

# Installation and Technical Manual

# Dura Cladding



## Dura Cladding

Strong and durable, Dura Cladding looks and feels just like natural wood. Our unique formula provides long lasting composite timber cladding that is environmentally friendly, easy to install and requires minimal maintenance compared with traditional timber.

To ensure you get the best results from your Dura Cladding, we recommend working with a professional contractor with previous cladding installation experience. As well as the detailed installation instructions provided in this Technical Manual, a helpful video is available on the Dura Composites website to offer additional visual guidance.

If you require any further information or support, please visit [www.duracomposites.com/clad](http://www.duracomposites.com/clad) or call us on +44 (0)1255 423601 where one of our knowledgeable staff will be happy to help.

...designed for the future

Industrial Rail Marine Decking Cladding

**dura**<sup>™</sup>  
composites

# Domestic Cladding



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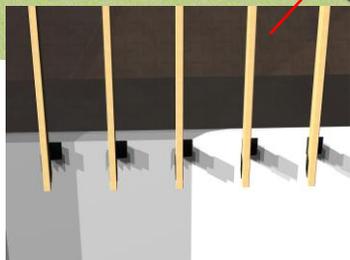
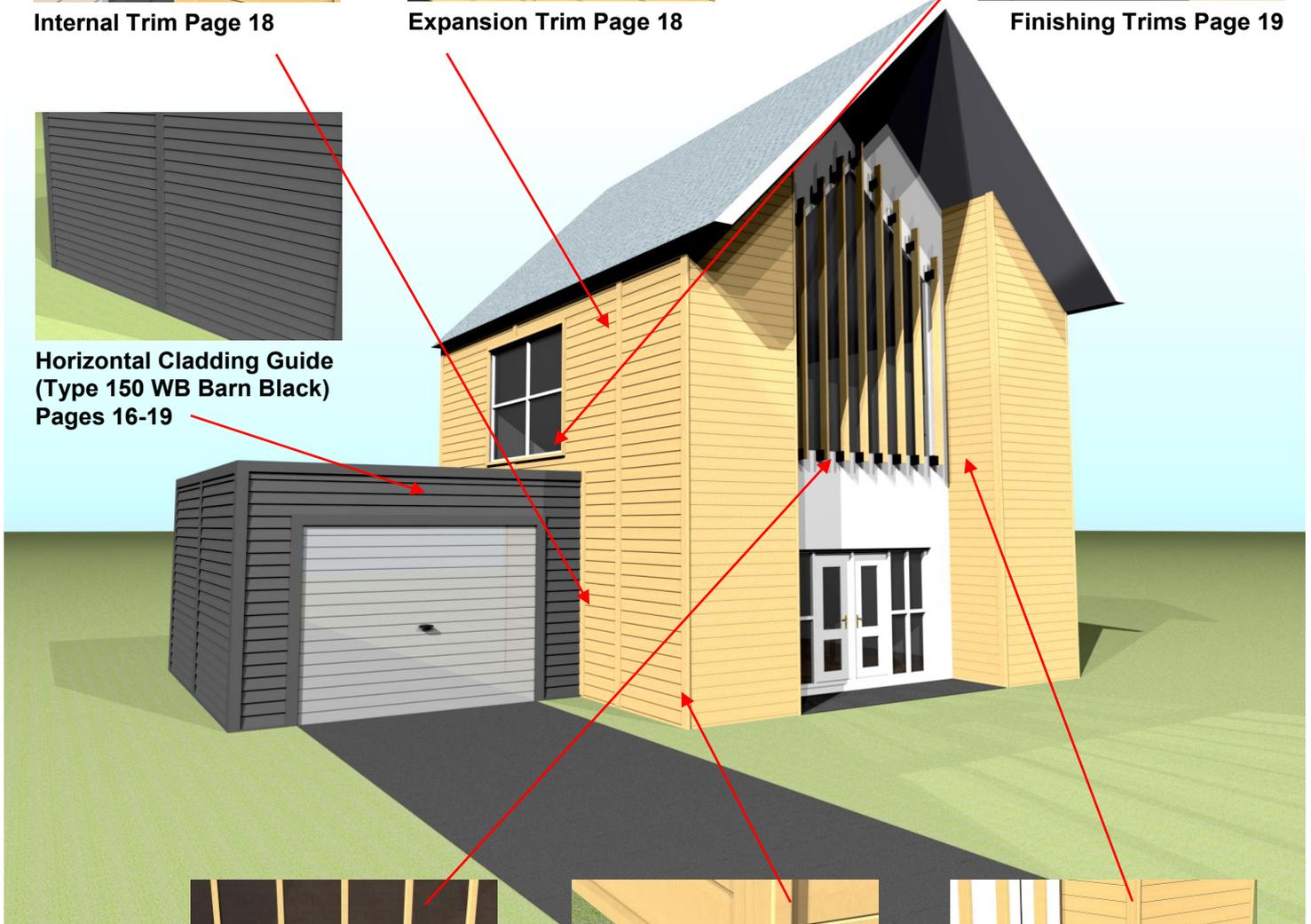
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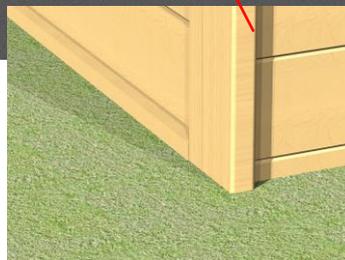
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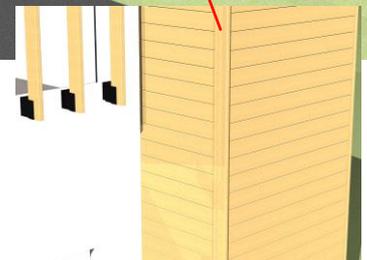
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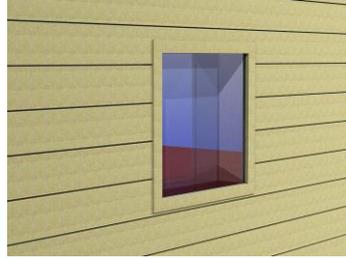
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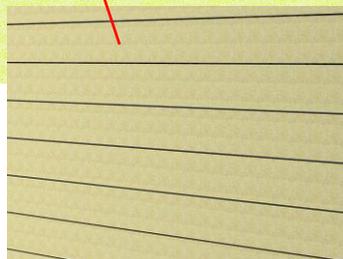
# Commercial Cladding



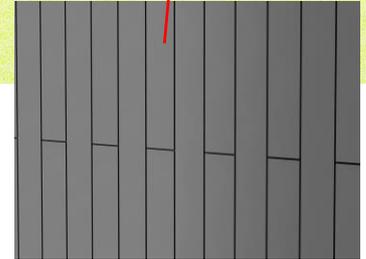
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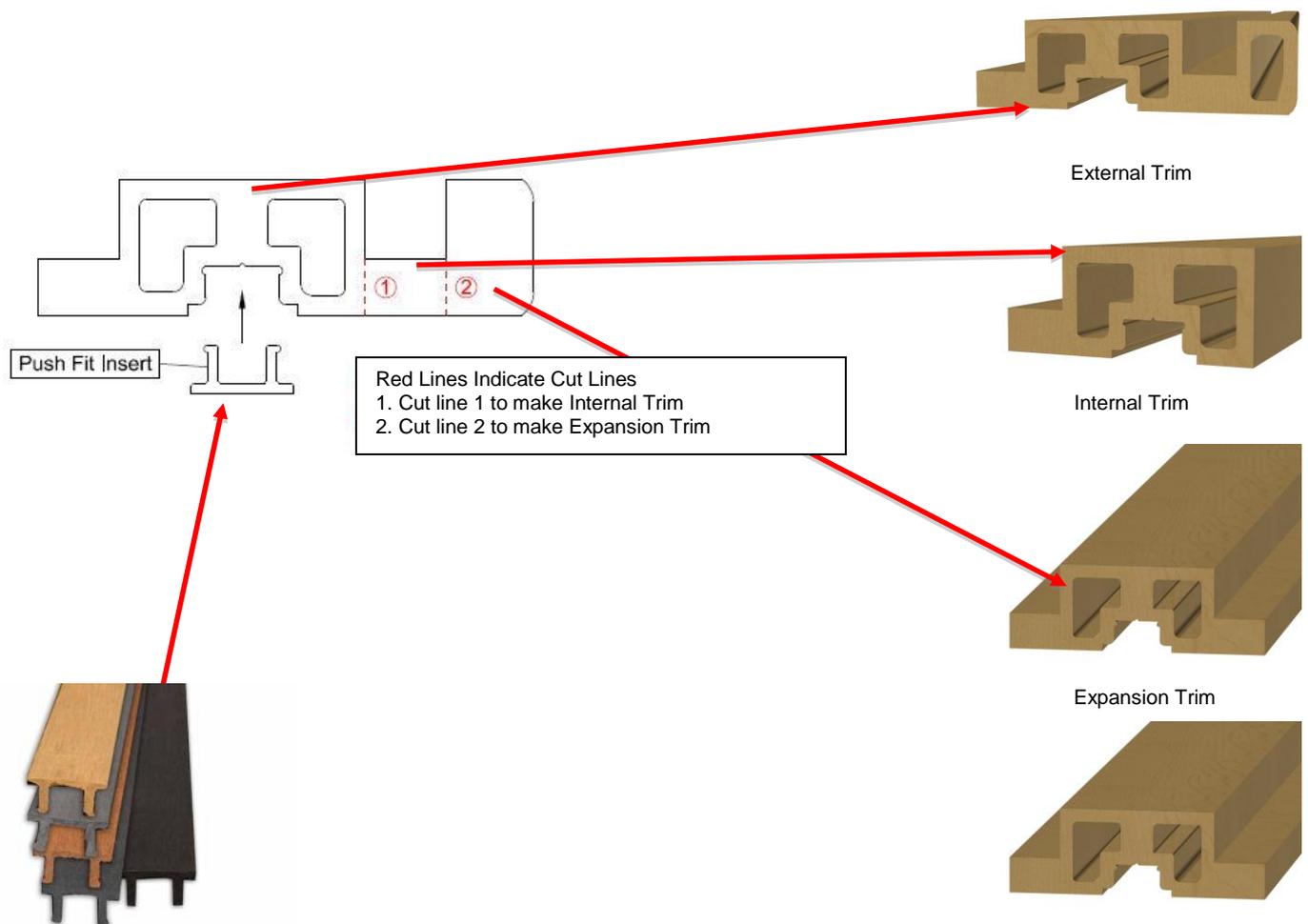


# 1. Quick Reference Guide

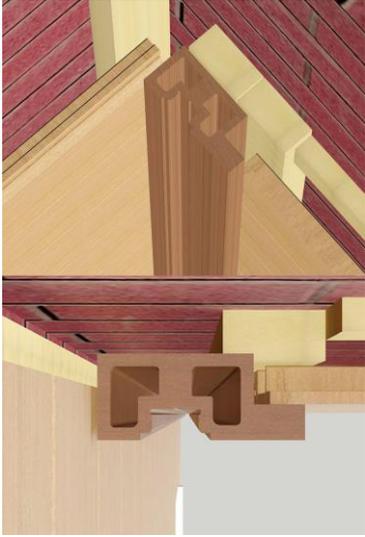
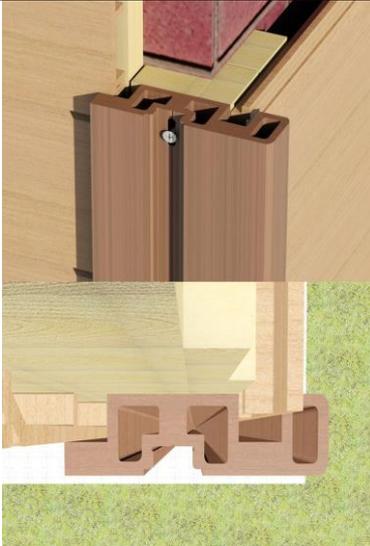
## Trim Cutting Guide

Dura Composites' Cladding Trim is multi-purpose and as such, needs to be cut at the relevant point, as shown below. Please refer back to this guide as and when needed to make sure you cut the trim correctly.

