



# THE PAEDIATRIC SOCIETY OF NEW ZEALAND

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## Submission to the Healthy Homes Standards, 2018

### **About the submitter**

Paediatric Society of NZ

The Paediatric Society of New Zealand (PSNZ) is a membership organisation with approximately 550 health professionals across medical, nursing and allied health disciplines, working to progress the health and wellbeing of children/tamariki and young people/rangatahi throughout Aotearoa/New Zealand. <https://www.paediatrics.org.nz/>

### **Introduction**

We support the overarching objective to '*establish minimum standards to allow New Zealand tenants to live in warm and dry rental homes.*' However, it is the intention with this submission to advocate for minimum standards that support enduring health for the entire population, regardless of age or vulnerability therefore genuinely addressing the social equity gap contributed to by poor housing. To achieve this, standards must go beyond current industry standards and recognise the whole of house relationship between reducing heat loss, reducing and managing moisture, ventilation and heat. Further to this, raising the standard of rental housing also has the potential to change the rhetoric of rental housing from 'return on investment' to the provision of a social service which can address the imbalance of health and wellbeing of householders between the private and rental markets. While we have made our own submission ours substantially concurs with that of the Healthy Homes Initiative.

# Section 1: Heating

## 1.1 Location of the heating device in a rental home

**Support Option Two: Living room (includes kitchen and dining room if open plan rental home) and bedrooms.**

New Zealand's housing stock is old and aging, with often poor orientation for passive solar gain, low levels of insulation, single glazing and poor curtaining. These conditions present the need for effective and efficient heating to be applied directly to areas of the home where heat is needed (living areas and bedrooms), so that the rooms (even with a poor thermal envelope) can reach and sustain the minimum temperature for a healthy indoor environment. This option two our preferred option avoids functional crowding where one room is used by all inhabitants which increases cross infection. Option one with one fixed heating unit such as a heat pump or wood stove is a significant improvement on many families current heating.

## 1.2 & 1.3 Indoor temperature that heating devices should be sized for in a rental home

**Support Option Two: Heaters that landlords provide must be capable of achieving an indoor temperature of at least 20° in rooms applicable to the heating standard.**

The World Health Organisation guidance is a minimum of 18° for already healthy people and 20° for the very young, sick and elderly. Setting a standard to heat a home to a minimum of 18° only supports the percentage of our population who are fit and well. Data suggests that those in the rental market tend to have less wealth than those in the private housing market. Less wealth can also translate to less ability to pay for health care, and it's well understood our housing is making us sick. We need to build a standard that provides healthy homes for all, giving everyone, the healthy, very young, sick and elderly a chance to thrive. Providing adequate heating for infants children the sick and elderly maximizes the possible health gains with devices which are adjustable for tenants with lesser need eg heat pumps/ wood stove and are flexible fixed assets for landlords

## 1.4 Should landlords only be required to provide heating devices where portable electric heaters are insufficient to achieve the required indoor temperature?

**Support option one; Fixed approved heating devices are less vulnerable to damage and loss than portable ones.** However, this must be in the context of the requirements on the landlord to provide heating in living areas and bedrooms that are capable of achieving a temperature of 20° and that are efficient and effective (see below).

## 1.5 Should we accept some heating devices and not others?

**Yes: We agree that unflued gas heaters, open wood fires and all electric heaters (except heat pumps) with a heating capacity greater than 2.4kw are unacceptable forms of heating.**

### Unacceptable:

- Unflued gas heaters are unacceptable due to the expense to run as well as the moisture and toxic gas they release, they present a real and dangerous health risk to users.
- Open wood fires create more draught than heat making them incredibly inefficient and with a low heating output (and high cost to run when paying for wood).
- Electric heaters with a heating capacity greater than 2.4kW are too expensive to run.

