

## Impacts of leaky homes and leaky building stigma on older homeowners

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### ABSTRACT

This paper employs mixed methods combining in-depth, semi-structured interviews with quantitative data of paired house sales, administrative data and institutional analysis to investigate the impacts of leaky building syndrome and its potential stigmatising effects on older homeowners in New Zealand. Older homeowners are particularly vulnerable to the negative effects of a leaky home. Adverse impacts were identified on the use value and financial value of older people's homes, retirement planning, physical and mental health, relationships and social connections. Some face an uncertain housing future and their ability to downsize is compromised. Complex and confusing information and processes around dispute resolution and remediation do not support a positive outcome. This exploratory study raises issues for further research, both in relation to older homeowners and ongoing challenges in addressing weathertightness problems due to non-remediation and remediation failure. This paper is the first to report research on older leaky homeowners' experiences, issues and impacts. The focus is unique in that it covers not only the experience of owning a leaky home, but also the implications of leaky home stigma for older people's ability to optimise their housing choices.

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## Introduction

Three-quarters of older people in New Zealand aged 65 years or more are homeowners (Statistics New Zealand, 2015). For most of them, their home is their most valuable asset. Widespread mortgage-free homeownership has allowed older people in New Zealand to maintain a relatively good standard of living (Perry, 2010; Koopman-Boyden, van der Plas and Cameron, 2007), despite relatively low incomes primarily from state-provided superannuation. Indeed, some have argued that older New Zealanders' wealth in their housing assets provides a nest-egg which older people can "cash-up" to fund the costs of retirement by moving to a smaller or cheaper home, popularly known as downsizing (Saville-Smith, 2013),<sup>1</sup> or by entering financial arrangements such as reverse equity mortgage (Davey, 2007).

Downsizing is not always simple and nor is releasing equity, even in an environment in which house prices have tended to increase rapidly as they have done in New Zealand. In particular, some older people have had to deal with external shocks, which have compromised the value of their homes. Adverse natural events, earthquakes and flooding, have affected older people in New Zealand and older people tend to be over-represented among populations that may be affected by sea level rise associated with climate change (James and Saville-Smith, 2014; Bell and Wadwha, 2014). The shock that is, however, perhaps most gruelling for older people is the shock of leaky building syndrome. It is that phenomenon and the way it impacts older householders, the value of their dwellings and their futures that this paper addresses.

### **Leaky building syndrome**

“Leaky building syndrome” refers to a systemic weathertightness problem due to design, materials and/or construction methods. It has been particularly apparent in stand-alone dwellings and multi-units built in the three decades from the mid-1980s, particularly but not only in monolithic-clad (plaster) buildings (Overview Group, 2002). A home suffering from leaky building syndrome is marked by both water entry and inability of water to drain out of the dwelling. The effects of pervasive and sustained water ingress were exacerbated by the use of untreated timber framing. Although damage may not be apparent on a simple visual inspection, the effects can be severe. Associated rot and decay of timber framing may result in building collapse (Overview Group, 2002; PriceWaterhouseCoopers, 2009; HOBANZ, 2014). In addition, residents may be exposed to damp, cold and moulds. Those conditions are associated with allergies, asthma, gastroenteritis and respiratory problems.

Furthermore, there can be significant costs related to assessment and remediation. There are also implications for the value of dwellings. Compromised asset values are not only associated with dwellings that are identified as suffering leaky building syndrome, but even remediated dwellings. Moreover, the value of a dwelling built over the period associated with leaky building syndrome, and with materials or designs also associated with leaky buildings can be negatively affected by stigma, even when it is not a leaky building. The primary architectural design feature that attracts stigma is monolithic cladding, which is comprised of sheets of materials (typically polystyrene or fibre cement) that are coated to give the seamless appearance of concrete or stucco plaster (Rehm, 2009).

Figure 1 provides a photo of a typical monolithic-clad terraced house development in Auckland, New Zealand.

Despite an array of government-commissioned reports on the prevalence of leaky dwellings and a flurry of legislation designed to remedy the problem, there remains considerable uncertainty as to the actual numbers affected. An early estimate was between 22,000 and 89,000 dwellings built between 1992 and 2005 (PriceWaterhouseCoopers, 2009). Government officials have arrived at a consensus forecast of 42,000 failures of houses built between 1992 and 2005 (PriceWaterhouseCoopers, 2009). That is, between 6.6 and 26.9% with the consensus at 12.7% of the dwelling stock built over that period (Statistics New Zealand, 2016). Around 78% of homes under claim through the Weathertight Homes Resolution Service are in the Auckland region, but homes nationwide are affected.

A key reason behind Auckland’s (and Wellington’s) disproportionate number of leaky building claims is the harsh winter weather, particularly wind-driven rain, to which the



**Figure 1.** Photo of typical monolithic-clad dwelling in Auckland.

**Table 1.** Average annual rainfall for main Australasian cities.

City	Annual rainfall (mm)	Sample period	Weather station
Wellington	1229.7	1862–1989	Wellington
Sydney	1222.7	1840–1989	Sydney
Auckland	1160.0	1853–1990	Auckland airport
Brisbane	1150.6	1840–1989	Brisbane regional office
Perth	864.9	1852–1989	Perth
Melbourne	656.0	1855–1989	Melbourne
Christchurch	647.2	1864–1990	Christchurch airport
Adelaide	516.2	1839–1989	Adelaide airport

Source: Global Historical Climatology Network (GHCN), version 1.

building stock is subjected. Table 1 provides the average annual rainfall for the largest cities in Australasia. As indicated, Wellington is home to the wettest urban climate in the region followed by Sydney and Auckland.

