



# INSTALLATION GUIDE

## COMPOSITE DECKING



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# STORAGE & HANDLING

Whilst our composite materials are highly durable we do recommend to follow the below guidelines for storage, handling and installing to ensure products are kept in the best possible condition.

## STORAGE

- Materials should be stored under cover, protected from weather and in the shade, until ready to install.
- Materials should be covered and kept dry until ready to install to ensure a clean surface. Products should not be stored outside and or covered with plastic sheeting.
- All composite products should be stored supported above the ground at 500mm intervals on a flat clean surface. Supporting battens used in storage should align through the stack to equally transfer the load.
- Boards must be stacked on top of each other
- Where multiple pallets delivered these should not be stacked higher than 3m per stack.
- Ecoscape will not be held responsible for issues that arise from poor storage.

## HANDLING

- Decking materials should be placed and not dumped when unloading. Boards should be lifted and set down with care to avoid damage do not slide boards over one another.
- Decking boards should be carried in the middle and on their edge for best support when moving.
- During installation, avoid sliding or dragging any equipment across the board surface to avoid any tarnishing the surface
- The surface of the decking boards should be kept free of construction debris and material to prevent damage to the boards. As with all sites surfaces should be kept clean and tidy for the best installation.

# SAFETY & USE

Prior to installing any composite system we recommended that you consult local building regulations for any special requirements or restrictions that may apply. The illustrations and accompanying instructions in this guide are for illustrative purposes to provide a typical installation scenario, and do not replace the advice of a licensed professional in the field.

## SAFETY

- Personal Protection Equipment (PPE) should be worn at all times (COSHH Assessment summary available). When cutting and installing boards it is advised to wear gloves, protective eye wear, a dust mask, long sleeves and trousers.
- Dry and windy environments may result in a naturally occurring static build-up in composite products. The levels of static build up will not cause personal injury.
- Composite decking boards MUST be installed onto a substructure to allow adequate air flow beneath – this prevents any excessive water absorption. Boards can not be laid directly onto a flat surface. A minimum of 25mm clearance beneath the decking should be provided to allow adequate drainage and drying.
- Excessive heat may be felt on the surface of the composite decking products from external sources such as reflection of sunlight from Low-E glass. This may cause an unusual heat build-up on any exterior surfaces. Excessive heat exposure may cause boards to sag, warp, expansion/ contraction at increased levels, may accelerate weathering and in extreme circumstances melt the board surface. A rise to such adverse levels is deemed extremely unlikely in the UK due to the stable climate.

## USE

- Standard woodworking tools can be used to install our composite products. When using a chop saw we would recommend a 60T+ Multipurpose aluminum blade for maximum efficiency and neatness on cuts.
- We recommend the ecoscape screws provided with the t-clips for installation of the boards – using any other screw system will invalidate the installation warranty. All fixings should be fastened at a 90 degree to the decking system.
- It is imperative to plan your decking before starting to ensure the best looking layout is achieved. We would recommend to pay particular attention to fixed elements such as door thresholds, gutter outfalls and walls in order to determine the optimal laying pattern and starting position of the first boards.
- Forma and Clarity Composite Decking Boards are not intended for use as primary load-bearing members. i.e. cantilevered structures, supports, beams, stringers.
- Boards must be supported by a compliant substructure at  $\leq$  400mm centres and absolutely CANNOT be installed onto existing decking boards.

# TOOLS

## RECOMMENDED TOOLS REQUIRED TO INSTALL FORMA AND CLARITY DECKING

Standard woodworking tools can be used when working with Ecoscape Decking. If you are unsure on how to use any tool, please consult the tool's manufacturer's user manual.

- Circular Saw – we recommend a 60T+ multipurpose blade to achieve the cleanest cuts.
- Mitre Saw extremely helpful also for mitres and beveled edges
- Jig Saw
- Hand Drill – 3mm and countersink drill bits (SmartBit countersink tool available)
- Tape Measure
- Set Square
- Spirit Level
- Protective eye wear and relevant Personal Protection Equipment (PPE)

# CALCULATING BOARDS

To determine how much Ecoscape Decking material will be required, you can either use detailed plans or follow the method below.  
Alternatively, feel free to speak to one of our technical experts on 0845 9011 988.

1. Start Off by measuring the width and length of your proposed decking area(s)
2. Plan which direction to lay your decking
3. If the boards are laid length ways, to find the number of board rows, divide the deck width by the width of the boards, plus a 5mm spacing per board (allows for the hidden T-clip):

Ecoscape boards are available in the following sizes:

Clarity – 25mm (H) x 150mm (W) x 2900mm or 4800mm (L)

Forma – 25mm (H) x 150mm (W) x 2900mm or 3600mm (L)

For example, for decked area 3.1m Wide x 6m Long, boards (150 x 25mm) with 5mm hidden fasteners:

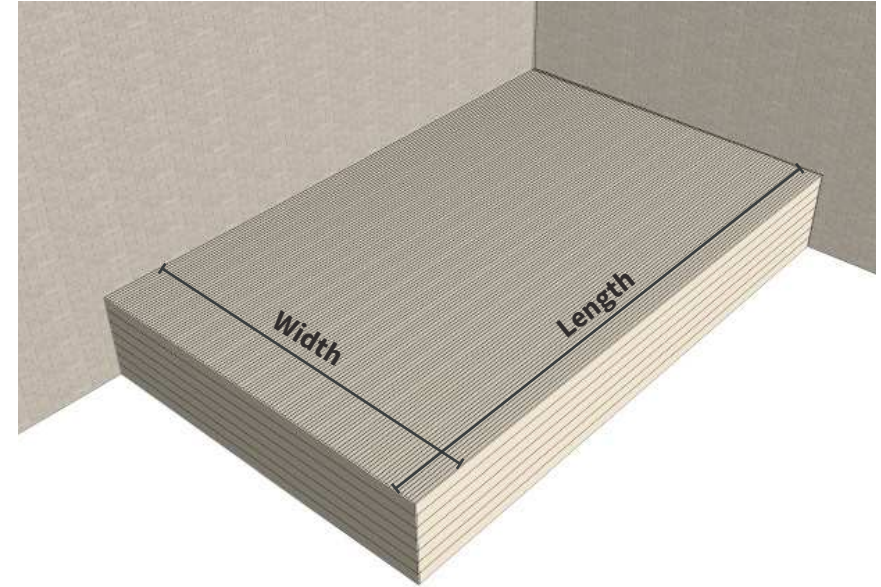
$$3.1\text{m width} / (0.150\text{m} + 0.005\text{m}) = 20 \text{ boards wide}$$

4. Now multiply the length of the deck by the number of boards wide (given above).  
This gives you the total linear meters of deck boards required:

$$6\text{m length} \times 20 \text{ boards wide} = 120 \text{ linear meters}$$

5. Next, divide the total linear meters of decking by the length of board being used:  
 $120 \text{ linear meters} / 2.9\text{m board length} = 41.3 \text{ lengths of } 2.9\text{m decking boards}$

6. Finally, multiply the number of total boards by 1.05 to include for 5% wastage:  
 $41.3 \times 1.05 = 43.365 \text{ or } 44 \text{ Boards.}$



The same method of calculation can be used to work out the number of boards required to the vertical fascia's to the deck.

# DECKING COMPONENTS

Please ensure you are familiar with all the decking components prior to starting.

