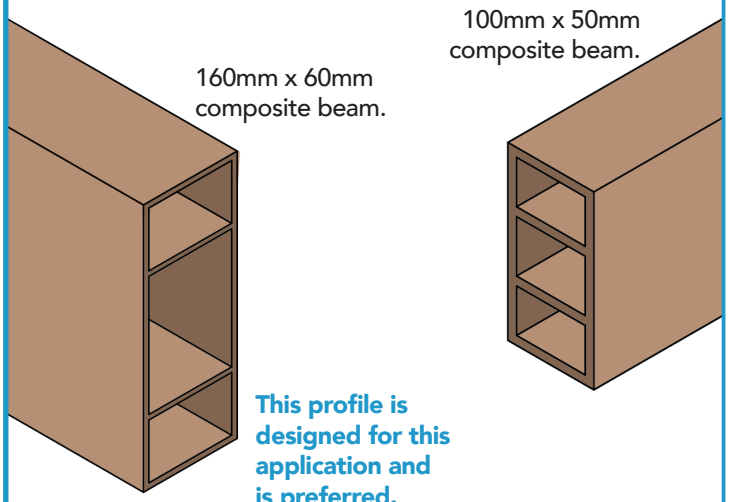
INSTALLATION INSTRUCTIONS - COMPOSITE WOOD BEAM + STEEL FRAMED PERGOLA

1: CHOOSING A COMPOSITE PROFILE FOR YOUR PERGOLA

This can be done in either of the two profiles below.



This profile is designed for this application and is preferred.

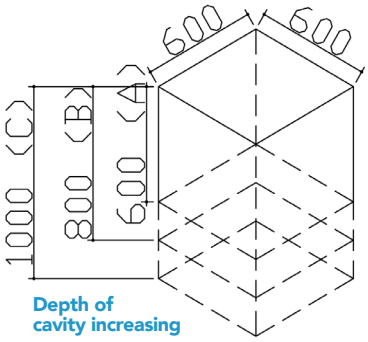
2: DETERMINING THE FIXING APPLICATION AND LAYOUT

Subject to specific installation requirements, there are generally two fixing installation applications:

Option 1 - The ring beam has vertical support footings to structurally secure it in place (concreted/cemented into the foundation); or

Option 2 - The pergola ring beam sits between/against walls where the ring beam would be fixed and secured directly to these façades.

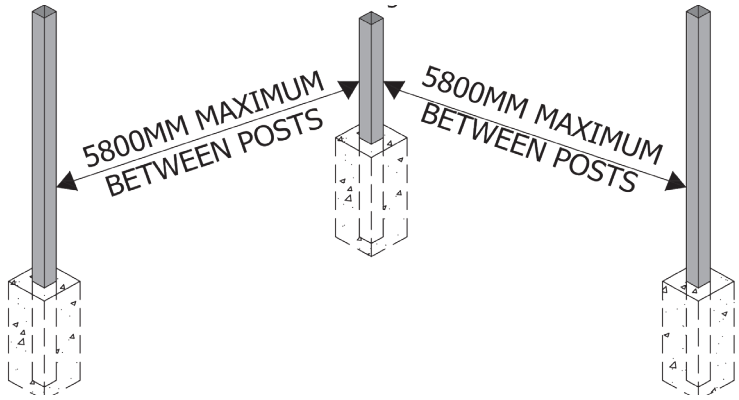
For option 1:
This diagram shows the basic requirements for the cavity to be dug to support and secure the vertical footings into the ground.



The depth of the cavity increases as the height of the pergola increases.

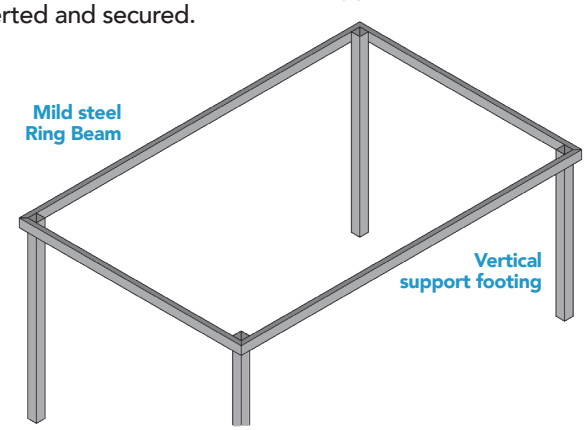
3: GENERAL PERGOLA INSTALLATION LAYOUT

- The pergola will vary in size and should not usually exceed a 5.8m span (but there are exceptions to this rule).
- The diagram below illustrates the general layout when setting the pergola out.
- Mild steel is supplied in 6m lengths. So, the diagram below shows the maximum span. There are exceptions to the diagram below for larger spans. Discuss these directly with Fishers Decking.