The Weathertight Homes Resolution Service was one of several responses established under the Weathertight Homes Resolution Services Act 2006 to provide owners of a leaky dwelling with access to assessment procedures, resolution of claims and financial assistance for remediation. Also included is the Financial Assistance Package (FAP) to facilitate repairs without homeowners going through litigation or dispute resolution. However, eligible homeowners can only claim half of the repair cost from central and local government agencies. Eligibility for FAP is determined by the Ministry of Business, Innovation and Employment, which includes what was the Department of Building and Housing. Affected homeowners can seek resolution through a dispute or litigation process through the Weathertight Homes Tribunal, the district or high court or through other dispute resolution processes, such as the Disputes Tribunal (for small claims), and private negotiation, mediation or arbitration. Homeowners who have accepted the FAP cannot pursue further costs from the government or their local council, but can use dispute resolution to recover costs through other liable

parties, such as developers, builders and manufacturers of defective products. To access services under the Weathertight Homes Resolution Services Act, a claim had to be made within 10 years of the build.

### *Older people and leaky building syndrome – why worry?*

Older homeowners are particularly vulnerable to the negative effects of a leaky home for three reasons. First, because of age-related frailty or existing health conditions, older people can be more vulnerable to the adverse health impacts of leaky buildings associated with a damp, mouldy living environment (Barrett, 1998; Parliamentary Library, 2002). There is evidence of a highly consistent association between a damp home and respiratory symptoms and asthma. There is also some evidence of an increased risk of depression and anxiety (Douwes and Howden-Chapman, 2011). In addition, there appears to be a substantial stress effect on older people attempting to resolve leaky homes. This is detailed later in this paper but appears similar to the stress associated with an adverse natural event (such as flooding and earthquake) resulting in major or irreparable damage to the home. The disruption to home and social networks, combined with financial stress, and adverse impacts on mental and physical health, can be devastating and long term, with recovery taking years, even decades. Yet, older people have limited time and resources to recover from those significant setbacks (James and Saville-Smith, 2014).

Second, the array of processes and procedures established by the New Zealand Government to assess leaky buildings, deal with disputes, remediate and compensate for the associated costs is complex and requires substantial technical and financial literacy. It is well established that older people are vulnerable to adverse outcomes under those sorts of conditions (Productivity Commission, 2015; James, 2015). Indeed, there is some evidence that householders of all ages may struggle to access and navigate the current resolution system provided under the Weathertight Resolution Services Act (Ministry of Business, Innovation and Employment, 2013).

The third dimension which makes leaky building syndrome important in the context of an ageing society and in the context of older people's well-being relates to the financial impacts of leaky homes. In New Zealand, 40% of people aged 65 and over are wholly reliant on state-funded national superannuation and an additional 20% receive around 80% for their income from state-funded national superannuation (Perry, 2010). Limited income, combined with the tendency for older people's wealth to be tied up in the home they occupy, means that some older people are under severe financial stress with costs of repairs and dispute resolution, as well as the devaluation of their primary financial asset. Major unanticipated disruption in retirement can tip older people out of homeownership (Wood, Smith, Ong, & Cigdem, 2013; Petersen, Parsell, Phillips, & White, 2014). Those especially at risk are households with limited housing equity, in areas with weak property values, or with few financial reserves and income uncertainty. The loss of housing assets can jeopardise standards of living, constrain housing options and reduce opportunities to downsize or use financial instruments such as reverse equity to fund retirement living or age-related health costs.

## Data and methods

The impacts of leaky homes on older people have been explored in research about older homeowners' downsizing opportunities and the costs and benefits of downsizing. The *Finding the Best Fit* research programme is a multi-disciplinary, cross-organisational, multi-component research programme focusing on the use and financial value of older people's homes, the realities of downsizing housing and attempts to realise housing equity and the net individual and societal benefits or costs of older people downsizing. It explores the ambiguities, permutations, opportunities and risks of older people's downsizing in an ageing society. The programme recognises that realising housing assets holds the promise of maintaining older people's living standards while offsetting liabilities for superannuation, social and health costs in an ageing society. But it also asks what if some older people find they have no or little equity to release? The case study of older people caught up in leaky homes addresses precisely that issue. It throws attention onto the impacts of regulatory failure in the building industry on house values, the efficacy of compensatory and dispute resolution processes attempting to resolve those failures retrospectively and the implications for older people in the context of ageing societies.

This case study uses triangulation to explore the impacts of leaky building syndrome for older people who may be exposed to it. Data-sets used consist of quantitative data-sets and a set of in-depth interviews. The quantitative analysis involves two data samples. First, house price data generated by dwelling sales and, second, fragmentary administrative data generated out of the New Zealand Government's response to compensating and remediating leaky building syndrome. It is the fragmentary nature of the latter and the potential for deep and persistent personal as well as financial impacts that have prompted this attempt to better understand the range of outcomes associated with leaky building syndrome. The quantitative data are illuminated by 12 in-depth interviews. Those interviews should not be treated as a small sample, but rather as a set of cases in which the dimensions, dynamics and complex interactions of leaky building syndrome with personal life can be explored. Interviewing is a well-established method of inquiry designed to allow participants to articulate in detail their experience (Denzin and Lincoln 2000; Patton 2002). That articulation is analysed thematically, giving attention particularly to convergence and divergences across the interviewees. The small number of interviewees provides insights into the dimensions and dynamics of experience unable to be captured by quantitative methods, particularly where the affected population is numerically unknown. One of the strengths of this case study is that the use of both quantitative and qualitative data, as well as different data-sets allows analytic interpretation to be triangulated. Triangulation enables data validation through cross-verification (Olsen 2004; Rothbauer 2008).

