

IMPORTANT - READ BEFORE YOU BEGIN

SAFETY FIRST

When working with glass and hardware we recommend you wear gloves, safety boots and safety glasses. Pool fencing glass is tougher than standard glass but it is not unbreakable.

Before you start it is important to check:

- All your tools are working well
- There are no trip hazards or obstacles
- Pets are secured
- Children are kept safely away

WORKING WITH GLASS

Special care must be taken whilst handling glass panels. If the corners of the panels are bumped against a hard surface the glass panel may shatter. Never let your glass panels touch, lie against or rest on concrete, tiles or other hard surfaces.

To avoid the panels being scratched, when lying them flat on the ground place a sheet, soft cloth or other padding underneath them.

Ideally your glass panels should sit on rubber or timber (or both).

Have a helping hand. Glass panels are very heavy and can be difficult to move.

MATERIALS NEEDED

Use the Glass Fencing Planner and Materials List located in the Guardian Glass Fencing brochure. Work out materials and quantities of glass and hardware.

For a frameless glass fence on a timber surface, you will require:

- Glass panels
- Glass gate
- Glass hinge panel
- Spigots & cover plates
- Stainless steel hinges & latch
- Stainless steel connectors
- Fixing screws
- Glass cleaner & cloth

COUNCIL REGULATIONS

Contact your local council prior to installing a pool fence to ensure compliance with any local laws. Council regulations vary and your local council can advise on requirements such as distance and heights of fences from neighbours.

If your pool is part of a building application or renovation please ensure you speak to your builder and certifier to check.

Producer Statement (PS1) available upon request.

SITE MEASURE

Careful planning is the most important step of any project.

Some handy tips are:

- The recommended distance from the edge of the pool is 1300mm. Note for fences that are closer than 1300mm the spigots may need to be earthed to comply with AS3000 Electrical Safety Standards. If in doubt please consult a licensed electrician.
- Look out for any existing cables that are attached to the underside of your deck.
- Try to use as many of the same size panels as possible. This will ensure the most aesthetic finish.
- Use a steel tape measure.

TOOLS NEEDED

You will need the following tools to install your balustrade fence:

- 2 x Qualified installers
- Steel tape measure
- Chalk Line
- Permanent marker
- Pencil
- Impact drill with 150mm extension bit to suit fixings
- Cordless drill
- Spirit level
- Masking tape
- 12mm Spade bit

GLASS SPECIFICATIONS

POOL SPIGOT SPACING CHART

GLASS PANEL SIZE	EDGE OF GLASS TO SPIGOT CENTRE
300 x 1200mm	50mm
400 x 1200mm	50mm
500 x 1200mm	50mm
600 x 1200mm	50mm
700 x 1200mm	100mm
800 x 1200mm	100mm
900 x 1200mm	100mm
1000 x 1200mm	100mm
1100 x 1200mm	150mm
1200 x 1200mm	200mm
1300 x 1200mm	250mm
1400 x 1200mm	300mm
1500 x 1200mm	350mm

IMPORTANT TO NOTE:

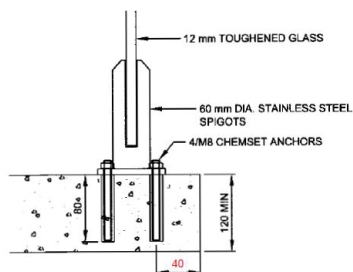
- Measurement to be taken from centre of the spigot.
- In very high wind zones add an additional spigot to each panel.

BALUSTRADE SPIGOT SPACING CHART

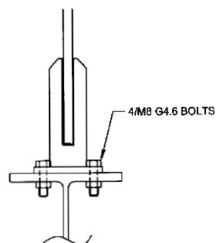
GLASS PANEL SIZE	EDGE OF GLASS TO SPIGOT CENTRE
600 x 970mm	100mm
700 x 970mm	100mm
800 x 970mm	100mm
900 x 970mm	100mm
1000 x 970mm	100mm
1100 x 970mm	150mm
1200 x 970mm	200mm
1300 x 970mm	250mm
1400 x 970mm	300mm
1500 x 970mm	350mm

