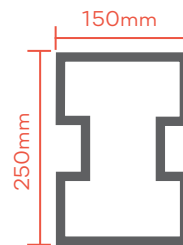


INSTALLATION GUIDE

BARRIERWALL



THANK YOU FOR CHOOSING ONE OF OUR QUALITY PRODUCTS. WE ARE THE INDUSTRY LEADERS IN COST EFFECTIVE, ACOUSTIC AND BOUNDARY WALLS, AND THIS PRODUCT WILL STAND THE TEST OF TIME AND WITHSTAND THE ELEMENTS IF INSTALLED IN ACCORDANCE WITH THESE GUIDELINES.



BARRIERWALL

The BarrierWall enables businesses to combine the pleasing aesthetics of a domestic wall with the scale, resilience and outstanding sound insulation of a commercial wall.

The dimensions of the BarrierWall posts give it the ability to achieve a significantly greater height than other modular wall systems, as well as take on a much stronger wind load.

This makes the BarrierWall ideal for those commercial applications that necessitate acoustic barriers of a larger scale, in order to fully address the greater noise pollution challenges encountered by businesses as compared to residential buildings.

NOTE

It is recommended that the reader pays particular attention to items identified as a NOTE in this manual to ensure a satisfactory installation and that the long term performance of the products.

For correct finishing of your modular wall, you must paint or seal the panels within 90 days of installation.

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BEFORE YOU START

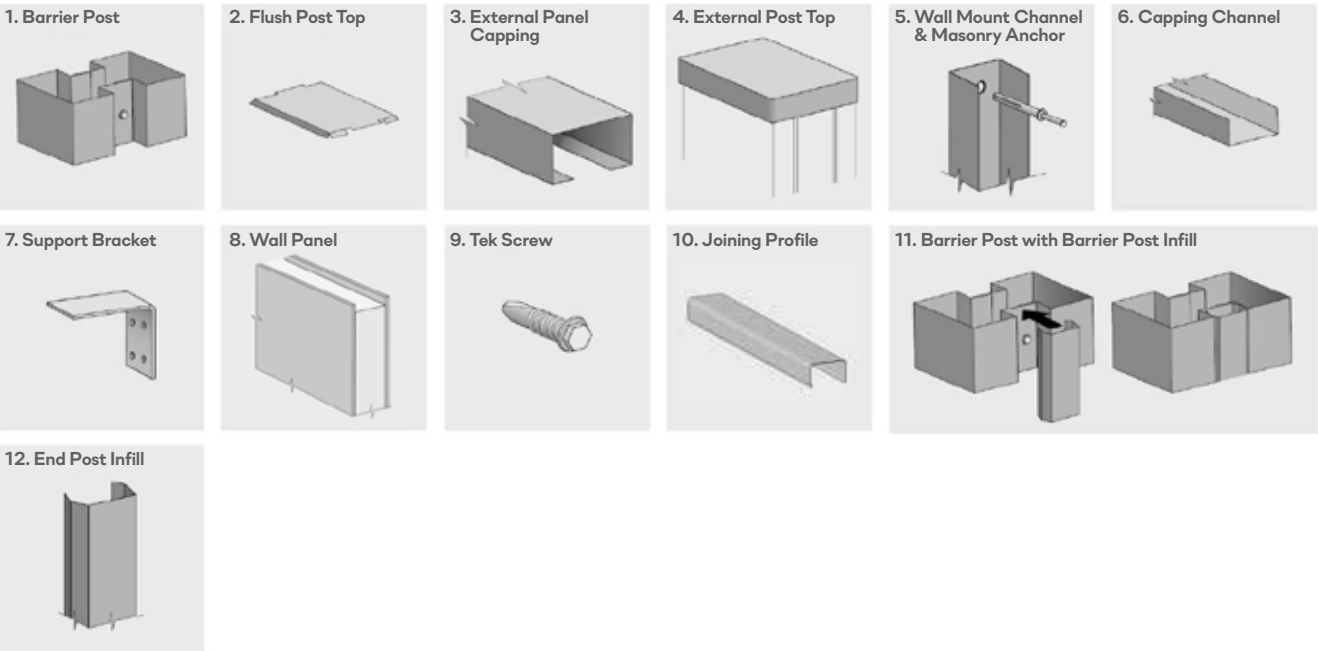
The recommendations detailed by ModularWalls in this guide are formulated along the lines of good building practice. They form a "common-sense" approach and are not intended to be an exhaustive statement of all the relevant data. Further, as the success of projects depend on factors outside the control of ModularWalls (e.g. quality of workmanship, particular design, detail requirements, etc.), we accept no responsibility for, or in connection with, the quality of the projects or their suitability when completed.

If you are in any doubt please seek independent advice or contact ModularWalls. We are always happy and available to answer questions regarding installation procedures, no matter how small or insignificant you think they may be. 7 day a week technical and installation advice is available on 1300 556 957.

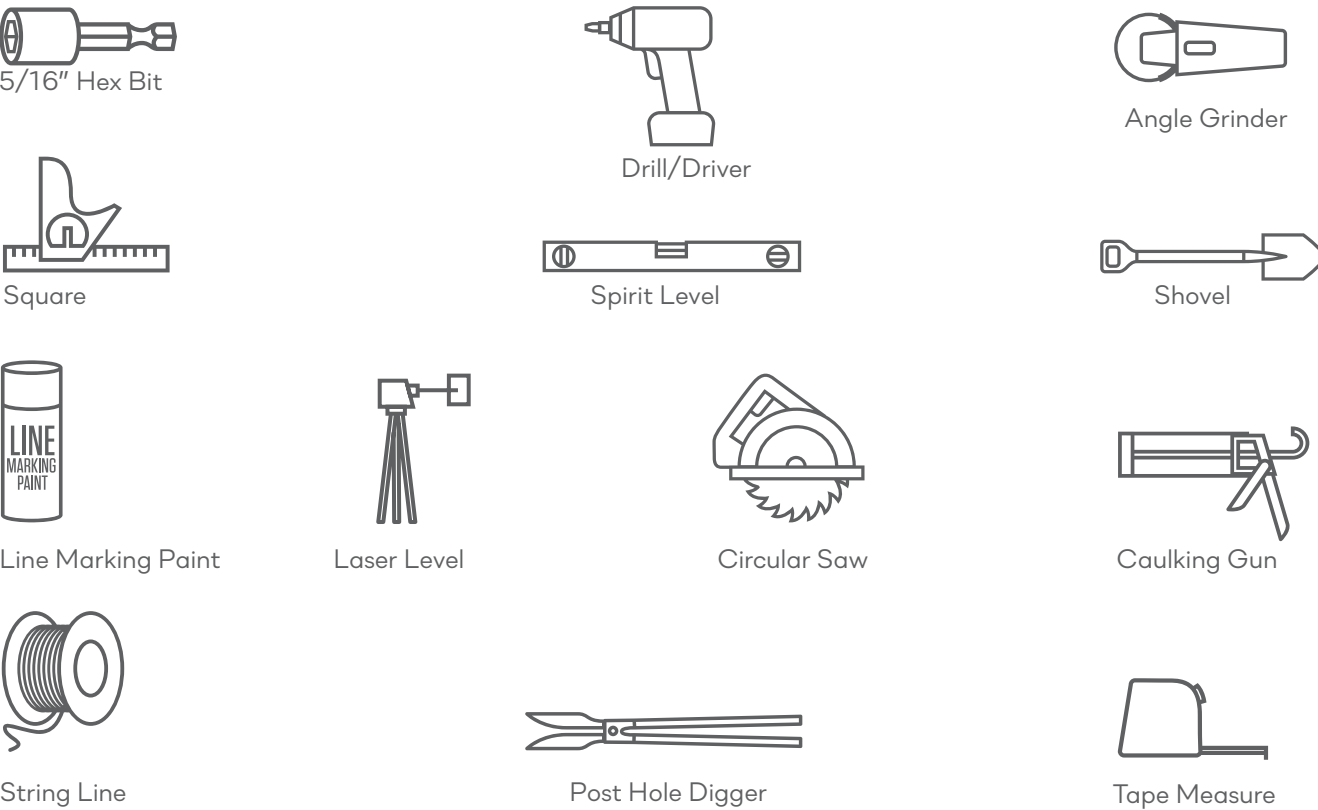


7 DAY A WEEK TECHNICAL
AND INSTALLATION ADVICE IS AVAILABLE
BY PHONING 1300 556 957 AND SELECTING
THE AFTER HOURS OPTION

COMPONENT LIST



TOOLS NEEDED



STEP 1:

