

ESTIMATOR, BUILDER AND TRADE CONTRACTOR

Lightweight Cladding Checklist

Considerations for estimating, procuring and installing lightweight cladding where NCC 2025 Vol 2 provisions apply

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Version 2 — August 2026

How to use	The following checklist provides a list of considerations that an estimator/ procurement manager and/or a builder/trade contractor needs to take into consideration when estimating and procuring materials and labour as well as installation for lightweight cladding on residential buildings in Australia. Some considerations relate to 'best practice' and are in excess of the requirements of the NCC. Separate checklists are available for Architect and Building Designer to suit each Climate Zone.
Contents	PURCHASING AND CONSTRUCTION CONSIDERATIONS
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PURCHASING AND CONSTRUCTION CONSIDERATIONS

✓	CONSIDERATION	COMMENTS AND GUIDANCE	NOTES
☐	Has the building membrane, thermal break or cavity batten been specified on the plans?	If not, refer to the checklist for Architects and Building Designers for the relevant Climate Zone where the building is being built.	
☐	Are you purchasing the correct reflective foil building membrane if it has been specified correctly?	Check the plans and specification for the vapour barrier to be used for the Climate Zone location. NCC has requirements for different vapour barriers in different climate zones. Reflective foil barriers can only be used in some situations in Climate Zone 1 or 3 and a 20mm air gap is required in front of the reflective foil. This is generally referred to as a Class 1 membrane.	
☐	Are you purchasing the correct vapour permeable building membrane?	Check the plans and specification for the vapour membrane to be used for the Climate Zone location. NCC has requirements for different vapour barriers in different climate zones. Ensure the correct vapour permeable membrane is being used over the stud frame. Ensure the vapour permeable membrane is installed over the studs and under the thermal break/cavity batten. Ensure the vapour membrane is fixed at the appropriate centres and the joints, penetrations are sealed with heat and moisture resistant tape. These are generally referred to as Class 3 and 4 membranes.	
☐	Do you know if a water control layer has been specified?	Building membranes can be used as 'water control barriers' or 'sarking'. In these situations, the membrane can be overlapped by 150mm and only taped at vertical joints. Be wary of 'perforated' membranes as these cannot be used as a 'water control' layer.	
☐	Are you purchasing the correct control layer in the wall?	Control layers can be used for different functions. See the previous comments above. The correct control layer should be specified so the correct function is performed in the building structure. Not only check the manufacturer's specifications but AS 4200.2.	
☐	Is the control layer being installed as required by AS4200.2?	Where a control layer is performing the function of an air control, thermal control or vapour control, the membrane has to be taped at all joints, and edges plus sealed around all penetrations. Gaps allow air combined with water vapour to escape or penetrate and concentrate moisture within a wall assembly. The membrane also needs to be pulled taut to prevent any 'lag' into the minimum cavity spaces.	
☐	If you are using timber battens as a thermal break, are you purchasing the correct timber and fixings?	Check if the battens are to run vertical or horizontal. If horizontal, the NCC has sizing and fixing provisions in CI 7.5.3 and 7.5.4. Also check on any manufacturer requirements for drainage and ventilation when using horizontal battens. If vertical battens are used as a thermal break, do the fixings for the cladding penetrate through the batten into the stud frame for the required distance? If no, then no additional requirements. If the fixings for the cladding are only into the vertical timber batten then the batten becomes a structural batten and will require certification by an engineer, use of Industry standard "Design and Installation of Timber Cladding D01" as part of a performance solution or strict compliance with a CodeMark certificate. Check that the timber is H3 treated and allowance is made to treating the 'cut ends' as well. The ATI website has a flowchart on how to specify timber for thermal breaks under 'Resources'. www.australianthermal.com.au	

PURCHASING AND CONSTRUCTION CONSIDERATIONS (continued)