Interviewing was chosen as the most appropriate method to gather data on the experiences, impacts and meaning of dealing with leaky home syndrome, rather than a survey. Such data are best obtained through in-depth discursive conversation with participants. A survey would not have delivered the rich material about the lived experience of leaky homes that the interviews, which lasted between 1.5 and 2.5 h, did. It is important in researching a very stressful experience such as leaky home syndrome to spend time establishing rapport with the individual and to allow them to tell their story in the way that they wish. This cannot be done through a survey. An interview allows for clarification and probing. Nuances, complexities, ambiguities and apparent contradiction can be explored through

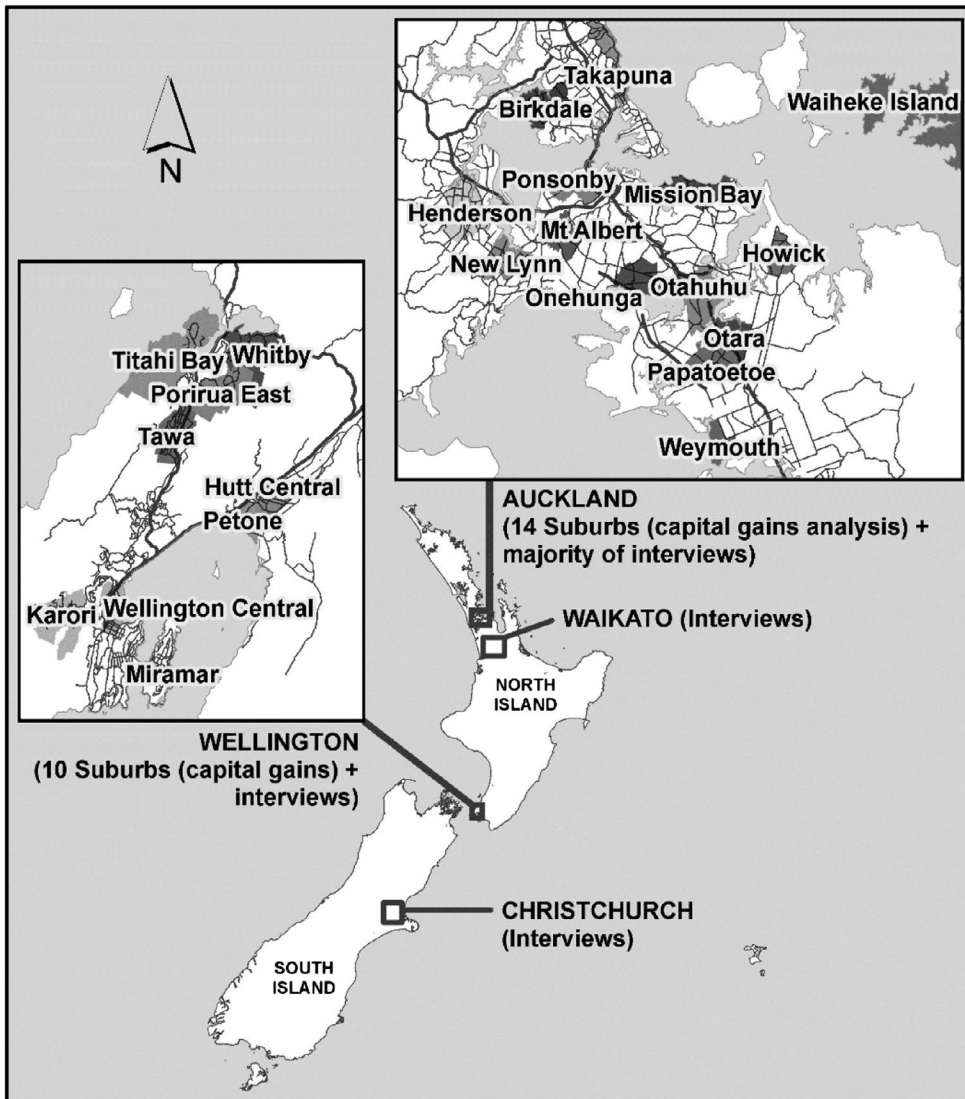
conversational techniques. This is not true for surveys, which are necessarily short, limited in their scope and require responses without nuance. Furthermore, establishing the population of leaky homeowners aged 65 and over for the purpose of a survey would take considerable time and resources. No administrative data-set, such as that managed by the FAP, or by councils which issue consents for leaky home remediation, collects data on the age of leaky homeowners. Furthermore, any administrative data would only partially cover the target group, as not all leaky homeowners have chosen to repair their homes, or to seek public assistance or public dispute resolution processes to do so. One way of accessing older leaky homeowners would be to focus on multi-unit dwellings, as these have been particularly affected by leaky home syndrome. Location and meshblock data would need to be established, and then residents in the meshblock randomly surveyed to identify eligible interviewees. Such a process would be very expensive and it is doubtful that it would deliver the rich information revealed in the interviews.

Interviewees were recruited through a body corporate management company, an organisation supporting leaky homeowners and personal contacts. Information was circulated about the research and leaky homeowners aged 65 and over were invited to contact the researcher. To agree to be interviewed was a major step for some, who after several years of dealing with a leaky home had only just reached the stage where they could talk about it to a third party. Several said that they took part in the research expressly because they wanted their story to be heard. Ethics procedures included providing prospective interviewees with full information about the research. It was explained that they had the right to not participate or to withdraw from the research process at any time. They were assured that personal details would be kept confidential and that data would be presented at the aggregate level only in order to preserve anonymity.

A mix of face-to-face and phone interviews was conducted. Appendix 1 outlines the topic areas covered, as the interview schedule comprising 56 items is too long to reproduce here. The 12 interviewees comprised 5 men and 7 women. Nine were in the 65–74 years age group and three were aged 75 years or older. Five lived alone, six lived with a partner and one resided with other family members. Four were employed. The majority were in New Zealand's largest city, Auckland, where the majority of leaky homes are, with others in Christchurch, New Zealand's capital city Wellington and the Waikato region, which has been marked by substantial and rapid urban development in a previously dairy farming-dominated region (Figure 2).