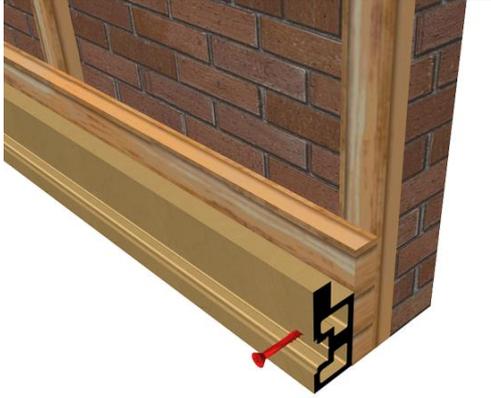
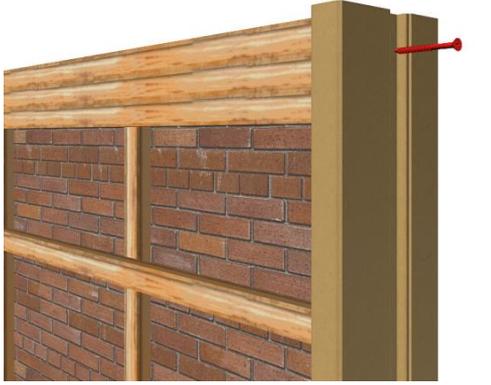
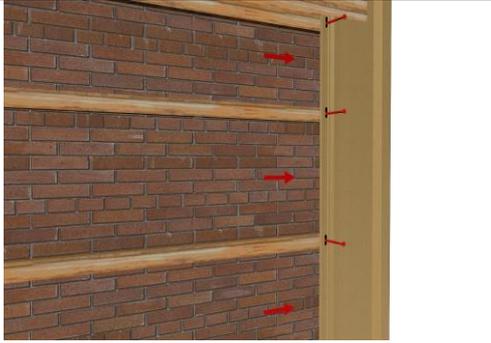
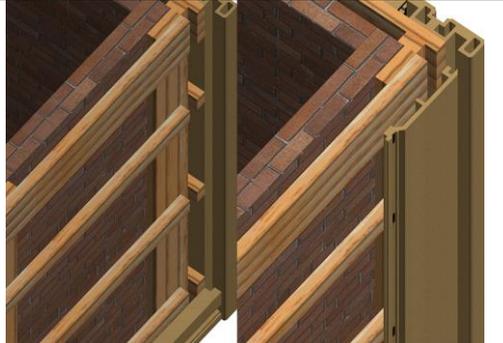
The trim insert is supplied as part of the profile and allows for quick installation and covering of fixings, ensuring a neat finish to your cladding project. Additional inserts are available on request.



# Horizontal Cladding

<p>1. Fix the Starter Trim to the batten. The screw should be positioned in the centre of the slotted hole. <b>Do not over tighten as this will restrict expansion and contraction.</b></p>		<p>4. Cut the Internal Trim as per the cutting guide (prev page). Position the Internal Trim and mark on battens to show where planks will finish. Position cladding approx. half way into recess. Fix using an 8G A4 Stainless Steel Pan Head Screw, 50mm in length. Push the trim insert into place.</p>	
<p>2. Place the first plank in the Starter Trim ensuring the hole centres line up with the battens. <b>Again, do not over tighten as this will restrict expansion and contraction.</b> Repeat this process, checking the level before each plank is fixed.</p>		<p>5. Cut the Expansion Trim as per the cutting guide (prev page). Place into position. Fix using an 8G A4 Stainless Steel Pan Head Screw, 50mm in length.</p>	
<p>3. Cut the External (Corner) trim as per the cutting guide (prev page). Place trim in position and mark on the battens to show where planks finish. Position Cladding approx. half way into recess. Fix using an 8G A4 Stainless Steel Pan Head Screw, 50mm in length. Push the trim insert into place.</p>		<p>6. Cut a Finishing Trim to size by marking where cuts are needed. Mitering and butt-jointing is acceptable. Mark batten centres and drill oversized holes (12mm) through top surface. Drill a 6mm hole and carbon burr to elongate hole. Fix the Trim through the second skin using 8G A4 Stainless Steel Pan Head Screw, 25mm in length. Insert plug and clean with chisel and sandpaper (40 grit abrasive). Fascia trims can be cut to required size to suit windows or door frames from our standard solid fascia boards.</p>	

# Vertical Cladding

<p>1. Place the Internal Trim (see Trim Cutting Guide) in position at the bottom batten. Screw into the middle of the trim.</p>		<p>4. Repeat process until you reach the end.</p> <p>Use Internal Trim at the top, position on Batten and attach with screws. Slide in the Trim Inserts at the Top and Bottom Trims.</p>	
<p>2. Position External Trim so it lines up with the Starter Trim and secure to battening. Screw in centre of grooves.</p>		<p>5. Use External Trim, cut to size and secure with screws.</p> <p>If cladding carries on round corner, make sure External Trim lines up with battening.</p> <p>Slide in the Trim Insert.</p>	
<p>3. Place the first Cladding Plank at the end and secure in the middle of the elongated holes.</p>		<p>6. If your cladding carries on around a corner, follow Steps 1 through 5. Make sure the External Trim is in the right position, so as to place the Cladding Plank into the right position.</p>	



# 1. Preparation

## Use Professionals

Dura Cladding has been designed for beauty as well as its ease of installation. However, to ensure long-term performance, we recommend that a professional tradesperson carries out the installation. The installation **MUST** be carried out in accordance with these instructions including the use of all trims and accessories otherwise the warranty for the product will be invalidated.

Dura Composites recommends that all cladding designs be approved by a licensed architect or engineer prior to installation. **Please be ensure that your plans meet any relevant local building codes before you begin the installation.** Dura Cladding must be supported by a code compliant substructure. While Dura Cladding products are ideal for re-cladding (removing old cladding planks and installing Dura Cladding on code-compliant substructure), it **CANNOT** be installed on top of existing cladding.

Note: Dura Cladding is NOT intended for use as columns, support posts, beams or other primary load-bearing members.

## Safety First

- Keep unauthorised personnel away from the work area until the job has been completed and tools have been stored safely.
- For power tool safety guides, refer to manufacturer's instructions.
- When handling Dura Cladding, always wear gloves and eye protection and work in a well-ventilated area.
- Do not burn composite timber off-cuts. Dispose of them safely as refuse.
- Always wear goggles when pressure washing or scrubbing.
- Always wear a dust mask when cutting.

## Storage and Handling

Store flat on suitable pallets and protect edges and corners. Keep dry and covered prior to installation - otherwise surface mould may form in damp, dark conditions.

When loading and unloading by hand, make sure that both ends are lifted on edge to avoid permanent deformation of the plank and/or damage to the plank.

Dura Composites cannot be responsible for damage caused by improper storage and handling of the product.



## Power Tools Required

### Chop saw



- Any wood cutting blade can be used but fine teeth are recommended for a professional finish.
- Used for simple straight cuts.
- Ideal for cutting obtuse and acute angles.
- Perfect for cutting mitres.

### Jigsaw



- Any Bosch blades can be used.
- Used for simple straight cuts, radius edges and for intricate shapes.
- Useful for notching out sections.
- A proficient Jigsaw operator is capable of absolute precision.

### Circular Saw



- Any wood cutting blade can be used but fine teeth are recommended for a professional finish.
- Suitable for cuts exceeding 1m.
- Provides a perfect straight line cut.
- Usually quicker than a jigsaw but limited to cuts in one direction at a time.

### Drills



- Used for creating clearance holes using appropriate sized wood drill bits depending on size of fixing.
- Used for screwing fixings through clearance holes to firmly secure objects.
- Can also be used with attachments such as Hex (Allen) key tools or sockets to the correct diameter of the fixing to enable rapid tightening of the fixings.