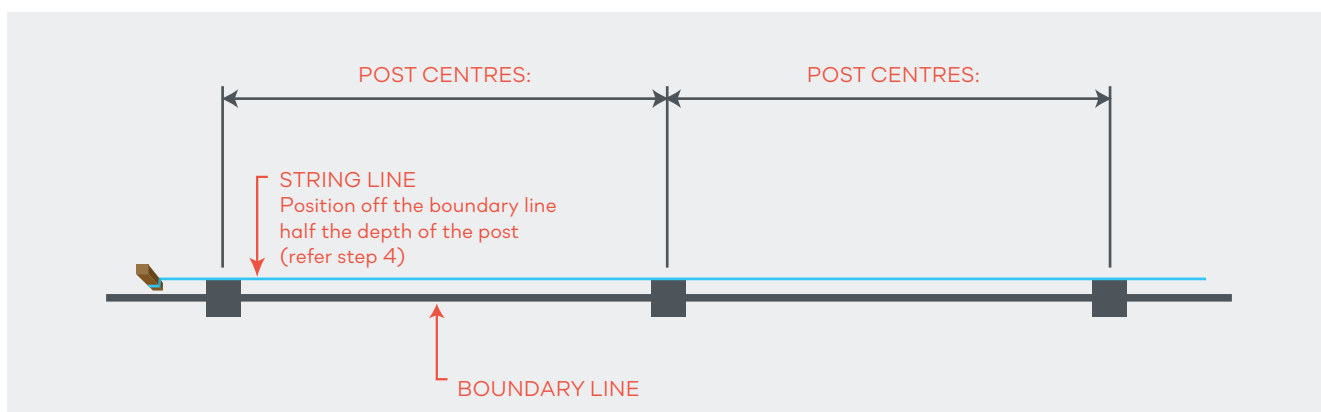
DETERMINE CONSTRUCTION LINE, POSTHOLE CENTRES & DEPTHS

Please read the wind region and post hole depth charts carefully prior to starting your installation.

We recommend you plan your wall set out/post position on a piece of paper first to save unnecessary digging.

Accurately determine the boundary line to where the wall will be installed, (in some cases a surveyor may be required) mark this with a string line as per the diagram below.

NOTE: The diagram below is for reference purposes only & shows the wall splitting the boundary line; this may not always be the case and will depend on your individual circumstances.



Determine your post hole centres using the table below as a guide and mark out your post hole positions on the ground with line marking paint.

NOTE: Wall panels may be trimmed with a circular saw if necessary to fit in within an exact measurement (panel cutting procedure is detailed later in this guide)

Post holes can be dug by hand or with a mechanical auger. Use the Footing depth table on page 7 to determine your posthole depth and diameter.

Recommended footing depths listed here are for wind regions A & B plus terrain categories 2.5 & 3. If you are building your wall in a Cyclonic wind area, on the top of a hill, adjacent to an escarpment, on a ridge, or in terrain category 1, you will need engineering advice beyond the scope of this publication.

Please contact Modular Wall Systems™ directly for this information.

STEP 1:

DETERMINE CONSTRUCTION LINE, POST HOLE CENTRE & DEPTHS

STANDARD 'POST CENTRE TO POST CENTRE' GUIDE

Wall panel length	VogueWall (75mm) post hole centres
2400mm	2500mm
3000mm	3100mm (3100mm centres are not available for all regions of Australia)

FOOTING DEPTH TABLE

Wall Height	Hole Depth into firm earth or clay		Hole depth into sand, soft clay or loose earth		Hole diameter
	Wind Region		Wind Region		For all wind regions the Post Hole diameter should be your post width plus 100mm. Barrier = 350mm (min)
	A and B	C	A and B	C	
3000mm	1000mm	NOTE: You will need engineering advice beyond the scope of this publication. Please contact ModularWalls™ directly for this information.	1200mm	NOTE: You will need engineering advice beyond the scope of this publication. Please contact ModularWalls™ directly for this information.	
3300mm	1100mm		1300mm		
3600mm	1200mm		1400mm		
3900mm	1300mm		1500mm		
4200mm	1400mm		1600mm		
4500mm	1500mm		1700mm		
4500mm +	Please contact ModularWalls™ for specific advice.				

NOTE: The free ends of your wall may need to be shortened or strengthened depending on your site specific specifications including wall height, terrain category, shielding class, wind region & soil conditions. The plan for your wall layout (if generated by ModularWalls) will specify any of these requirements.

1) Grade of concrete N32 with a maximum aggregate size of 20mm

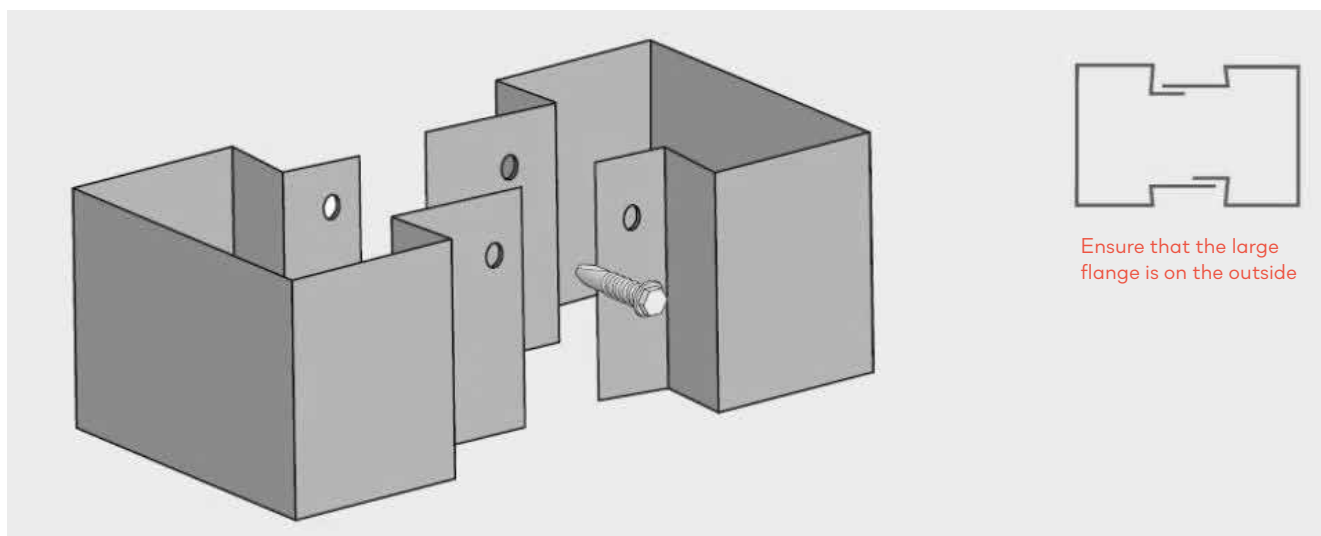
2) Concrete shall be compacted after placement by means of roding or vibrating

STEP 2:

SCREW POSTS TOGETHER

Place the two halves of the post on a FLAT surface. Align the pre-punched holes in the post exactly (large flange on top) and clamp both ends together – see picture.

NOTE: Screw both ends together first then fasten one screw in the middle (with supplied hex head screws). The remaining screws can be fixed in any order.



