

# EcoDecking



New tech

## Decking Installation Guide



### 1. Getting Started

Eco Decking Systems Ltd is the UK distributor for NewTech manufacturing that produces the APC Agro Plastic Composite Decking. The formula is made up of 50% recycled post-industrial plastic (PEP) & 50% natural fibres (Rice Husks) a natural form of water repellent material. This formulation gives the tile incredible strength and flexibility which will provide long lasting performance. ***Please ensure that you follow the installation guidelines and the correct procedures as any variance to this will void your warranty.***

When getting started, be sure that you have all the necessary fitting materials together

### 2. Tools:

**Our composite decking works well with standard woodworking tools:**

- It is recommended that all blades and router to have carbide tips
- Sanding is not recommended as it will change the surface texture and appearance of the composite
- Proper clothing and safety equipment are recommended when working with all tools and equipments.



**Mitre Saw:** Standard mitre saws can be used to cut decking to size using a 10"-12" blade or a blade with 30 or less teeth. This is recommended to create a smooth clean appearance.



**Screw Guns/Drills:** These power tools can be used to fix the decking boards providing an easy fastening solution. Standard drills and drill bits can be used when drilling into NewTech composites. When drilling into NewTech solid decking, it is recommended to occasionally lift the drill to prevent shavings from building up in the hole. Build up of shavings in the hole makes it harder to drill. This is not necessary for the voided profiles. **Tip:** Shavings can be used to cover screws for a smoother appearance.

