

Bison Bridge Installation guide

Recycled plastic
deck and spindle
parapet option.



Bison bridge installation guide

Please read through the following before starting the assembly and installation of your Bison Bridge kit.

Tools required:

- Impact driver
- Drill bits 12mm
- Socket set
- Spirit level
- PPE
- x2 clamps
- SDS drill/ hammer drill



Bison bridge kit

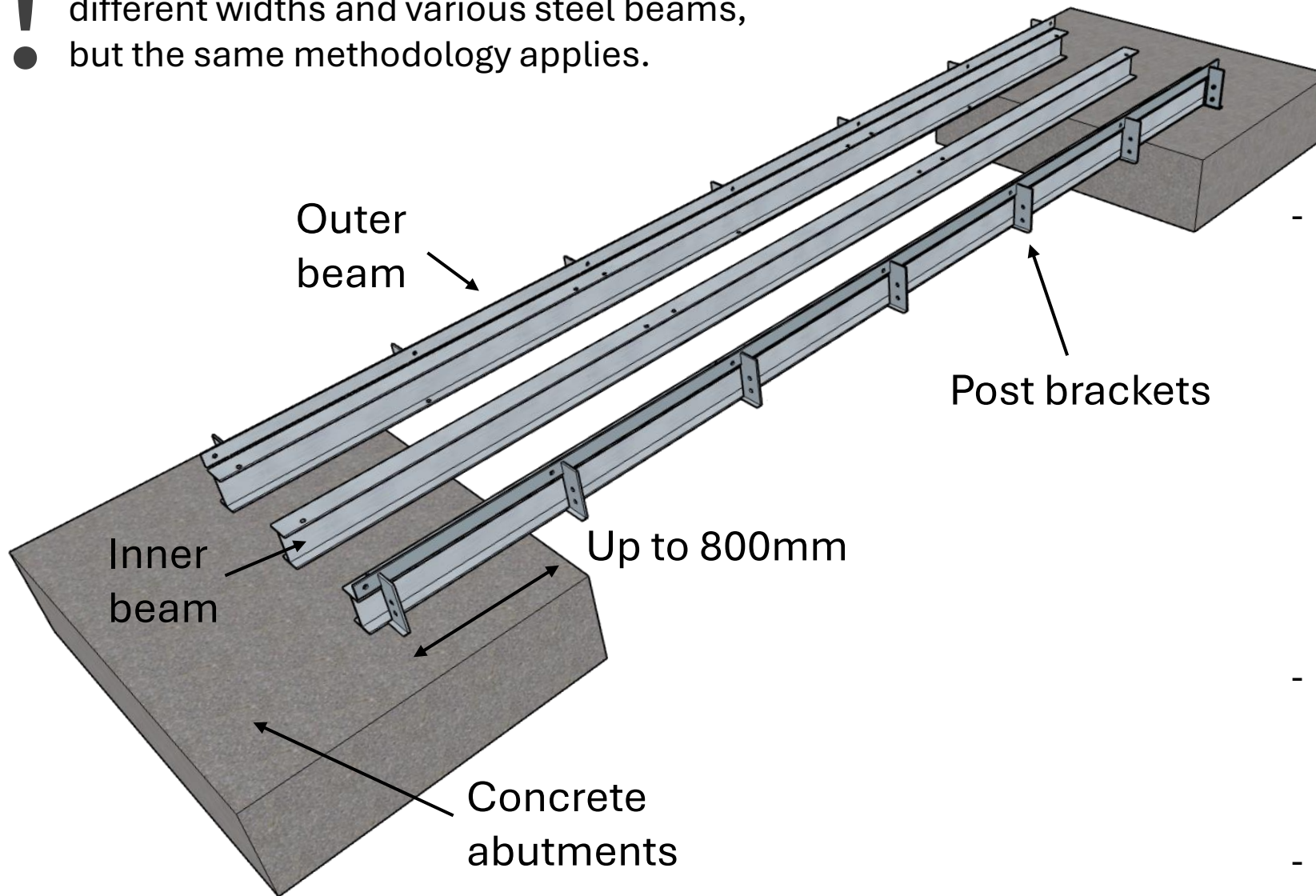


Bison bridge installation guide

Step one



- ! Please be aware that bridges can have different widths and various steel beams, but the same methodology applies.