## Other Equipment Required



Sawhorse or Bench



Tape Measure



Spirit Level



Square



## 2. Materials

### Dura Cladding Planks



150 – Cedar  
Flush



150 – Charcoal  
Flush



150 – Grey  
Flush



150 – Teak  
Flush



150 – Barn Black  
Weather Board



200 – Teak Flush



250 – Cedar Flush



250 – Grey Flush

### Dura Cladding Accessories



Starter Trim



End Caps and Plugs



Trim Insert



Finishing Trim



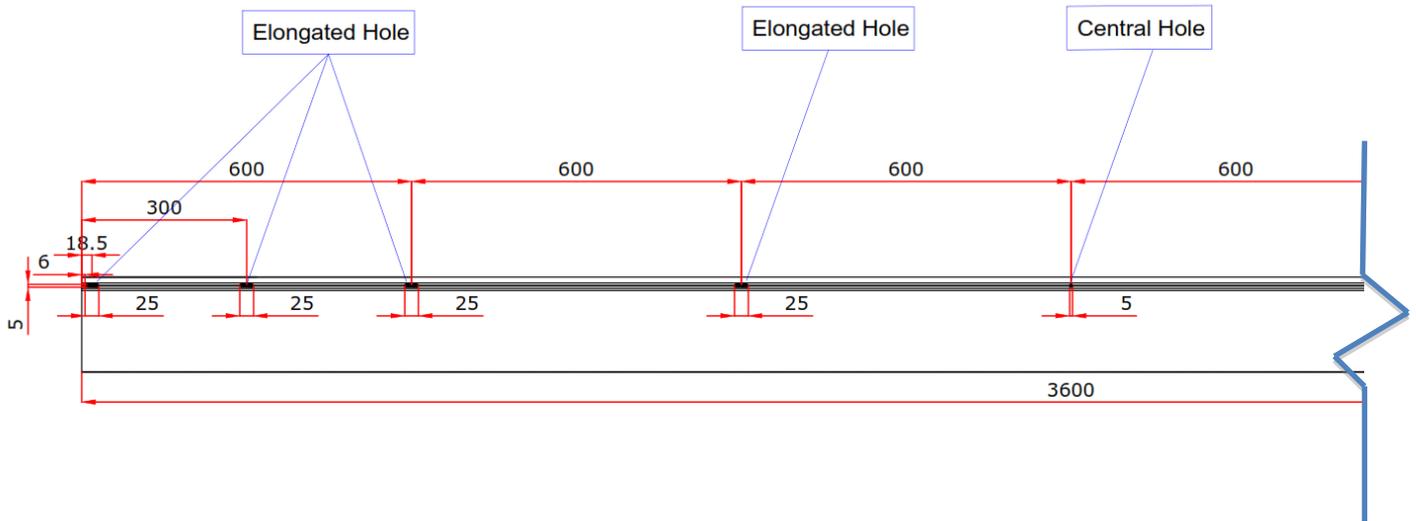
Internal, External and Expansion Trim



# Dura Cladding Design Explained

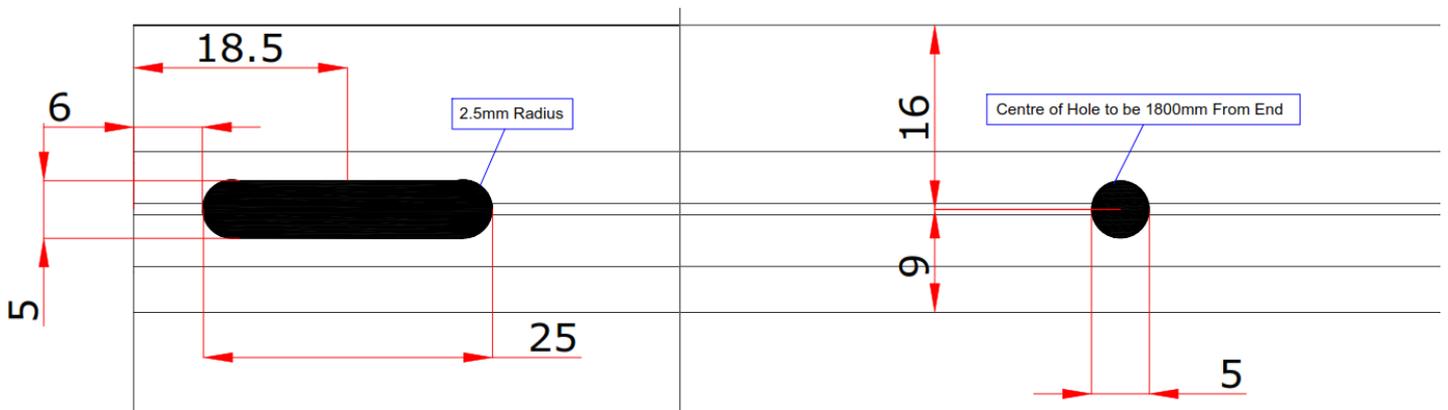
## Fixing Holes

Our plank incorporates a central fixing point to ensure any expansion of the plank during hot weather is controlled equally in both directions. If the cladding plank is cut please remember to make a 5mm diameter new centre hole to ensure any expansion is equal on both sides of the plank.



## Hole Details

Close up to show the 25mm slotted holes that allow expansion and also the 5mm centre hole to equally distribute expansion on either side of the plank centre.



## Gap Guide

Please refer to this guide to ensure your planks have adequate space for expansion and contraction and to preserve the service life of your cladding.

Install Temp °C	Region Plank Length	Europe Gaps (mm)				Middle East & Africa Gaps (mm)			
		1m	2m	3m	3.60m	1m	2m	3m	3.60m
-25									
-20									
-15									
-10		3.3	4.6	6.9	8.3				
-5		3.0	4.2	6.3	7.6				
0		2.8	3.8	5.7	6.9				
5		2.5	3.4	5.1	6.2				
10		2.3	3.0	4.5	5.5	3.0	4.6	6.3	7.6
15		2.0	2.6	3.9	4.8	2.8	4.2	5.7	6.9
20		1.8	2.2	3.3	4.1	2.5	3.8	5.1	6.2
25		1.5	1.8	2.7	3.4	2.3	3.4	4.5	5.5
30		1.3	1.4	2.1	2.7	2.0	3.0	3.9	4.8
35		1.0	1.0	1.5	2.0	2.8	2.2	3.3	4.1
40						2.5	1.8	2.7	3.4
45						1.3	1.4	2.1	2.7
50						1.0	1.0	1.5	2.0



## 3. Cladding Preparation

### 1. Decide on which direction to install

It is possible to install Dura Cladding in either direction, both vertical and horizontally. Once you have decided where you want your cladding situated, measure the length and width of the total area. Cladding is installed horizontally as standard, but Dura Cladding can also be installed vertically to provide a different final look.

### 2. Select the area to be clad and produce a bill of quantities

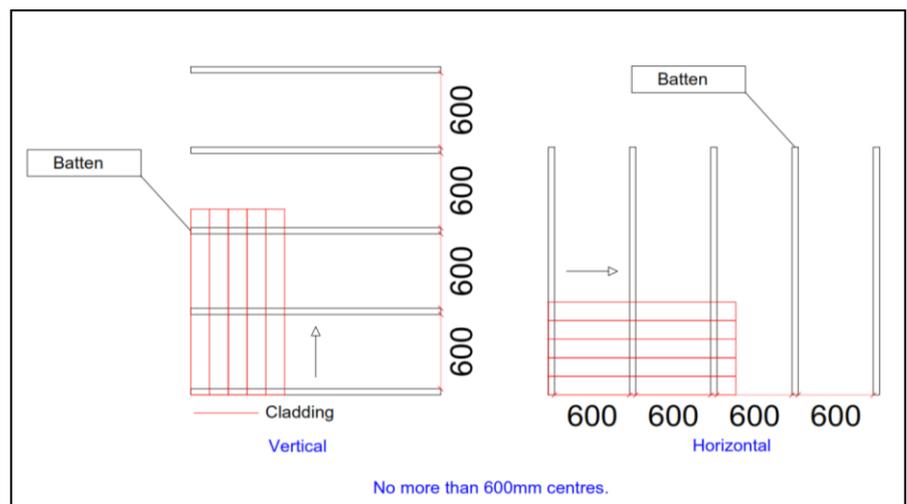
Before you finalise your order, it is best to choose exactly which parts of the building that you wish to clad with Dura Cladding, how large it will be, and which cladding planks and which trims you will require. Normally, it is best to produce a bill of quantities based on a CAD layout taking into account the actual plank lengths available. This is something that we may be able to help with subject to sufficient time and information. Most customers find that it is wise to build in a waste factor of 7-10% to account for the inevitable quantity of material that cannot be used due to cutting—this may be more or less depending on the number of cuts required to fit awkward shapes. By taking these factors into account, it is more likely that all of your planks can be delivered on a single load thus avoiding an expensive additional delivery.



### 3. Preparing the battening

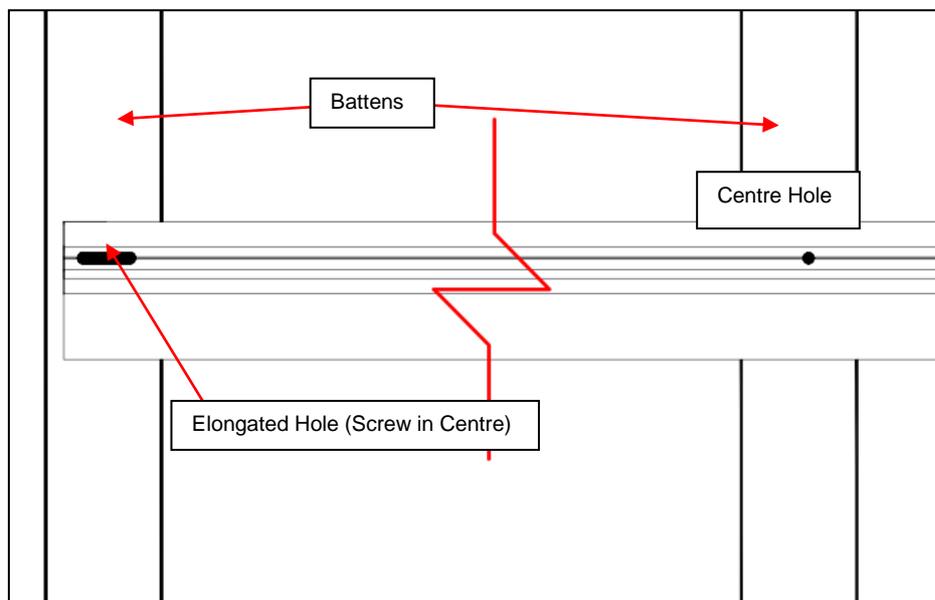
Now that you know the direction of the cladding and the exact area of your cladding, next you must determine the batten layout. It is most common to use timber battens although other approved wall batten materials can be used so long as they are fixed to the building using a suitable fixing system. Each Dura Cladding plank must be supported every 600mm.

Extra care is required in order to provide sufficient battening in and around obstacles such as windows, fascias, soffits, guttering, ventilation points etc.



## Batten Installation

- Please consult a building professional regarding vapour barriers for your project. Where a vapour barrier is to be used, it should be a breathable type and must be positioned behind the battens to allow the cladding maximum unrestricted airflow.
- The first batten should be 100mm from the floor.
- Timber battens should be fixed into position at 600mm centres using a suitable A4 Stainless Steel countersunk wood/masonry screw.
- Ensure all battens are flat to the wall surface, using packers where appropriate.
- Battens should be no less than 38mm x 50mm wide, sawn treated timber to allow a maximum of 38mm air flow behind the cladding.
- Cladding Planks have predrilled slotted holes at 600mm intervals with smaller centres at the end of each plank.
- Fixing the cladding to the batten should be carried out using an A4 Pan Head 8 gauge 38mm screw (minimal length 38mm). The screw should be positioned in the centre of the slotted hole to allow for expansion & contraction. Do not over tighten the screws and adjust torque settings according to your drill manufacturer's instructions.
- If the hole centres miss the battens, appropriate slotted holes must be drilled to allow for expansion and contraction.  
**Tip: To do this, drill a hole with a 6mm Drill Bit and then use a 6mm Solid Carbon Burr to create a 12mm elongated hole.**
- Add appropriate battening for all trims, i.e. around doors and windows.
- For vertical cladding, counter battening is advised to allow sufficient airflow. Also, timber battens with a 15 degree top edge is advised to shed water into the cavity.

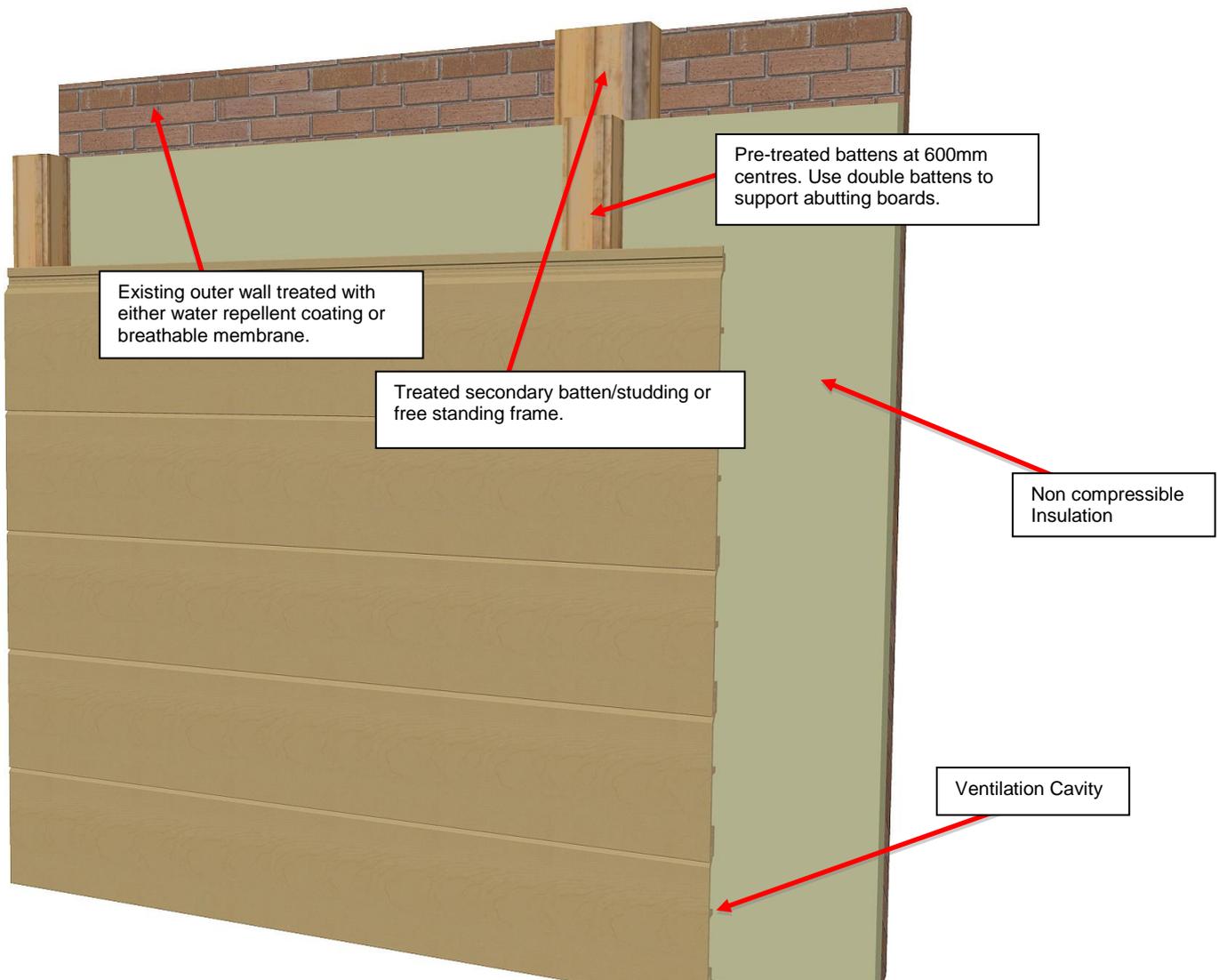


### **Important Note:**

When using rockwall thermal insulation or similar, the minimal airflow required behind the cladding plank should be 25mm. To maintain this cavity depth the recommend Batten depth of 38mm may not be adequate so a deeper batten profile should be used to compensate. Please call our experienced sales team if you need any additional technical guidance for this requirement.



