ENVIROBUILD

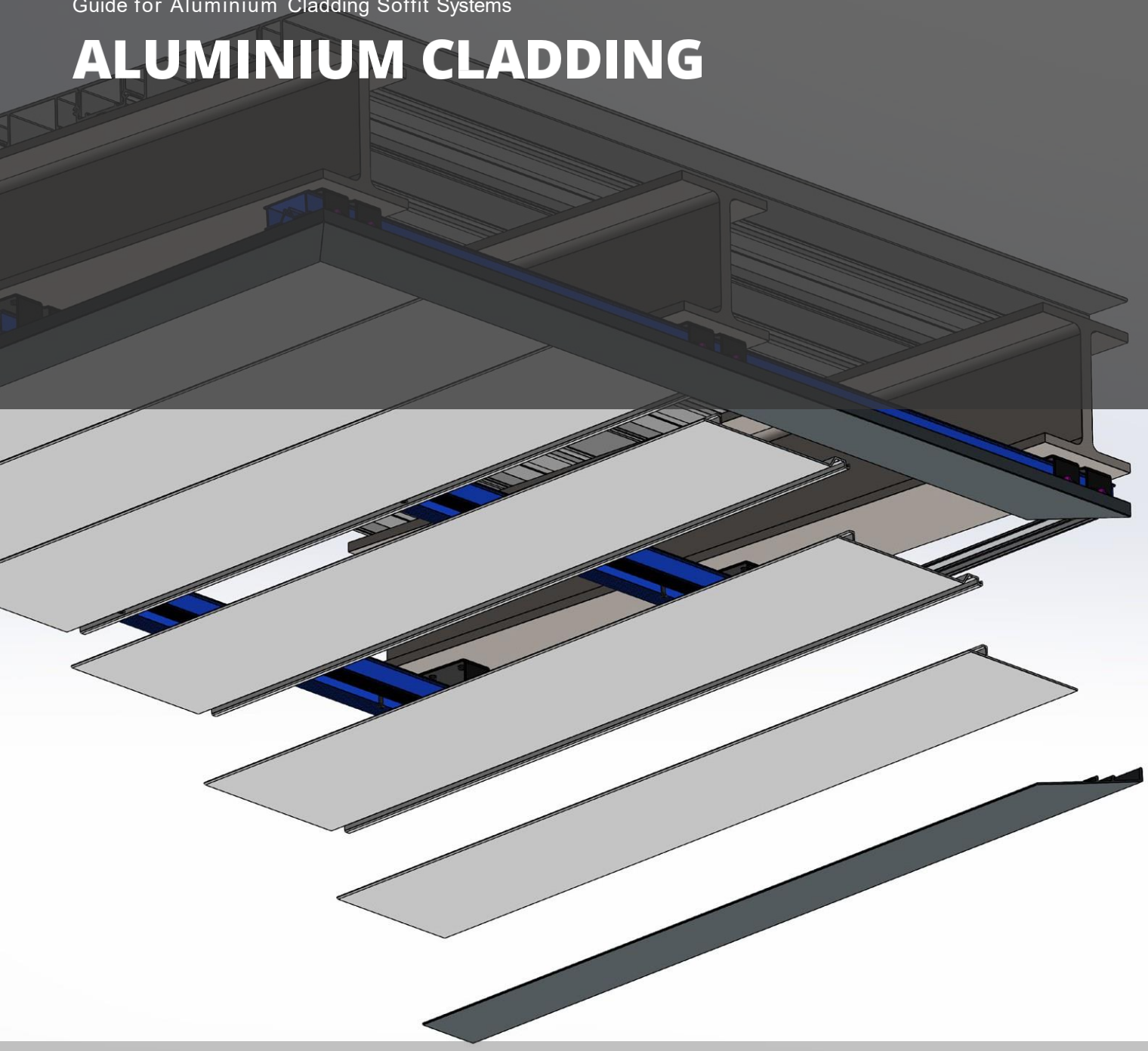
Installation & Maintenance Guide

v1.3

HYPERION®
ALUMINIUM

Guide for Aluminium Cladding Soffit Systems

ALUMINIUM CLADDING



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Please Note

It is the customer's responsibility to determine the suitability of Hyperion® Aluminium Decking for their particular private or commercial installation. It is solely the customer's responsibility to consult with their local building control to determine fire classification project requirements.

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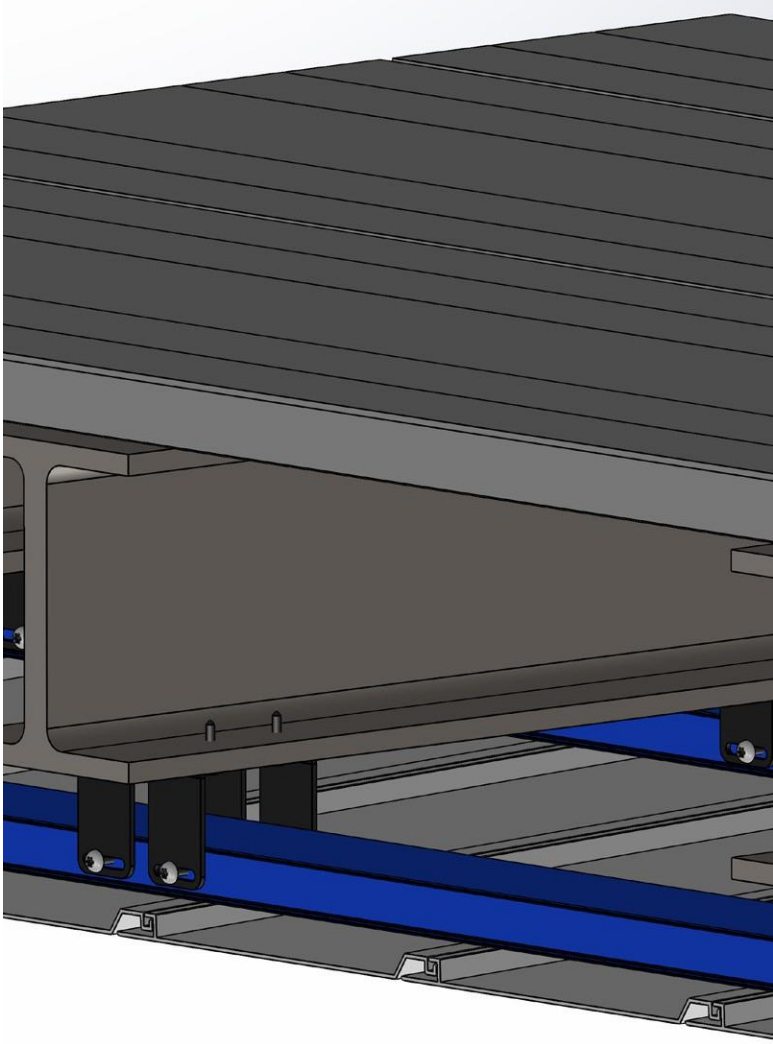
Supporting Information



Supporting Information

The Complete System – Bracket Fixed (up to 120mm from balcony steels)