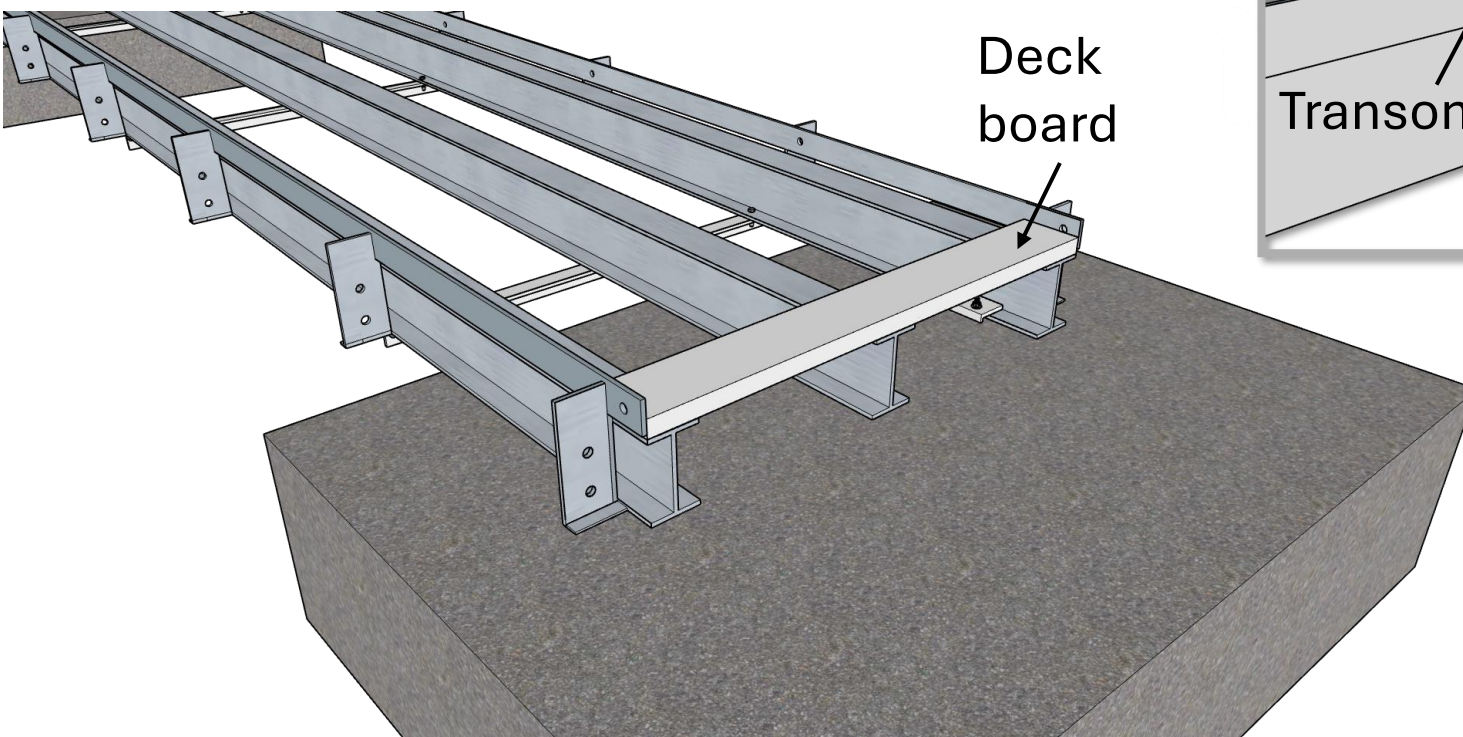
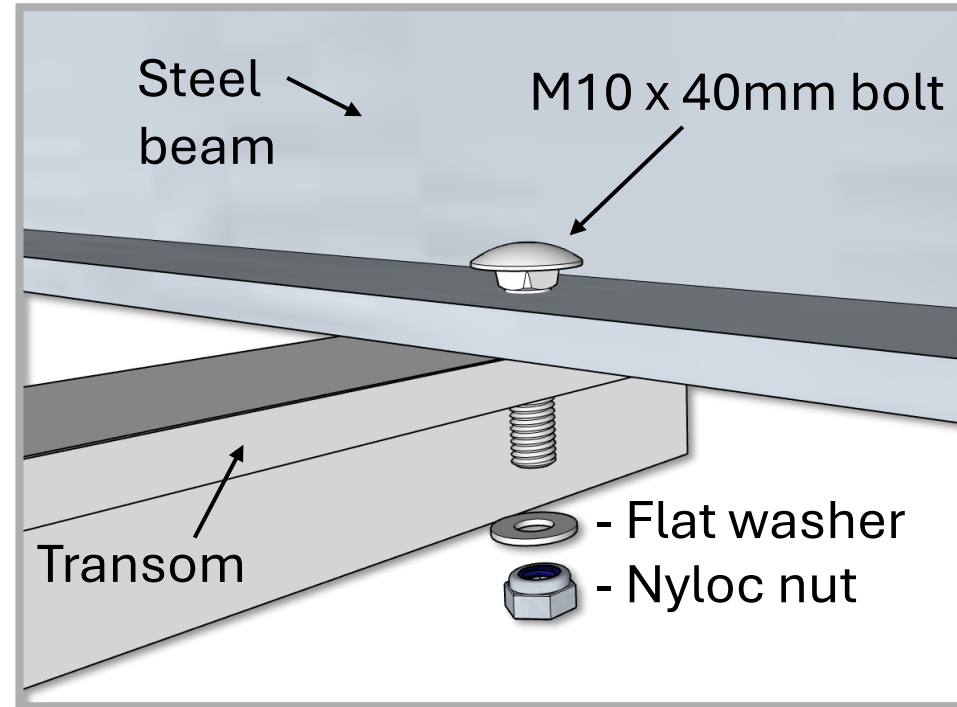
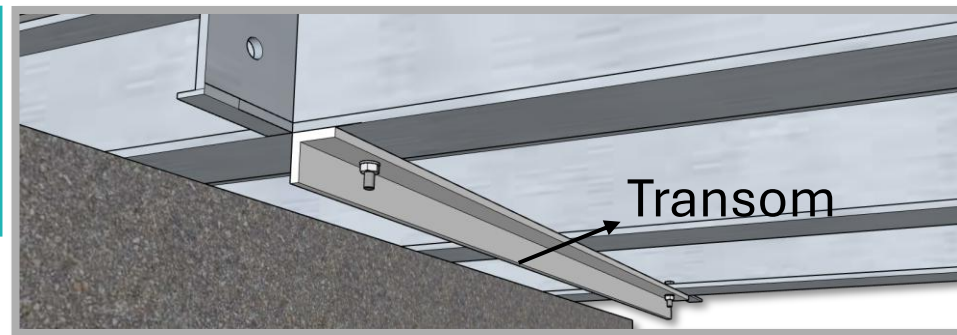