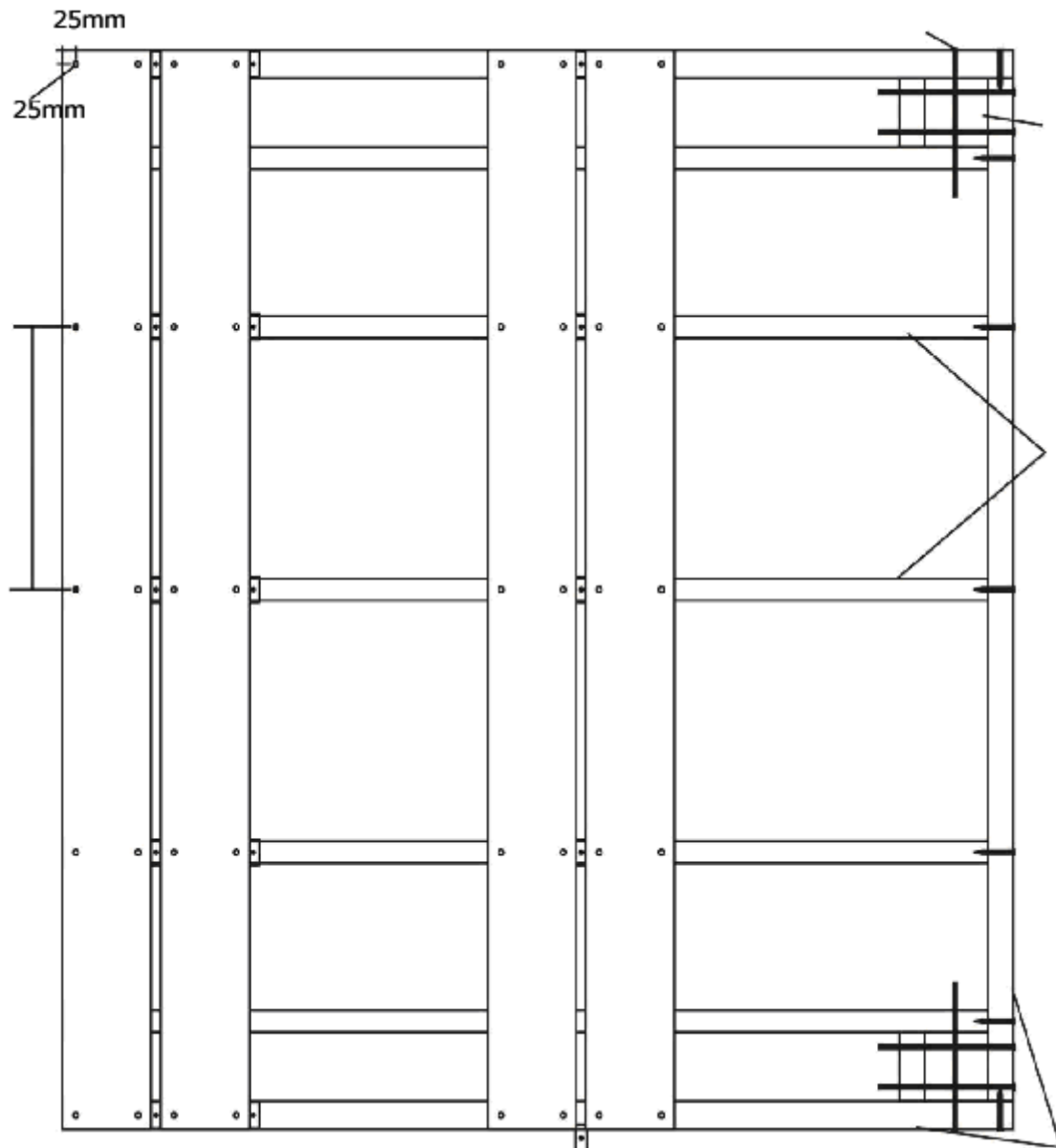


**Router:** Extraordinary profiles with detailed shapes and patterns can be created with the router. Routers are not recommended for beginner carpenters. Note that routing changes the surface texture and appearances of NewTech composites.

### 3. Framing and Installation:

Fasten at minimum 25mm off edge of board

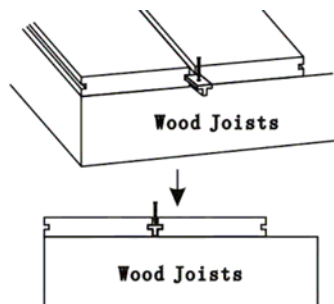
8mm x 200mm carriage bolts and nuts with washer (required at all posts)



**Rim joist: 50mm x 200mm or larger as required.**

**Joist spacing needs to be at a minimum 400mm off centre**

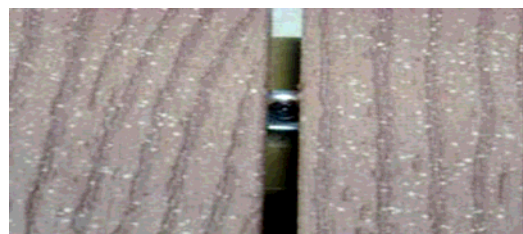
## 4. Grooved Systems with Hidden Fasteners:



1. Place 1st piece of NewTech decking at the edge perpendicular to the wood joist. Notch the NewTech composite to accommodate for the 100mm x 100mm Post.
2. Fasten screws at the edge of deck boards at a minimum of 20mm from the edge on all sides. Note that screws are needed around opening of 100mm x 100mm Posts
3. Place the 2nd decking with a slight gap between the two boards.
4. Slide the hidden fasteners T-clip C-4 between the two boards; Place one at each joist locations.
5. Make sure to put a clip K-2 in the middle between every two boards so that the decking boards will not move at any condition.
6. After all hidden fasteners are in place fix the fasteners on the joist.
7. Continue placing hidden fasteners and NewTech decking until end. Hidden fasteners are designed to create even spacing between decking, so simply slide decking tight to hidden fasteners.
8. Place final piece as you did with the first piece. Fix decking on 100mm x 100mm Post and use screws to fasten the edges of the decking (minimum 20mm from edge).