FIXINGS SPECIFICATIONS

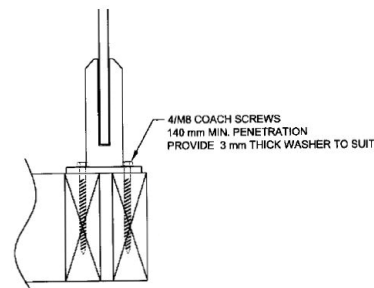
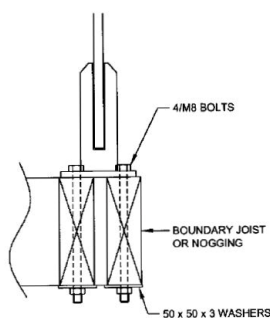
FIXING TO CONCRETE



FIXING TO STEEL



FIXING TO TIMBER



M8 FIXING DETAILS

SUBSTRATE MATERIAL	FIXING/PER BASE PLATE	MINIMUM GEOMETRIC DISTANCE
STEEL	4 x Stainless Steel 316 M8 Bolt	12mm (edge distance)
TIMBER	4 x Stainless Steel 316 M8 Bolt with minimum 50x50x3mm Washer	32mm (from edge of member) 80mm (from end of member)
	4 x Stainless Steel 316 M8 Coach Bolt	40mm (from edge of member) 64mm (from end of member) 120mm (embedment depth)
CONCRETE	4 x M8 Concrete Anchor	80mm (embedment depth) 120mm (concrete thickness) 40mm (edge distance) Specific design required for overall size

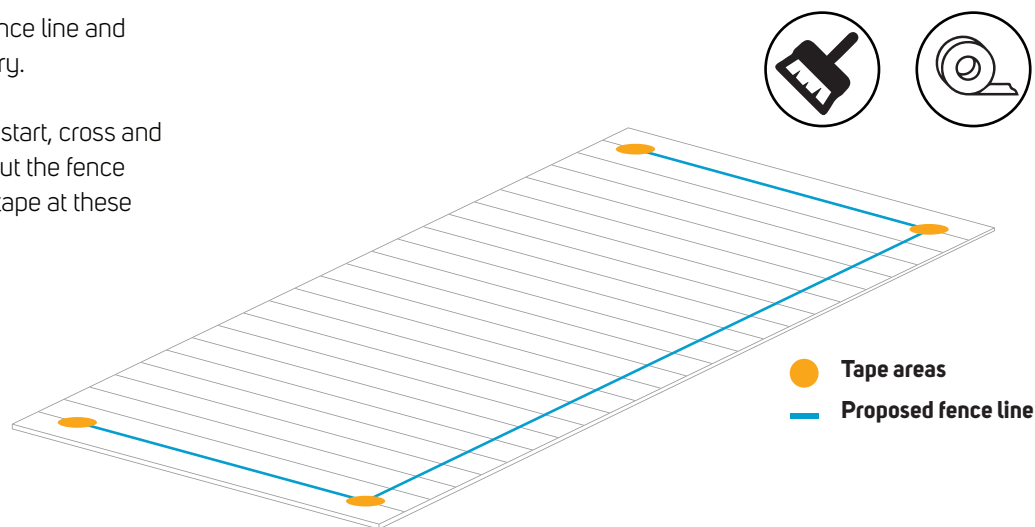
M10 FIXING DETAILS

SUBSTRATE MATERIAL	FIXING/PER BASE PLATE	MINIMUM GEOMETRIC DISTANCE
STEEL	4 x Stainless Steel 316 M10 Bolt	15mm (edge distance)
TIMBER	4 x Stainless Steel 316 M10 Bolt with minimum 50x50x3mm Washer	40mm (from edge of member) 100mm (from end of member)
	4 x Stainless Steel 316 M10 Coach Bolt	50mm (from edge of member) 80mm (from end of member) 80mm (embedment depth)
CONCRETE	4 x M10 Concrete Anchor	90mm (embedment depth) 150mm (concrete thickness) 50mm (edge distance) Specific design required for overall size