- Position the beams with the post brackets facing away from the centre of the bridge, on a 1200mm wide kit there will be 3 beams, 2 outer beams and 1 inner beam (subject to bridge width).
- Place up to 800mm of the beam ends on the concrete abutments.
- Check the beams are square and parallel.

Bison bridge installation guide

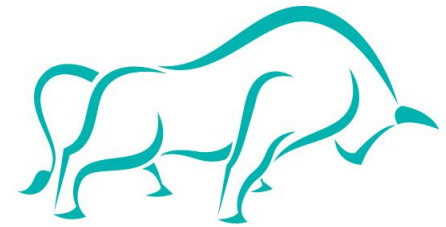
Step two

- Fix the angle transoms to the underside of the beam using the M10 x 40mm bolts, flat washers and nyloc nuts.
- Rest a deck board on top of the beams at either end, between the flat edge bars to ensure the outer beams are far enough apart for the deck before tightening the bolts.



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Step three



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M12 anchor
bolt

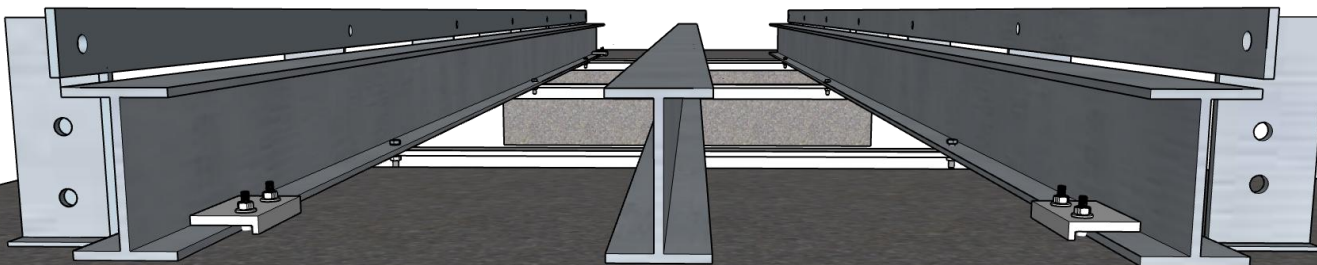


M12 anchor bolt
with flat washer
and hex nut

Hold down plate

- Fix the hold down plates down at each end of the outer beams (these can be positioned on the inside of the beams).

- Use an M12 anchor bolt provided or resin fixing of your choice (these are not included in the kit) to secure the hold down plates onto the abutment.



