

Built Environment

City Futures Research Centre

Poor-quality housing and low-income households

Review of evidence and options for reform

Shelter Brief No. 63

Edgar Liu, Chris Martin & Hazel Easthope





for

City Futures Research Centre UNSW Built Environment UNSW Sydney <u>cityfutures.be.unsw.edu.au</u>

Published by: City Futures Research Centre, UNSW Built Environment, UNSW Sydney, NSW 20152, Australia First published June 2019

© Shelter NSW

This report was undertaken by the City Futures Research Centre at UNSW Sydney for Shelter NSW, funded by NSW Department of Family and Community Services. This report may be reproduced in part or whole by non-profit organisations and individuals for educational purposes, so long as the City Futures Research Centre, UNSW Built Environment, UNSW Sydney and Shelter NSW, is acknowledged.

Any opinions expressed in this report are those of the authors and do not necessarily reflect the views of the UNSW Sydney, Shelter NSW or NSW Department of Family and Community Services.

Table of contents

Executive summary	
Introduction	2
Methodology	3
Why does having good quality housing matter?	
Impacts on health and comfort	4
Costs of maintenance and use	4
What is the extent of housing quality problems?	5
Private rental	6
Social housing	6
Disadvantaged neighbourhoods	6
Indigenous Australians	6
Current research	7
How is housing quality addressed in policy and regulations?	
Regulation of development, design and construction	8
Hazards and sanitary regulation	9
Strata	9
Tenancies	9
Boarding houses	10
Current issues and directions for reform	11
New building standards	11
Extending the agenda: Increasing the supply of social and affordable housing	12
Minimum standards for existing dwellings	12
Extending the agenda: Empowering tenants and regulators	13
Extending the agenda: Addressing split incentives by mandating improvements	14
Social housing maintenance problems	14
Extending the agenda: Improving reporting and transparency of housing standards	14
Conclusions	16
References	17

List of tables

Table 1: Selected housing and locational indicators by income groups, NSW and Australia, 2016	2
Table 2: Housing repair needs and ability to keep warm/cool across tenure and income groups, Australia 2017	
Table 3: Proportional change in tenures, 2006-2016	6
Table 4: Tenant satisfaction and dwelling conditions of social housing in NSW and Australia, 2016	6

List of figures

Figure 1: Suggestions for increasing social and affordable housing supply	12
Figure 2: Suggestions for improving security of tenure	13
Figure 3: Suggestion for greater transparency	15

Executive summary

This report is about households on low and very low incomes—that is, those in the second and first quintiles of households by income—and the quality of the housing in which they live. In this report, these households are collectively categorised as 'low-income households'.

Poor quality housing is negatively impacting on the lives of a significant proportion of low-income households, in terms of their health and wellbeing, as well as the financial burden of maintaining and repairing these dwellings. The problems are particularly acute for renters in private housing, public housing and Indigenous housing. Renters in community housing report lower levels of dissatisfaction. There is also a sub-sector of low-income households with mortgages struggling with essential repair needs.

There is a myriad of policy regimes in effect in NSW that address aspects of housing quality. This is despite a general lack of definitional consensus on what 'good' quality housing is. The absence of a single overarching regulatory regime or government body responsible for oversight of building quality issues, however, has meant that responses to issues regarding 'housing quality' have been ad hoc and reactive, rather than considering the broader potential for assurance, and improvement. This approach is, therefore, in urgent need of reform.

A policy workshop with eight representatives from NSW government agencies, non-profit and housing development industries was conducted to discuss these issues in depth. Three areas—new building standards, minimum standards for existing dwellings, and social housing maintenance problems—were identified as needing policy attention. In this report, four potential reform options are put forward in response:

- increasing the supply of social and affordable housing;
- empowering tenants and regulators;
- addressing split incentives by mandating improvements in dwelling standards; and
- improving reporting and transparency of housing standards.

Introduction

This report is about households on low and very low incomes—that is, those in the second and first quintiles of households by income—and the quality of the housing in which they live. Households in the first quintile (Q1) have very low incomes (less than \$33,800 gross annual household income at the 2016 Census); households in the second quintile (Q2) have low incomes (less than \$52,000 gross annual household income). In this report, these households are collectively categorised as 'low-income households'.

Low-income households are more likely than their higher-income counterparts to live in (1) apartments, (2) public housing, (3) smaller dwellings, and (4) inner areas of regional cities (Table 1). Notably, a relatively high proportion of low-income households are outright owner-occupiers. These households are most likely older singles and couples on low, fixed incomes (e.g. age pension) who paid off their mortgages prior to retirement.

This report builds on a previous brief prepared for Shelter NSW (#61; Easthope et al. 2017), which focused on the challenges faced by lower income and disadvantaged households living in higher density housing. It found that building quality (including design quality, construction quality and building maintenance) was a concern for a large number of these households.

In this report, we look at this issue of poor-quality housing more closely and identify ways of reform for more equitable outcomes.

	Very low inc	Very low income (Q1) Low income (Q2)		ome (Q2)	Other households (Q3-5)	
	NSW	Aust	NSW	Aust	NSW	Aust
Dwelling structure						
Detached houses	59%	64%	67%	72%	68%	75%
Semi-detached dwellings	15%	17%	12%	13%	11%	11%
Flats/apartments	23%	17%	18%	12%	20%	12%
Tenure						
Owned outright	40%	38%	41%	38%	25%	23%
Owned with mortgage	11%	12%	16%	18%	40%	42%
Private rental	15%	14%	18%	18%	20%	18%
Public rental	11%	9%	5%	4%	1%	1%
Other social rental	2%	2%	1%	1%	0%	0%
Dwelling size						
2 bedrooms or fewer	45%	42%	33%	30%	23%	19%
5 bedrooms or more	2%	2%	3%	3%	9%	7%
Location						
Major city	66%	64%	65%	64%	77%	74%
Inner regional area	25%	23%	26%	23%	17%	17%
Outer regional area	9%	11%	9%	11%	5%	8%
Remote area	1%	1%	1%	1%	0%	1%
Very remote area	0%	1%	0%	1%	0%	1%

Table 1: Selected housing and locational indicators by income groups, NSW and Australia, 2016

Source: ABS TableBuilder Pro

A broad range of housing quality issues can be faced by low-income households related to design quality, construction quality and building maintenance.