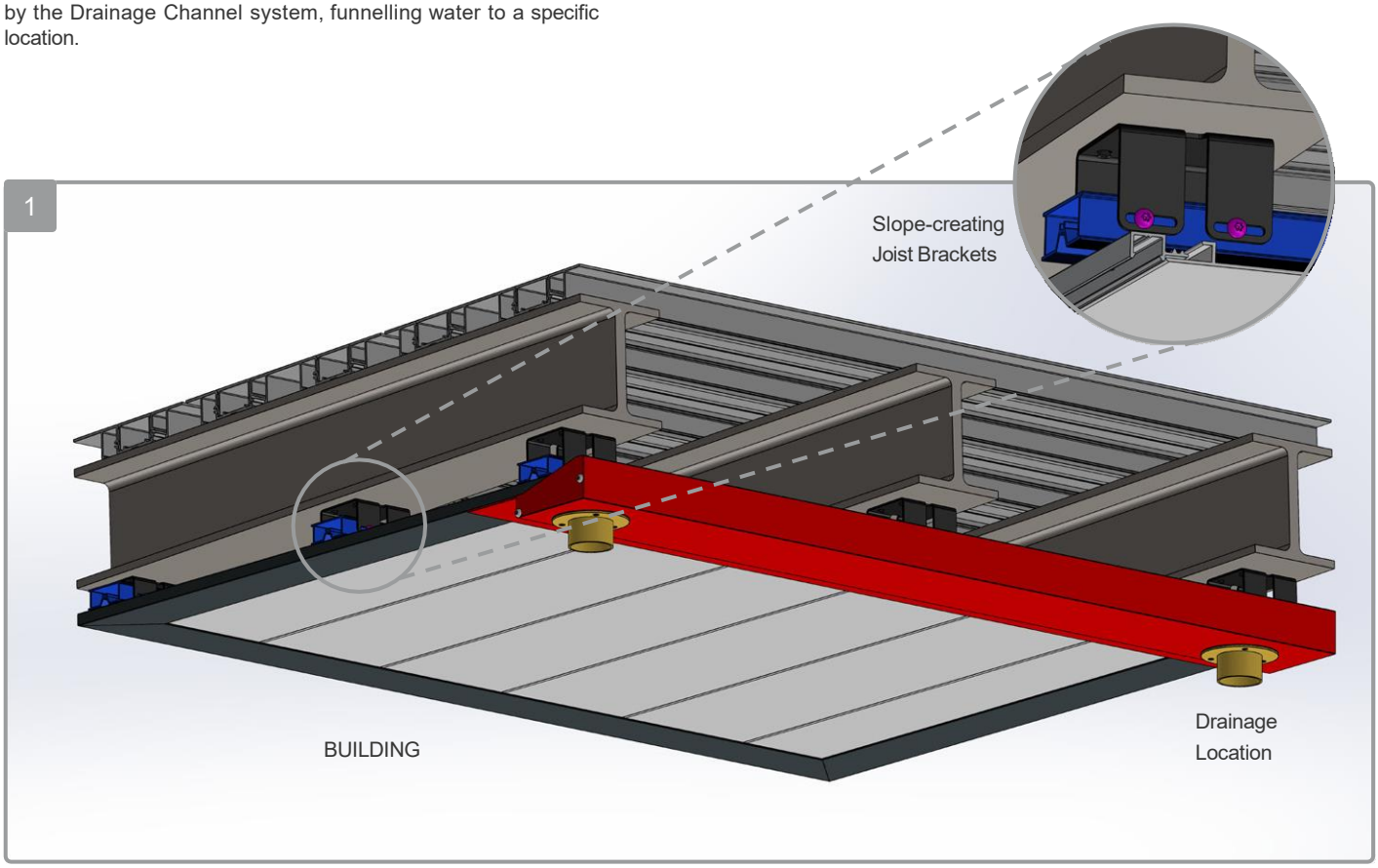
Hyperion aluminium cladding boards create a continuous soffit surface, with interlocking connection and drainage channels which are designed to mitigate the capillary effect.

The boards are designed to be installed at a slope, forcing liquids down the continuous rear board surface where it can be collected by the Drainage Channel system, funnelling water to a specific location.

The Drainage Channel system provides a complete drainage solution, primarily for use on projecting balconies and is designed for easy fixing and assembly.

For soffit layers supported under 120mm from the balcony steels, Joist Brackets can be used to suspend the support joists required for the soffit cladding boards *(fig 1)*. For soffit layers suspended >120mm from the balcony steels, please consult page 13.

1



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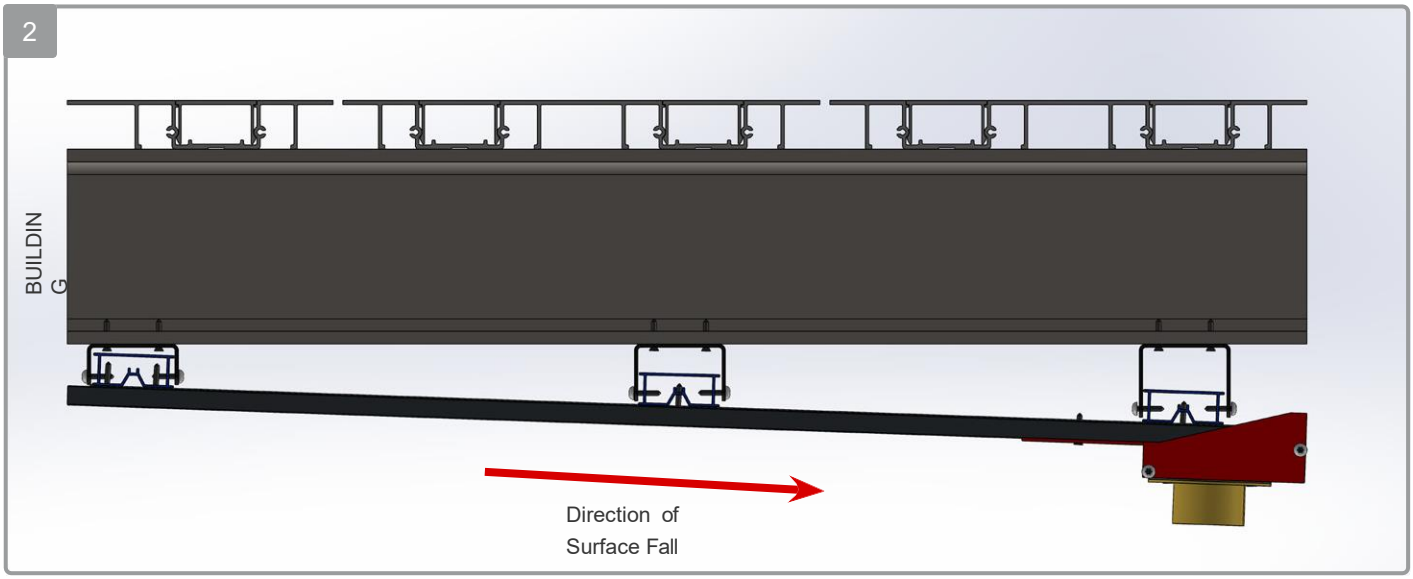


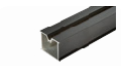
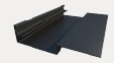
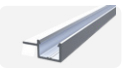
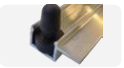
Pre-Installation Checks

Before starting your installation, a few key considerations should be confirmed:

1. Direction of surface slope - We recommend a 1:80 fall away from the building on the soffit layer.
2. Direction of your soffit boards - The system above shows how to install based on boards running depthways (parallel to the building), which is the simplest method to create a slope away from the building and reduces the number of drainage channels required.
3. Water collection point - Best practice will see water collected at the lowest point of the drainage channel, which is likely to be the furthest point from the building, although the soffit can be sloped in any direction and so collection can be wherever you require. Pipes can be connected to the outflow spigot in order to direct water onward.
4. Water overflow point - Opposite to the above an overflow spigot should be placed at the highest point in the soffit drainage system, to allow water a means of escape if the primary outlet becomes blocked.

Parts and Equipment Check

It is essential to check you have all the parts required before installation, as per below:

Parts Required	
Cladding boards	
Joists	
Drainage channel	
Channel end plates	
Spigot(s)	
Slope-creating joist brackets (might require various heights - 1:80 slope is 12.5mm height over 1m)	
Self-drilling pan-head screws (screwdriver bit included)	
Edging clip rail	
Edging covers	
Edging clip-rail gaskets	

Equipment Required
Appropriate PPE
Impact driver
Hand drill with 30mm metal drill bit
Chop saw with metal cutting blade

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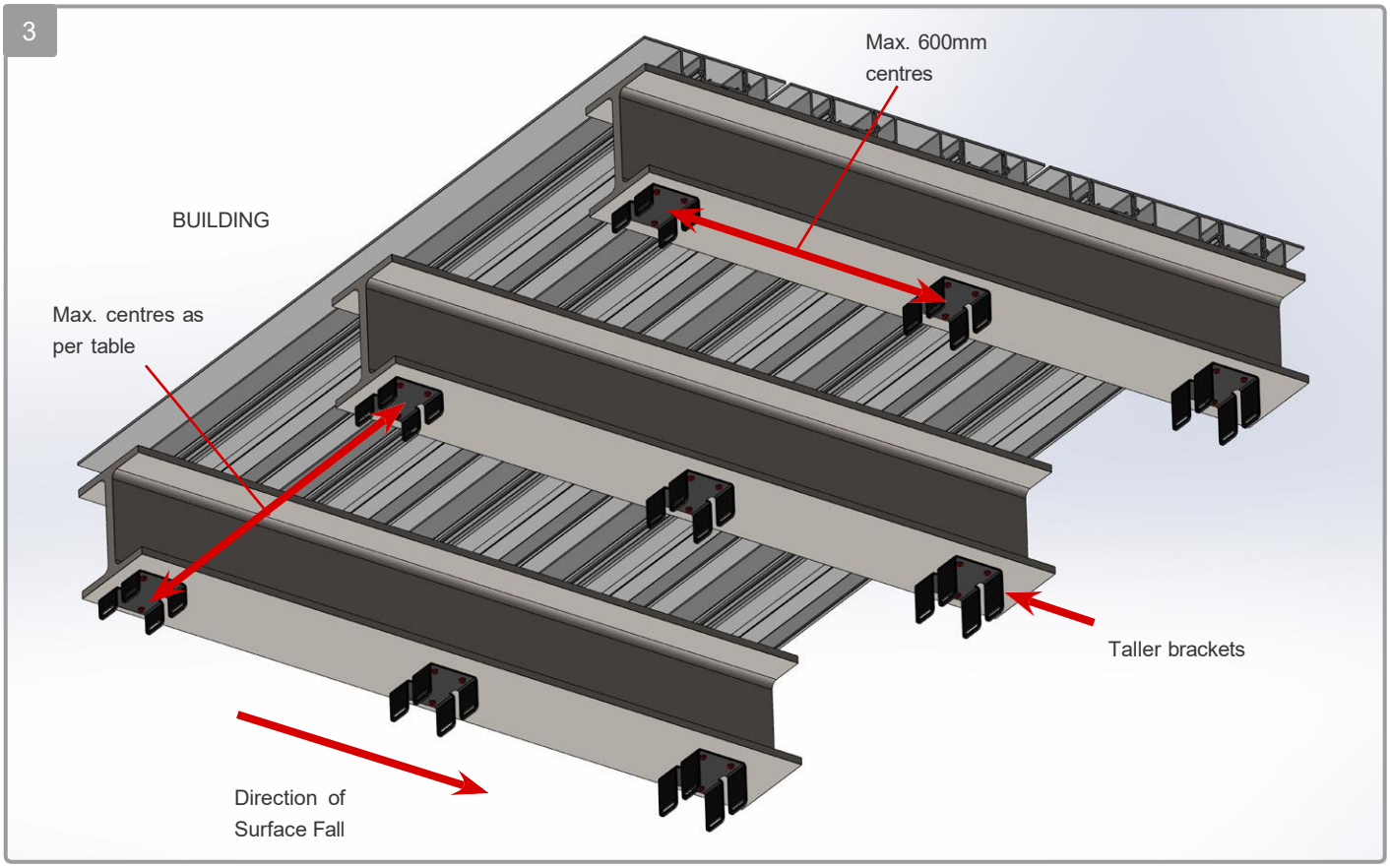