## CLARITY

CLARITY Decking Board (25x150x2900mm)  
(25x150x4800mm)  
Various colours



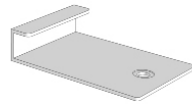
## FORMA

FORMA Decking Board (25x150x2900mm)  
(25x150x3600mm)  
Various Colours



# DECKING ACCESSORIES

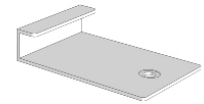
Starter / Finish Clip (Steel)



Hidden T-Clip (Plastic) and Screw



Starter / Finish Clip (Steel)



Hidden T-Clip (Plastic) and Screw



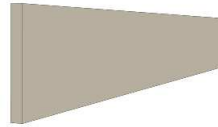
# DECKING ACCESSORIES CONT.

## CLARITY

Angle Fascia Trim (42x6x2900mm)



Flat Decking Trim (10x90x2900mm)



Colour Coded Screws (250pcs or Individual)

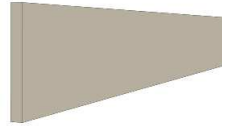


Colour Coded Poly Pin (50pcs)



## FORMA

Flat Decking Trim (10x150x2900mm)  
(10x150x3600mm)



Colour Coded Screws (250pcs or Individual)





# PRE INSTALLATION NOTES

Decking areas can take many forms and scales of complexity. The following guide portrays the steps to install the basic board system and side trim. The approach shown can be used to develop terraces and step details however these will require further planning and consideration.

The diagrams shown use an external grade timber sub-frame on which to fix the decking. Boards can also be fixed onto aluminum or composite frames. Ecoscape are able to offer support with and design approaches which vary from that shown here.

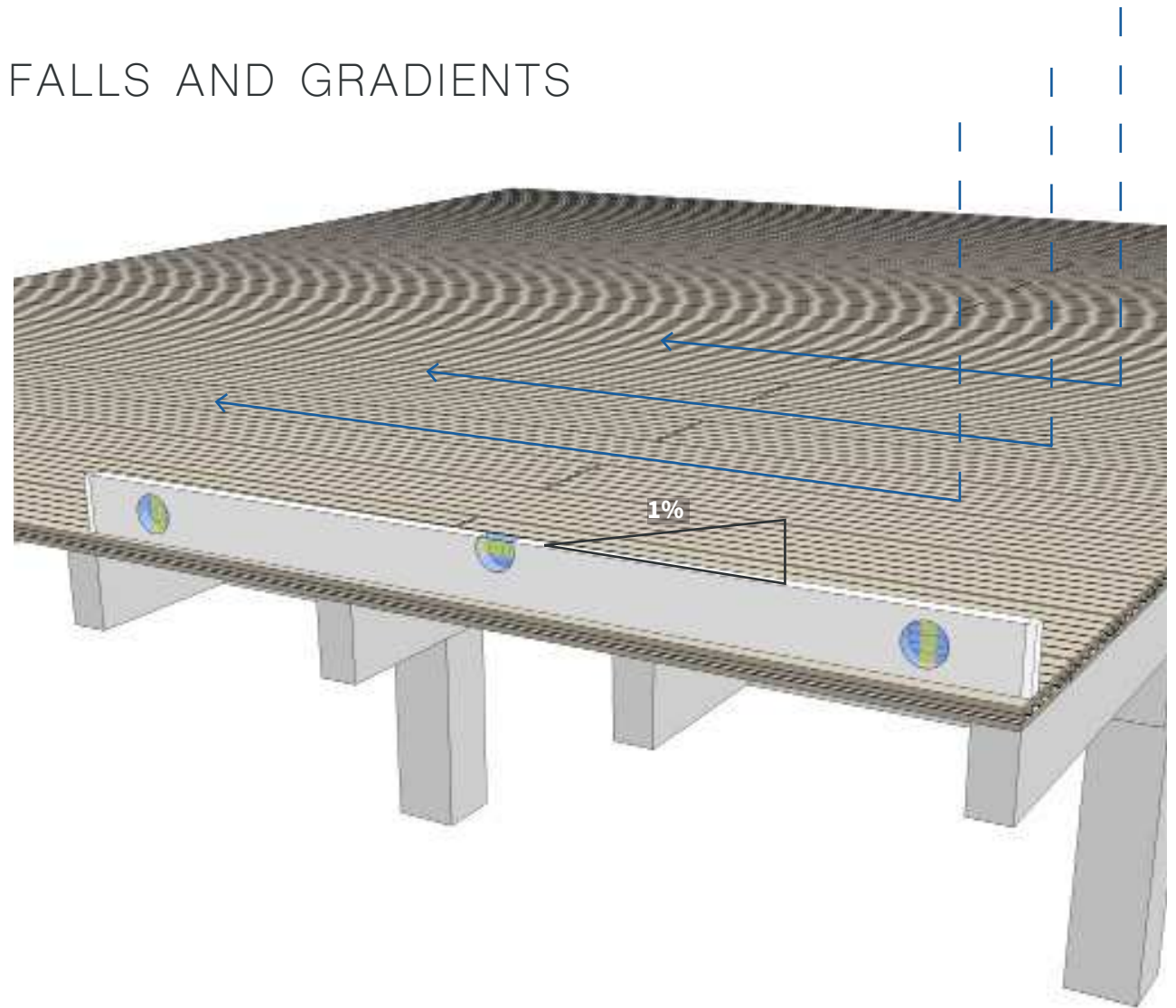
TYPICAL INSTALLATION: DECKING AREA ADJACENT TO HOUSE



# FALLS AND GRADIENTS

Whilst not absolutely necessary, it is recommended that composite decking boards are installed at a 1% gradient.

Boards laid parallel to the direction of fall will encourage water to shed via the preformed grooves in the boards (FORMA only), and so further reducing the risk of slipping when wet.



# INSTALLATION OF SUBSTRUCTURE

## Timber Joists

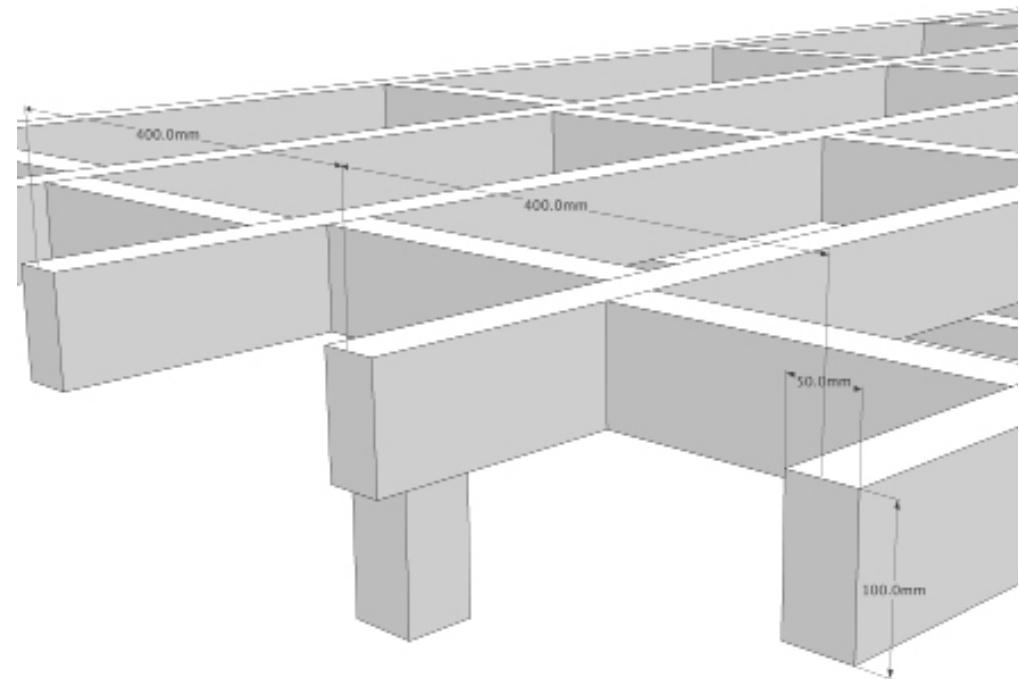
### DECKING JOIST LAYOUT:

Joists should be fixed to a secure legs in a concrete footing or similar. Ecoscape are unable to accept any liability for the installation of inadequate sub-frames. The contractor should ensure the frame is adequately prepared.