Design quality can impact on sound, light and thermal insulation. The ability to light, heat and cool the home naturally is especially important for households who cannot afford high energy costs. Construction quality typically concerns building defects, an issue that affects the whole residential housing industry, but low-income households are particularly negatively affected. Poor building and construction quality can also have significant impacts on the frequency and costs of building maintenance. In apartment buildings, the combination of complex buildings, governance structures and responsibilities can result in a lack of adequate maintenance, especially in buildings dominated by private renters (Easthope et al. 2017). In strata, both owners and tenants can also struggle to get funding and permission to install home modifications in their homes (Easthope & van den Nouwelant 2013). There is, however, little consensus on what 'good' housing quality is. In its reports on social housing, the Australian Productivity Commission (2018: 18.18), for example, uses the term 'dwelling condition', which relates to "the proportion of households living in dwellings that meet agreed minimum standards [where] it has at least four working facilities (for washing people, for washing clothes/bedding, for storing/preparing food, and for removing sewerage) and not more than two major structural problems." Others refer to the suitability of the dwelling for the residents' particular requirements, in affording quality of life, and being relatively easy to maintain (e.g. Harrison 2004).

Methodology

This project incorporates two main methods:

- A literature and policy review was conducted to highlight current Australian evidence that discusses the causes, extent and impacts of poor quality housing. This review includes a desktop review of evidence (academic publications, grey literature) about poor-quality housing in Australia, particularly NSW, as well as a map of the various regulatory regimes that are relevant to housing quality. It also includes an analysis of the new dataset, the Australian Housing Conditions Dataset. The findings of this review were summarised in a discussion paper, which informed the discussions of a stakeholder workshop.
- 2. A **half-day workshop** (UNSW ethics approval HC180624) was held on 12 February 2019 with eight stakeholders from:
 - Shelter NSW,
 - a NSW State Government agency,
 - a community housing peak organisation,
 - a community housing provider,

- a tenants organisation,
- a disability advocacy organisation,
- a development industry organisation, and
- an asset management professional.

The workshop included a brief overview of the discussion paper, the content of which is also included in this final report. The discussions focussed on five specific questions:

- What types of poor-quality housing problems are most prevalent and most urgent?
- To what extent do current problems with poor housing quality reflect inadequate enforcement of otherwise adequate regulations?
- To what extent do existing regulations need to be amended or extended?
- What could be done at national, state (NSW) and local (council) level to better regulate housing quality?
- Should regulatory reform focus on particular market segments (e.g. housing for people on low incomes), tenures (e.g. private or public renters) or building types (e.g. apartments, rural properties), or would blanket regulatory measures be more effective and/or more appropriate?

The workshop concluded with an exercise where, in three smaller groups, participants discussed what they considered to be the most pressing issues impeding on low-income households' access to quality housing, before each participant was asked to nominate three priorities for reform.

The discussions were audio recorded. Notes were written up post-workshop and analysed thematically.

Why does having good quality housing matter?

Housing quality affects the quality of life of residents through impacts on health and comfort and through the costs of maintenance and use.

Impacts on health and comfort

Australian and international evidence shows direct associations between poor housing and living conditions with poor physical and mental health outcomes (Baker et al. 2016; Evans et al. 2000; Hood 2005). Particular concerns include poor ventilation leading to the build-up of mould (Dewsbury & Law 2016; Mitakakis et al. 2000; Peat et al. 1998; Scott 1994), and suitability for people with different accessibility and mobility needs (Easthope et al. 2017).

Overcrowding, increasingly common in Australian cities due partially to housing unaffordability, can also lead to a range of health concerns, including increased spread of communicable diseases like the flu as well as lead to sleep disruption (Herath & Bentley 2018). Overcrowding as a result of illegal sub-divisions inside dwellings can also lead to poorer ventilation and increase in fire hazards.

Poor quality housing can also negatively impact on the social lives of households, neighbourhoods and buildings, for example if noise insulation is poor or if there are disagreements over maintenance schedules and costs (Easthope et al. 2017; Randolph 2006).

Costs of maintenance and use

Recent Australian and international evidence highlights the broad and lasting impacts of households, especially those on low incomes, when unable to afford energy or other living expenses due to the high costs of housing and energy (Hernández & Bird 2010; Hope & Booth 2014; Liu & Judd 2016). Low-income private renters were particularly vulnerable to energy poverty in Australia due to a combination of limited funds and limited power to implement adaptation and mitigation among other reasons (Instone et al. 2013; Liu & Judd 2018. See also Table 2). The lack of efficiency features in the home, therefore, can impact on these households' short- and longer-term expenditure in maintaining a liveable standard. Evidence from the US shows that water heating energy use could increase by as much as 66% in rental properties due to split incentives (Murtishaw & Sathaye 2006. See page 14 for a short discussion of split incentives); there is as yet no equivalent evidence in Australia.

For new private buildings, the costs of defect rectification can be significant, encompassing expert reports, legal fees and the cost of the works themselves (Easthope et al. 2012, p.71). While these costs will be borne by the property owners, and not tenants, in private buildings this may result in landlords being less able or willing to afford other repairs or upgrades to their properties.

The situation is slightly more favourable in social housing properties. Pawson et al. (2015b) compared the housing management costs, including property maintenance, and associated tenant outcomes of eight social housing providers in Australia. While the property management expenditure per dwelling varied across the different providers, reflecting both differences in portfolio and repair needs as well as organisational strategies towards maintenance, most now operate on longer-term asset planning to be proactive in maintaining social (particularly community) housing at a high standard but also be more responsive to emergency repair needs.

This finding resonates with Milligan et al. (2015), who found that more social housing providers saw that continued need to restructure their maintenance services in response to industry and policy changes (such as taking on new management transfers), to reduce costs through high efficiency, and to maintain tenant satisfaction.

More recently, Liu et al. (forthcoming) found that many social housing providers, particularly the larger community housing providers, are also taking energy efficiency into consideration as a means to reduce longer-term maintenance and replacement costs and lessen the impacts of energy poverty on tenants. Like many private renters, however, these community housing providers face a range of barriers—financial, contractual, and structural—from carrying out many upgrades.

What is the extent of housing quality problems?

There is no comprehensive, up-to-date time series of data about the quality of housing in Australia. The following are the most important sources:

- The ABS Housing Occupancy and Costs series (Cat No 4130.0) occasionally includes survey data regarding 'Housing Mobility and Conditions'. The most recent report is from 2013-14; the previous report is from 2007-08. Findings from the 2013-14 report include:
 - 17% of lower income households reported at least one major structural problem (compared to 14% of all households);
 - 11% of all owners reported a major structural problem; compared to 18% of private renters, and 32% of public housing renters.
- The Australian Housing Conditions Dataset (AHCD) is a new dataset created by a team of university researchers led by the University of Adelaide under a recent Australian Research Council Linkage Infrastructure, Equipment and Facilities project.

The AHCD combines data from a housing conditions survey and household interviews conducted during 2017-18. It identifies stark differences in housing quality across tenure and income groups, with renters on very low income far more likely to have essential and urgent repair needs than their owner-occupied counterparts. Very low income renters and other households that owned with a mortgage were far more likely to have essential or essential and urgent repair needs while not having had any repairs done recently. Renters with low and very low incomes also had greater difficulty in keeping their homes warm during winter or cool during summer, likely due to a combination of poorly insulated homes and energy unaffordability (Table 2).