STEP 1 - SETOUT

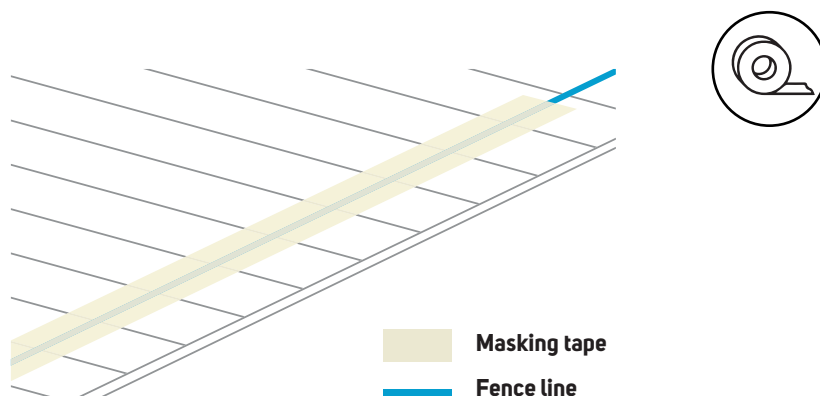
Sweep out area for the new fence line and ensure the area is clean and dry.

Work out where the fence will start, cross and finish. Use a chalk line to set out the fence perimeter and place masking tape at these points.



STEP 2 - TAPE THE FENCE LINE

Apply masking tape along the fence line. This will allow easy marking of the fence line and other measurements. It prevents you from making setout mistakes on the decking and is very easy to see.

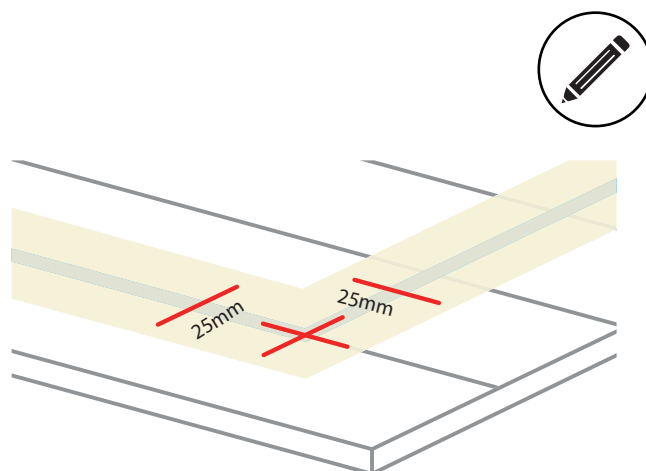


STEP 2 - TAPE THE FENCE LINE

Once you have placed the masking tape down along the fence line, it is time to mark out the corners (intersecting points) and the end points of where the glass panels will end.

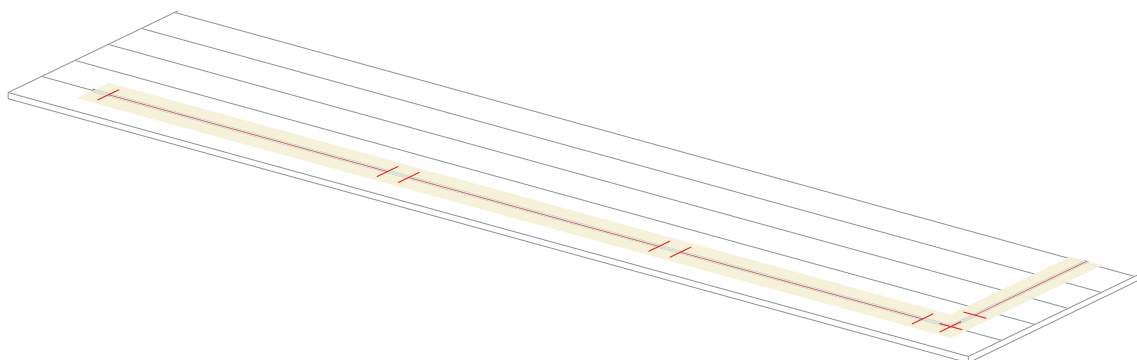
We recommend leaving a 25mm gap between the corner point and the end point of the glass panel.

These distances between the end points are the overall length of the fence line.



STEP 4 - MARK OUT THE PANELS AND GAPS

As per the setout plan provided, you can now start marking out the glass panels and gaps between the panels. The recommended spacing between panels is 50mm or 20mm if using connectors.