Table 2 summarises the characteristics of the leaky dwellings owned by participants, or affected by leaky building stigma. Eleven interviewees were current or former owners of a leaky home; one had been affected by leaky home stigma, although the dwelling was watertight. The leaky homes included stand-alone dwellings, semi-detached terrace houses and apartments in multi-unit buildings. Eight were involved in body corporates.<sup>2</sup> Of the eleven leaky homeowners, at the time of interviewing, four were living in the leaky home, three had sold their leaky home and three still owned, but were not living in the leaky home because repairs were being done. One person had demolished the leaky home and rebuilt on the same site. The interviewee affected by leaky home stigma was residing in their dwelling and awaiting sale to allow downsizing.

In terms of the analysis of reduced capital gains, two areas were the focus of analysis – Auckland and the Wellington conurbation. Within these two broad housing markets, a set of submarkets were identified from which sales transaction data were purchased from



**Figure 2.** Map showing locations of analysed submarkets and interviews.

CoreLogic, a property information, analytics and services provider. The submarkets vary in their spatial location, socio-economic composition and housing stock. The approach of analysing an aggregation of representative submarkets was adopted in favour of analysing the whole of Auckland and Wellington due to research budget limitations. The below Table 3 provides a list of the analysed submarkets while their spatial distribution is illustrated in Figure 2.

The determination of real capital gains involved pairing sales transactions of individual properties occurring within two distinct time periods. The earlier period spanned three years from 1997 to 1999, while the latter period ranged from 2011 to 2013. Properties that were sold in both periods were considered for analysis. These two time periods were chosen based on data availability.

**Table 2.** Characteristics of leaky dwellings.

	Type of owner		Dwelling type		Current ownership	
	Owner-occupier	Investor owner	Stand-alone	Terrace, multi-unit, apartment	Still own	Sold
Auckland	√			√	√	
Auckland	√			√	√	
Auckland	√			√	√	
Auckland	√			√	√	
Auckland	√			√		√
Auckland		√		√	√	
Auckland		√		√	√	
Wellington	√		√		*	*
Wellington	√		√			√
Waikato	√		√		√	
Waikato	√		√		√	
Christchurch	√		√			√

\*Demolished house and rebuilt on same section.

**Table 3.** Submarkets included in the capital gains analysis.

Auckland	Wellington
Birkdale	Hutt Central
Henderson	Karori
Howick	Miramar
Mission Bay	Petone
New Lynn	Porirua East
Onehunga	Tawa
Otahuhu	Titahi Bay
Otara	Whitby
Papatoetoe	
Ponsonby	
Takapuna	
Waiheke Island	
Weymouth	

Once identified, the paired data were checked for structural differences (floor area, land area, vintage, etc.) to verify that no major additions or land subdivisions occurred between the two sales transactions. The cleaned data were then organised into two groups: monolithic-clad and non-monolithic. The latter approach was to test the impact of cladding on value because monolithic-clad dwellings were over-represented in leaky buildings.

In total, 2469 paired sales were considered, 1553 in Auckland and 916 in Wellington. Analysis of the data revealed that the non-monolithic group in both Auckland and Wellington featured a string of outliers with exceptionally large capital gains. At the same time, the monolithic-clad group in both cities contained a number of negative capital gains (real losses). These losses likely involved the sale of known leaky homes prior to remediation. Given the outliers in both groups, the authors elected to compare median real capital gains as the means of quantifying the different outcomes experienced by homeowners of monolithic-clad homes vs. owners of non-monolithic dwellings.



**Table 4.** Median real capital gains (1997–2013).

		Auckland		Wellington	
		N	Median real capital gain	N	Median real capital gain
Stand-alone homes	Monolithic-clad	72	209,904	43	104,413
	Non-monolithic	1481	235,279	769	134,602
	Difference in gain		–25,375		–30,189
	% Difference		–12%		–29%
Apartments and units	Monolithic-clad	33	130,235	21	57,401
	Non-monolithic	883	145,202	343	72,065
	Difference in gain		–14,967		–14,664
	Difference		–11%		–26%

## Findings

### *Leaky home stigma and capital gains*

Table 4 provides the median real capital gains (shown in 2013 dollars) by city, group and property type (stand-alone homes and apartments and units). The difference in capital gains represents an estimate of the stigma loss suffered by owners of monolithic-clad dwellings. In Auckland, the stigma loss for stand-alone homes is approximately \$25,000 while owners of monolithic-clad apartments and units have their capital gain reduced by approximately \$15,000.

Notably, the difference in capital gains is quite similar between Auckland and Wellington, despite the fundamental differences in house prices – the December 2013 average house price in Auckland was \$693,549 but only \$451,200 in Wellington.<sup>3</sup> Viewed as a percentage of total capital gain realised, Wellington homeowners suffered considerably from leaky building stigma, the reduction being owners of stand-alone homes who have their capital gain reduced by 29% due to their home’s monolithic cladding.

While the older interviewees were not aware of the precise nature of reductions in capital gain, they were aware of and sensitive to the apparent stigma associated with monolithic-clad buildings built in the mid-1990s to mid-2000s. From being dwellings which, at their time of building, were presented as high-value, quality homes and which tended to attract higher income or asset rich buyers, monolithic-clad homes, regardless of whether or not a particular home had ever had any leaks, became presented in the media as the epitome of the leaky building.

The impacts have been profound. A leaky homeowner noted that among their own acquaintances, householders with monolithic cladding homes were incurring significant costs to avoid market stigmatisation:

This is not a story that is unique to us, we know people ... they spent \$300,000 on re-cladding their five year old home so they were able to sell it and it didn’t even have leaks (Auckland 1).