STEP 3:

FIXING THE BASE BRACKETS TO THE POST

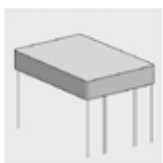
Attach the panel support bracket into the post with the hex head screws supplied. The measurement from the top of the post will vary depending if you have Flush (standard) or External post tops.

NOTE: Bracket leg should point **DOWNWARDS** for ease of panel fitment.



FLUSH POST TOPS (STANDARD)

The support bracket should be fixed at 3mm more than the finished wall height. Example: for a 4200mm high wall the bracket should be fixed at 4203mm from the top of the post. This 3mm is to allow for the thickness of the top wall capping and base channel on top of the panel measurements.



EXTERNAL POST TOPS

The support bracket should be fixed at 23mm more than the finished wall height. Example: for a 4200mm high wall the bracket should be fixed at 4223mm from the top of the post. This allows 23mm for the post top to sleeve over the post after the panels have been installed.



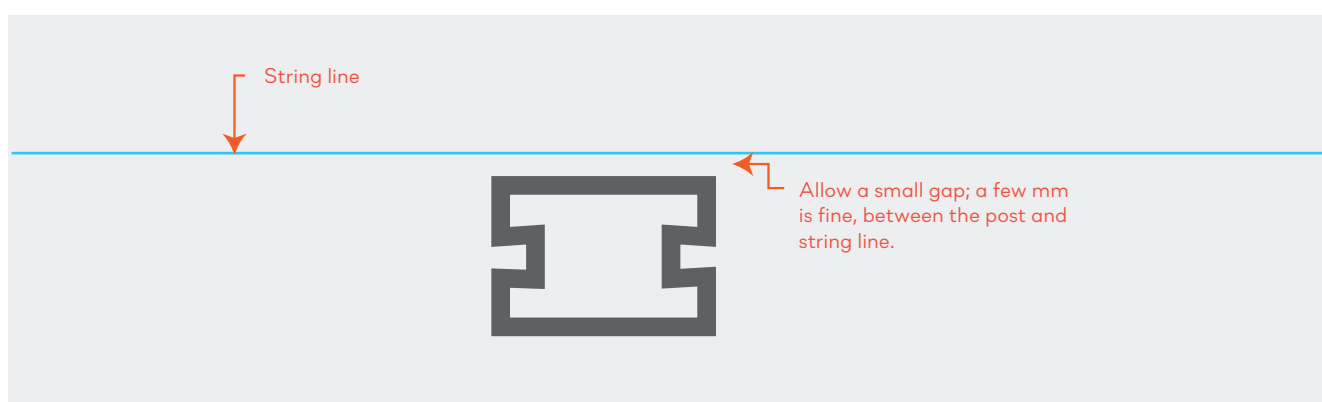
STEP 4:

POST FITMENT & ALIGNMENT

These instructions presume you are using a bracing method as detailed and pouring the footings from a concrete truck. There are many different methods that could be adopted depending on your knowledge and construction experience.

Measure the depth of the hole and, if necessary, fit post extensions to the post so the base of the post is approx 50mm off the bottom of the hole.

Working to a string line on the face of the post, insert the first post into the hole and slide the timbers under the brackets and level to the correct height with packers.



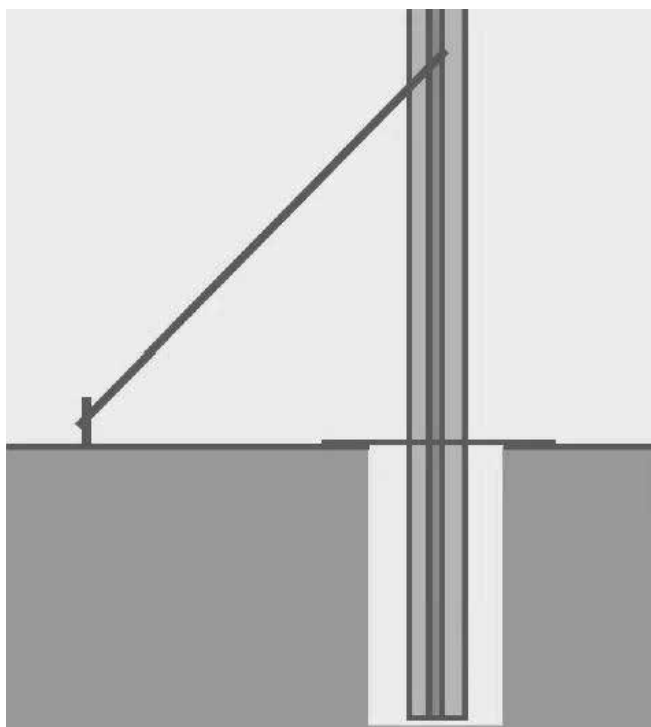
STEP 4:

POST FITMENT & ALIGNMENT

NOTE: The post should be clamped or secured so it cannot 'skate' or 'slide' on the supports. The timbers should also be pinned to the surrounding earth.



Next while holding the post vertical secure the 'diagonal' support brace into position (approx 2m from the ground) and then drive the stake into the ground in the appropriate position and adjust to level.

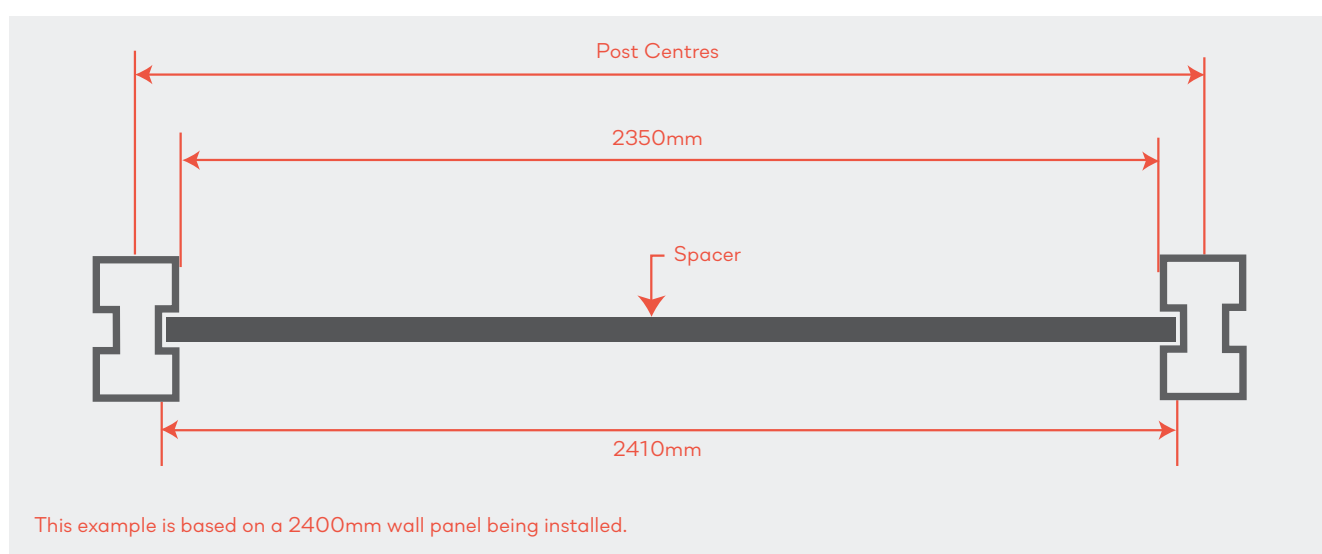


STEP 4:

POST FITMENT & ALIGNMENT

Working to a string line on the face of the post, insert the first post into the hole and gradually pour in the concrete (mix as per the manufacturers recommendations). Continually check the post alignment with a spirit level as the concrete is being poured.

Your string line should have a small amount of clearance between it and your post. If you have your string line always touching the post you can risk pushing it slightly every time and the result will be an 'arc' in the line of the wall.



Now insert the next post in the hole using the 'spreader bar' as a spacer. This spacer bar should rest on the base brackets.



