

triton baffle beamTM



Sound Absorbing Ceiling Baffles Installation Manual



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Sound Absorbing Ceiling Baffles

Installation Manual

Triton Baffle BeamTM is a made in NZ high sound absorbing ceiling system designed to provide an attractive linear aesthetic and to control unwanted noise. Triton Baffle Beams are available in a range of sizes, decorative finishes and three mounting systems for direct fix or suspended use.

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1.0 General Information

Description

Triton Baffle BeamTM are a proprietary acoustical baffle system designed to control unwanted noise reverberation in indoor areas and provide a decorative finish.

Application

Triton Baffle BeamTM panels are suitable for new builds or retro fitting in existing interiors. They can be mounted directly to the underside of linings or structures, or suspended using a quick and easily installed proprietary Rondo DONN DX exposed grid system. They can also be attached to furring channel suspension systems.

Composition

Manufactured in NZ, from non-combustible glass fibre core and faced and edge wrapped in 2 ply SonatexTM glass mat laminate, or decorative wood look LPL finishes.

General

The installation details and information contained within this Asona Triton Baffle Beam Technical Installation Manual provides a range of construction methods that can be adapted to suit individual projects. Asona Ltd can also provide custom made components should there be a particular requirement.

Disclaimer

"Asona Triton Baffle Beam panels and components as described must be used and installed in accordance with the installation instructions detailed within this guide. Use of any other installation methods, materials or components may result in component failure and void the warranty of the product and system"



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2.0 Technical Installation Specification

Humidity:

Max 99% R/H at 45°C.

NZ Building Code:

Clause B2—durability, 5 years.

Maintenance:

Clean with vacuum, soft brush, or damp cloth.

Weight: kg/lm of baffle

60mm—0.16; 75mm—0.20; 90mm—0.24; 125mm—0.34; 175mm = 0.47; 275mm—0.74; 575mm—1.55

Handling & Storage

- Handle with care, on edge to avoid bending when moving and to prevent edge damage.
- Store Triton Baffle Beam panels on a flat dry surface with adequate support to prevent bending.
- Keep dry, clean, and free from dust and debris.
- Pay special attention to the edges.
- When handling wear white gloves to avoid marking the panels.
- When storing onsite protect the panels from possible damage by other trades.

Limitations of Use

- Triton Baffle Beams are a finishing trade, installation shall not commence until the building is water tight, dry and free of dust and debris.
- Triton Baffle Beams are not designed for use in external applications, high wind areas, or hygiene sensitive areas.
- Baffles are not to be used by sub-trades to support other services or equipment.

Installation

- The installation of Asona Triton Baffle Beams can be carried out by competent tradesperson or suspended ceiling installer who has received training from Asona. Space Baffles evenly as per drawings.
- Baffles can be direct fixed or fixed to suspended framing.
- Health & Safety and PPE
- Wear loose long sleeve clothing.
- Safety glasses.
- Clean white gloves.
- Dust mask.
- If cutting with power tools use dust extraction.

Seismic Bracing

- For Triton Baffle Beam panels direct attached under plasterboard lining or to the building structure, purlins, beams or battens with the ECD (External Channel Direct fixed), bracing is generally not required.
- If the baffles are attached to a suspended sub structure or a lined suspended ceiling system, then the weight of the Triton Baffle Beams shall be included in the seismic design calculations for the suspension. Bracing can be by perimeter attachment or back bracing. Install bracing as required by the seismic design. Proprietary systems such as Gridlok® can be used.
- For preliminary advice, please contact Asona Ltd. If a PS1 or SED (specific engineering design) is required, then consult a chartered structural engineer familiar with the seismic designs of suspended ceilings

Do's

- Use the specified components as detailed in this manual.
- Do ensure there are sufficient attachment points for the size and weight of the panel.
- Do use cotton gloves to minimise any handling marking.

Don'ts

- Do not install Asona Triton Baffle Beams until the building is watertight.
- Do not use Asona Triton Baffle Beam panels to support other products or services.
- Do not install panels within wet areas or where they can come in direct contact with water.

