SMART**WALL**

A STEP-BY-STEP GUIDE TO INSTALLING YOUR FENCE

Boundaryline

INSTALL
GUIDE

Boundaryline

INTRODUCTION

Thank you for choosing Boundaryline Smart**Wall** 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 than 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 LIST

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

TOOLS

☐ Tape Measure
☐ Shovel
☐ Circular Saw
☐ Hex Drive Bit
☐ Line Marking Paint

☐ String Line
☐ Drill/Driver
☐ Angle Grinder
☐ Post Hole Digger
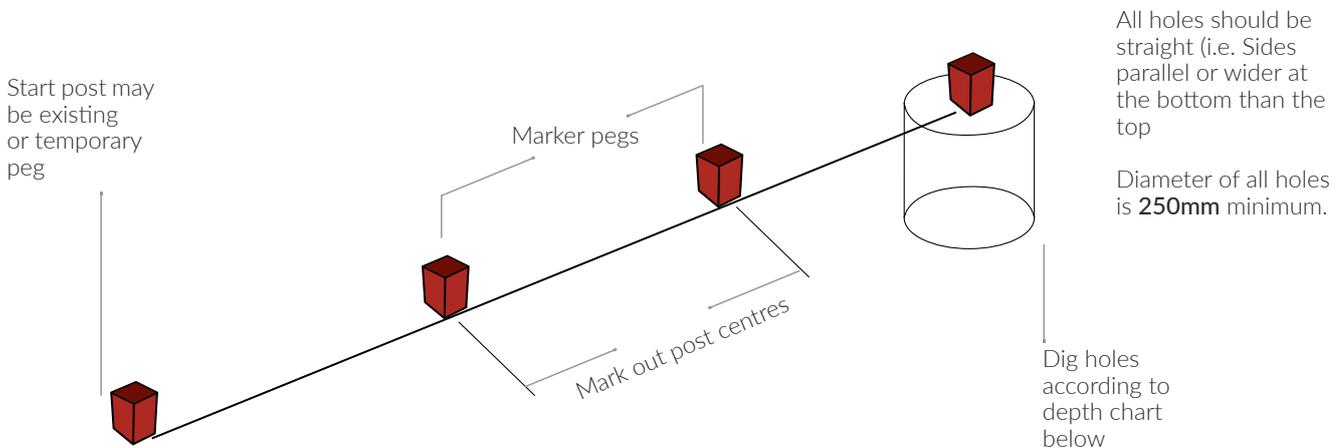☐ Spirit Level

SAFETY GEAR

☐ Safety Boots
☐ Gloves
☐ Helmet
☐ Eye Protection
☐ Hearing Protection
☐ Sun Protection

!

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

IMPORTANT

A STEP-BY-STEP GUIDE **TO INSTALLATION**

STEP 1 – **MARKING OUT POST HOLES**

Start post may be existing or temporary peg

Marker pegs

Mark out post centres

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

Diameter of all holes is **250mm** minimum.

