



kimberley community  
legal services

# Stuck in the Heat:

Lived Experiences of Public Housing  
Tenants in the Kimberley



# KCLS acknowledges that we work on Aboriginal land and pays respect to elders past and present.

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## Contact us

### KUNUNURRA

4 Papuana Street  
PO Box 622  
Kununurra WA 6743  
Tel: (08) 9169 3100  
Freecall: 1800 686 020  
Email: office@kcls.org.au

### BROOME

3/41 Carnarvon Street  
PO Box 2715  
Broome WA 6725  
Tel: (08) 9192 5177  
Freecall: 1800 797 088  
Email: broomeoffice@kcls.org.au

 [WWW.KCLS.ORG.AU](http://WWW.KCLS.ORG.AU)

 @KIMBERLEYCLS

ABN: 63535078148

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This report was prepared by KCLS Systemic Change Advocate, Grace Dudley with approval from CEO Christine Robinson.

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# Executive Summary

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## Key Findings

This report explores the lived experiences of public housing tenants in the Kimberley during periods of extreme heat. The information presented in this report is based on research conducted with public housing tenants and service providers in the region in 2021. In summary, we found that:

- The Kimberley region experiences extreme temperatures and high humidity dangerous to human health and wellbeing. Current projections indicate temperatures in the region will rise in the future.
- Poor quality public housing, maintenance issues and overcrowding due to low housing stock impacts the ability of public housing tenants to effectively control the temperature and energy efficiency of their homes.
- Public housing tenants in the Kimberley may

experience energy poverty due to high energy prices and the use of inefficient cooling appliances.

- Current Housing Authority cooling policy tends to reinforce the financial disadvantage experienced by many public housing tenants in the Kimberley.
- Exposure to high internal house temperatures may harmfully impact a householders' health and effect their ability to participate in their community.
- The effects of a warming climate on the habitability of public housing in the Kimberley is a pressing issue and appropriately designed policy to mitigate the effects of heat should be prioritised.

## Our findings support solutions that will



Improve access to energy efficient air conditioning in public housing

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Subsidise the cost of electricity

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Deliver Solar Energy to ease financial pressure

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Provide education and support to tenants

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Address overcrowding by increasing public housing stock

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Improve liveability and energy efficiency of housing

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Introduce minimum energy efficiency standards

# Introduction

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***We are always talking about how hot it is and saying how we can't afford air conditioners, we are stuck in the heat. (Public Housing Tenant)***

Living in the Kimberley region means extreme heat and humidity are part of life. For six months of the year the heat is enduring, it does not cool down at night and there is very little respite. Air-conditioned workplaces and housing provide much needed relief from the sweltering temperature and humidity. For those without access to air-conditioned houses, however, the temperature can make life unbearable.

This document is the outcome of consultations conducted by the Kimberley Community Legal Services (KCLS) and Kimberley Jiyigas in late 2021, which aimed to explore the experience of public housing tenants with extreme heat. The stories of tenants we spoke to reveal how inadequate housing, unmet maintenance needs,

energy insecurity and current department cooling policy can hinder the ability of tenants to effectively control internal house temperatures. In the absence of adequate cooling to counter the rising heat, homes can become what some tenants have called a 'heat box', 'sweat box', 'oven', 'incinerator' or 'tin box'.

The implications of the effects of extreme heat are significant, impacting not only the health of tenants but their social, mental and financial well-being. Current climate change projections indicate the region will experience increasing temperatures in the future. Without appropriate measures and policy responses to mitigate the harmful effects of the heat, many public housing tenants will continue to be 'stuck in heat.'

## Where we are

The Kimberley region is located in northern Western Australia, and includes four local government areas, 150 Aboriginal Communities and over 30 different language groups.<sup>1</sup> Aboriginal and Torres Strait Islander people make up 41.6 percent of the population.<sup>2</sup> The region has a semi-arid tropical monsoon climate and towns like Kununurra and Broome experience high temperatures for long periods of the year.

## Who we are

KCLS is a non-profit community legal centre based in Kununurra and Broome, offering legal support, social support, and financial counselling throughout the Kimberley region. We conduct regular outreach from our offices in Kununurra and Broome to Halls Creek, Fitzroy Crossing, Derby, Wyndham and more than a dozen remote communities in the Kimberley. Our practice is client centric, holistic and embedded in the community and region in which we work.

KCLS is the only legal service in the region providing free tenancy legal advice and advocacy. Our client advocates provide intensive support to clients in public tenancies, and our financial counsellors work with clients experiencing financial hardship.

## Why we did this project

The need for a project on housing standards was identified by the team at KCLS, who witness the poor housing standards tenants experience and the impact it has on them, particularly during extreme heat periods. To understand the issue better, KCLS & Kimberley Jiyigas spoke to tenants in the East Kimberley during the hottest months of 2021 about their experience of living in the extreme heat.

## Who we spoke to

The information contained in this report was collected from semi-structured interviews conducted with public housing tenants in the

East Kimberley. We spoke with three groups of public housing tenants comprising a total of 13 people. Participants were from Kununurra, Halls Creek and Wyndham and all identified as Aboriginal. We also interviewed two tenants in Kununurra in unstructured interviews. Information from tenants was also collected by an online survey, which was offered to tenants throughout the Kimberley. We received 70 responses across the region, including Broome, Balgo, Kununurra, Halls Creek and Derby.

In addition to public housing tenants, we also interviewed six people from organisations working in the public housing sector or involved with supporting tenants with advocacy, financial counselling or intensive support. These service providers were in the East Kimberley and worked for government and non-government organisations. We refer to them as service providers.

All information used in this report is deidentified.

## Sarah's story

We spoke to Sarah in October 2021. It had been 40 degrees or above during the day for over a week. We sat in her living room while she cooled herself down with a damp cloth.

Sarah is 52 years old and has been living in the same public housing property for over 20 years. She had to retire due to health issues, so relies on a Centrelink income. The house is old and not well insulated. It gets very hot inside during the day. She has one box air conditioner in her living room. She cannot afford a better air conditioner. Because the house gets so hot, turning on the air conditioner makes no difference. At night she turns it on and sleeps in the living room. She is also worried about how expensive her power bill will be.

"I went to the hospital the other day, they reckon I looked that stressed out and overheated and dehydrated just from sweating. The hospital said why don't you put the air con on. And I said I can't have it on it just won't work - it's not big enough to keep the house cool. It's just so hot I just sweat all the time. I can't go outside otherwise I will start having fits with the heat."

<sup>1</sup> Kimberley Development Commission 'Our Place - Our Community' (Web Page, 2022) <<https://app.remplan.com.au/kimberleyregion/community/population/Aboriginal?state=IBGDTz!NkmElzOGnhKP20WiWpJKRCCztB69i7tPtJtYjcktxuKF9Bn>>

<sup>2</sup> Australian Bureau of Statistics, 2016 Census All Persons Quick Stats Kimberley (Web Page, October 2017).

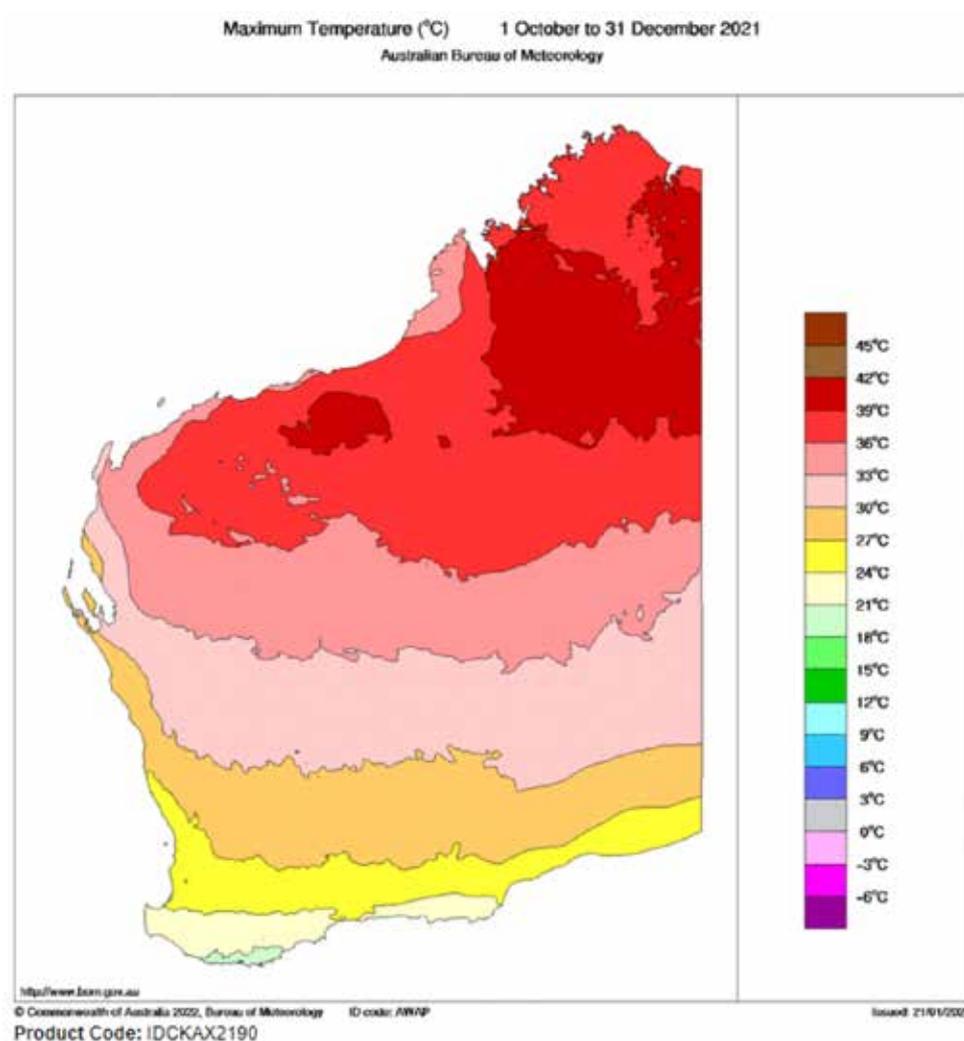
## The Kimberley Context: a summary of the unique heat and housing issues in the region

Sarah’s story is far too common in the Kimberley, where the heat can be relentless, and many residents live in public housing.<sup>3</sup>

## It’s one of the hottest regions in WA

From November to April the build up and wet season are characterised by high temperatures and humidity. In Miriwoong culture, local to the Kununurra region, there are three seasons: Nyinggiyi-Mageny (wet season), Warnka Megeny (cold season), and Barndenyiriny (hot season/build up).<sup>4</sup>

FIGURE 1: MAXIMUM TEMPERATURE IN WA FROM OCTOBER 2021 TO DECEMBER 2021



Caption: Maximum temperatures ranged from 36 to 42 degrees across the Kimberley in late 2021 (the build up).<sup>5</sup>

<sup>3</sup> Australian Bureau of Statistics, 2016 Census of Population and Housing General Community Profile (Catalogue No 2001.0, 23 October 2017) Table GO33.