One couple, whose house conformed to the image of a leaky home but who had not experienced any leakiness, did extensive re-surfacing and renewal of sealants to guard against future leaks and had weathertightness reports prepared. They found when marketing their house:

We did full disclosure on the repairs made. A lot didn’t want to look at it because of the stereotyping that’s emerged about this type of building, there’s a blanket condemnation (Waikato 1).

### *Costs and older people's financial futures*

As at 31 December 2015, the Weathertight Homes Resolution Service had received 7299 claims for 12,511 properties.<sup>4</sup> Only a minority of those, about 3,500, have been repaired using the FAP.<sup>5</sup> If the low-end estimates of dwellings with leaky building syndrome are accepted (22,000), this implies that more than half of affected householders have accessed the provisions under the Weathertight Resolution Services Act, although those claims may not have been concluded. If the consensus position held by government officials is accepted (42,000), 29.8% of dwellings have been subject to some claim. If, however, the high end of the estimated range is accepted (89,000), then only 14% of affected dwellings have been subject to a claim.

The evaluation of the FAP found that on average, the estimated cost of repair of a stand-alone leaky house is \$220,000, and the per unit cost in a multi-unit building is estimated at \$95,000 on average (Ministry of Building, Innovation and Employment, 2013). Despite the FAP and the alternative possible routes to seek remedy for design, material or building failures giving rise to leaky buildings, it has been estimated that those who have remediated their homes have typically shouldered 69% of the remediation cost burden (PriceWaterhouseCoopers, 2009). Indeed, there appears to be some evidence that the financial assistance offered in relation to leaky homes is only accessed by a few. Of the interviewees, only three had used the FAP; others had used the court or other type of dispute resolution.

Of the nine interviewees who had done repairs, their personal contributions ranged from under \$20,000 to over \$700,000, with five spending more than \$100,000. Two of those noted that repairs were not completed, and they might have to provide additional funds. There were unexpected additional remediation expenses. One person talked about repairs on their apartment building leading to discovery of further decay caused by weathertightness problems, which required more remediation work. This resulted in delays to repairs while apartment owners found more money to fund the mounting repairs costs.

In another apartment building, settlement of the leaky building claim did not cover additional costs associated with non-compliance with building standards that came to light during repairs. Significant structural and safety faults discovered included structural misalignment, lack of fire safety features and lack of membranes. This resulted in delays to repairs, as well as several million dollars of additional costs, which could not be covered by the claim because they were not attributable to weathertightness failures. The owners are still in the process of raising funds to complete the repairs.<sup>6</sup>

In addition to repairs, other costs included accommodation and storage of household effects while repairs were being done. Although the FAP covers these costs, they are only covered to a maximum amount, and costs beyond that must be paid by the householder. To reduce those costs, several participants lived with friends or relatives, or carried out "house sitting" duties for others while their leaky home was repaired.

Interviewees also detailed the costs associated with pursuing remedies and noted that some older people found meeting those costs difficult. One interviewee had kept costs under \$2,000, with the use of the Disputes Tribunal and doing all preparation themselves, as well as using a small amount of legal advice. But the rest noted that their costs relating to dispute resolution ranged from \$12,000 to over \$50,000. Those costs are consistent with

the Weathertight Homes Resolution Service data showing an average legal cost of around \$30,000 for each party involved (Stewart, 2014).

None of the interviewees involved in remediation had savings that covered all repairs and associated costs, despite these interviewees typically having had moderate or higher incomes during their working lives. Taking on debt was typical. Two commented that their working past age 65 was a direct consequence of the leaky home, as they had to service a substantial debt or mortgage to cover remediation, dispute resolution and other costs. Comments included:

You only partly recover financially. It has a big effect (Auckland 2).

Quality of life over that time was not great. I felt shattered, a lot of sleepless nights. Emptied the bank account! Six years of a not nice life (Wellington 1).

The effects on material well-being in retirement were substantial, as these comments suggest:

When you get to be 78, you don't have much money coming in and you have to plan for any expenses, like the dentists (Auckland 3).

It's been huge, I'd saved for retirement and it has put a hold on my whole life (Auckland 4).

It's not allowed me to plan and save for retirement. My resources have gone into fighting a legal battle. I've been struggling to survive (Auckland 5).

I've had to use my savings to pay for repairs. It's changed my whole retirement. You've worked hard, saved hard and now just struggle to meet costs (Auckland 6).

It's had a significant impact on my lifestyle for 10 years ... It's required us to manage our finances. We don't have a secure retirement fund (Auckland 1).

For all participants, leaky home syndrome has reduced future housing choices. Two owners bought apartments as an investment, either for retirement income, or to move to as their "downsized" home in later years. These were later found to be leaky. Six reported that their current owner-occupied leaky home could not release capital gains to the level expected, hampering their future move to a downsized home. For four others, the leaky home was already their downsized home. Now they face uncertainties about their housing future, despite envisaging that home as their "last-time" buy. Comments included:

Well, I haven't got any savings! All my equity is in the property when I sell it (Waikato 2).

Yes I bought the apartment as downsizing, I wanted a new, trouble-free apartment. Of course that didn't work out (Auckland 2).

I can't afford to go anywhere else, I'll have to stick it out (Auckland 4).

Some were also confronting still uncertain costs associated with failed remediation. This is consistent with disquiet expressed about an apparent poor remediation rate, as well as remediation failure (Alexander, 2011; Ministry of Business, Innovation and Employment, 2013; Stewart, 2014). No system-wide data are collected on the nature and extent of remediation rates and failures, unlike in British Columbia where detailed data on remediation failure have emerged through mandatory requirements since 2011 for condominiums to prepare depreciation reports. Those reports have revealed widespread practices of both

“patched over” repairs, and non-repairs (Penner, 2014). Two interviewees directly experienced remediation failures, and commented:

Their workmanship was horrendous, the repairs were leaking from day one, it has created my second leaky home (Waikato 2).