Bison bridge installation guide

Step four

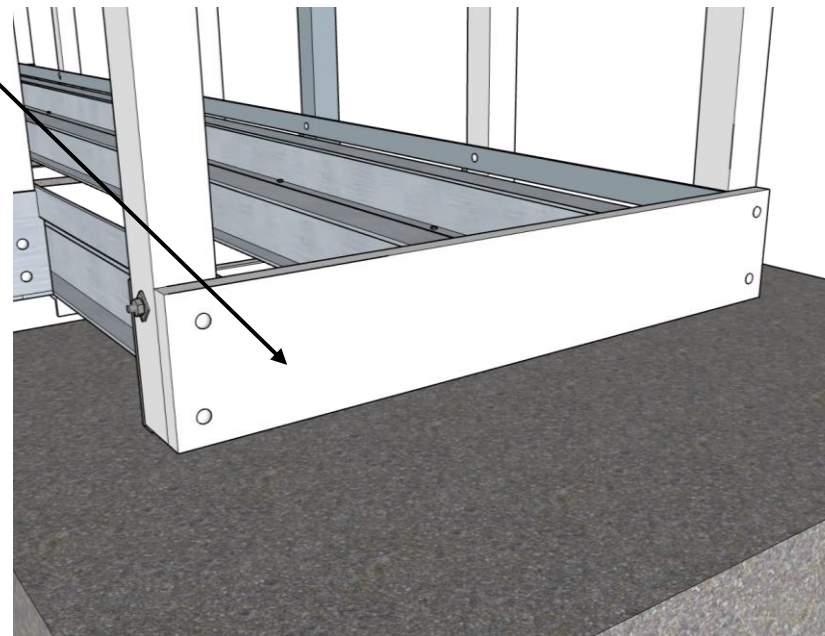
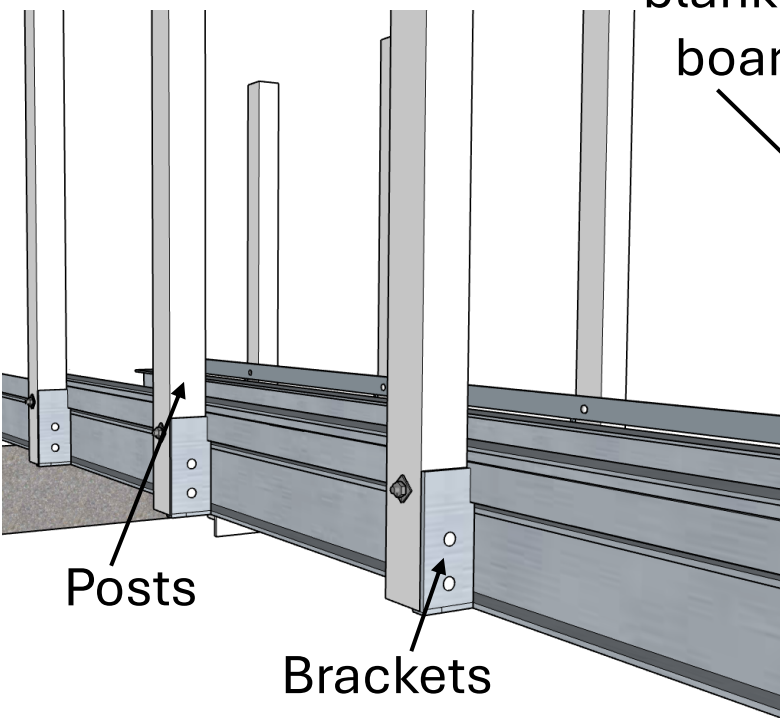
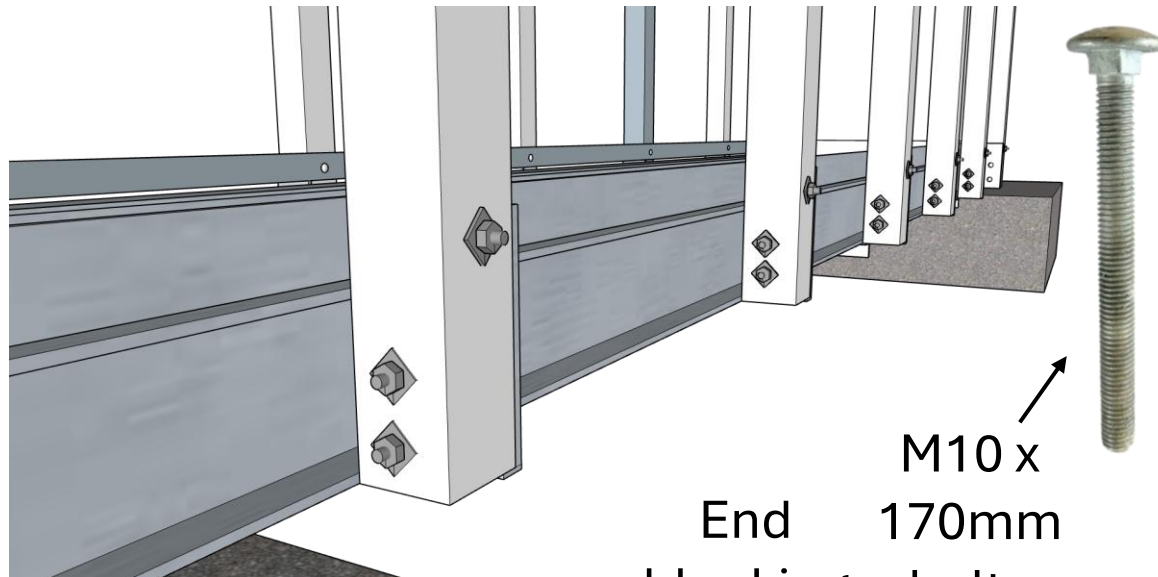


- Bolt the 100 x 100mm posts to the post brackets and flat edging bar using the M10 x 140mm bolts, square washers and nyloc nuts.

