

# SMARTWALL

A STEP-BY-STEP GUIDE TO INSTALLING YOUR FENCE

 Boundaryline



# **INSTALL GUIDE**

# 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 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

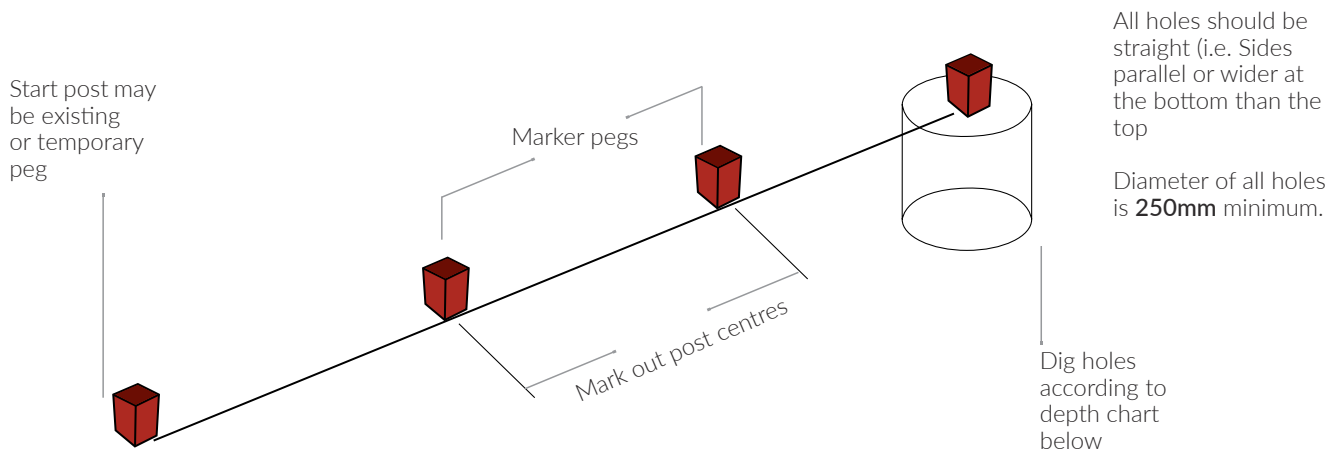
- ☐ Safety Boots
- ☐ Gloves
- ☐ Helmet
- ☐ Eye Protection
- ☐ Hearing Protection
- ☐ Sun Protection