**K-2 Anti-walking clip**



**K-2 clip between decking**

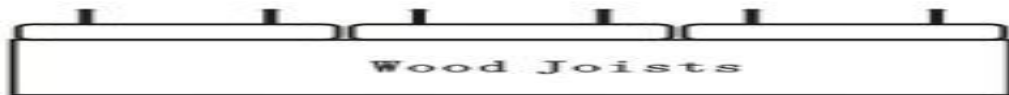
**Please Note:** Eco Decking Systems Ltd will not be responsible for those who do not follow the installation guide.

## 5. Fastening:

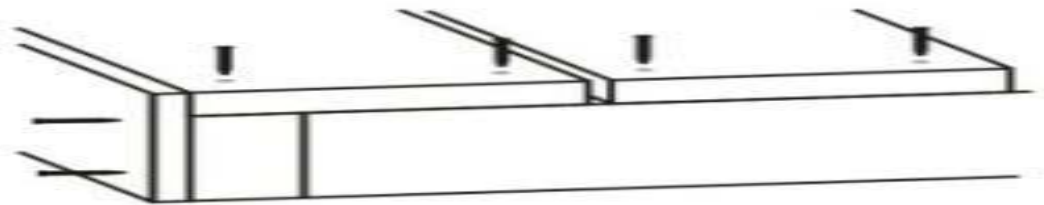
We recommend screws to fasten NewTech composite decking. **Stainless steel, hot dipped galvanized, or ceramic-coated screws** will provide the longest service life. Using composite screws and pre-drilling can minimize the effects of mushrooming. Pre-drilling is recommended, although not required, for fastening at least 20mm away from the edge of the board. Fastening less than 20mm away from the edge of the board, though not recommended, would require pre-drilling.



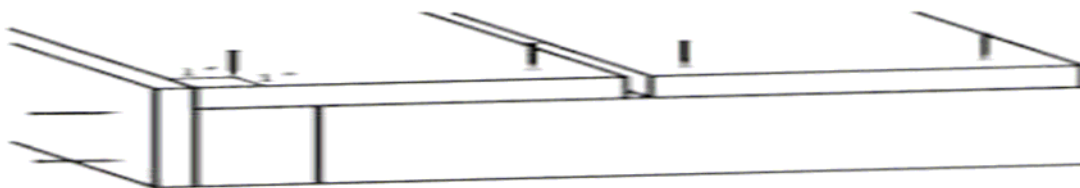
NewTech decking can be purchased with a grooved profile that allows decking to be installed with NewTech hidden fasteners as shown in the picture. This hidden fastener system is a great way to conceal fasteners and wood joists. It is also a great way to ensure proper spacing between deck boards.



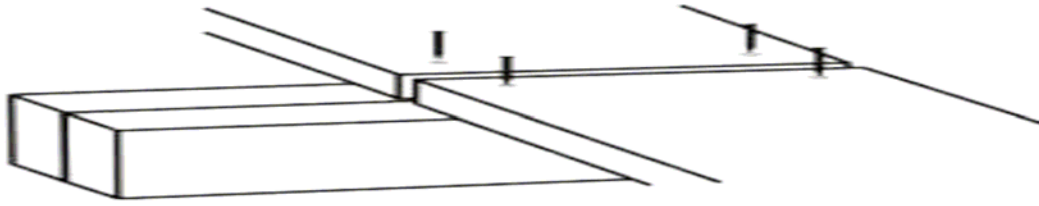
NewTech composites can easily be fastened and are engineered to accept the above recommended screws.



When installing the NewTech fascia trim, match the edge of the fascia to the top of the deck boards to ensure a consistent level. Be sure to fasten NewTech fascia to the wood joists. Both Screws (recommended) and nails could be used for fastening fascia.