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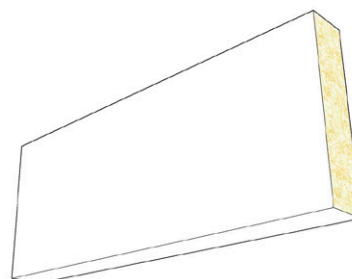
Sound Absorbing Ceiling Baffles

3.0 Components & Ancillary Products

Baffle Beam Panel

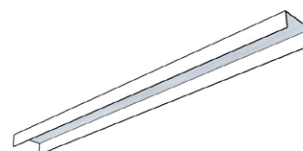
Asona Baffle Beams are available in the following standard sizes

- 45mm (D) x 60mm (H) x 2400mm (L)
- 45mm (D) x 75mm (H) x 2400mm (L)
- 45mm (D) x 90mm (H) x 2400mm (L)
- 45mm (D) x 125mm (H) x 2400mm (L)
- 45mm (D) x 175mm (H) x 2400mm (L)
- 45mm (D) x 275mm (H) x 2400mm (L)
- 45mm (D) x 575mm (H) x 2400mm (L)



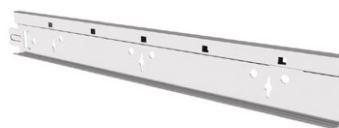
Top Fix Channel7

25 x 45 x 25mm for direct fixing



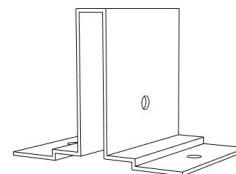
Suspension System - Rondo DONN DX® Exposed Grid

- DX1 Main Tee
- DX2/DX3 1200mm Cross Tee
- DX4 600mm Cross Tee



Baffle Saddle Bracket

Attaching Baffle to Rondo Donn DX® exposed grid



Joining Biscuit

For joining Baffle to Baffle for longer continuous lengths



Screws - 6g x 12mm self drilling wafer head

- fixing Saddle to Donn Grid

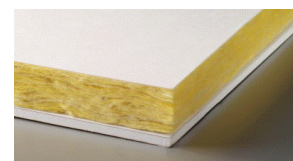
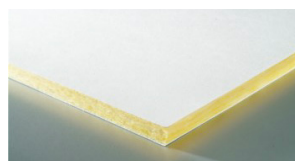
Screws - 8g x 45mm wafer head

- fixing Saddle to Baffle Beam
- fixing furring channel to Baffle Beam



Optional Acoustical Tiles

By using Rondo Donn DX® exposed grid system as a suspended sub-frame, a range of Asona Triton acoustical panels can be laid into the grid to provide additional acoustical absorption (Triton 5, 25), for external noise reduction (Triton Duo 60), or to hide building elements above the Baffle Beams.



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4.0 Installation

4.1 Direct Fix Method

The simplest option, Triton Baffle Beams can be direct fixed to the ceiling substrate, timber battens, portal beams, purlins, or exposed flooring, using a Top Fix Channel. Once the channel is installed, the acoustic baffle is simply pushed into the channel as a friction fit combined with construction adhesive. The channel can be either powder coated, or tissue wrapped to match the baffle.

Direct Fixed Installation of Asona Triton Baffle Beam Panels to Existing Building Framework or Substrate

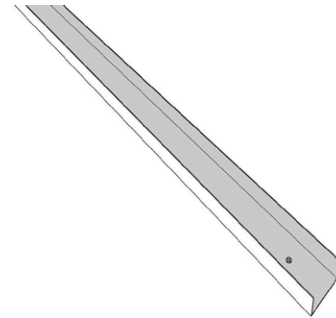
Installation shall not commence until the building is watertight and dry.

Installation Overview:

The ceiling surface must be dry and free from dirt, dust, grease, loose paint, or any foreign matter that would interfere with installation. If the ceiling or structure surfaces are not reasonably flat then beam alignment will be compromised.

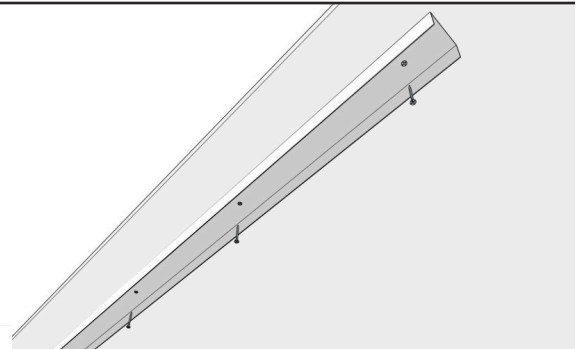
Step 1

- Measure lines on ceiling keeping lines plumb and square to create beam locations.
- Drill holes into the Baffle Beam top fix channel for standard wafer head screws at nominal 600 mm apart



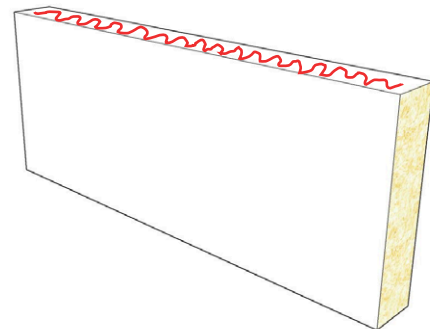
Step 2

- Screw the baffle channel into place using self tapping flat head screws suitable for substrate.
- Take care to make sure the channel is level. Pack as required if there are any dips so the channel remains flat.
- Ensure screw head is flush with channel.