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

# A STEP-BY-STEP GUIDE TO INSTALLATION

## STEP 1 – MARKING OUT POST HOLES



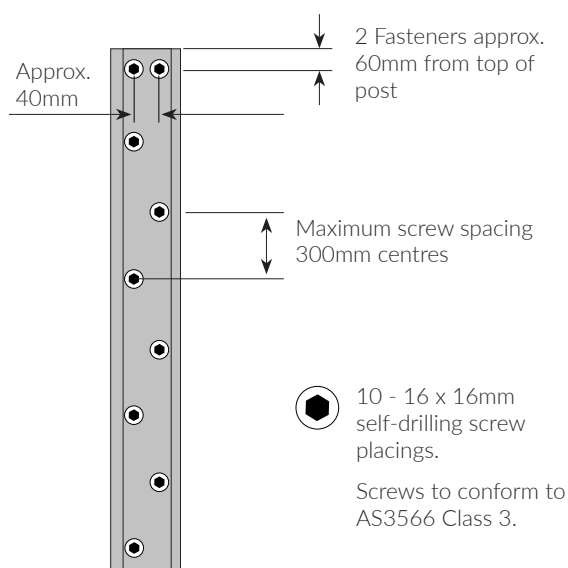
IMPORTANT

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

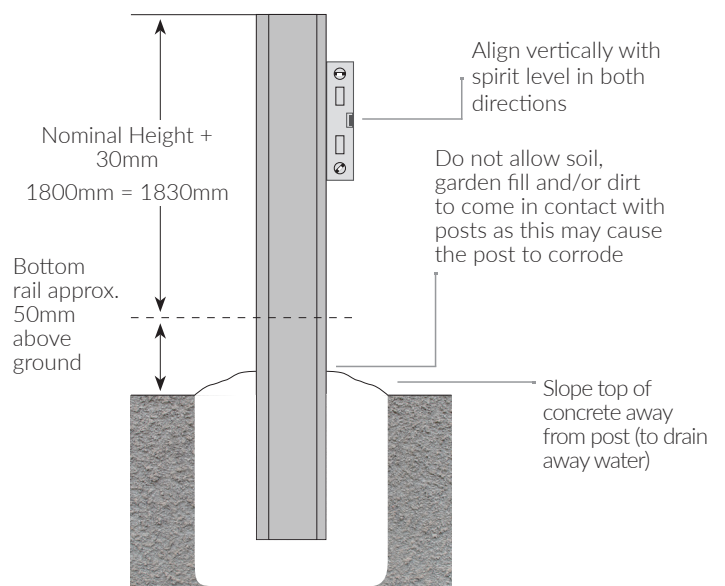
Soil Type	Minimum Hole Depth	Approximate Concrete Required
Clay/Firm Earth	600mm	2 bag per hole (20Kg bags)
Sand/Loose Fill	900mm	3 bag per hole (20Kg bags)

## STEP 2 – INSTALLING POSTS

### a. Fastening posts together



### b. Fixing post in ground



IMPORTANT

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

- 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.

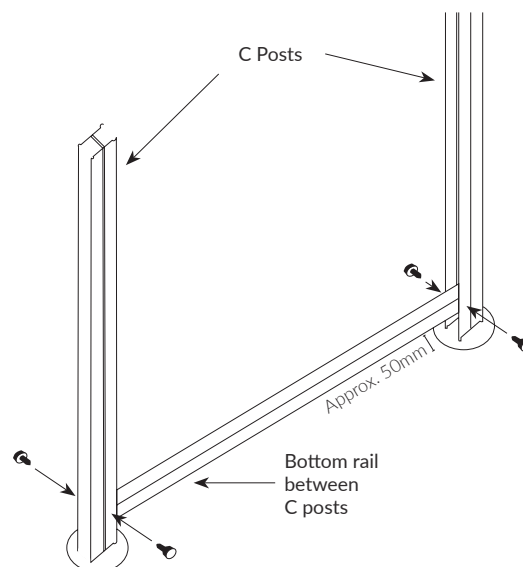
## STEP 3 – INSTALLING RAILS | INSTALLING PALINGS

### 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.



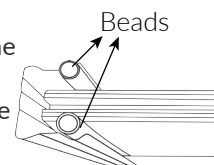
### b. Palings

#### 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.
- 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

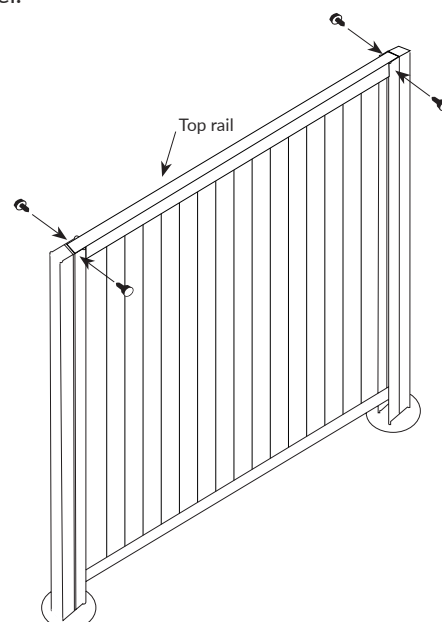


**Note:** the half-palings with a groove to be installed at top of panel and half-paling with a tongue to be installed at bottom of panel.