- Check the posts are vertical before tightening the bolts. For the 4 end posts use 2no. M10 x 170mm bolts, square washers and nyloc nuts for the post bracket fixings.

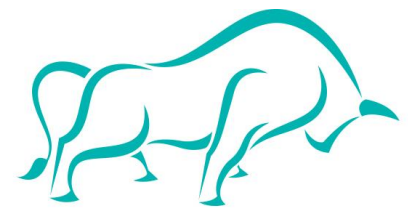
- These will be required for the end boards which measure 200mm wider than the bridge deck to blank off the ends of the beams.

- Clamp the end boards to the posts and drill through, secure with the 2no. M10 x 170mm bolts.



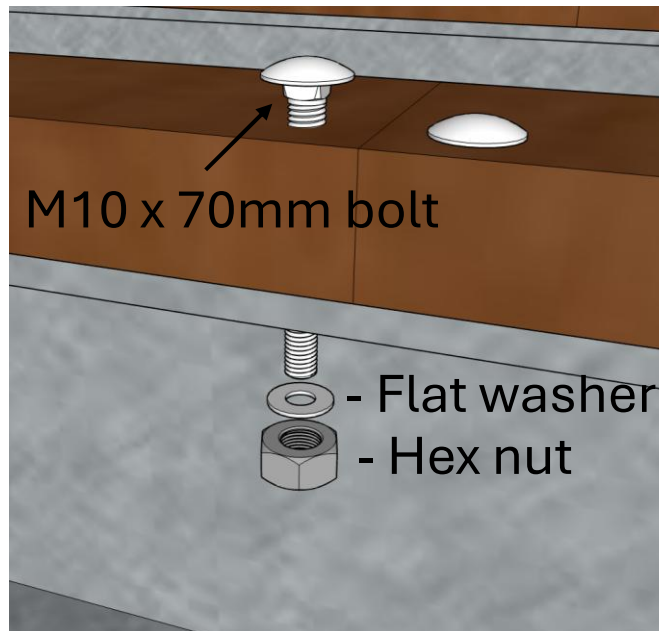
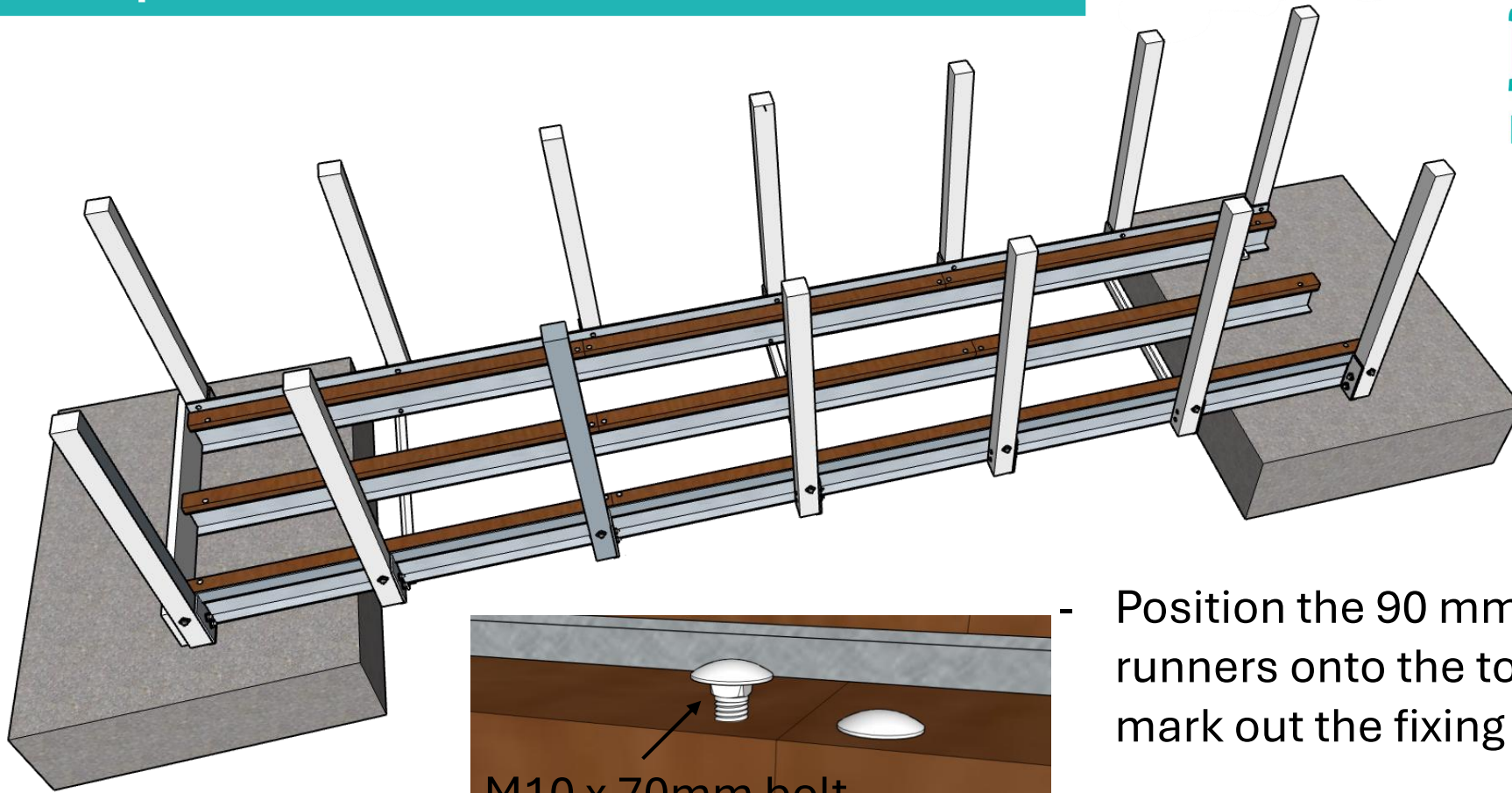
Bison bridge installation guide