<sup>4</sup> Mirima Dawang Woollab-Gerring Language and Culture Centre, ‘Seasonal Calendar’ (Web Page, 2017) <<http://mirima.org.au/seasonal-calendar/>>

<sup>5</sup> Bureau of Meteorology, ‘Three-Monthly Mean Maximum Temperature for Western Australia’ (Web Page, 2022)<<http://www.bom.gov.au/jsp/awap/temp/index.jsp?colour=colour&time=history%2Fwa%2F202110120220131&step=4&map=maxave&period=3month&area=wa>>

FIGURE 2: MAXIMUM TEMPERATURE IN KUNUNURRA, OCTOBER 2021

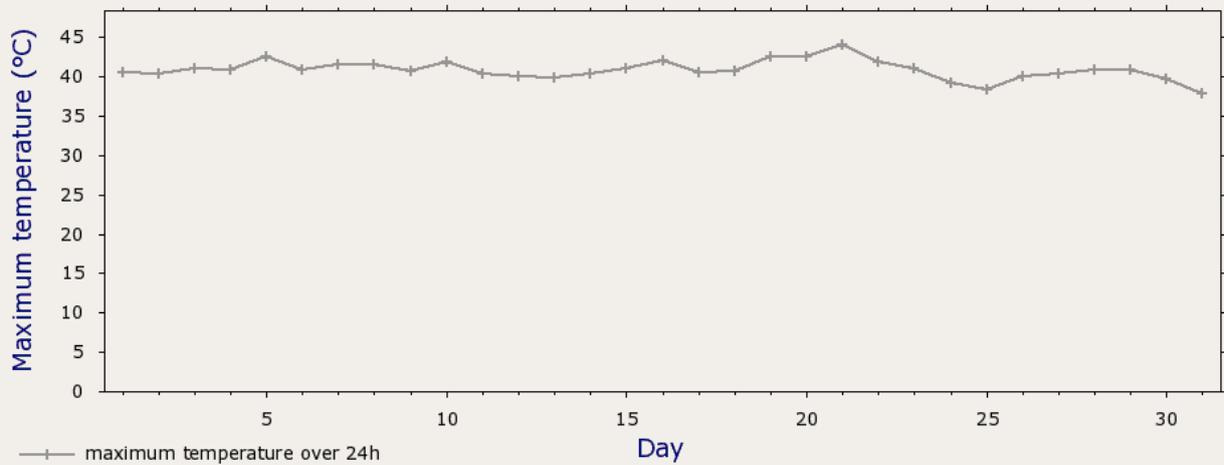
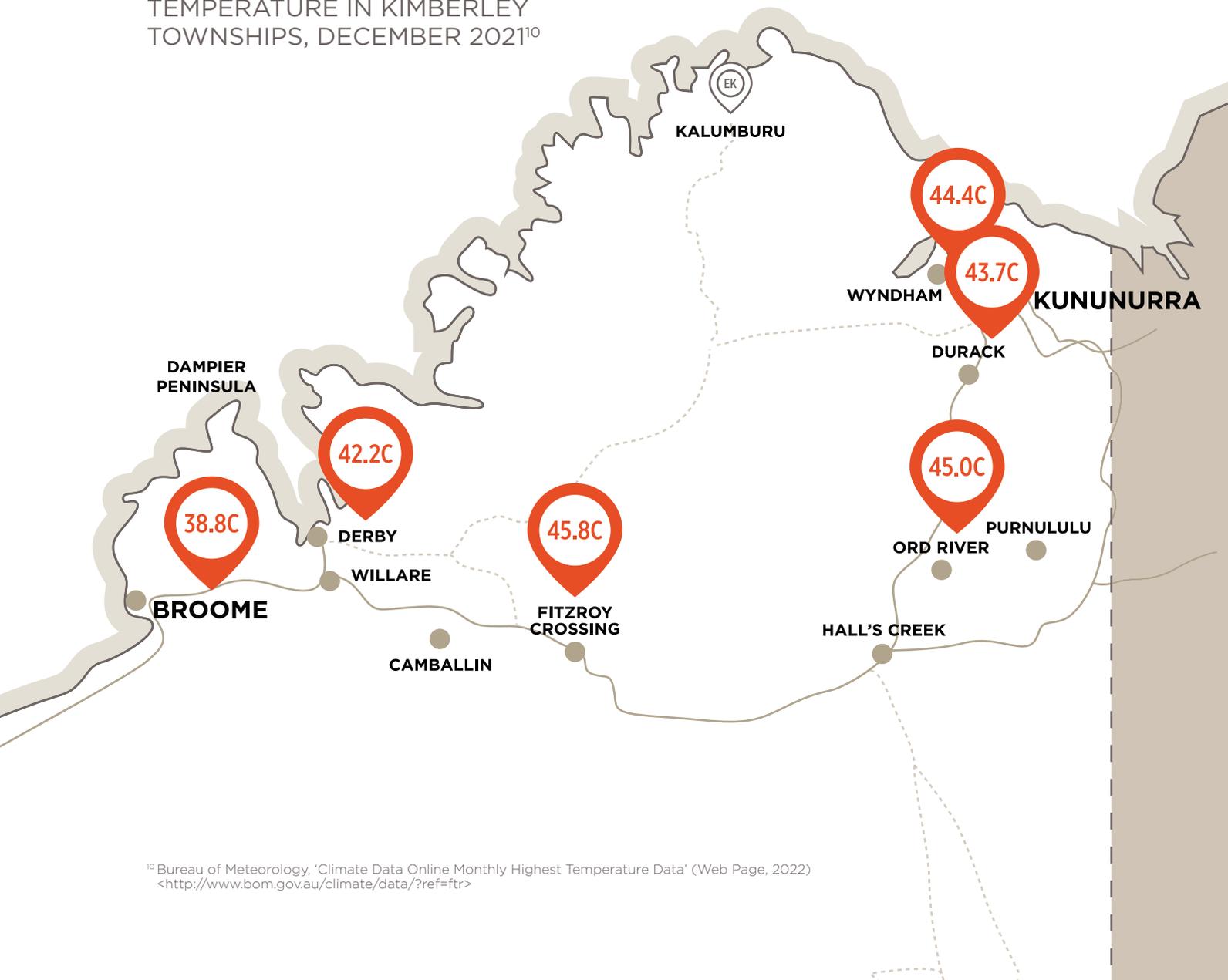


FIGURE 3: MAXIMUM TEMPERATURE IN KIMBERLEY TOWNSHIPS, DECEMBER 2021<sup>10</sup>



<sup>10</sup> Bureau of Meteorology, 'Climate Data Online Monthly Highest Temperature Data' (Web Page, 2022) <<http://www.bom.gov.au/climate/data/?ref=ftr>>

Daily temperatures reach 35 degrees in Kununurra for more than half the year, and in many other towns in the Kimberley temperatures reach 35 degrees or above for long periods of the year, especially throughout the ‘build up.’ During the wet season humidity can be as high as 60 percent in Broome.<sup>6</sup>

Temperatures at or above 35 degrees are dangerous to human health and wellbeing, especially when combined with humid

conditions. When weather is both 50 percent humid and over 35 degrees, conditions are considered dangerous, and when humidity reaches above 70 percent it is considered extremely dangerous.<sup>7</sup> The impact of the heat is worse when night-time temperatures do not go below 25 degrees as it affects the body’s ability to rest and recover from the heat during the day.<sup>8</sup> It stays at 25 degrees for at least 100 nights a year in Kununurra and 114 nights in Broome.<sup>9</sup>

### It’s getting hotter

The Kimberley region is going to get hotter under current climate change projections in Western Australia.<sup>11</sup> In the coming decades the Kimberley region will experience a significant increase in days over 35 to 40 degrees. By 2090 Kununurra is expected to experience 40-degree

days for most of the year. Without sufficient shelter, this increase in hot days will be above a survivable human threshold.<sup>12</sup> Further, Aboriginal people in regional areas will be some of the first to feel the effects of climate change, and risk being forced to move off their country if extreme heat continues and improvements are not made.<sup>13</sup>

TABLE 1: DAYS OVER 35 DEGREES IN THE KIMBERLEY

Town	Broome	Derby	Fitzroy	Halls Creek	Kununurra
Days over 35 degrees <b>now</b>	81	178	215	156	207
Days over 35 degrees <b>in 2030</b>	147	237	260	200	253

Source: Kimberley HeatWatch data, 2019.

***I don’t know, this year we haven’t had a good year, but usually it gets cool when it’s rain time. Last time we didn’t have much rain, it’s been getting hotter and hotter. (Sarah, Tenant)***

<sup>6</sup> Audrey Quicke, n3, p.2.

<sup>7</sup> US Government National Oceanic and Atmospheric Administration.

<sup>8</sup> Audrey Quicke, n3, p. 28.

<sup>9</sup> Ibid, p.2.

<sup>10</sup> Bureau of Meteorology, ‘Climate Data Online Monthly Highest Temperature Data’ (Web Page, 2022) <<http://www.bom.gov.au/climate/data/?ref=fttr>>

<sup>11</sup> Audrey Quicke, n3, 1.

<sup>12</sup> Sharon Campbell, Tomas Remenyi, Christopher White, Fay Johnston (2018) ‘Heatwave and Health Impact Research: A Global Review’ 53 Health and Place, 210, 216.

<sup>13</sup> Dr Tarun Weeramanthri, Climate Health WA Inquiry: Final Report, Government of Western Australia, 48, 55.

## Housing in the Kimberley

Almost half of renters in the Kimberley live in social housing, part of which is public housing managed by the Department of Communities, Housing Authority.<sup>14</sup> Aboriginal people comprise 59 percent of tenants in social housing in the region.<sup>19</sup> Extreme heat is felt more by renters because their houses are often behind with maintenance issues and are less energy efficient.<sup>15</sup> Housing quality impacts on energy consumption, the effectiveness of cooling appliances, and therefore the habitability of a home.<sup>16</sup>

While access to an adequate standard of living, including housing, is a right recognised in several International Agreements,<sup>17</sup> this has not translated to outcomes in the Kimberley. Importantly, what constitutes adequate housing includes whether the house is habitable. According to the United Nations Special Rapporteur on Housing: 'Housing is not adequate if it does not guarantee physical safety or provide adequate space, as well as protection against the cold, damp, heat, rain, wind other threats to health and structural hazards.'<sup>18</sup>

Housing in Aboriginal communities has been found to offer inadequate thermal comfort, resulting in prolonged high indoor temperatures.<sup>19</sup> Thermal comfort refers to the indoor environment that affects health and human performance.<sup>20</sup> The Australian Institute of Health and Welfare's National Housing Survey data showed that thermal comfort was the lowest rated amenity in Aboriginal Households

across Australia,<sup>21</sup> and in Western Australia only 66 percent of social housing tenants had their thermal comfort needs met.<sup>22</sup>

In the Kimberley overcrowding can also make managing the heat difficult - the more people there are in a house, the harder it is to cool it down effectively.<sup>23</sup> Homelessness rates in the Kimberley are nine times the WA Average,<sup>24</sup> and over 60 percent of those who are homeless in the Kimberley and the Pilbara are staying in severely overcrowded dwellings.<sup>25</sup>

## Housing and heat

Housing is a social determinant of health and is particularly relevant to Aboriginal people in the Kimberley whose health outcomes are likely to be impacted by poor housing. The National Agreement on Closing the Gap identifies access to safe housing as key to improving the health and wellbeing for Aboriginal Australians.<sup>26</sup> Poor environmental health in housing, overcrowding and exposure to heat for extended periods of time increase health risks.<sup>27</sup>

Already, more people in Australia die in heatwaves than all other natural disaster events combined.<sup>28</sup> In the three hottest climate zones in Australia, 4.5 to 9.1 percent of all deaths were associated with heat related mortality.<sup>29</sup> It is not known how many hospital admissions or deaths occur a result of the heat in the Kimberley, however a study in Perth found that young children and people aged over 60 years old were more likely to attend the hospital during heatwaves.<sup>30</sup>

<sup>14</sup> Australian Bureau of Statistics, 2016 Census of Population and Housing General Community Profile (Catalogue No 2001.0, 23 October 2017) Table GO33.

<sup>15</sup> Deloitte, The Economic Impacts of the National Low-Income Energy Productivity Program (April 2021) 2.

<sup>16</sup> Ibid.

<sup>17</sup> Including Article 25 of the Universal Declaration of Human Rights (1948) and in Article 11 of the International Covenant on Economic, Social and Cultural rights (1966).

<sup>18</sup> UN Habitat, Special Rapporteur on Housing, The Right to Adequate Housing, UN Doc Fact Sheet No.21, Rev. 1 (May 2014)

<sup>19</sup> Tess Lea et al. (2021) 'Sustainable Aboriginal Housing in Regional and Remote Australia' Final Report No. 368 AHURI, 68.

<sup>20</sup> Science Direct, 'Thermal Comfort' (Web Page 2022) <<https://www.sciencedirect.com/topics/earth-and-planetary-sciences/thermal-comfort>>

<sup>21</sup> Australian Institute of Health and Welfare, (2019) 'Aboriginal and Torres Strait Islander people: a focus report on housing and homelessness' Cat. 301, AIHW, 1, 45.

<sup>22</sup> Shelter WA, 'Energy Efficient Housing' (Web Page 2022) <<https://www.shelterwa.org.au/our-work/advocacy/social-housing/energy-efficient-housing/>>

<sup>23</sup> Tess Lea et al. (2021) 'Sustainable Aboriginal Housing in Regional and Remote Australia' Final Report No. 368 AHURI, 64.

<sup>24</sup> Shelter WA, Unlock Housing, Heat Map Summary - Homelessness and Housing Stress 2021, (Report, March 2021) 3 -5.

<sup>25</sup> Ibid.

<sup>26</sup> Australian Government, 'National Agreement on Closing the Gap 2020' (Report 2020).

<sup>27</sup> Ibid.

<sup>28</sup> A. Gasparrini et al., 2015, 'mortality risk attributable to high and low ambient temperature: a multi country observational study.' 386 Lancet, 369.

<sup>29</sup> T Longden et al. (2022) 'Energy Insecurity During Temperature Extremes in Remote Australia' 7 Nature Energy 43.

<sup>30</sup> J Xiao et al, (2017) 'Variation in Population Vulnerability to Heat Wave in Western Australia' Front Public Health, 5.