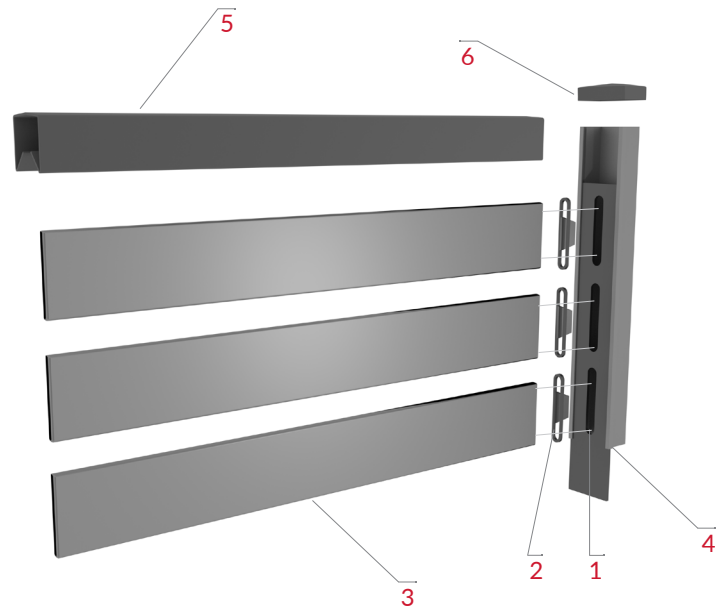
### c. Top Rail

- 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 tek screws provided. The top of the rail should be 15mm from the top of the post.

### d. Check Installation



ITEM	PART NUMBER	DESCRIPTION
1	SPI-xx	Slotted Post Insert
2	UNI3	Grommet
3	NMS-xx	Notched ColourSlat
4	Post-xx	Standard C Post
5	Rail-xx	Universal Rail
6	Cap-xx	Post Cap



## STEP 4 – SLOTTED POST INSERTS

- Ensure locking plugs and grommets are fully seated into the Slotted Post Inserts. CNF-UH4 locking plugs go into one post insert and CNF-UP3 grommets go in the other post insert. Make sure the locking plugs are all the same with the lock point at the bottom of the slot.

- Remove top rail and insert Slotted Post Inserts with locking mechanism of the plug at the base or bottom of each hole. If you are facing the fence, the locking plug with the fully enclosed backing will be in the left-hand post. You are now ready to insert the slats.

## STEP 5 – INSERTING THE SLATS

- Pull back the core strip (plastic covering) from each end of the slat approximately 100mm. Each slat will have a small notch near the bottom of the left end.

- The slat's roll-formed seam should be at the top rear of the slat when it is inserted.

- Insert the slat into the top hole of the Slotted Post Insert by pushing it fully into the UP3 Grommet until it contacts the rear of the ColourSlat™ post. The other end of the slat will now be able to be pushed into the UP4 Locking Plug where it is pushed into the final locking position. You may need to move the slat up or down to get it past the edge of the ColourSlat™ post.

- Continue installing the slats until all slots are filled.

- Peel all plastic core strip from the installed slats and discard.

- Mark the centre of the top and bottom slats with a non-carbon pencil.

- Peel the corestrip (plastic covering) from the Centre Vertical slat just before use. The pre-drilled Centre Vertical Slat (CVS) is now placed in position by standing it in the centre of the bottom rail and moving it into position with the slats. The CVS is then riveted into position using the pre-drilled holes.

- Replace the top rail on the fence panel and secure with pre-painted self-drilling hex. head screws #10-16. One screw each side of each corner ie 8 per panel.

- Secure the CVS to the top and bottom rails using a 10G 40mm wafer head screw.



**Always start at the top as you may injure your fingers starting from the base if a slat slips and falls next to an inserted slat.**

## STEP 6 – INSTALLING POST CAPS

All SmartWall 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.

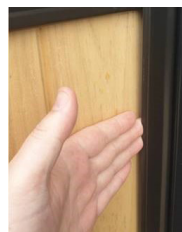
Make sure you keep the correct distance from the top of the post to the top of the rail (see page 4).



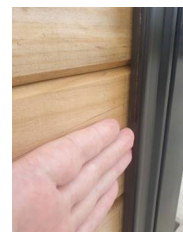
IMPORTANT

### 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 you 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 TVB 1617-BK



With TVB 1617-BK



IMPORTANT

### 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 occurrence of 'checking' (or small splits) on the surface of the paling is a normal and natural releasing of tension in the timber.

