

INSTALLATION GUIDE

COMPOSITE BALUSTRADE

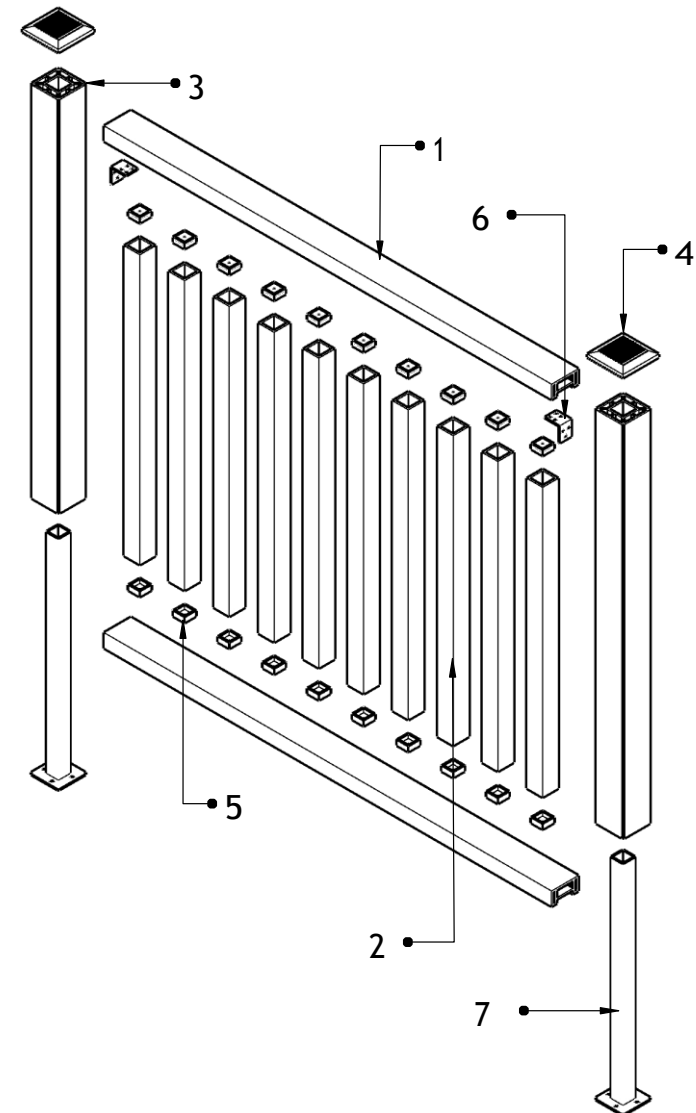
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COMPOSITE BALUSTRADE SYSTEM COMPONENTS

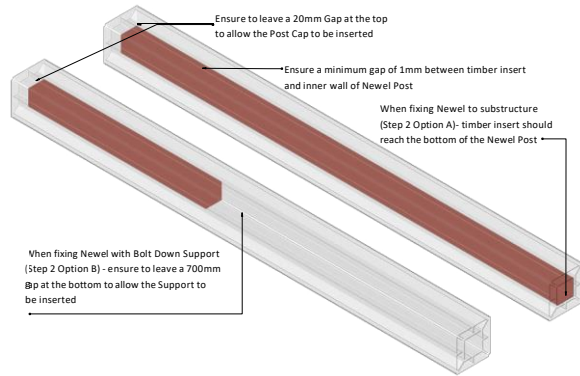


	<u>Part No.</u>
1. Handrail -1800 x 93 x 45mm	ECO09B(S/A/C/G/W)
2. Spindle -900 x 54 x 54mm	ECO11B(S/A/C/G/W)
3. Newel Post -2400 x 95 x 95mm	ECO07B(S/A/C/G/W)
4. Post Cap - 115 x 115 x 50mm	ECO10C(S/A/C/G/W)
5. Spindle Inserts -37.5 x 37.5 x 15mm	ECO09SI
6. L-Brackets - 50 x 50 x 40mm	ECO09LB
7. Bolt Down Support -700 x 95 x 95mm	ECO09BD

NB: PLEASE READ MANNINGHAM CONCRETE 'COMPOSITE DECKING INSTALLATION GUIDE' WHICH CONTAINS FULL DETAILS RELATING TO BUILDING OF A SUITABLE SUBSTRUCTURE FOR YOUR DECKING



Step 1: prepare newel post



The Newel Post should first be cut to appropriate length, using a standard handsaw or chop saw.