STEP 4:

POST FITMENT & ALIGNMENT

NOTE: If you are pressing your spacer bar to the back of the panel rebate make sure it does not collide with a tek screw. If it does, remove the tek screw at this stage and re insert it later when the spacer has been removed.

We recommend another spacer bar at around 2000mm in height. The posts can be very tall and if you are a few millimeters out at the bottom that can translate to a lot at the top and in turn causing poor panel fitment.

After the post alignment has been performed you can secure the top spreader bar into position. This will hold the 2 posts parallel to each other.

NOTE: It is very important that the top spreader bar is parallel to the bottom one.

You can see below a combination of steel and timber spacers being used.



STEP 4:

POST FITMENT & ALIGNMENT

If pouring directly from a concrete truck - you must stabilize the bottom of the post to the hole. If you do not, the force of the concrete entering the hole will push the post around and undo all the previous alignments. This can make panel inserting very difficult and ultimately produce a poor result.

To do this we recommend using bagged concrete that doesn't require mixing in the hole or pre-mixed concrete that can be shovelled in the hole.



Go back and have one final check of all post alignments before pouring concrete and also check the alignment as you go.



STEP 5:

CONCRETING THE POSTS

Recommended concrete grade is 32 mpa with a 20mm aggregate and 90 slump.

The concrete should be a wet mix so as not to put undue force on the post as it is entering the hole.

MOST IMPORTANTLY...ASK THE DRIVER TO POUR THE CONCRETE SLOWLY! If you try to rush things by pouring it fast you will only cause more work later by having ill aligned posts.

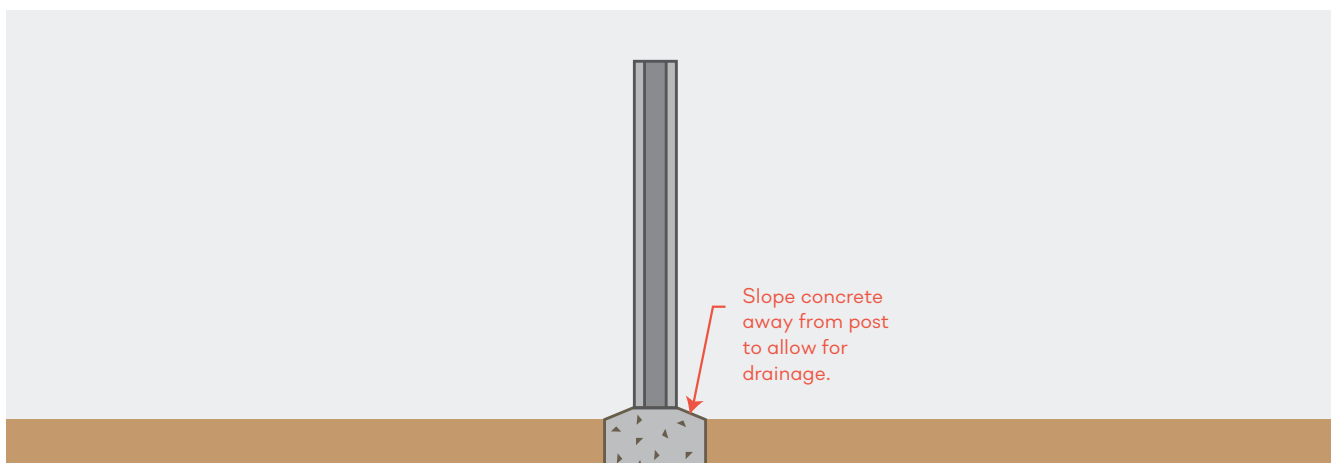
Rod or vibrate the concrete as required.



After the posts have set and the support shoes have been removed you should mix up a mortar mix and with a trowel slope the concrete away from the post for correct drainage.

It may be required to apply a zinc rich industrial preventative coating to the base of the footing and 100mm minimum up the post.

The recommended coating is DULUX DUREBILD STE applied thickly ie 100 microns minimum.



STEP 6:

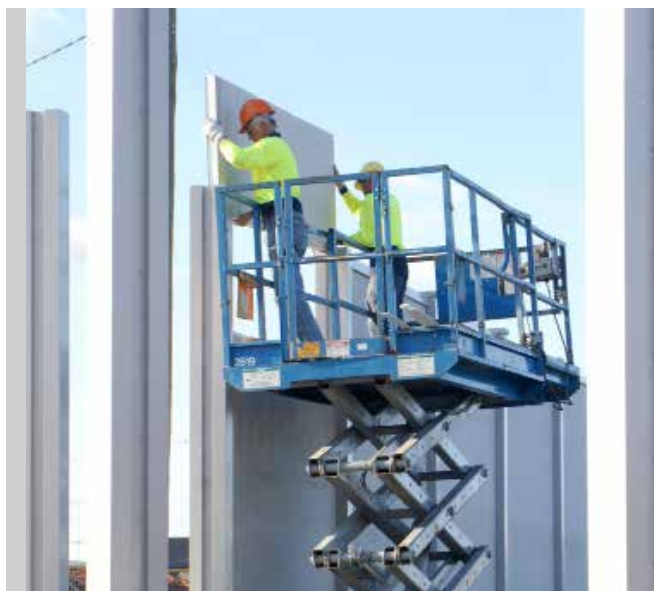
FINAL WALL ASSEMBLY

NOTE: This step and pictures below are for reference only. Step 7 needs to be performed inserting any wall panels.

Allow concrete to cure completely before assembly.

On tall walls we recommend installing the panels via a scissor lift or a crane/hiab. For lower walls, the panels can be installed using a low portable scaffolding.

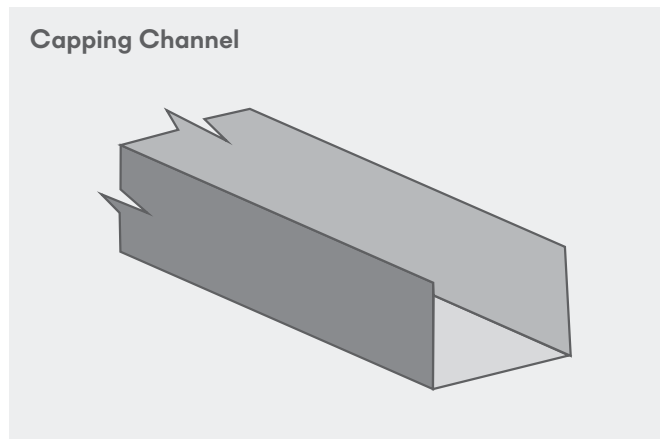
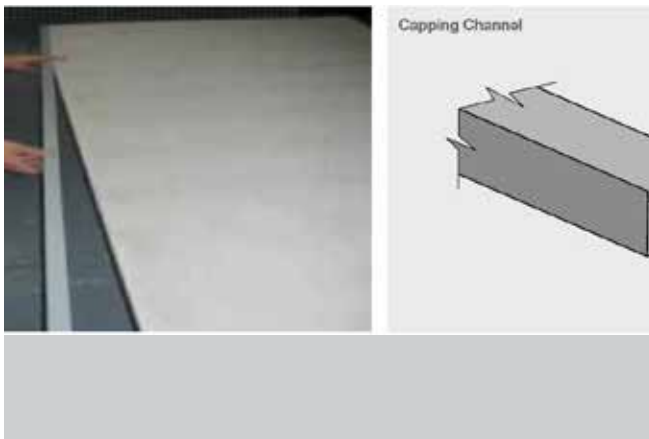
Maneuver the scissor lift close to the wall (side on if possible) and load the platform with all the panels required plus joining strips and wall capping.



STEP 7:

FITTING THE CAPPING CHANNEL TO THE PANEL

The capping channel will be slightly shorter than the panel to allow it to be guided down the post easily so it does not collide with the heads of the tek screws. Apply 'liquid nails fast grab' or similar along the 90 degree radiuses (as pictured below). Ease the wall capping over the panel starting at one end and press down. Start at one end of the panel, approx 5mm in and carefully ease the capping channel over the panel. Once fitted, tap the capping channel to make sure it is seated correctly.