There is more data and research about housing quality issues for individual sectors of the housing system, and for specific socio-economic groups, summarised below.

	Very low income	Low income	Other households			
a. Have essential repair needs						
Owned-outright	4%	2%	2%			
Owned with a mortgage	14%	1%	3%			
Being rented	4%	2%	2%			
b. Have essential & urgent repair needs	i					
Owned-outright	1%	1%	0%			
Owned with a mortgage	4%	6%	2%			
Being rented	11%	4%	0%			
c. Have essential or essential & urgent r	c. Have essential or essential & urgent repair needs and no repairs done in previous 12 months					
Owned-outright	15%	7%	8%			
Owned with a mortgage	0%	14%	25%			
Being rented	28%	14%	0%			
d. Not able to keep comfortably warm i	in winter					
Owned-outright	6%	6%	3%			
Owned with a mortgage	5%	9%	6%			
Being rented	19%	14%	8%			
e. Not able to keep comfortably cool in summer						
Owned-outright	4%	3%	5%			
Owned with a mortgage	8%	4%	4%			
Being rented	21%	23%	8%			

Table 2: Housing repair needs and ability to keep warm/cool across tenure and income groups, Australia 2017

Note: Because of the income ranges used in the survey, very low income households are represented by those with annual household income < \$40,000, and low income households are represented by those with annual household income between \$40,000 and \$60,000. Other households are those with annual income > \$60,000. 'Being rented' includes private and social renters. Source: Australian Housing Conditions Dataset

Private rental

The private rental sector is the fastest growing housing sector in NSW and across Australia (Table 3).

Tenure	NSW	Australia
Fully owned	+4%	+6%
Owned with mortgage	+14%	+18%
Private rental	+18%	+50%
Public housing	-14%	-1%
Other social housing	+7%	+2%
Total dwellings	+12%	+18%

Peak consumer group Choice, in association with National Shelter and the National Association of Tenant Organisations, published in 2018 the results of a survey that found more than half of Australia's private renters lived in homes that needed repairs. More alarmingly, nearly 70% delayed requesting repairs in fear of rent rises with another half fearing eviction (Choice et al. 2018). These statistics resonate with earlier Australian studies that found renters are more likely to live in poorer quality and less energy-efficient housing, resulting from a combination of wider affordability concerns and the vast majority of Australia's private rental stock being owned by small-scale landlords (Beer 1998; Berry 2000; Gabriel et al. 2010). This corresponds with findings of the AHCD (Table 2).

Social housing

The Productivity Commission's annual Report on Government Services includes data on housing quality and resident satisfaction in the social housing sector (Table 3). These data indicate that 20% of public housing dwellings in Australia, and 25% of those in NSW, do not meet minimum acceptable standards as defined by the report. This reflects the decline, over decades, of public investment in the sector, and a vicious cycle of tightly targeted allocations, reduced rental revenues, increased management costs, and sales of stock to fund operations (Hall & Berry 2004).

Table 4: Tenant satisfaction and dwelling condition	ons of social housing in NSW and Australia, 2016
---	--

	Type of social housing	NSW	Aust
a. Tenant rating of dwelling size	Public housing	86.2%	84.4%
	SOMIH^	83.8%	82.0%
	Community housing	88.7%	87.7%
b. Tenant rating of ease of access and entry	Public housing	90.1%	91.5%
	SOMIH^	91.0%	90.8%
	Community housing	91.6%	92.3%
 c. Tenant rating of safety/security of home 	Public housing	75.4%	80.9%
	SOMIH^	77.0%	79.8%
	Community housing	86.3%	86.6%
d. % that meet minimum acceptable standards*	Public housing	74.8%	80.7%
	SOMIH^	66.6%	75.1%
	Community housing	87.9%	88.8%

Note: % of surveyed tenants feeling satisfied with their dwelling conditions. * with at least four working facilities and not more than two major structural problems. ^ SOMIH refers to state owned and managed Indigenous housing. Source: Productivity Commission 2018

Disadvantaged neighbourhoods

Inequality is also evident between neighbourhoods. Australian research has demonstrated that housing in disadvantaged neighbourhoods—often dominated by rental housing (both public and private)—is of poorer quality (Stilwell & Hardwick 1973). Following decades of gentrification and, more recently, state-led largescale urban renewal projects, these disadvantaged areas are more likely to be found in suburban (particularly outer suburban) areas were transport options are more limited and support services more difficult to access (Darcy 2010; Pawson et al. 2015a; Randolph & Holloway 2005; Winter & Bryson 1998).

Indigenous Australians

Despite the 'Closing the Gap' reform agenda initiated by Australian governments in 2008, many Indigenous Australians continue to experience worse housing conditions than their non-indigenous counterparts. Many Indigenous people live in crowded households, particularly in rural and remote areas (Memmott et al. 2012), with overcrowding in remote areas recognised as a High Priority Initiative in the 2019 Australian Infrastructure Plan (Infrastructure Australia 2019). Existing policies and housing stock may also not respond appropriately to culturally specific practices such as temporary mobility (Habibis et al. 2011; 2013; Moran et al. 2016). These policy and housing gaps can lead to other negative non-housing outcomes such as poor health (Andersen et al. 2016; Walker & Barcham 2010).

Current research

A number of research projects currently underway are aiming to fill gaps in knowledge about housing quality:

- A current study for the NSW Office of Environment and Heritage's Energy Efficiency Decision Making Node is using surveyed and monitored data of 100 social housing dwellings across NSW to simulate the current conditions and energy efficiency retrofit needs of the sector (Liu et al. forthcoming). The results of this study are expected to be released in late 2019.
- A current study funded under the Australian Research Council's Linkage Grants program is recording the nature and incidence of building defects in private strata titled buildings across the Sydney metropolitan area by drawing together multiple datasets (see factsheet at <u>https://cityfutures.be.unsw.edu.au/research/defe</u> <u>cts-strata/</u>). Interim results of this study are expected to be released in early 2020.

How is housing quality addressed in policy and regulations?

Housing quality is the subject of myriad regulatory regimes. Some are regimes of public law (e.g. land-use controls; licencing regimes; regimes for inspecting and making orders); some are private law (e.g. contracts; tortious duties), which are also subject to different degrees of statutory amendment. Some regimes address housing quality through the processes of developing and constructing new housing; others address housing quality in existing buildings as they are used in the provision of shelter. There are sectoral regimes specific to, for example, buildings in strata schemes, rental housing and boarding houses. Different levels of government are involved in establishing and operating these regimes.

