Barry Mosley

Weathertightness, Economic Loss, Equity and Remedies

Abstract

New Zealand's leaky housing crisis, generally associated with the period between 1995 and 2004, has left a legacy of costs which continue to thwart the provision of affordable and healthy housing. Furthermore, those displaced and financially harmed by the deregulation of building standards under the Building Act 1991 face arbitrary time frames in which to seek appropriate remedies. The model of applying a limitation defence in circumstances of systemic failure has contributed to inadequate accountability and weak incentives for performance in the building industry. This article explores the causes of the leaky housing crisis, including the political impetus to reduce building construction costs, and suggests how similar systemic failures can be avoided in the future.

Keywords systemic failure, intertemporal costs, inefficient resource allocation, appropriate legal remedies, accountability and incentivisation

Barry Mosley is a former senior local government manager who is currently a resource management consultant and independent hearing commissioner.

Genesis of the leaky building crisis in New Zealand

Political elements

The leaky housing crisis in New Zealand is generally associated with a period commencing in the mid- to late 1990s following the implementation of the performance-based Building Code, which replaced the former, prescriptive standards system. Contributing to this crisis were several factors which largely centred around a political ambition to position New Zealand's building system on a more self-regulatory axis. This goal was primarily realised through the Building Act 1991 passed by the fourth National government, which provided for more liberal building standards and building certification by private companies.

The Building Act 1991 introduced the possibility of easily applied 'off the shelf solutions' and for compliance with standards to be achieved by design-led solutions. Central to this initiative was a desire to achieve greater efficiency in regulation. Efficiency in regulation was not considered to be promoted where there was only one or a very limited number of building standards in place for any built feature. The philosophy of the legislative framework was to enable lower-cost solutions to be implemented if these could

meet the relevant performance standard. Later, the Hunn report[1] was to identify the importance of any review of the Building Act ensuring that any gains in compliance process efficiency were not achieved through the compromising of standards or quality. Moreover, the Hunn report was to emphasise the need to ensure that any approved documents for house construction considered the 'whole-of-life' costs, as opposed to merely the initial capital cost.

Arguably, both the legislative framework and new products going into house construction were not adequately supported by research and funding. The practice around product appraisal was found to need considerable improvement. For example, the Hunn report identified the need for more proactive and independent research from the Building Industry Authority on the matter of weathertightness.

Had more robust research and analysis been undertaken, there may not have been the acceptance of cladding systems which allowed the ingress of moisture into timber framing (ConsumerBuild, 2011). Of particular note was the 'Mediterranean' style of cladding for dwelling construction which increased the likelihood of water penetrating the timber structure, and was often associated with recessed windows, flat roofs, minimal eaves, balustrade balconies, and structural elements which penetrated exterior cladding (ConsumerBuild, 2012). Better understanding, research and inspection could have avoided leakiness associated with high-density housing, a lack of drainage from the bottom of walls and poorly constructed flashings around doors and windows. Furthermore, the results associated with the 1995 changes made to the New Zealand standard for timber treatment – which allowed the use of untreated *Pinus radiata* timber in the construction of buildings – may well have been avoided (Molloy, 2009).

Another recognised contributor to the New Zealand leaky building crisis was a decision by government to drop the building apprentice training scheme. The Hunn report identified significant issues around the available training for builders and the need for national registration. Also identified in this analysis was the absence of appropriate tertiary learning opportunities for building inspectors and building certifiers. Many of these matters persist today.

The construction of what is considered to be a cheap housing option may, in fact, not be as cheap as first thought, and bring with it intertemporal costs which disproportion-ately fall on the less wealthy or the unlucky.

Other systemic failings

Other recognised contributory factors to the leaky building crisis included the actions of territorial authorities where building consents issued had deficient documentation, and inspections were not completed prior to the issue of Building Code compliance certificates. These were significant factors, as detail supplied around weathertightness and flashings was often inadequate. Today, much more extensive information is required around cladding and weathertightness. However, the current National-led government's proposal to enable some inspection and approval to be based on photographic evidence in lieu of a physical inspection by a certified building inspector is seen by many to carry inherent risk and has raised concerns.

The Hunn report identified several other systemic elements that warranted consideration or improvement. These included: guidelines and criteria for weathertightness when issuing a code compliance certificate;[2] guidance documents on the Building Act and companion documents; information on land information memorandums (LIMs) detailing the maintenance requirements of building features such as cladding systems; the possibility of an occupation certificate in the absence of a code compliance certificate, certifying the building as satisfactory for human occupation based on compliance with the Building Code.

Estimates of the cost of the leaky building crisis in New Zealand range widely. One estimate put the cost at $11.3 billion for a stock of 42,000 buildings (PricewaterhouseCoopers, 2009; NZ Herald, 2009) other building experts have expanded this estimate to $23 billion for a stock of 89,000 buildings.