### Acceptable (with caveat):

- Electric heaters with a heating capacity less than 2.4kW should only be deemed acceptable when destined for small (<30m<sup>3</sup>) room with sufficient ceiling and floor insulation, as well as well fitted, lined, floor length curtains on the basis that it will not be capable of reaching the required temperature of 20° without significant cost to the tenant if the room is any larger, or without the thermal envelope already addressed. (See below.)
- Electric resistance heaters are most suitable for small bedrooms as referenced by EECA Energywise because of their incapacity to heat large spaces.
- Other forms of acceptable heating are 8-10kW heat pump transfer systems as well as other heat transfer systems with an acceptable heat source (such as a wood burner)

## **Section 2: Insulation**

### **2.1 What minimum level of insulation should be required in rental homes?**

#### **- Support Option Three: Akin to 2008 Building Code**

One standard for all New Zealand homes is the only fair and logical step forward towards improved thermal performance and housing equality (in conjunction with all other aspects of a healthy home). The 2008 upgrade to the Building Code was to achieve better outcomes for new buildings achieving a higher standard for thermal performance. Benefit cost ratio of 3.9 largely from insulation with reduction in ill health and lower energy bills and increased disposable income and total net benefits greater for option 3 than 2. Given we know the NZ housing stock is older and ageing, we should not accept a lower standard be acceptable in these older properties. One standard is will also be easier to understand and assess (for compliance).

#### **Do you agree with the exceptions set out in the 2016 regulations?**

##### **1. It is not reasonably practicable to install insulation. - Do not support unless more clearly defined.**

This becomes very subjective and can be used as an excuse. Concrete slabs and skillion roofs are clear exceptions (even then a skillion roof can be insulated when re-roofing takes place and should be so), however a pitched roof with a ceiling cavity but no access is not (i.e. access can be made by cutting through the ceiling). Crawl space in the subfloor is also subjective and an absolute minimum should be clearly determined, although not used as a reason not to insulate if the subfloor is accessible.

##### **2. The home complies with the requirements relation to thermal insulation at the time at which it was installed and the landlord has relevant records showing compliance with those requirements.- Do not support if the landlord previously insulated to any level below current 2008 compliance.**

Research shows relatively cost-effective insulation top ups can have a meaningful impact on reducing heat loss, therefore reducing energy costs through heating and improving health (therefore reducing health costs).

##### **3. The landlord intends to demolish or substantially rebuild the home within 12 months and application for any necessary consent before the tenancy commenced. - Support**

##### **4. For 12 months from the date the tenancy commences, if the tenant is the former owner of the home. - Support**

#### **Do you think any other requirements for insulation should be included in the standard?**

**- Foil should not be acceptable, regardless of condition. It must be removed and replaced with compliant (Ceiling R2.9 if zones 1 or 2 and R3.3 if in zone 3, underfloor R1.3) product.**

#### **Would any of the above options inhibit future innovation and/or flexibility? - No**

Future innovation would not be impaired and flexibility maintained.

### **2.2 How should the degradation of insulation under “reasonable condition” be assessed?**

#### **Do you support option one or two to assess a ‘reasonable condition’ for insulation?**

##### **- Support Option two**

No more than a 10% degradation on 2008 compliance.

#### **Do you think any other criteria for interpreting ‘reasonable condition’ of insulation should be included and if so, what?**

When insulation has been poorly installed or damage has occurred due to compression, movement or exposed to moisture.

### **2.3 How can landlords show compliance with the insulation standard?**

#### **Do you agree landlords should show compliance with the insulation standard by retaining particular records? - Yes**

**For retrofitted insulation:** certified compliance from the installer or by a suitably qualified and experience assessor (including the R-value when the insulation was installed).