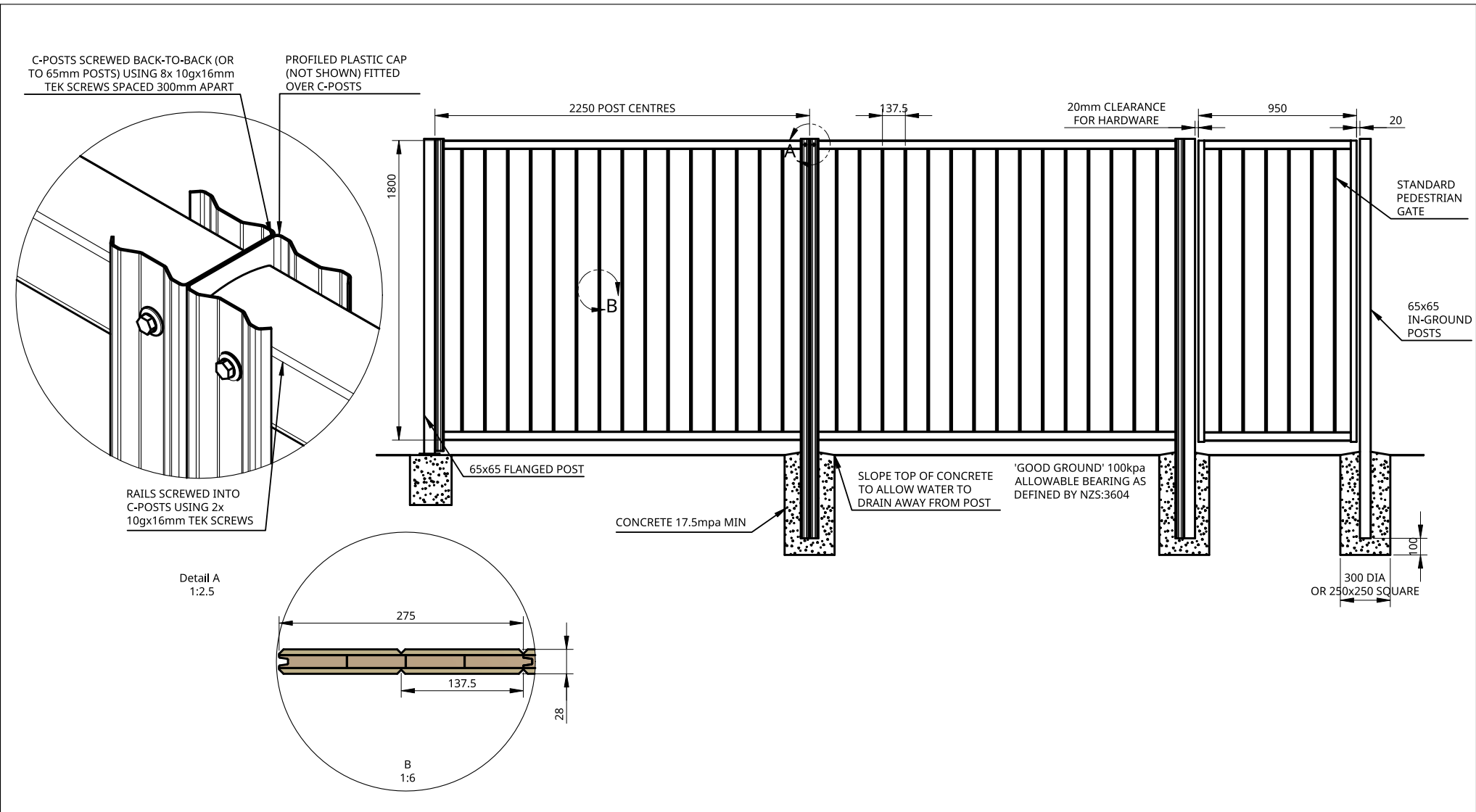
A common timber fence with individual palings will react by warping and twisting, and the overall appearance of it will continually look worse as it degrades over time. However the SmartWall paling is a 'laminated' (several pieces glued together) which provides structural integrity and will ensure your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