Once you have confirmed where the support joists and border drainage channel will sit, their direction, and the slope of your balcony, arrange joist brackets to fix joists within the following max. spans:

- Max. 600mm centres between joists
- Max. centres between joist supports:
  - 1000mm for 20x50 joist
  - 1500mm for 40x50 joist
  - 2000mm for 80x50 joist

Taller brackets should be placed at the lowest point of the soffit *(fig. 3)*.

Fix down the bracket either using self-drilling screws or by pre-drilling and then screwing or bolting *(fig. 4)*. Due to a large variance in the material type and thickness for the substrate here, EnviroBuild do not provide fixings. The hole size in the base of the bracket is 6mm.

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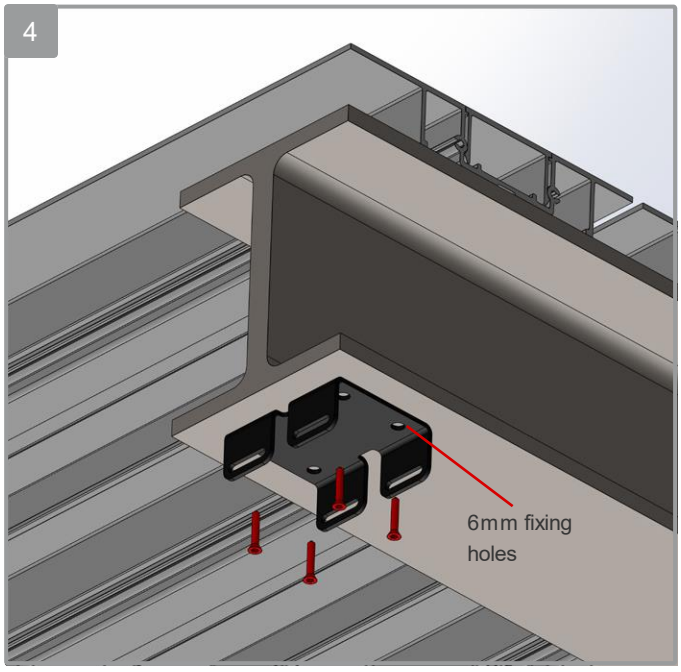

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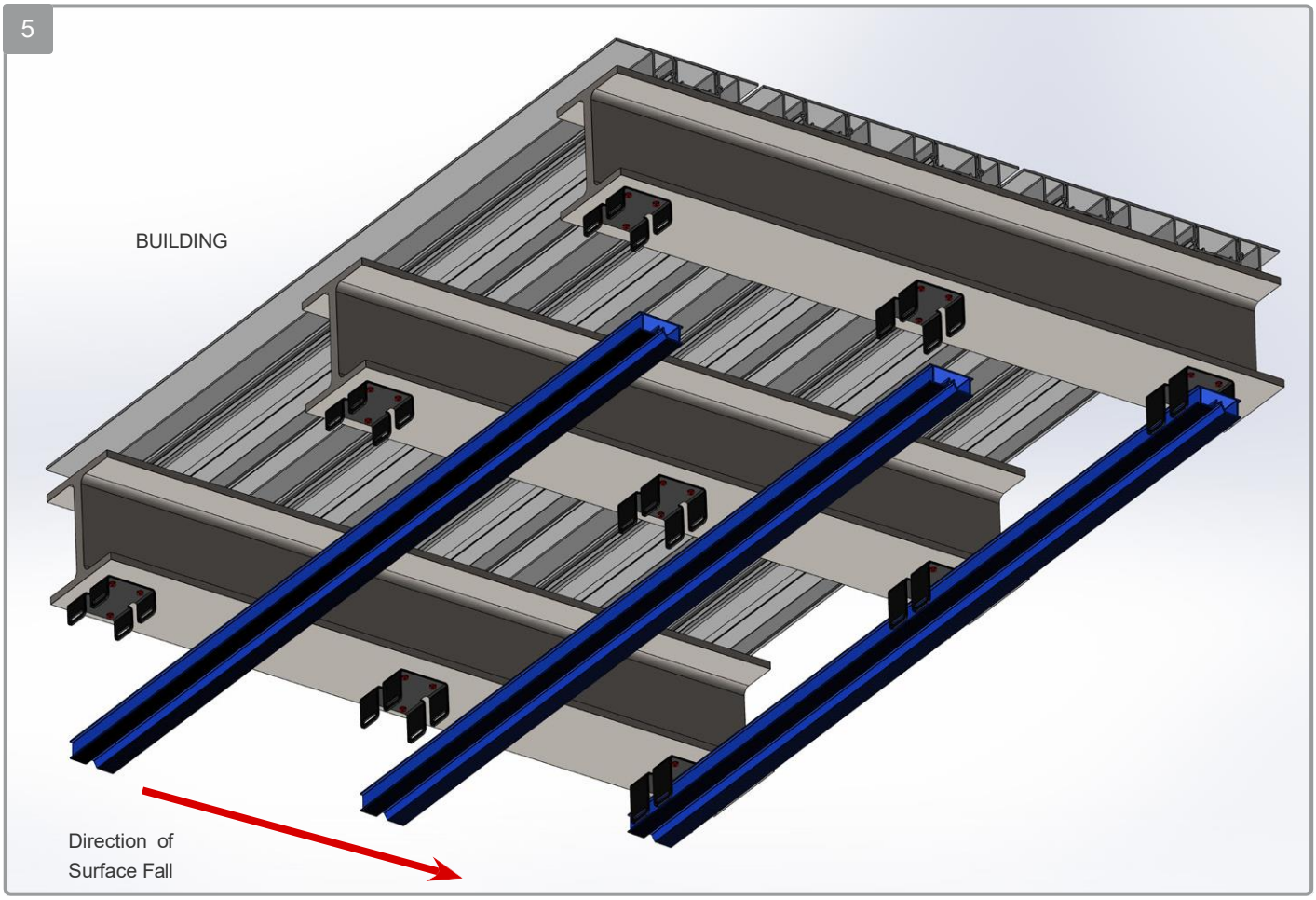

With slope-creating joist brackets in place, next you can install the support joists:

1. Cut joists to length and place into joist brackets.
2. Double check levels and slope.
3. Fix joist in place with screws through the joist bracket slotted holes *(fig. 6)*.