Some targeted repairs were done, which failed. They actually made it worse (Auckland 5).

Long-term negative impacts were particularly apparent for those dealing with remediation failures. For them, it felt like the leaky building problem was never going to disappear.

### *Impacts on older people's connectedness and well-being*

The impacts on physical and mental health were as significant as the financial effects, as these comments show:

Absolutely disgusting mould, all colours, I was at the doctor every week with respiratory problems (Waikato 2).

It didn't do much for my faith in human nature. Some people could have been a lot more honest. For me the mental health issue was the biggest thing (Christchurch 1).

It's an extremely debilitating thing, you feel helpless (Auckland 2).

Hugely affected in every way ... [payment] this goes nowhere near paying for stress and disruption to your life (Auckland 5).

It's fear of the unknown ... The end of it is quite a way off yet! ... hugely stressful at my stage of life ... it's had such a big impact on my life (Auckland 4).

Various negative impacts on relationships were experienced. Some reported less contact with friends and relatives. As one person observed, “I haven't put my time into my grandchildren. You become insular and cut yourself off socially”.

The leaky home resulted in the loss of a sense of place for others. They had deliberately chosen their home and neighbourhood as the place where they would retire. Now there was uncertainty whether they would be able to continue to live in that place:

For me going into retirement, it was in an ideal location, perfect, a good street, ground level apartment, within walking distance of shops, had a garage. Perfect! That's why I brought it (Auckland 5).

Because I've used so much money, I've got no reserve. I haven't even thought about where to go, but I want to stay in same area because of family (Waikato 2).

I have had to buy a house that I can afford, had to move away from an area I loved (Wellington 2).

Others commented on marital problems or rifts with family because of money worries. Two were unable to continue to provide accommodation and care for dependents, who as a consequence had to enter residential care.

Finally, interviewees talked about the long-term negative impacts and disruption of weathertight problems, which take years to resolve. Two homeowners mentioned claims and repairs processes lasting 8 and 10 years, respectively. Another person talked about the apartment building leaking “from the very beginning”, with some repairs having to be done before the building was completed. Interviewees who had used dispute resolution noted

the process, including preparation and communications among parties prior to the formal dispute resolution process, took from just less than one year (for a small case) to over seven years (involving a multi-unit building). The three participants who had used the FAP noted the process lasted from several months to over one year. The evaluation of the FAP reported an average of 352 days for the dwelling assessment and repair to be completed (Ministry of Business, Innovation and Employment, 2013). Ongoing disruption and impacts were also caused by repairs, which upset daily routines, and required months of temporary accommodation (and sometimes several moves) while repairs were done.

### *Public as well as private impacts*

It has already been shown that through stigmatisation, the impacts of leaky homes have gone beyond householders who have been unfortunate enough to own and occupy a leaky home, as stigma affects non-leaky homes of similar style and vintage. The impacts go even further, to ratepayers and taxpayers, as leaky buildings present significant burdens on local and central governments. Ratepayers in jurisdictions disproportionately afflicted by leaky building claims, such as Auckland Council, are exposed to liabilities through the agreements made with central government to compensate affected homeowners. There are too suggestions that subsequent risk-averse behaviour in councils and among other building consent agencies is further increasing building costs (New Zealand Productivity Commission, 2012).

Central government has had to establish a raft of mechanisms to deal with dispute and compensation around leaky homes, the costs of which fall on the taxpayer. The annual cost forecast to be appropriated in 2010 for those various mechanisms and organisations was \$66.9 million (The Treasury, 2015). Unfortunately, those mechanisms have not been entirely effective. The case study suggests that for older people, they have been confusing and, in some cases re-victimising. Those who discover they have a leaky home are confronted with a variety of complex and often confusing issues, spanning financial, technical, legal, regulatory and process matters. They must deal with a potentially wide range of parties. In addition to central government agencies, they include the local council, and the builder, developers, manufacturers, engineers and designer or architect implicated in the construction. Finally, they need to involve a dispute resolution practitioner if they make a claim. Essentially, then, there is no one place to go to be guided through managing the leaky home problem, although the Weathertight Homes Resolution Service performs an information and advisory role. The Home Owners and Buyers Association Inc. (HOBANZ), an incorporated society which was established to assist homeowners and buyers with issues including leaky homes, is arguably the organisation that has developed the most important information and advisory role in the sector. It is also the only advocacy group for leaky homeowners.

The leaky homeowners in this case study sought information and advice from a wide variety of sources, including: relatives, friends and acquaintances with relevant technical skills; their council; lawyers; engineers; builders; building surveyors; Weathertight Homes Resolution Service; Building Industry Authority; the former Department of Building and Housing; and HOBANZ. Those in a body corporate identified their body corporate committee as a primary source of information and advice. Interviewees talked about their confusion over processes, how to access information and how to assess whether information was relevant and correct. When asked if there was information or advice that they needed but could not get, several participants reiterated the general difficulty of knowing

where to go for information. Those owners whose leaky building problem was beyond the 10-year limit for bringing a claim especially felt they lacked places to go for information and support. Others commented that they had encountered a lack of knowledge among some professionals about leaky building syndrome and how to remediate it. They found it difficult to know whether the advice they got about remedial products and procedures was correct. These comments were typical:

We could not have managed on our own. Didn't have that legal or accounting/business knowledge among the owners. Decided if we're to make the right decisions we needed help from someone with more experience ... Humungously difficult because we didn't know where to start. People didn't understand the FAP. We didn't understand whether products being touted would help or not (Auckland 7).