**For new builds:** a record of Building Code compliance and level of insulation.

## **Section 3: Ventilation**

### **3.1 What level of ventilation is required in rental homes?**

**- Support Option Three: Extractor fans installed in rooms with a bath or shower or indoor cooktop, and living rooms, dining room, kitchens, and bedrooms have windows that can be opened for the entry of air unless an exemption applies**

We know from BRANZ data that a significant proportion of rental homes in New Zealand do not have mechanical ventilation in the kitchen or bathroom, which are the two areas most responsible for the creation of moisture (in the home). The hierarchy when managing moisture is eliminate moisture at source, extract at source, manage and mitigate. Extraction at source in wet areas is essential to reduce moisture damage and the prevention of mould in the wet areas as well as internal moisture migration within the home.

**What other forms of ventilation should be considered acceptable, or not included in the standard as acceptable?**

**- Positive Pressure Ventilation Systems (PPVS) should not be included in the standard as acceptable.**

Research by BRANZ indicates that PPVS have the potential to increase moisture and reduce temperature in a home. This therefore has the potential to create more humidity and temperature concerns in the household which could be better addressed by effective mechanical ventilation (extraction fans).

**- Extraction fans that don't meet the minimum ventilation rates (litres per second) for kitchens 50 l/s intermittent and bathroom 25 l/s intermittent should not be included in the standard as acceptable.**

**- Extraction fans (kitchen and bathroom) that are not vented to the outside should not be included in the standard as acceptable.**

Extraction fans vented in the ceiling space forces moisture into this cavity which can transfer back into the home through downlights and other gaps, as well as cause moisture damage to insulation, impacting on its R-value.

**- Recirculated range hoods should not be included in the standard as acceptable.**

These do not extract moisture.

**- Unvented clothes driers (inside the thermal envelope) should not be included in the standard as acceptable.**

Where a clothes drier is provided by the landlord, it must be vented to the outside, or be a condensing model. Research shows up to 5 litres of moisture can be released in the air from a single load of washing dried inside on a clothes rack or in an unvented drier.

**- If no vented clothes drier is available, provision for outdoor covered clothes line needs to be mandatory.**

One of the biggest contributors (out of necessity) is drying clothes inside, up to 5 litres moisture per load going into the home. A common reason this is done is because there is no other option available on the premises. If a tenant has no transport, this makes accessing a laundromat difficult. A vented drier or a covered outdoor clothesline needs to be mandatory e.g. Carport.

**Do you agree that exemptions should be available for certain rental homes from requiring opening windows?**

**- Apartment buildings only when a living area or bedroom is built into an internal space, and would then rely on a 24/7 HVAC system, however it's not an ideal situation - if a window is physically present it should be openable.**

**Would any of the above options inhibit future innovation and/or flexibility? - No**

## **Section 4: Moisture ingress and drainage**

**4.1 How should landlords protect rental homes against moisture entering the home and inadequate moisture drainage?**

**- Support Option two with the caveat that Ground Vapour Barriers are a requirement regardless of adequate subfloor ventilation.**

BRANZ research shows up to 40 litres of moisture and can evaporate under a home of 100m<sup>2</sup> in size, even when the ground (under the home) looks dry, and when adequate subfloor ventilation is in place. The HCS found that unprotected ground contributed to 74% of cases of internal moisture problems. Hence this major source of internal moisture needs prioritization.

**Do you think other requirements for moisture ingress and drainage should be included in the standard. - Yes: compulsory Ground Vapour Barrier**

**All downpipes connected and in good working order for effective removal of storm water from property (i.e. not draining to subfloor) or on to ground outside eg to soakage pits) (i.e. no connection to council storm water system of discharge to soakage pits)**

**No broken pipes in subfloor**

**No broken gutters**

**Fabric of building intact and in good working condition (roof, walls, floors, windows, doors).**

**Do you agree with the proposed exemptions?**

**1. The rental home has adequate open and unblocked subfloor ventilation openings**

**- No: Ground Vapour Barrier should be compulsory regardless**

**2. The rental house is a pole house**

**- Yes**

**3. A landlord obtains a certificate from a qualified building surveyor to show the rental home complies with standard**

**- This is problematic because the current Building Code does not require a Ground Vapour Barrier to meet compliance (for concrete slab or house on piles)**