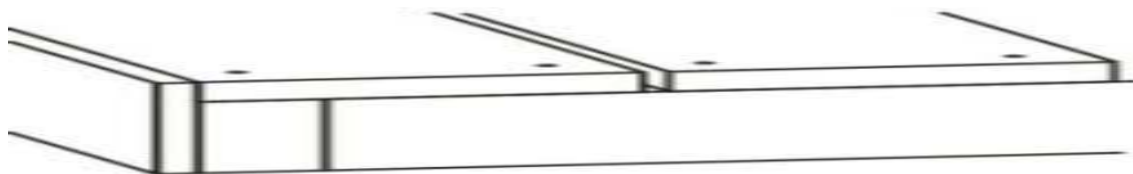
When fastening NewTech with screws and nails, fasten perpendicular to the deck boards at a minimum of 25mm from all edges of the board.



When fastening at butt joints, additional wood joists can be added so that both boards can be fastened at the minimum 25mm from all edges. Whenever there are butt joints that all boards that are used in those butt joints to have a screw through the centre of the board (Length & Width wise). If the joist does not fall on the centre of the board screw the board closest to the joist. If you have a board that stretches the entire length of the deck and has no butt joints secure one end of the deck board with 2 screws or have fascia board cover up the ends of the board to secure the board in place.

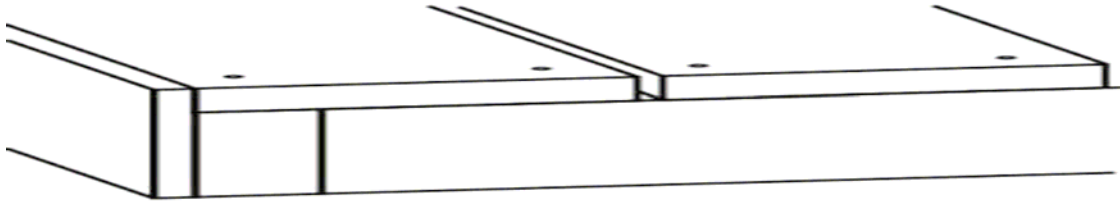


When fasteners cannot be fastened at the recommended 25mm from on edge, it is possible to fasten boards at an angle. Because of the physical nature of the composite material, fastening at an angle will not cause splitting. Angling the fastener from a minimum 25mm away from the edge can allow you to fasten deck boards to the joist without additional nails. However, pre-drilling is recommended. After fasteners are installed, shavings may be used to cover the fasteners for a smoother finish. Simply fill the divot with shavings and tap gently with a hammer.

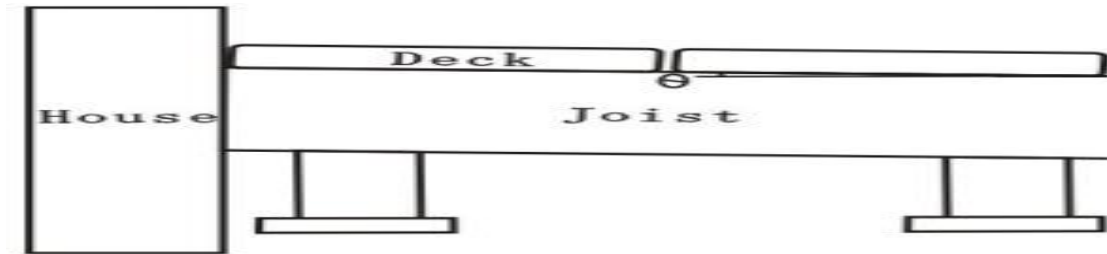


## 6. Spacing:

NewTech composite decking requires a minimum of 150mm high, continuous airspace below joists as well as along three side of the deck to allow for cross ventilation.



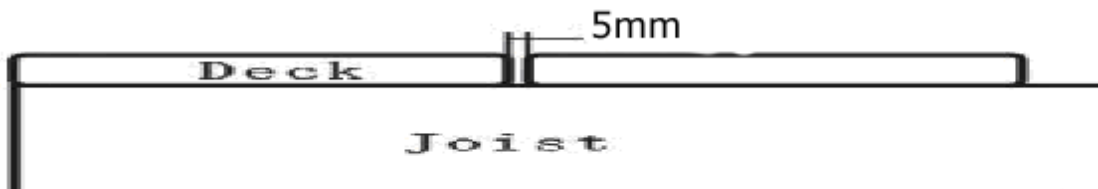
Slightly slope the deck (2mm per 300mm) away from the house to allow for water runoff.