Historical motivation of the actors

Historically, reducing costs has been a key incentive for both government and many of the players in the building and construction industry. However, in the absence of appropriate regulation which maintains acceptable baseline standards for house construction, incentives exist for houses to be built in such a way and at a cost which results in suboptimal outcomes. The construction of dwellings with building features that could be considered so cheap as to be misaligned to environmental conditions, or that possess high likelihood of significant failure, raises social equity and ethical issues. The construction of what is considered to be a cheap housing option may, in fact, not be as cheap as first thought, and bring with it intertemporal costs which disproportionately fall on the less wealthy or the unlucky. This is counter to the premise that the purchase of a dwelling comes with an implicit guarantee that the dwelling will remain dry and warm and provide for healthy residential living.

Of interest is who gains and who loses over time from this scenario, and, just as importantly, where real harm can be shown to result, are there personal remedies and are they appropriate? Some of these matters are explored further in the following case study.

A case study – the legacy

Around 2000, a 61-unit townhouse complex was built in Mount Albert, Auckland. In 2024 the complex was found to have systemic defects which had contributed to moisture ingress. Of significant note were the findings of: defective detailing of flashings around parapet walls and structural transitions; inadequately detailed roof and wall junctions; entrance canopy supports, inter-storey joints and cantilevered joists passing through fibre cement cladding, all reliant on textural coating and sealant for weather tightness; and inadequate detailing of joinery. The absence of a building cavity in the townhouses worked to prevent any release of moisture, promoting a damp atmosphere around wooden structures and decay in the timber framework.

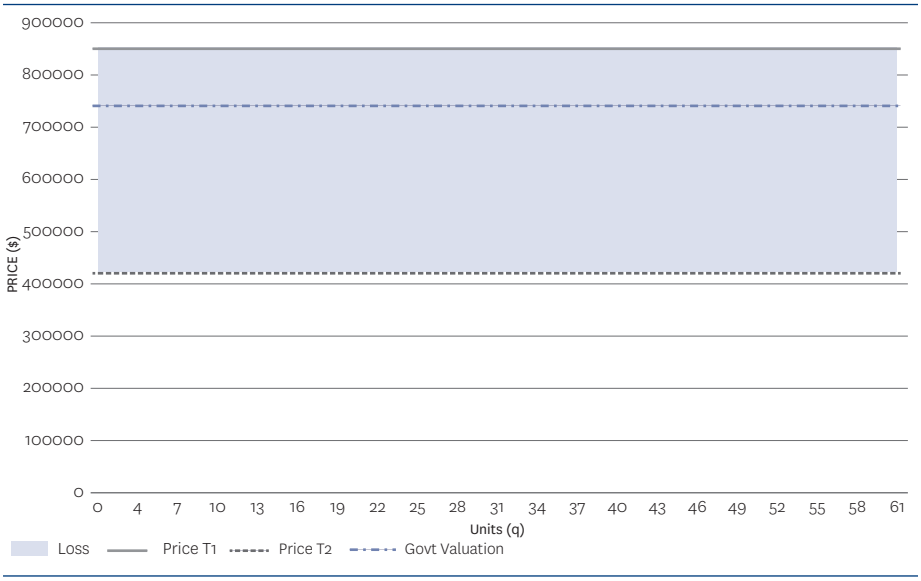
In some cases, the degree of decay resulted in unsafe structural elements that needed to be blocked off from residents. These problems were the result of poor building practice at the time of construction and the failure of the responsible authorities (in this case, private building inspectors acting on behalf of the territorial authority, Auckland City Council) to perform adequate inspections and detect defects such as incorrectly installed flashings.

The market responded to the situation unequivocally, as shown in Figure 1. From a height of $850,000 for a unit, the next sale price was recorded at approximately $420,000. This reflects a total economic loss of approximately $26.2 million across the complex (Coursey, 2004).

There are several ways of viewing the resulting market outcome. One perspective is that there has been a transfer of profit to the building industry larger than what would have occurred had the units been constructed to a higher standard more appropriate for the climatic conditions and at greater cost. More succinctly, the market outcome can be seen to represent a subsidy to industry and a cost to future owners, as quantified by the shaded area in Figure 1. The shaded area in Figure 1 could also be seen to approximate an inefficient allocation of resources.

Another perspective is that the shaded area simply approximates the cost of premature obsolescence allowed to be built into the construction of the units through government policy. In this way it can be seen as an intertemporal cost which falls on subsequent unit owners.

Figure 1: Economic Loss $26.2m



At the price point shown in Figure 1, the economic loss for this one complex approximates to $26.2 million. To restore and recover lost market value by way of reroofing, recladding and reconstruction to new 2024 Building Code standards would cost approximately $12.2–$18.3 million. This pathway will inherently result in more expensive units, as the owners in subsequent sales will be motivated to pass on the cost incurred in restoring value. For the last sale price in the series at $850,000, the owner would be disadvantaged by any sale price below approximately $1.1 million.

This case is also symptomatic of a policy implementation gap where a central government policy initiative to enable greater deregulation of the building industry and introduce lower-cost building solutions has resulted in unanticipated and undesirable economic and social outcomes.