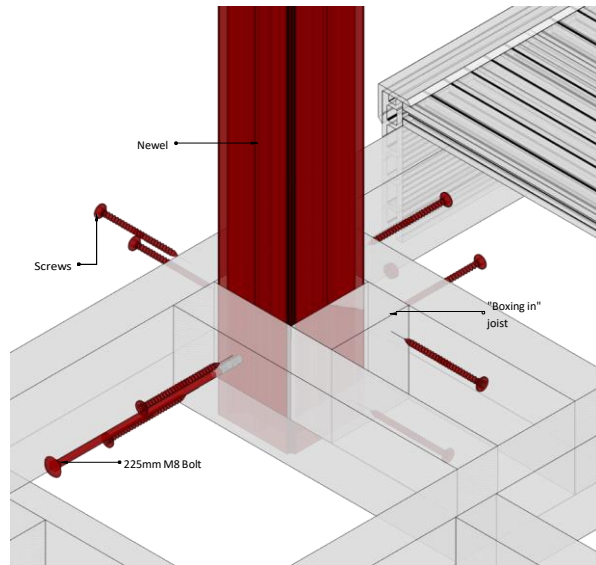
It is best practice to insert a piece of 44 x 44mm tanalised timber into the Newel to ensure a strong, durable connection when fixing.

The timber insert should be planed to allow a minimum of 1mm expansion gap between timber insert and inner wall of Newel Post. A 20mm gap must be left above to allow the Post Cap to fit into the Newel.

If using Bolt Down Supports, a 700mm void should be left at the bottom to allow these to be inserted.

Step 2: Install Newel: Fix Newels at required intervals.

OPTION A: Fix Newel to Substructure



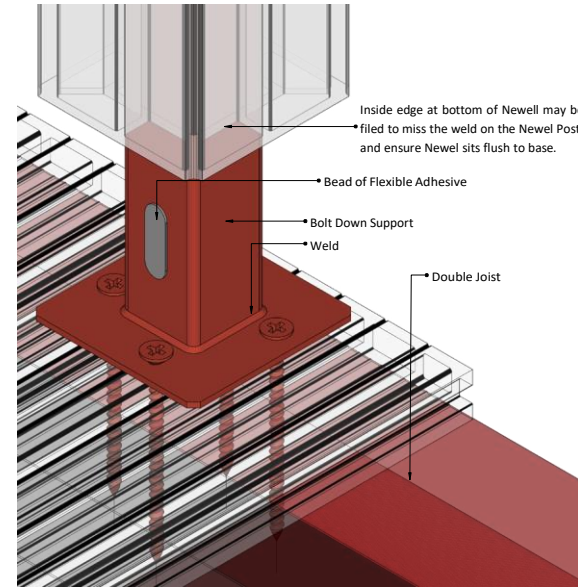
When fixing Newel to the decking substructure, the Newel will need to be 'boxed in' using additional joist sections, to ensure the Newel has adequate support.

Once in position, check position of Newel, and check it is square.

The Newel can then be fixed to the substructure using an exterior grade M8 dome head coach bolt. Additional exterior screws should be fixed through the substructure into each face of the Newel.

All fixings should be pre-drilled to minimise risk of splitting.