For vulnerable groups such as the elderly, and those with chronic health issues, living in poorly maintained houses will amplify their vulnerability to heat.<sup>31</sup> Aboriginal and Torres Strait Islander people experience higher levels of preventable diseases and chronic illness in part due to overcrowded and run-down housing.<sup>32</sup> Research across Australia shows:

- Over a third of Aboriginal people in Australia have a respiratory disease and over a quarter have a cardiovascular disease,<sup>33</sup>
- Chronic kidney disease is more than twice as common among the Aboriginal population.<sup>34</sup> Aboriginal people are also 3.5 times more likely to have diabetes than non-Aboriginal people,<sup>35</sup>
- Aboriginal adults are 2.7 as likely as non-Aboriginal adults to experience high/very high psychological distress.<sup>36</sup>

The rate of avoidable deaths in the Kimberley region is 2.5 times higher than the WA average. Avoidable death rates for diabetes, renal failure, rheumatic and other valvular heart disease, and suicide are significantly higher than the rest of the state.<sup>37</sup>

### Financial disadvantage in the Kimberley

Public housing tenants in the Kimberley live on low incomes not sufficient for the high cost of energy and water in remote WA. One third of Kimberley residents living in Local Government Areas (Halls Creek, Wyndham East Kimberley) score in the lowest 10 percent of Australia on the Socio-Economic Indexes for Areas (SEIFA).<sup>38</sup> This score reflects many people are living on low incomes and have limited access to services and resources.<sup>39</sup> For example:

- On average the cost of living in the Kimberley region is 12.9 percent more expensive than in Perth,<sup>40</sup>
- In Halls Creek, a community with one of the highest cost of living in the state, the median personal weekly income for an Aboriginal household is 316.00 and the median weekly household income is 781.00,<sup>41</sup>
- The median non-Aboriginal income in the Kimberley is \$2,014 whereas the median Aboriginal household income is \$920.<sup>42</sup>

<sup>31</sup> Lander et al., (2019) 'Extreme Heat Driven by the Climate Emergency: Impacts on the Health and Wellbeing of Public Housing Tenants in Mildura' (Report prepared by Mallee Family Care and the University of Sydney) 4.

<sup>32</sup> Australian Government, 'National Aboriginal and Torres Strait Islander Health Plan 2013-2023' (Report 2013) p.12.

<sup>33</sup> Australian Institute of Health and Welfare, Cardiovascular disease, diabetes and chronic kidney disease - Australian Facts: Aboriginal and Torres Strait Islander people (Report No CDK 5, 25 November 2015).

<sup>34</sup> Ibid.

<sup>35</sup> Ibid.

<sup>36</sup> Australian Government, The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples:2015 (Report June 2015) 50.

<sup>37</sup> Western Australia Country Health Service, Kimberley Health Profile (Report November 2018) 41.

<sup>38</sup> Western Australia Country Health Service, Kimberley Health Profile (Report, November 2018) 13.

<sup>39</sup> Australian Bureau of Statistics, Census of Population and Housing: SEIFA Australia 2016 (Web Page 2016) <<https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2033.0.55.001-2016-Main%20Features-Advantage%20&%20Disadvantage.%20The%20Concepts-9>>

<sup>40</sup> Binarri-Binyja Yarrowoo, Kununurra Housing and Home Ownership (Empowered Communities Evidence Brief 2020) 1.

<sup>41</sup> Australian Bureau of Statistics, 2016 Census of Population and Housing General Community Profile (Catalogue No 2001.0, 23 October 2017).

<sup>42</sup> Australian Bureau of Statistics, 2016 Census of Population and Housing General Community Profile (Catalogue No 2001.0, 23 October 2017).

# Discussion of Findings

## CH 1: Housing Quality & Maintenance

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***I try and cool the place off. But it's still hot. The house is hot, how they made it. (Tenant, Kununurra)***

***I just usually hose the veranda down out the front if I can and if not I just sit inside and sweat with the fan on. (Sarah)***

Throughout our consultations tenants reported they struggle to keep indoor temperatures to a manageable level. They told us they try to keep themselves and their houses cool by:

- hosing down the roof, veranda and under the house,
- hosing down concrete outside the house,
- getting their children to play outside under a hose or sprinkler,
- putting foil on the windows,
- using sheets and other material as curtains,
- going to the TAB or the supermarket to stay cool,

- wiping themselves down with a cool cloth,
- lying down inside with the fan,
- avoiding walking outside from 7am to 5pm,
- seeking respite at aged care facilities,
- going to a family member's house who has better air conditioning,
- sleeping outside because it is cooler than inside.

None of these solutions are sustainable and using water puts further financial pressure on tenants who will have to pay high water bills.

***It is so hot if you don't have air-conditioning, and you have lots of people living in one house, especially kids, they have to cool down with water, under the hose or bath. This then makes them sick and you end up with a big water bill. The wet season is intolerable, when you're in the house with just the fan on, it just gives off hot wind anyway. The house is like an incinerator. (Respondent to KCLS Housing Survey)***

## Findings

In our consultations we asked tenants what they think about their house and what changes would help them most to deal with the heat. Many tenants spoke of feeling defeated trying to keep the heat out and had insights into why they think their housing is hot.



## Housing is not built for the heat

***I don't know how they built these houses, but...it's not really cool at this time of the year. (Tenant, Kununurra)***

***I sit outside all the time. I don't sit inside my lounge. I sit on my veranda just to get some coolness. (Tenant, Wyndham)***

Eighty five percent of social housing survey respondents said their house always gets too hot during the hotter months of the year, with the remaining 15 percent saying their house gets hot very often and at times. For a lot of tenants, turning an air conditioner on during the day is very costly and makes little difference because their houses are so hot inside.

Tenants told us they think their houses get hot because they are not built for the heat experienced in the Kimberley - 'the houses are not insulated in the roof properly. They maybe have one foam layer and the direct heat is coming through.' Some tenants spoke about not having enough shade, or their house facing the afternoon sun and their bedroom, lounge and kitchen getting hot. Others told us about air

conditioner apertures facing into a small space rather than into the living area.

When asked what changes would help public housing tenants stay cool in the Kimberley, all service providers acknowledged the concerns raised about the standard of housing in the region and agreed that housing is not built with the tropical climate in mind. Many were concerned housing was designed in Perth without discussion with locals. They described seeing houses with no vents for air flow, too many small rooms, large glass windows facing the sun, no curtains, no verandas, or insufficient shade outside. They suggested new houses being built should be designed to cope with the heat and designed with input from the community.

***It's like a sauna. It's like an oven. It's like a bake. The tin roof, the walls are just as bad and corrugated. So it's hard for them to even live in there. Four walls makes the house. Really? What about making it a cool environment for the people in this place? (Service Provider, Wyndham)***

## Tenant Story

I care for my daughter and son, and they have been diagnosed with severe mental illnesses. When they have panic and anxiety attacks, they cannot leave the house so they spend days and or weeks at a time in their bedrooms. As we only have 2 box aircons in 2 bedrooms my daughter bunks in my bedroom and when she is going through manic episodes, I feel like I can't have a moments peace from constant manic and psychotic behaviours. The house gets so hot that we barely use the stove to cook because it makes it...hotter. Then when we go to have a cold shower to cool down the water coming out of the cold water tap is hot as well so the only relief is the aircons. Then I get electricity bills that are \$1000 to \$1300 just from 2 aircons and am paying \$300 per f/n to cover the bill. I just don't feel like I'm living a good life.

## Housing is aging and poorly maintained

***There's no point in someone having an air conditioner, that's even a good one, if there isn't maintenance being done on the broken window or the door isn't sealed properly. (Service Provider, Kununurra)***

Without ongoing maintenance and repairs, houses deteriorate<sup>43</sup> and contribute to poor environmental health and thermal comfort in a house.<sup>44</sup> Broken windows or doors, cracks in walls and gaps under doors keep houses hot. Disruptions to electricity and water supply can occur due to outstanding maintenance issues such as broken taps and light switches.<sup>45</sup> This reflects what the Remote Housing review found – 'housing construction quality in remote WA was consistently found to be poor, repairs were taking too long to fix and there is no capacity for proactive works.'<sup>46</sup>

Tenants told us they find it hard to manage the heat because their houses are aging quickly and have maintenance issues not remedied quickly by the Housing Authority. It was common to hear of urgent repairs not conducted within prescribed times<sup>47</sup> or properties not maintained to a reasonable state of repair.<sup>48</sup> One tenant we spoke to had not had maintenance requests attended to for nine months. Common maintenance items include broken doors and windows, holes in walls, bathroom and laundry taps, hot water systems and ant infestations.

<sup>43</sup> R Towart (2017) 'Remote Housing Review: A Review of the National Partnership Agreement on Remote Aboriginal Housing and the Remote Housing Strategy (2008-2018)' Canberra: Department of Prime Minister and Cabinet, 2.

<sup>44</sup> Tess Lea et al. (2021) 'Sustainable Aboriginal Housing in Regional and Remote Australia' Final Report N.368, 4 November 2021;

<sup>45</sup> Vicki-Ann Ware, 2013, Housing strategies that improve Indigenous health outcomes, Australian Institute of Health and Welfare (Closing the Gap Clearinghouse), Resource Sheet 25.

<sup>46</sup> R Towart (2017) 'Remote Housing Review: A Review of the National Partnership Agreement on Remote Aboriginal Housing and the Remote Housing Strategy (2008-2018)' Canberra: Department of Prime Minister and Cabinet, 5.

<sup>47</sup> For example: Under the Housing Authority Maintenance Policy Manual (3.3.2 P2 Urgent Work Orders) and the Residential Tenancies Act (s 38) Urgent repairs such water leaks or a blocked toilet must be repaired within 24 hours.

<sup>48</sup> Residential Tenancies Act 1987 (WA), s 42(2).

The current maintenance system is inaccessible and leads to poor outcomes for tenants in the Kimberley. Tenants are required to report maintenance to Housing Direct in Perth by phone, which is sent on to a privately owned maintenance company, Lake Maintenance (contracted by the Department).

Lake Maintenance send a workorder to a subcontractor in a local town. This system is prone to delays, administrative errors, and extra travel overhead expenses to tenants.

Tenants spoke about the poor condition of their housing and the impact it has on their daily lives:

### Sophie:

***I always go and ask them to put air-conditioner or flyscreen door. But they say...we're fixing this house because it's old, you know? They say that to me. And I just you know? It's their house, I can't really say anything else.***

Sophie has been living in the same public housing property for over 20 years. The property has cracks in the walls, broken windows, a broken shower and only one flyscreen door. The house did not have an air conditioner aperture. She had been living without air conditioning for years, and coped by leaving the doors and windows open at night which was a safety risk. She asked the local Housing Authority office if she could have an aperture installed. The office told her she had too many outstanding bills and, on that basis, they would not install one. She ended up using an axe to create a hole herself and installed an air conditioner with sheets to keep it in place. She worries about asbestos in the walls, but she really needs an air conditioner as the weather continues to get hotter.

The 2014-15 National Aboriginal and Torres Strait Islander Social Survey found that Aboriginal people in remote areas were more likely to be living in a dwelling with major structural problems (37%), lacking basic household facilities (27%), and in dwellings not meeting acceptable standards (31%).

### Tracey:

***I think the heat comes in through all the cracks. The house is dead old. That's why I need a new house. Because this part, that thing is falling to bits.***

Tracey was recently allocated a property for her and her children. She told us the property is old and has significant maintenance issues. She has one old box air conditioner in her bedroom, and she cannot afford the cost of a new one. She doesn't feel it will help much because her house cannot keep the heat out. There are cracks throughout the house, gaps under the doors and unrepaired holes in wall. She is worried about possible asbestos risk. She spends her days at work and her afternoons at her sister's house because her house is too hot to live in during the day.

*Santa Teresa v Chief Executive Officer (Housing) [2019] NTCAT 7 (27 February 2019)*

The Northern Territory Civil and Administrative Tribunal held that a premises inhabited by an Aboriginal woman was considered not habitable for the months of November through January for a number of years. This was partly based on the home not having an air conditioner for 2121 days in temperatures reaching above 40°C during the day.

On appeal the Northern Territory Supreme Court held that 'habitable' requires an overall assessment of the 'humaneness, suitability and reasonable comfort' of the premises judged against contemporary standards.