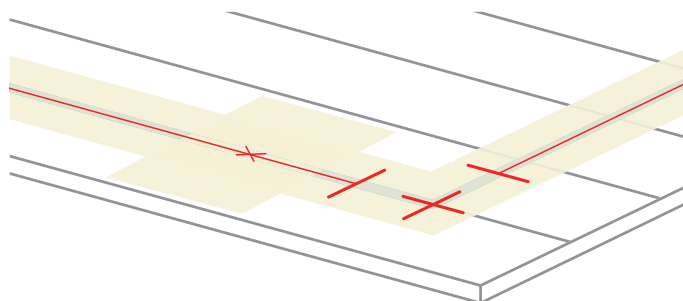
STEP 5 - MARK OUT THE SPIGOT LOCATIONS

Once the panel locations are marked out, you can start marking the spigot locations on the setout.



Mark where the middle of the spigots will be and then place another piece of masking tape to each side of the spigot location. You will later mark the drill holes for the spigots on this extra tape.

Use a chalk line to accurately mark the centre of the fence line on the masking tape.



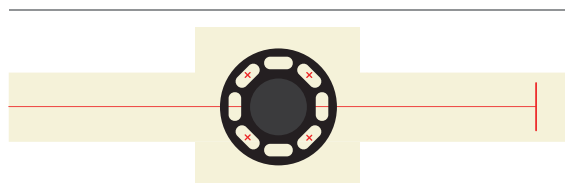
TIP: Measure twice drill once! Always double check measurements and ask your helper to check them with you. It adds a little time to the job but saves you from having to replace decking boards when holes are in the wrong position.

STEP 6 - MARK THE SPIGOT DRILL HOLES

Take one of the spigots out of its packaging to use as a guide to mark the hole positions for drilling,



Place the spigot on the centre of the chalk line in the correct position, making sure the chalk line is in the centre of both sides of the spigot, and it is not twisted. Mark at least four of the holes.



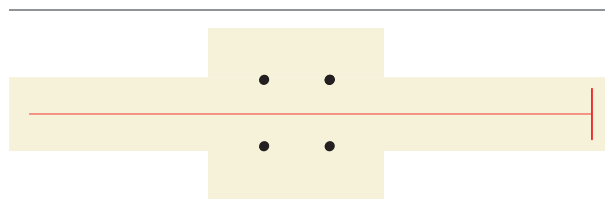
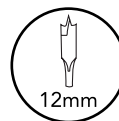
Do this for all the spigot positions along the entire fence lines.

STEP 7 - DRILL CLEARANCE HOLES

Once all the spigots are marked it is time to drill clearance holes in the decking boards. This is an important step to ensure you do not split the boards.

Using a sharp 12mm spade bit, drill all holes for the spigots just to the depth of the decking board and no deeper. Depending on the fixing type you may also require a pilot hole.

Once you have drilled the holes, blow, sweep or vacuum the shaving away to ensure the debris is not left on the tiles and does not go in the pool as it can stain the area.



TIPS:

1. If the deck is out of level along the fence line, the spigots come with two black shims in each box to put under the glass panels in the spigots.
2. If you happen to drill a clearance hole in the deck and there is a void with nothing to fix to, remember that you have eight fixing points to choose from. Just use another hole and ensure you have four secure points of fixing. If there is no subframe under a section, you will have to add timber to ensure that section is strong enough.
3. If your fixing point on a spigot has a decking screw in the hole location, remove the screw and use that position for the spigot fixpoint.

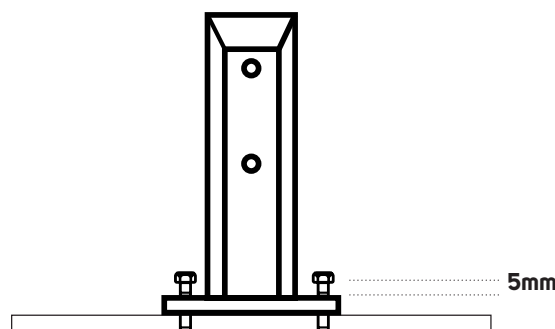
STEP 8 - ATTACH SPIGOTS

Unpack all the remaining spigots and lay them out next to their installation location. Ensure the spigot grub screws are all facing the same way.

Insert the fixings into the drilled holes and using a long extension on an impact drill drive the fixings in but not down tight, leaving them up 5mm from the spigot.

Most decks are built to be a level surface. But if the deck is not level you will need to ensure you use shims to level it. It is relatively common for the edge board on a deck to be out of level, and you can easily use 1mm shims to correct this.

Fix down all spigots in the same way as described above.