When installing a deck over living space, a membrane is essential



Allow proper spacing between deck boards for drainage, and expansion and contraction of the boards. A minimum of 2mm is suggested. It is recommended that the spacing/gap does not exceed 10mm. NewTech hidden fastening system is already engineered for perfect spacing every time. Simply install grooved NewTech decking tight to the hidden fasteners.



## **7. Expansion & Contraction.**

NewTech boards are designed to be installed with adequate gapping around the boards to aid air flow. Using NewTech deck clips to fix the boards to the joists provides an automatic 5mm gap between the sides of each board and is the preferred fixing method. Installations made without adequate air flow or a gap between the sides of each board may void the warranty.

NewTech composite decking expands and contracts lengthways due to changes in temperature (there is minimal change to the width of the board). It is critical to understand the board temperature prior to cutting in order to determine the gap requirements when installing the decking as hot boards will shrink and cool boards will grow.

The longer the board the greater the potential for a change in length due to temperature change. All boards should be the same temperature during installation. The boards should be unstacked so that each board is exposed to the same amount of direct sunlight and will therefore absorb the same amount of radiant heat (if the deck is enclosed or in the shade it is still important to have all of the boards at the same temperature by spreading them evenly over the deck surface prior to installation).

A 5.4 metre long board will grow by approximately 12mm (6 mm at each end) over a 30°C increase in the temperature of the board. The board will contract by the same amount if the temperature of the board cools by 30°C.

Even on a day of mild temperatures and minimum temperature change the boards may vary in temperature by 30° Celsius or more if moved between direct sunlight and shade.

A 3mm-7mm gap for butt joints between short boards should be employed when "cooler" boards are being installed. No gaps are required between the butt joints when boards are installed "hot". Butt joints should always occur over a double joist or cleat (minimum 90mm x 45mm) to allow for proper fixing.

It is highly recommended that boards over 4 metres in length are not butted end to end (this applies for either a continuous run of boards or an angled or mitred join). Running long boards with a butt join may result in a gap of more than 10mm once the boards have cooled and contracted. The preferred method of deck design is to use a breaker board run across the deck at 90 degrees to the long boards so that the gapping requirement is effectively halved.

Gapping around posts or other protrusions in the decking requires careful consideration. We do not recommend "spacing" a gap in a continuous board in order to go around a deck protrusion. Our recommendation is to cut the board at the protrusion so that one end of the board finishes before the protrusion and can be gapped according to the information above. The other end of the board can be placed around the protrusion allowing 5mm for the side gap.

As mentioned in the substructure information any protrusions should have joists fitted around them so that the end gaps can be fully supported.

## NewTech Composite Decking Domestic Fixing Specifications

**It is critical to follow the spacing chart below for proper deck performance**

**Non adherence to the fixing recommendations may void your warranty.**

Maximum joist distance (centre to centre) laid at 90 ° to the joist	400mm*
Maximum joist distance (centre to centre) laid at 60 ° to the joist	400mm*
Maximum joist distance (centre to centre) laid at 45 ° to the joist	300mm*
Maximum joist distance (centre to centre) laid at 30 ° to the joist	250mm*
Maximum stringer spacing for stairs (centre to centre) Note: Stair installation using NewTech should always include a riser board	300mm
Minimum ground Clearance	150mm**
Minimum spacing between boards (side to side)	5mm
Minimum spacing at end of boards (abutting a wall)	5mm
Minimum spacing from side wall	5mm
Maximum overhang of boards past supporting joist	50mm
Spacing required for end gaps for boards up to 3 metres long	0-7mm
Spacing required for end gaps for boards over 3 metres (not recommended)	Use breaker board
Minimum spacing for screw fixings from the edge of the board	20mm

