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Subject: Webform submission from: Design and Place State Environmental Planning Policy (SEPP)
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Submitted on Fri, 05/03/2021 - 09:30

Submitted by: Anonymous

Submitted values are:

Submission Type

I am making a personal submission

Name

First name

██████

Last name

██████

I would like my submission to remain confidential

No

Info

Email

████████████████████

Suburb/Town & Postcode

2050

Submission

Firstly, I would like to welcome this initiative. It is great to see design and sustainability initiatives being placed to gather as they are integral to each other. It is also great to see the focus on precinct/community space as part of this discussion/proposed new controls.

Improving building standards substantially over the next 10 years is low hanging fruit to meet our net zero targets. It has been fantastic to see the Passive House standard recently recognised as an alternative pathway under BASIX and presumably in the new SEPP but I am particularly interested in the minimum sustainability measures that are to be implemented moving forward.

In NSW and Australia we are building huge numbers of poorly performing and energy hungry new homes and apartments. These are with us for a very long time but also arguably due to poor detailing do not last long enough and are demolished sooner than they should be. While they are cheaper to build they are really expensive to live in both now and in the future. This contributes to energy poverty for many NSW residents as they struggle to pay for heating and cooling and is essentially leading to people not using heating and cooling when they should. That has health repercussions both with respect mental and physical health.

NSW's current BASIX requirements are resulting in poorer performance than those achieved in other states such as in Victoria and as an architect working at the top end my experience is that they are often an inconvenience rather than a useful tool.

The cost of implementing better sustainability measures for a new building is not particularly expensive if done carefully and thoughtfully. Eg more expensive material can be offset by a better planned smaller floor area negating the cost difference. The additional cost is paid back many times over in the course of living in a house.

Key measures that need to be considered are:

1. Proper insulation calculated to suit the climatic conditions of the site. In Sydney this requires 140mm thick studs with standard insulation between them. The additional cost of this measure is negligible.
2. Sealing the building up to a point where we are not constantly leaking energy. The average Australian new build house has 15 air changes per hour. This is a huge amount of energy lost in heating and cooling each hour. Sealing the building up to less than 1 air change per hour not only avoids sick building syndrome, it allows us to use Mechanical Heat Recovery ventilation systems to reduce energy consumption by 90%. This is a huge factor in future cost of living, energy grid stability and reducing health costs and meeting our net zero emissions targets.
3. Incentivising materials - the average building in NSW is a brick veneer house with aluminium windows, single glazing and concrete slabs that extend beyond the thermal building envelope. The bricks are not shaded and act as a battery radiating heat back into the building after the sun sets and to the outside causing urban heat island effect. Aluminium window frames transfer heat directly from inside to out, or vice versa negating efforts to heat and cool the house and concrete slabs that extend to the patio outside transfer stored heat back into the building. There is minimal incentive to use Timber or UPVC windows with double glazing in the current controls, in fact you are penalised for using a custom made timber window frame with double glazing that is almost airtight and does not transfer heat on the basis that it has not been tested like a standard aluminium window system that performs poorly but because it is a standard system can be tested more cost effectively.
4. Recognising value in energy efficient design - Right now brick veneer and aluminium windows are seen as a premium product due to low maintenance and because financial institutions and insurers recognise it as a premium product and homeowners are not presented with any information to tell them otherwise. It is also what the sales brochures tell them. We need to give people reasons to make better product selections based on scientific evidence rather than marketing spin or perceived public perception. A signal at point of sale of how energy hungry a building is is really important. A step towards that is making it part of the building approval process to establish a standard that can recognise building performance and give a cost of running figure like household appliances currently have.

The government and building professionals both have a role to educate. The built environment is responsible for 39% of Co2 emissions, Improving building standards substantially over the next 10 years is low hanging fruit to meet our net zero targets. At the top end we can reduce building energy consumption by 90% by designing and detailing buildings to the Passive House Standard or similar. Minimum standards as set out in the SePP describe the worst possible building that we are allowed to build in NSW. That bar needs to be lifted significantly and quickly in order to be an effective contributor to meeting net zero targets, reduce energy poverty and reduce ongoing costs of living in NSW.

Thank you for the opportunity to participate in this discussion. I look forward to seeing the results.

Sincerely


Architect NSW  & Certified Passive House Designer

I agree to the above statement

Yes