Step 2

- On the top of the baffle, run a 6mm bead of construction mastic glue along the length.
- (Installers of Asona products have successfully used the following construction mastics: Quilosa, Bostick Extreme. This is not a product endorsement).



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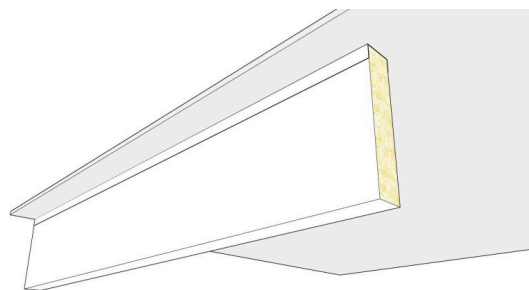
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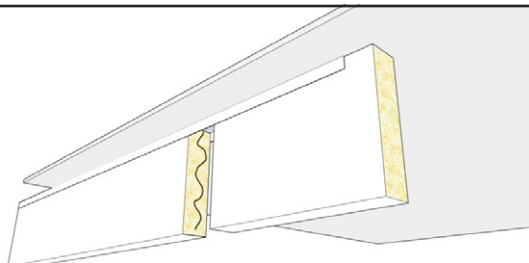
Step 4

- Wearing white gloves, place beam into position with top raw edge facing up
- Press beam carefully and evenly into channel creating contact with the mastic glue until beam fills the channel completely (no gap between beam and channel).



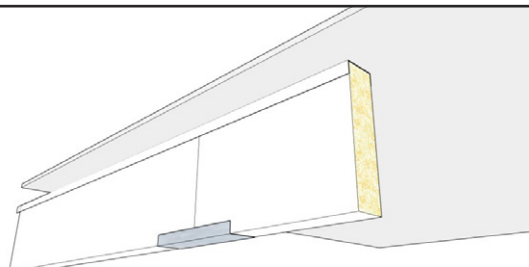
Step 5

- If baffles are to be butt jointed, apply a 5 mm line of low viscosity adhesive on one baffle end.
- Use the channel to slide the baffles together until tight contact is made.
- Make sure there is no excess glue that is squeezed out onto the baffle facing.



Step 6

- When butt joining baffles, it is recommended to place a 200mm temporary c-channel connector across the base join to allow adhesive to cure and ensure baffles are in line.



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4.0 Installation

4.2 Suspended with exposed grid method

For suspended installations, Triton Baffle Beams can be fixed to Rondo Donn DX[®] exposed grid for new installations. They can also be retro fitted to existing 24mm grid systems.

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Direct Fixed Installation of Asona Triton Baffle Beam Panels to Existing Building Framework or Substrate

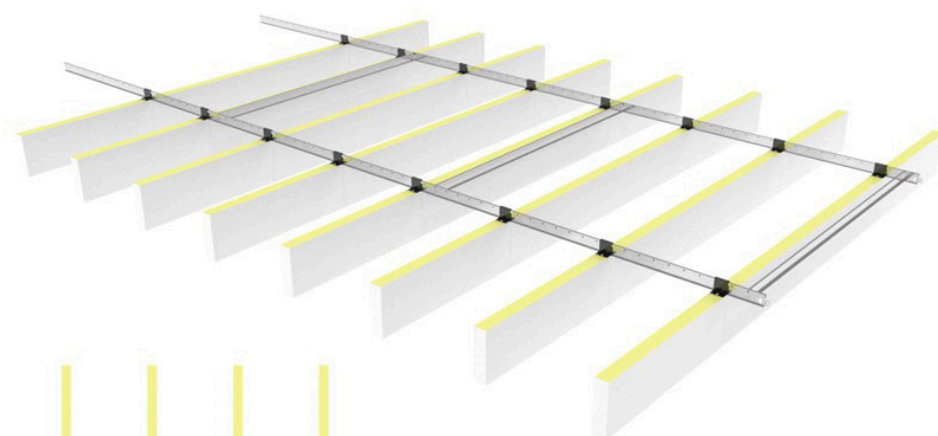
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Installation Overview:

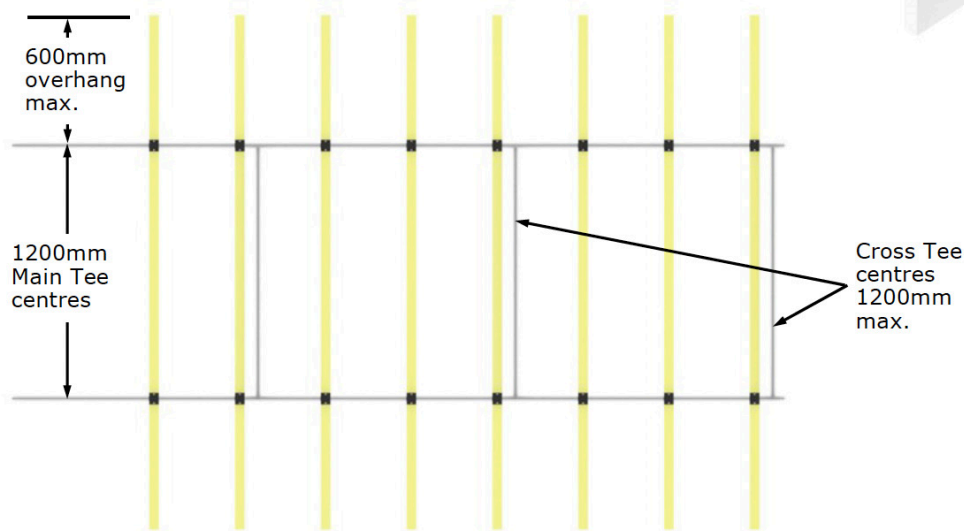
Install Rondo Donn DX[®] 24mm exposed grid to accommodate the Baffle Beam layout per specification drawings. The face of the grid should be specified FCL height plus the depth of the beam e.g. FCL 2700mm plus a 275mm deep beam = 2975mm to the grid face.

Overview:

Standard grid layout with 400mm gap example between Baffle Beams.



PLAN



ELEVATION



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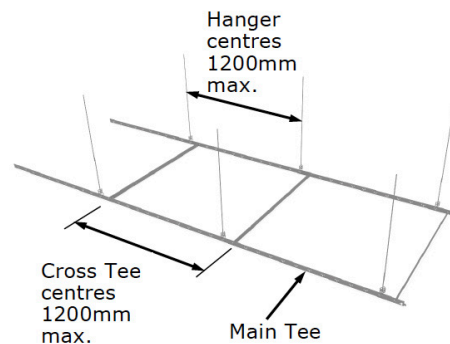
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Install Rondo Donn DX 24mm exposed grid to accommodate the Baffle Beam layout per specification drawings. The face of the grid should be specified FCL height plus the depth of the beam e.g. FCL 2700mm plus a 275mm deep beam = 2975mm to the grid face.

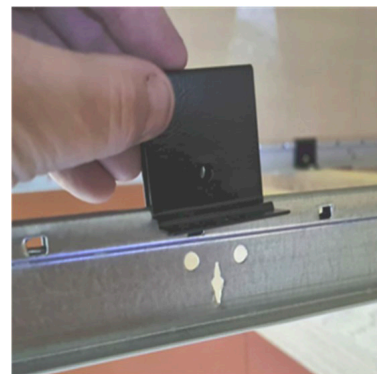
Step 1

- Suspension assembly— Suspend Rondo Donn DX[®] Main Tees at 1200mm centres apart using 1200mm Cross tees. Cross Tees shall be 1200mm centres maximum. Suspension hangers shall be 1200mm centres maximum.

Note: Where a Triton Baffle Beam system is suspended as a “floating” ceiling ie not fixed to any walls, seismic bracing will be required. This may be via proprietary seismic design calculators or may required SED by a suitably qualified Chartered Engineer familiar with the seismic designs of suspended ceilings.



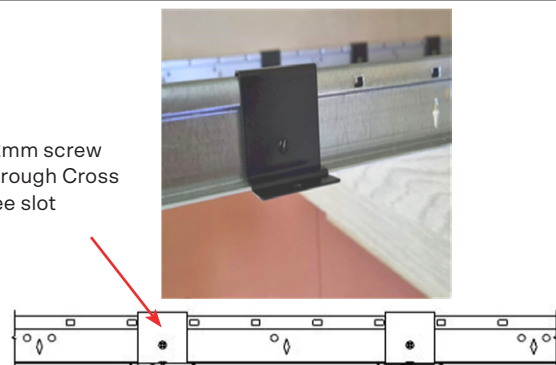
Note: Maximum brackets centres between Main Tees to be 1200mm. Maximum Baffle Beam cantilever to be no greater than 600mm from the Bracket.