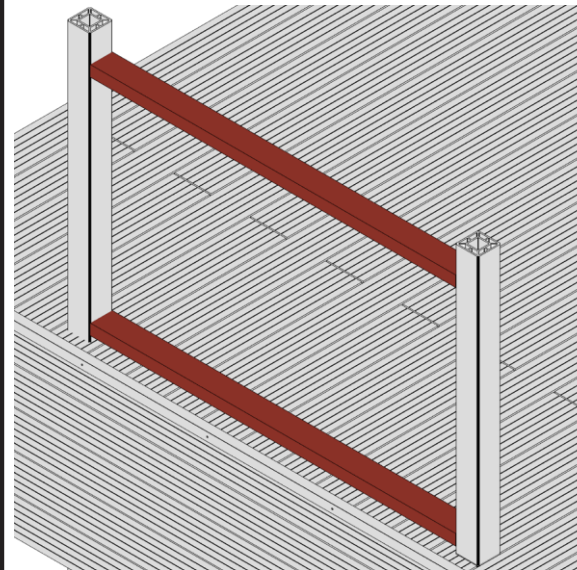
OPTION B: Bolt Down Support



For this method, use exterior grade 7.5mm x 100mm masonry screws to fix the Support through the decking boards and into the substructure joists below (a double joist will be required around the perimeter). All fixing holes should be pre-drilled to minimise risk of splitting.

Before fitting the Newel, a bead of flexible adhesive should be applied to the Support to hold the Newel securely in place. For a flush fit, the base of the Newel can be filed, to miss the Post Support weld, as shown. The Bolt Down Support can also be used to fit balustrade directly on to masonry, using suitable fixings for your particular substrate.

Step 3: Cut Handrails to Size (IF neCeSSary)

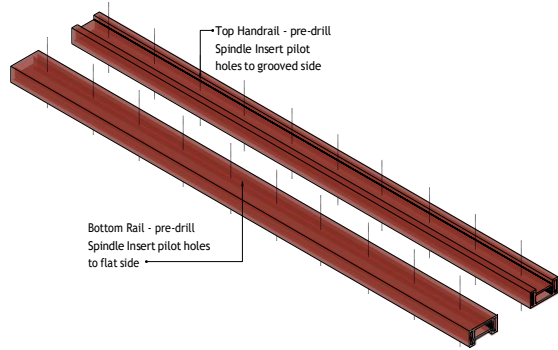


Composite Balustrade Handrail (Part No. ECO09B(S/A/C/G/W)) should be used to form both a top handrail, and a bottom rail. These sit between Newel posts and form the frame to hold the spindles.

If the gap between each Newel post is less than 1800mm, it will be necessary to cut the top and bottom handrail to size to ensure they fit exactly between the Newel posts.

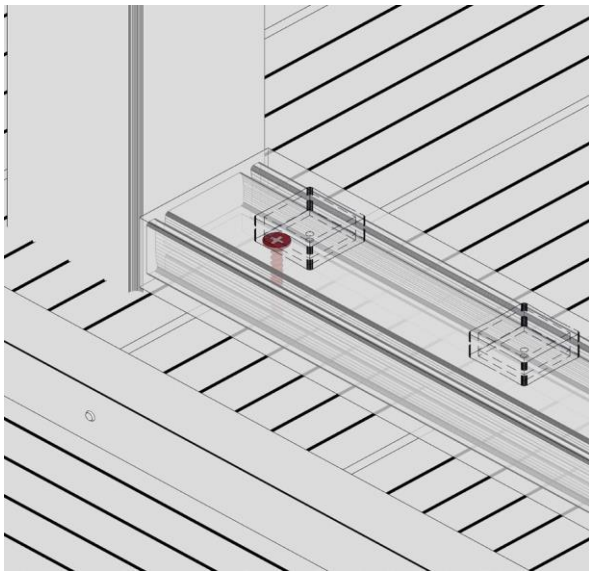
Cutting can be done with a standard handsaw or chop saw.

Step 4: mark Spindle Insert positions on top and bottom Handrail



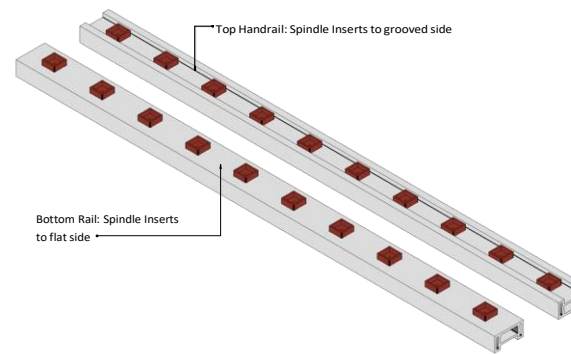
Spindles should be spaced equally between Newel Posts, placed at centres of no more than 99mm. Once Handrails have been cut and preferred interval has been chosen, the position of each spindle should be marked on the handrail. Corresponding pilot holes for spindle inserts can then be drilled at the centrepoint of each spindle, ready for fixing. Ensure that both top and bottom rails as oriented to have the grooved side facing downward - this helps to avoid water pooling, which could cause damage over time.