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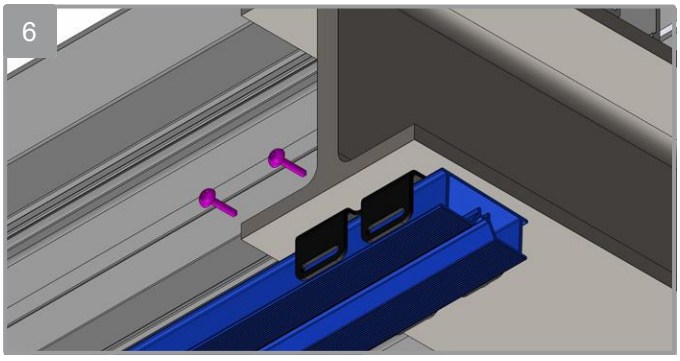

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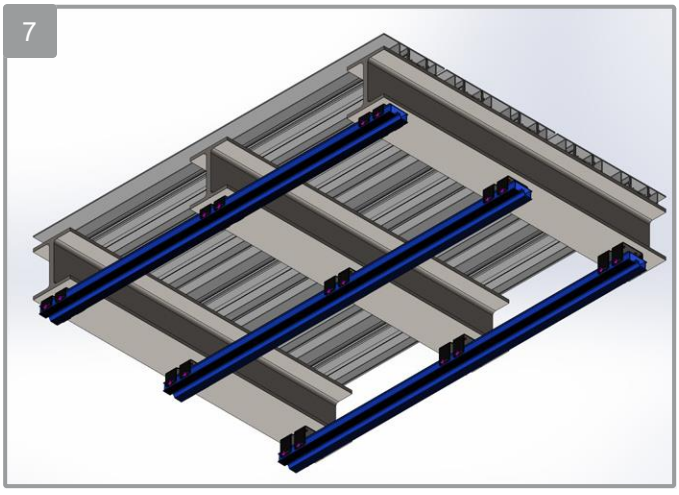

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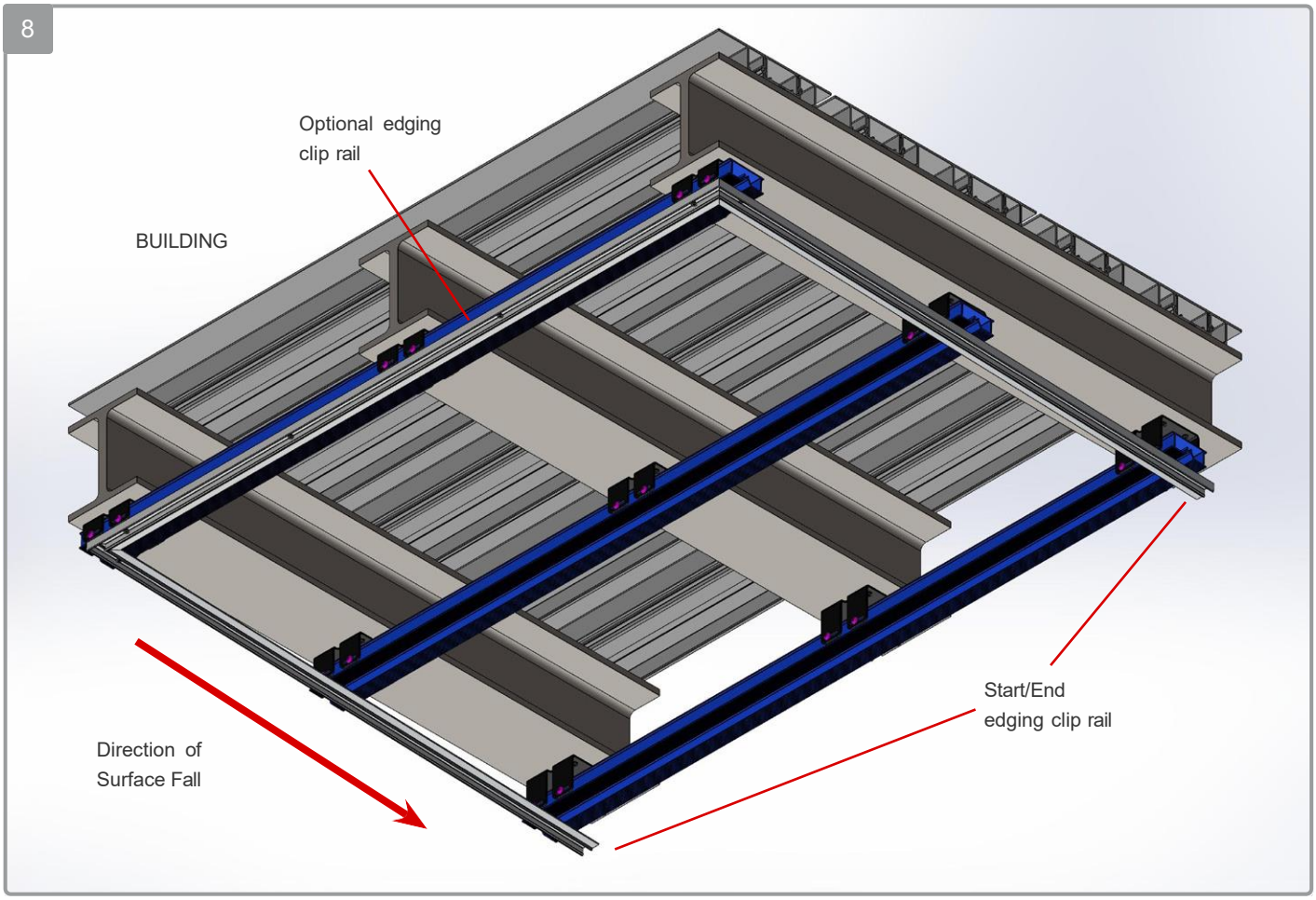

With support joists in place you can proceed to fixing edging rails:

1. On the starting edge of the cladding (where the bottom of the first board will sit) screw the first clip rail at least 14mm from the soffit edge into the support batten. Ensure the protruding tongue is facing toward the soffited area *(fig. 9)*.
2. Optional: If you would like the edge closest to the building to have a matching border to the other sides *(as per fig. 10)*, you can affix a clip rail to the edge parallel to the building. In this instance either mitre the clip rail ends to fit, or leave a gap between perpendicular clip rail ends to be able to mitre the edging piece *(fig. 11)*.
3. Install the final clip rail. Make sure to leave at least a 14mm gap between the clip rail and the edge of the soffit, and that the protruding tongue faces towards the soffited area.

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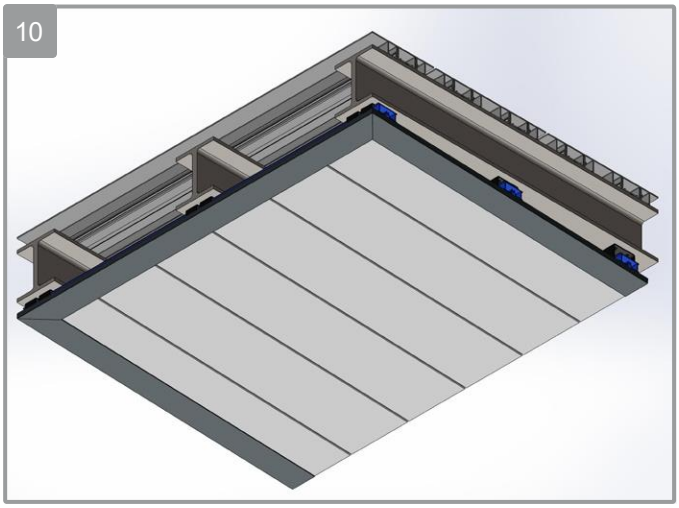

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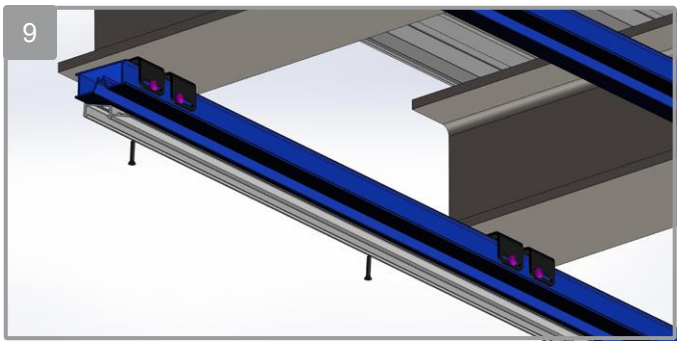

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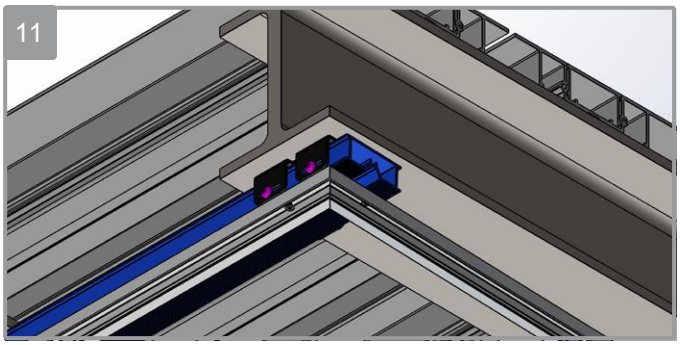