Regulation of development, design and construction

The development of land in NSW-including for building new housing, or changing the use of an existing building to a residential use-is regulated under the Environmental Planning and Assessment Act 1979 (EPA Act). The Act invests local councils with the responsibility for planning whether, and under what conditions, different forms of development are allowed. Councils do this through Local Environmental Plans (LEPs) that apply land use zones to all land in the area. Zones are standardised by the State Government's Standard Instrument—Principle LEP, with some variation afforded to councils. The Act also provides for local councils to determine whether specific proposed developments comply with its planning instruments, although some developments may be allowed with state government consent (even without council consent). For example, in land zoned under a council's LEP 'R2 Low Density Residential', the development of 'dwelling houses', 'boarding houses', 'group homes', childcare facilities and (as it happens) certain aquaculture activities is allow with the consent of the council, while development of multi-dwelling housing (i.e. a block of apartments) and other land uses may be prohibited.

The design and construction of buildings are regulated by the National Construction Code (NCC)—comprising the Building Code of Australia (BCA) and Plumbing Code of Australia (PCA)—which sets out performance requirements of buildings. It also provides a common terminology and categorisation of buildings, including detached single dwellings (Class 1a buildings), small boarding houses (Class 1b), larger boarding houses (Class 3] and multi-unit apartment buildings (Class 2).

The NCC's 'performance-based approach' does not prescribe the use of particular building materials, design factors or construction methods, but instead provides for designers and builders to comply with the performance requirements by use of a 'deemed-tosatisfy solution', or by demonstrating how another 'alternative solution' will perform.

Example of performance requirements and practice: room heights

The BCA provides for performance requirements regarding various aspects of 'Health and Amenity', including 'Room Heights'. For Class 1 buildings, the performance requirement for room height is:

A room or space must be of a height that does not unduly interfere with its intended function. (Part 2.4.2).

The BCA then sets out minimum heights for different rooms—2.4m for 'habitable rooms excluding kitchens', 2.1m for kitchens, corridors, bathrooms and other rooms—as well as formulas for rooms with sloping ceilings (Part 3.8.2), which are deemed to satisfy the performance requirement.

Performance is assessed and certified by either local government officers, or by qualified building professionals. Where the NCC changes a performance requirement with respect to a type of building, already existing buildings of that type are not required to meet it.

The NCC is administered by the Australian Building and Construction Board, but given effect through statelevel legislation regarding building professions (in NSW, the *Home Building Act 1989* and the *Building Professionals Act 2005*) and development (in NSW, the EPA Act).

The *Home Building Act* sets out licensing requirements for residential building workers, prescribes warranties into building contracts, and provides for resolution of disputes about building through the NSW Civil and Administrative Tribunal (NCAT). It also established the Loose-fill Asbestos Insulation Register. The Building Professionals Act sets out accreditation requirements for professional certifiers.

The Building Products (Safety) Act 2017 allows the State Government to proscribe the use of certain building products, and order rectification works where buildings are affected, including where the product was used before the ban took effect. There are additional standards that apply to different building materials such as concrete and steel, to features such as fire safety and hallways, and to issues of accessibility (Standards Australia 2018).

State, territory and local governments may also encourage or impose additional urban, housing and building design requirements. The City of Sydney, for example, supports the inclusion of green roofs and walls to promote urban biodiversity, mitigate urban heat island effects, and improve air quality. There are also additional national (Nationwide House Energy Rating Scheme) and state-based minimum requirements (NSW's Building Sustainability Index) that focus on energy efficiency and thermal comfort levels.

Hazards and sanitary regulation

Housing quality in existing buildings is regulated at a fairly basic level through legislation regarding hazards and sanitation. The EPA Act provides for regulations regarding 'building and fire safety', which are embodied in the *EPA Regulation 2000*. This requires Class 1b, 2 and 3 buildings (i.e. boarding houses and multi-unit apartment buildings but not Class 1a private dwellings) to have fire safety schedules and annual fire safety statements from an appropriate professional. The EPA Act also requires all buildings in which persons sleep overnight to have smoke alarms installed.

Under the *Local Government Act 1993*, councils are empowered to make orders regarding buildings and uses of property that pose a threat to public health, or that breach certain standards under the Act. For example, owners and occupiers can be ordered to remove or destroy waste, to stop certain uses or activities, to evacuate premises, do repairs or even demolish premises that threaten public health (section 124).

Strata

In a strata scheme, responsibility for property maintenance is divided between the individual lot (unit) owners who are responsible for maintaining the inside of their unit and the owners corporation (comprised of all of the lot owners) which is responsible for maintaining the common property (under S106 of the *NSW Strata Schemes Management Act 2015*). Generally speaking, the dividing line is the interior surface of the walls, floor and ceiling of the lot. There is evidence that problems undertaking maintenance of common property are widespread in strata schemes across NSW, commonly resulting from inadequate budgets and/or disagreements over expenditure (Easthope et al. 2012).

For new buildings, the *Strata Schemes Management Amendment (Building Defects Scheme) Act 2018* introduced changes to the *Strata Schemes Management Act 2015* to allow for the introduction of a building bond and inspection scheme with the aim of identifying and addressing building defects in new strata schemes. While new, the introduction of the building defects scheme has been controversial with critics concerned that it will not adequately address the current problems with building defects in strata schemes across NSW (e.g. PICA 2019).

Tenancies

For most purposes, laws relating to the development and construction of housing do not distinguish between housing that is intended for owner-occupation and housing intended for tenancies (although boarding houses are distinguished). Dwellings (per the EPA Act), or 'single dwellings' and sole occupancy units (per the BCA) may be owner-occupied or rented, and quality is regulated the same way.

Residential tenancies law provides for some additional regulation of housing quality. The *Residential Tenancies Act 2010* provides that landlords are obliged to:

- provide premises 'in a reasonable state of cleanliness and fit for habitation' (section 52);
- comply with statutory health and safety requirements (section 52);
- provide and maintain premises in a state of reasonable repair, having regard to the age of, rent payable for, and prospective life of the premises (section 63).

Together these obligations set both an absolute standard (fit for habitation) and a relative standard (that varies according to the rent paid, and age and prospective life of premises). This means that even very cheap premises must be fit for habitation, while very expensive, new premises must be maintained at a higher standard. Under amendments recently passed, but yet to commence (*Residential Tenancies Amendment (Review) Act 2018*), the meaning of 'fit for habitation' is set out in more detail: e.g. premises are 'structurally sound', have adequate lighting and ventilation, and are supplied with water and electricity (or gas).

These obligations take the form of prescribed terms in residential tenancy agreements, so it is up to tenants to enforce them. Tenants may apply to NCAT for orders (including performance orders, rent reductions, compensation and termination); under the yet-tocommence amendments, tenants could apply to Fair Trading for rectification orders. However, because these obligations are contractual, they do not have effect before a tenancy agreement is entered into, and do not allow authorities to take action. For the same reason, household members (e.g. children) who are not party to the tenancy agreement cannot enforce the landlord's obligations or seek other remedies under the tenancy agreement, they may, however, take action in negligence.

