PLEASE READ INSTALLATION INSTRUCTIONS CAREFULLY.
COMPOSITE DECKING BEHAVES DIFFERENTLY THAN REGULAR TIMBER
Planning Your Deck

Designing and building a deck can be a fun and rewarding experience. You probably have given some thought as to what you want in a deck, now is the time to really visualise it. What will your deck be used for, relaxing, entertaining, will you put garden seating, BBQ and tables with a parasol on it and how many people might you have on your deck. Will there be children and elderly people using it.

These are the questions you need to look at before starting.
(1) Where will I install the deck.
(2) What size do I want the deck.
(3) Which deck board do I like best
(4) Decide on what direction you would like the boards to run
(5) Follow the fitting instructions carefully, see full instructions on www.wrg.ie before starting.

Location & Deck Size
When deciding the size of your deck, look around at the space you have, your house, the size of your garden and what proportion of deck will enhance and improve the look of it. Your deck should have a southerly aspect. Is the ground level or falling? How close to the house do I want it? When deciding on the size of deck you need to take into account that the deck boards are 3.6m in length. You can make a deck any length, but you do not want to have a deck with very short end boards.

Tools Required
Whiteriver Decks can be installed using the same tools that you would you use for fitting any timber deck. • Tape Measure • Electric Saw • Level • Square • Cordless Drill • Building Line • Safety Goggles

General
Composite decking has a composition of 60% timber, 30% HDPE Plastic and 10% Resins / Pigments etc. While the timber element is very stable (it is kiln dried to very high temperatures to remove the cell structure), the HDPE expands and contracts on the length of the board in line with changes in temperature and humidity. It is necessary to leave a perimeter gap of 10mm around the entire deck and any fixed objects/obstructions and also a 5mm spacing must be left at each short board end to allow for normal seasonal movements.

To ensure you get the best result from your Whiteriver Composite Decking, we recommend working with a professional contractor with previous composite decking installation experience.
Direction of deck

There is no correct deck direction; it is purely personal preference but whatever you choose dictates the sub-frame design and configuration. Things to consider: Think about where you or your guests will view the deck. Looking along the length of the boards will make the deck look longer, while looking across the boards creates an illusion of width. Would you rather the deck looked longer or wider? Also, most of our deck boards contain grooves which affect both the slip resistance qualities in particular directions and also the aesthetic of the board. Standard board lengths are 3.6 metres long.
Deck Quick Installation Guide

Before you start here are a few tips:

- Make sure you have ordered enough material, so as not to be short. Allow for about 5% waste.
- Store decking on site for at least 3 days, raised off the ground, lying flat and keep it dry.
- Read full set of instructions on www.wrg.ie before starting.
- Ensure there is adequate ventilation under deck. Air should have an entry point and exit point to the subconstruction.
- Make sure you allow for expansion of the decking. Expansion must be allowed on all butt ends including where the deck meets posts and other fixed objects. No objects e.g. post and railing systems etc. should be fixed directly to/through the deck as this will prevent seasonal movement.
- There should be good drainage under deck and the should be a minimum fall of at least 5% to allow for water drainage.
- It is essential to use a movestop clip on the joist nearest the centre of every board. This minimises the amount of expansion that the board can do.
- Whiteriver decking is approved for use over joist centres of maximum 400mm/16” (300mm/12” in commercial use).
- Secure start/end clips in line with each joist ensuring that you have allowed an expansion gap of at least 10mm between the first row of deck boards and wall. If two end boards meet on a joist use a start/end clip on each board. Hollow deck boards are not suitable for face fixing.
- Push the first deck board into the start/end clip. Check that the board is straight and fully inserted into the clip. Please note an expansion gap of 10mm must be placed around any fixed objects within the decking e.g. stair case, post brackets and any permanent fixtures that may prevent the decking expanding and contracting naturally.
- Insert a standard clip into each deck board in line with joist and screw fully but do not overtighten.
- It is very important to install one movestop clip per board onto the joist nearest the centre of the board. This helps maintain a consistent expansion gap. For the 2016 design movestop clip, this is also screwed to the deck board and the deck board should be pre-drilled in this case.
- All clips should be on their own independent joists i.e. when two board ends meet each other there must be a sister joist. The end of each board must sit on its own joist with a gap of 5-10mm to allow leaves, dirt and debris etc fall through the deck boards as per image above.
If not framed by wall or building on each side, the second last row of boards can be slid into position after you have fixed the last row and the clips for the second last row have been fixed into position. If a wall or house prevents sliding the board in, fix the last board using the start/end clip. Next insert fixing clips into groove of board and then slide them along with a screwdriver into position. (See Insert)

Push the second row of boards into the previous installed row of boards making sure that the deck board grooves are in tight on the clips. Continue to keep inserting clips and boards in this way.