4: RAISING AND SECURING THE RING BEAM INTO POSITION

- With the vertical support footings secured in place, the ring beam can now be constructed and secured in place.
- The mild steel used to fabricate the ring beam is generally 76mm x 76mm / 100mm x 50mm / 100mm x 100mm. The steel tube wall thickness varies according to the span.
- The ring beam is welded to the vertical footings to secure them.
- One now has a framework to which the support bearer beams can be inserted and secured.



5: INSERTING THE BEARER SUPPORT BEAMS INTO THE RING BEAM

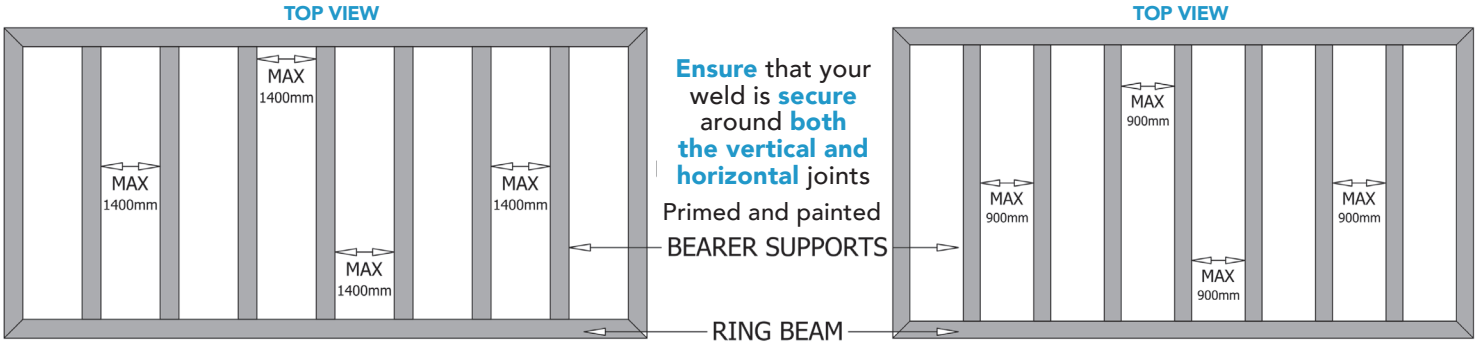
(NB: Note the maximum bearer support spacing for the two profile options)

160mm x 60mm profile:

The supporting bearers inserted must not exceed a span of 1400mm.

100mm x 50mm profile:

The supporting bearers inserted must not exceed a span of 900mm.



The diagrams above indicate the bearer supports fixed in place at the two required spacing requirements for the 160mm x 60mm and 100mm x 50mm profiles.

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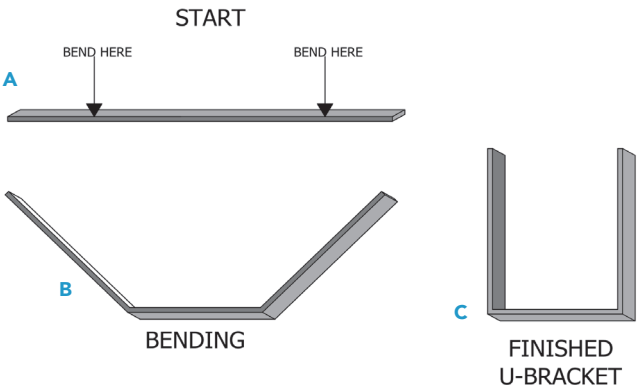
6: CONSTRUCTION OF U-SHAPED SUPPORT BRACKETS

1: With a galvanised flat bar, make U-shaped brackets to accommodate the composite wood profile being used (160mm x 60mm or 100mm x 50mm) - see diagram below.