Step 5: SCrew bottom Handrail to deCK



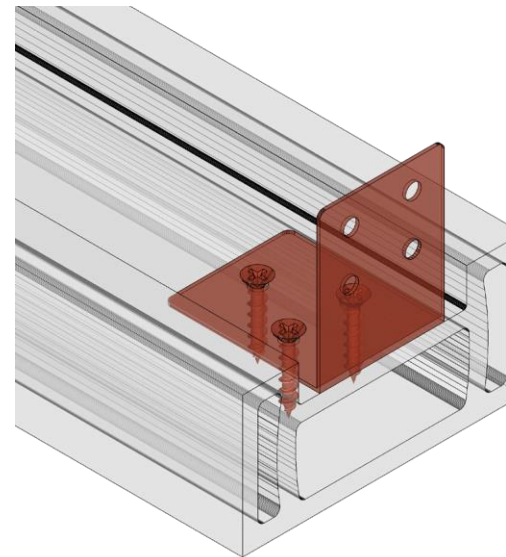
Before spindle inserts are fixed, the bottom Handrail should be screwed down to the substructure through the deck - using a 7.5mm x 100mm masonry Frame Fixing Screw, or similar. For the best visual effect, the fixing screw should be counter-sunk into the Handrail, in such a position that it will be hidden by Spindle Insert, once this is in place. All screws should have pilot holes pre-drilled to minimise risk of splitting.

Step 6: Fix Spindle Inserts to top and bottom Handrails



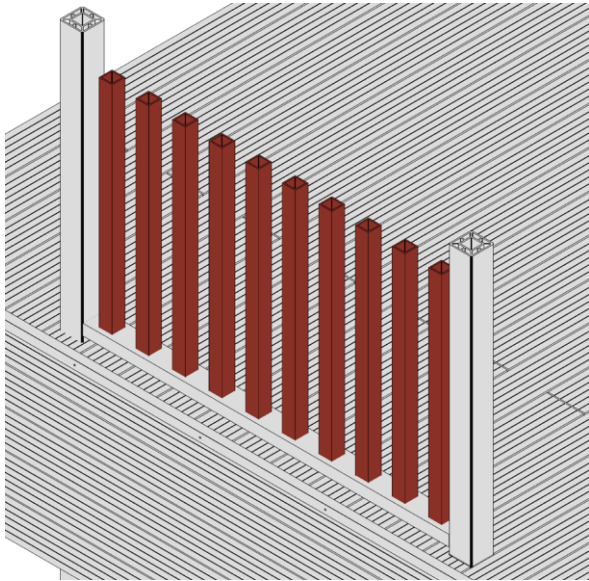
Spindle inserts can now be screwed into the handrail - using a good quality 3.5 x 25mm exterior grade screw. Ensure Spindle inserts are fitted square, as they will determine the orientation of the spindles. All screws should have pilot holes pre-drilled to minimise risk of splitting.

Step 7: Fix L-bracket to top Handrail



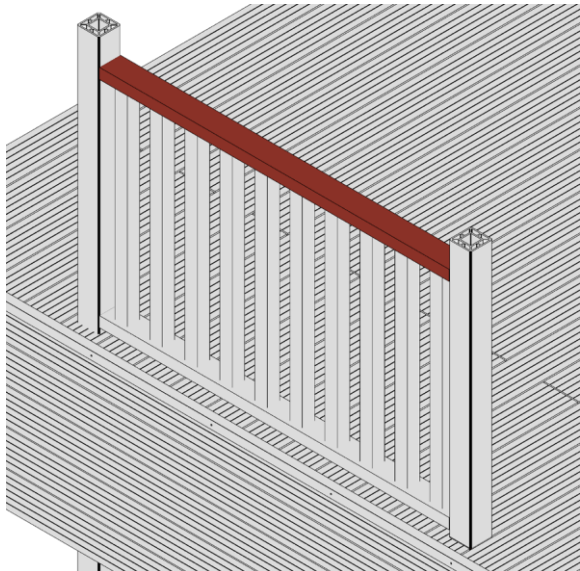
L-Bracket should be positioned to be flush with the end of the Handrail, and fixed - using a good quality 3.5 x 25mm exterior grade screw. Repeat L-bracket installation to each end of the top Handrail.

