



Condensation Management Changes to NCC2019 Volume 1 & Volume 2

MAKE SURE YOU'RE COMPLIANT



WHAT IS THE CHANGE?

On the 1st of May 2019, the National Construction Code will introduce a new section titled 'Condensation Management' which includes an important change to the selection of wall wrap.

The change will effect all Building Permits approved after the 1st of May 2019. All Building Permits approved using NCC2016 will not be affected by this change, and may use the wall wrap included in the original specification.

The NCC changes to Volume 1 Part F6.2 and Volume 2 Part 3.8.7.2 will state that if a wall wrap is installed onto an external wall frame in BCA Climate Zone 6, 7 & 8, it is required to be vapour permeable. This change is mandatory for brick veneer and lightweight clad construction.

Pliable building membrane

- (a) Where a *pliable building membrane* is installed in an *external wall*, it must—
- comply with AS/NZS 4200.1; and
 - be installed in accordance with AS 4200.2; and
 - be a vapour permeable membrane for *climate zones* 6, 7 and 8; and
 - be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building.
- (b) Except for single skin masonry and single skin concrete, where a *pliable building membrane* is not installed in an *external wall*, the primary *water control layer* must be separated from *water sensitive materials* by a drained cavity.



National Construction Code

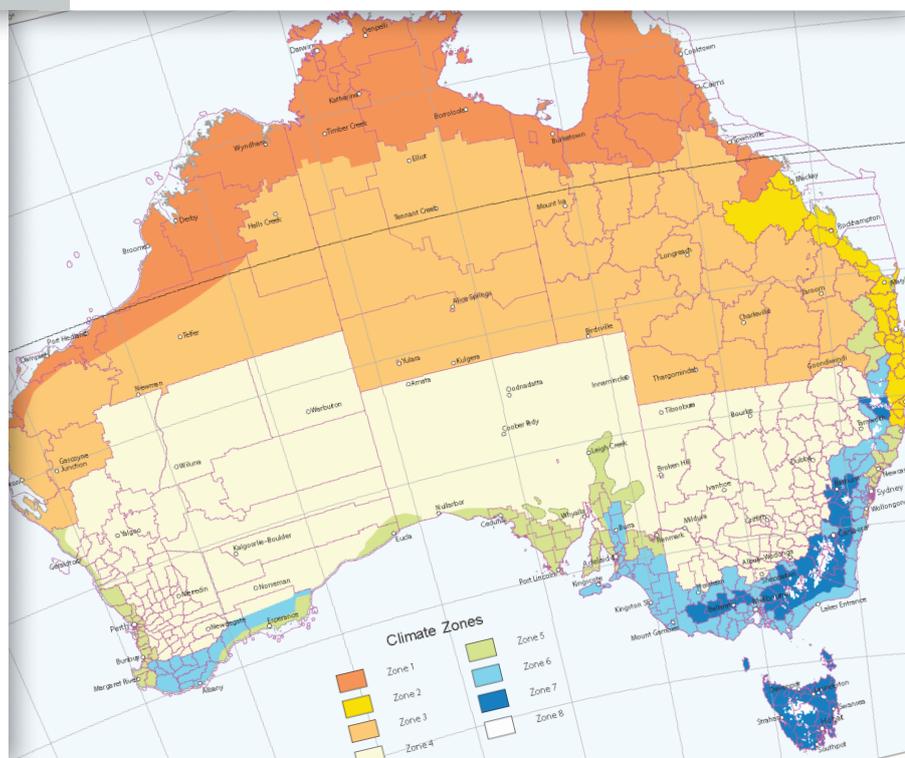
WHY HAS THE NCC MADE THIS CHANGE?

Better insulated and sealed homes perform well in cold climates but they need to release the water vapour accumulated inside as a result of everyday activities like heating, cooking & washing. Vapour permeable wraps allow the release of water vapour from inside the home while preventing the entry of external water and air.

WHAT DOES IT MEAN FOR YOU AND YOUR STATE?

A detailed summary of the affected municipalities are shown by BCA Climate Zone on the following pages.