- The U-shaped bracket is to secure the composite profile into position.

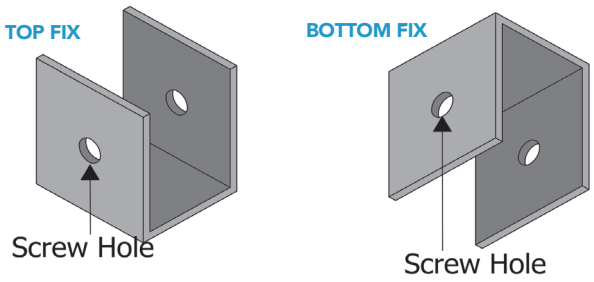


2. The number of U-shaped brackets required is determined by the distance chosen to space out the composite wood beams.

- The distance between the composite beams is determined based on the aesthetic end result required.

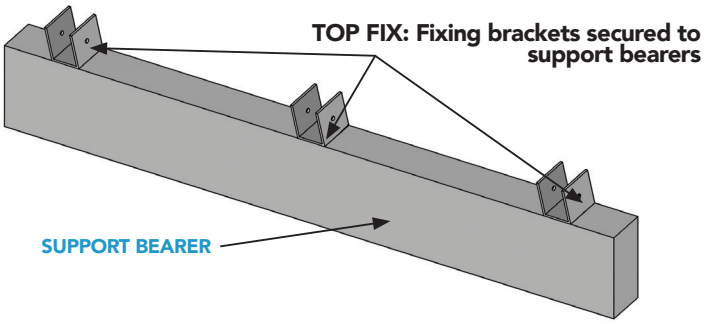
3. To accommodate the composite beam, drill a hole through the U-shaped fixing bracket.

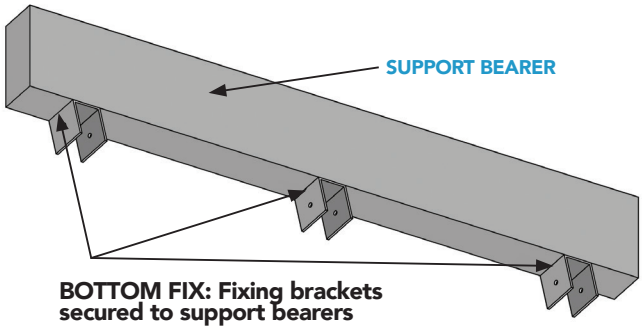
- The drilled hole has a diameter of either 8mm or 10mm, depending on the profile being used.
  - o The 160mm x 60mm profile = 10mm diameter hole. This one requires an 8mm diameter bolt, washer and nut.
  - o The 100mm x 50mm profile = 8mm diameter hole. This one requires a 6mm diameter bolt, washer and nut.



7: WELDING THE U-SHAPED BRACKETS TO THE BEARER BEAMS

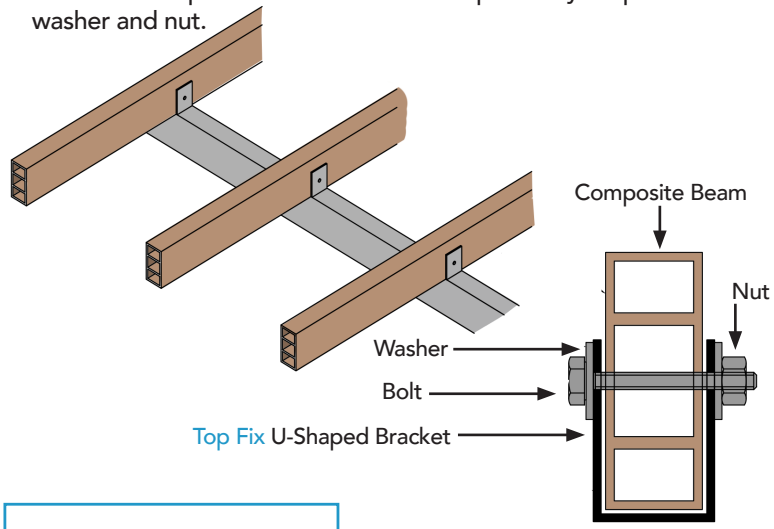
- **Ensure all welds are primed with a steel rust protection primer.**
- Weld the U-shaped brackets into position as shown in the images below.
- Ensure that the brackets are securely welded.