Step 3

- Align the BSB with the Cross Tee location slots and install 1x 6g x 12mm Tek screw to secure the BSB to the Main Tee.

12mm screw through Cross Tee slot



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For suspended installations, Triton Baffle Beams can be fixed to Rondo Donn DX[®] exposed grid for new installations. They can also be retro fitted to existing 24mm grid systems.

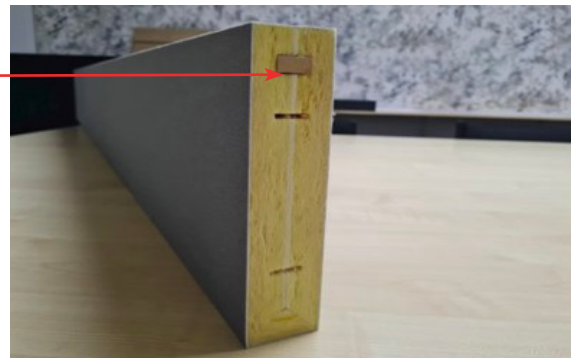
Installation shall not commence until the building is watertight and dry.

Installation Overview:

Install Rondo Donn DX 24mm exposed grid to accommodate the Baffle Beam layout per specification drawings. The face of the grid should be specified FCL height plus the depth of the beam e.g. FCL 2700mm plus a 275mm deep beam = 2975mm to the grid face.

Baffle Beam Attachment

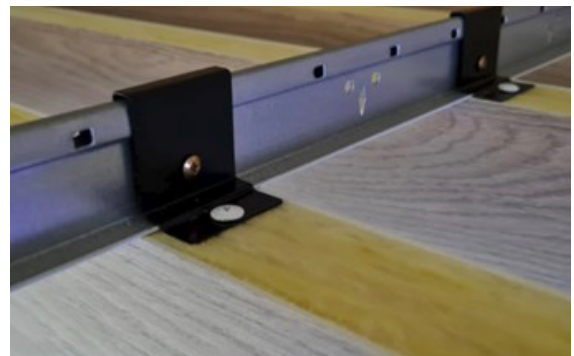
- An internal fixing strip is located centrally within a machined slot inside each Baffle Beam. The 20mm wide internal fixing strip runs the full length of the Baffle Beam to provide a solid fixing point for the installation of fasteners.



Step 4

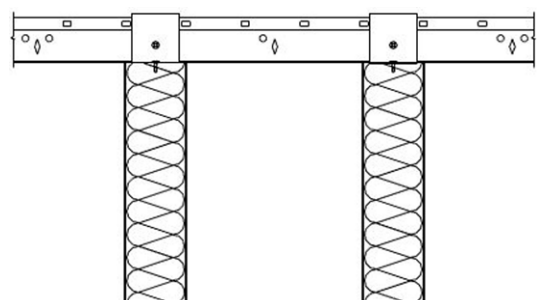
- Wearing white gloves to prevent marking of the beam, position the 2400mm long beam up to the underside of the suspended ceiling grid and centralise to the brackets. This will require 2 x persons.
- Install 2x 8gx 45mm Water Head Screws through the bracket and into the Baffle Beam.
- and into the Baffle Beam.

Note: It is critical not to over drive the screws as this will result in damaging the edge of the Baffle Beam.



Step 5

- Continue installing other Baffle Beams to drawing layout centres.



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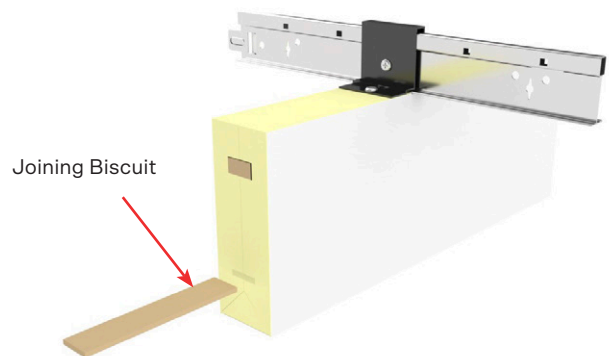
Installation shall not commence until the building is watertight and dry.