### JOIST SPECIFICATION:

- Decking can be fixed to pressure treated softwood timber joists ( Grade C16 – EN14081 or similar) or composite battens depending on design requirements.
- Joists should be fixed into position at 400mm centres using suitable A4 stainless steel countersunk wood/ masonry screws. All joists need to be fixed in a minimum of 3 places.
- All joists need to be minimum 45x95mm thick

### TYPICAL TIMBER SUB-FRAME



# INSTALLATION OF SUBSTRUCTURE

## Aluminum or Composite Joists with Pedestal System

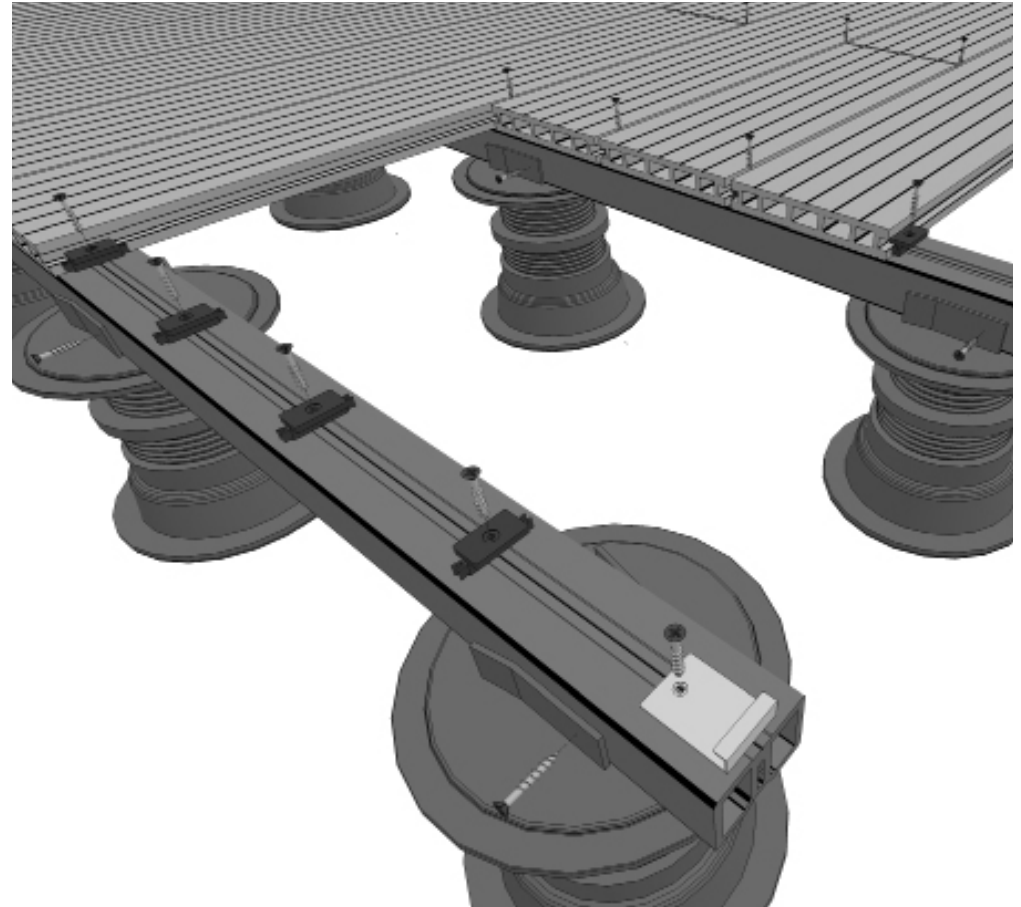
Ecoscape are also able to offer Aluminum or Composite sub frames.

With solid flat foundations and flat roof areas the decking substructure can be supported with adjustable support pedestals. These are simply placed straight onto the ground with a protective rubber pad (flat roofs) and the height of each is adjusted by rotating the pedestal top.

Joists can also be fixed to concrete block work or low walls.

Please refer to separate manual for full pedestal system installation or contact our technical team for further information.

TYPICAL ALUMINUM / COMPOSITE SUB FRAME ON ADJUSTABLE PEDESTALS

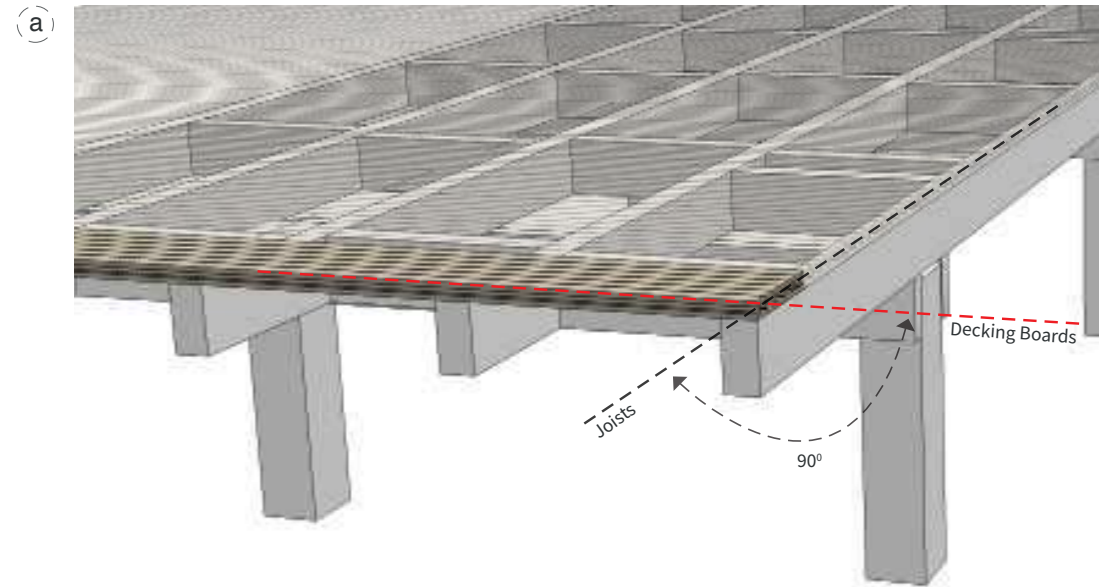


# INSTALLATION

## STEP 1 - Orientation of decking boards

- (a) We recommend that decking boards are laid perpendicular to the direction of the sub-frame, however other configurations are possible. Decking boards also function and look best when laid perpendicular to building line / door / viewing point.

There are a wide variety of laying patterns that can be achieved but these are not covered in this manual. Ecoscape are able to assist with the design of non standard laying patterns.