## Housing is overcrowded

***If we dealt with the overcrowding, some of these issues that we're talking about, wouldn't be a major issue. (Service Provider, Halls Creek)***

***Too much overcrowding.... Makes our life living hell. (Respondent, KCLS Housing Survey 2021)***

The amount of people living in a house can affect the thermal comfort of a house<sup>49</sup> and impact the level of maintenance required to keep a house habitable. In our consultations it was common to hear of overcrowding in households. Service providers reported that

many of their clients lived in three-bedroom houses with up to ten other occupants. An air conditioner in an overcrowded house must work harder to deal with the additional heat, which pushes power prices up and reduces their effectiveness.<sup>50</sup>

***As soon as you have 10 plus people staying in the house, one air con is not going to do anything. (Service Provider, Kununurra)***

Some tenants told us their whole household would sleep in the one room that has an air conditioner, which they said causes difficulty staying in a routine. Service providers observed

that it also can raise stress levels in families and means parents might not sleep well and attend work, and kids might be irritable for school.

***There's just beds everywhere; there's just people everywhere. There's just that overcrowding again. And we've got places there that have very sick children and no air conditioning. (Service provider, Halls Creek)***

<sup>49</sup> Tess Lea et al. (2021) 'Sustainable Aboriginal Housing in Regional and Remote Australia' Final Report No. 368 AHURI, 37.

<sup>50</sup> Ibid.

For people experiencing homelessness, staying with family is one way of dealing with the extreme heat and tropical climate over November to April. However, there are others who do not have a place to stay. One local crisis accommodation facility observed a sharp increase in admissions in Kununurra during the hotter months, from 192 admissions in July 2020 to 446 in December 2020. They attribute this to high temperatures and increased rain leaving homeless people stranded. The average wait time on the priority waitlist is one year in

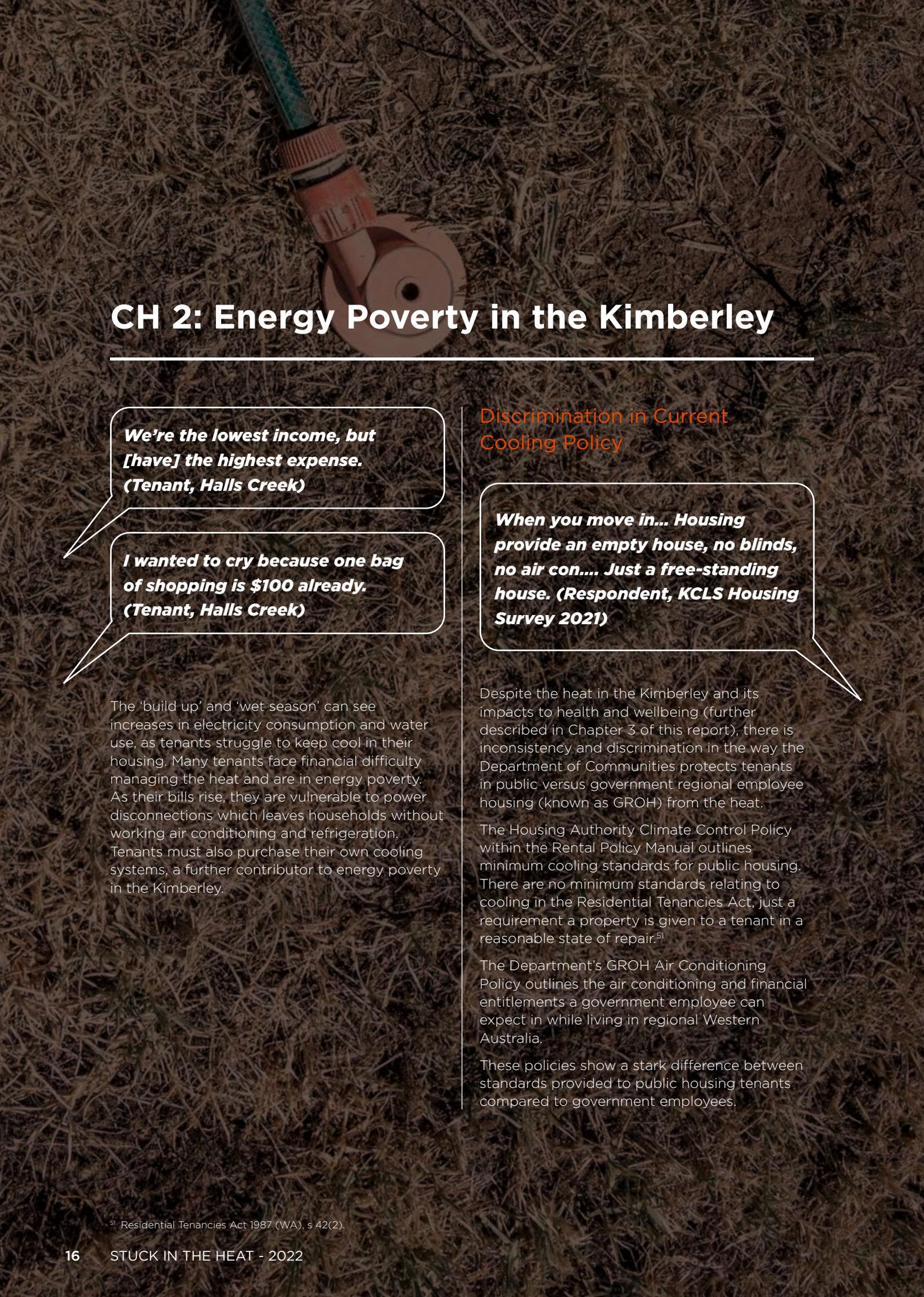
Western Australia, but in our experience many clients wait more than two years on the priority list in the Kimberley. Tenants can expect to wait up to ten years on the general list.

When asked what solutions would help tenants stay cool and save money, every service provider suggested overcrowding is the underlying issue. One service provider suggested increasing housing stock numbers and investing in effective cooling measures could reduce hospital admissions and alleviate pressure on shelters and other social services.

### Kelly's story

Kelly has two children. She lives with her mother in a three-bedroom house. There are 12 people living in the house. They have one box air conditioner and one portable air conditioner. Kelly and her mother find it hard to pay bills and are in arrears with

Horizon Power by over 2,000.00. She finds it hard to keep the house clean because of how hot it is and the amount of people in the house. She says it leads to her kids getting sick with dehydration, vomiting and diarrhoea. She finds it difficult to sleep as most people sleep in the same room at night.



## CH 2: Energy Poverty in the Kimberley

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***We're the lowest income, but [have] the highest expense. (Tenant, Halls Creek)***

***I wanted to cry because one bag of shopping is \$100 already. (Tenant, Halls Creek)***

The 'build up' and 'wet season' can see increases in electricity consumption and water use, as tenants struggle to keep cool in their housing. Many tenants face financial difficulty managing the heat and are in energy poverty. As their bills rise, they are vulnerable to power disconnections which leaves households without working air conditioning and refrigeration. Tenants must also purchase their own cooling systems, a further contributor to energy poverty in the Kimberley.

### Discrimination in Current Cooling Policy

***When you move in... Housing provide an empty house, no blinds, no air con.... Just a free-standing house. (Respondent, KCLS Housing Survey 2021)***

Despite the heat in the Kimberley and its impacts to health and wellbeing (further described in Chapter 3 of this report), there is inconsistency and discrimination in the way the Department of Communities protects tenants in public versus government regional employee housing (known as GROH) from the heat.

The Housing Authority Climate Control Policy within the Rental Policy Manual outlines minimum cooling standards for public housing. There are no minimum standards relating to cooling in the Residential Tenancies Act, just a requirement a property is given to a tenant in a reasonable state of repair.<sup>51</sup>

The Department's GROH Air Conditioning Policy outlines the air conditioning and financial entitlements a government employee can expect in while living in regional Western Australia.

These policies show a stark difference between standards provided to public housing tenants compared to government employees.

<sup>51</sup> Residential Tenancies Act 1987 (WA), s 42(2).



TABLE 2: COMPARISON BETWEEN PUBLIC HOUSING AND GROH HOUSING

What Public Housing tenants can expect when they move in <sup>52</sup>	What GROH tenants can expect when they move in <sup>53</sup>
Ceiling Fan (in houses built after 1990)	Ceiling fans in all bedrooms
Secure air-conditioning apertures into external walls of living area and bedrooms to allow tenants to install air conditioner units. (in houses built after 1990)	Ducted or sufficient split system air conditioner
Windows in each room to improve air flow	Curtain Rods
Insulation (in houses built after 1990)	Curtains/Blinds
	Annual Maintenance of Air Conditioner by landlord
	Air Conditioning Subsidy to assist with high power bills
	Flyscreen installed to all doors and windows
	Insulation
	Window treatments

## Findings

### Tenants rely on ineffective cooling

***I was dumbfounded, to be honest. When someone said to me that there's no air conditioning in these houses, to me I would have thought it was their right to have that, especially when the temperature is 43 degrees day in and day out. (Service Provider, Halls Creek)***

<sup>52</sup> Design Brief - Northwest Regional Social Housing; Climate Control Policy.

<sup>53</sup> Housing Authority Part B: Functional Brief. GROH and Key Worker Housing. Single and Grouped Dwellings. Southern and Northern Regions; GROH Air Conditioning Policy.

There is no way to avoid the need for an air conditioner in current public housing when temperatures reach above 35 or 40 degrees for weeks to months on end. During our consultations with tenants in October to December, temperatures were often over 40 degrees during the day and were lucky to dip below 25 degrees overnight. Tenants are again 'stuck in the heat' because they do not have sufficient choice and are stuck in a cycle of purchasing poorly performing air conditioners. Selecting the right air conditioner impacts on its effectiveness, the amount of electricity it will use, and the lifespan it will have.

The following are some factors contributing to the effectiveness and efficiency of an air conditioner:

- **The size of the room and capacity of the air conditioning unit** - (kilowatt per hour capacity)
- **The quality of the house** (i.e., Insulation, windows, shading of the walls and windows). Using a correctly sized unit will make cooling

more efficient. Undersized units have to work harder to maintain the selected temperature.

- **Usage time** - if the unit is going to be used for long periods of time, it is important to select a unit with a higher energy rating.
- **Climate zone** - star ratings for cooling are based on the efficiency of the air conditioner at an outside temperature of 35C.<sup>54</sup>
- **Smaller sized box units have a smaller filtration system and can cause a build up of dust and pathogens** - filter maintenance is critical.

Most tenants are not in a financial position to purchase the best cooling system for their house. They are only able to afford box air conditioners (also known as window wall units). These units have a lower up-front cost and are easy to self-install into the aperture provided by the Department. Tenants also said box air conditioners are easier to remove when they leave a property, something they are required to do under current policy.<sup>55</sup>

***Yeah, we tried to get someone to install it for us but that costs a lot of money and then when you leave the house and want it taken out you have to pay someone to take it out, and then we have to pay for the damages.***  
***(Sarah, Tenant)***

Of the 33 public housing tenants we surveyed 26 had box air conditioners, two had split system air conditioners, and seven tenants did not have air conditioning because they felt it would be too expensive and difficult to install themselves. It is common for tenants to purchase a box air conditioner second hand for less than 100 dollars.

To get around the costs, service providers told us many tenants use the No Interest Loan (NILS) scheme to purchase box air conditioners during the hotter months of the year, which puts pressure on their ability to afford other essential whitegoods like refrigerators and washing machines.



<sup>54</sup> Commonwealth Government, Energy Rating Air Conditioners (Web Page 2022) <<https://www.energyrating.gov.au/products/space-heating-and-cooling/air-conditioners>>

<sup>55</sup> Government of Western Australia, Rental Policy Manual (Climate Control Policy), 71.

Using cheap box air conditioners means tenants are less able to cool their houses effectively. Box air conditioners are known to be less efficient<sup>56</sup>, and cheaper, smaller, or second-hand units are likely not sufficient to effectively cool a large room. Half of our survey respondents had two or more box air conditioners in their house, and tenants like Sarah could not rely on their box

air conditioner to cool their house down during the day. Often box air-conditioners were self-installed by tenants to minimise costs. Faulty or incorrect installation appeared to be a common occurrence, with reports of tenants using pillows, sheets, cardboard, or other materials to fit the air conditioner in the aperture, causing air to escape.

***One thing that we really see is just the high electricity bills as well. So people are putting their pillows around their air cons so it's working overtime, and they're getting these massive power bills which they can't pay. (Service Provider, Kununurra)***



### Mary's Story

Mary is 55 years old. she has been renting with Housing Authority for 10 years. She receives the Disability Support Pension and lives with mental health issues and diabetes. She has one box air conditioner in her bedroom she uses for afternoon naps and overnight at times. Her box air conditioner in

the living room has been broken for two years. She cannot afford a new one. She worries about affording her power bills even without another air conditioner. During the hot months of the year her mental health suffers. She copes during the day with the heat by having 2 – 3 showers a day, she also does other things to keep the house cool.