In summary, any Building Permit for Class 1, 2 and 4 buildings approved after the 1st of May 2019 that includes a pliable building membrane on the external wall frame, must be vapour permeable if it is constructed in climate zones 6/7/8.



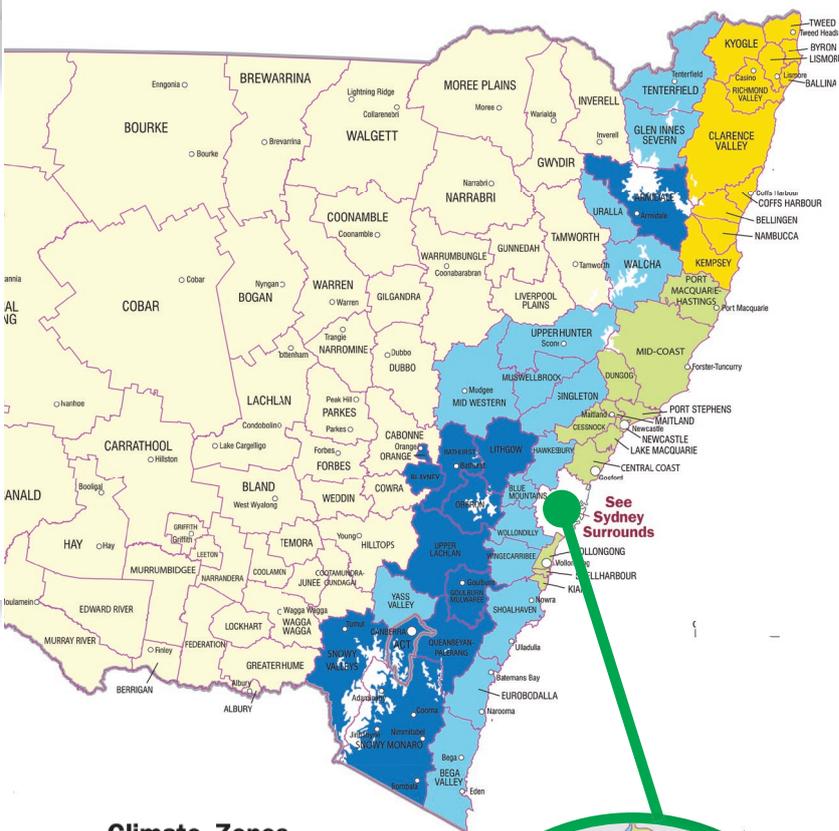
New South Wales & ACT

WHEN WALL WRAP IS INSTALLED BEHIND BRICK VENEER OR LIGHTWEIGHT CLAD, IN ACCORDANCE WITH NCC2019, IT WILL BE REQUIRED TO BE VAPOUR PERMEABLE IN BCA CLIMATE ZONES 6, 7 & 8.

CHANGES TO NSW & ACT

New South Wales will be partially affected by the NCC 2019 changes as a number of suburbs fall under the BCA climates 6, 7 and 8. All of the listed regions are classified as 'Mild to Cool Temperate' and there is a higher risk of condensation when building in these areas.

NEW SOUTH WALES



Climate Zones



LIST OF EFFECTED REGIONS

The following lists include every municipality within New South Wales that is categorised within BCA Climate Zone 6, 7 or 8.

If a wall wrap is specified in any Building Permit after the 1st of May 2019, it will be mandatory to use vapour permeable behind both Brick Veneer and Lightweight Clad in the climate zones listed below.

NEW SOUTH WALES (EXCLUDING SYDNEY URBAN AND SURROUNDS)	CLIMATE ZONE
Armidale	7 to 8
Bathurst	7
Bega Valley	6
Blayney	7
Blue Mountains	6
Eurobodalla	6
Glen Innes Severn	6 / 8
Goulburn Mulwaree	7
Hawkesbury	6
Lithgow	7
Mid Western	6
Muswellbrook	6
Oberon	7 to 8
Queanbeyan-Palerang	7
Shoalhaven	6
Singleton	6
Snowy Monaro	7 to 8
Snowy Valleys	7 to 8
Tenterfield	6
Upper Hunter	6
Upper Lachlan	7
Uralla	6
Walcha	6 / 8