✓	CONSIDERATION	COMMENTS AND GUIDANCE	NOTES
☐	If you are using timber battens as cavity battens only, are you purchasing the correct timber and fixings?	Check if the battens are to run vertical or horizontal. If horizontal, the NCC has sizing and fixing provisions in CI 7.5.3 and 7.5.4 or strict compliance with a CodeMark certificate. Also check on any manufacturer requirements for drainage and ventilation when using horizontal battens. Do the fixings for the cladding penetrate through the batten into the stud frame for the required distance? If no, then no additional requirements. If the fixings for the cladding are only into the vertical timber batten then the batten becomes a structural batten and will require certification by an engineer, use of Industry standard "Design and Installation of Timber Cladding D01" as part of a performance solution or strict compliance with a CodeMark certificate. Check that the timber is H3 treated and allowance is made to treating the 'cut ends' as well. The ATI website has a flowchart on how to specify timber for thermal breaks under 'Resources'. www.australianthermal.com.au	
☐	Do you use pre-formed metal flashings at the base of the lightweight cladding over brickwork or AAC panels?	Check the width of any flashings used between the cladding and brickwork or AAC. The pre-formed flashings will need to be fixed back to the frame and allow for drainage of the moisture from the cavity behind the cladding. Allowance should also be made for any settlement of the timber frame. There will also need to be allowance to vent the top of the cavity to the floor below.	
☐	Is sheet cladding used on the building?	If sheet cladding is to be used, check to see if horizontal battens can be used. If only vertical battens are used, check that the studs are set out correctly to suit the sheet sizing. If horizontal battens are used or horizontal noggings are specified, check with the cladding manufacturer to see if a 'castellated' batten has to be used for drainage and ventilation. Check with NCC 2025 Part 10.8 and the cladding manufacturer about the required drainage and ventilation details at both bottom and top of wall and also at the interim horizontal battens, if used. Check that the thermal break/cavity batten is suitable to be fixed/fitted over the vertical studs and if the fixings are to go through the batten into the studs. Check that the timber for any thermal breaks or cavity battens is H3 treated and allowance is made to treating the 'cut ends' as well. Check that the cavity closer and top vent closer is suitable for the type of cladding.	
☐	Is plank style cladding used on the building?	Check with NCC 2025 Part 10.8 and the cladding manufacturer about the required drainage and ventilation details at both bottom and top of wall. Check that the thermal break/cavity batten is suitable to be fixed/fitted over the vertical studs and if the fixings are to go through the batten into the studs. Check that the timber for any thermal breaks or cavity battens is H3 treated and allowance is made to treating the 'cut ends' as well. Check that the cavity closer and top vent closer is suitable for the type of cladding	
☐	Are the window reveal sizes suitable for the thickness of the thermal break or cavity batten?	Check that the window reveals ordered and provided with the windows and doors will be suitable for the depth of the wall construction detailing required by the builder. Are horizontal 'castellated' battens to be used over the horizontal timber battens? Take the appropriate action if not suitable.	

PURCHASING AND CONSTRUCTION CONSIDERATIONS (continued)