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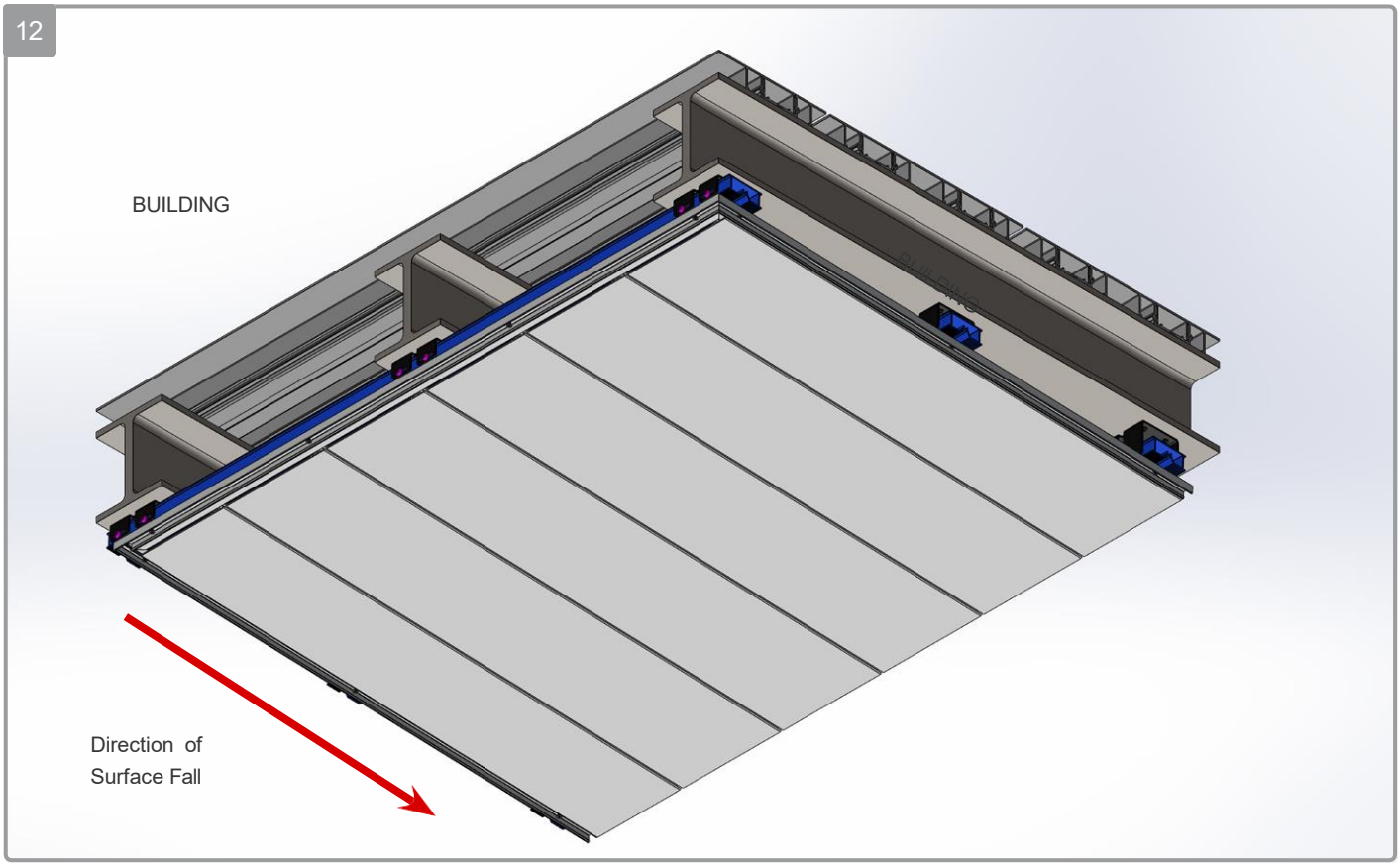

With edging clip rails in place, you can start to fix the cladding boards:

1. Cut the cladding boards to length, ensuring there is at least a 30mm gap for the water to drain into the end drainage channel.
2. Offer the bottom edge of the first cladding board up to the clip rail and fix the board to the joists, using self-drilling pan-head screws, through the fixing channel *(figs. 13 & 14)*.
3. Keep fitting the boards until the space remaining is either a full board width or less.
4. Rip down a board to fit the final slot so that the ripped edge would sit on the tongue of the end clip rail.

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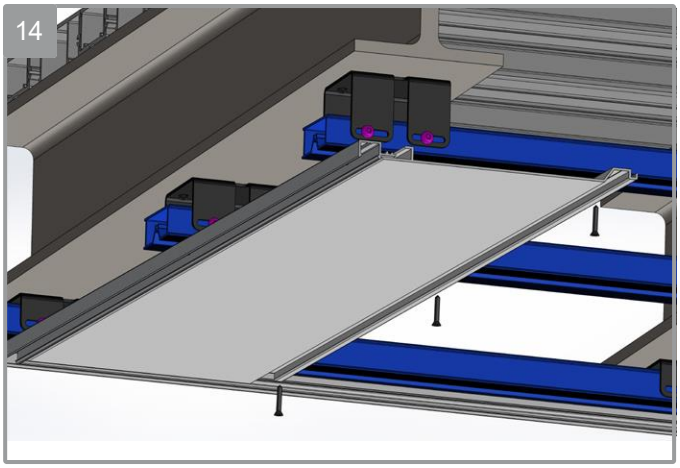

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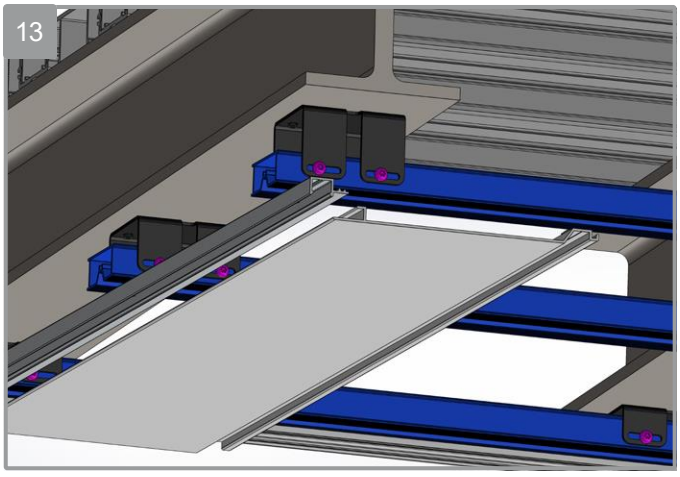

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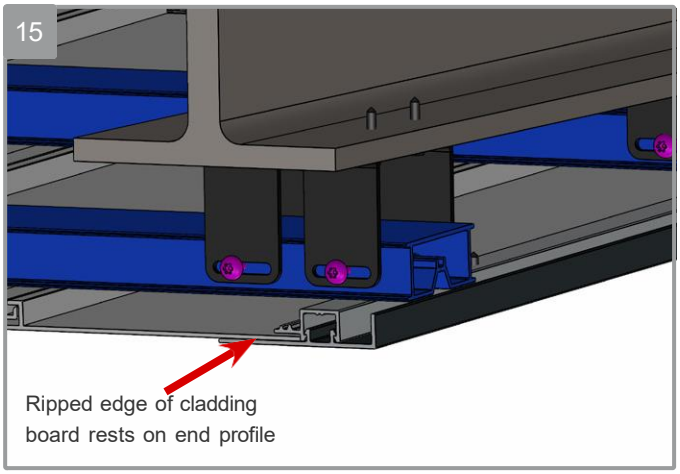

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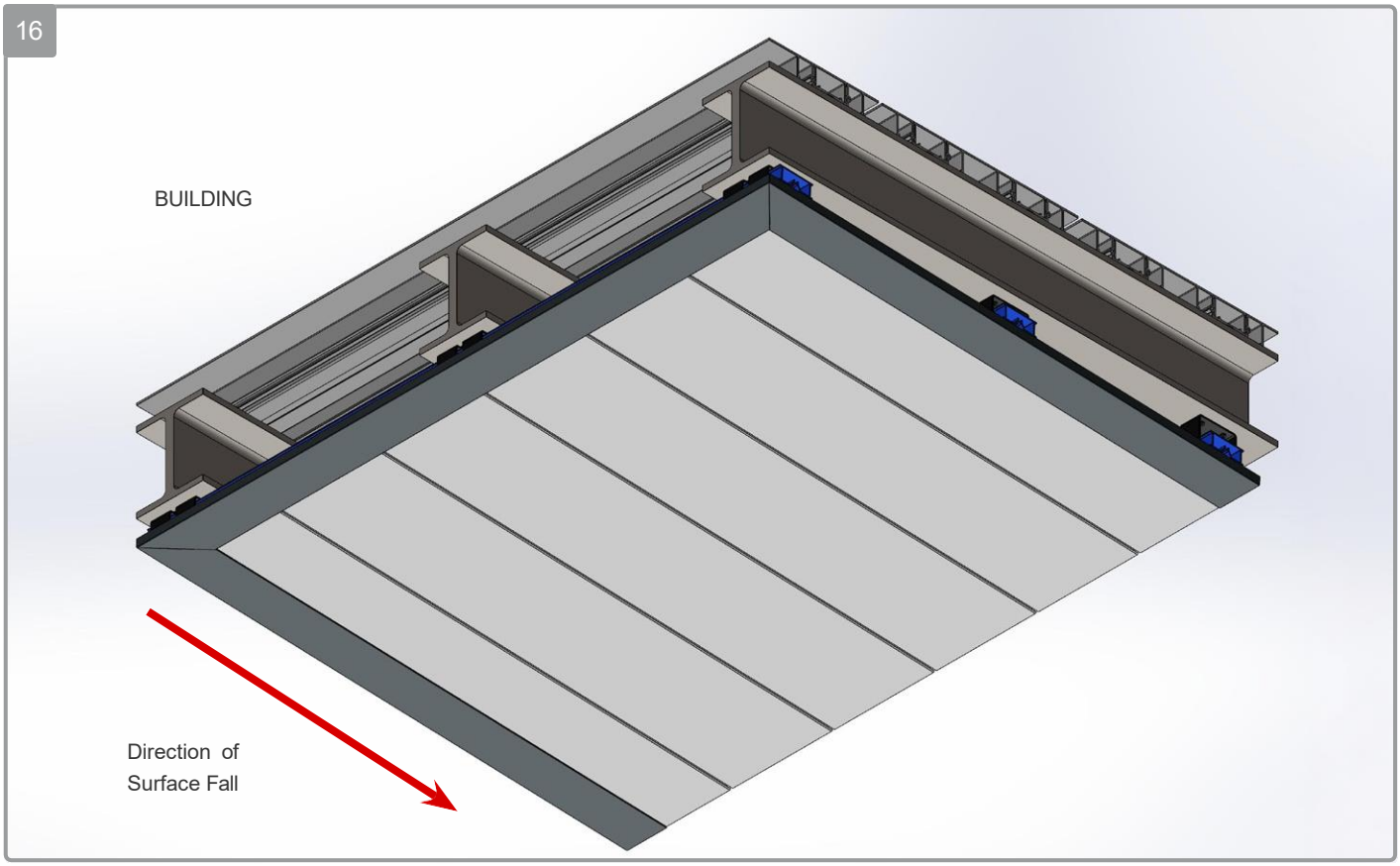