***I open the windows during the day, I mop the floors twice a day, I wipe down the walls with a cloth every day otherwise it gets too hot. I clean the fans. I like to go for a walk during the day, but I have mental health problems, diabetes. At the moment I am just trying to look after myself and keep the house as cool as I can. [The heat] makes me feel anxious and depressed. I start having psychosis during the heat, it makes it much harder to control.***

<sup>56</sup> Alliance, 'Window Wall Unit Air Conditioners' (Web Page 2022) <<https://www.alliancecc.com.au/5-things-you-need-to-know-about-window-wall-unit-air-conditioners/>>

## Tenants are in financial stress

***That's why you're scared to use the air con, because the amount of money you're on at the moment you can't afford it. If it comes to \$300-\$400, that's the amount of money you get from Centrelink just about, and it's all gone. (Tenant, Kununurra)***

In consultations, tenants like Mary told us they worry about their power bills increasing during the hot months of the year. They spoke of

having to make the choice between keeping cool, knowing their bills will be too expensive, or feeling hot and struggling through the day.

***You pay so much rent living in those houses, and it's so hot. You can't have the air conditioner on all day because your bill comes in. It's hard. (Tenant, Kununurra)***

Tenants in the Kimberley connect to power through an account with Horizon Power with regular billing periods, or by pre-payment method using a Pre-Paid Power Card (only available in some towns). Most tenants we spoke to have a regular account with Horizon Power. Some tenants said they preferred using Prepaid Power Cards so they could control their

spending. However, other tenants and service providers also mentioned that Pre-Paid cards can lead to ongoing power outages if nobody has money to pay for power. This is consistent with recent research which revealed high rates of prepaid meters being disconnected in remote Aboriginal communities.<sup>57</sup>

***When [they] get in financial problems...they get their power cut off. So even though if they do have it [air cons] there, they can't use it because they've got no power. (Service Provider, Halls Creek)***

***Those box air cons do build up electricity bills. So you can't have it running all day. (Tenant, Halls Creek)***

<sup>57</sup> T Longden, S Quilty, B Riley et al. (2022) 'Energy Insecurity During Temperature Extremes in Remote Australia' 7 Nature Energy, 43.

Seventy eight percent of survey respondents said they found it hard to pay their power bills when they use air conditioners. Power bills amounting to \$2000.00 or more were not uncommon, with many noticing the tendency for bills to go up during the 'build up' and 'wet season.' A hardship officer at Horizon Power told us Kimberley customers' power bills can triple in price during the 'build up', from about \$300 to \$400 dollars every two-month bill period to \$1200 to \$1800 per bill period.'

If tenants do not pay their electricity bills, their power accounts may be disconnected. Having the power disconnected in extreme heat places stress on families and poses a health risk particularly to children, the elderly and unwell householders. Support services reported they were frequently overwhelmed by tenants requiring emergency relief and help negotiating a reconnection. Unless there is a plan to address energy poverty, tenants will continue to be vulnerable to disconnections as temperatures increase.

***[Tenants] are all looking for emergency relief because the idea of having this power bill that's \$4000 when you're living on \$600 a fortnight is crippling. (Service provider, Kununurra)***

The stories we heard are consistent with national data which shows low-income households spend more than 10 percent of their disposable income on electricity, compared to an average of 4 percent of spending for an average household.<sup>58</sup> We compared a public housing

tenant on Jobseeker to a GROH housing tenant in Kununurra. The public housing tenant spent up to 15 percent of their income on their power bill. In comparison the government employee spent 0.8 percent of their income on their power bill.

**TABLE 3: ONE OFF COMPARISON OF PERCENTAGE OF INCOME ON POWER IN KUNUNURRA\***

	Public Housing tenant, Jobkeeper (living alone)	Public Housing Tenant (with children) Centrelink income, plus benefit from Department of Communities	Full time Professional, private rental (2 person household)	Government worker, GROH Housing (2 person household)
<b>Income</b>	660.00	1833.00	2515.00	2,020
<b>Power Bill (on average for 2 month period)</b>	400	600	400	482 (but GROH tenant paid 65.00 with subsidy)
<b>Proportion of income they spend on power (%)</b>	15%	9.5%	4.0%	0.8%

\*This is a small sample size and used to indicate lived experience of these four individuals

Tenants told us they try hard to educate their children or other household members not to leave doors and windows open when the air conditioner is on. Tenants said that while they tried their best to educate their kids and family members about the need for energy efficiency, more support and education on how to manage power bills and thermal cooling is needed.

<sup>58</sup> Shelter WA, 'Energy Efficient Housing' (Web Page 2022) <<https://www.shelterwa.org.au/our-work/advocacy/social-housing/energy-efficient-housing/>>

## CH 3: Lived Experience Feedback: the effect of the heat on wellbeing

***I am not a well person and my home is like a heat box. I can't rest and relax most of the time. The heat is unbearable during the hot season. It's very hard to live in this house but we have no choice. There are so much repairs to be done in this house. My children are often sick and can't go to school often because of this living condition. (Tenant, KCLS Housing Survey 2021)***

Faced with poor quality housing and energy poverty, tenants in the Kimberley are exposed to extreme heat and are vulnerable to the serious impacts it can have. Extreme heat can cause dehydration, heatstroke, aggravation of pre-existing illnesses and conditions, increase heart and respiratory rates, muscle cramps and discomfort.<sup>59</sup> Poor indoor temperature regulation and mould can lead to respiratory and skin diseases.<sup>60</sup>

There is also evidence heat exacerbates psychological stress.<sup>61</sup> Extreme heat and humidity can cause sleep disruption and fatigue, irritability and stress, and lead to increases in aggression and violence.<sup>62</sup> High day time temperatures also make it difficult for people to move around during the day, particularly if they do not have access to a vehicle.

### Findings: effect of the heat on physical health

#### Impact on children

The heat is particularly dangerous to the wellbeing of children - their body temperature is more sensitive to heat, and they are less aware of how to recognise signs of heat stress.<sup>63</sup> One

third of public housing tenants we surveyed who had children said their children have been unwell 10 or more times in the past year due to the heat. Many tenants spoke about their children running around outside all day despite the heat, resulting in dehydration and sicknesses.

#### Impact on Elders

***I do notice that some of the adults, they do get a little frustrated, and it's kind of hard for them to stay awake because they always get dizzy. That's mainly the elders I see as well, like they just can't handle the heat. (Tenant, Halls Creek)***

The heat has a bigger impact on older people due to lower cardiovascular fitness and existing illnesses.<sup>64</sup> Some service providers spoke of the difficulty older people have with walking around in the heat. They also spoke of the increased

conflict and impact it has on elders in the community. Some of their elderly clients had younger family members asking them for money for taxis because it is too hot to walk anywhere.

<sup>59</sup> Nate Seltenrich, 'Between Extremes: Health Effects of Heat and Cold' (2015) 123(11) Environmental Health Perspectives 275.

<sup>60</sup> Vicki-Ann Ware, 2013, Housing strategies that improve Indigenous health outcomes, Australian Institute of Health and Welfare (Closing the Gap Clearinghouse), Resource Sheet 25.

<sup>61</sup> Binarri-Binyja Yarrawoo, Halls Creek Social and Emotional Wellbeing (Empowered Communities Evidence Brief 2020) 1.

<sup>62</sup> Lander et al., (2019) 'Extreme Heat Driven by the Climate Emergency: Impacts on the Health and Wellbeing of Public Housing Tenants in Mildura' (Report prepared by Mallee Family Care and the University of Sydney) 3.

<sup>63</sup> Victoria Council of Social Service, Feeling the Heat (Report May 2021) 16.

<sup>64</sup> Ibid.

## Difficulty sleeping

When we spoke to tenants, day-time temperatures were above 35 degrees every day, leaving tenants with no chance to recover from the impact heat has on the body. Ninety three percent of respondents in our survey said they find it hard to sleep when it is hot. Of the six percent who did not have trouble sleeping, 75 percent had a split system air conditioner.

One tenant with diabetes spoke about his difficulty staying cool at night, getting up four to five times a night to shower just to keep cool enough to sleep. Another tenant said her mother, who is in a wheelchair, sleeps outside because they do not have an air conditioner. Most service providers had noticed that their staff or clients in public housing end up sleeping outside or spending time outside.

***We also see a lot more of our clients living outside of the house, so we'll go and see them, and they'll just be lying out in the veranda area, because it's 50 degrees inside. (Service Provider, Kununurra)***

## Impact on existing illnesses

We asked tenants how the heat affects them and their families. Several tenants we spoke to told us the biggest impact was on their existing illnesses which are made worse by being unable

to escape the heat. People are more vulnerable to the heat if they already have a chronic or respiratory illness.<sup>65</sup>

***The doctor said with the heat and having no air con I haven't put on any weight and stuff but I have been trying to eat but sometimes it is hard to eat during the day like at lunch time and even in the morning it's too hot to eat. (Tenant, Kununurra)***

## Impact on storage of medication

Service providers and tenants also raised the issue of medication needing to be stored in a cool place or in a refrigerator. This is often not achievable by individuals who are homeless or do not have a cool place to live. Certain medications can also be disrupted by extreme

heat, resulting in side effects and worsening health.<sup>66</sup> It can mean they do not take their medication which causes further health issues. Service providers spoke of dialysis patients who could not do dialysis at home because their home was not cool enough.

<sup>65</sup> Victoria Council of Social Service, Feeling the Heat (Report May 2021) 16.

<sup>66</sup> Ibid.



## Tenant stories

### Sarah

Sarah spoke to us about how the heat makes her stress and health issues harder to manage. 'I try to keep cool and try to relax because I have been on that many different tablets trying to keep my fit levels down and stuff like that which is from the heat and stress.' If I had a split system, I would turn it on and my health would change. The doctor said with the heat and having no air con I haven't put on any weight... but I have been trying to eat but sometimes it is hard to eat during the day...at lunch time and even in the morning it's too hot to eat.'

### Tori

Tori has been in Public Housing for many years. She has breast cancer and is trying to recover from her treatment. She worries about having a big power bill and does not feel that her box air conditioner cools her down. She told us, 'I was diagnosed with breast cancer, and due to my condition, my doctor wrote a letter for me to [Housing] asking if they could put in a split system. They told me in person, "No, you can't have a split system in there, you have to pay for it yourself." I'm not working. I'm on JobSeeker allowance...due to my health. They won't help at all. Even though I've got a doctor's letter in writing.'



## Social wellbeing

***A lot of people get stressed especially sick people, and other people too. I see a lot of people drinking and walk around and don't eat much, sweating. I can't get over that. (Tenant, Kununurra)***

### Impact on storage of medication

It is well known that heat impacts physical health, however research has also shown living in extreme heat has impacts on a person's social wellbeing and their wider community.<sup>67</sup> The heat can impact on personal safety inside houses, if windows or doors are kept open; <sup>68</sup> and contribute to lower attendance at school and work.<sup>69</sup>

Housing stress ends up creating major costs for the whole community and contributes to costly government interventions in the justice system.<sup>70</sup> A Victorian report observed an increase in demand for domestic violence services during and after heatwaves, attributed to increased

drug and alcohol use, tension and families being trapped at home with perpetrators.<sup>71</sup> A NSW study found assault and theft offences increased as temperatures increased.<sup>72</sup>

This appears to be consistent with experiences in the Kimberley. Kimberley residents often refer to the 'build up' as the 'silly season' – as it becomes hotter there is more conflict and stress. WA Police statistics in Kununurra and Broome from 2013 to 2021 show seasonal differences in crime rates. Crime numbers increase in the 'build up' and 'wet season' compared to the cooler months of the year.

<sup>67</sup> Lander et al., (2019) 'Extreme Heat Driven by the Climate Emergency: Impacts on the Health and Wellbeing of Public Housing Tenants in Mildura' (Report prepared by Mallee Family Care and the University of Sydney) 3.

<sup>68</sup> Victoria Council of Social Service, Feeling the Heat (Report May 2021) 6.

<sup>69</sup> Ibid.

<sup>70</sup> SGS Economics and Planning, Give Me Costs: The Long-Term Costs Of Underproviding Public, Social And Affordable Housing (Report June 2022) 9.

<sup>71</sup> Victoria Council of Social Service, Feeling the Heat (Report May 2021) 22.

<sup>72</sup> Heather Stevens et al. (2019) 'Hot and bothered? Associations between temperature and crime in Australia' 63 International Journal of Biometeorology 1.