STEP 8:

INSERTING THE WALL PANELS

NOTE: Make sure the base bracket is free of debris. Pictures below depict a scissor lift installation only.

With one person at either end, lift the panel vertically and insert into the top recesses of the post. The panel must be guided down at an even rate or it will jam. This can be done by inserting the panel into the rebate by approx 200mm and have one person apply a twisting action onto the panel to jam it up in the rebate. This person should then move into the middle of the panel to support it (with a twisting action still applied) while the other scissor lift operator lowers the platform.

There should be 2 people below that then catch the first panel and guide it down onto the base brackets. These two people should then fit the panel joining profile as outlined in the next step.

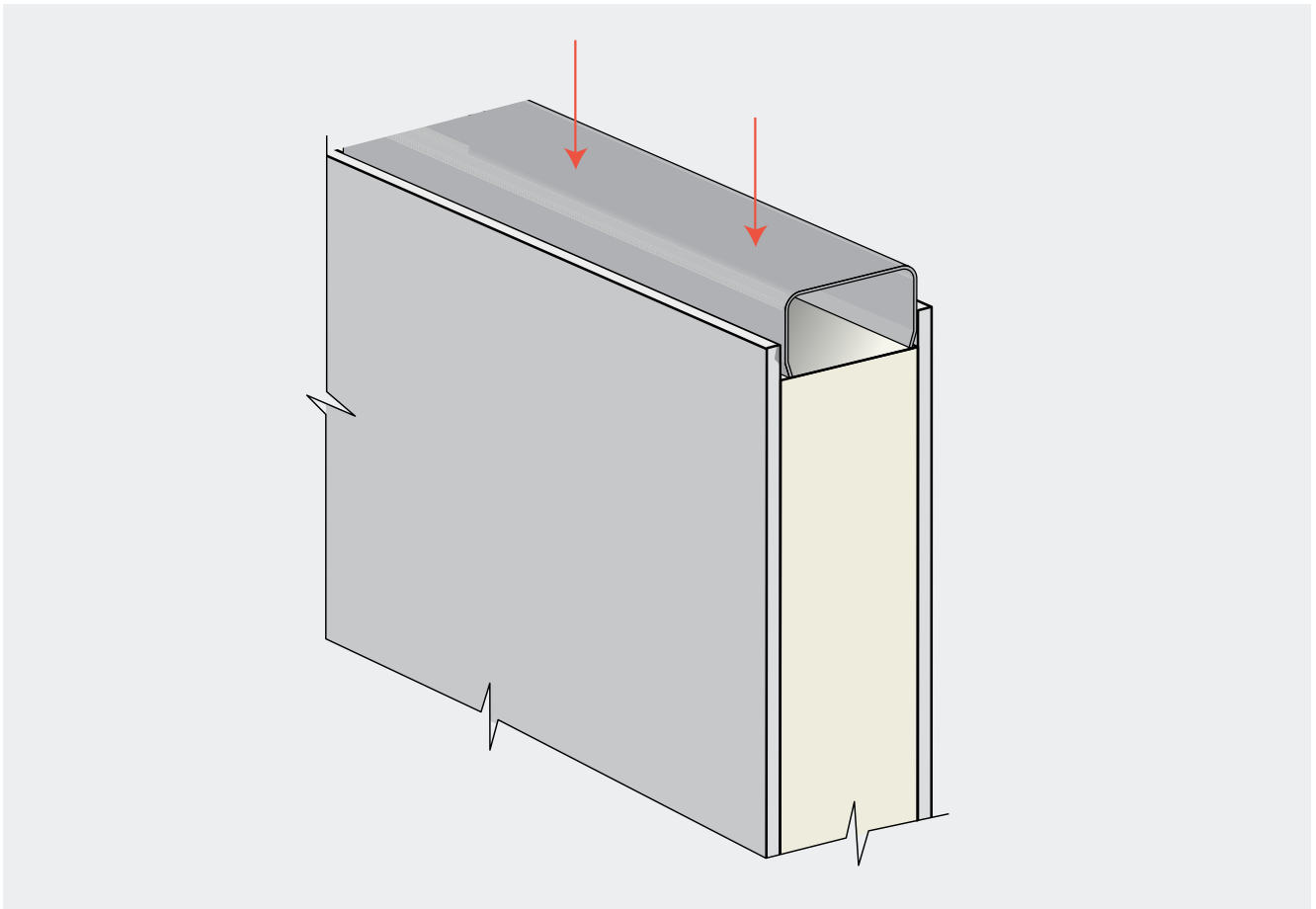


STEP 9:

JOINING PROFILE

Insert the joining profile into the bottom panel making sure it is seated all the way down against the polystyrene core.

NOTE: The panel joining profile is 2400mm long regardless of your panel length, i.e if you have a 3000mm panel, position the joining profile centrally.



STEP 10:

INSERTING CONSECUTIVE PANELS

Guide the second panel down on top of the bottom panel and press down to seat the joining profile. Care should be taken to make sure everything is in place before attempting to press the panels together.

If they do not align correctly with light downward pressure remove the top panel and inspect the polystyrene joint. It may be necessary to 'tap' the panel down using a heavy block of wood in a pivoted slapping action to bring it together completely (see picture below).



STEP 11:

LINKING THE POSTS (FOR WALL HEIGHTS 3900MM & ABOVE)

The purpose of this step is to link the tops of the posts from one to the next. This will assist the top alignment and increase strength.

After the top panel is inserted and before any wall capping is fitted, place the steel 'strap' on top of the polystyrene (see below).



Next fit the wall capping (outlined further in the next step) + bracket and Tek screw in place. Make sure to 'pull or push' the post if required to achieve the correct alignment before Tek screwing off.

As seen in the pictures below the bracket can be fitted either on top or below the capping.

If you have flush post capping, you must alter the bracket attachment method to suit.



STEP 12:

FITTING THE TOP WALL CAPPING

There are two types of panel capping options - You will either have a Capping Channel (flush finish) or an External Panel Capping (box). Both procedures are outlined below.

CAPPING CHANNEL

Apply 'liquid nails fast grab' or similar along both internal radiuses. This adhesive will contact with the fibre cement sheets once the channel is installed. Start at one end approx 5mm in and carefully guide the capping channel over the panel. Once fitted, tap the capping channel to make sure it is seated correctly.



EXTERNAL PANEL CAPPING

Apply 'liquid nails fast grab' or similar along the two locations as pictured on the left, so once installed the liquid nails will contact the edges of the fibre cement sheets.

Ease the wall capping over the panel starting at one end and press down (see picture below). Make sure you align the panel capping correctly before the liquid nails dries. Once set, the liquid nails will stop any unwanted movement.



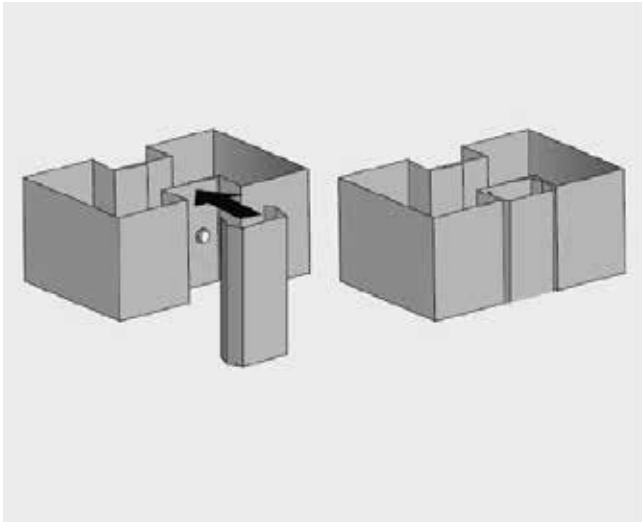
STEP 13:

END POST INFILLS

To fill the recess in a post where you are not inserting a panel, snap in an end post infill.