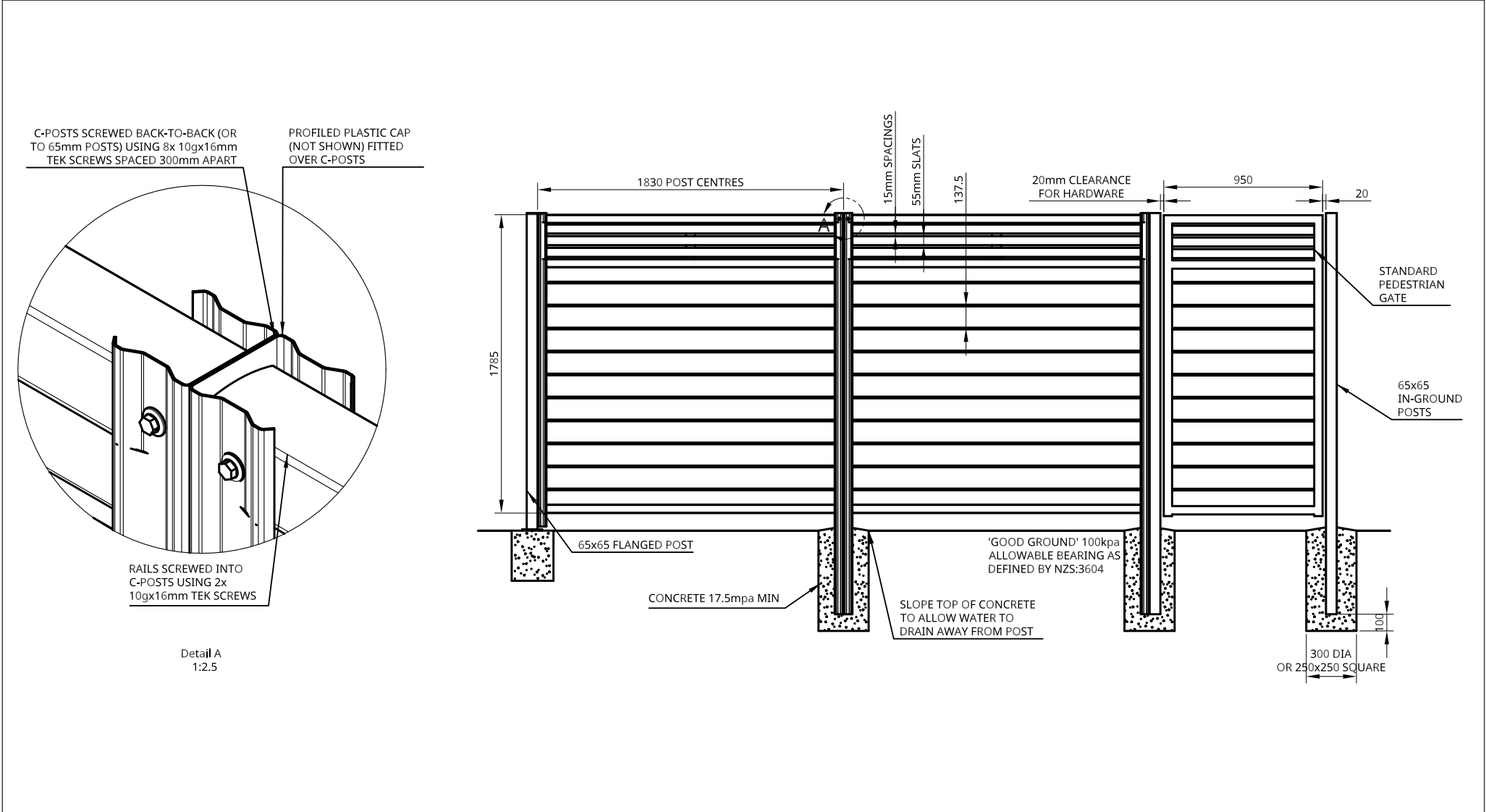
TECHNICAL DRAWINGS SMARTWALL VERTICAL



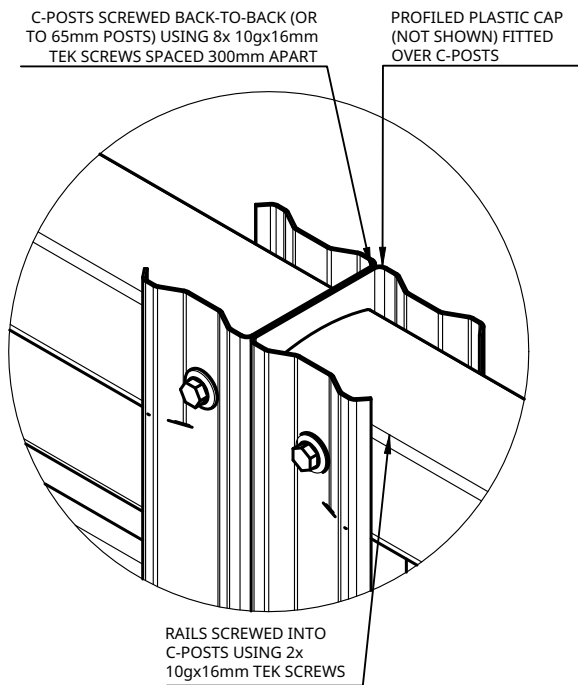
<div><div></div><div>Boundaryline</div></div> <div>Terranota Ltd, P.O. Box 1703 Invercargill 1703 Telephone: 0800 003 006 Fax: 03 215 8248 Email: enquiries@boundaryline.co.nz Website: www.boundaryline.co.nz © Copyright June 2017. All rights reserved to Terranota Ltd.</div>				Model SmartWall Vertical 1800mm		Rail Profile	50mm Roll-formed Steel ColourSlat Rail	Bracket Fixing	N/A
SIZE A4		DATE ISSUED 2020-06-15		REV. DO NOT SCALE DRAWING		C-Post Profile	65x50mm Roll-formed Steel ColourSlat C-Post	Post Caps	External Plastic Profiled Caps
SCALE 1:32		SHEET 1 of 1		WEIGHT		Panel Length	2250mm wide x 1800mm high	Standard Gate Hardware	Unsprung hinge, with Key-Lockable Latch
						Flanged Post	65x65x1900mm Galv Steel (125mm Square flange) M12 fixings	Child Safety Gate Hardware	Self-closing hinges, with Magnetic Top-Pull Latch
						In-ground Post	65x65x2500mm Galv Steel		