FIGURE 4: SEASONAL BREAKDOWN OF ASSAULT (FAMILY IN KUNUNURRA)<sup>73</sup>

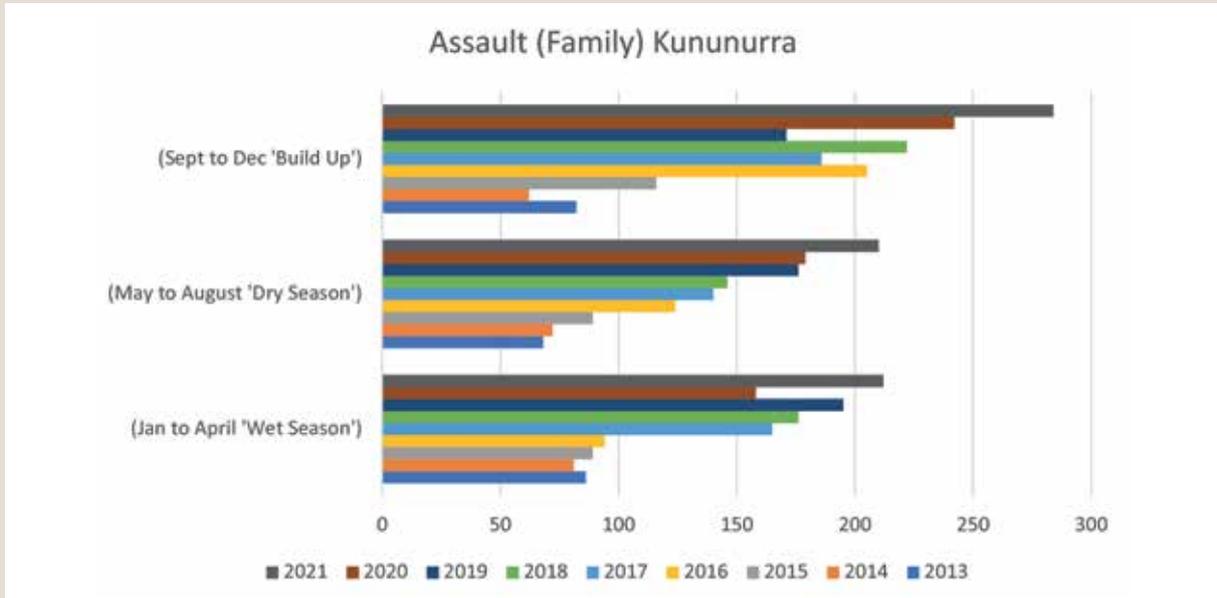
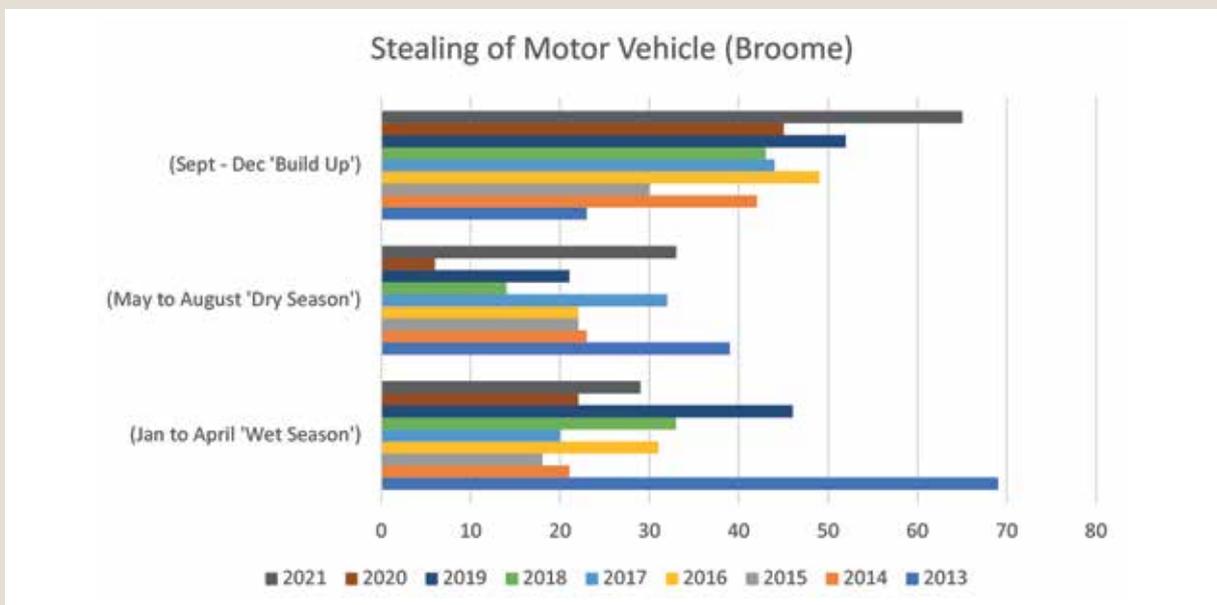


FIGURE 5: SEASONAL BREAKDOWN OF STEALING MOTOR VEHICLE IN BROOME



<sup>73</sup> Data retrieved from Western Australia Police Force Crime Statistics <https://www.police.wa.gov.au/Crime/CrimeStatistics#/start>

## Findings: effect of the heat on social wellbeing

Many tenants we spoke to talked about the stress and tiredness that comes with the hotter months of the year - 'everyone starts to get a bit irritable.'

### Ability to go to work

***If you're building new homes, you must put some air conditioning in, because how do you expect people to live, to get up to work. It was just pretty much, no, that's not even a negotiation point. (Service Provider, Kununurra)***

Several service providers had staff living in public housing who struggled to come to work in the heat. One service provider said most of their staff did not have air conditioners or struggled to keep their power connected,

leading to sleepless nights and an inability to come to work. This particularly affects female staff who have children and become sick more often due to the heat.

***A lot of our staff are mums, single mums, so kids get sick, and Mum has to stay home. And I think that the illness level at this time of the year just goes through the roof. So then all the single mums have to stay home with all the kids that are sick. (Service Provider, Kununurra)***

The heat and lack of sleep also has an impact of the productivity of staff who make it to work. One service provider said, 'what might take

*someone one hour takes someone two hours because of the level of stress people are under from heat, lack of sleep.'*

## School attendance

One third of social housing respondents with children said their children miss over 10 days a year at school because of the heat. Other studies have also found that children are less likely to attend school when they have not slept

well, and if they do attend, they are less able to concentrate.<sup>74</sup> There are various contributing factors to school attendance in the Kimberley, but a lack of access to adequate housing is seen as a contributing factor.

***The over-crowding and then the disturbance that comes from that. So the kids are up all night because there's parents, even if they're not drinking, they're just physically in their space, so they can't sleep. So, then they're not going to school and just the roll-on effects from that is probably what we see most often. (Service Provider, Kununurra)***

## Safety

Tenants told us they often resort to leaving windows and doors open all night to keep the house cool. However, this is not a safe practice and tenants worry people will come into the house while they are asleep.

A box air conditioner that is not secured properly in the aperture can also create security and safety risks. People can enter the property via the aperture and steal property. Service providers also told us tenants have box air conditioners stolen because it is very easy to remove them from the aperture.

## Antisocial behaviour

When asked what changes they notice in the community or their clients during the hotter months of the year, service providers said they feel it contributes to social issues like kids playing up at night time, because it is cool

enough to walk around. Other service providers in Kununurra spoke about the impact of the heat on antisocial behaviour as people stay up all night and instead nap during the day. See WA Police Statistics at Appendix A.

## Stress

72 percent of social housing tenants we surveyed said the heat makes them stressed always or very often. Many tenants spoke to us about the stress of living through the heat, worrying about high power bills, and dealing with overcrowded conditions. They expressed despair at the extreme heat and their feeling that they have no control over the quality

of their housing and no way to apply to the Housing Authority for air conditioning. Many tenants said they felt like an afterthought, and if they had a roof over their head the liveability of their house did not matter. One service provider said many public housing tenants he works with are *'beaten down and downtrodden, because there's only so much you can take.'*

***I'm glad that you are hearing us, you know? Our stories. And it's true, our stories. And we do get stressed and everything, you know? We want a nice house too. Same as every other person. We want to have a house and a garden. We want to be...equal. That's right. Have a good sleep at night. (Tenant, Halls Creek)***

<sup>74</sup> Lander et al., (2019) 'Extreme Heat Driven by the Climate Emergency: Impacts on the Health and Wellbeing of Public Housing Tenants in Mildura' (Report prepared by Mallee Family Care and the University of Sydney) 12.

# Finding Solutions

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***We should be asking What kind of house do you envisage? So that the people who are designing them, have an idea of the market they're delivering to because who better to tell you how to stay cool than the people who live in the region?  
(Service Provider, Wyndham)***

The views and information provided to us by tenants and service providers confirm that there is a need for interventions to address the impact of rising temperatures on public housing tenants. The following recommendations are based on current evidence and research on interventions that can help address households to keep cool and safe during the extreme heat.



## Recommendation 1: Improve access to air conditioning

Most older houses in the Kimberley do not have the energy efficiency standards newer houses are equipped with and may never have them. In these circumstances air conditioners are a short-term, necessary solution to provide relief to tenants.<sup>75</sup>

A minimum standard requiring the provision of split system or ducted air conditioning in premises above the 26th parallel will bring thermal comfort standards of public housing in line with what the WA Government provides its employees.

- A. Review the Climate Control Policy within the Rental Policy Manual and update the Cooling Policy to reflect current evidence of climactic conditions and health impacts of exposure to heat.**
- B. Amend the Climate Control Policy to include eligibility for air conditioning based on an agreed temperature average.**
- C. Subsidise Energy costs (see Recommendation 2).**
- D. Provide Community Education where required (see Recommendation 4)**

### Example: NSW Aboriginal Housing Office Air Conditioning Policy:

The Aboriginal Housing Office Air Conditioning Policy<sup>76</sup> commenced in September 2016 and provides the following:

- **Eligible houses are determined by whether they are in the isotherm boundary of 33, where the average January temperature is 33-36 degrees (Isotherms are climactic lines related to temperature zones from Bureau of Meteo).**
- **The AHO is responsible for the provision of air conditioning systems in eligible properties.**
- **The AHO will be responsible for maintenance of air conditioning systems.**
- **Tenants with certain medical conditions may be eligible for installation of an air conditioning system<sup>77</sup>**

Split system air conditioners were chosen by AHO because they are easy to run and maintain and perform well in humid and hot weather. Units should be scoped based on room sizes using the Australian Institute of Refrigeration, Air Conditioning and Heating's Fair Air calculator.

### Example: GROH Housing Air Conditioning Policy<sup>78</sup>

In the North-west, the Climate Control Policy could mirror the GROH Policy:

- **Government Employee Housing North of the 27th Parallel is fitted with a split system air conditioner, following the Bureau of Meteorology Relative Strain Index.**
- **Department of Communities are responsible for the provision of air conditioning in eligible properties.**
- **Department of Communities are responsible for the maintenance of air conditioning systems.**

<sup>75</sup> Tess Lea et al. (2021) 'Sustainable Aboriginal Housing in Regional and Remote Australia' Final Report No. 368 AHURI, 64.

<sup>76</sup> NSW Government (2016) Aboriginal Housing Office Air Conditioning Policy – September 2016.

<sup>77</sup> Ibid, 5-6.

<sup>78</sup> Government of Western Australia (Department of Housing), Government Regional Officers Housing Government Housing Air Conditioning Policy (October 2021) 8.



## Recommendation 2: Subsidise the cost of electricity

Energy affordability is a key concern for public housing tenants and is required to alleviate the stress of using cooling systems when required.

- A. Subsidise the cost of electricity for public housing tenants and low-income earners in other rentals in the Kimberley, particularly those with a disability or medical condition which is made worse by the heat.**



## Recommendation 3: Deliver more Solar Energy to ease financial pressure

'Accessing reliable, sustainable and affordable energy remains an issue critically relevant to Aboriginal self-determination, economic development and wellbeing in the North-West.'<sup>79</sup> While renewable energy is a known adaption for energy smart housing, access to this technology is not equally available to Aboriginal and Torres Strait Islander people.<sup>80</sup>

The Kimberley has huge capacity for solar uptake. Rooftop solar reduce energy costs and will allow tenants to use their air conditioners when they need them. More Community Solar projects should be delivered by Horizon Power in remote communities.

- A. Introduce the Smart Energy for Social Housing Plan to the Kimberley region, rolling out solar panels to public housing properties.**
- B. Aim to have all Kimberley public housing powered by solar power within 18 months.**
- C. Pair the solar rollout with a training and education component for local residents to learn how to maintain and install rooftop solar. (See Recommendation 4).**

### Local Perspective:

Investing in solar technology and other options such as wall and roof installation for the houses that are given or built for social housing or community housing would vastly improve the lives of people at the lower end of the economic scale. There are vulnerable old people and young people living in houses with no electricity at times because of the ridiculous cost of using air cons in properties where the cold air just escapes through roof and windows.