# Horizontal Cladding Batten Preparation



## Specification notes:

Cladding may be fixed to an existing property in one of three ways:

- 1.1 Fixed to cladding battens that are fastened directly to the outer wall through the vapour barrier and non-compressible insulation using special fixings or, more preferably:
- 1.2 Fixed to cladding battens and counter battens over secondary battens/studding attached separately to the wall (as in the drawing above) or;
- 1.3 Where there is concern about additional loads being attached or the wall is uneven/out of true, the cladding may be fixed to battens attached to a self-supporting treated timber frame.

## Waterproof membrane:

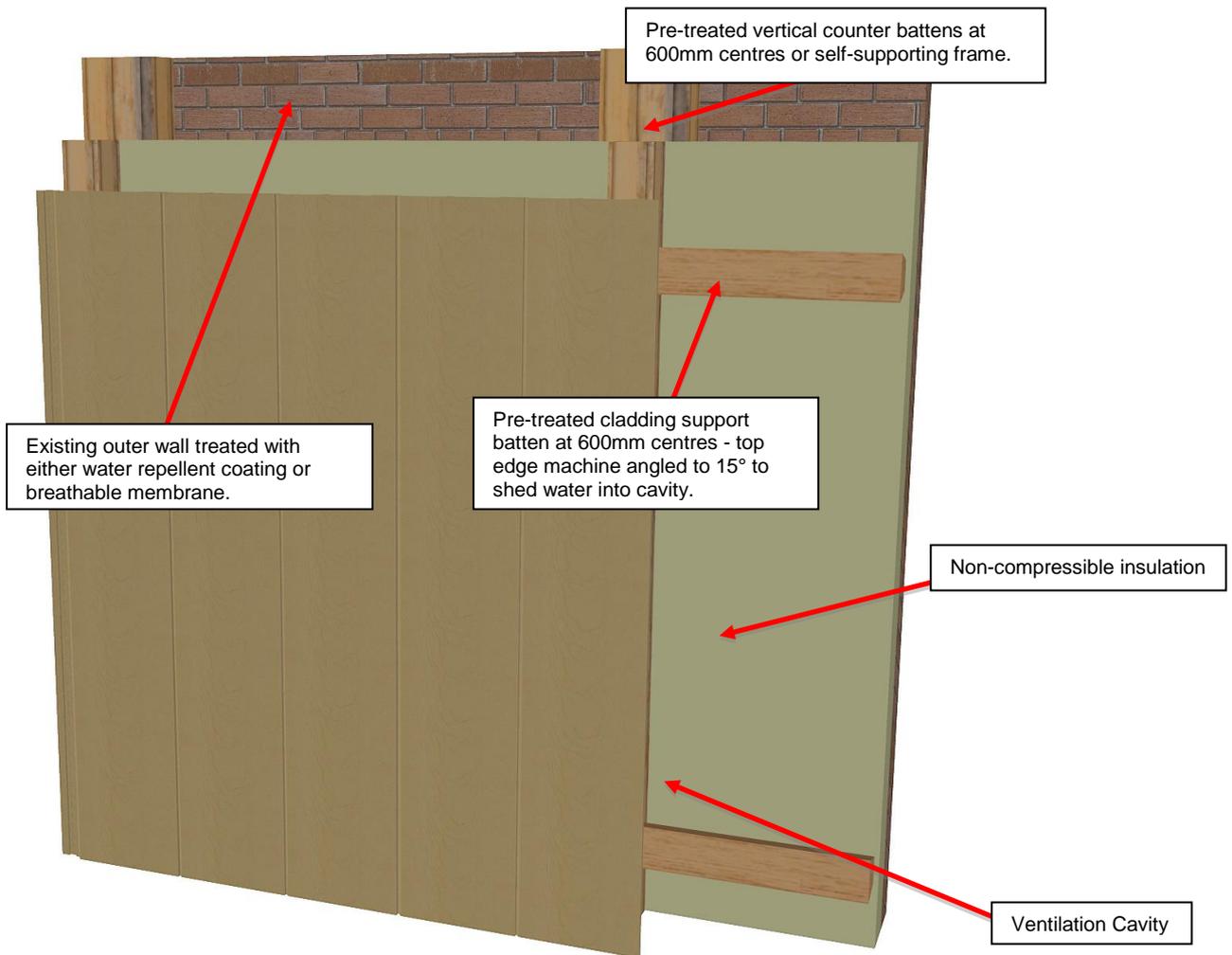
Solid walls shall be protected from water penetration by either a water repellent coating or breather membrane. Fitting a breather membrane between cladding battens attached to a cavity wall structure is not essential.  
Batten size: Battens should be 38mm x 50mm wide.

## Pre-Treatment Specification:

Softwood battens/studding/support frame shall be pre-treated by an industrial process in accordance with BS8417 for a BSEN335:1 Use Class 3 application - Wood Protection Association Commodity Specification Code: C6. This code is also referred to in NBS as Z12/120)  
A cavity of at least 38mm shall be incorporated into the design to permit air circulation and unrestricted drainage of rainwater that penetrates the cladding. The more open the cladding joints then the width of the cavity shall be increased. All openings into the cavity should be fitted with insect mesh.



# Vertical Cladding Batten Preparation



## Specification notes:

Cladding may be fixed to an existing property in one of three ways:

- 1.1 Fixed to cladding battens that are fastened directly to the outer wall through the vapour barrier and non-compressible insulation using special fixings or, more preferably:
- 1.2 Fixed to cladding battens and counter battens over secondary battens/studding attached separately to the wall (as in the drawing above) or;
- 1.3 Where there is concern about additional loads being attached or the wall is uneven/out of true, the cladding may be fixed to battens attached to a self-supporting treated timber frame.

## Waterproof membrane:

Solid walls shall be protected from water penetration by either a water repellent coating or breather membrane. Fitting a breather membrane between cladding battens attached to a cavity wall structure is not essential where water repellent insulation is used. Batten size: Battens should be 38mm x 50mm wide.

## Pre-Treatment Specification:

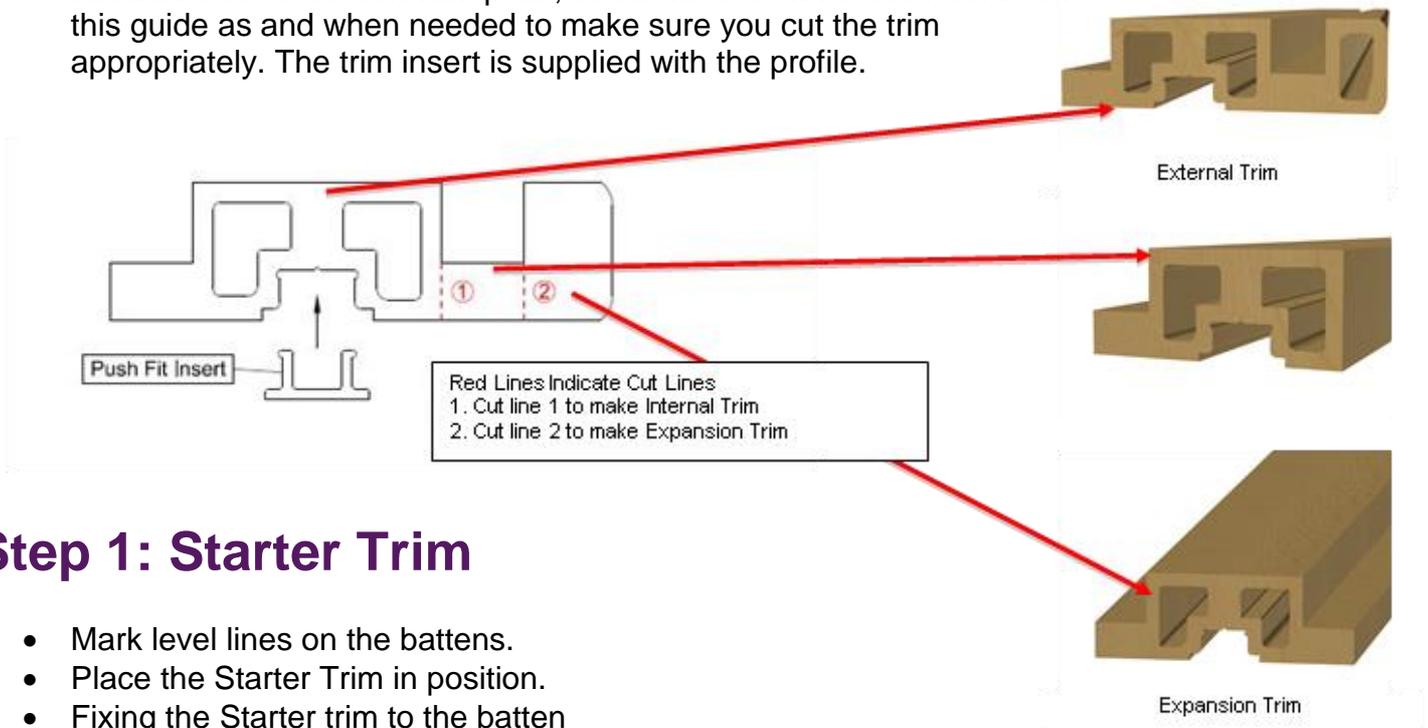
Softwood battens/studding/support frame shall be pre-treated by an industrial process in accordance with BS8417 for a BSEN335:1 Use Class 3 application - Wood Protection Association Commodity Specification Code: C6. This code is also referred to in NBS as Z12/120)



# 4. Horizontal Installation

## Trim Cutting Guide

- Dura Composites' Cladding Trim is multi-purpose and as such, should be cut at the relevant point, as shown below. Please refer back to this guide as and when needed to make sure you cut the trim appropriately. The trim insert is supplied with the profile.