LOCAL GOVERNMENT AREA	CLIMATE ZONE
Australian Capital Territory	7 to 8

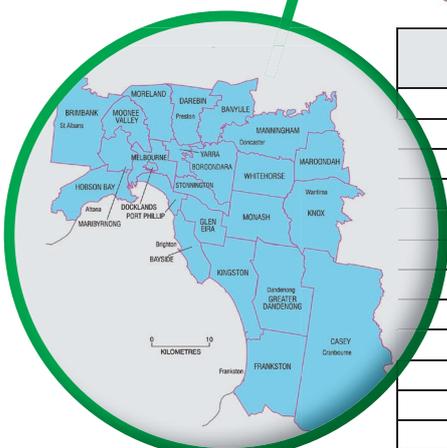
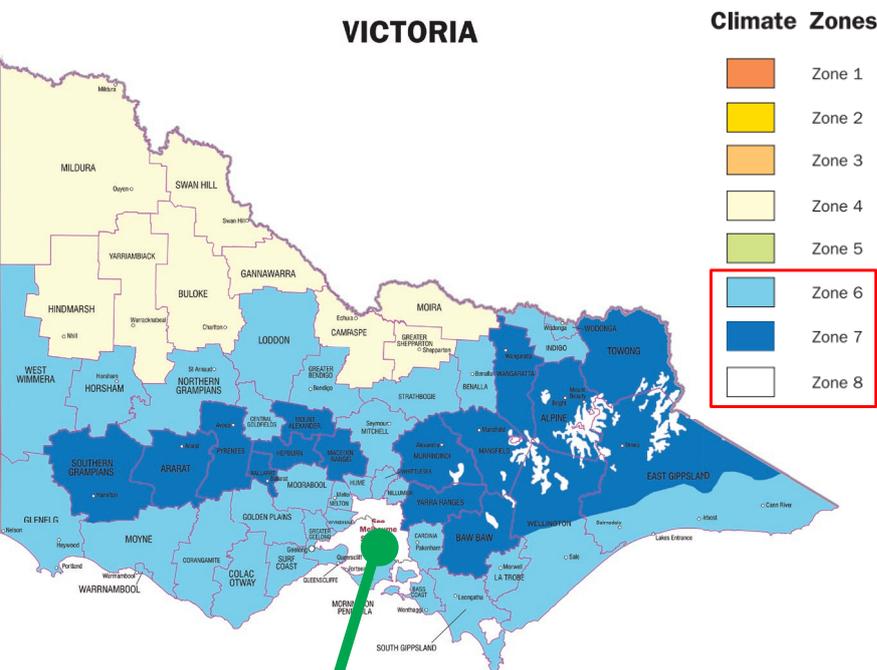
SYDNEY SURROUNDS	CLIMATE ZONE
Blacktown	6
Camden	6
Campbelltown	6
Cumberland	6
Fairfield	6
Liverpool	6
Parramatta	6
Penrith	6
The Hills	6

Victoria

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CHANGES TO VIC

Victoria will be significantly affected by the NCC 2019 changes, as the majority of suburbs fall under the BCA climates 6, 7 and 8. All of the listed regions are classified as 'Mild to Cool Temperate or Alpine' and there is a much higher risk of condensation when building in these areas.



MELBOURNE SURROUNDS	CLIMATE ZONE
Banyule	6
Bayside	6
Boroondara	6
Brimbank	6
Casey	6
Darebin	6
Docklands	6
Frankston	6
Glen Eira	6
Greater Dandenong	6
Hobson Bay	6
Kingston	6
Knox	6
Manningham	6
Maribyrnong	6
Maroondah	6
Melbourne Surrounds	6
Monash	6
Moonee Valley	6
Moreland	6
Port Philip	6
Stonnington	6
Whitehorse	6
Yarra	6

LIST OF EFFECTED REGIONS

The following lists include every municipality within Victoria that is categorised within BCA Climate Zone 6, 7 or 8.

If a wall wrap is specified in any Building Permit after the 1st of May 2019, it will be mandatory to use vapour permeable behind both Brick Veneer and Lightweight Clad in the climate zones listed below.