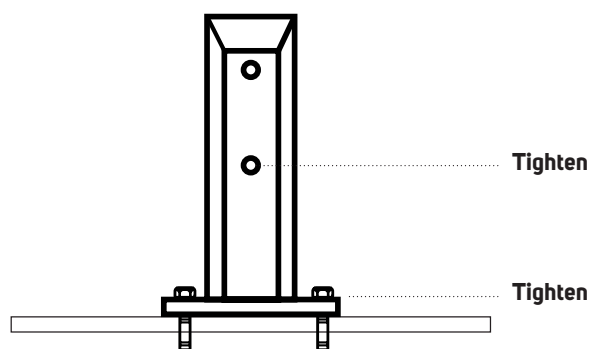
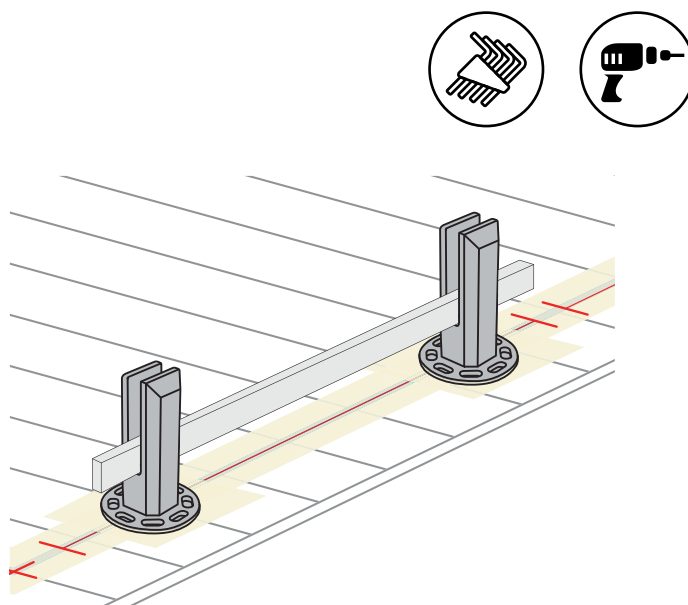


STEP 9 - STRAIGHTEN THE SPIGOTS

Using a straight edge inserted into the glass slot of the spigots, tighten the lower grub screw to ensure there is no rotational twist in the spigot. This is a crucial step because if the spigot is twisted in its final location, it can be very difficult to insert the glass. If incorrectly installed the glass could have a pressure point from the twisted spigot causing the glass to break. This is the most common reason for glass failure caused by incorrect installation.

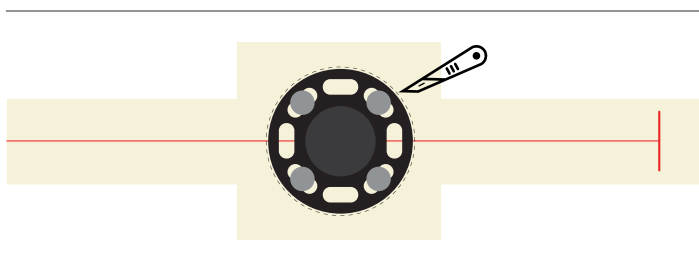
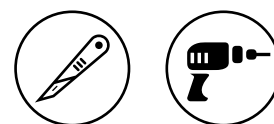
Once you have the spigots in place with the straight edge inserted, ensure the spigots are centred on the chalk line. Once they are centred, you can then tighten the fixings.

TIP: A simple alternative to a straight edge is a piece of 10mm or 12mm skirting or architrave from your local hardware store.



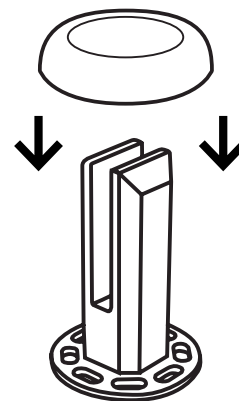
STEP 10 - REMOVE TAPE

Once each spigot has been tightened down to the deck, cut the masking tape from around the spigots using a sharp knife. Then remove the tape.



STEP 11 - ADD SPIGOT COVER RINGS

Once the tape has been removed install the cover rings on the spigots.



