BRANZ – MBIE workshop on airtightness, ventilation etc.

Starter for ten – Questions to discuss with BRANZ on 10 June 2021

Interstitial condensation in new residential and non-residential buildings

1. What evidence exists on the risk of interstitial condensation in residential and non-residential new buildings in New Zealand?

2. Is there validated evidence that quantifies the increased risk of interstitial condensation when increasing insulation levels as per the H1 proposals in the various climates of New Zealand? Also considering necessary changes to construction, e.g. warm construction.

3. In what situations (e.g. construction types, construction details, climates, internal environmental conditions, building typologies) does the available evidence suggest that additional measures are required to mitigate the risk of interstitial condensation? E.g. will increased insulation require NZ to adopt the widespread use of vapour control layers, if so in what situations?

4. Which mitigation measures are critical to prevent unintended consequences (and in what situations)? Which measures are 'nice-to-haves' (i.e. beneficial but not urgent)?

5. How could adequate management of interstitial condensation risk be pragmatically verified during the building design, consent and construction process?

6. Are there any interdependencies between different mitigation measures that need to be considered?

7. Do any mitigation measures require changes to other aspects of building design and construction?

8. What can we learn from overseas about what works / doesn't work and are these learnings transferrable to New Zealand?

9. What are the gaps in available evidence and how / how quickly could they be addressed?

10. When will the NZ Hygrothermal modelling project be completed (the s 9(2)(a) draft report from 2016)? We assume the model buildings project is related to this work.

Airtightness and ventilation in new residential buildings

11. What is BRANZ's position on desirable minimum standards for airtightness and ventilation in new homes in New Zealand (recap)?

12. On what evidence is that position founded?

13. Are there alternative ventilation strategies that work? Do different residential building types or climates require different ventilation strategies?

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14. Does BRANZ have a position on ventilation requirements to prevent overheating?

15. What is the problem with current settings and practice (including evidence documenting the problem(s))?

16. To what extent have the impacts of potentially shifting minimum settings to BRANZ's recommendations already been assessed and quantified?

17. What are the interdependencies of potential changes to airtightness and ventilation settings? E.g. does introducing airtightness standards necessarily require changes to ventilation standards? What ventilation strategies rely on certain levels of infiltration (max/min)?

18. What can we learn from overseas about what works / doesn't work and are these learnings transferrable to New Zealand?

19. How could BRANZ's recommended airtightness and ventilation settings be achieved and verified during the building design, consent and construction process?

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