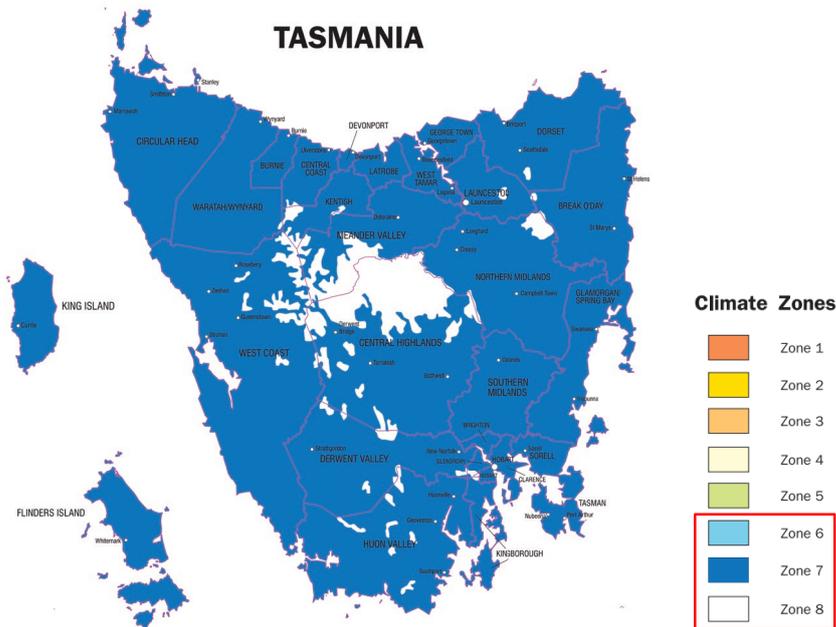
REGIONAL MELBOURNE	CLIMATE ZONE
Alpine	7 to 8
Ararat	7
Ballarat	7
Bass Coast	6
Baw Baw	7 to 8
Benalla	6
Cardinia	6
Central Goldfields	6
Colac Otway	6
Corangamite	6
East Gippsland	6 to 8
Glenelg	6
Golden Plains	6
Greater Bendigo	6
Greater Geelong	6
Hepburn	7
Horsham	6
Hume	6
Indigo	6
La Trobe	6
Loddon	6
Macedon Ranges	7
Mansfield	7 to 8
Melton	6
Mitchell	6
Moorabool	6
Mornington Peninsula	6
Mount Alexander	7
Moyne	6
Murrindindi	7 to 8
Nillumbik	6
Northern Grampians	6
Pyrenees	7
South Gippsland	6
Southern Grampians	7
Strathbogie	6
Surf Coast	6
Towong	7 to 8
Wangaratta	7
Wellington	6 to 8
West Wimmera	6
Whittlesea	6
Wodonga	6
Wyndham	6
Yarra Ranges	7

Tasmania

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CHANGES TO TAS

Tasmania will be greatly affected by the NCC 2019 changes as all of the suburbs fall under the BCA climates 7 and 8. All of the listed regions are classified as 'Cool Temperate to Alpine' and there is a much higher risk of condensation when building in these areas.



LIST OF EFFECTED REGIONS

The following lists include every municipality within Tasmania that is categorised within BCA Climate Zone 6, 7 or 8.

If a wall wrap is specified in any Building Permit after the 1st of May 2019, it will be mandatory to use vapour permeable behind both Brick Veneer and Lightweight Clad in the climate zones listed below.

TASMANIA	CLIMATE ZONE
Break O'Day	7
Burnie	7
Central Coast	7 to 8
Central Highlands	7 to 8
Circular Head	7
Clarence	7
Derwent Valley	7 to 8
Dorset	7 to 8
Flinders Island	7
George Town	7
Glamorgan/Spring Bay	7
Glenorchy	7 to 8
Hobart	7
Huon Valley	7 to 8
Kentish	7 to 8
King Island	7
Kingsborough	7
La Trobe	7
Launceston	7 to 8
Meander Valley	7 to 8
Northern Midlands	7 to 8
Sorell	7
Southern Midlands	7
Tasman	7
Waratah/Wynyard	7 to 8
West Coast	7 to 8
West Tamar	7