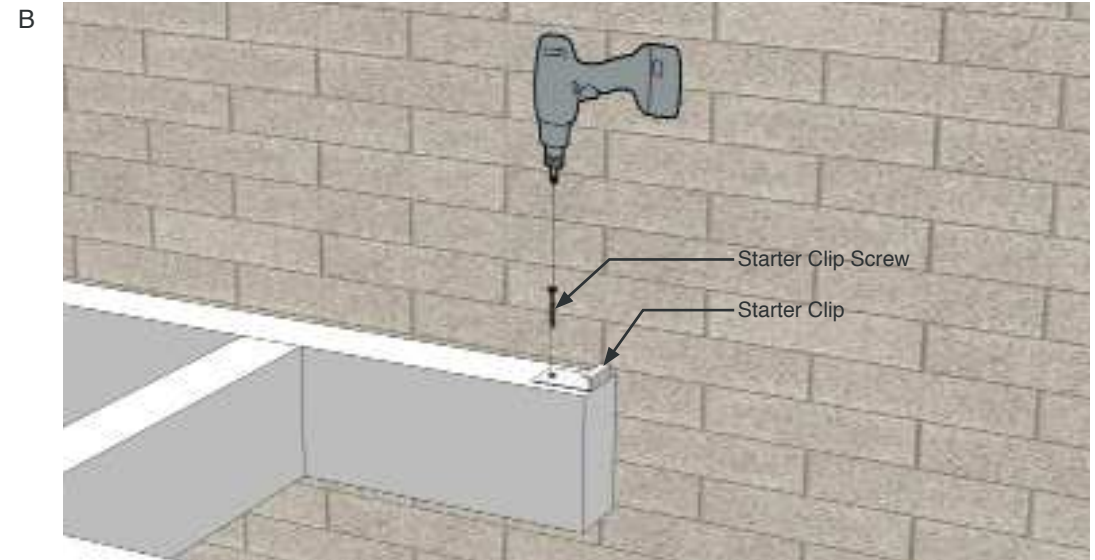




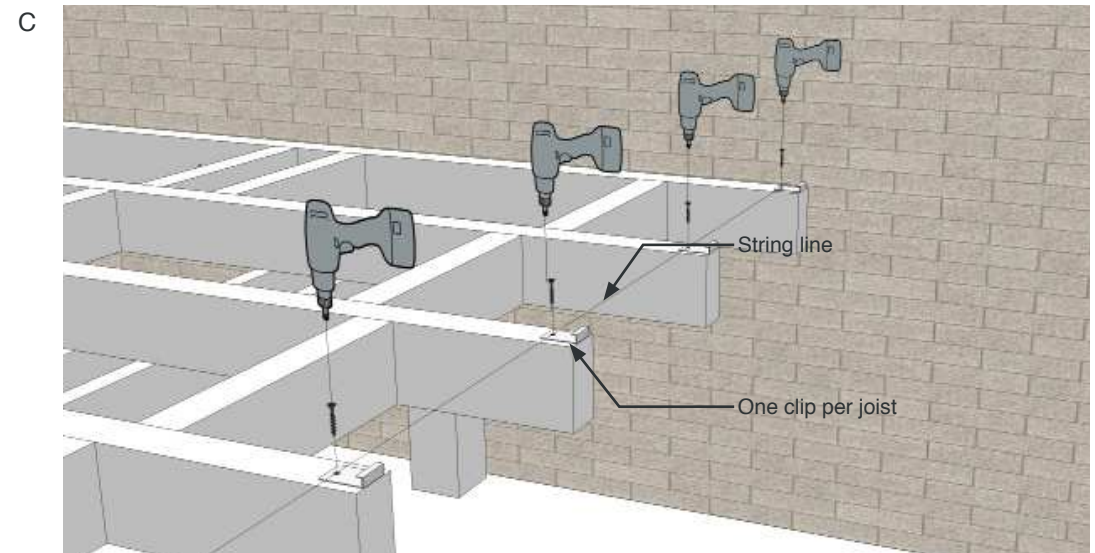
# INSTALLATION

## STEP 2 - Fixing the starter clips

- B** Once you have determined the location and orientation of the first decking board, you are ready to install the first starter clip. Align the clip to the end and centre of the joist, pre-drill, and screw in place the starter clip using the starter clip screw.



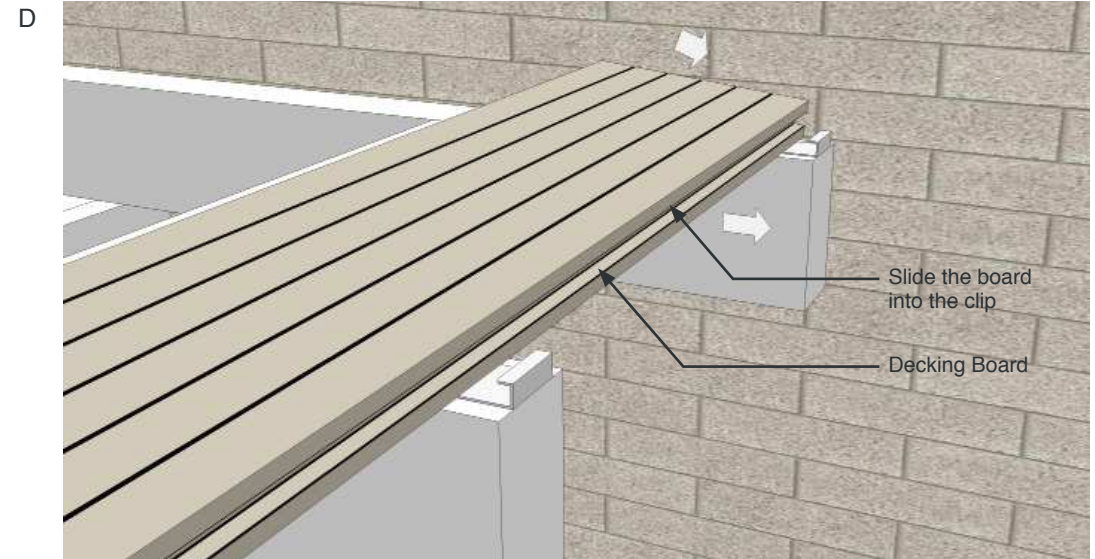
- C** Using a deck board or string line install the remaining starter clips, taking care to ensure they are aligned.



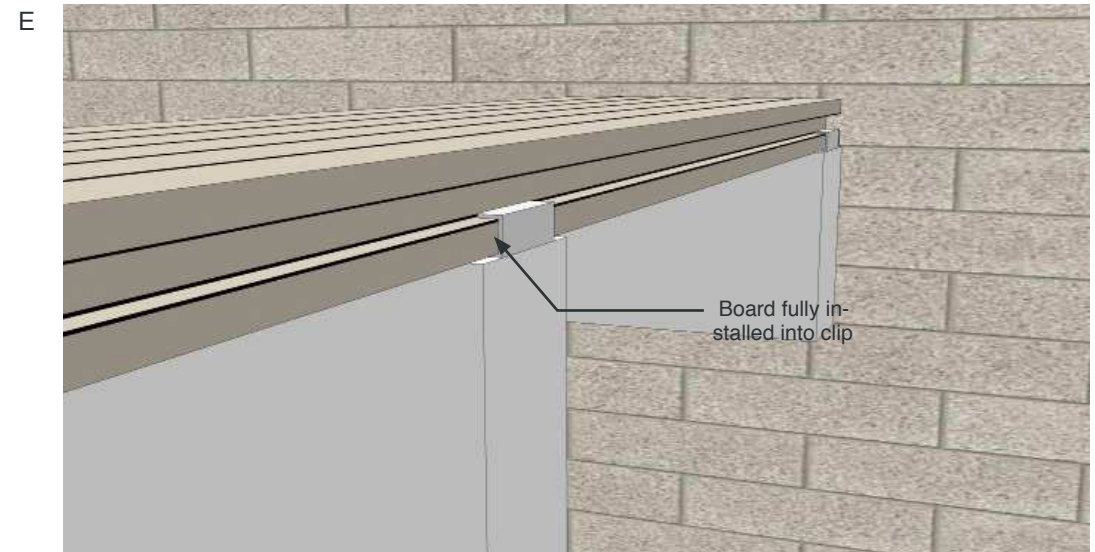
# INSTALLATION

## STEP 3 – Install the first decking board

- D Take the first board and slide it into the starter clip using the grooves in the side of the board.