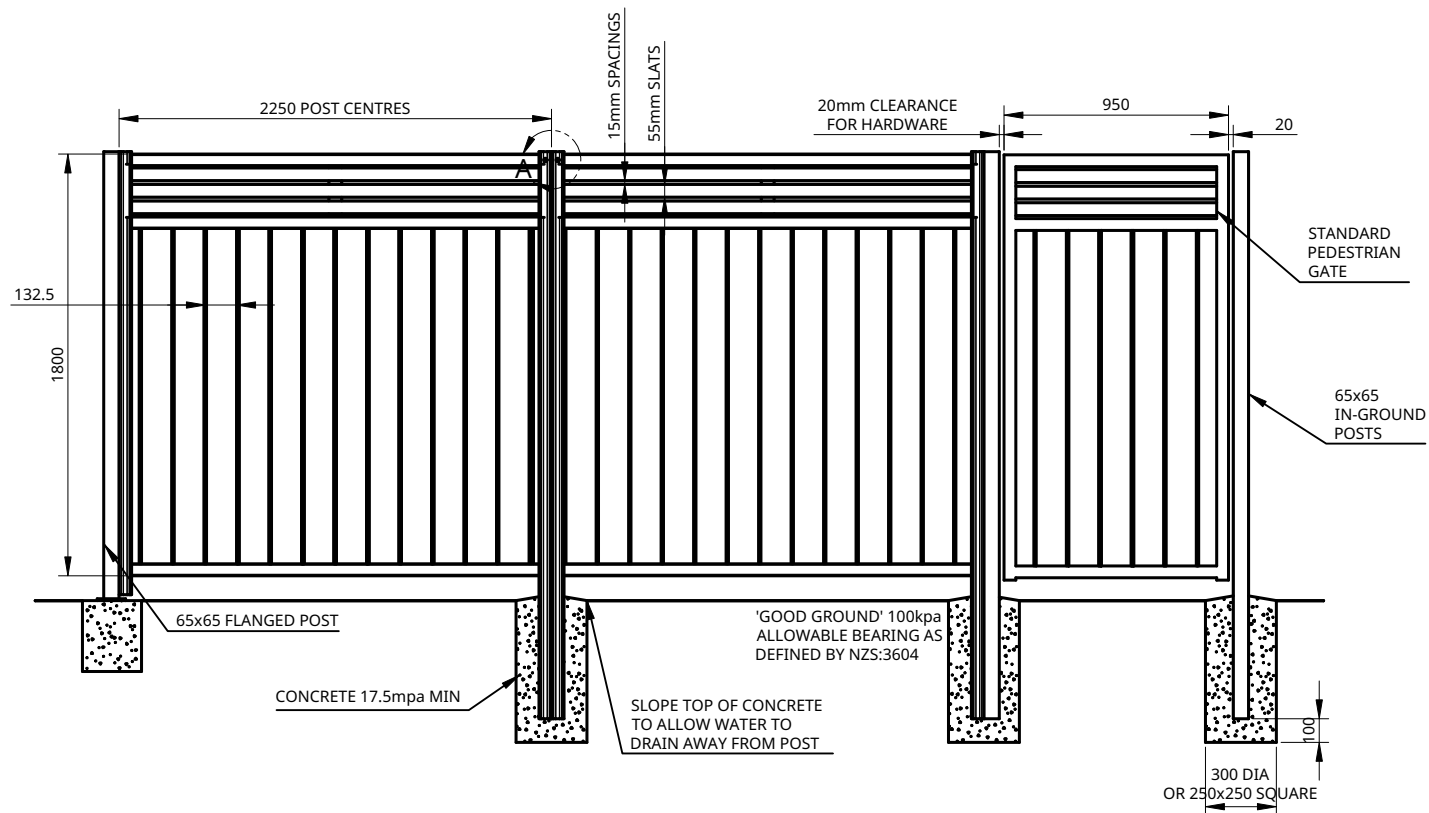




<b>Boundaryline</b> Terranota Ltd. P.O. Box 1703 Invercargill 1703 Telephone: 0800 003 006 Fax: 03 215 8248 Email: enquiries@boundaryline.co.nz Website: www.boundaryline.co.nz © Copyright June 2017. All rights reserved to Terranota Ltd.				Model <b>SmartWall Horizontal Slat-top 1800mm</b>	Rail Profile	50mm Roll-formed Steel ColourSlat Rail	Bracket Fixing	N/A
SIZE <b>A4</b>	DATE ISSUED <b>2020-06-15</b>	REV.	DO NOT SCALE DRAWING	UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS	C-Post Profile	65x50mm Roll-formed Steel ColourSlat C-Post	Post Caps	External Plastic Profiled Caps
SCALE <b>1:32</b>	SHEET <b>1 of 1</b>	WEIGHT			Panel Length	2250mm wide x 1800mm high	Standard Gate Hardware	Unsprung hinge, with Key-Lockable Latch
					Flanged Post	65x65x1900mm Galv Steel (125mm Square flange) M12 fixings	Child Safety Gate Hardware	Self-closing hinges, with Magnetic Top-Pull Latch
					In-ground Post	65x65x2500mm Galv Steel		



Detail A  
1:2.5



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SIZE <b>A4</b>	DATE ISSUED <b>2020-06-15</b>	REV.	DO NOT SCALE DRAWING
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SCALE <b>1:32</b>	SHEET <b>1 of 1</b>	WEIGHT
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Model  <b>SmartWall Vertical Slat-top 1800mm</b>	Rail Profile	50mm Roll-formed Steel ColourSlat Rail	Bracket Fixing	N/A
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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS



## 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.

## CONTACT BOUNDARYLINE FENCING

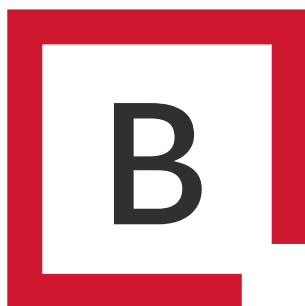
SmartWall Fencing is designed to withstand most wind conditions. The wind on the fence at your site will depend on a number of factors, including the number of surrounding properties and how exposed the location is.

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.

**BOUNDARYLINE'S TECHNICAL SUPPORT: 0800 003 006**

To learn more about SMARTWALL visit: [www.boundaryline.co.nz/our-brands/smartwall/](http://www.boundaryline.co.nz/our-brands/smartwall/)



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