NOTE: These are designed to be inserted with a small amount of force.

Where your wall is stepped, this insert can be cut to size to suit the step and inserted in the expose recess.



STEP 14:

FITTING THE TOP POST TOPS

There are two types of Post Top options – you will have either have External Post Top, or to give a flush finish look you will use a Flush Post Top (standard).

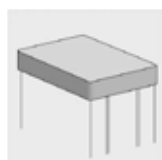
Both procedures are outlined below.



FLUSH POST TOP (STANDARD)

Lay your flush post top on top of the post making sure there are no obstructions that may cause it to sit unevenly. If any obstructions are present, such as one flange of a post-half being slightly higher, make the necessary adjustments to allow the flush post top to sit correctly.

Seal around the post top with 'Sika flex pro - grey' or a similar paintable polyurethane sealant. Scrape back any excess sealant and finish by smoothing out your sealant application with a rag coated in mineral turpentine.



EXTERNAL POST TOP

Apply liquid nails to all four internal walls of the post top. Sleeve the post top over the post and seat down by hand then level the post top.

NOTE: It may be necessary in some cases to place a small packer in-between the top and the post to hold the top level until the liquid nails dries.



STEP 14:

FITTING THE TOP POST TOPS



ADDITIONAL

CUTTING THE PANELS & POSTS

NOTE: Wear the appropriate safety equipment for performing the task. Eye wear, hearing protection & a dust mask.

CUTTING THE PANELS

The panels can be cut using a circular saw with a timber blade. Remember to always support or catch the piece you're cutting off as it may break towards the end of your cut if you don't.

NOTE: If your circular saw doesn't have a deep enough blade to cut through the panel in one sweep then you must cut through one face and carefully turn the panel over and cut through the other.

The panel should go 25mm into the rebate of each post.

Example: If the distance between the internal face of posts is 2000mm then the panel should be cut at



CUTTING THE POSTS

Mark the post and use a 5 inch/125mm angle grinder with a 1mm cutting blade to cut through the post. A smaller grinder (4 inch/100mm) can be used but you will find it difficult to get the blade depth required when cutting through the rebate in the post that accepts the panel.

NOTE: All cut edges that will remain exposed to the elements will require treating with a zinc rich paint such as 'cold gal' or similar.



ADDITIONAL

POST EXTENSIONS (WHEN EXTRA POST LENGTH IS REQUIRED)

Where a post extension is required the 2 halves must be flexed open and sleeved over the exterior of the post base by 200mm minimum, then fastened with the supplied tek screws at a minimum 100mm spacings along the flange edges (see picture below).

We recommend digging your hole first, then measuring the depth of the hole and sleeving the post extension onto the base of the post to suit the hole depth. Before panel insertion the post must be core filled with concrete to cover the post extension internally.

NOTE: The pictures below are only showing one half of the post extension being fitted, the post should be turned over and the other half fitted also. The 2 halves of the post extension will not quite meet in the middle of the post, this is to allow a small amount of concrete to enter the centre of the post before actual core filling.



ADDITIONAL

STEPPING OR RAKING YOUR WALL

This will generally be the most complex part of any installation. Please take the time to draw it out on a piece of paper before setting any posts in the ground. Having to remove posts that are concreted in can be very disheartening! And remember we are always here to help you get it right so if you are unsure please ask.

There are three methods for dealing with sloping ground. The examples below are based around an 1800mm high wall.

METHOD 1

Stepping the bottom of your panels and maintaining a minimum 1800mm wall height at one end and a taller wall height at the low end of the slope.

NOTE: This will leave a void/gap under one end of your wall panels.

METHOD 2

Raking/cutting the base panel and maintaining a maximum 1800mm wall height.

NOTE: This will leave no void/gap under your wall panels but will reduce your wall height at one end.

METHOD 3

Raking/cutting the base and maintaining a minimum 1800mm wall height at one end and a taller wall height at the low end of the slope.

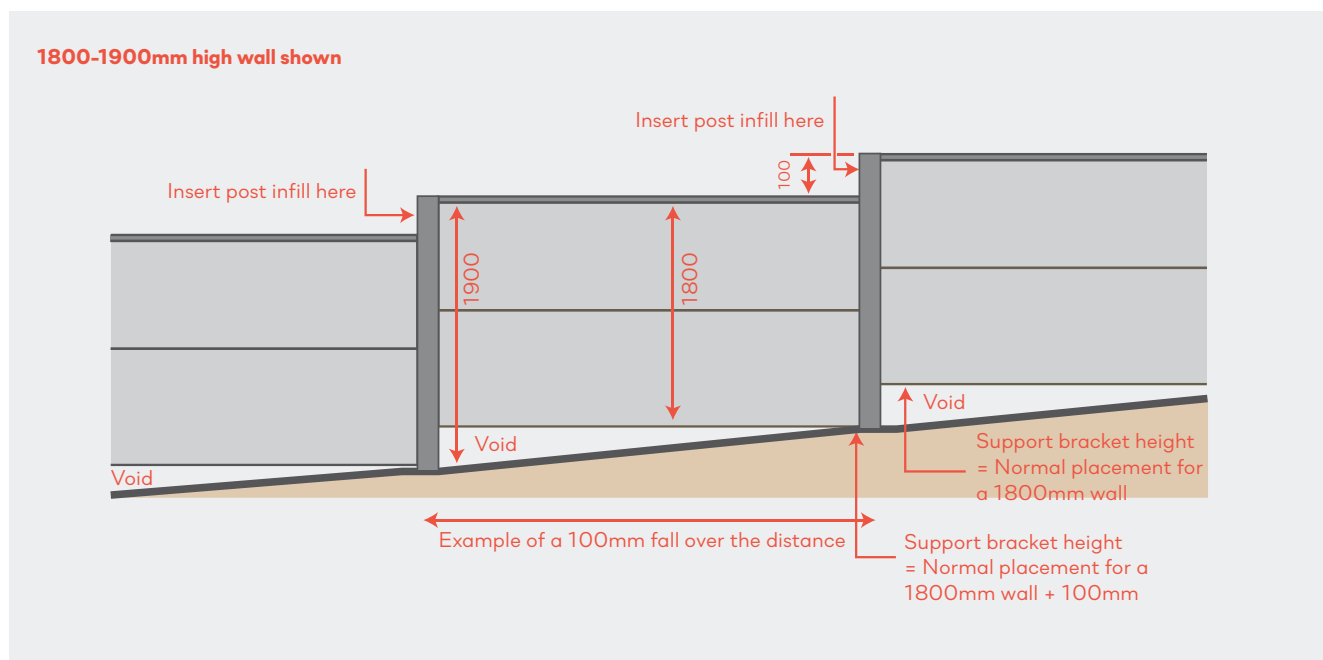
NOTE: This will leave no void/gap under your wall panels but will increase your wall height at the lower end of the slope above 1800mm. A longer base panel is required for this method and as such should be a consideration at the time of ordering.

ADDITIONAL

STEPPING OR RAKING YOUR WALL

STEPPING METHOD 1 - MAINTAINING A MINIMUM 1800MM WALL HEIGHT

As pictured below it should be noted that you will be left with a void at the low end of the slope but you will maintain a minimum 1800mm wall height. In most cases on gradual slopes this void won't be large and can either be left as is or planted in front of.