Step 8: puSH SpIndIeS onto SpIndIe InSertS



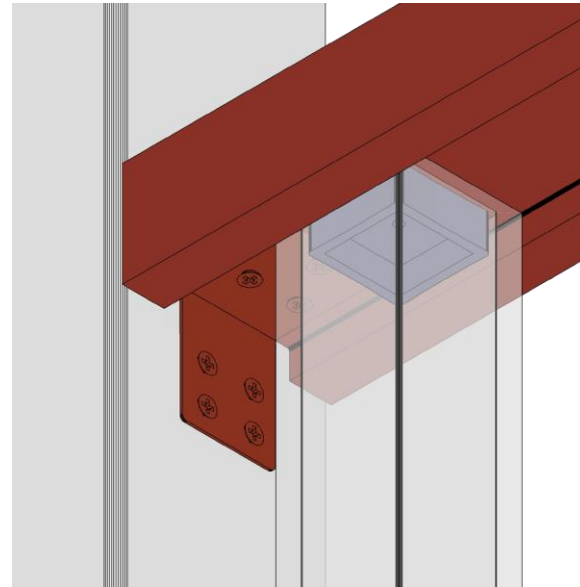
Push spindles onto the lower Spindle Inserts. This may require the use of a non-marking mallet, to ensure the Spindle Inserts are fully inserted into the Spindles.

Step 9: Fix Top Handrail



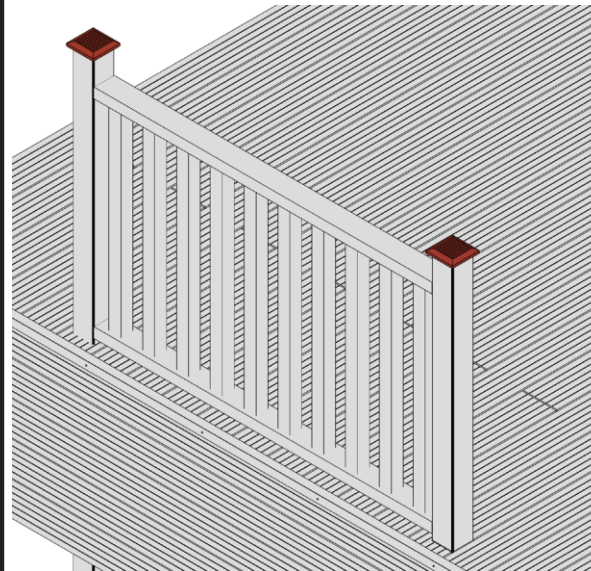
Push top Handrail onto the Spindles. Ensure Spindle Inserts are fully inserted into the Spindles at top and bottom. This may require the use of a non-marking mallet, to ensure the Spindle Inserts are fully inserted into the Spindles.

Step 10: Fix I-brackets to newel posts



Once the top Handrail is in position, and both the top and bottom Spindle Inserts are fully inserted into the Spindles, the top Handrail should be screwed to the Newel Post using exterior grade 3.5 x 25mm screws. It is best practice to insert a block of 44 x 44mm tanalised - this will ensure a strong, and durable connection (see Step 1). Where a timber block is used, a 20mm gap must be left above to allow the Post Cap to fit into the Newel. All screws should have pilot holes pre-drilled to minimise risk of splitting.

Step 11: Fit Post Caps



Finally, a Post Cap can be fitted to each Newel - simply push the block on the lower portion of the Post Cap into the top of the recess in the Newel.

Repeat Steps 1-9 for each section, until balustrade is complete