We were like headless chooks ... Needed someone to help identify the options – to give the guidance ... The more you know the better equipped you are to deal with it (Wellington 1).

Those participants who were part of a body corporate commented on additional information and advice that would have helped them. For example, advice on how to manage denial among some owners that there was anything wrong with the building, which inhibited progress towards resolution. Others observed difficulties in managing conflict between owner-investors and owner-occupiers, as the objectives and interests of these two different groups of owners can be significantly different.

Dispute resolution was a key way that participants sought to resolve their leaky home problem. Eleven of the 12 interviewees used, or attempted to use, a dispute resolution process. Satisfaction with the process and its outcome varied considerably. Even those who were part of major settlements achieved for apartment buildings found the process very difficult. Confusion was inherent in the different pathways through which participants could pursue their claim. The processes they used included the Weathertight Homes Tribunal, arbitration, mediation, high court, negotiated settlement and Disputes Tribunal. One participant described the options for resolution as “a woolly process, it wasn't clear cut by any means”. Another talked about struggling to assess whether there would be a better outcome by going to court compared to using the Weathertight Homes Tribunal.

Some found the dispute resolution process daunting and alienating. They were more likely to be owners of stand-alone houses, rather than those in multi-unit buildings where processes were managed by the body corporate. One man recounted:

It was a very uncomfortable experience. The council, the architect and the developer, all of them except us with high powered lawyers ... it was a shattering experience and they were saying it's not our fault! (Wellington 1).

In particular, women were critical of the way they were treated, describing processes as frustrating and chauvinistic, whether they were by themselves or with a male partner or relative. Two commented:

[tradesmen and developer] they wouldn't deal with me and wouldn't listen to me ... so we went to mediation in 2005, once again I was the only woman in the room (Christchurch 1).

I was told to shut up ... I felt that he [the dispute resolution practitioner] did not acknowledge that I did know about technical matters ... I wanted respect and I wanted a fair hearing and it was neither of those (Waikato 2)

Whether effective or not, these processes have cost the government and by extension tax payers. There are also costs still to be estimated associated with disputes, as well as regulatory procedural and practice changes in the real estate industry. Leaky building syndrome is not only a public liability to taxpayers and ratepayers but also a public risk that threatens the integrity of New Zealand's housing stock as dilapidation caused by non-repairs or poor remediation occurs.

The impacts of leaking homes can be expected to be felt beyond the housing, property and building sectors. The widespread nature of leaky buildings has other significant welfare, well-being and independence implications, not only for those people directly affected. There are public policy implications for retirement income, standard of living and ongoing care needs arising from a group of older people whose financial position, independence and well-being are significantly impacted by weathertightness failure.

Leaky building syndrome undermines welfare assumptions about the use of housing assets by older homeowners to maintain living standards and fund growing care needs in retirement, thus saving public expenditure on aged care. Housing wealth is eroded by leaky buildings through expenditure on dispute resolution, repairs and associated costs, which can require the householder to take on debt or a mortgage. Loss can also occur if the home is sold in an unrepaired state, and even when a home is remediated, the impact of stigma can erode its value. If an older person needs to move into long-term residential care because they can no longer care for themselves, and if they apply for the residential care subsidy to assist with the costs of care, they will be subject to both asset and income testing. In this context, the value of property is considered in the asset test (for a single person, the asset limit is just under \$219,000, as at July 2015). There are issues for the funding of health services if it transpires that assumed streams of funding from the sale of household assets cannot be achieved. These potential risks have been left almost entirely unexplored. Moreover, New Zealand is not well positioned to even explore the materiality of those risks. No systematic data are being collected about the characteristics of the population owning and living in leaky buildings: who they are; how they are affected; the impacts on household wealth; and the distribution of those impacts.

## Summary and discussion

### *Regulatory failure*

It is no coincidence that New Zealand's leaky building crisis occurred in the wake of fundamental deregulation of the building industry. Some have asserted that "*leaky building syndrome is an exemplar of the economic failure of light-handed regulation*" (Easton, 2011). Under the banner of market liberalisation, which was widespread during the 1980s within similar markets such as the U.S., U.K. and Australia, New Zealand replaced its long-standing prescriptive building regulations regime with the 1991 Building Act and its performance-based building code. Instead of a set of prescriptive materials and methods, the new code provided generalised performance criteria that could be satisfied in innumerable ways. For instance, wall and roof cladding needed to be impermeable to water ingress and maintain this performance over a minimum number of years. The end goal of the deregulation was to facilitate innovation and increase efficiency in the building sector which in turn would increase productivity and lower construction costs (Layton, 2011).

The new regulatory environment permitted, and actively encouraged, the use of new building systems. Some, such as Mediterranean-style monolithic cladding, had no track record of use in New Zealand's exceptionally wet and windy environment. Nor did they take account of the type of work process typical on New Zealand building sites. Notably, an equitable solution for mitigating against financial losses associated with building failures was scrapped alongside the decision to embrace a market-driven, performance-based regulatory framework. The Building Performance Guarantee Corporation (BPGC) was founded in 1978 to offer an insurance scheme designed to protect buyers of new homes against the consequences of poor workmanship, the use of inferior building materials, the bankruptcy of the builder or other failures to complete a house in accordance with the contract. Although the BPGC was closed down in 1987, the 1990 Building Industry Commission, which endorsed the creation of what would become the 1991 Building Act and its performance-based code, proposed to reinstate the BPGC. That recommendation was not adopted (Easton, 2011).

