

Attention: Paddy Phillips

Chief Public Health Officer - SA Health

Dear Paddy,

Good day.

I tracked you down after seeing your comments on the ABC TV 7.30 last night. The entire segment was very well put together.

<https://www.abc.net.au/7.30/extreme-heat-felt-across-australia/10721126>

The comments by yourself and prof Boland were very well expressed.

Background

I am foil insulation manufacturer based in SE Melbourne, and have sat on the insulation Standards Committee BD58 from 1998-2010, representing AFIA, the once independent foil association.

I can readily agree with the fact that Star ratings as winter heating focussed, and do not account for summer cooling. And explained by the woman interviewed in the SA Housing Trust House couldn't get her house cool – it was a sweat box.

Its very important that the public ask the question about what insulations work best in hot climates. Aluminium foil performs better over bulk insulations.

One quick analogy: we use reflective foil under car windscreens, rather than 10 blankets. Even a child knows this. Then why do people think that very thick bulk insulation is best? Because they have been indoctrinated over 40 years.

The related insulation standards (AS/NZS 4859.1-2002 & AS 3999-2015) do not account for in-situ realist Australian radiation levels, a battle I have pursued for over 20 years, and since 2010 assisted by another tireless fighter Graeme Doreian - just a mere member of the public.

At the end of the ABC segment, the ABCB was asked to respond, and their answer was that 'ACB is improving standards by May'. No it is not. The ABC 7.30 ought to do a follow up story.

The ABCB actually means the adoption of the recently issued documents, AS/NZS 4859.1-2018(materials) & AS/NZS 4859.2-2018(Total/System R-values), which are revisions of the singular insulation document AS/NZS 4859.1(2002)Amdt-1(2006).

The ABCB is very likely to additionally call up the AS 3999-2015 (installation of bulk insulation), under rapid revision now, which is a scientifically fraudulent document full of errors.

These new revised insulation standards(which I purchased in Dec 2018) are mathematically impossible to decipher, and continue not to account for high temperature radiation impact as occurring in Australian roof spaces, not overseas technical manuals.

The existing Standard AS/NZS 4859.1(2002) listed the environmental factors needed to be accounted for, and included 'radiant energy level'. The new revised standard has removed these clear words.

Concise summary: The ABCB regulations are not 'evidence-based' which all regs are meant to be. There is no actual field testing that should have be authorised 20 years ago, when I called for it.

Additionally Standards are meant to provide NET BENEFIT. The insulation standards certainly do not. And the public continues to be lied to.

All bulk insulations are tested at 23degC 'mean' for 4 hours laboratory testing, derived from 33 & 13deg conduction plates (Steady State), and the revised standards have maintained this. In other words, any bulk insulation is allowed to sold across Australia with its R-value anchored on 23deg.

When thinking about skillion, cathedral, and flat roofs with compressed bulk insulation, the intense roof temperature in summer rapidly transfers through the bulk and the R-value is far less than claimed. See FACTS-5 below.

ATTACHMENTS

CSR Bradford – “Insulation Design Guide 1994”. 55deg quoted for walls, and 65deg for roofs.

FACTS-5 illustrates a 40% reduction in R-value bulk under hot roof cover – AGO part funded insulation guide booklet 2001.

FACTS-1 reveals case stories of high radiation impact upon cooling ductwork in roof spaces, resultant R-value failure, where chilled air is being cooked, and the dramatic reversal by using double foil insulations, under roofs as well as around ductwork.

I have written to Standards Australia in Feb 2016 about this situation and they have refused to institute elevated radiant heat testing of ductwork.

Univ SA 2013 report – Climate Adaptation: recommended use of RFL foil under roofs.

2018 Parliamentary Inquiry – Biotxin-related Illness in Australia

Submission 75 Tim Law – very important reading.

Conclusion: increasing levels of energy efficiency regulations since 2010 have coincided with increasing health risks from mould and condensation.

This directly means increasing levels of insulations, which means R4,5,6,7 batts.

St Regis – ACI foil testing project 1968-69

The conclusion paragraph is paramount – RFL foil must be used under roofs as aircon ducting was becoming more popular. This was 1969! Why has this report not been acknowledged by the ABCB?

NEEBP National Energy Efficiency Building Project – report 2014

In the tropics for ceilings, double layered foil insulations recommended & no bulk insulation

Many more technical reports can be provided.

Wren Industries – simple files are the last attachments FACTS-13 & poster.

Conclusion

Bulk insulations have the habit of trapping summer heat in houses and incubating occupants, causing excessive demand for airconditioning.

I wish it were possible for the ABC TV to run a follow up segment and interview myself and other notable scientific experts.

I would be pleased to hear any comments from you, and thankyou again for your direct words on 7.30 program.

The public are being misled by the ABCB-NCC building energy efficiency regulations.

Regards,

Tim Renouf

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Dear Mr Renouf

RE: HEAT STRESS AND BUILDING DESIGN

Thank you for your email of 17 January 2019 regarding your concerns about inadequate insulation standards.

As the Chief Public Health Officer for South Australia, I share your concern about the warming of our climate.

You have raised an important issue about standards and their role in assisting with improving adaption to changing climate. Adaption to climate change, and in particular to heat, will require consideration of social, economic, political, cultural and environmental factors, which can be leveraged, in some cases, by codes and standards. I agree that building standards will need to evolve over time, informed by best available evidence, in order to provide effective strategies to mitigate increasing temperatures. Such improvements or modification will need to be addressed at a national level, led by experts across many relevant fields. Typically, the contribution that health agencies can make is being involved at a national level in matters related to environmental health issues such as climate change.

I appreciate you bringing this matter to my attention.

Yours sincerely

PROFESSOR PADDY PHILLIPS
CHIEF MEDICAL OFFICER & CHIEF PUBLIC HEALTH OFFICER
PUBLIC HEALTH AND CLINICAL SYSTEMS

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