With cladding boards in place the next step is to fix the edging trims:

1. In each clip rail, insert 2 rubber gaskets per length *(image 1)*.
2. Clip in the edging trims - use a rubber mallet if required *(figs. 17 & 18)*.
3. If the final cladding board is ripped, it will not be fixed in place with screws at this point. This final board will be fixed in place with the drainage channel at a later point (fig. 24).

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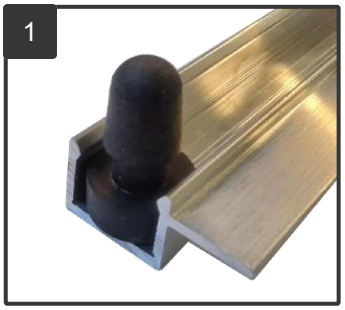

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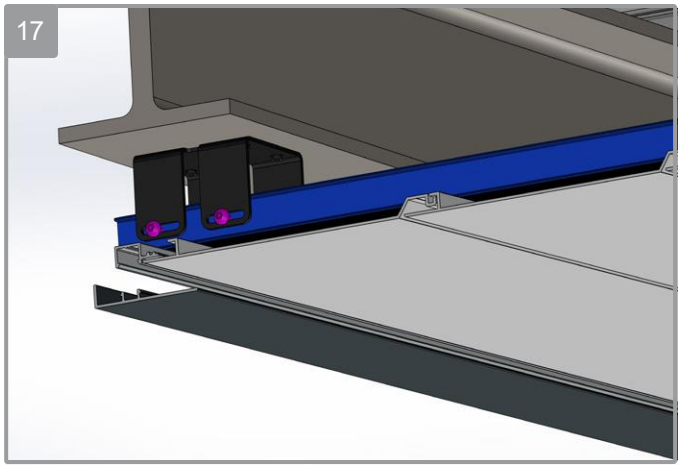

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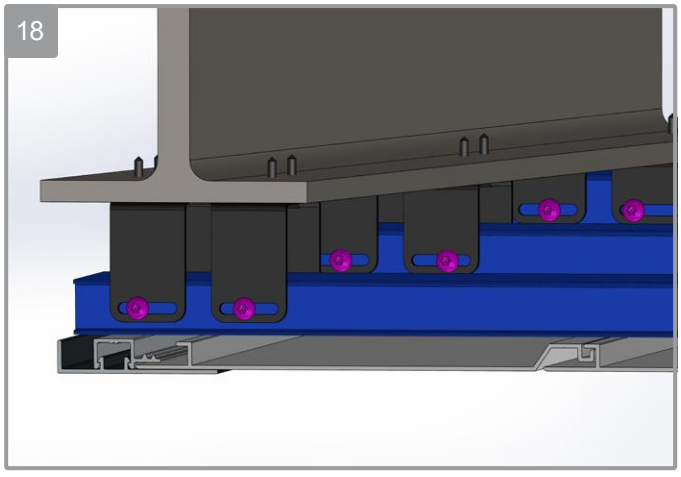

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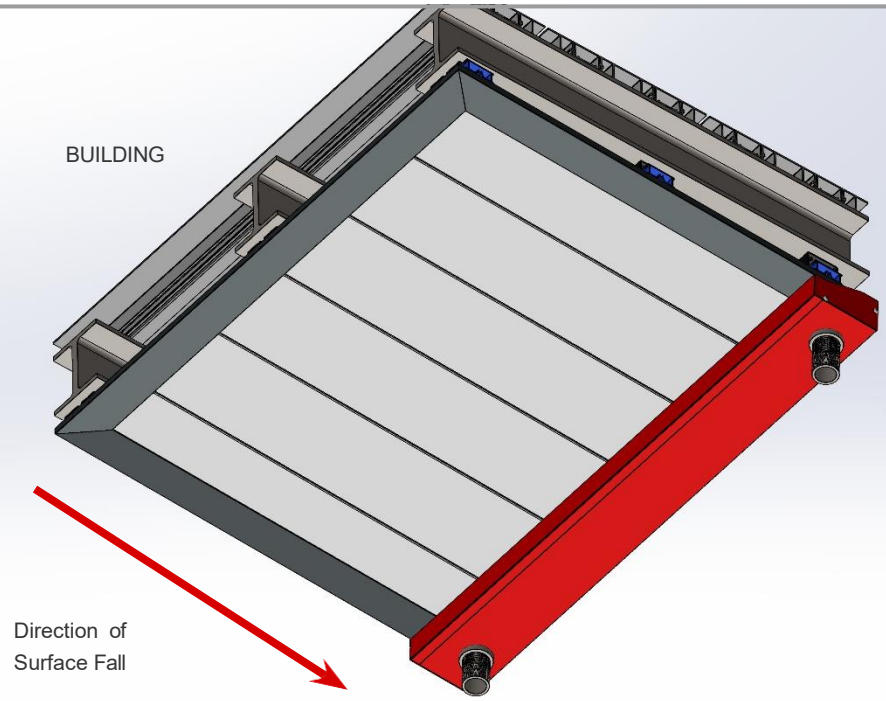

The next step is to fix the drainage channel to the soffit surface:

1. Cut the channels length to match the width of the soffit including edging trims.
2. Next attach end plates to close off the drainage channel ends. Use silicon sealant *(as per highlighted areas fig. 20)* and simply screw the end plate to the open end of the drainage channel.
3. Determine where the outlet spigot and overflow spigot will be location in the channel, and create appropriate sized holes for the outlets (max. 80mm spigot diameter can be used).
4. Fix the spigots in place *(fig. 21)* and use silicon sealant to ensure water-tightness - for the overflow outlet use the additional nut to raise the head to desired level (*fig.23)*.
5. It is prudent to check the silicon-sealed areas with some test water at this stage to ensure they are water-tight.

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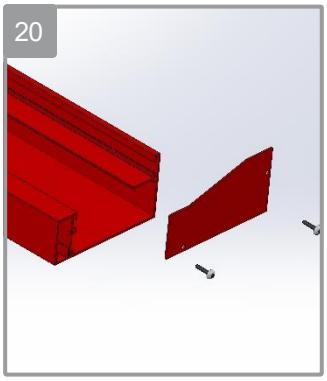

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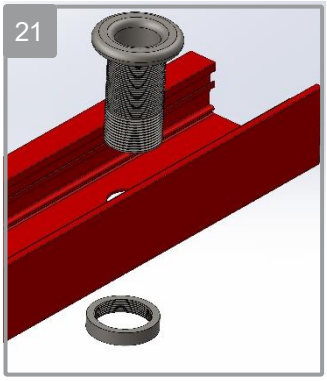

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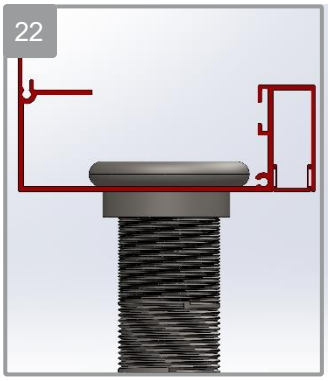

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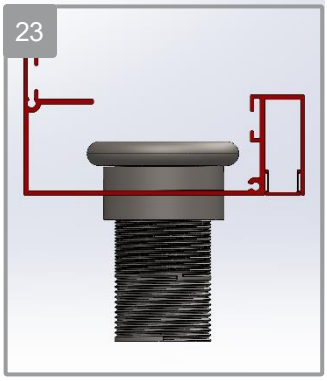

6. With drainage channel fully assembled, offer it up to the drainage edge of the soffit, ideally with the fixing channel sitting below a joist position *(fig. 26)*, then fix in place with self-drilling pan-head screws where the soffit boards connect for best watertightness *(fig. 25)*. Fix min. every 3 soffit boards.
7. The ripped (final) cladding board can be held in place with a fixing screw for the drainage channel.
8. Connect up your outlet spigot to your drainage system.