## Step 1: Starter Trim

- Mark level lines on the battens.
- Place the Starter Trim in position.
- Fixing the Starter trim to the batten should be carried out using an A4 Pan Head 8 gauge 38mm screw. The screw should be positioned in the centre of the slotted hole to allow for expansion & contraction.
- Use the appropriate torque setting to ensure you don't over-tighten the screw as this will restrict expansion and contraction.
- Torque settings are present on most combi drills. Please note that all drill driver settings are slightly different so if you are using more than one on site, please ensure to check them all.
- Ensure that the Starter Trim is firmly in position, lying flat across batten faces.
- For vertical cladding, internal or external trims can be used.
- Refer to Gap Guide.



## Step 2: First Plank

- Place the Plank in the correct position on the Starter Trim ensuring the hole centres line up with the battens. (Drill appropriate holes if required).
- Using the same method as the Starter Trim, fix the cladding plank starting from the centre and then work outwards towards the ends on both sides.
- Once again, do not over-tighten the screws.
- Ensure that the Cladding Plank is secure.
- Repeat this process, checking the level before each Plank is fixed.
- Slight adjustments maybe required.

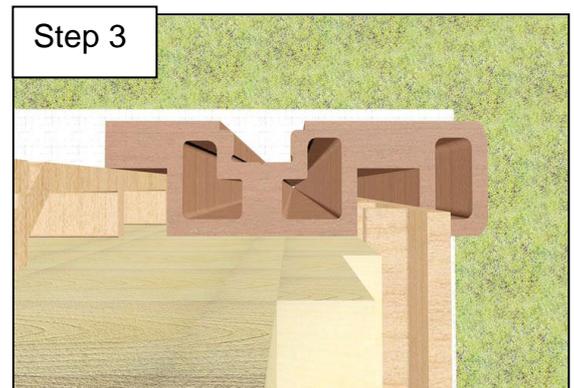
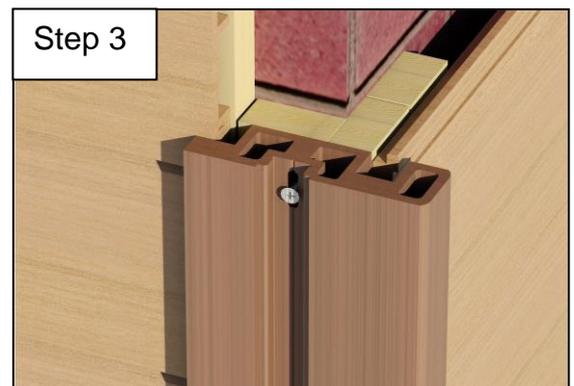
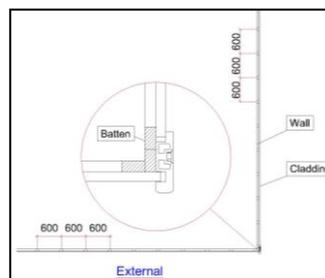


## Step 3: External (Corner) Trim

- Cut Internal/External/Expansion trim as appropriate using Trim Cutting Guide (at start of this section).
- Place the External Trim in position & mark on battens to show where the Cladding Planks will finish.
- Cladding should be positioned approximately half way into the recess to insure that a suitable gap is allowed for expansion and contraction.
- It is possible to install External Trims after all the cladding has been installed as long as sufficient space has been left to accept the trims.
- Remove the push fit trim Insert, place the External Trim into position ensuring that it is plum. Fix into position with a 8G A4 Stainless Steel Pan Head Screw, 50mm in length.

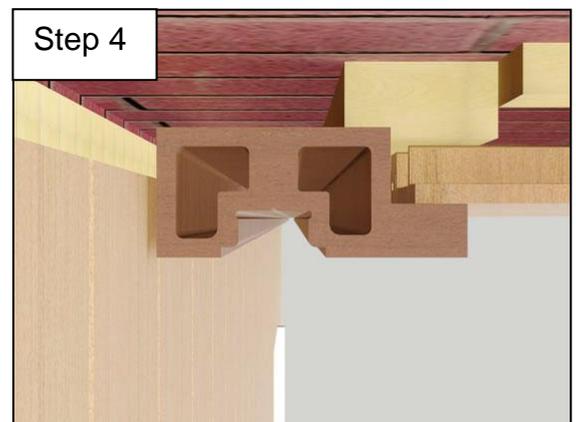
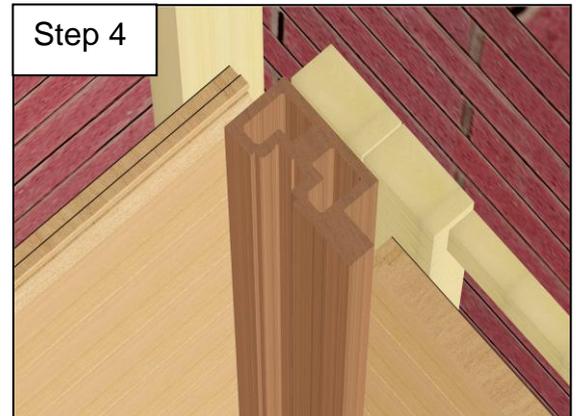
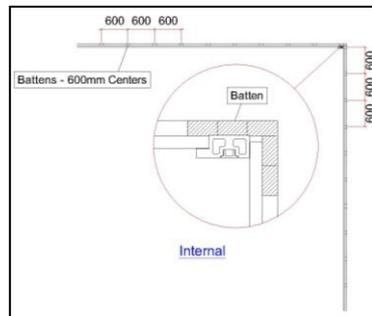
Head Screw, 50mm in length.

- Push the push trim insert into place to conceal the screw heads.
- Make sure the trim insert is secured safely using Aro-Bond 811 HV glue.



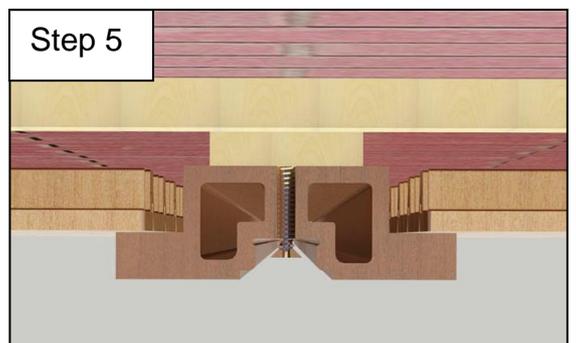
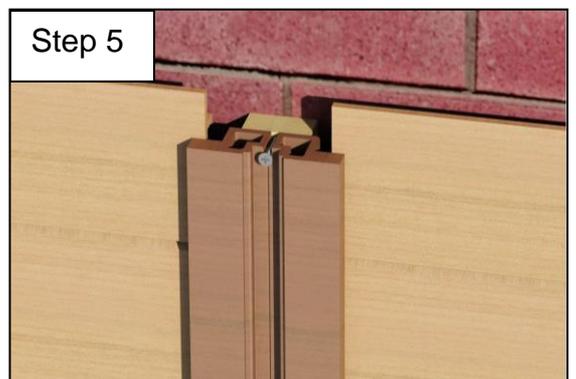
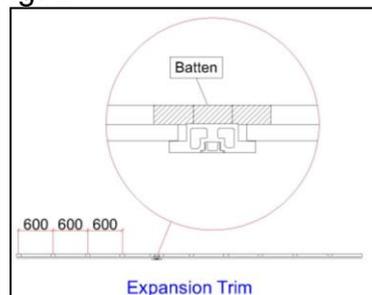
## Step 4: Internal (Corner) Trim

- Cut Internal/External/Expansion trim as appropriate using Trim Cutting Guide
- Position the Internal Trim and mark on the battens to show where the Cladding Planks will finish.
- Cladding should be positioned approximately half way into the recess to ensure that a suitable gap (refer to Gap Guide) is allowed for expansion and contraction.
- It is possible to install the Internal Trims after all the cladding has been installed so long as sufficient gaps have been left to accept the trims.
- Remove the push fit trim Insert, place the Internal Trim into position ensuring that it is plum. Fix into position with an 8G A4 Stainless Steel Pan Head Screw, 50mm in length.
- Push the push fit insert into place to conceal the screw heads.



## Step 5: Expansion Trim

- It is possible to install the Expansion Trims after all the cladding has been installed so long as sufficient gaps have been left to accept the trims.
- Remove the push fit trim Insert, place the Expansion Trim into position ensuring that it is plum. Fix into position with an 8G A4 Stainless Steel Pan Head Screw, 50mm in length.
- Push the push fit insert into place to conceal the screw heads.



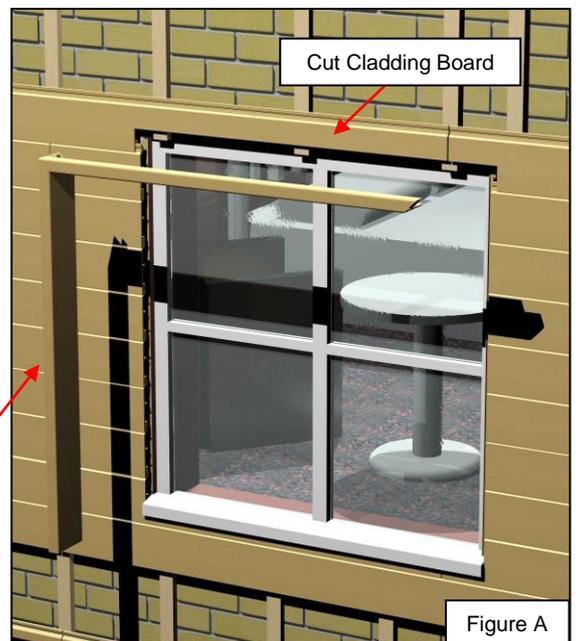
## Step 6: Finishing Trim

- Additional battening is required around doors and windows.
- Finishing Trim Battens should be no less than 38mm x 50mm sawn treated timber to allow a minimum of 38mm air flow behind the cladding.
- Fascia trims can be cut down to size to suit windows or door frames. These can be cut from our standard solid fascia board 230x9mm.
- Position the Trim. Mark and cut where appropriate. Mitering or butt joining is acceptable.
- Mark batten centres and drill oversized holes (12mm) through the top surface (these will be plugged once fixed into position).
- Drill a 6mm hole & use the Carbon burr to elongate the hole.
- Fix the Trim through the second skin using an 8G A4 Stainless Steel Pan Head Screw, 25mm in length, concealing the screw head in the box section.
- Insert the Plug & clean off with a sharp chisel and sand using 40 grit abrasive paper if necessary.



### Tip:

- If the board doesn't finish flush with the window, a cut will need to be made into the Cladding Board, so a Trim can be used. Cut the Top and Side Trims from a Fascia Board. Fix to battens with screws and use plugs for a clean finish. See Figure A.
- All openings should be secured with an Insect Mesh.



## Finishing the Last Plank – Horizontal Cladding

It is unlikely that cladding installed horizontally on the wall will terminate on a full width plank, and if this is the case it may be necessary to cut the last plank down in width. There are a range of options available, subject to individual site conditions. We have provided guidance below for the most common last plank scenarios. If you require any further information or support, please visit our website at [www.duracomposites.com](http://www.duracomposites.com) or call us on **+44 (0)1255 423601** where one of our knowledgeable staff will be happy to help.