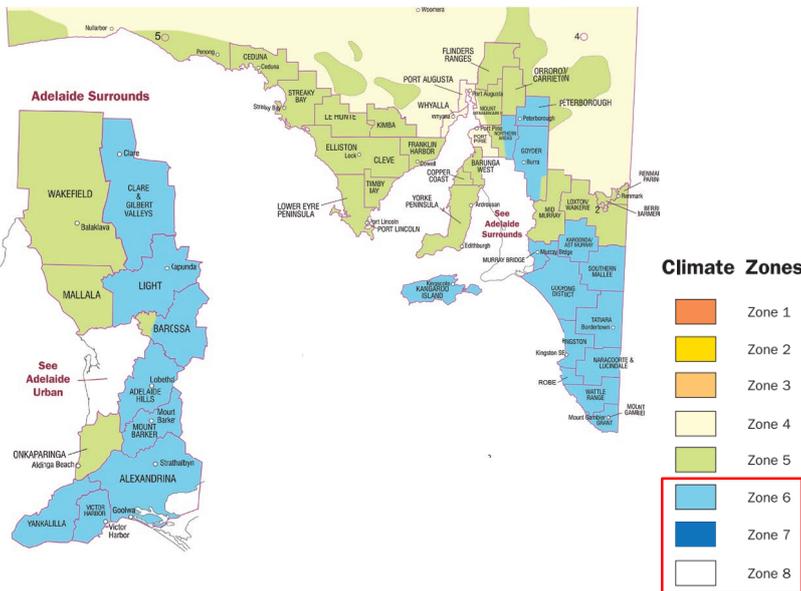
South Australia & Western Australia

WHEN WALL WRAP IS INSTALLED BEHIND BRICK VENEER OR LIGHTWEIGHT CLAD, IN ACCORDANCE WITH NCC2019, IT WILL BE REQUIRED TO BE VAPOUR PERMEABLE IN BCA CLIMATE ZONES 6, 7 & 8.

CHANGES TO SA

South Australia will be partially affected by the NCC 2019 changes as a number of suburbs fall under the BCA climate 6. All of the listed regions are classified as 'Mild Temperate' and there is a higher risk of condensation when building in these areas.

SOUTH AUSTRALIA



CHANGES TO WA

Western Australia will be partially affected by the NCC 2019 changes as a number of suburbs fall under the BCA climate 6. All of the listed regions are classified as 'Mild Temperate' and there is a higher risk of condensation when building in these areas.

WESTERN AUSTRALIA



LIST OF EFFECTED REGIONS

The following lists include every municipality within SA and WA that is categorised within BCA Climate Zone 6, 7 or 8.

If a wall wrap is specified in any Building Permit after the 1st of May 2019, it will be mandatory to use vapour permeable behind both Brick Veneer and Lightweight Clad in the climate zones listed below.

SOUTH AUSTRALIA	CLIMATE ZONE
Coorong District	6
Goyder	5 to 6
Grant	6
Kangaroo Island	6
Karoonda / East Murray	6
Kingston	6
Mount Gambier	6
Murray bridge	6
Naracoorte & Lucindale	6
Northern Areas	5 to 6
Peterborough	6
Robe	6
Southern Mallee	6
Tatiara	6
Wattle Range	6

ADELAIDE SURROUNDS	CLIMATE ZONE
Adelaide Hills	6
Alexandrina	6
Barossa	5 to 6
Clare & Gilbert Valleys	6
Light	6
Mount Barker	6
Victor	6
Victor Harbor	6
Yankalilla	6

WESTERN AUSTRALIA	CLIMATE ZONE
Albany	6
Cranbrook	6
Denmark	6
Esperance	5 to 6
Gnowangerup	6
Jerramungup	5 to 6
Manjimup	6
Plantagenet	6
Ravensthorpe	5 to 6

PERTH SURROUNDS	CLIMATE ZONE
Boyup Brook	6
Bridgetown Greenbushes	6
Broomehill / Tambellup	6
Donnybrook-Balingup	6
Kojonup	6