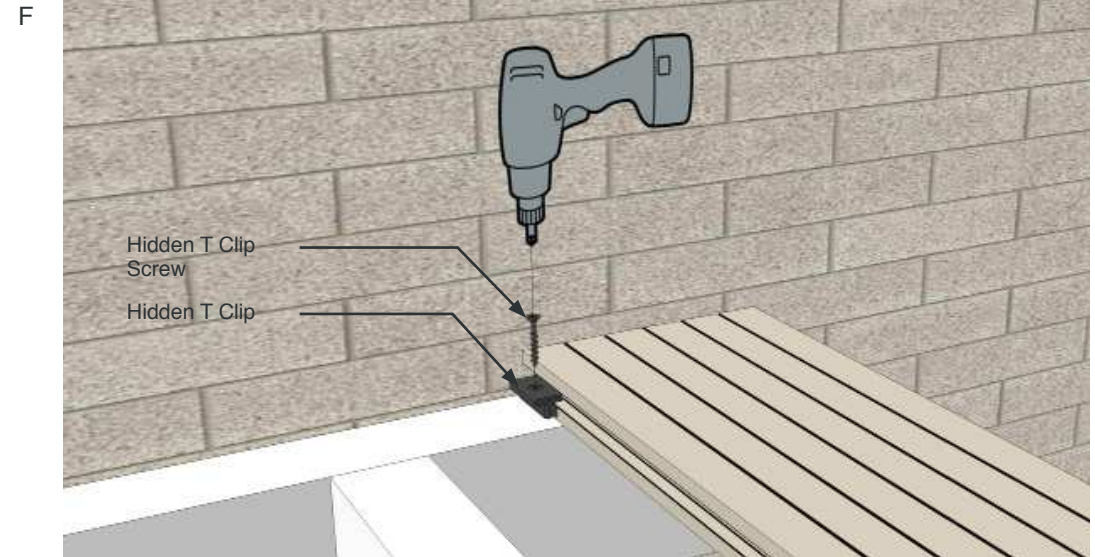
- E Ensure the board is fully installed into the clip before proceeding.



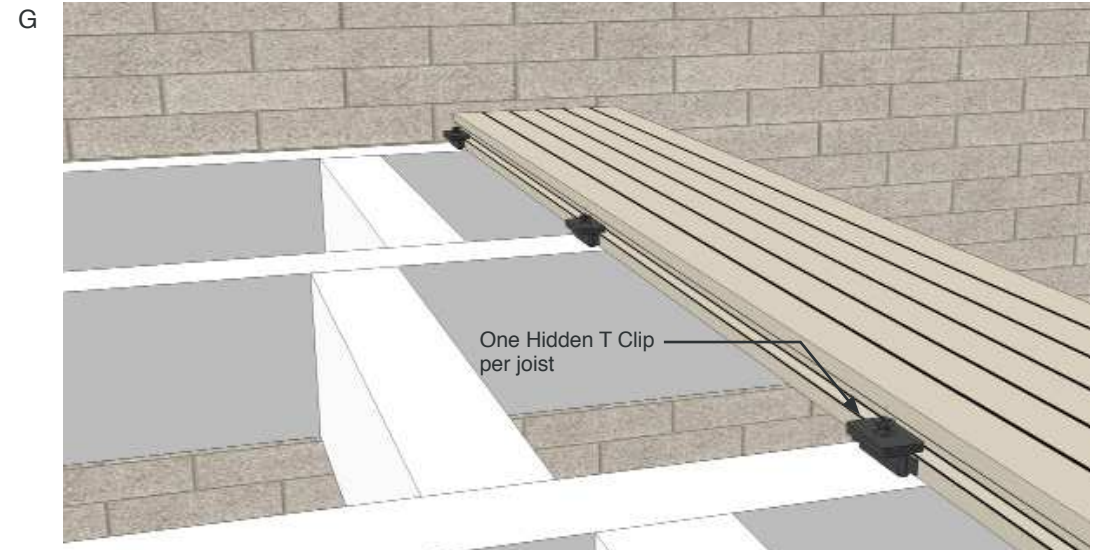
# INSTALLATION

## STEP 4 - Installing the T-Clips

- F Using the Hidden T Clips, Secure one end of the board in place by sliding the T clip into the side groove on the decking board and part screwing the T-clip screw into the joist. Do not fully screw the T Clip in place.



- G Install the remaining T Clips part way as above. One T-Clip should be installed per joist.