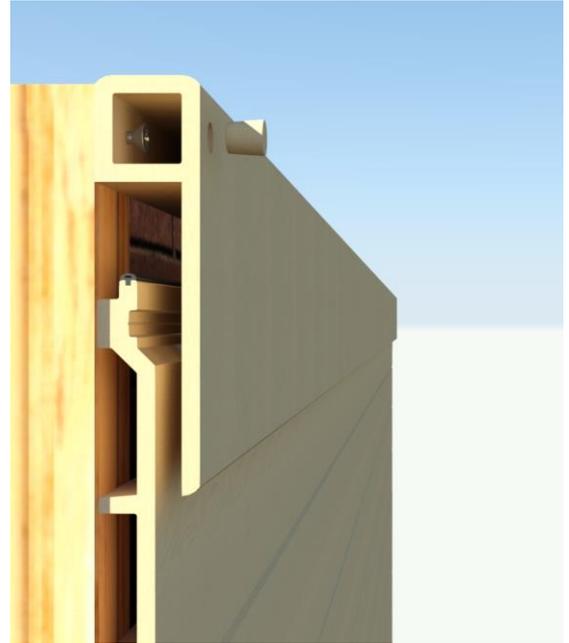
### Scenario 1:

If your cladding terminates on a full width plank, you can use the Finishing Trim to provide a neat finish to your cladding.

Simply Position the trim and mark and cut where appropriate. Mark batten centres and drill oversized holes (12mm) through the top surface (these will be plugged once fixed into position).

Drill a 6mm hole & use the Carbon burr to elongate the hole. Fix the Trim through the second skin using an 8G A4 Stainless Steel Pan Head Screw, 25mm in length, concealing the screw head in the box section.

Insert the Plug & clean off with a sharp chisel and sand using 40 grit abrasive paper if necessary.

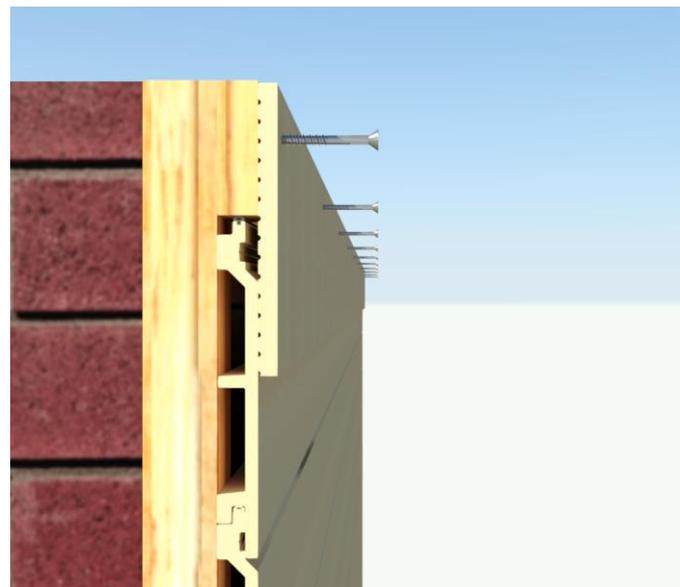


### Scenario 2:

You can opt to use a fascia board to cover the exposed end of the last plank.

Fascia trims can be cut down to size to suit from our standard solid fascia board which is 230mm x 9mm.

To affix fascia, simply screw through the fascia into the batten using an 8G A4 Stainless Steel Pan Head Screw, 25mm in length.

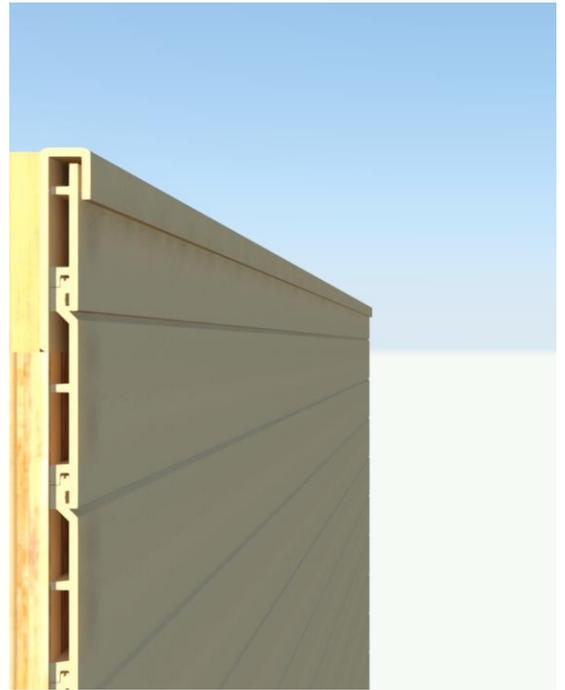


### Scenario 3:

Notch out top batten to accommodate Finishing Trim.

Cut through finishing trim as shown opposite and screw to batten using an 8G A4 Stainless Steel Pan Head Screw, 25mm in length.

Cut final plank to size and slide into place. The top plank will be held into place by the finishing trim.



### Scenario 4:

Cut down the Dura Cladding multi-purpose trim as shown on page 4 to produce the Internal Trim.

Cut last plank to required size, allowing space for the Internal Trim to be added.

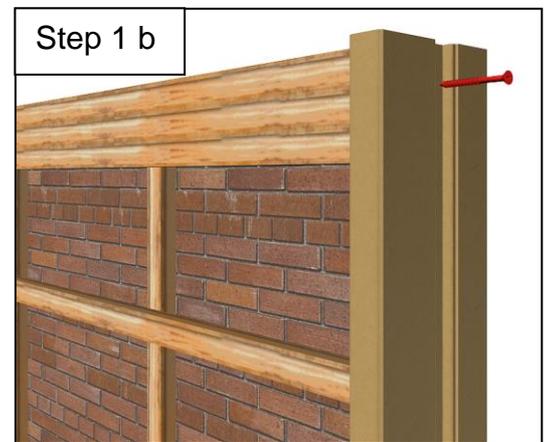
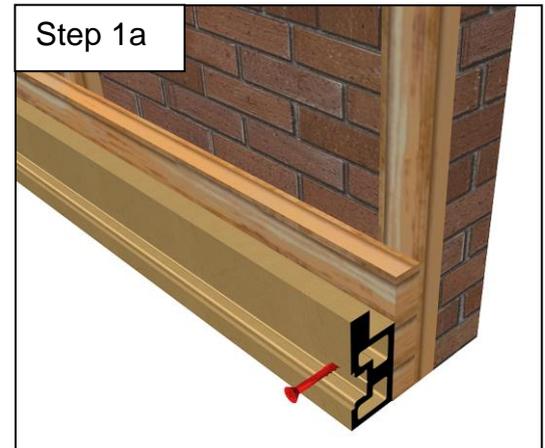
Affix trim using 25mm 8G A4 Stainless Steel Pan Head Screws, and then slide in the trim insert strip to provide a neat finish to your horizontal cladding.



## 5. Vertical Installation

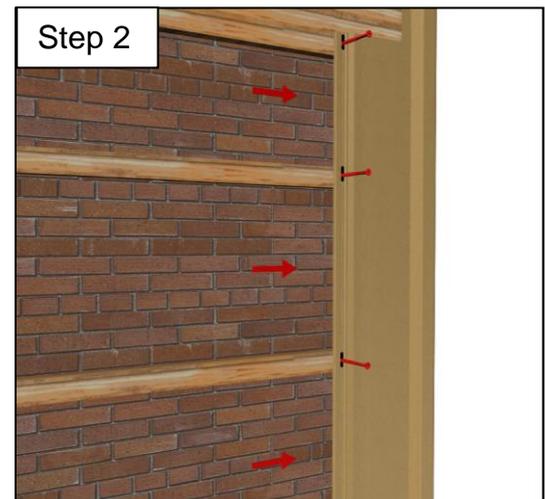
### Step 1 Starter Trims:

- Mark level lines on the batten
- Place the Internal Trim in position
- Fixing the Internal Trim to the bottom battening should be carried out using an A4 Pan Head 8 Gauge 50mm Length Screw. The screw should be positioned in the centre of the slotted hole to allow for expansion and contraction.
- Use the appropriate torque setting to ensure you don't over-tighten the screw as this will restrict expansion and contraction.
- Torque settings are present on most combi drills.
- Please note that all drill driver settings are slightly different so if you are using more than one on site, please ensure to check them all.
- Ensure that the Internal Trim is firmly in position, lying flat across batten faces.
- Position External Trim so it lines up with the Internal Trim.
- Fixing the Trims should be carried out using an A4 Pan Head 8 Gauge 50mm Length Screw. The screw should be positioned in the centre of the slotted hole to allow for expansion and contraction.



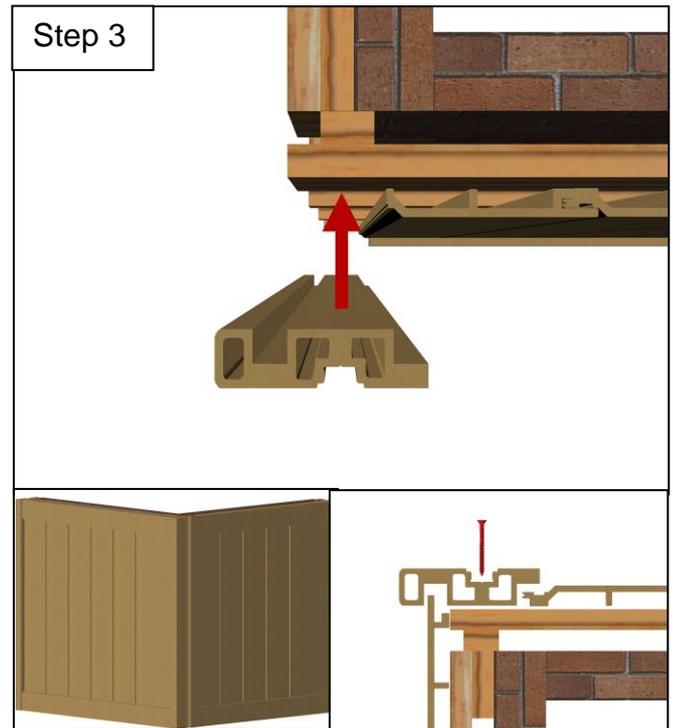
### Step 2 First Plank:

- Place the Plank in the correct position on the Internal Trim (bottom) and External Trim (end) ensuring the hole centres line up with the battens. (Drill appropriate holes if required).
- Using the same method as the Internal Trim, fix the cladding plank starting from the centre hole and then work outwards towards the ends on both sides.
- Once again, do not over-tighten the screws.
- Ensure that the Cladding Plank is secure.
- Repeat this process, checking the level before each Plank is fixed. Slight adjustments maybe required.



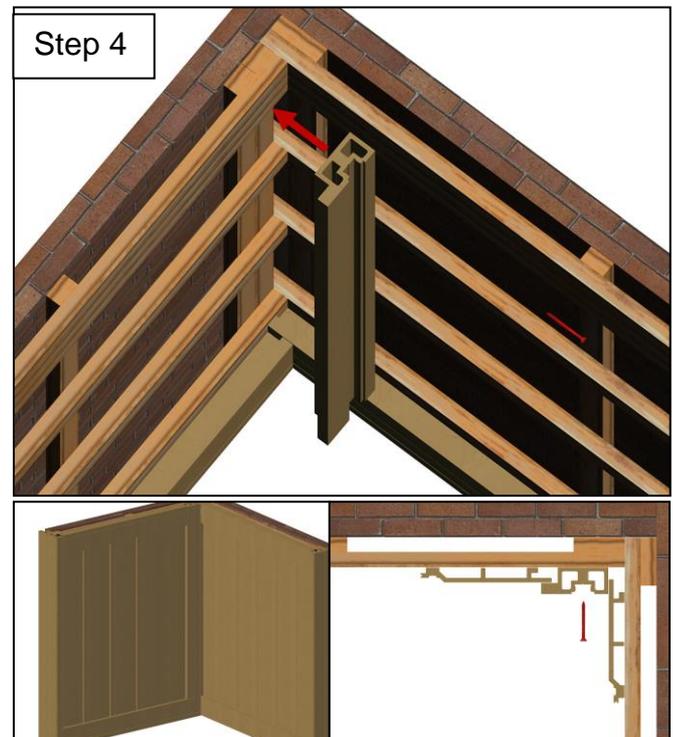
## Step 3 External Trim:

- Cut Internal Trim as per Trim Cutting Guide (p18).
- Place the External Trim in position and mark on battens to show where the Cladding Planks will finish.
- Cladding should be positioned approximately half way into the recess to ensure that a suitable gap is allowed for expansion and contraction.
- It is possible to install External Trims after all the cladding has been installed as long as sufficient space has been left to accept the trims.
- Remove the Trim Insert, place the External Trim into position ensuring that it is plum. Fix into position with 8G A4 Stainless Steel Pan Head Screws, 50mm in length.
- Push the Trim Insert into place to conceal the screw heads.