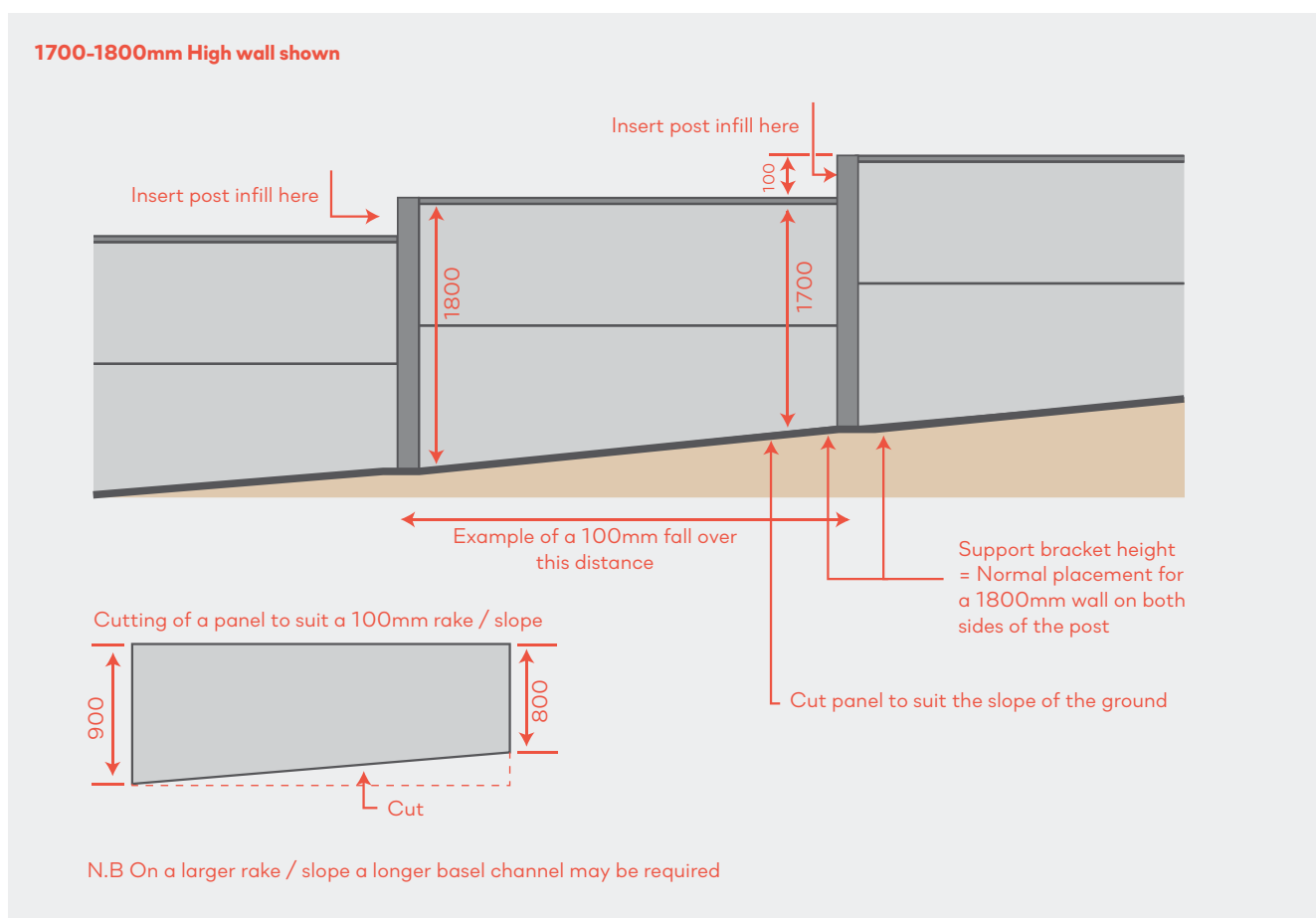


ADDITIONAL

STEPPING OR RAKING YOUR WALL

STEPPING METHOD 2 – RAKE/CUT YOUR BOTTOM PANEL TO THE SLOPE USING 1800MM WORTH OF WALL PANELS

You will maintain a maximum height of 1800mm wall height – As pictured below it should be noted that your wall height at the high side of the slope will be reduced by the amount of the rake – in this situation 100mm.