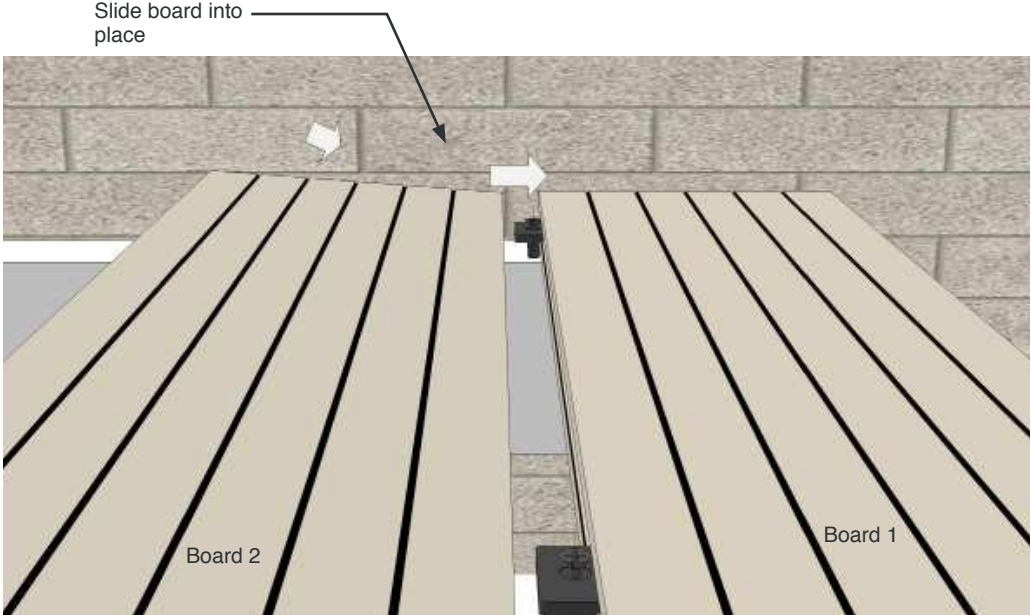




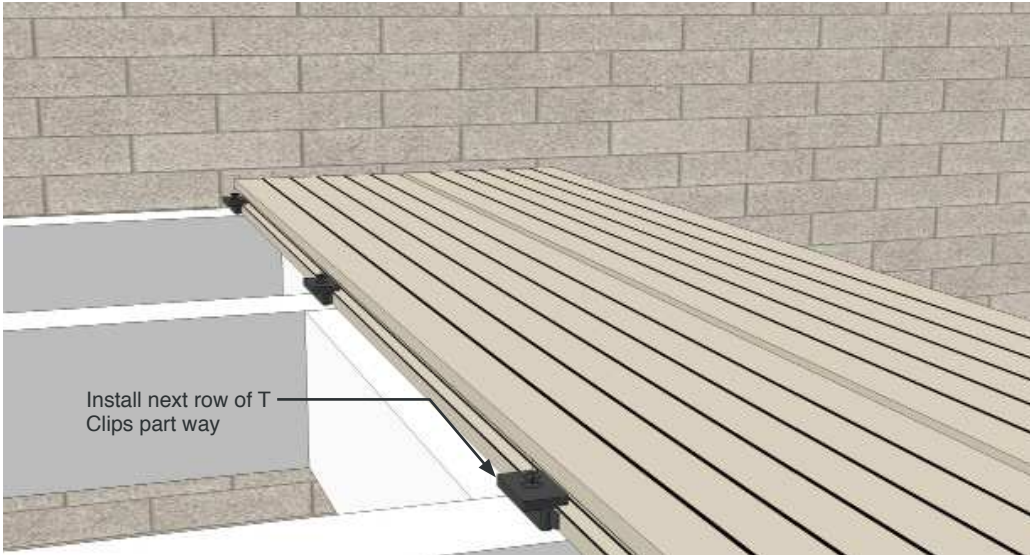
# INSTALLATION

STEP 5 - Install the second decking board

H Take the second decking board and slide into the T Clip fixings



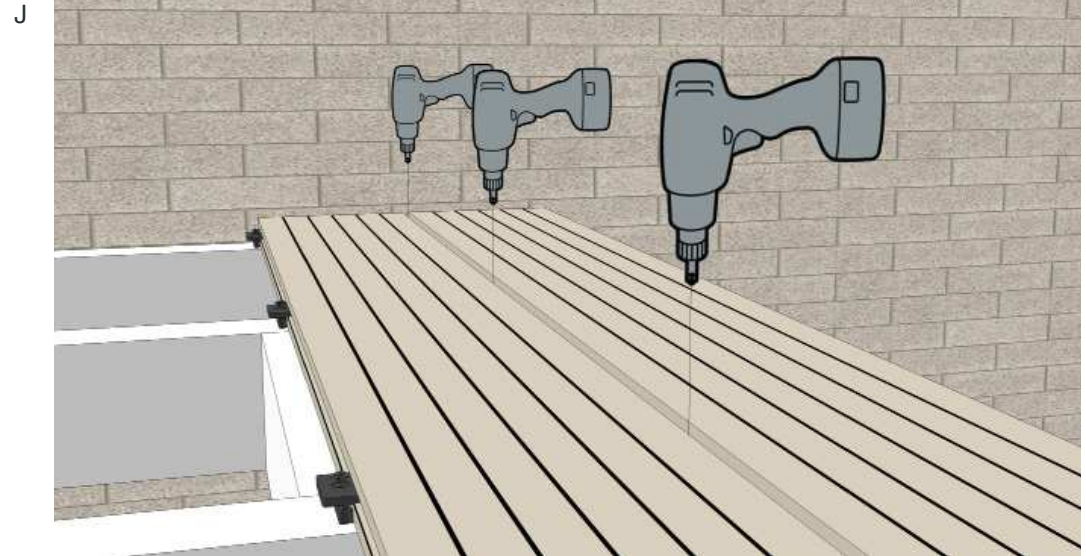
I Install the next row of T Clips to board 2 as described in step 4.



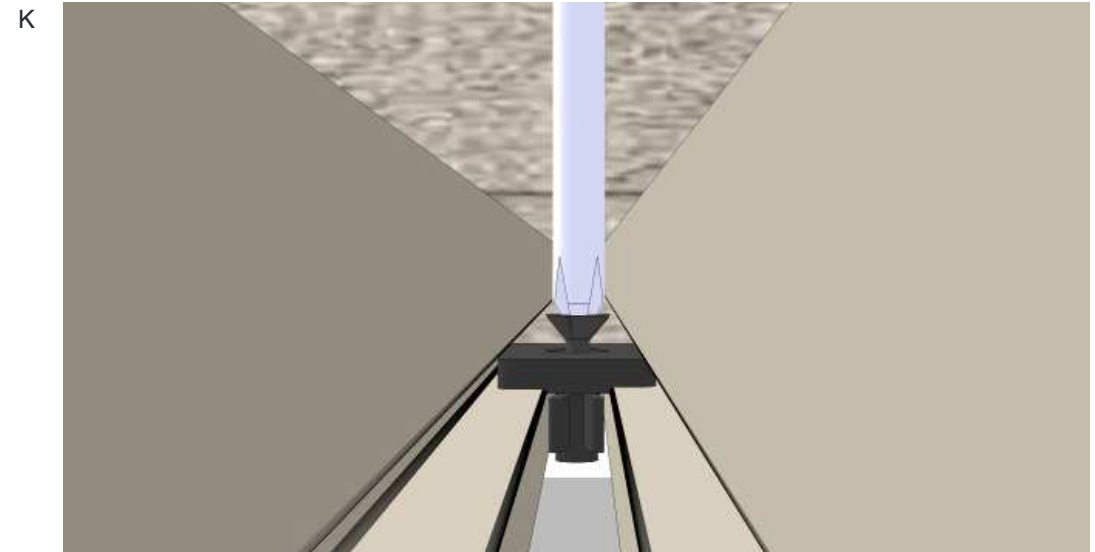
# INSTALLATION

## STEP 6 - Fully secure first set of T Clips

- J Once the second board is in place you are ready to fully secure the first line of T Clips in place.



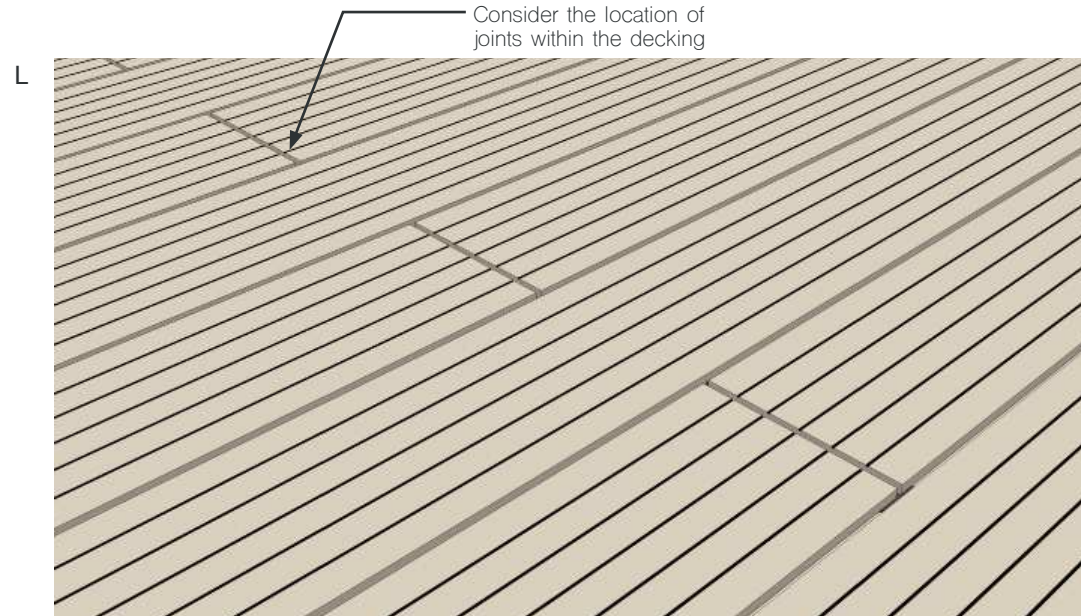
- K When Installing the T Clips Take care to use a screw bit of a suitable width (5mm) to avoid damage to the boards. If using a drill to screw in the clips, ensure the chuck does not come in contact with the boards.