THE RISK OF CONDENSATION IN OTHER CLIMATE ZONES

CONDENSATION RISK IN TROPICAL BCA CLIMATE ZONE 1

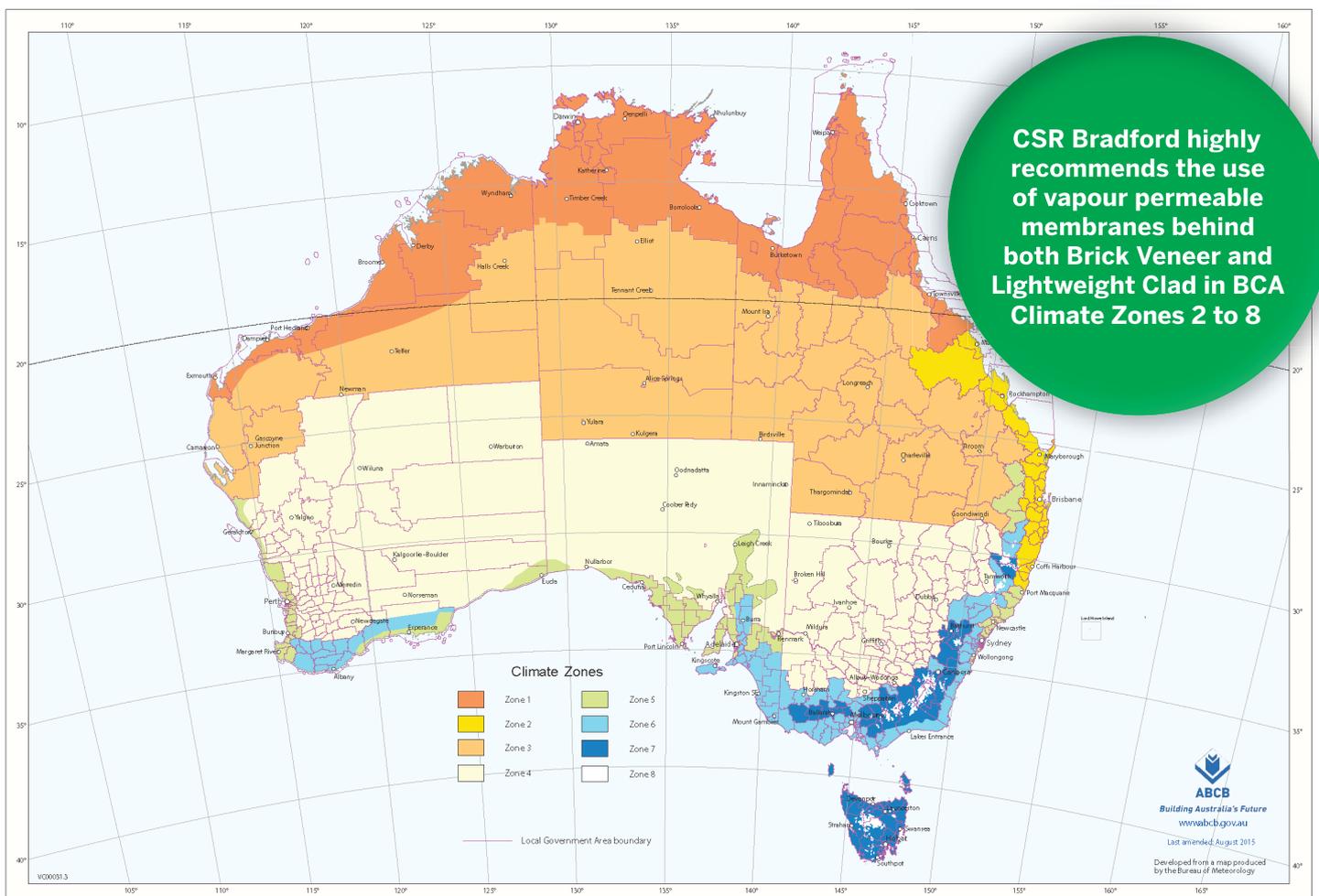
BCA Climate Zone 1 is considered a tropical region, and CSR Bradford highly recommends the use of vapour barrier membranes, instead of vapour permeable products. This is due to the higher moisture level experienced in tropical regions increasing the risk of interstitial condensation when the inside of the building is air conditioned. For more information on Bradford Thermoseal vapour barriers, please visit bradfordinsulation.com.au.