Step five

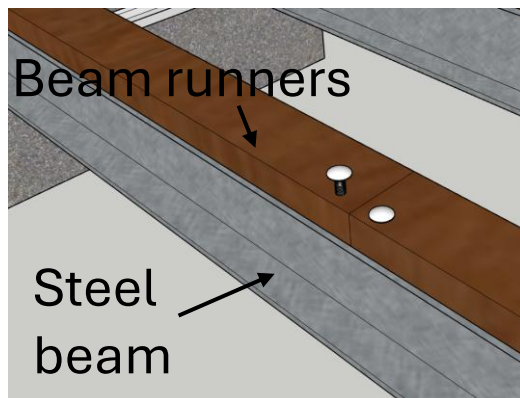


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12mm drill bit



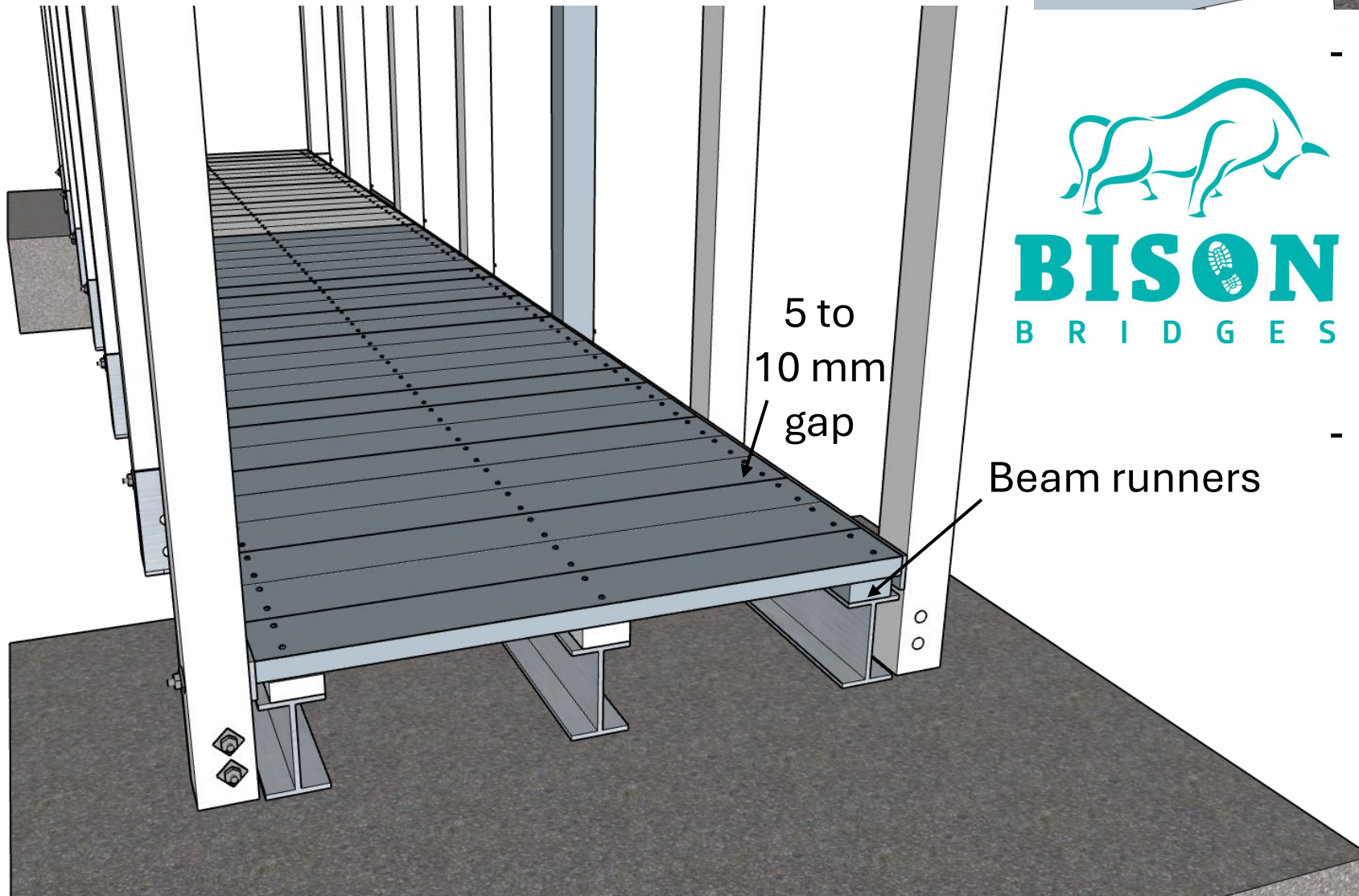
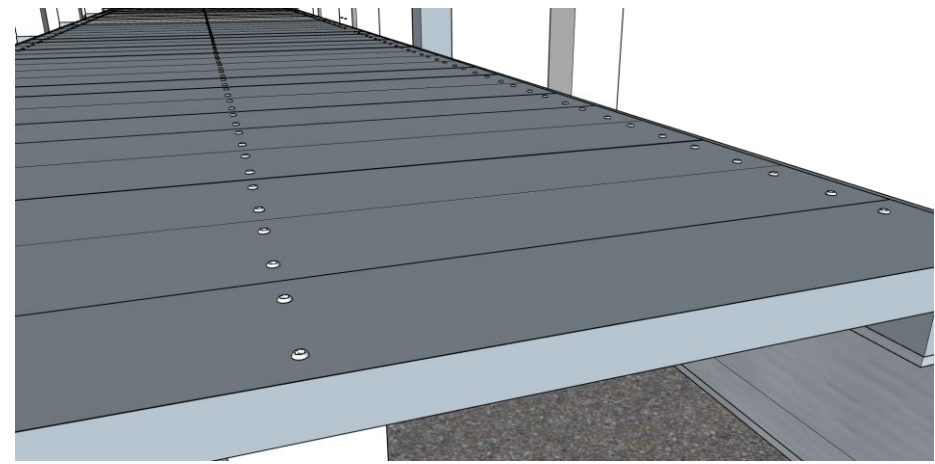
- Position the 90 mm x 38mm beam runners onto the top of the beams and mark out the fixing holes.
- Pre-drill the holes using a 12mm drill bit, countersink for the bolt head and fix the beam runners to the beam using the M10 x 70mm bolts, flat washers and hex nuts (not nyloc).



Bison bridge installation guide

Step six

70mm screw → 



- Fix the deck boards down to the beam runners using the 70mm screws (6 screws per board on a 3-beam kit).
- Care will need to be taken to calculate the deck board spacings so that the last board finishes flush with the end of the bridge. Allow a 5 to 10mm gap between each board.