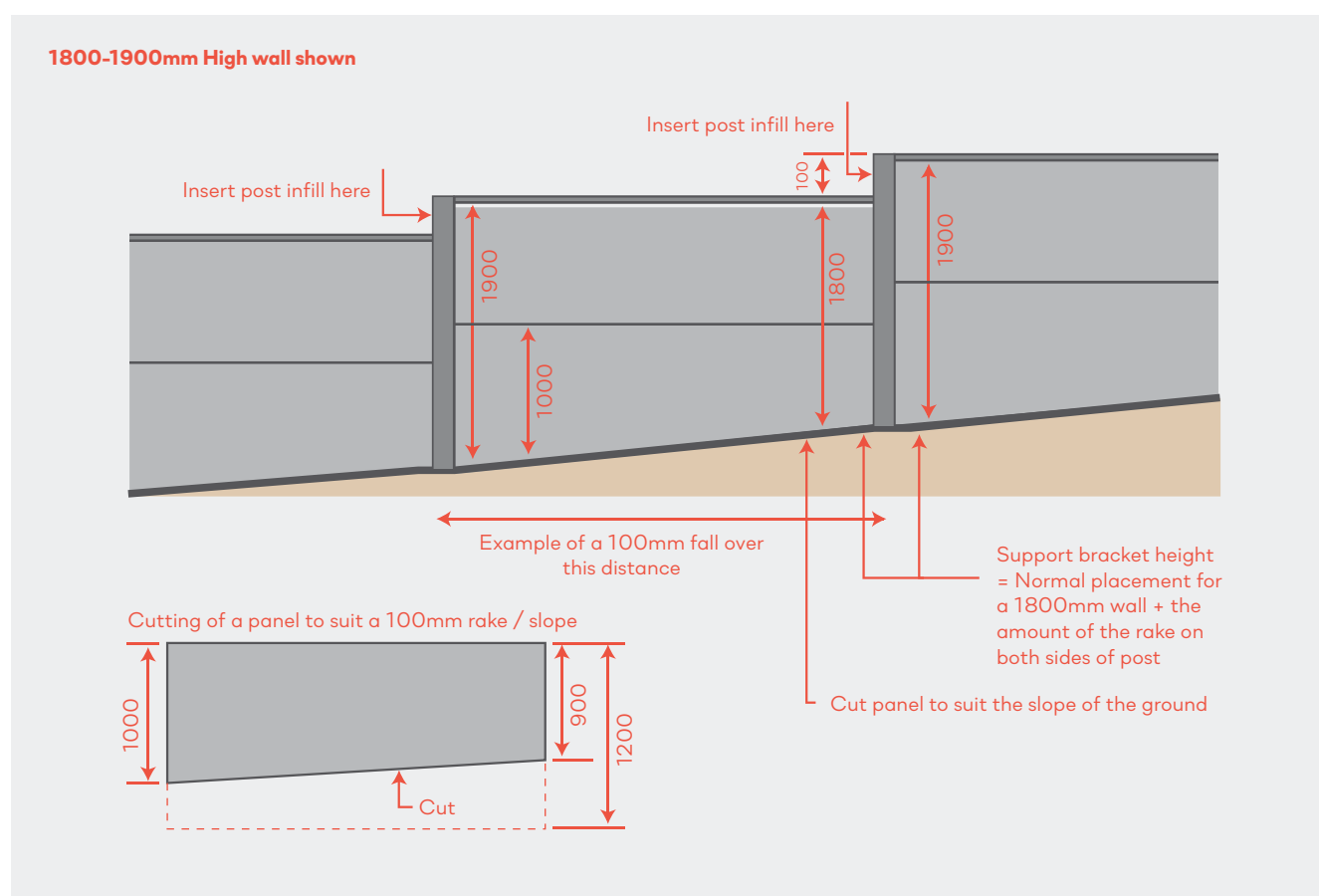
ADDITIONAL

STEPPING OR RAKING YOUR WALL

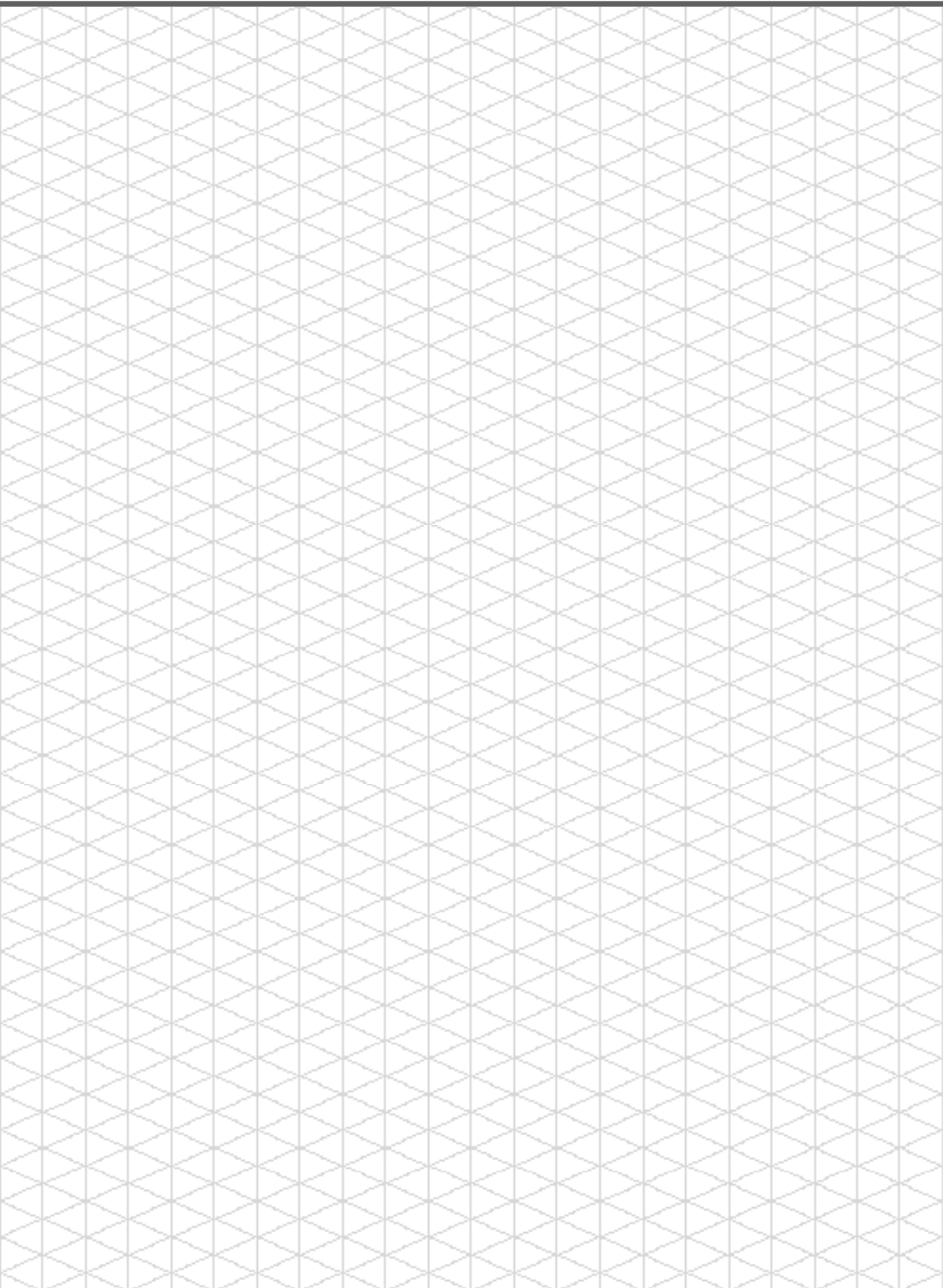
STEPPING METHOD 3 – RAKE/CUT YOUR BOTTOM PANEL TO THE SLOPE USING 2100MM WORTH OF WALL PANELS TO MAINTAIN A MINIMUM 1800MM WALL HEIGHT.

You will maintain a maximum height of 1800mm wall height – As pictured below it should be noted that your wall height at the high side of the slope will be increased by the amount of the rake – in this situation 100mm.

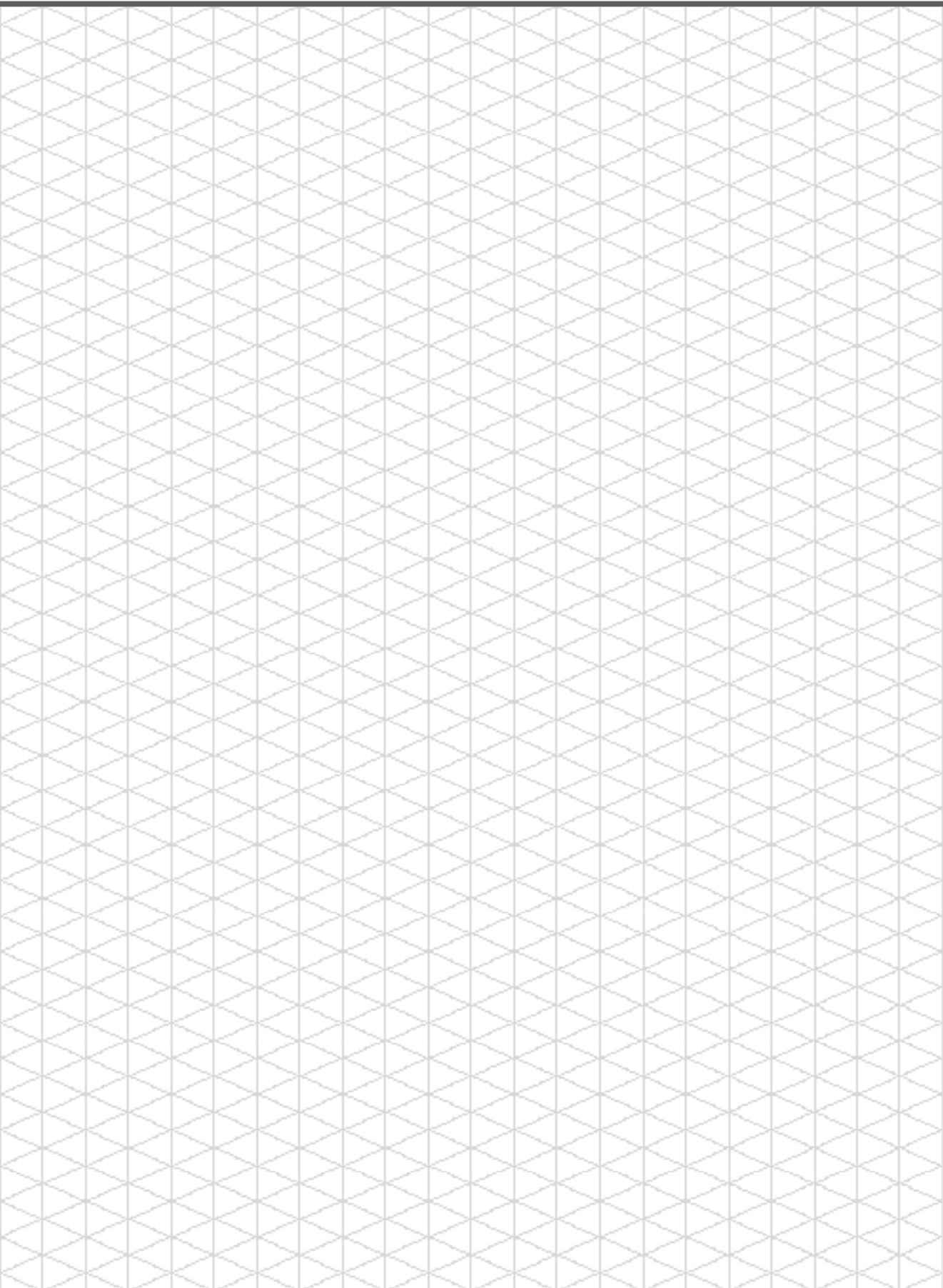
Depending on the additional height gained by doing this you may require deeper footings and longer posts. Please contact us for specific advice before installation.



NOTES:



NOTES:



WITH A REPUTATION FOR QUALITY
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