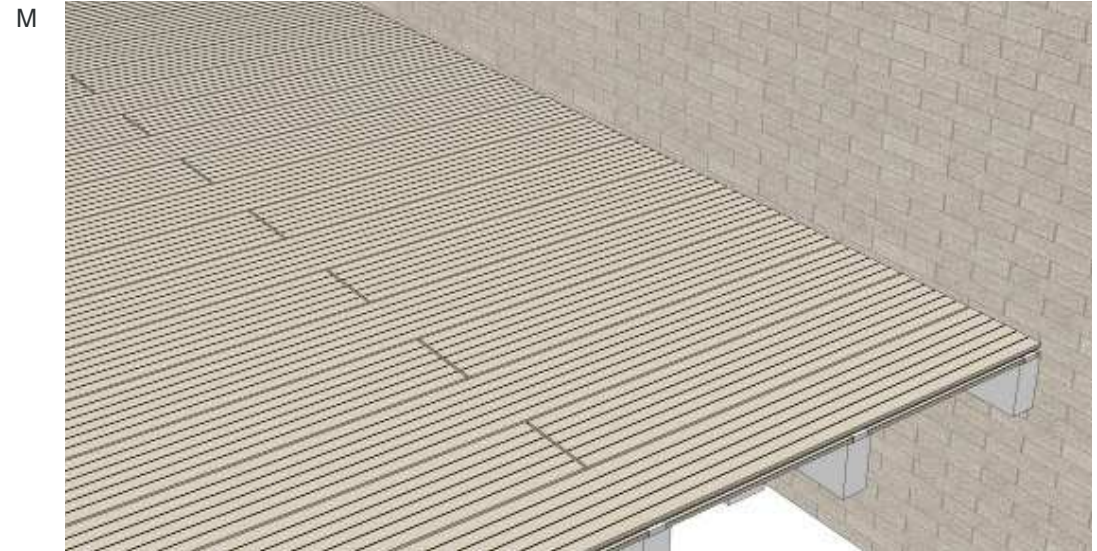
# INSTALLATION

## STEP 7 -Installing the remaining boards

- L Repeat steps 4 and 5 to install the remaining area of decking. If the decked area required joints to panels, plan where you want the joints to be visible. Joints should be made over a joist, with a T-Clip holding the two boards on either side to ensure a secure fixing.



- M Install the remaining boards





# INSTALLATION

## STEP 8 – Installing boards end to end

**N** Where a decking board is to be laid end-to-end with another, a 2/3mm gap is to be left between the boards.

Please note as a product that contains both timber and wood it is subject to movement with temperature change. The movement is 1mm per 10° C in temperature change of the product, not air temperature. In direct sunlight, darker composites will reach higher temperatures than lighter colours.

Please take into consideration the boards temperature when laying. If particularly warm these may need tighter gaps during install.

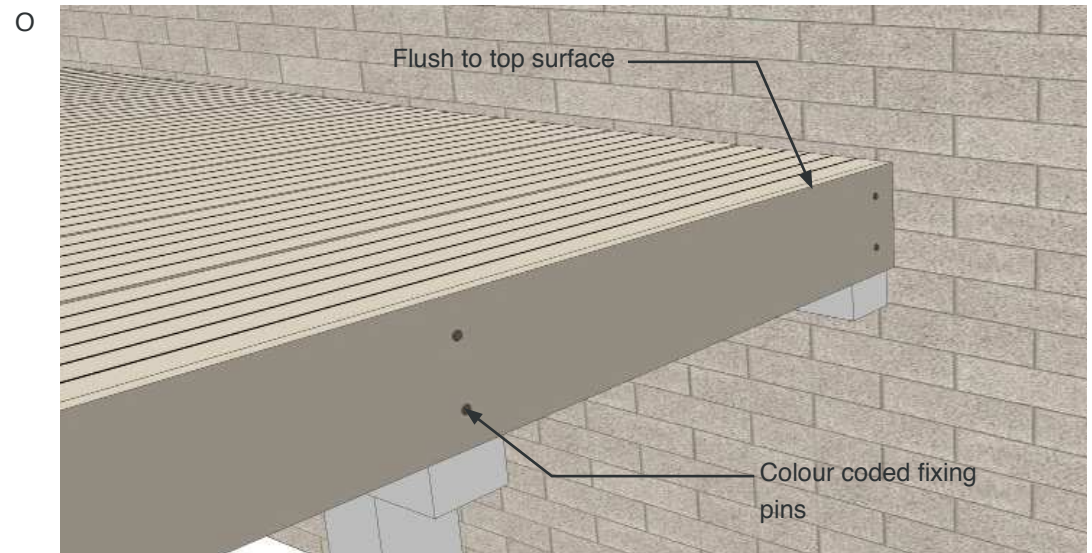
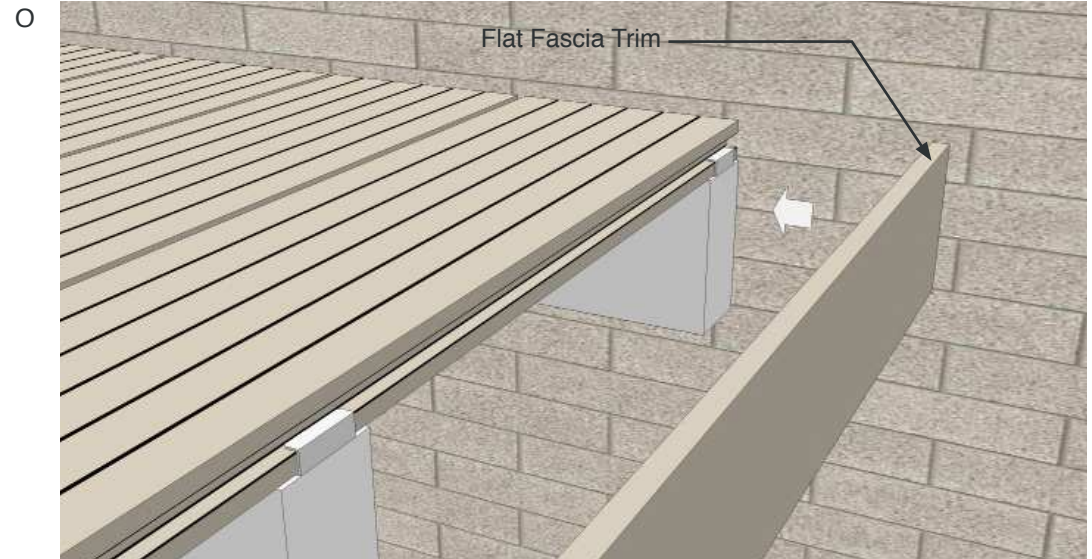
The boards should be supported by sub-frame joists, positioned 20mm apart as shown on the adjacent image. This allows the ends of the decking boards to be supported, whilst also allowing water to drain freely between the ends of the boards and prevent standing water.