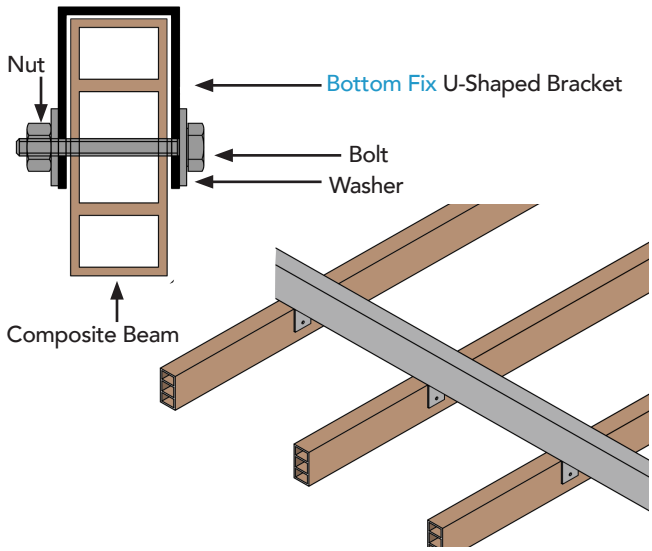




8: SECURING THE COMPOSITE WOOD BEAMS TO THE U-SHAPED BRACKETS

- Insert the composite wood beam into the constructed U-shaped brackets.
- Once the composite beam is inserted in place in your pre-drilled bracket, drill through the composite profile to accommodate the bolt, washer and nut.





Fishers DECKING & FLOORING
010 500 0963 | gary@fishersdecking.co.za | www.fishersdecking.co.za

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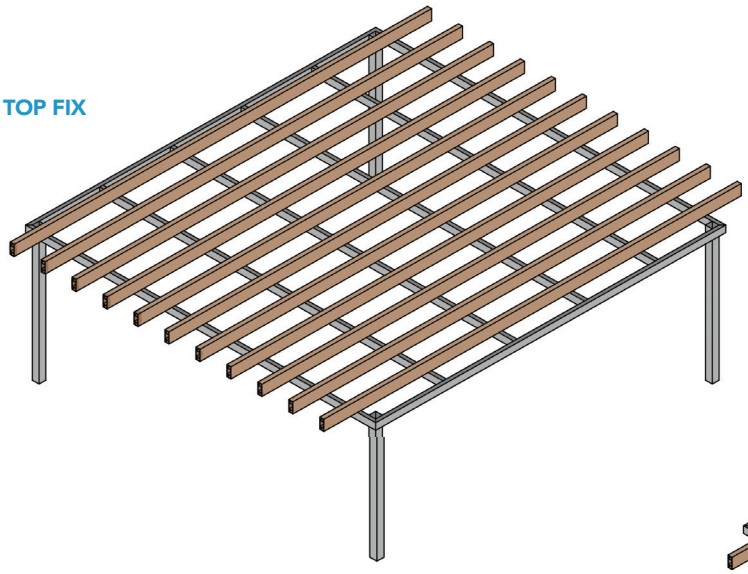
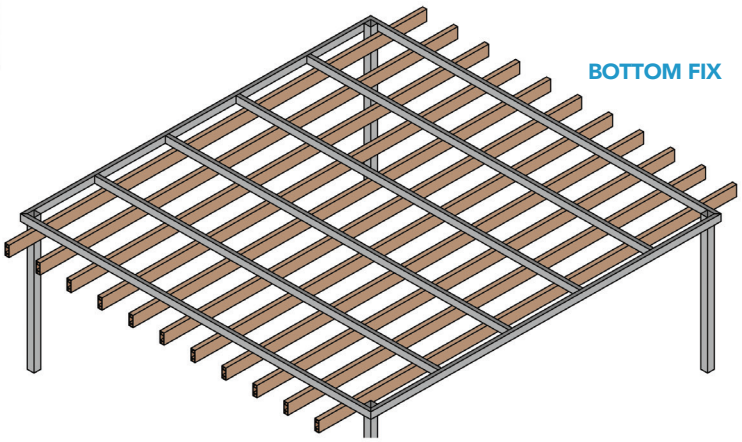
9: AN ALMOST COMPLETE PERGOLA

TOP FIX



- The composite wood beams have now all been secured in place in either a top hung or bottom hung application.
- What's left to do now is to close off the open ends of the composite profiles which Fishers Decking refer to as (Capping).