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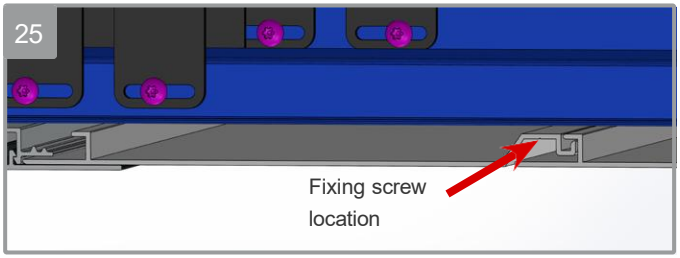

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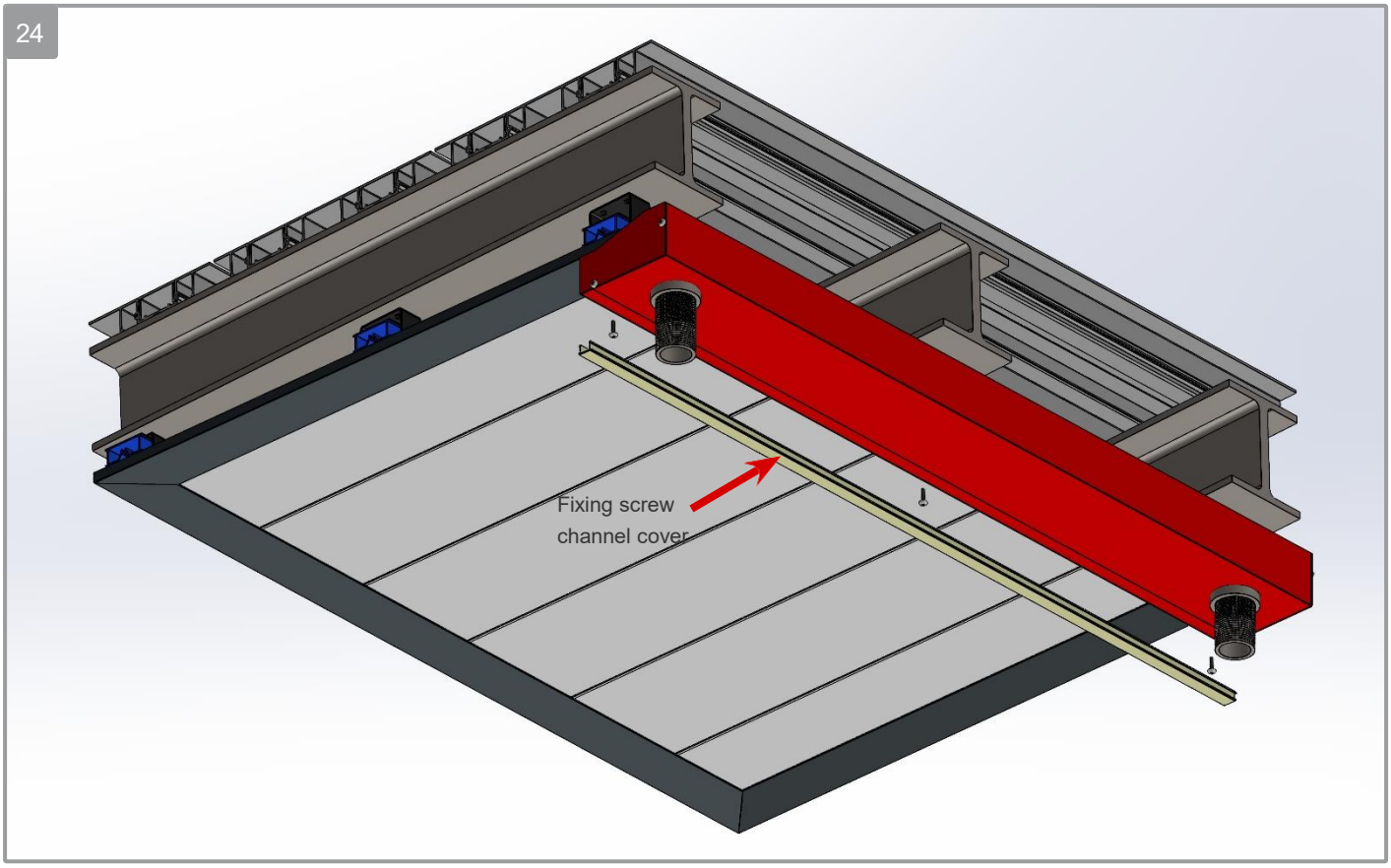

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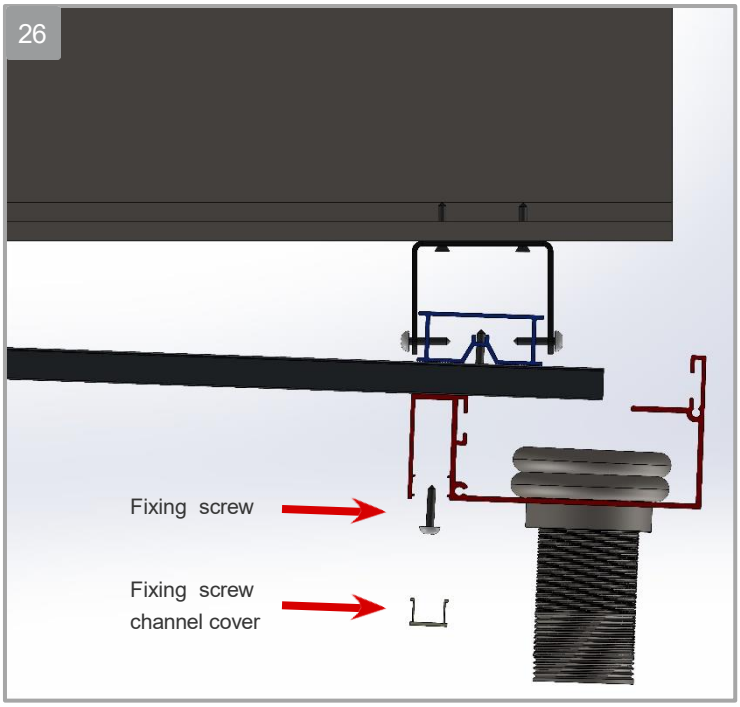

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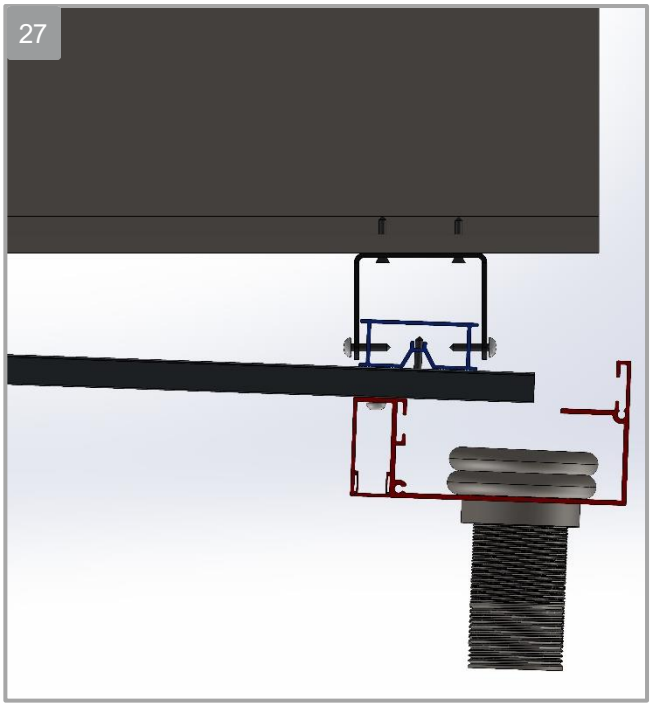

The Suspended System >120mm from Balcony Steels

For soffit surfaces suspended >120mm from the balcony steels, a threaded bar system will need to be used to fit the soffit layer.