# INSTALLATION

## STEP 9 - Finishing the deck - Option A

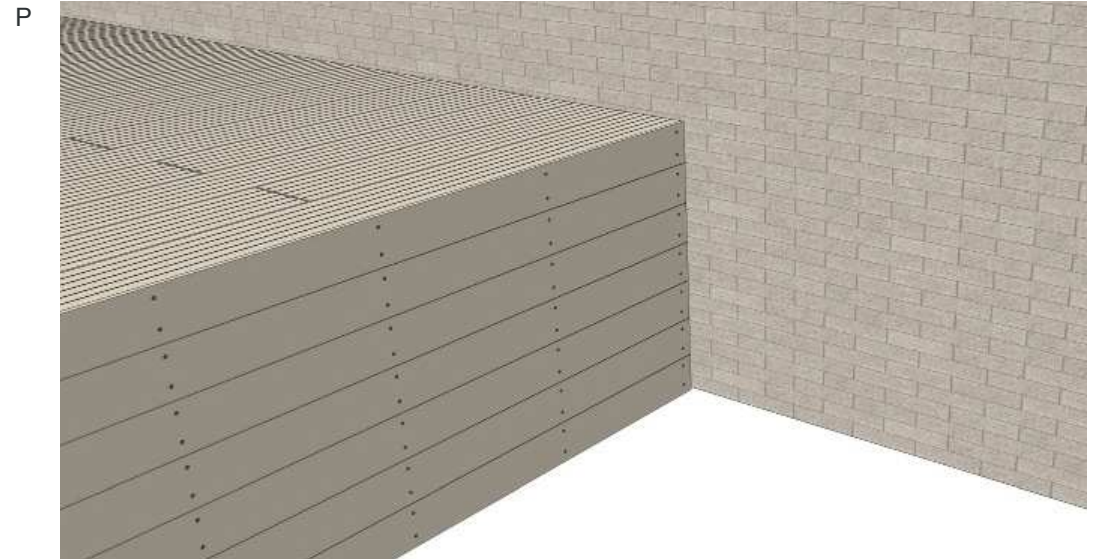
- Once the main boards have been installed the fascia trim can be attached to create a clean edge. Align the first Trim with the top edge of the decking and fix into the joists using the colour coded fixing pins. 2 Pins per joist.



# INSTALLATION

STEP 10 – Finishing the sides – Option A

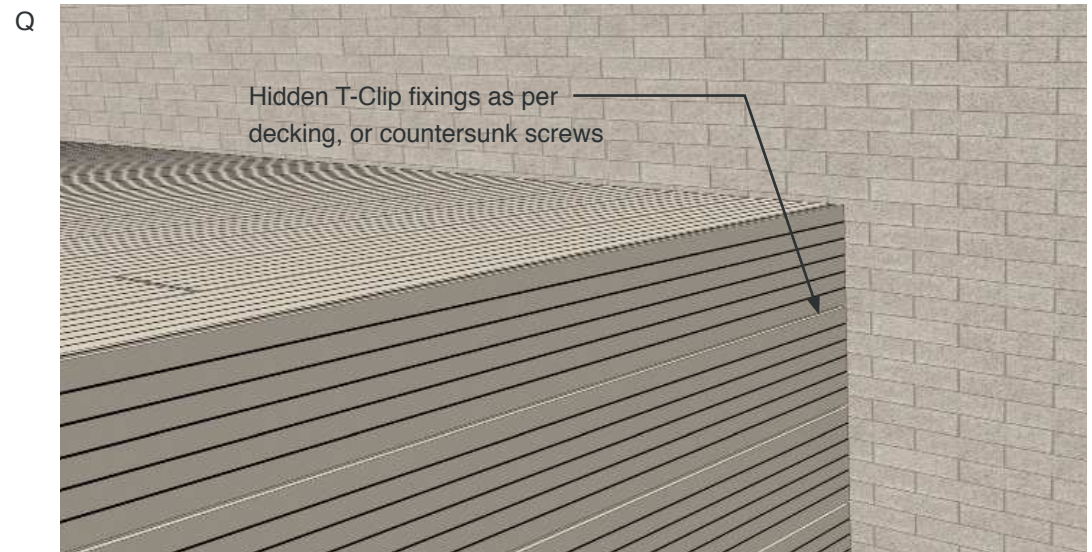
**P** Use the flat fascia boards to finish the sides of the decking as required.



# INSTALLATION

## STEP 9 - Finishing the deck - Option B

- Q An alternative method to finishing the decking is to utilise additional decking boards to clad the face of the decked area. The boards should be installed in a similar manner to the decking, however countersunk screws can be used rather than Hidden T-Clip fixings if the face of the decking isn't going to be in view.

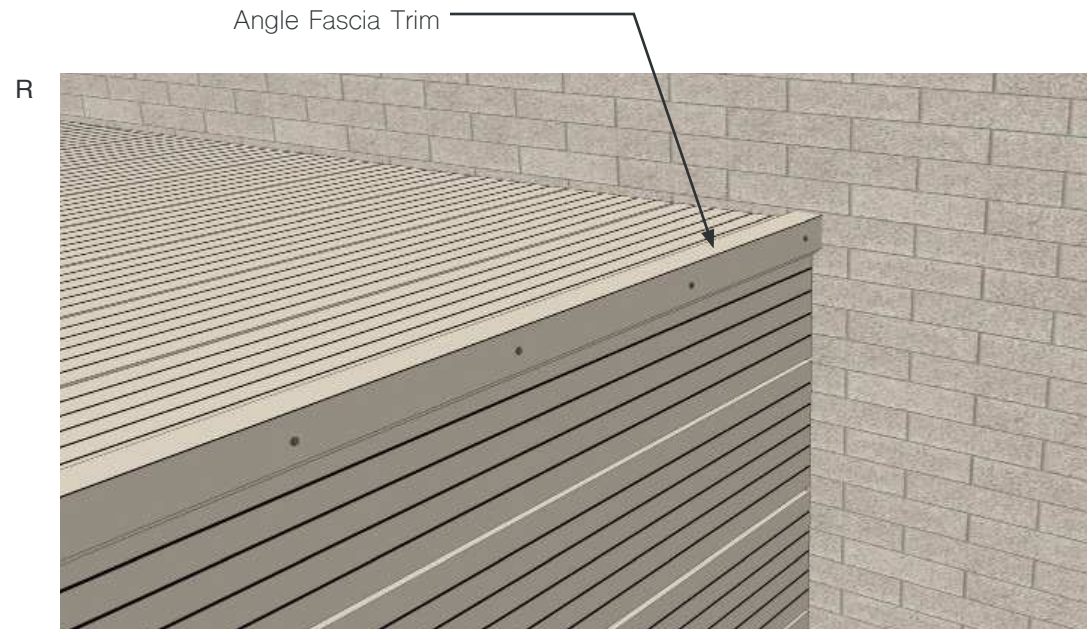




# INSTALLATION

## STEP 10 - Finishing the sides - Option B

- R Once the decking boards have been installed to the face, the Angle Fascia Trim accessory can be pinned to the top edge of the decking using colour coded poly pins, creating a smooth join.





# INSTALLATION

**Job Done!** Please consult with the technical department for further advice.



# CLEANING AND CARE

ECOSCAPE Decking boards will require periodic maintenance to remove the build up of dirt and debris. We recommend the decking is cleaned once or twice a year using either:

- A high pressure cleaner (Jetwash) with a fan shaped beam at a distance of at least 20cm in a lengthwise direction, or;
- Scrubbing brush with a all-purpose cleaner and water

Burn marks, from BBQ's or similar can also be removed using a course piece of sandpaper (80gsm or similar), by rubbing the deck length-ways gently.

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