<sup>79</sup> Brad Riley (2021) 'Scaling Up: Renewable Energy on Aboriginal Lands in North West Australia,' Nulungu Research Papers, 6.

<sup>80</sup> Close the Gap Report p.13



## Recommendation 4: Provide education to support policy roll out

### ***'It's all about skill building.'***

Some public housing tenants called for culturally appropriate resources and support to manage their housing and build financial capability.

While education is an important part of building capacity in the community, education will not improve outcomes without structural improvements to housing quality and the provision of better cooling systems.

- A. Fund an education program within Department of Communities, local support services or Aboriginal Corporations for public housing<sup>81</sup> households/roll out the Household Energy Efficiency Scheme (HEES) program in the Kimberley.**
  - a. Assess energy efficiency of current house/appliances,**
  - b. energy saving tips, practical advice about optimising thermal comfort,**
  - c. how to use an air conditioner effectively,**
  - d. and how to manage money.**
- B. Consult the community on what kind of program would work best for them;**
- C. Involve Job Pathways or other community groups in community support for maintenance and energy saving opportunities.**

### **Example from Halls Creek**

Tenants from Yardgee Community (near Halls Creek) spoke of a recent housing clean up day organised by Department of Communities, and local tenant support services. They were assisted with rubbish clean up and tidy of the communal spaces. Each house was visited by a housing officer who helped make a list of maintenance issues, checked whether they were in arrears and helped them understand what they needed to do next.



## Recommendation 5: Address overcrowding - more roofs over people's heads

Overcrowding and homelessness in the Kimberley are systemic issues that lead to environmental health issues and based on tenant experiences, an increased difficulty living through the heat.

The most effective and immediate measure to reduce the impact of temperature on tenant health and wellbeing is therefore reducing crowding.<sup>82</sup>

The National Agreement on Closing the Gap specifies Housing as one of five policy focuses. Outcome 9 focuses on Aboriginal and Torres Strait Islander people secure affordable housing that is aligned with their priorities and need,<sup>83</sup> particularly to address overcrowding.

- A. Increase budget allocation for construction of public housing properties in the Kimberley.**
- B. Ensure budget allocation provides for the extra cost of meeting the NatHERS Guidelines developed by the Federal Government in 2019 and the NatHERS Climate Zone.<sup>84</sup>**
- C. Involve the community in design, construction and maintenance of public housing in the Kimberley.**
- D. Engage climate specialists and architects with experience building houses in tropical monsoon climates to consult and provide evidence of best long term design for the region.**

<sup>81</sup> JL Steinborner, 2016 'Smart Cooling in the Tropics - Low Income Energy Efficiency Program' Department of Industry, Innovation and Science.

<sup>82</sup> Tess Lea et al. (2021) 'Sustainable Aboriginal Housing in Regional and Remote Australia' Final Report No. 368 AHURI, 87.

<sup>83</sup> Australian Government, 'National Agreement on Closing the Gap 2020' (Report 2020) 25.

<sup>84</sup> Australian Government, National Wide House Energy Rating Scheme (Web Page 2022) <<https://www.nathers.gov.au/nathers-accredited-software/nathers-climate-zones-and-weather-files>>



## Recommendation 6: Increase liveability and energy efficiency of current and future housing

In Kununurra and Halls Creek the average age of social housing properties are 23 years old, and in Wyndham the average age is 27 years old.<sup>85</sup> The average energy efficiency rating of older properties in Australia is only 1.7 stars compared to 6.1 stars for new homes.<sup>86</sup> Many houses in the Kimberley are need of improvements to be more efficient and liveable, particularly as temperatures continue to rise. These improvements can be viewed in two parts: retrofitting and improving ongoing maintenance of properties.

- A. **The State Government expand the Building Condition Assessment program in the Kimberley region. The expanded program should assess maintenance issues, energy efficiency and thermal comfort of public housing properties with climate projections in mind.**
- B. **Following an audit of all public housing in the Kimberley to determine maintenance and retrofitting required, deliver a retrofit program within one year to improve thermal comfort through:**
  - a. **Roof insulation,**
  - b. **Draught proofing,**
  - c. **Glaze windows,**
  - d. **Increase shade outside,**
  - e. **Install energy efficient appliances.**
- C. **Improve the maintenance system for the North West of WA**
  - a. **Proactive maintenance to protect current stock,**
  - b. **Improved property management skills, including employing Aboriginal people in property management roles,**
  - c. **Upskill local people with property maintenance skills and employ them to undertake maintenance, particularly on broken or ineffective windows and doors.**

### Examples:

#### Victorian Government Energy Efficiency in Social housing program

The 2020-21 Victorian State Budget included \$112 million to upgrade the energy efficiency of 35,000 social housing properties – insulation, draught proofing, energy efficient appliances.

#### AHURI report on Sustainable Aboriginal Housing in Regional and Remote Australia

This report found that the key design strategies for tropical climates include the following:

- **Awnings to shade windows and prevent solar radiation entering the building,**
- **Awnings to shade walls to prevent solar radiation overheating the surface and to increase the heat transmitted indoors through conduction,**
- **Additional wall insulation**
- **Verandas or pergolas to create buffer zones and shading,**
- **Maximisation of cross ventilation.<sup>87</sup>**

<sup>85</sup> Meeting with Department of Communities, 2021.

<sup>86</sup> Ibid, 2.

<sup>87</sup> Tess Lea et al. (2021) 'Sustainable Aboriginal Housing in Regional and Remote Australia' Final Report No. 368 AHURI, 70.



## **Recommendation 7: Minimum energy efficiency standards for all rental properties**

Legislating minimum standards in the RTA WA is an opportunity to improve the thermal comfort of housing for all tenants in the Kimberley.

- A. Introduce mandatory minimum energy efficiency standards into the Residential Tenancies Act, in line with the National Trajectory for Low Energy Buildings.**

### **Tasmanian Residential Tenancies Act**

Tasmania specifically legislated for adequate heating in the main living room of a residential premise and this was considered to be ‘the most important standard’ given ‘Tasmania’s cooler climate’. We contend a similar approach should be taken with regard to minimum standards in WA, requiring premises to be fitted with air conditioning, ceiling fans and or adequate insulation.<sup>88</sup>

<sup>88</sup> Residential Tenancy Act 1997 (Tas) s36M.

# Conclusion

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The Kimberley region experiences extreme temperatures and high humidity at levels that can be harmful to human health and wellbeing. Current climate projections suggest Northern Australia will continue to experience rising heat in the future. The lived experience of participants of this project, suggests public housing tenants in the Kimberley are experiencing thermal discomfort at levels which raise credible threshold questions around the “habitability” of some public housing homes during periods of high temperature. These living conditions are not in line with the internationally recognised right to habitable housing that ‘protects [occupants] from cold, damp, heat, rain, wind or other threats to health, structural hazards and disease vectors.’<sup>89</sup>

A common sense of struggle and despair resonated in the responses of tenants when they told us what it was like living through unbearable heat –they struggle to sleep and eat, they find it hard to manage existing illnesses, and their kids suffer from dehydration and sickness. This can in turn impact performance and attendance at work or school or lead to stress, despair and increased conflict within households. The relationship with housing and health outcomes is well documented, and it is evident that poor quality housing can make public housing tenants, particularly those with underlying health issues, more vulnerable to extreme heat.

Inappropriate housing design, poor maintenance and overcrowding can affect thermal temperature levels. Tenants reported living in aging houses that required on-going maintenance, with cracks and holes in the walls and inadequate insulation. They told us their houses got so hot during the heat of the day, particularly during the hot months of the year, that turning their air conditioners on during the day provided minimal relief from the heat. In situations where there is overcrowding, it becomes even more difficult to keep the house cool, particularly if the air-conditioner is not energy efficient or not properly installed.

Public housing tenants in the Kimberley have limited ability to adequately control the internal thermal temperature of their houses during periods of high temperatures. Most tenants do not have the means to make structural design improvements to the thermal performance of

their housing. Tenants are more likely to rely on appliances such as air conditioners to cool their houses when the outside temperature increases above 35-40 degrees.

While public housing in the Kimberley comes with ceiling fans installed, the Housing Authority’s Cooling policy places the onus on public housing tenants to install and maintain their own air-conditioning units. The more energy efficient air conditioning units are expensive to purchase and install, which means tenants either go without, or purchase cheaper and less effective air conditioners and self-install them to reduce costs.

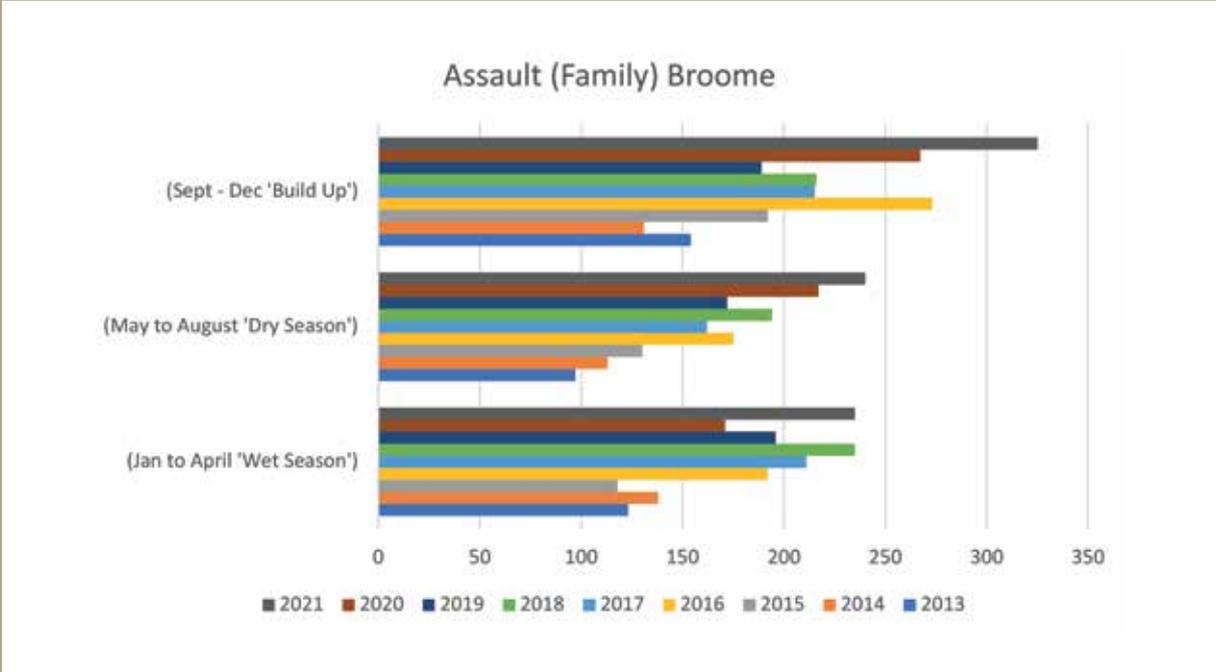
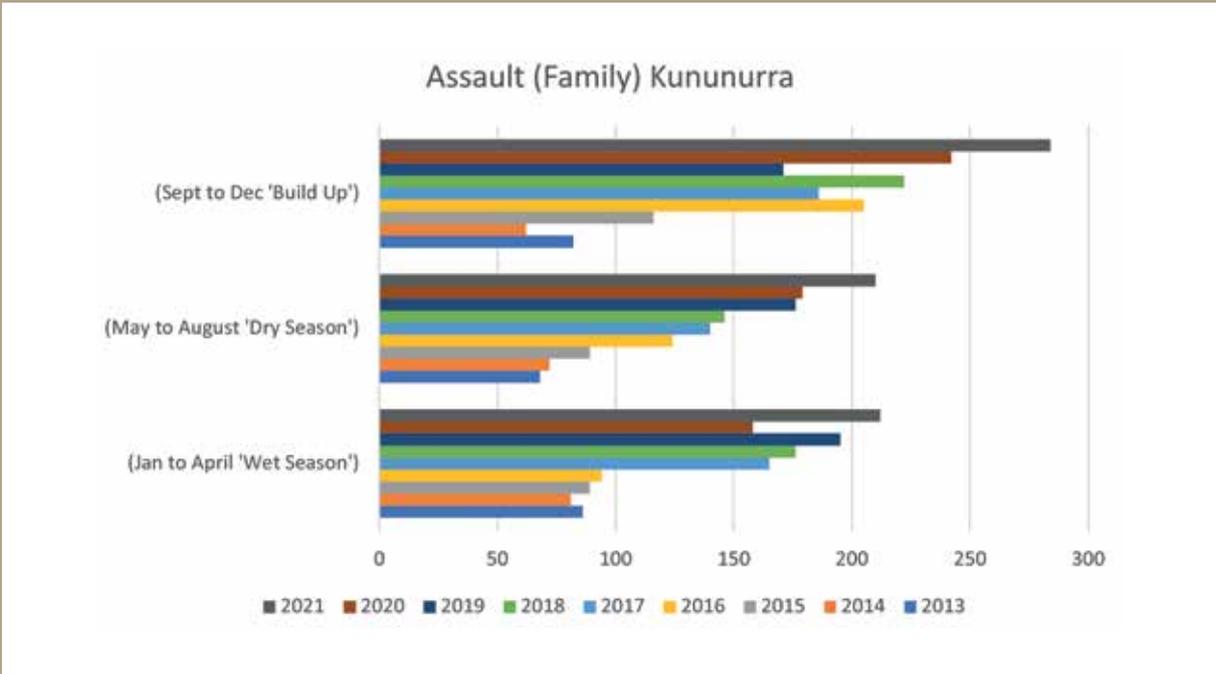
This is in stark contrast with the Housing Authority’s approach to government employees. GROH tenants are provided with split system air conditioning and a subsidy to assist with power bills, in recognition of the extreme heat in the region and the financial and health impacts it can have.

