular attention to the area under the top rail, which is sheltered from natural washing by rain.

2. DO NOT build up soil, garden fill and/or dirt against the bottom rails and posts of your fence as this will retain water and lead to corrosion.

3. DO NOT use your fence as a retaining wall, as it is not designed for this purpose.

4. Adequate drainage is needed to ensure that water does not pond in the bottom rail and to assist in the removal of debris. This is achieved by ensuring there is a clearance between ends of the bottom rail and the inside of the posts.

5. DO NOT use touch up paint. Minor scratches should be left alone, or the post/rail replaced. Touch up paint will weather differently than the original steel coating. A small touch up brush can be supplied for any small scratches.

6. Fencing is backed by a 10-year warranty* under the following conditions:

   - Installation > 1km from Marine or Industrial environment
   - Fence is installed to manufactures guidelines
   - Fence is maintained regularly in accordance with suggestions made by Boundaryline.

There is no warranty on the timber components due to being a natural product.
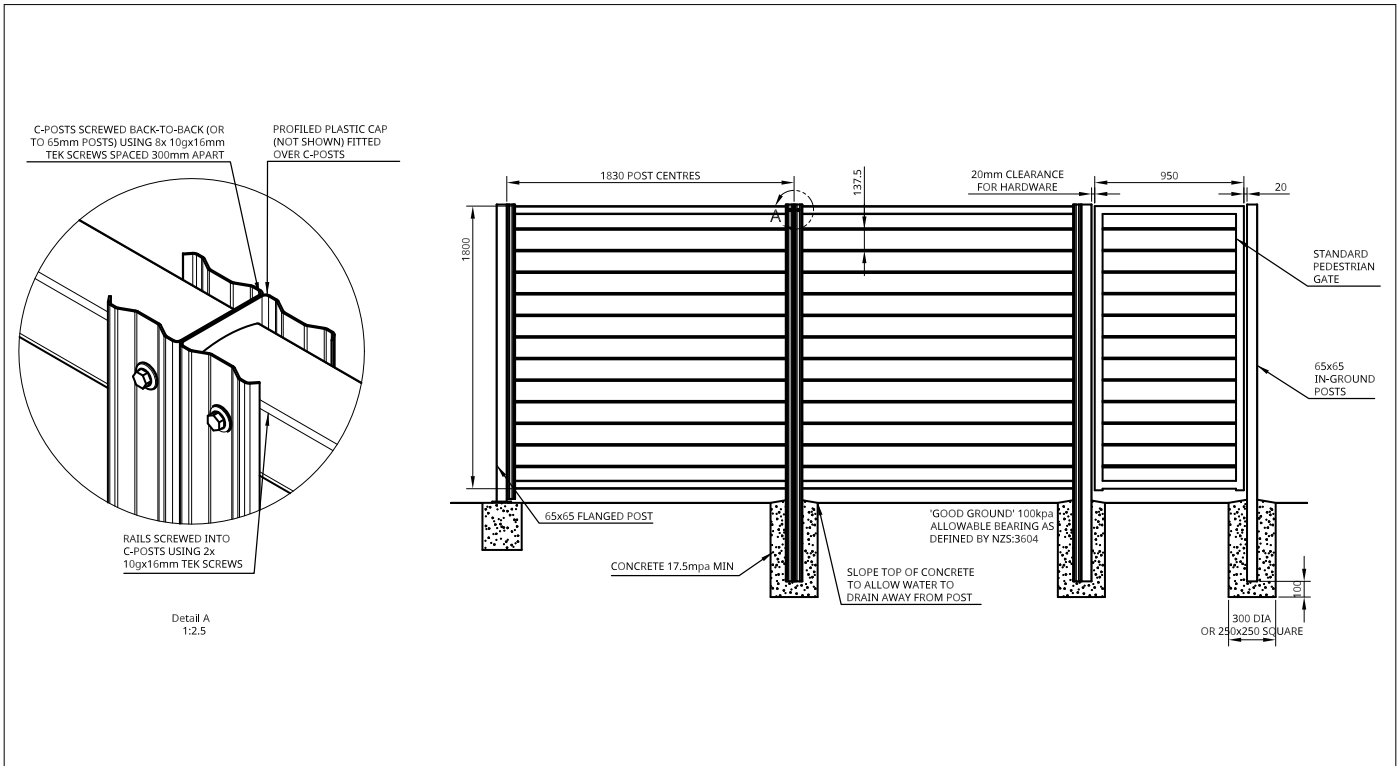
Technical Drawings

Smartwall Vertical

MODEL						Issue Date	scale
SMARTWALL 1800 VERTICAL						18-04-2019	1:16
						Unless Otherwise specified	Revision
Patent Pending NZ Pat. App. 745289/753226							

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Technical Drawings

Smartwall Horizontal

C-POSTS SCREWED BACK-TO-BACK (OR TO 65mm POSTS) USING 8x 10gx16mm TEK SCREWS SPACED 300mm APART

PROFILED PLASTIC CAP (NOT SHOWN) FITTED OVER C-POSTS

RAILS SCREWED INTO C-POSTS USING 2x 10gx16mm TEK SCREWS

Detail A
1:2.5

1830 POST CENTRES
137.5
20mm CLEARANCE FOR HARDWARE
950
20
1800

STANDARD PEDESTRIAN GATE

65x65 IN-GROUND POSTS

65x65 FLANGED POST

'GOOD GROUND' 100kpa ALLOWABLE BEARING AS DEFINED BY NZS:3604

CONCRETE 17.5mpa MIN

SLOPE TOP OF CONCRETE TO ALLOW WATER TO DRAIN AWAY FROM POST

300 DIA OR 250x250 SQUARE

Boundaryline	Model	Rail Profile	50mm Roll-formed Steel ColourSlat Rail

Boundaryline

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Fax: 03 215 8248
Email: enquiries@boundaryline.co.nz
Website: www.boundaryline.co.nz
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Model
SmartWall Horizontal 1800mm

Rail Profile	50mm Roll-formed Steel ColourSlat Rail	
C-Post Profile	65x50mm Roll-formed Steel ColourSlat C-Post	
Panel Length	2250mm wide x 1800mm high	
Flanged Post	65x65x1900mm Galv Steel (125mm Square flange) M12 fixings	
In-ground Post	65x65x2500mm Galv Steel	

Bracket Fixing	N/A
Post Caps	External Plastic Profiled Caps
Standard Gate Hardware	Unsprung hinge, with Key-Lockable Latch
Child Safety Gate Hardware	Self-closing hinges, with Magnetic Top-Pull Latch

SIZE A4	DATE ISSUED 2020-06-15	REV.	DO NOT SCALE DRAWING
SCALE 1:32	SHEET 1 of 1	WEIGHT	UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS

SmartWall Fencing is designed to withstand most wind conditions. The wind on the fence at your site will depend on a number of factors, including the number of surrounding properties and how exposed the location is.

If your property is exposed to higher wind speeds, please contact us for further advice/recommendations.

Also, if in proximity to severe marine conditions or bounding swimming pools, please seek specific advice from Boundaryline.

Contact Boundaryline Fencing
0800 003 006
boundaryline.co.nz