It is notable that building costs have not declined in New Zealand since the institution of the permissive and performance-based approach to building. Indeed, New Zealand is notable by its high cost construction (New Zealand Productivity Commission, 2012). It is notable too that one of the costs of leaky home remediation has been costs associated with the uncovering of other failures in performance or non-compliance, even where buildings have been issued code compliance certificates. In the context of legislation seeking better compliance, innovation and reduced building costs, the approach taken in New Zealand appears to have under-performed at best and at worst to have generated a range of additional costs on private individuals and on public institutions.

The New Zealand Government's response to the leaky homes crisis has, effectively a recognition that the model of consumer sovereignty in which markets, including the supply side, were assumed to respond, failed. Liberalised regulatory frameworks, including self-policing of performance standards in the industry, presuppose that consumers can undertake effective due diligence when making decisions. What leaky homes have highlighted is that home buying is a complex and high-risk environment. Moreover, as Dupuis and Thorns (2011) state, deregulation and liberalisation promote consumer choice and individual responsibility as paramount. This has happened in conjunction with complex building processes, practices and technologies where there is no longer any one individual, group or institution that can be determined as responsible. With that the management of risk focuses on individual, rather than systemic, solutions. But individual risk management is hampered by inadequate processes to support due diligence and disclosure. The problem of inadequate disclosure to subsequent buyers of leaky homes has been examined in British Columbia, where, despite tightened procedures, there are numerous cases of buyers not being aware of material facts before purchase. This study concluded that the investigative tools (such as property disclosure statements) were flawed, and there is little assistance to help buyers understand and analyse the complex information they receive (Bain, 2003).

In New Zealand, there are problems with the LIM (Land Information Memorandum), which should not only contain a summary of information about the property, but also provide information notified to the territorial authority under section 124 of the Weathertight Homes Resolution Services Act 2006.<sup>7</sup> However, a weathertightness claim that has gone through the court or private dispute resolution does not have to be noted on the LIM. Buyers of multi-unit properties have some protection, in that body corporate disclosure statements must include information about whether "the unit or the common property is, or has been,



the subject of a claim under the Weathertight Homes Resolution Services Act 2006 or other civil proceedings relating to water penetration of the building or unit title development”<sup>8</sup>. However, this does not require weathertightness problems to be disclosed if a claim has not been made, if one might be made in future or if a private settlement has been made with a confidentiality clause preventing disclosure (Kearn, n.d.). Furthermore, this form is signed by the seller, not by the body corporate itself. Consequently, if the information provided is incorrect, there is unlikely to be liability on the body corporate (Eagleson, 2015). Other disclosure problems have been identified with unqualified building inspectors providing inadequate reports that provide misleading information with regard to weathertightness (Clement, 2015).

The heart of regulatory failure in New Zealand, then, is not the innovative performance-based legislative framework. But rather the problem lies in the failure to establish effective mechanisms to support that approach. Neither insurance nor adequate systems for disclosure and due diligence were established. The processes relating to compliance certification have proved inadequate. The costs of those inadequacies have long-term and widespread impacts on individuals, on the integrity and value of the housing stock, on tax payers and ratepayers and on confidence in the building industry and property markets.

## Conclusion

This paper reports on in-depth research on older leaky homeowners’ experiences, issues and impacts. It covers not only the experience of owning a leaky home, but also the experience and implications of general leaky home stigma and post-remediation stigma for older people’s ability to optimise their housing choices.

The public implications of the weathertight homes market failure as it relates to older people go beyond a simple framing of the public interest in the failure of the building industry. Instead, this paper has shown that the impacts for older people include reduced material, physical and mental well-being, loss of connections with others and declining ability to look after themselves and other dependents.

The public impacts of leaky homes have been narrowly conceptualised in terms of the integrity of New Zealand’s housing stock, whereas there are also important public impacts in terms of consumer sovereignty and for older people’s financial position, well-being and independence.

This paper also contributes to growing evidence of ongoing weathertightness problems due to non-remediation and remediation failure.

## Notes

1. This tendency is also evident in Australia (Judd, Bridge, Adams, & Liu, 2012).
2. Owners of a unit in a unit-title development, such as an apartment block and town house, belong to a body corporate. The body corporate is responsible for the financial, management and administrative functions associated with the common areas and the development as a whole. In the case of a leaky building, the body corporate has a critical role in making decisions around remediation.
3. <https://www.qv.co.nz/resources/monthly-residential-value-index>.
4. Weathertight Homes Resolution Service claims statistics website: <http://www.building.govt.nz/ws-claims> (accessed 12 February 2016).

5. Leaky Home Guide website <http://www.building.govt.nz/leaky-home-guide> (accessed 11 February 2016).
6. In early 2016, six Auckland leaky apartment blocks were identified with fire safety and structural faults, in addition to the weathertightness problems. See “Deregulation non-compliance turns home into house of horrors” *Sunday Star Times*, February 14, 2016.
7. Local Government Official Information and Meetings Act 1987, section 44a.
8. Clause 10, Form 18, Pre-contract disclosure statement Section 146, Unit Titles Act 2010.

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## Appendix 1. Topic areas covered in the interview schedule

Current home: dwelling characteristics; household composition; tenure

Leaky home: duration of residence; dwelling characteristics; household composition; tenure; reason for not longer residing in that home (if applicable)

Leaky home sale (if applicable): reasons for sale; sale price; ease or otherwise of sale

Leaky home repairs: nature and extent of repairs undertaken; cost of repairs; duration of repairs; source of funds for repairs; reasons for not repairing or partial repairs

Information and advice: range of information/advice needed and sought; sources; usefulness; ease or otherwise of obtaining needed information/advice; gaps in information/advice sought

Dispute resolution process used, costs and satisfaction with process

Financial impacts of leaky home – specific costs, impact on retirement savings, living costs, etc.

Other impacts identified – physical and mental health and well-being; connections; social and familial impacts

Impacts of leaky home on future housing options and decisions