CONDENSATION RISK IN BCA CLIMATE ZONES 2 TO 5

The formation of condensation related mould growth in temperate Climate Zones is still a high risk if moisture is not managed correctly. If there is insufficient drying capacity within the wall system and vapour permeable membranes are not used, liquid water can form and may be absorbed into water sensitive materials resulting in rot or mould. The combination of vapour permeable membrane and wall cavity not only allows water vapour to escape the building envelope, but prevent condensation and wind driven rain coming into contact with water sensitive materials such as building frame or insulation.

CONDENSATION RISK UNDER ROOFS

Condensation is not only a damaging force inside walls, it can also be a serious issue under the roof assembly. The risk of condensation is caused when water vapour generated inside the home, from daily activities, rises up into the roof cavity and comes into contact with the underside of the cold roof assembly. At night when the roof cools, it can reach dew point and moist air can condense to liquid water on the underside of the tile or metal sheet. This water can drip back down onto the ceiling potentially damaging insulation, staining plasterboard, or even be absorbed by the timber frame leading to serious mould growth. This issue can develop regardless of climate zone and CSR Bradford highly recommend the use of a vapour permeable roof sarking under tiled roof construction.



Vapour Permeable Wall Wrap & Roof Sarking Solutions

Bradford™ Enviroseal™ ProctorWrap™ range of construction fabrics represent the latest in moisture control, air tightness and vapour permeable water tight membranes. These products are designed to reduce the risk of condensation forming on surfaces within the building envelope where it is undesirable. While allowing moisture (water vapour) to pass outward from the inside of the building, these sophisticated membranes prevent the entry of water and dust and air from the outside environment both during and after construction.

ENVIROSEAL RW VAPOUR PERMEABLE WALL WRAP

A Light* duty triple layered spunbond vapour permeable wall wrap ideal for minimising condensation risk. Bradford Enviroseal RW is suitable for use with brick, timber, steel, fibre cement (James Hardie™ sheeting products) and Hebel construction

PRODUCT NAME	WIDTH (MM)	LENGTH (M)	M2 PER ROLL	WEIGHT	PRODUCT CODE
Enviroseal RW	1500	30	45	4.6	167641
Enviroseal RW	1500	50	75	7.9	118153
Enviroseal RW-IT*	1500	50	75	7.9	165532
Enviroseal RW	2750	25	68.75	8.5	138628
Enviroseal RW	3000	25	75	9.5	155884

*RW-IT includes integrated tape release liners



ENVIROSEAL CW VAPOUR PERMEABLE WALL WRAP

Enviroseal ProctorWrap CW is a Light* Duty, triple layer spun bond vapour permeable wall wrap with a higher tensile strength and material gsm weight than RW making it suitable for use as a commercial grade wrap with brick, timber, steel, fibre cement (James Hardie™ sheeting products) and Hebel construction.

PRODUCT SPECIFICATIONS

PRODUCT NAME	WIDTH (MM)	LENGTH (M)	M2 PER ROLL	WEIGHT	PRODUCT CODE
Enviroseal CW	1500	50	75	10.3	114175
Enviroseal CW-IT	1500	50	75	11	134863

*CW-IT includes integrated tape release liners



ENVIROSEAL HTS VAPOUR PERMEABLE ROOF SARKING

A highly vapour permeable, medium duty roof sarking is ideal for use as either a high strength wall wrap or roof sarking. It is suitable for use under tiled, slate and metal roof applications. Enviroseal HTS is lightweight making it easy to install and reinforced with a high tensile scrim for improved durability.

PRODUCT SPECIFICATIONS

PRODUCT NAME	WIDTH (MM)	LENGTH (M)	M2 PER ROLL	WEIGHT	PRODUCT CODE
Enviroseal HTS	1500	30	45	8.2	185381



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bradfordinsulation.com.au

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