Boarding houses

Boarding houses are a distinct type of land use under the EPA Act, and have distinct performance requirements under the NCC (particularly larger Class 3 boarding houses; smaller Class 1b boarding houses are regulated in a similar way to Class 1a single dwellings). Most boarding houses are also subject to the Boarding Houses Act 2012, which applies to all 'general boarding houses' (roughly speaking, boarding houses with five or more residents, not counting any resident proprietor or manager) and 'assisted boarding houses' (with two or more residents who are 'persons with additional needs'). Both these forms of boarding house are required to be registered, and subject to an inspection by the local council. General and assisted boarding houses are also subject to a special regime of sanitarystyle regulation under the Local Government (General) Regulation, as 'places of shared accommodation' (schedule 2). This allows councils to determine the maximum number of residents allowed, and requires adequate ventilation and lighting, certain signs, schedules and room numbering, and clean facilities. The standards also incorporate from the Public Health Regulation 2012 a requirement that rooms for 'sleeping accommodation' must be at least 5.5 square metres per person (cl 46(1)(a)). Assisted boarding houses are also required to be authorised by Family and Community Services, and comply with detailed licence conditions under the Boarding Houses Act. There are fewer than 20 authorised assisted boarding houses in operation in NSW.

Current issues and directions for reform

At the project workshop, members of the research team and participants reviewed the research on the extent of housing quality problems, and housing quality regulation. The workshop then discussed directions for reform, both in terms of what is on the current policy reform agenda, and what is missing or requires more attention.

New building standards

Concerns about the standard of design and construction of new buildings currently have a high profile with policymakers and the general public, not least because of the very highly visible examples of problems provided by the 2012 fire at the Euro Terrace building, the 2014 fire at the Lacrosse building in Melbourne, and the 2018 cracking at the Opal building in Sydney.

One line of criticism is that current standards—as set out in the performance requirements of the NCC, and elsewhere—do not set a high enough bar for dwelling quality (e.g. Hanmer 2019a; 2019b; Zaidi & Davies 2010).

Another line of criticism is that construction practitioners—architects, builders and certifiers—are not complying with the standards, variously because of insufficient training or accountability to public authorities and the end users of buildings, i.e. the residents (Chandler 2018; Hanmer 2019b).

Moves to reform building standards have recently been undertaken at both state and national levels. In 2015, New South Wales received the report of an 'Independent review of the Building Professionals Act 2005' (the Lambert Review), which found significant problems with the current system for building standards and certification in NSW. In response, the NSW government has legislated to:

- require greater qualifications for fire safety certifiers;
- centralise certification data collection; provide for the prohibition of unsafe building products (the new *Building Products (Safety) Act 2017*); and
- replace the *Building Professionals Act 2005* with a new Act that (*Building and Development Certifiers Act 2018*, which is yet to commence).

Lambert, however, has been critical of the response for not addressing the fragmentation of responsibility for building standards across and within government agencies (Davies 2018).

At the national level, the intergovernmental Building Ministers Forum received in late 2018 the report of a review of compliance and enforcement problems regarding the NCC and the building industry (the Shergold Weir Report). While acknowledging recent reforms in NSW and elsewhere, the Shergold Weir Report found that problems were 'significant and concerning', leading to 'serious compliance failures in recently constructed buildings. These include noncompliant cladding, water ingress leading to mould and structural compromise, structurally unsound roof construction and poorly constructed fire resisting elements.' In particular, the Shergold Weir Report (2018: 3-4) highlighted:

- inadequate training in the NCC;
- inadequate design documentation, leading to building improvisation without independent oversight; and
- weak oversight by licencing bodies, state regulators and local government, and private building surveyors [certifiers] who are not sufficiently independent from designers and/or builders.

While strongly supportive of the principle of performance-based standards, Shergold and Weir (2018: 5) recommend:

- reforms for nationally consistent registration and training of building practitioners;
- improved regulatory oversight, building audits, onsite inspection and documentation;
- early involvement of fire authorities in performance certification; and
- a code of conduct and increased reporting obligations for certifiers.

As an initial response to the Shergold Weir Report, the NSW Government has announced the establishment of a Building Commissioner as a 'consolidated regulator' to licence and audit practitioners (Kean 2019).

In the workshop discussions, the theme from the Lambert Review and Shergold Weir Report that most resonated with the participants was the inadequacy of policy governance. Participants generally acknowledged that housing quality issues and regulatory responses were wide-ranging, but were concerned that there was no comprehensive overview or oversight of the issues of dwelling quality and their interrelations, resulting in some important issues escaping the attention of policymakers. Many participants indicated that the current focus on problems in new buildings was itself an example of this; though plainly an issue in need of attention, other problems (i.e. in existing buildings) and more fundamental solutions (i.e. increasing social and affordable housing supply) were being overlooked.

Extending the agenda: Increasing the supply of social and affordable housing

Most workshop participants saw the increased supply of new social and affordable housing as a fundamental reform that would improve housing quality across new and existing stock, and five of the eight participants nominated it amongst their top three priorities (see Figure 1 for examples). Various benefits were suggested by participants: as developers, social housing landlords have an interest in durable, defect-free construction and, as landlords, an ethos of service and commitment to tenant satisfaction (we return to this point, and qualifications on it, below). For tenants of private landlords, and in existing buildings, increased social and affordable supply would increase confidence about housing alternatives and reduce the 'fear factor' that discourages tenants from asserting their rights (discussed further below).

Some participants suggested that similar benefits may also come from the emergence of a for-profit 'Build to Rent' sector. It was suggested that large-scale institutional landlords would drive higher standards in development, and be more professional and hence responsive to tenants' requests for maintenance.

Minimum standards for existing dwellings

Aside from standards governing new construction and major renovation, there is little regulation of standards for existing buildings across Australia. Local governments can issue notices or orders to require maintenance of properties that are deemed unsafe or unhealthy under the *Local Government Act 1993* (*NSW*), but these typically deal with only the very worst

Figure 1: Suggestions for increasing social and affordable housing supply

-Targetel Long social hou s essertia

MASING IMPREASE IN SOCIAL HOUSING TO BOTH BE - GOM CONTROLLED QUALIT: AND - KREMMATINE TO FORCE CONVENTIVE SECHA-JOINC

quality properties. Residential flat, unit and apartment buildings, boarding houses and shared accommodation must also abide by fire safety compliance measures (*Environmental Planning and Assessment Regulation* 2000), but aside from fire safety, few inspections are undertaken to assess the quality of residential buildings. Dwellings can spend decades in owneroccupation without anyone checking on the quality of the building or work done to it by the owner. When they are the subject of a transaction (i.e. placed on the market for sale, or for rent) dwellings will usually be subject to an inspection by interested parties, though the degree of scrutiny and professional knowledge brought to bear varies depending on the purchaser and the specialists they employ. It is left to the prospective purchaser or tenant to respond, as consumers, to quality issues, and the data produced by consumer inspections remains private and dispersed.