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☐	What to consider with minimum cavity widths	Building with minimum cavity widths mean zero tolerance during construction. Membranes must be installed taut, insulation must remain within the wall frame thickness with no bulging outwards, thermal breaks must not compress below the minimum widths. ATI Cavi-Break® and Cavi-Vent® Strips at 12mm provide minimum compliance however the 20mm and 35mm provide better tolerances during construction as well as providing much higher performance. The high compressive strength also means no compression behind the cladding.	
☐	How is wastage considered with Cavi-Break® and Cavi-Vent® Strips?	Very little waste is generated with the strips as any off-cuts can be used at the end of other strips.	
☐	How many Cavi-Break® and Cavi-Vent® Strips should be used on a project?	Cavi-Vent® is designed to be installed along the horizontal of the bottom and top plate and the noggings while Cavi-Break® is installed on the vertical studs plus any K braces. ATI has a calculator on the website to assist with quantities. There are 125 strips for the X12, 70 strips for the 20mm and 40 strips for the X35 in each box at 1200mm long.	
☐	What is the usual cost for installing the Cavi-Break® and Cavi-Vent® Strips?	ATI's enquiries with builders indicates a labour cost of \$2/m2 would be sufficient to cover the cost of installing the Cavi-Break® and Cavi-Vent® Strips however, some installers/carpenters are not charging to install the ATI strips as they understand how fast the whole process has been sped up by using the ATI strips. The speed of installation is one of the major benefits of using Cavi-Break® and Cavi-Vent® Strips. 140 Cavi-Break® Strips will provide enough material for 70 studs 2400 long. To carry the amount of timber needed for 70 studs, around 7 trips would be required from the timber storage to the work location. Cavi-Vent® strips will be needed for at least 3 times the length of wall being clad to cover the plates and noggings.	
☐	How are the Cavi-Break® and Cavi-Vent® Strips cut onsite?	Use a 'Stanley' knife type cutting blade and cut from the adhesive side first. If you cut from the 'other' side and try to snap the strip, the adhesive backing will prevent you from separating the pieces.	
☐	What WHS considerations are required when using Cavi-Break Strips?	Care must be taken when using the 'Stanley' knife blades when cutting the strips. When fixing the cladding over the strips, use the required eye and ear protection for the power tools and nail guns you are using. The full boxes of Cavi-Break strips weigh approx. 5.6kg so you should be able to carry 2 boxes comfortably to the work area.	
☐	How should the Cavi-Break® and Cavi-Vent® Strips be stored onsite?	The boxes should be stored under cover in a dry, shaded area away from locations where the sun can shine on the outside of the boxes for long periods of time. This is just to protect the adhesive backing from prolonged exposure to heat. The Cavi-Break® and Cavi-Vent® boxes fit neatly on standard pallets so on larger projects, the pallets can be delivered directly to the storage location.	
☐	How is the packaging and left over strips disposed of?	The packaging is recyclable cardboard that can be flattened for disposal into recycling containers. Any leftover strips are easily used on the next project and can be stored in a leftover carton for ease of transport. If there is a recycle scheme for extruded polystyrene in your area, the left over strips can be disposed of there.	
☐	How are the Cavi-Break® and Cavi-Vent® Strips ordered and supplied?	Check on the ATI website for available distributors nationally. www.australianthermal.com.au	
☐	What happens if I 'stick' an off cut to other surfaces?	DO NOT stick any off-cuts to other surfaces as the adhesive strength of the strips will cause damage to the other surface and be extremely difficult to remove. ATI does not recommend you stick the strips to any place except the final location on the building	

PURCHASING AND CONSTRUCTION CONSIDERATIONS (continued)			
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☐	What installations instructions are available for trade contractors?	Each strip has a QR code on the strip so you can access the installation instructions which is a short video	
☐	What is the warranty on the Cavi-Break® and Cavi-Vent® Strips?	Cavi-Break® and Cavi-Vent® Strips have a 10 year manufacturer's warranty. A copy of the warranty is available on the ATI website. www.australianthermal.com.au	
☐	What is the durability of the Cavi-Break® and Cavi-Vent® Strips?	Cavi-Break® and Cavi-Vent® Strips are made from extruded polystyrene (XPS) and have a fire retardant added to the mix at manufacture. The material is waterproof, termite proof, mould resistant and has a min 300 kPa compressive strength for the blue 20mm strips and a min 450 kPa for the yellow X10, X12 and pink X35.	
☐	Is there a MSDS available for the product?	Yes an MSDS is available on the ATI website. www.australianthermal.com.au	
☐	Are there installation diagrams for various construction details?	The ATI website has a number of installation diagrams available under 'Resources' for download or viewing. www.australianthermal.com.au	
☐	Are there videos of a project using the Cavi-Break® and Cavi-Vent® Strips?	The ATI website has Case Studies of different projects showing the use and installation of the strips. www.australianthermal.com.au	