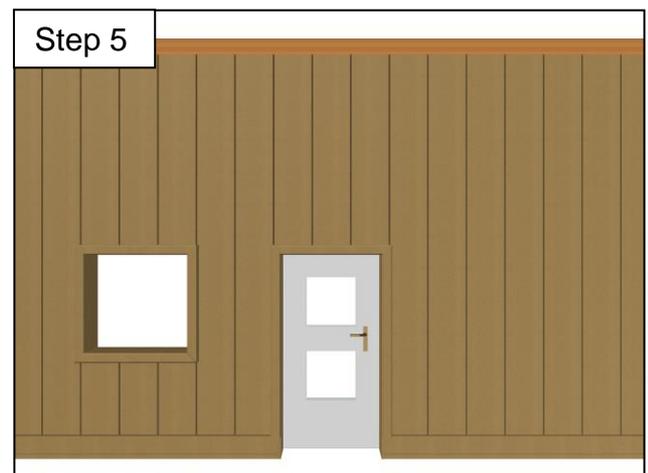
## Step 4 Internal Trim:

- Cut Internal Trim as appropriate using Trim Cutting Guide (p18)
- Position the Internal Trim and mark on the battens to show where the Cladding Planks will finish.
- Cladding should be positioned approximately half way into the recess to ensure that a suitable gap (refer to Gap Guide) is allowed for expansion and contraction.
- It is possible to install the Internal Trims after all the cladding has been installed so long as sufficient gaps have been left to accept the trims.
- Remove the push fit trim Insert, place the Internal Trim into position ensuring that it is plum. Fix into position with an 8G A4 Stainless Steel Pan Head Screw, 50mm in length.
- Push the push fit insert into place to conceal the screw heads.



## Step 5 Finishing Trim:

- Additional battening is required around doors and windows.
- Finishing Trim Battens should be no less than 38mm x 50mm sawn treated timber to allow a minimum of 38mm air flow behind the cladding.
- Fascia trims can be cut down to size to suit windows or door frames. These can be cut from our standard solid fascia board 230x9mm.
- Position the Trim. Mark and cut where appropriate. Mitering or butt joining is acceptable.
- Mark batten centres and drill oversized holes (12mm) through the top surface (these will be plugged once fixed into position).
- Drill a 6mm hole & use the Carbon burr to elongate the hole.
- Fix the Trim through the second skin using an 8G A4 Stainless Steel Pan Head Screw, 25mm in length, concealing the screw head in the box section.
- Insert the Plug & clean off with a sharp chisel and sand using 40 grit abrasive paper if necessary.



## Finishing Options – Vertical Cladding

There are a range of finishing options available when installing cladding vertically, subject to individual site conditions. We have provided guidance below for the most common last plank scenarios. If you require any further information or support, please visit our website at [www.duracomposites.com](http://www.duracomposites.com) or call us on **+44 (0)1255 423601** where one of our knowledgeable staff will be happy to help.

### Scenario 1:

You can choose to use our Dura Cladding Finishing Trim to provide a neat finish to your vertical cladding.

Simply Position the trim and mark and cut where appropriate. Mark batten centres and drill oversized holes (12mm) through the top surface (these will be plugged once fixed into position).

Drill a 6mm hole & use the Carbon burr to elongate the hole. Fix the Trim through the second skin using an 8G A4 Stainless Steel Pan Head Screw, 25mm in length, concealing the screw head in the box section.

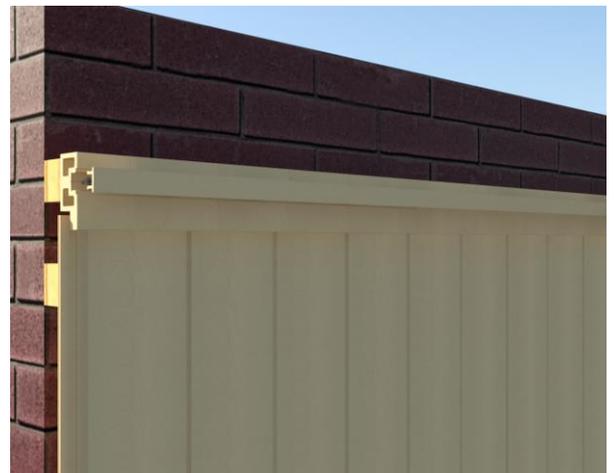
Insert the Plug & clean off with a sharp chisel and sand using 40 grit abrasive paper if necessary.



### Scenario 2:

You may prefer to use the Internal Trim and complementary trim insert to complete your vertical cladding installation. To do this you should cut down the Dura Cladding multi-purpose trim as shown on page 4 to produce the Internal Trim.

Affix trim using 25mm 8G A4 Stainless Steel Pan Head Screws, and then slide in the trim insert strip to provide a neat finish to your horizontal cladding.



## Finishing Gable Ends

There are 2 methods for finishing cladding at gable ends or dormer windows.

1. Ending with the Finishing Trim– this method is largely adopted if the application is a refurbishment or reinstallation of cladding.
2. Alternatively a PVC or similar barge board & soffit from another manufacturer can be used to conceal the top of the cladding– this system is generally used on a new build project or if the barge board & soffit is being replaced.



## Dispose of Off Cuts

- Safely dispose of Dura Cladding as per local legislation.
- Do not burn.
- Treat as construction waste.
- If unsure, consult your local governing body/ council.

## Installations without Dura Cladding Trims & Accessories

Certain applications may require a specific finish that can only be achieved using trim parts from 3rd party suppliers using materials such as aluminium, natural wood, plastic etc. The use of 3rd party products is not recommended and **may invalidate your Dura Composites warranty if not pre-approved by Dura Composites at the design stage**, however if you choose to do this, we have produced Butt Joint Gapping guidelines that allow the installer to install alternative trims. These guidelines take into account the natural expansion and contraction that occurs as the product goes up and down the temperature range.



Please therefore use the appropriate expansion gaps between plank lengths in accordance with your region and the temperature at the time of the installation to accommodate for this movement. Always allow 5mm minimum gap where planks meet an adjoining fixed structure/post regardless of plank length. This chart should also be used if for whatever reason your project does not require trims at all as per the example install photo pictured above.



## Dura Louvre Cladding

Dura Louvre provides an aesthetic design solution to protecting a building against extreme solar influence, or to covering unsightly areas whilst still maintaining desirable daylight. Made of composite timber, Dura Louvre solar shading cladding can help reduce the thermal heat in south-facing buildings as well as reducing energy costs by minimising air conditioning requirements. It can also be used effectively to screen pipework, utilities and other areas from view.

Dura Louvre Cladding is available in Cedar and Charcoal colours in 140/40mm profiles as standard. Other colours and profiles are available on request.

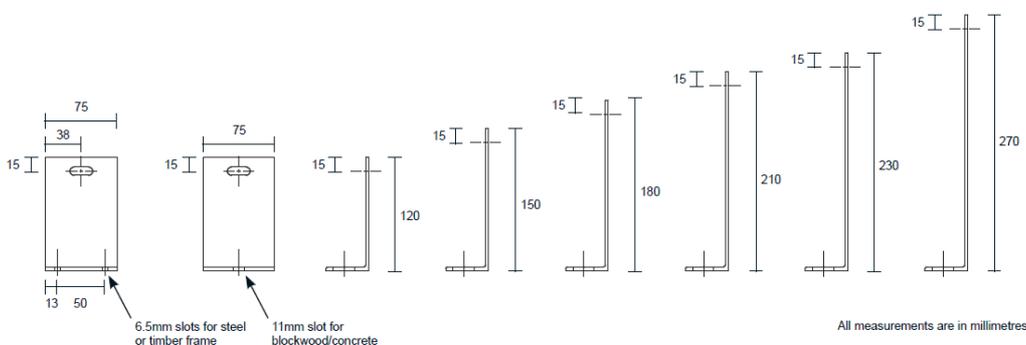
Dura Louvre solar shading cladding can be integrated into new builds or added to existing properties and will transform the exterior of any building. Please note that careful selection of the most appropriate solar shading system and orientation is necessary in order to achieve the necessary functional performance and to meet the aesthetic requirements of the building. Please consult your Dura representative for more information.



## Dura Louvre Bracket Options

To fix Dura Louvre, a simple bracket sleeve is used to fasten the cladding to the substructure. The brackets are fixed to the substrate at set vertical or horizontal separations, and the Dura Louvre profiles are then fixed into the brackets. Various bracket sizes are available in both Cedar and Charcoal.

Available dimensions and configurations are shown below:



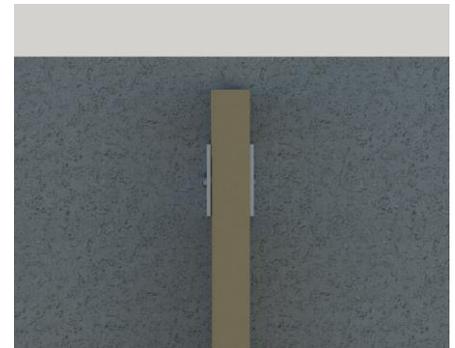
## Dura Louvre – Vertical Installation using brackets

The information below outlines the key steps for installing Dura Louvre Cladding. If you require any further information or support, please visit our website at [www.duracomposites.com](http://www.duracomposites.com) or call us on **+44 (0)1255 423601** where one of our knowledgeable staff will be happy to help.

### Option 1: Inward Facing Bracket

It is recommended to install Dura Louvre Cladding at 100mm spacing, but our versatile brackets can be positioned either inward or outward facing to enable you to reduce or vary the distance if required. Once you have selected the appropriate bracket sleeve and configuration for your Dura Louvre Cladding project from the selection shown on the previous page of this document, you should mark the location of each bracket on your substructure.

If choosing to face the brackets inwards, the brackets should be fixed to the substrate using the supplied Anchor Bolt. Once your bracket has been fixed to your substructure as described above, you should insert your Dura Louvre profile and use the supplied Pan/Dome Head screw and rivet nut to affix the profile to the bracket. The maximum vertical and horizontal span between brackets should be set at 1.5m – 2m, depending on site details.



### Option 2: Outward Facing Bracket

If choosing to face the brackets outwards, the brackets should be fixed to the substrate at your required intervals using the supplied Anchor Bolt.

Once your bracket has been fixed to your substructure as described above, you should insert your Dura Louvre profile and use the supplied Pan/Dome Head screw and rivet nut to affix the profile to the bracket. The maximum vertical and horizontal span between brackets should be set at 1.5m – 2m, depending on site details.



## Dura Louvre – Horizontal Installation using brackets



Solar Shading Cladding is also sometimes known as Brise Soleil and can be used just as successfully for its aesthetic properties as for its ability to provide a reduction in the effects of sun glare.