Bison bridge installation guide

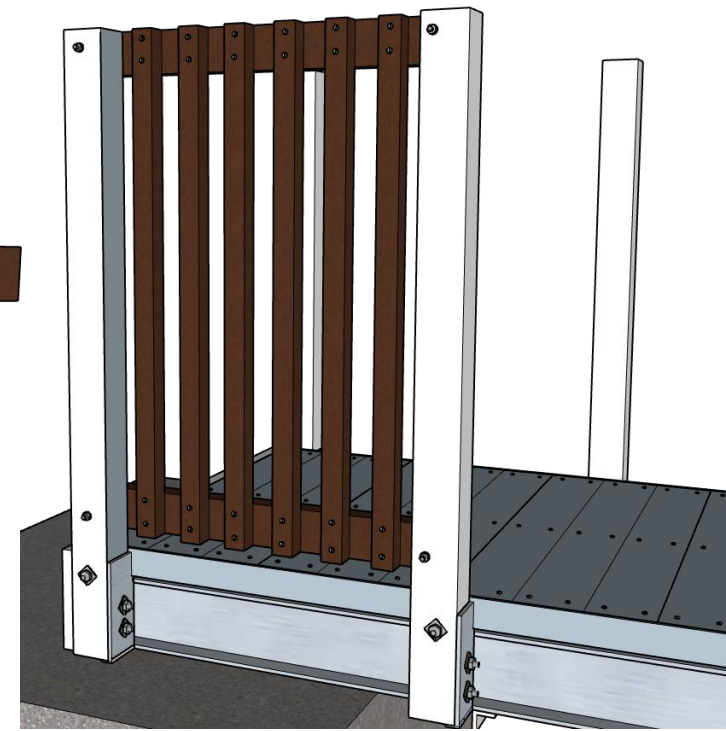
Step seven

- Fix the pre-assembled panels to the inside of the posts using the M10 x 170mm bolts, flat washers and nyloc nuts (1 bolt per fixing location), with the spindles facing away from the deck.



- Clamp the panel rail ends to the post face, pre-drill and bolt. Each panel will require 4 bolts. Starting with the end panels, ensure the top of the rail is flush with the top of the posts but bear in mind that the 50 x 150mm handrail will cap the panels and posts. Note the top of the panels have 2 screws in the spindles.

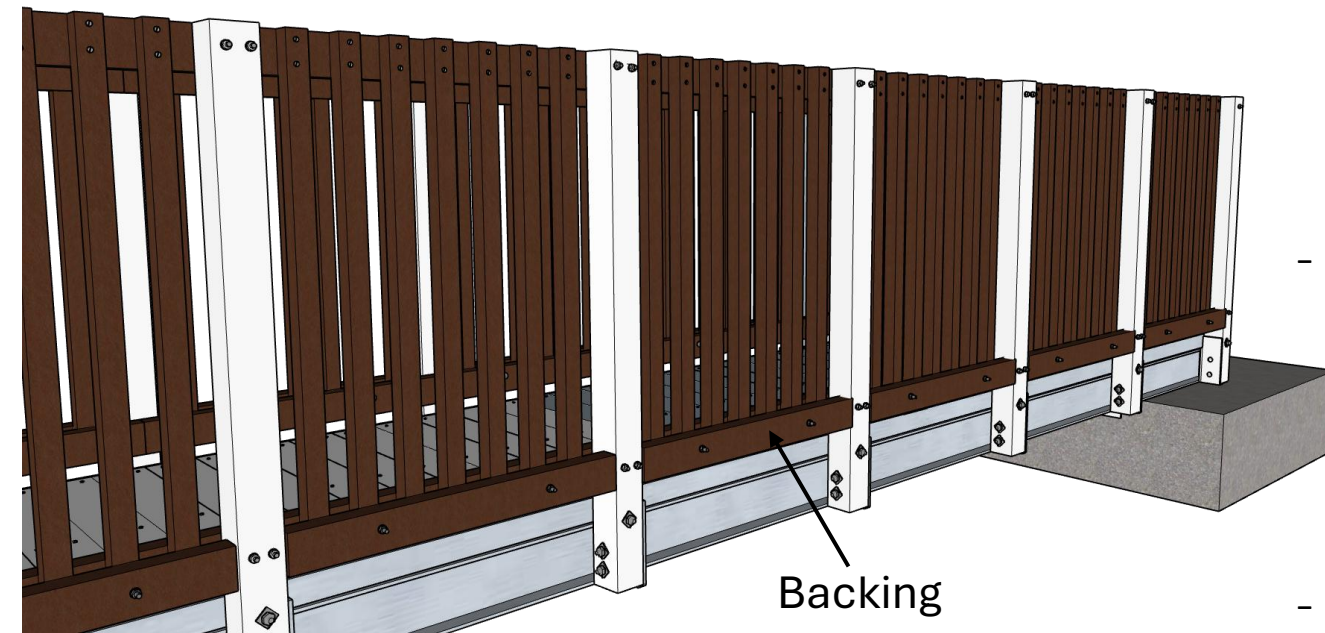
- The positioning of the panels is important to comply with the loading requirements.



Bison bridge installation guide

Step eight

- Continue fixing panels, rail ends should align with the adjacent panel leaving a gap above the deck boards. Next, bolt the backing rails to the outside of the panels at the bottom to sandwich the spindles. Use 850mm rails for the end panels and 900mm rails for the intermediate panels.
- Clamp in position and drill through between the 2nd and 3rd spindles from the right and left to create 2 fixing points per backing rail, fix using the M10 x 170mm bolts, flat washers and nyloc nuts.
- Finally fix the 150mm handrails to the top of the posts using the 100mm screws, ensure they are flush with the parapet rails below and end posts.



Backing rails

Handrails



100mm screws