Installation Overview:

Install Rondo Donn DX 24mm exposed grid to accommodate the Baffle Beam layout per specification drawings. The face of the grid should be specified FCL height plus the depth of the beam e.g. FCL 2700mm plus a 275mm deep beam = 2975mm to the grid face.

Step 6 Continuous Baffle Joining

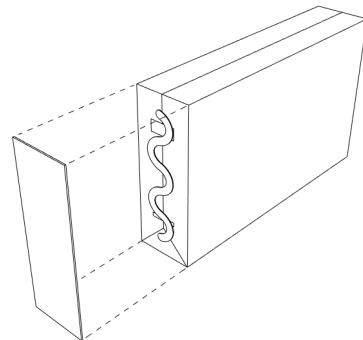
- To join Baffle Beams in a continuous line, insert 2 (or single for short Baffles) of the joining Biscuits halfway into the pre-formed slots in the Baffle.
- Apply a small amount of construction adhesive to each cut face, ensuring the adhesive will not be pressed out of the join and onto the face of the Baffle Beam once pressed together.



Capping Ends

Asona Triton Baffle Beams can be supplied with factory fitted end caps for individual baffles if they are not being joined continuously. For continuous Baffle runs, end caps to match the Baffle depth will need to be ordered to site apply to the first and last Baffle ends.

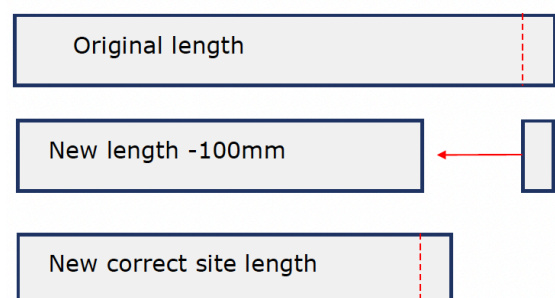
- Apply low viscosity construction adhesive, or contact adhesive to the cut end of the Baffle Beam
- Align the end cap with the Baffle and press together, ensuring the adhesive will not be pressed out of the join and onto the face of the Baffle Beam once pressed together.



Site Trimming Baffle Beams

If Baffles need to be shortened on site, use a guided circular saw to provide a clean and straight cut end. To finish the cut end off aesthetically if exposed, there are two options..

- Apply an end cap as in the method detailed above.
- Alternatively, cut 100mm off the end to be shortened, then cut the main part of the Baffle Beam to the new length minus 100mm. Rejoin the 100mm end to the new length as above Step 6 for continuous beams.



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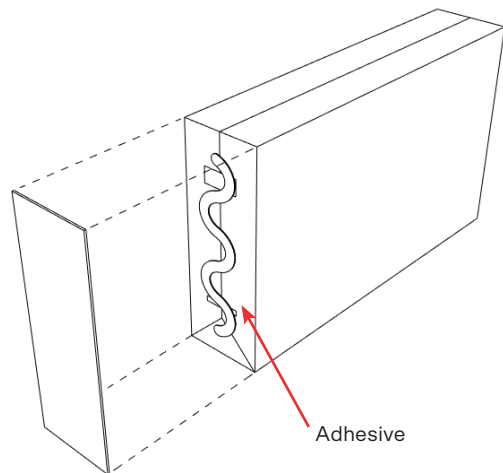
5.0 Baffle Beam Removal for Service Access

5.1 Suspended ceiling grid method

When installing Baffle Beams to areas that require future access to services it is important **not** to permanently join the ends of each baffle beam. Prepare the service area Baffle Beams as below.

Service Access Area Baffles

- Use the Baffle Beam end caps to form a finished end of each Baffle Beam if not already supplied.
- Apply low viscosity construction adhesive, or contact adhesive to the end of the Baffle Beam.
- Align the end cap with the Baffle and press together, ensuring the adhesive will not be pressed out of the join and onto the face of the Baffle Beam once pressed together.
- Install the Baffle Beams with a **touch fit butt join**– do not glue.



Service Access Area Baffles

- Wear white gloves to prevent marking of the beam. This will require 2 x persons to support the Baffle Beam while uninstalling.
- Remove the 2 x 8g x 45mm wafer head screws from the BSB Baffle Beam connection.
- Continue to remove sufficient Baffles to allow required access. Should a suspension Rondo Donn Cross Tee obstruct access, this will require removal by rotating the Main Tee away from the Cross Tee connection. Repeat for the other end taking care to not allow the Cross Tee to fall.