For the last row of boards use a start/end clip in line with each joist. You need to use these clips even if you putting on a fascia board.

Where the short ends of the deck boards meet, ensure that you leave a gap of 5mm to allow for seasonal expansion and contraction.

You can use a solid fascia plank for a great looking finish. It is very important to predrill all composite material prior to fixing with a hole slightly bigger than the screw. Fix in two stainless steel screws into the substructure at intervals of 300mm – the fascia board must be fixed to a solid timber plank in all areas (not directly to the butt ends of exposed joists). You must leave a minimum 40mm gap between the bottom of the fascia and the ground.

Alternatively place end caps in front of any exposed hollow boards ends and push in as shown. A mallet could be used as well to push in the end caps. A dab of external silicon sealant should be used on the end cap or inside the holes of the board in order to secure the end caps better.
Fitting Posts & Railings

NOTE: IT IS IMPORTANT THAT COMPOSITE MATERIAL IS PRE-DRILLED PRIOR TO INSTALLATION OF ACCESSORIES.

Step 1
As the diagram 2.1 below shows, firstly use expansive bolts to fix the Post Bracket in the right position of measured posts on the concrete ground or in case of timber joists, use coach screws suitable for outdoor use. The post bracket should be fixed to the sub-construction, not the decking. **We recommend that the spacing between two posts should be not more than 1800mm;** this distance is based on the specific spacing between two Spindles. (The standard spacing between spindles is 100mm to 150mm)

Insert the posts into the Post Bracket, then using fixing screws, fix the posts through the holes of the angle iron on the Post Bracket:

![Diagram 2.1](image)

Step 2
After fixing the posts, please insert the Post Flange to the bottom of the posts; then mark the position for the Top and Bottom Handrail on each posts. Drain holes should be drilled into the underside of the composite decking handrail and baserail. This is to prevent water accumulating within. Fix the Handrail Bracket on the marked position on the post, just as diagram 2.2 below shows. **We recommend that the spacing between two posts should not be more than 1800mm.**

![Diagram 2.2](image)

Step 3
As diagram 2.3 below shows: fix the Spindle Bracket on both the Top and Bottom Handrail - the fixing spacing is based on the standard spindle spacing of 100mm or 150mm. Install and fix the Top and bottom Handrail to the Handrail Bracket.

![Diagram 2.3](image)

Step 4
Please install minimum 2 pieces of spindles below the Bottom Handrail according the installation of spindles in diagram 2.4. It will avoid the sag by natural gravity.

![Diagram 2.4](image)

Step 5
Install the Post Cap on the top of posts. Now you are finished the installation of the Post and Handrail system. Please consult the finished drawing of Post and Handrail system as shown in diagram 2.5 below.

![Diagram 2.5](image)

Deck Finishing
When you have finished securing all the deck boards and there is an overhang use a chalk line to mark the board and cut the excess with a circular saw. You can fix the composite angle by using stainless steel screws every 40cm. Screw the angle to the deck board. Pre-drilling is required, do not nail.

**Care for your composite Deck**
- The deck should be washed with water and soap
- A power washer can be used (max 80 bars)
- If there is oil or grease on your deck use a degreasing agent. If necessary you can use sandpaper, sand with the grain. Please note that if sanding, there will be some colour difference initially but this will blend in over time
- Do not use solvent based cleaners on your deck
- Water stains can appear due to uneven moisture levels, these stains will disappear under UV. Rinse evenly with water and leave to dry naturally

If you need any further assistance in the fitting of your Whiteriver Composite deck, please do not hesitate in contacting your local stockist for more information.