STEP 11 - ADD SPIGOT COVER RINGS

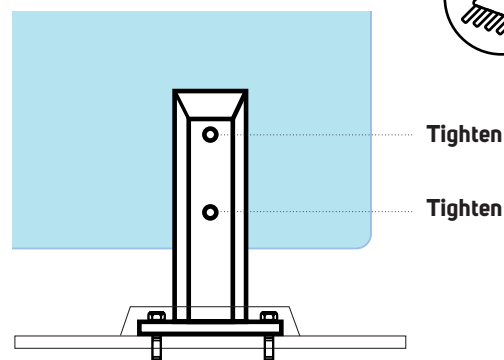
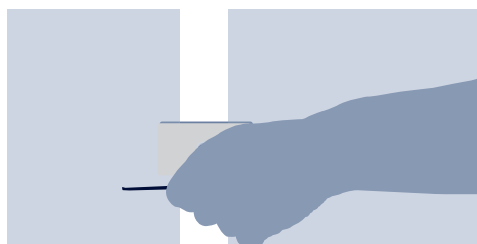
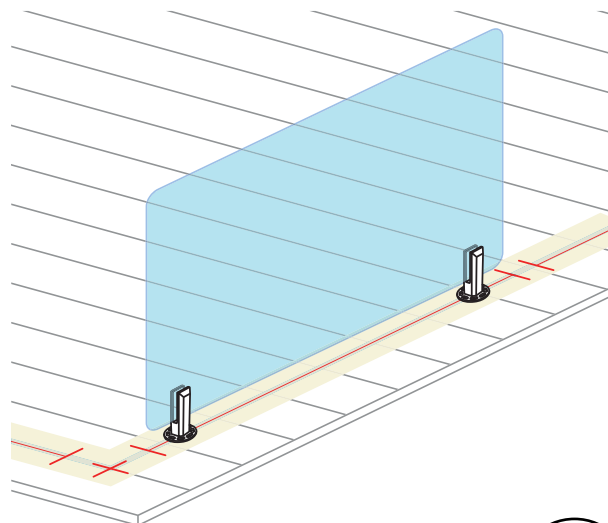
Now its time to install the glass panels. This is a two person job and requires care not to damage the glass panels.

Unwrap the glass panels from the cardboard packaging, removing the protective film and plastic corner bumpers.

Carefully carry a glass panel to where it will be installed and insert into the spigots. Once in place ensure the gaps are correct and tighten the two grub screws on each spigot. Small adjustments may be necessary to ensure the panel is level and plumb.

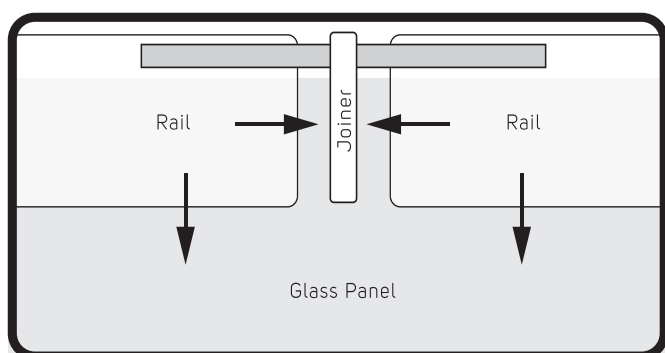
Remove any dirt or marks on the glass with glass cleaner or a soft cloth.

If using the optional connector brackets, position to desired height and tighten with an allen key.



TOP MOUNT HANDRAIL SETUP

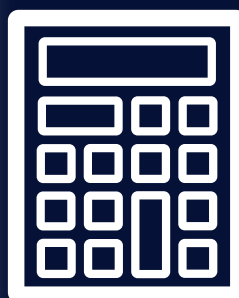
1. Attach the desired End Cap onto the rail.
2. Position the rail onto the glass
3. Connect the rails together across the length using the appropriate Joiner.
4. If necessary, cut the rail length using a hack saw and mitre box.
5. Smooth the cutends with a metal file and 180 grit sandpaper.
6. Clean components of dust and contaminants, then glue fittings onto the rail using Loctite 638 or Selleys Araldite Super Strength. Allow 24 hours to dry.
7. Apply a bead of non-acidic Glazing Silicone along the top edge of the glass.
8. Reposition the rail onto the glass and apply a bead of Silicone along the edges where the rail meets the glass.



Glass Calculator

Our streamlined Glass Calculator makes project planning simple and hassle free, it's your pocket size project manager!

➤ calculator.guardianfencing.co.nz



Project Supplies

4x

8x

12x