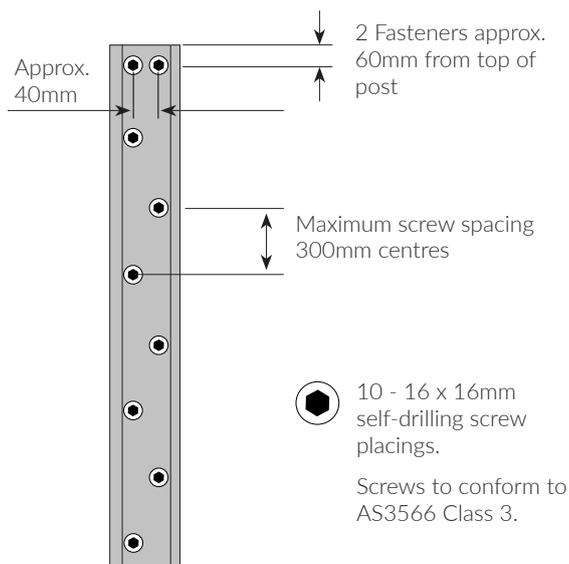Dig holes according to depth chart below

! IMPORTANT

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

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

STEP 2 – **INSTALLING POSTS**

a. Fastening posts together

Approx. 40mm

2 Fasteners approx. 60mm from top of post

Maximum screw spacing 300mm centres

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

Screws to conform to AS3566 Class 3.
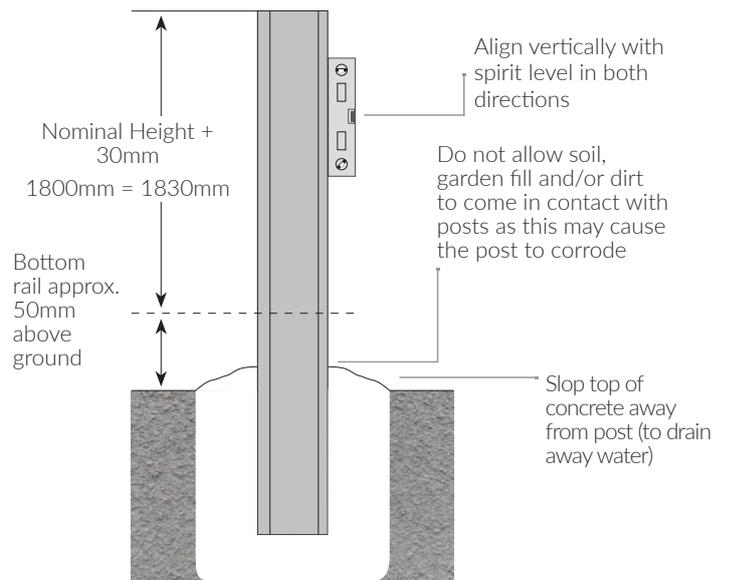
! IMPORTANT

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

b. Fixing post in ground

Nominal Height + 30mm

1800mm = 1830mm

Bottom rail approx. 50mm above ground

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.

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**	For **SmartWall Horizontal**
- Slide the first paling into the bottom rail with the groove in end of paling to the bottom.	- 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 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.	- 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 joint is in place correctly.	- Continue to insert all palings, ensuring the tongue and groove joints are in place correctly.

For SmartWall Vertical:

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

For SmartWall Horizontal:

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.
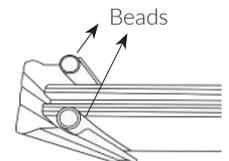
Note: the half-palings with a groove to be installed at top of panel and half-paling with a tongue to be installed at bottom of panel.

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
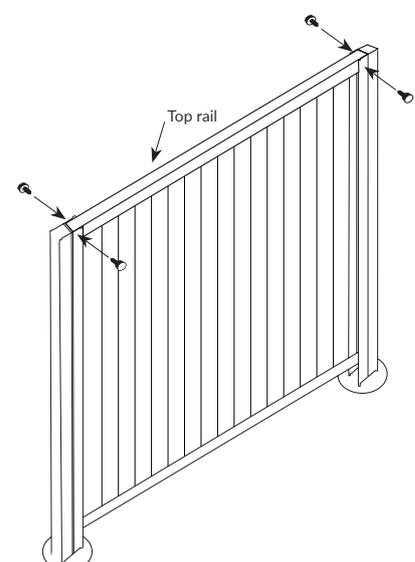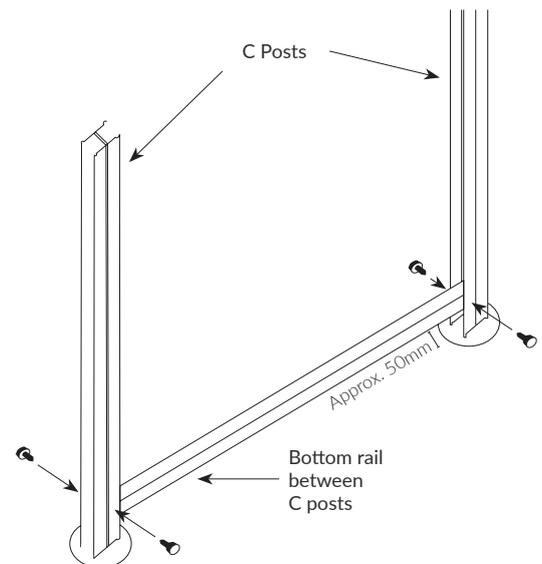
STEP 4 – INSTALLING POST CAPS

All Smart**Wall** caps are supplied as a 'double' cap, which are designed to be snapped in half to create two single caps where required.

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.

Make sure you keep the correct distance from the top of the post to the top of the rail (see page 4).

! **IMPORTANT**

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

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

3. 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 designing the posts such that there is a clearance between the ends of the bottom rail and the posts.