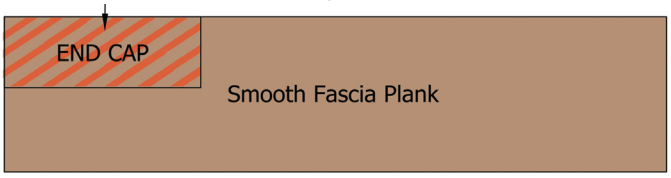
BOTTOM FIX



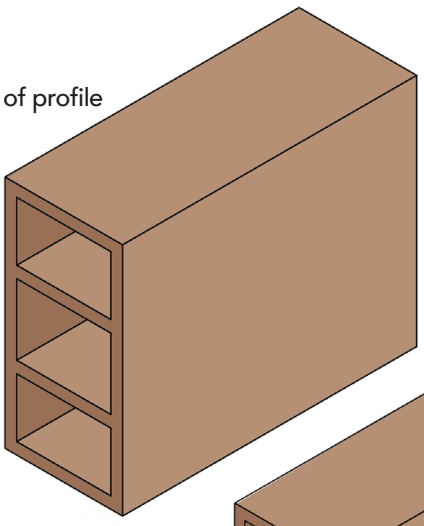
10: THE OPEN ENDS OF THE COMPOSITE BEAMS NOW NEED TO BE CLOSED OFF (CAPPED)

- To cap off the open ends a Fishers Decking 151mm fascia plank is required; the texture of this matches the finish of the composite beams.
- Cut a rectangle piece of material out of the 151mm fascia plank, width the dimensions to suit the chosen profile.
- Insert the end cap that has been cut into the open end.
- Securing the cap in place with an adhesive, the end cap must fit snug.

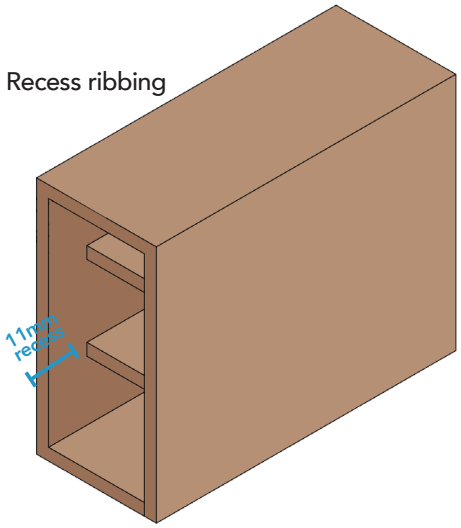
1: Cut rectangle out of fascia plank



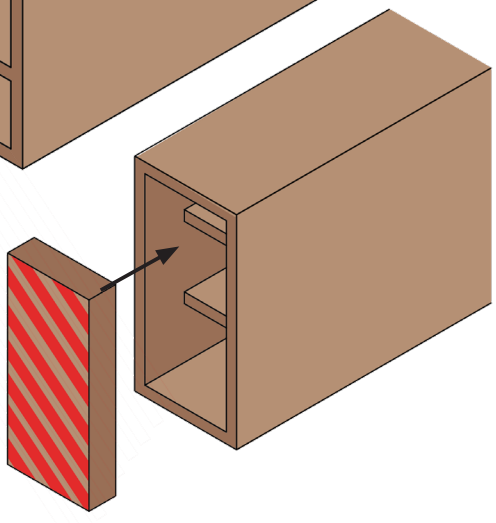
2: Open end of profile



3: Recess ribbing



4: Insert Cap into open end of profile



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11: OPTION TO CLAD VISIBLE STEEL PROFILES

- The option is now to clad or paint the visible steel profiles.
- To clad the steel a Fishers Decking 151mm fascia plank is required. This plank is brushed on one side and matches the finish on the Composite pergola beams.
- The diagrams below illustrate the fixing application of cladding the visible steel profiles using a Fishers Decking 151mm fascia plank.
- Using a only Fishers Decking pan head screw, mount the fascia planks to the primed visible steel.