**Would any of the above options inhibit future innovation and/or flexibility?**

**- No**

## **Section 5: Draught Stopping**

**5.1 What is the appropriate level of draught stopping to create warm and dry rental homes?**

**- Support option Two: Landlords to stop any unnecessary gaps (3mms or greater) or holes that cause noticeable draughts and a colder rental home (windows, doors, floors, ceilings & access hatches) and block any decommissioned chimneys and fireplaces.**

Draught stopping as per option two can be addressed with minimum cost and disruption and can reduce uncontrolled two-way air movement by up to 20%. V-Seal is a draught stopping product which is cost effective and can easily manage window and door draughts up to 8mm. Likely to achieve warmer drier homes.

**Do you think other requirements for draught stopping should be should be included in the standard?**

**- Yes: cracked and broken windows, skylights, broken cat flaps, holes or gaps in external wall cladding and roofing**

**Would any of the above options inhibit future innovation and/or flexibility?**

**- No**

## **Section 6: Date to comply with the standards**

### **6.1 When and how should the healthy homes standards be implemented?**

#### **- Support option two: a single date is chosen for when all landlords must comply with the standards**

A single date 1 July 2022 for compliance will eliminate confusion by landlords and tenants as well as allow industry a clear signal to 'gear up'. There needs to be a strong and clear message to the rental market that standards need to improve and there is very little wiggle room to comply, determined by a single date.

Non-compliance (by the single date) needs to be met with very clear consequences for example: in the case of a property already tenanted, rent cannot be charged until compliance is met (this does not allow for the eviction of the existing tenants as this will contribute to homeless and is due to no fault of the tenants). Should the tenants be required to move due to extensive or evasive work required by the landlord to meet compliance (after the deadline), the landlord should be required to cover the costs of any temporary accommodation. In the case of a property being empty and not meeting the compliance deadline, that property cannot be legally rented out until compliance is met. If the property is subsequently put on the market, full disclosure must be given about the non-compliance (to meeting rental property standards).

#### **Is 1 July 2022 an appropriate date to allow landlords, industry and government with sufficient time to comply with standards?**

#### **- No: it should be sooner, there needs to be urgency applied to these standards due to the known human risk associated to living in existing rental properties in New Zealand.**

#### **General question: Do you agree with the assumptions and analysis in the document for the indicative costs and benefits, and our analysis of the advantages and disadvantages?**

#### **- New Zealand needs a massive paradigm shift in what rental housing is and the subsequent responsibilities of landlords.**

Rental properties and the management, maintenance and performance of such needs to be understood as providing housing, social service and investment. The New Zealand approach of rental properties is too closely connected to financial return on investment, as are many of the indicative costs and benefits discussed in the associated HHS consultation document. The return on the social investment of healthy housing should take precedence and property owners entering the market need to understand and take on this responsibility. Status quo puts the landlord in the position of power and the emphasis on maximising profit, which often translates into deferred maintenance and expectations of the tenant to live in substandard conditions. Understanding rental housing as equally a social service, with the emphasis on providing a warm, dry, healthy and safe living environment, also protects the asset and prolongs the capacity for that asset to provide an income. We must change the thinking, relationships and responsibilities as well as the standards.

## Section 7: Implementation

**7.1 Enforcing the standards, when and how should the healthy homes standards be enforced?**

**- The Government should establish a credible programme with accountabilities in place for a fleet of trained, independent assessors whose role it is to assess and confirm compliance as well as provide guidance towards compliance. A system needs to be in place allowing a grace period to achieve compliance after first assessment (within the deadline) and then reassessment, with enforceable penalties after that.**

The responsibility for determining compliance should not fall on the landlord, property manager or tenant because few would be suitably qualified to understand the intention of the standards in the context of whole of house performance and it's unlikely a landlord, property manager or tenant will be in a position to provide an independent response.