'Minimum standards' for rental housing have become a reform priority for housing advocacy organisations and some policymakers. This is reflected in the yet-tocommence amendments to the NSW Residential Tenancies Act 2010, discussed above. Queensland, Tasmania, and Victoria have also legislated for minimum standards for rental housing. The Tasmanian and (when they commence) Victorian amendments go further than will the NSW provisions, by providing that it is an offence for a landlord to let premises that are non-compliant with the standards. The Queensland amendments provide for regulations that prescribe minimum standards, and set out how the standards will be monitored and enforced, but no regulations have yet been made.

There have been calls by community organisations to more broadly implement the adoption of minimum standards for rental properties to ensure all renters enjoy decent housing quality (e.g. Environment Victoria 2017), particularly given that minimum standards have been in place throughout the EU for over a decade and have been more recently introduced in the UK and New Zealand (EU 2010; Liu & Judd 2018).

Most of the advocacy for minimum standards in rental housing also acknowledges that tenants may lack the market power and legal security necessary to effectively assert their rights and hold landlords to their obligations (Choice et al. 2018). This concern was reflected in workshop discussions, with several participants contending that law reform for improved security was needed, and that other authorities should take on the task of enforcement. Some participants observed that relatively secure public housing tenants still have to report problems with dwelling quality, and even if they do so, the response is often far from satisfactory.

Extending the agenda: Empowering tenants and regulators

Improving tenure security was nominated by four workshop participants as a priority for improving housing quality (see Figure 2 for examples). The major concern was around the potential for retaliatory rent increases and evictions for private renters, even where minimum standards exist and are robust. So long as it is tenants who have enforce those standards by notifying their landlords of a problem and so long as they risk threatening their tenancy to do so, those standards will not be upheld.

For existing properties, workshop participants discussed the potential for inspections of quality to occur when a tenant moves out and before a new tenant moves in. There are uncertainties, however, over who should conduct the inspections and to what standards and qualifications.

Figure 2: Suggestions for improving security of tenure

removal of no grounds eviction clause from residential tenancy legislation

Tenanci

Property inspections already occur for the purposes of bond releases, but inspections assessing whether a property meets minimum dwelling quality standards could also occur at this point. Workshop participants discussed the potential for the involvement of real estate agents, but noted the need for the people to be undertaking these reviews to have undertaken appropriate training. Following this train of thought, it may also be possible to enforce quality standards when a residential property is sold.

Extending the agenda: Addressing split incentives by mandating improvements

'Split incentive' refers to situations where the party who outlays the costs is not the main beneficiary. In a housing quality context, this is highlighted by the reluctance of some landlords to pay for upgrades (e.g. insulation or other energy efficient features) where tenants are the beneficiaries (Liu & Judd 2018). As a result, renters, especially those on low-incomes, are likely to be living in housing of lower standards or quality (Gabriel et al. 2010).

One workshop participant suggested a straightforward solution to the split incentive impasse: governments should legislate to make specified energy efficiency improvements mandatory (Figure 3). Another observed that 'energy poverty' was another way of framing the policy issue that had proved compelling in overseas jurisdictions, and that while this framing had not had the same purchase in Australia, this may be changing.

Social housing maintenance problems

The social housing sector has some specific housing quality problems. While the standard of initial construction varies widely, the stock generally is ageing and there is a backlog of maintenance, the result of disinvestment by governments from the sector (Hayward 1996; Kenley et al. 2013; Sharp & Jones 2012). While the majority of public housing meets minimum acceptable standards (Table 4d), public housing (particularly state-owned indigenous public housing) is faring worse than its community housing counterparts.

Recent attempts to address this have included management transfers of public housing to community housing providers (CHPs) with mandates of repairs and upgrades. Because community housing tenants are (unlike public housing tenants) eligible for Commonwealth Rent Assistance, CHPs can charge higher rents and are better able to fund repairs and maintenance. In the transfer programs investigated by Pawson et al. (2016), CHPs did effect some improvements, but success was limited by the unexpectedly bad condition of transferred stock in some sites, and by anticipation that CHPs lacked capacity for more challenging assets in other sites. There are also reports of split incentives (see above) that prevent community housing providers from performing upgrades to other social housing stock (Blunden et al. 2017; Halldorsson et al. forthcoming; Liu et al. forthcoming). In the UK, Decent Homes was a legislated program where over a 10-year period upgrades to over one million social housing dwellings were performed (NAO 2010), though it was ended in 2010 with its replacement (Green Deals) favouring individually arranged private financing.

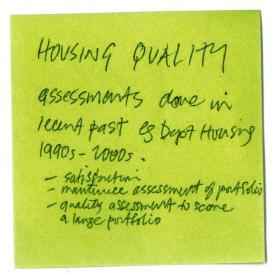
Having strongly supported increased supply of social and affordable housing as a housing quality improvement measure, workshop participants acknowledged current problems and deficiencies in the sector. Some participants were particularly scathing about the state of maintenance in public housing properties, saying that buildings have been allowed to run down and the responsibility for seeking action to improve quality standards has been passed to tenants. One participant observed that before the onset of tight targeting, public housing had a working class clientele including tenants with trades skills who did their own repairs and improvements. Participants from the social housing sector saw little scope for tenant DIY improvement, and instead believed that social housing should be a model for a strategic management approach to maintaining properties at an appropriate standard.

Extending the agenda: Improving reporting and transparency of housing standards

Community housing is the only sector that regularly carries out dwelling quality and maintenance reviews and reports these outcomes, along with resident satisfaction scores. This is often an outcome of tenancy management contracts between the state government and housing providers but also long-term asset management practices of many providers. Some participants considered that transparent reporting had helped motivate community housing providers to seek to effect best practice and identify potential to further improve service. Some workshop participants argued that principles of transparency and focus on tenant satisfaction should be entrenched in the current review of the National Regulatory Scheme for Community Housing and extended to public housing landlords (Figure 3).

Participants also addressed the question of how quality standards could be systematically monitored and enforced in the private rental sector. Some participants suggested that advances in information technology meant there was new potential in review sites for rental properties and/or landlords. Another participant suggested that NSW Fair Trading could operate a rating scheme for landlords and properties. Participants were cognisant of the need for a broader evidence base on the quality of properties as an important area for reform. However, it was also recognised that improved quality may also be matched with increased price, resulting in residents with the lowest incomes living in the poorest quality properties. There remains a need then for adequate minimum standards to protect the most vulnerable.