The current system is not working. Tenants either cannot afford appliances to cool their housing, or their air conditioners use a lot of power, their power bills are unaffordable, and they risk disconnection in peak extreme heat events. We found that some tenants are paying up to 15 percent of their Centrelink income on power per fortnight. Cost of living in the Kimberley is 12.9 percent higher than Perth and is rising current economic climate. In these circumstances, tenants are having to choose between paying for power or other essential items like food and clothing.

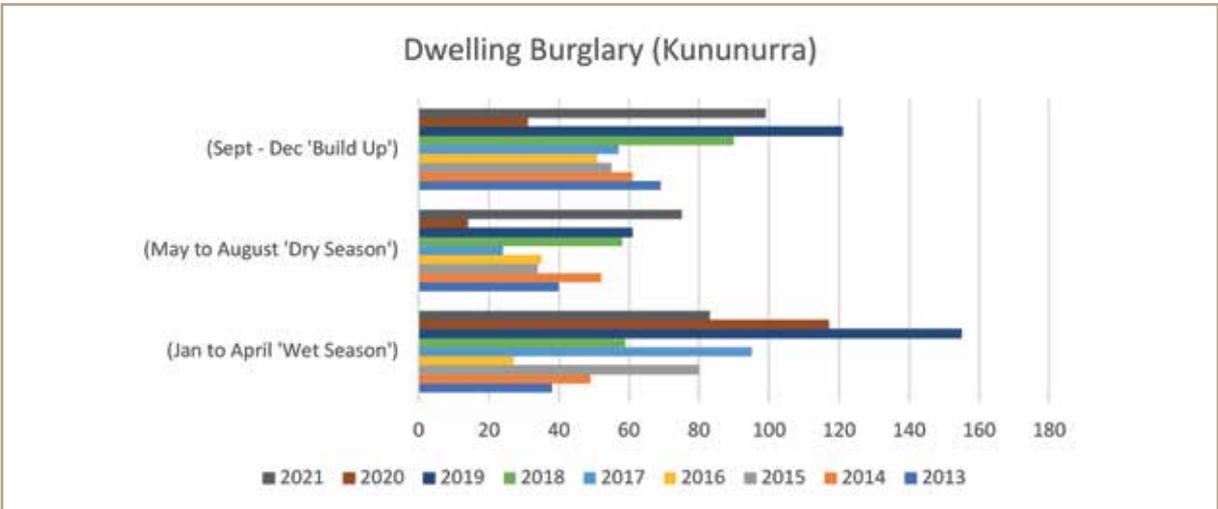
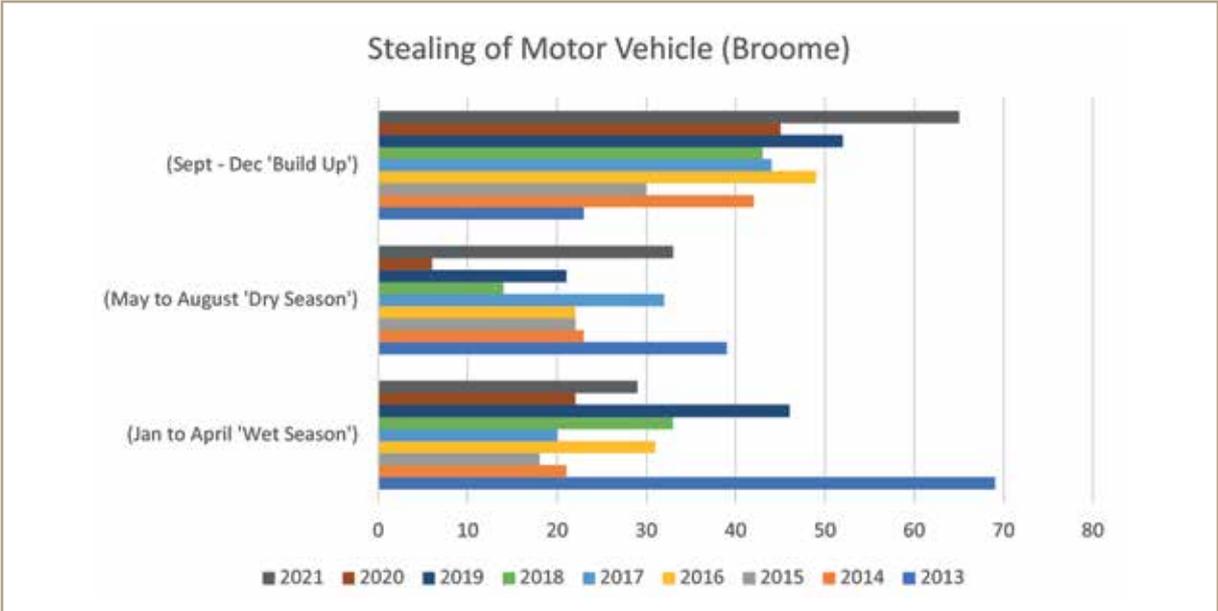
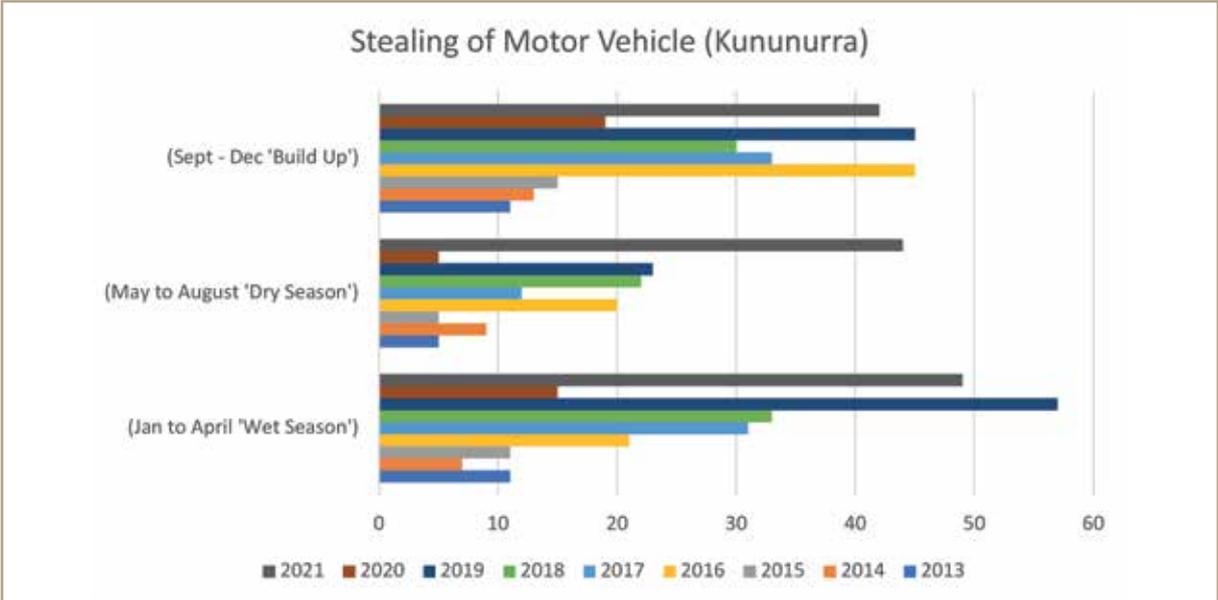
The provision of public housing that remains habitable during periods of extreme heat should be a key priority for the relevant authorities going forward. Amongst other things, this will require forward planning for more energy efficient and appropriately designed housing stock, options to improve access to energy efficient cooling appliances, improved energy security and access to reliable cost-effective energy sources like solar, and strategies to address the energy poverty and injustice experienced by public housing tenants in remote and regional areas like the Kimberley. Importantly, solutions to address this issue must be informed by consultation and input from the tenants who call these houses home.

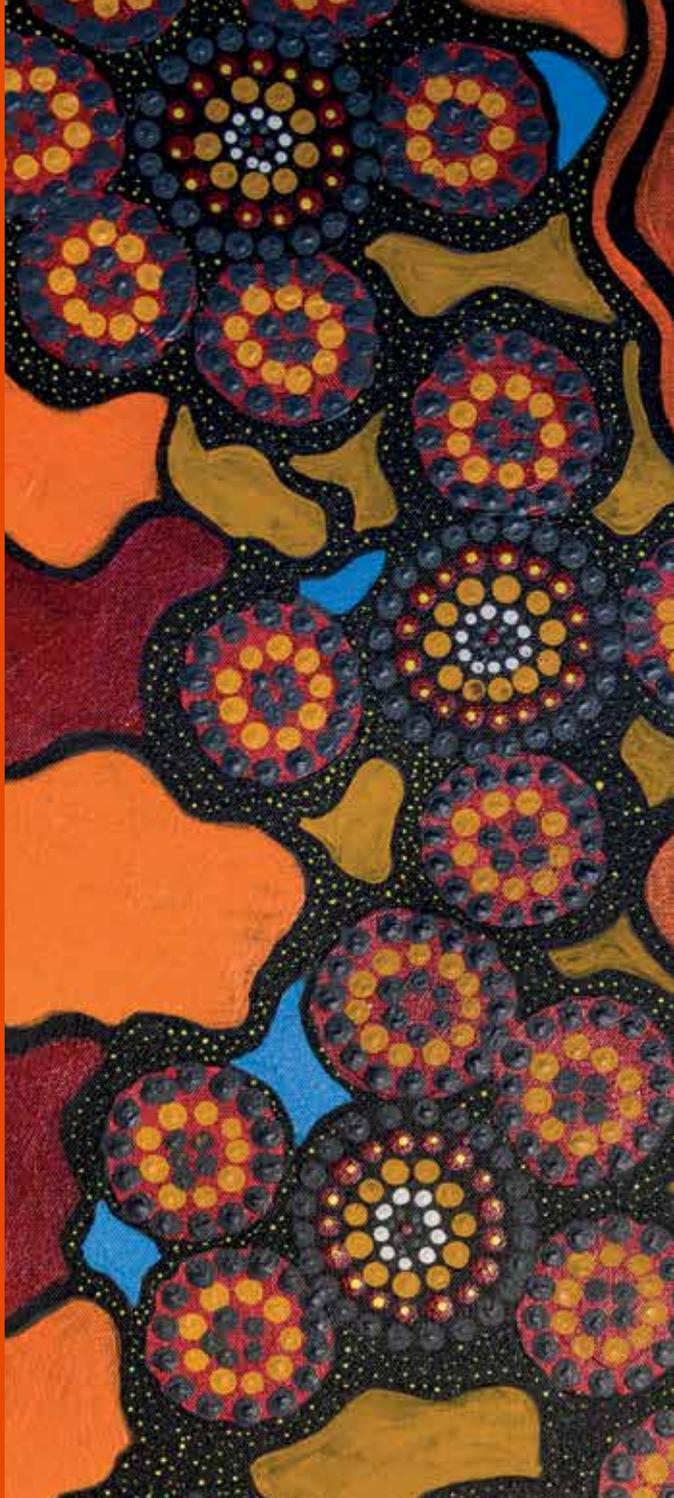
<sup>89</sup> Committee on the Economic, Social and Cultural Rights, General Comment No.4, The Right to Adequate Housing (Art. 11(1) of the Covenant) (sixth session 1991)

# Appendix A



Data retrieved from Western Australia Police Force Crime Statistics <https://www.police.wa.gov.au/Crime/CrimeStatistics#/start>





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