M10 threaded bar can be any length and will fix to the balcony steel with appropriate M10 nuts (not supplied by EnviroBuild) either side of the support steel *(fig.25)*. At the opposite end of the bar an M10 nut will be inserted into the Aluminium 20x50mm suspended soffit bearer to hold the threaded bar to the soffit support system.

The slope and height of the soffit layer can be controlled by adjusting the nuts around the balcony steel.

With the supports in place the soffit surface can be installed as per steps from Page 8.

Please note: for drainage off the soffit layer either the extended edge drainage profile (shown below) or the piped drainage channels can be used with threaded bar support system.

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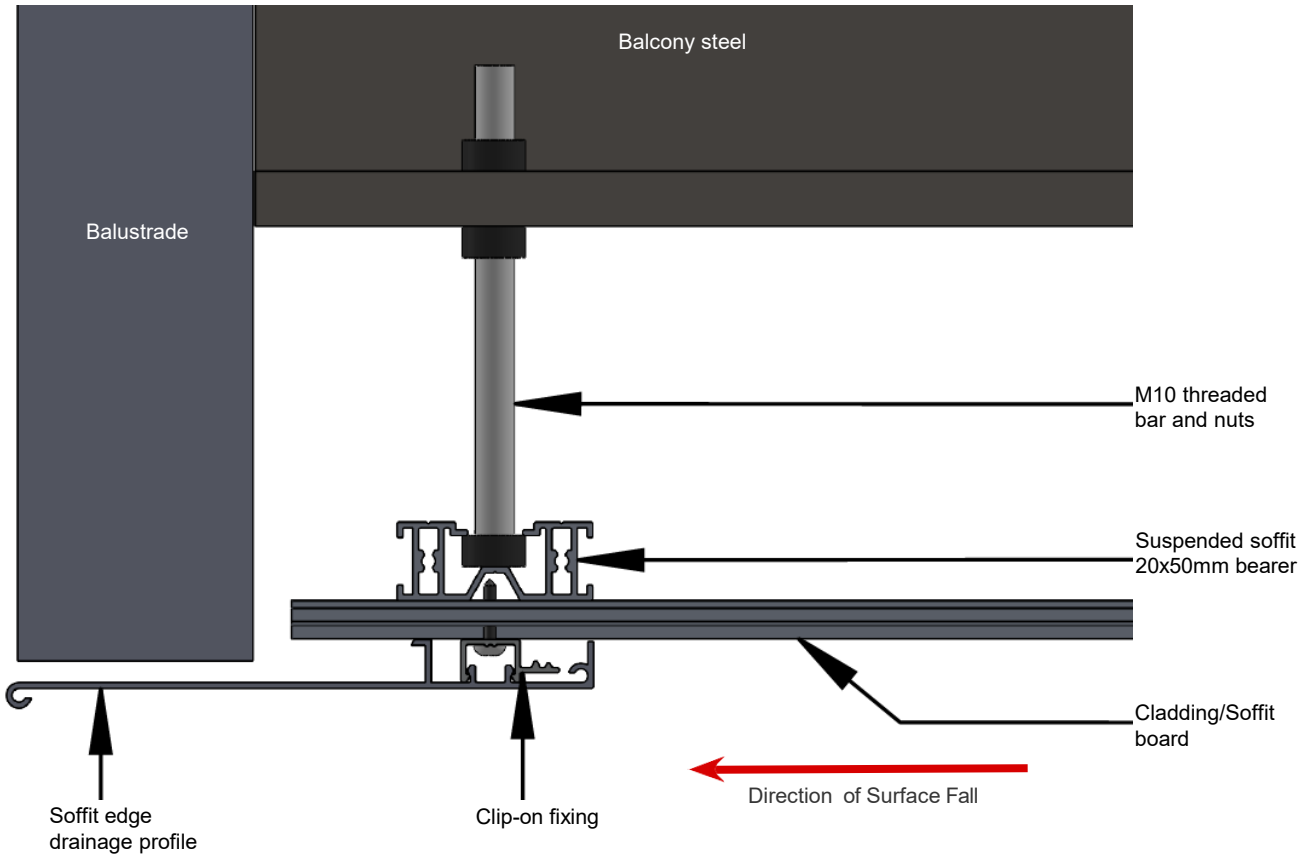

Soffit Edge Drainage

The Soffit Edge Drainage Profile can be used to comply with BS8579, where edge drainage should occur at least 30mm from the balcony perimeter.

1. Setup your soffit layer so the draining edge sits max. 6mm from the bottom of the balcony perimeter *(fig.26)* and is sloped to that edge (this will leave 4mm drainage gap).
2. Fit the Clip-on fixing rail with self-drilling screws to the soffit surface, position this so that the drainage profile would sit 30mm (or desired amount) from the balcony perimeter (Clip-on rail tongue pointing to the soffit area).
3. Clip the Soffit Edge Drainage Profile onto the Clip-on fixing, use a rubber mallet if required - *for added security, a self-drilling screw can be used through the Soffit Edge Drainage Profile into the soffit layer.*
4. Finish off the drainage channel by screwing on end caps ensuring to silicon seal the joints.

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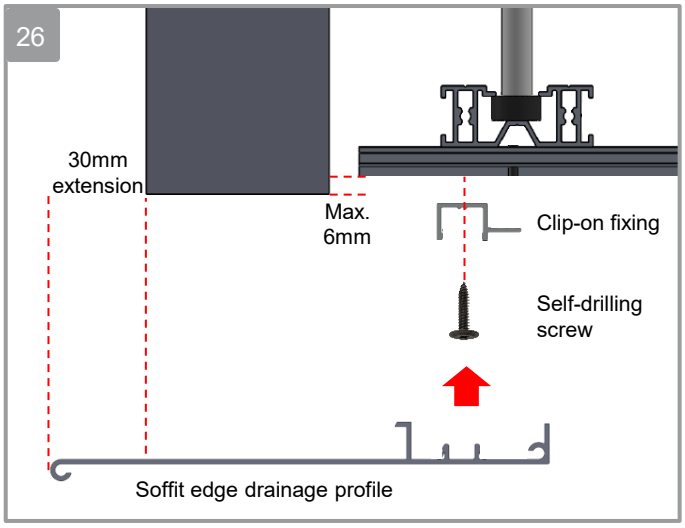

Care & Maintenance

- How should I prevent scratching cladding boards?
  Ensure that all furniture used on A-Class systems have soft felt pads under their legs.
- How often should I clean my cladding boards?
  At regular intervals but at the very least they should be cleaned twice a year as excess dirt can cause damage.
- How should aluminium cladding boards be cleaned?
  To clean the structure, a solution of warm soapy water and a lint-free cloth should be used. The structure should then be rinsed thoroughly with water. No form of abrasive should be used at any time. All concentrated cleaners should be diluted as per the manufacturer's instructions. Never use bleach, solvents, abrasive paste or cream cleaners as they could damage the surface of your cladding.

  To maximise the life of the painted surface, it is highly recommended that no cleanser that contains chlorinated solvents, ketones or esters is used. These will cause the paint to soften.
- Can a pressure washer or steam cleaner be used?
  It is not advised to use pressure washers or steam cleaners to clean aluminium deck boards.
- How can I fix light chips or scratches?
  Light chips or scratches which leave exposed the base metal should be carefully covered by applying an appropriate zinc rich primer, followed by a topcoat finish in a matching acrylic based spray paint. Ensure all areas are cleaned with PW3 panel wipe to remove any grease prior to re-coating. It is strongly recommended that the surrounded area should be fully protected and masked off while spraying.
- How can I fix larger areas of damage, coating breakdown or vandalism?
  The area should be sanded so that the edges are smoothed to allow for feathering in using P320 grade fine sandpaper (to create a smoother transition from the old paint to the new). 'Paint pens' can be used to very simply cover the area. Otherwise, a zinc rich primer should be brushed or sprayed onto the area and a topcoat should then be applied in a similar manner.
- How can I remove graffiti?
  Graffiti should be removed by a specialist contract cleaner or by using a "T-Cutting" compound. It is not recommended to use any solvents, abrasive cleaners or other chemicals to clean the surface at any time.

Installation

- How do I cut aluminium cladding boards and joists?
  A saw blade suitable for aluminium materials should be used. Preferably use one with a blade suited to non-ferrous materials and for profiles of a suitable thickness. Blades designed for cutting non-ferrous materials usually have a special grade of carbide for aluminium, a triple chip top grind and a zero or negative hook angle. There are ways to cut aluminium materials with blades designed to cut wood, however this is not recommended.

  A circular saw or table saw can be used however the preferred method is using a mitre saw. Ensure the aluminium material is sufficiently fixed with a clamp in order to prevent damage to the blade or the user. You will get better results and a longer blade life if you use a lubricant (a wax stick or WD-40 is easy to apply while the blade is spinning).
- Does cutting aluminium leave burrs?
  Any small burring which may occur can be removed simply by using sandpaper and a pair of safety gloves.
- How can noise dampening be improved?
  A layer of EPDM membrane could be used between the aluminium decking and the joist. This requires checking with building control.

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