Figure 3: Suggestion for greater transparency



Conclusions

This report reflects on the prevalence of poor-quality housing in Australia and the negative impacts that has on low-income households. We reviewed some dimensions of the problem of poor-quality housing including through the use of new data from the Australian Housing Conditions Dataset—and the myriad ways in which housing quality is regulated.

From workshop discussions with representatives of NSW government agencies, non-profit and housing development industries, we put forward four options for reform that extend current reform agenda in ways that would likely bring about more equitable outcomes. These relate specifically to (1) increasing the supply of social and affordable housing so more families in need can benefit; (2) empowering tenants and regulators so they have more security and real choices; (3) addressing split incentives by mandating improvements in dwelling standards so the build quality of our existing stock is improved; and (4) improving reporting and transparency of housing standards so as to minimise the need of substantive repair, retrofit and upgrade.

Collectively, these options can deliver more equitable housing outcomes, not only to low-income households but to all. The challenge lies in having the political and industry will to initiate them.

References

- ABS (2017) <u>TableBuilder Pro</u>. Canberra: Australian Bureau of Statistics.
- Andersen, M., A. Williamson, P. Fernando, S. Redman &
 F. Vincent (2016) "'There's a housing crisis going on in Sydney for Aboriginal people': focus group accounts of housing and perceived associations with health." <u>BMC Public Health</u> 16: 429.
- Baker, E., L. Lester, R. Bentley & A. Beer (2016) "Poor housing quality: prevalence and health effects." Journal of Prevention & Intervention in the Community 44(4): 219-232.
- Beer, A. (1998) "Overcrowding, quality and affordability: Critical issues in nonmetropolitan rental housing." <u>Rural Society</u> 8(1): 5-15.
- Berry, M. (2000) "Investment in rental housing in Australia: Small landlords and institutional investors." <u>Housing Studies</u> 15(5): 661-681.
- Blunden, H., E. Liu & k. valentine (2017) Evaluation of the Better Places, Stronger Communities program: <u>Final report</u>. Sydney: Social Policy Research Centre and City Futures Research Centre.
- Chandler, D. (2019) "The construction industry through the lens of the Opal Tower." <u>The Fifth Estate</u> 29 January 2019.
- Choice, National Shelter and the National Association of Tenant Organisations (2018) <u>Disrupted: the</u> <u>consumer experience of renting in Australia</u>. Sydney: Choice.
- Darcy, M. (2010) "De-concentration of disadvantage and mixed income housing: A critical discourse approach." <u>Housing, Theory and Society</u> 27(1): 1-22.
- Dewsbury, M. & T. Law (2016) "Recent increases in the occurrence of condensation and mould within new Tasmanian housing." <u>Fifty years later: Revisiting the role of architectural science in design and practice:</u> <u>50th International Conference of the Architectural Science Association</u>, The Architectural Science Association and The University of Adelaide.
- Easthope, H. & R. van den Nouwelant (2013) <u>Home</u> <u>Modifications in Strata: Final Report</u>. Sydney: City Futures Research Centre.
- Easthope, H., B. Randolph & S. Judd (2012) <u>Governing</u> <u>the Compact City: The role and effectiveness of</u> <u>strata management</u>. Sydney: City Futures Research Centre, UNSW.
- Easthope, H., L. Troy & L. Crommelin (2017) Equitable Density: The place for lower income and disadvantaged households in a dense city: Report 1,

<u>The Building Scale</u>. Sydney: City Futures Research Centre for Shelter NSW.

- Environment Victoria (2017) <u>Bringing rental homes up</u> <u>to scratch</u>. Melbourne.
- EU (2010) <u>Directive 2010/31/EU of the European</u> Parliament and of the Council of 19 May 2010 on the energy performance of buildings. European Union.
- Evans, J., S. Hyndman, S. Stewart-Brown, D. Smith & S. Petersen (2000) "An epidemiological study of the relative importance of damp housing in relation to adult health." Journal of Epidemiology and <u>Community Health</u> 54(9): 677-686.
- Gabriel, M., P. Watson, R. Ong, G. Wood & M. Wulff (2010) <u>The environmental sustainability of</u> <u>Australia's private rental housing stock</u>. Final Report No. 159. Melbourne: Australian Housing and Urban Research Institute Limited.
- Habibis, D., C. Birdsall-Jones, T. Dunbar, M. Scrimgeour,
 E. Taylor & M. Nethercote (2011) <u>Improving housing</u> responses to Indigenous patterns of temporary <u>mobility</u>. Final Report No. 162. Melbourne: Australian Housing and Urban Research Institute Limited.
- Habibis, D., P. Memmott, R. Phillips, C. Go-Sam, C. Keys& M. Moran (2013) <u>Housing conditionality,</u> <u>Indigenous lifeworlds and policy outcomes:</u> <u>Towards a model for culturally responsive housing</u> <u>provision</u>. Final Report No. 212. Melbourne: Australian Housing and Urban Research Institute Limited.
- Hall, J. & M. Berry (2004) <u>Operating deficits and public</u> <u>housing: Policy options for reversing the trend</u>. Final Report No. 55. Melbourne: Australian Housing and Urban Research Institute Limited.
- Halldorsson, J., E. Liu & D. Daly, D. with P. McGuirk, B. Judd, P. Cooper, G. Waitt & J. Gardner (forthcoming)
 <u>Energy efficiency in social housing: Literature and</u>
 <u>program review</u>. Sydney: Energy Efficiency
 Decision-Making Node, NSW Office of Environment and Heritage.
- Hanmer, G. (2019a) "Beyond Opal: A 10-point plan to fix the residential building industry." <u>The</u> <u>Conversation</u> 5 February 2019.
- Hanmer, G. (2019b) "Lacrosse fire ruling sends shudders through building industry consultants and governments." <u>The Conversation</u> 5 March 2019.