As well as being installed vertically as shown on the previous pages, Dura Louvre can also be installed horizontally to help provide a contemporary building façade. Dura Louvre combines the natural beauty and character of wood with a durable and low maintenance composite timber solar shading and architectural louvre solution.

### Option 1: Inward Facing Bracket

It is recommended to install Dura Louvre Cladding at 100mm spacing, but our versatile brackets can be positioned either inward or outward facing to enable you to reduce or vary the distance if required. Once you have selected the appropriate bracket sleeve and configuration for your Dura Louvre Cladding project from the selection shown on the page 27 of this document, you should mark the location of each bracket on your substructure.

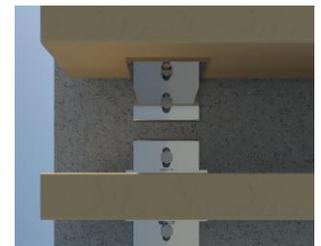
If choosing to face the brackets inwards, the brackets should be fixed to the substrate using the supplied Anchor Bolt. Once your bracket has been fixed to your substructure as described above, you should insert your Dura Louvre profile and use the supplied Pan/Dome Head screw and rivet nut to affix the profile to the bracket. The maximum vertical and horizontal span between brackets should be set at 1.5m – 2m, depending on site details.



### Option 2: Outward Facing Bracket

If choosing to face the brackets outwards, the brackets should be fixed to the substrate at your required intervals using the supplied Anchor Bolt.

Once your bracket has been fixed to your substructure as described above, you should insert your Dura Louvre profile and use the supplied Pan/Dome Head screw and rivet nut to affix the profile to the bracket. The maximum vertical and horizontal span between brackets should be set at 1.5m – 2m, depending on site details.



## 4. Maintenance and Troubleshooting

### Dura Cladding Maintenance & Cleaning

#### Basic Cleaning

Spray with a hose to remove surface debris. Use warm soapy water and a soft-bristled brush to clear dirt and/or debris from grooves or contours.

#### Pressure Washing

Pressure washers up to 1500psi may be used to maintain cleanliness of timber composites. In order to prevent any damage, always keep the pressure washer nozzle at least 15cm (6 inches) from the surface, and avoid concentrated spraying on one area for more than 3 seconds. The use of a pressure washer in this manner will not shorten the life of the material.

#### Sanding

Sanding should only be used when basic cleaning or pressure washing fail to remove stubborn stains, scuffs and/or marks. Always use coarse grade Emery paper (22-60 grit). Sanding should be carried out lightly and progressively harder if necessary to a maximum of 0.5mm surface depth. Most marks blend naturally after 12 weeks of weathering.

#### Marking

Always use a non-permanent marker such as a dust-off marking chalk to mark cutting and plumb lines.



# Troubleshooting

## General dirt and debris

Spray with a hose to remove surface debris. Use warm soapy water and a soft-bristled brush to clear dirt and/or debris from grooves or contours. Pressure wash to remove more stubborn stains.

## Oil, grease, food and drink

Remove and wipe as soon as possible. Spray with a hose and use warm soapy water and a soft-bristled brush. Pressure wash to more stubborn stains. Any surface stain that has been absorbed can be easily removed with a light, progressive sanding.

## Colour fade

Dura Cladding contains natural wood meaning that depending on the colour selected there will be a small amount of initial colour fading to be expected during the life of the product. Our extensive lab testing and experience from real-life installations shows that any minor colour fading occurs in the first 3 months following installation and then subsides, making Dura Cladding a great choice for projects which require a striking and long-lasting finish.

## Rust stains and engrained dirt

Cleaning products containing Oxalic or Phosphoric Acid can be used but DO NOT use bleach as this will lighten the cladding. With any cleaning product, test it on a small, inconspicuous area first, following the cleaning manufacturer's instructions.

## Mould and mildew

Remove and mop as soon as possible— spray with a hose and use warm soapy water and a soft-bristled brush. Pressure wash more stubborn stains.

## Scuffs, surface indents and marks

Sanding should only be used for very stubborn stains and to a maximum depth of 0.5mm. Most marks blend naturally after 12 weeks weathering.

**Please note:** All timber based products will release tannins but these will naturally stabilise after approximately 12 weeks, depending on the temperature, UV and exposure to rain.



# 5. Technical Specifications

## 1. Definition

Range of products produced from **Wood Polymer Composite (WPC)** which is manufactured by an Extrusion process using a mix of recycled plastics and hardwood wastes with various bespoke additives.

### 1.1 Applications

WPC is an immensely versatile material which combines the traditional appearance of natural timber with the durability and resilience of an engineered composite. Given it is available in a wide range of colours and huge range of profile sections, the engineer can create a product or component to meet the most demanding construction, industrial or leisure applications.

### 1.2 Benefits

Natural appearance, long life, lightweight, low maintenance, no warping, no rotting, no trip hazards, corrosion/electrical resistance, low tooling/installation cost, long service life, no splintering, UV stable. WPC products compete very favourably on a life cycle cost basis versus traditional materials due to their limited maintenance needs and long life span.

## 2. Raw Materials

WPC is manufactured using a composition comprising high density polyethylene, hardwood waste plus a number of specialist additives such as coupling agents, inhibitors and stabilisers. The exact composition used for this company's products is confidential. It is this highly developed, precise composition that enables the composite to deliver such strength and durability.

## 3. Product

**Dura Cladding** comprises a range of low maintenance composite timber cladding products that provide a natural wood appearance for commercial or residential building facades. The Cladding is designed for a 25 year service life, features a unique concealed fixing system and does not require painting or any other form of protection, only basic cleaning. The materials will not warp, rot or splinter like natural wood and due to the pre-cut slotted holes, screw fixing is very rapid making for quick and efficient installations.



### 3.1 Product Range

Cladding Profile	Plank Thickness	Plank Length	Actual Plank Width	Maximum Fixing Span	Weight l/m
Type 150 Flush	21mm	3600mm	150mm	600mm	2.04kg
Type 150 Weatherboard	21mm	3600mm	150mm	600mm	2.34kg
Type 200 Flush	21mm	3600mm	200mm	600mm	3.14kg
Type 250 Flush	21mm	3600mm	250mm	600mm	3.75kg
Starter Trim	21mm	3600mm	60mm	600mm	1.21kg
Finishing Trim	38mm	3600mm	154mm	600mm	2.7kg
External/Internal/Expansion Trim	38mm	3600mm	139mm	600mm	4.11kg
Trim Insert	14mm	3600mm	28mm	600mm	0.24kg
Fascia Trim	9mm	3660mm	230mm	-	2.88kg
Fascia Trim (Grey Cladding Only)	10mm	3660mm	140mm	-	1.94kg

### Material Specifications

Characteristics	Unit	Test Reference
Tensile Strength	15mpa	BS 6399
Impact Strength	8kj	ASTM D1037 - 93
Flexural Strength	3.15gpa	ASTM D1037 - 93
Flexural Strength****	3.13gpa	ASTM D1037 - 93
UV Aging Test	Pass	ISO 4892 - 2
Density	1.4g/cm3	Ceram, Stoke on Trent
24 Hour Water Absorption	1.07%	ASTM D684
Flammability Resistance	Euro Class Dfl-S1	BS EN 13501-1 (TBC)
Fire Resistance	Pass	476 Part 7 Class 3
Expansion Rate	3.882 E-US(K-I)	Ceram, Stoke on Trent
Weatherability	No Damage at 100 cycles	MOAT 22
Thermal Conductivity	0.154 W/m K	Indicative result
Maximum Thermal Expansion Rate*	0.038mm/min/°change	ESG Report M5703R1 Rev1
Maximum Thermal Contraction Rate**	0.036mm/min/°change	ESG Report M5703R1 Rev1
Frost Resistance	No Damage	DD CEN/TS 772-22 :2006
Structural Wind Load-Negative	<654.86kg***	ESG Report M5703R1 Rev1
Structural Wind Load-Positive	<2308.6kg	ESG Report M5703R1 Rev1
Sustainability	FSC® certification	FSC® 100% Certification
Recycled Content	Minimum 83% recycled	Ceram, Carbon footprint report

\*From 60 to 80°C \*\*From 70 to 30°C \*\*\*Dura Cladding exceeded the test rig capacity \*\*\*\*After UV aging (1000 hours & rain)

### 3.2 Manufacturing Tolerances

Width +1mm - 1mm  
Thickness +1mm - 1mm  
Length +3mm - 3mm

### 3.3 Colours

A range of standard colours and widths are available to suit every project need. The surface finish is fine sanded and lightly brushed. It is possible to produce Dura Cladding in bespoke colours subject to minimum volumes of 1500 sqm. Please ask for details.



**CEDAR**  
Available for Type  
150 and 250 Flush

**CHARCOAL**  
Available for  
Type 150 Flush

**TEAK**  
Available for Type  
150 and 200 Flush

**GREY**  
Available for Type  
150 and 250 Flush

**BARN BLACK**  
Available for Type  
150 Weatherboard

### 3.4 Fire Certificate

Euro Classification – Standard Dfl-S1. Fire Retardant Bfl-S1 is available by special order subject to 1500 sqm minimum order value and is subject to minimum 10 weeks lead-time.

## 4. Safety Data Sheet

This section provides data for protection against substances hazardous to health.

### 4.1 Material Identification and Use

Chemical Name: Wood Polymer Composite  
Common Name: WPC, Composite Timber  
Product Identification: **Dura Cladding**  
Uses: Building envelope on new builds or renovations or domestic or commercial

### 4.2 Composition

High Density polyethylene, hardwood waste materials from industry, coupling agents, UV stabilisers, mould inhibitors. Components are extruded through die, heated and cured.

### 4.3 Hazard Identification

None by contact. Dust produced by cutting or grinding can penetrate pores and skin causing itching. Avoid breathing dust, skin contact or dust inhalation when cutting. People with a condition that could be aggravated by dust should avoid cutting or grinding.

First Aid procedure: Skin – shower with water and soap. Eyes – flush with sterile eye wash solution.



#### 4.4 Product Appearance

Hollow or solid profile sections cut to specified lengths. Some sharp edges, top surface sanded. Wood Odour. Not soluble in water. Standard colours are Cedar, Teak, Charcoal, Grey and Barn Black (weatherboard only). Others colours available on request subject to lead-time and minimum volumes.

#### 4.5 Fire Fighting Measures

Standard extinguishing equipment, water, foam, A, B or C fire extinguishers. Produces black smoke while burning, carbon particles. Use air respirator.

#### 4.6 Waste Disposal

Product is not considered a hazardous waste. Abide by local laws and procedures.

#### 4.7 Handling/Cutting

Wear masks and goggles when cutting or grinding. Cover exposed parts of the body. Wear gloves when moving or lifting. Use standard wood working equipment & tools for cutting. Avoid direct fire source.

### 5. Product Warranty

10 year limited warranty. Please register your product with us to activate your warranty. Dura Composites warranty gives you peace of mind and expert back up should you ever need it, so you can rest assured you're buying the best in design excellence, quality and durability.

Please note that your warranty must be registered and activated within 30 days of your invoice date to be eligible. See [www.duracomposites.com/warranty](http://www.duracomposites.com/warranty)



**Head Office**

Dura Composites Ltd  
Dura House, Telford Road, Clacton-on-Sea  
Essex CO15 4LP  
United Kingdom  
Tel: +44 (0)1255 423601  
Fax: +44 (0)1255 435426  
**[www.duracomposites.com/clad](http://www.duracomposites.com/clad)**  
[info@duracomposites.com](mailto:info@duracomposites.com)

For further information, please do not hesitate to call us.

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