**- Trained, independent assessors.**

The Home Performance Advisor (HPA) training programme is a New Zealand sector developed programme providing science based, whole of house, independent training for anyone wishing to provide independent advice to improve the performance of the home. The HPA programme (which requires ongoing professional development by certified advisors) is well recognised as providing a platform of knowledge suitable for the application of housing tools or standards such as a Warrant of Fitness or, Healthy Housing Standards. HPA is a training programme, which once certified, practitioners apply their knowledge in whatever way suits their line of work (within the parameters of an ethical code of conduct). Trained HPAs would present a suitable standard of knowledge and independence to carry out a role of assessing standards. There are currently 70 certified HPAs spread across New Zealand with more pending certification.

**What are the most important considerations in developing a tool to help tenants and landlords to comply with the heating standard? - The principles of heat loss, the different types of heat and the importance of passive solar gain.**

Heat loss: The movement of heat is always to a colder place, therefore addressing heat loss first is as important as applying heat. This means the thermal envelope needs to be looked at as part of system. Windows are often the weakest point in many New Zealand houses, the colder glass attracting the warmer air therefore applying heat to a room with ceiling and floor insulation but no well fitted, lined, floor length curtains, will not be effective.

Types of heat: Most heating types in NZ are either convection (heat pumps) or radiant (fires), with electric resistance covering a variation of the two. A radiant heat source with a strong output can better heat a draughty home than a convection heater will be able to.

Passive solar gain: The winter heat from the sun can contribute significant amounts of free warmth into the home, if the North facing windows are unshaded and the curtains are open and then pulled before the sun goes down, trapping that heat in (providing the movement of heat to cold is reduced)

## **Additional evidence supporting a whole of house approach (reducing heat loss, reducing and managing moisture, ventilation and heat):**

- The World Health Organisation guidance is for living rooms and bedrooms to be able to each 18° and 20° for the very young, elderly or sick. New Zealand homes, especially rental properties struggle to reach this.
  - As per the BRANZ research quoted on page 12 of the HHS discussion document *'during the winter months, mean living room temperatures in New Zealand fall below the recommended range.<sup>37</sup> Living room and bedroom mean temperatures are typically 15.8°C and 14.2°C respectively during the day and fall to 13.5°C and 12.6°C respectively overnight.'*
  - Even though New Zealand has a relatively temperate climate, the condition of our housing is thought to contribute to a winter mortality rate of 1,600 annual excess winter deaths (University of Otago Wellington studies).
- Recent research is now indicating *'indoor dampness and mould are associated with the development of asthma'* Indoor visible mould and mould odour are associated with new-onset childhood wheeze in a dose-dependent manner
- The 2015 BRANZ Housing Condition Survey (HCS) reported that mould was present in 30% of bedrooms in rental properties. Mould requires two conditions to thrive, high moisture and low temperature.
  - also *'just under half of houses surveyed (47%) had less than 80% coverage of insulation in the roof space or less than 120 mm-thick insulation'* and windows in a rental property are more likely to be in a bad state of repair (resulting in substantial heat loss and requiring effective and efficient heating to compensate).
  - and that *'half of main bathrooms and half of all kitchens did not have mechanical extract ventilation to the outside.'*
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- On the effectiveness of foil BRANZ report SR354 states 'draped foil insulation is a poor performer particularly in windy or cold situations', concluding that bulk insulation is superior.
- The Paediatric Society of NZ applauds the MOBIE Healthy Homes Standards Sept 2018 Discussion Document and in particular agree with the authors' recognition of the health risks of cold damp housing, the benefits of insulation heating and limiting heat loss. The 143 references provide those considering these submissions solid evidence on which to improve NZ housing and its current often negative impact on the health of its citizens. These detailed references provide a significant body of local and international literature identifying the health costs of current NZ housing and limited standards and potential health gains addressing them. This literature explains the weight we have given to the more effective measures for the sake of present and future health of new Zealand's most vulnerable citizens which will benefit all.