- Harrison, M. (2004) "Defining housing quality and environment: disability, standards and social factors." <u>Housing Studies</u> 9(5): 691-708.
- Hayward, D. (1996) "The reluctant landlord? A history of public housing in Australia." <u>Urban Policy and</u> <u>Research</u> 14(1): 5-35
- Herath, S. & R. Bentley (2018) "Crowding, housing and health: an exploratory study of Australian cities."
 <u>State of Australian Cities Conference</u> 28-30 November 2017, Adelaide, Australia.
- Hernández, D. & S. Bird (2010) "Energy burden and the need for integrated low-income housing and energy policy." <u>Poverty & Public Policy</u> 2(4): 5-25.
- Hood, E. (2005) "Dwelling disparities: How poor housing leads to poor health." <u>Environmental</u> <u>Health Perspectives</u> 113(5): A310-A317.
- Hope, A. & A. Booth (2014) "Attitudes and behaviours of private sector landlords towards the energy efficiency of tenanted homes." <u>Energy Policy</u> 75(Supplement C): 369-378.
- Infrastructure Australia (2019) <u>Infrastructure priority</u> <u>list: Australian Infrastructure Plan – Project and</u> <u>initiative summaries</u>. Canberra: Australian Government.
- Instone, L., K. Mee, J. Palmer, M. Williams & N Vaughn (2013) <u>Climate change adaptation and the rental</u> <u>sector</u>. Gold Coast: National Climate Change Adaptation Research Facility.
- Kean, M. (2019) <u>Biggest overhaul of building laws in</u> <u>NSW history</u>, Minister for Innovation & Better Regulation media release, 11 February 2019.
- Kenley, R., C. Heywood & T. Harfield (2013) "Maintenance of ageing social housing stock: Australian Asset Management in practice." <u>International Conference on Structural Engineering</u> <u>Construction and Management</u> 13-15 December 2015, Kandy, Sri Lanka.
- Lambert, M. (2015) <u>Independent Review of the Building</u> <u>Professionals Act 2005: Draft Report August 2015</u>. NSW Government.
- Liu, E. & B. Judd (2016) <u>RP3038 Lower income barriers</u> to low carbon living: Summary of focus group and <u>survey findings</u>. Sydney: Cooperative Research Centre for Low Carbon Living.
- Liu, E. & B. Judd (2018) "Tenure as barrier to low carbon living." <u>State of Australian Cities Conference</u> 28-30 November 2017, Adelaide, Australia.
- Liu, E., D. Daly, P. McGuirk, G. Waitt & J. Halldorsson with B. Judd & P. Cooper (forthcoming) <u>Energy</u> <u>efficiency in social housing: Interview findings and</u> <u>policy recommendations</u>. Sydney: Energy Efficiency

Decision-Making Node, NSW Office of Environment and Heritage.

- Memmott, P., C. Birdsall-Jones & K. Greenop (2012) <u>Australian Indigenous house crowding</u>. Final Report No. 194. Melbourne: Australian Housing and Urban Research Institute Limited.
- Milligan, V., K. Hulse, H. Pawson, P. Flatau, & E. Liu (2015) <u>Strategies of Australia's leading not-forprofit housing providers: A national study and international comparison</u>. Final Report No. 237. Melbourne: Australian Housing and Urban Research Institute Limited.
- Mitakakis, T., E. Tovey, W. Xuan & G. Marks (2000) "Personal exposure to allergenic pollen and mould spores in inland New South Wales, Australia." <u>Clinical & Experimental Allergy</u> 30(12): 1733-1739.
- Moran, M., P. Memmott, D. Nash, C. Birdsall-Jones, S.
 Fantin, R. Phillips & D. Habibis (2016) <u>Indigenous</u> <u>lifeworlds, conditionality and housing outcomes</u>.
 Final Report No. 260. Melbourne: Australian Housing and Urban Research Institute Limited.
- Murtishaw, S. & J. Sathaye (2006) <u>Quantifying the Effect</u> of the Principal-Agent Problem on
- NAO (2010) <u>The Decent Homes Programme</u>. London: National Audit Office.
- Pawson, H., C. Martin, K. Flanagan & R. Phillips (2016) <u>Recent housing transfer experience in Australia:</u> <u>Implications for affordable housing industry</u> <u>development</u>. Final Report No. 273. Melbourne: Australian Housing and Urban Research Institute Limited.
- Pawson, H., K. Hulse & L. Cheshire (2015a) <u>Addressing</u> <u>concentrations of disadvantage in urban Australia</u>.
 Final Report No. 247. Melbourne: Australian Housing and Urban Research Institute Limited.
- Pawson, H., V. Milligan, E. Liu, P. Phibbs, & S. Rowley (2015b) <u>Assessing management costs and tenant outcomes in social housing: Recommended methods and future directions</u>. Final Report No. 257. Melbourne: Australian Housing and Urban Research Institute Limited.
- Peat, J., J. Dickerson & J. Li (1998) "Effects of damp and mould in the home on respiratory health: a review of the literature." <u>Allergy: European Journal of</u> <u>Allergy and Clinical Immunology</u> 53(2): 120-128.
- PICA [Prudential Investment Company of Australia] (2019) Opal Tower Sparks Inquiry: Is NSW's 2% building defects bond enough?, <u>https://picagroup.com.au/opal-tower-sparks-</u> <u>inquiry-is-nsws-2-building-defects-bond-scheme-</u> <u>enough/</u> (accessed 26 March 2019)

Productivity Commission (2018) <u>Report on Government</u> <u>Services</u>. Canberra: Australian Government.

- Randolph, B. & D. Holloway (2005) "The suburbanization of disadvantage in Sydney: New problems, new policies." <u>Opolis</u> 1(1): 49-65.
- Randolph, B. (2006) "Delivering the compact city in Australia: Current trends and future implications" Urban Policy and Research 24(4): 473-490.
- Scott, G. (1994) "Moisture, ventilation and mould growth." <u>Studies in Conservation</u> 39(S2): 149-153.
- Sharp, M. & K. Jones (2012) "Perceived inefficiency in social housing maintenance." <u>Construction</u> <u>Innovation</u> 12(4): 414-428.
- Shergold, P. & B. Weir (2018) <u>Building Confidence:</u> <u>Improving the effectiveness of compliance and</u> <u>enforcement systems for the building and</u> <u>construction industry across Australia</u>. Australian Institute of Building Surveyors.
- Standards Australia (2018) <u>Building and Construction</u> <u>Standards Catalogue</u>. Sydney.
- Stilwell, F. & J. Hardwick (1973) "Social inequality in Australian Cities." <u>The Australian Quarterly</u> 45(4): 18-36.

- Tas CAFT (2015) <u>Minimum standards for premises: A</u> <u>guide for tenants and property owners</u>. Hobart: Tasmanian Consumer Affairs and Fair Trading.
- <u>US Residential Energy Use</u>. Berkeley, CA: Lawrence Berkeley National Laboratory.
- Walker, R. & M. Barcham (2010) "Indigenous-inclusive citizenship: The city and social housing in Canada, New Zealand, and Australia." <u>Environment and</u> <u>Planning A: Economy and Space</u> 42(2): 314-331.
- Winter, I. & L. Bryson (1998) "Economic restructuring and state intervention in Holdenist suburbia: understanding urban poverty in Australia." <u>International Journal of Urban and Regional Research</u> 22(1): 60-75.
- Zaidi, M. & H. Davies (2010) "A prospective study on building quality: enforcement of control in the Australian housing industry." <u>Sustainable Building</u> <u>Conference: Innovation and Transformation</u> 26-28 May 2010, Wellington, New Zealand.