## 8. Care & Maintenance:

**NewTech™** composite building materials are virtually maintenance free, so very little care or maintenance is required. Here are some tips to keeping your decking looking new:

**Mould and Mildew:** *NewTech™* has an antifungal guard added during formulation and an additional antimicrobial surface coating. This means your *NewTech™* material is protected against mould, mildew and germs, including bacteria. We recommend that you periodically clean your *NewTech™* material by washing dirt and debris from the surface of the decking. Do not allow twigs and other sources of microbes to build up between the boards. If mould or mildew develops, use a standard deck wash containing sodium hypochlorite. Spray on the solution in concentrated form to a slightly dampened deck surface. Allow 20 minutes for the chemical to set and then simply wash off using a standard garden hose.

**Please note:** You can use a pressure washer but do not use more than 1200 PSI or hold wand close to the deck surface as this may cut into the surface of the deck causing unwanted scratches.

**Heavy Stains:** Staining may occur from oil, grease, dark wine, mayonnaise, butter, charcoal, red clay, or rust, damaging your deck surface. The first action is to clean the spot immediately. The best results will occur by cleaning immediately after the damage happens, before it soaks in to the cellulose fibre. If immediate cleaning is not possible, try to lift the stain from the surface using a degreaser or detergent in hot water. If you are not satisfied with the result of either method, try rubbing alcohol and a wire brush, brushing in the direction of the grain to maintain surface finish). You can lighten the colour of the stain by using bleach but be careful to not lighten the colour more than the rest of the deck as this will create a blemish. Always test your cleaning solution in an out-of-the-way place to avoid ruining the aesthetics of your *NewTech* product. Additional cleaners such as oxalic acid or phosphoric acid also provide more power when removing stains. Be careful not to mix these cleaners together, however. Always allow for proper ventilation and respiratory protection. Refer to the manufacturer's suggested precautions when using any cleaning products. If all else fails, you can sand the face of the board as the stain will not penetrate past the surface to the interior.

**Please note:** If you sand an area, it will not have the same grain pattern as the rest of the deck. Use a protective mat or plastic caps to protect against constant metal contact from sources such as furniture legs, grills or planter stands. Constant metal contact may produce rust stains.

**Ice and Snow:** Always use a plastic shovel to remove snow from your deck surface. This will not scratch the surface like a metal shovel. If you use a metal shovel, do not chip at the deck surface. Use salt to remove ice from the surface of your deck. Salt will not cause harm or react with the composite formulation. Remove the salt from the deck surface when convenient. Note, however, that prolonged exposure is not recommended.

**Fire/Storm Damage/Refinishing:** NewTech™ works well with a variety of deck stains. A custom formulation of colour-fast properties allows you to recover and maintain the rich beauty of the original colour. NewTech does fade to a slightly lighter colour due to the bleaching nature of the natural cellulose fibres contained within the product.

**Painting:** NewTech™ does not require any painting over the life of the product. If you want to change the colour of the decking, railing, fencing or furniture products, use a paint recommended for surface coating applications. The paint will not penetrate the surface of the material like traditional wood. Additionally, the paint will last much longer than it does with wood due to the fact that water does not penetrate the interior of the board causing the paint to lift from the surface. Always wait until the surface weathers before painting to provide more cellulose exposure for the paint to adhere to.

**Please note:** Always test a piece of product before applying to the whole project to ensure that desired results are achieved.

**Miscellaneous:** Always place concentrated heavy items where the deck board is in contact with the joist substructure. Constant loading of the deck board without support may cause the decking to sag. **NewTech™** is not recommended for structural supports. Refer to the ASTM specifications when designing for your hot tub, spa, outdoor kitchen or open pit barbecue and other heavy fixtures. Additionally, be careful not to drag furniture or heavy items across your deck as it will leave scratches on the surface.