4. **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.
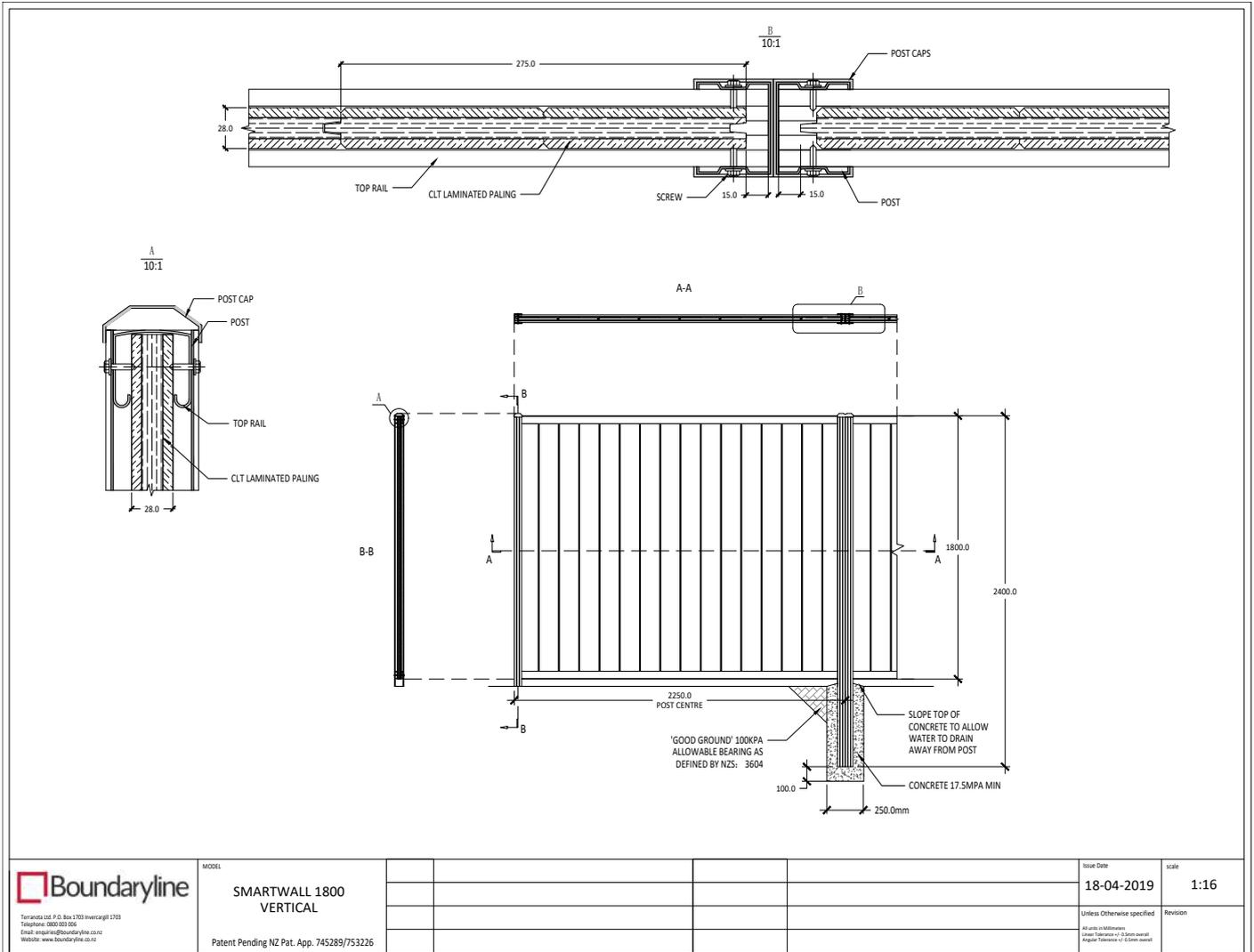
5. The steel posts and rails are backed by a 10-year warranty* under the following conditions:

   - 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

						Issue Date	scale
Boundaryline	MODEL					18-04-2019	1:16
Terranota Ltd. P.O. Box 1703 Invercargill 1703	SMARTWALL 1800 VERTICAL					Unless Otherwise specified	Revision
Telephone: 0800 003 006 Email: enquiries@boundaryline.co.nz Website: www.boundaryline.co.nz	Patent Pending NZ Pat. App. 745289/753226					All units in Millimeters Linear Tolerance +/- 0.5mm overall Angular Tolerance +/- 0.5mm overall	

TECHNICAL DRAWINGS

SMARTWALL HORIZONTAL

MODEL	Issue Date	scale
SMARTWALL 1800 HORIZONTAL	23-04-2019	1:16

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Patent Pending NZ Pat. App. 745289/753226

Unless Otherwise specified — Revision

All units in Millimeters
Linear Tolerance +/- 0.5mm overall
Angular Tolerance +/- 0.5mm overall

Labels in drawing:
- POST CAP
- TOP RAIL
- POST
- CLT LAMINATED PALING
- VERTICAL BEAD
- POST CAPS
- SCREW
- A 10:1
- B 10:1
- A-A
- B-B
- 275.0
- 28.0
- 15.0
- 1800.0
- 2400.0
- 1830.0
- 100.0
- 250.0mm
- 'GOOD GROUND' 100KPA ALLOWABLE BEARING AS DEFINED BY NZS: 3604
- SLOPE TOP OF CONCRETE TO ALLOW WATER TO DRAIN AWAY FROM POST
- CONCRETE 17.5MPA MIN

CONTACT BOUNDARYLINE FENCING

Smart**Wall** 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.

BOUNDARYLINE'S TECHNICAL SUPPORT: 0800 003 006

To learn more about SMART**WALL** visit: www.boundaryline.co.nz/our-brands/smartwall/

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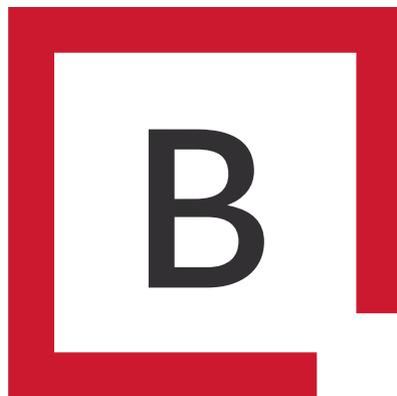
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