Responsibility and accountability

Responsibility can be considered akin to 'ownership'. If responsibility is accepted, then there is a higher likelihood that actors will seek to achieve appropriate standards, and accountability will follow. The Hunn report indirectly supports this notion. The authors of the Hunn report found the view that 'no-one takes overall responsibility for the project anymore' expressed with reference to many building projects. The report observed:

> The respective roles and responsibilities of architects, main contractors, sub-contractors, specialist sub-trades and project managers and developers become very complicated, hard to define and consequently unclear and hard to understand. There can be over 50 sub-contractors on a large site. The co-ordination and sequencing of cladders, flashers, plumbers for instance is often difficult and not given adequate priority due to time and cost constraints. Such an environment results in poor planning, co-ordination and a lack of individual responsibility and co-operation between the various sub-trades. It has been reported to the Overview Group that more and more often responsibilities and liabilities are being passed 'down the line' to the sub-contractors and sub-trades. Whatever the reality of this, the circumstances result in a collective system failure – and buildings that leak. (Hunn, 2003, p.9)

Given the density of development occurring in major New Zealand cities and the scale of construction, it is possible to have reservations about whether this aspect of the weathertightness problem has been resolved and the lines of responsibility are now both transparent and unambiguous. One way to address this matter may be to prescribe professional responsibilities, something that I am not aware has been attempted in any relevant legislation to date. Barrett and Fudge identify the significance of clarity in implementing

public policy: 'The statute (or other basic policy decisions) contains unambiguous policy directives and structures the implementation process so as to maximise the likelihood that target groups will perform as desired' (Barrett and Fudge, 1981, p.275).

It seems astonishing that the Hunn report was able to identify that, at a detailed technical level, two fundamentals of good, detailed construction design were occasionally being bypassed. The first was a means of getting the water away and a means of drying out any wet elements within buildings. The second was the lack, or misuse, of flashings at junctions and penetrations: it noted that these were being dispensed with or detailed or constructed inadequately. Furthermore, the report noted that the consensus from builders was that the incremental cost of incorporating such features in the original construction was not significant to the bottom-line capital cost and they would have significant whole-of-life cost benefits. Despite this, the legislation in place enabled these two fundamentals to be largely sidestepped without sanction.

The Hunn report recognised the need to consider what further measures might be desirable to improve the accountability of all parties in the building sector (including owners) for the quality of construction (including weathertightness) within the framework of the then performance-based system. It drew on a report from the New South Wales legislature which considers that the building regulation system should rely on three core pillars: namely, responsibility, accountability and liability. The authors of the Hunn report state in their findings:

> Having completed the investigations recorded in the previous sections of this report, we have come to similar conclusions as our Australian colleagues. The single thread that runs through the multi-faceted building sector we have portrayed, is the seeming lack of accountability. The practical effect of the current system when it comes to the crunch of litigation (and as we have said that is where the battle over weathertightness tends to be fought) is to dump most of the responsibility on the building inspector. It should be apparent from what we have said that this is not a true reflection of the building process. While we have found that this part of the process requires significant improvement, the number of parties required to arrive at the end product should be mirrored in the system of 'responsibility, accountability and public liability. (Hunn, 2003, p.41)

The ten-year liability clock is a 'blunt' mechanism which continues to promote repetitive recladding of buildings and system failures at a frequency which diverges significantly from the structural life of most buildings.

This clearly suggests that had there been better accountability in place and effective consequential liabilities, New Zealand may not have experienced the pain around leaky buildings that has occurred.

Liability

Current remedies

Unfortunately, any legal remedy in the Mount Albert case and similar cases is time-constrained by section 91(2) of the Building Act, which states that civil proceedings may not be brought against any person ten years or more after the date of the act or omission on which the proceedings are based. This is what can only be considered an arbitrary determination written into law. Not all building owners could expect that the problems to be experienced would expose themselves in the first ten years from the date of construction. It would be more equitable to require any legal proceeding to be based on a building being constructed during the period associated with the leaky building crisis and the known systemic failures, namely 1995–2004.

Neither of the main political parties (i.e., Labour and National) have any willingness to remedy this situation, largely because of the anticipated cost – which some commentators estimate could be in the tens of billions. Consequently, the owners of most leaky dwellings and buildings are left unaided to undertake and bear the cost of expensive repairs.

Law change

Allowing the limitation defence of the Limitation Act 1950 (i.e., a ten-year time limitation for bringing civil proceedings) to be applied to any systemic failure such as the leaky building crisis does little to disincentivise political and technical failure, or incentivise at the macro level the expected appropriate level of performance – in this case, quality-built dwellings. Systemic failure, where significant cost is passed on to individuals largely through the actions of policymakers and public bodies in conjunction with industry, should be dealt with quite differently in law. In such cases it should not be time-constrained and a more qualitative assessment of the merits of any case should be applied.

What the current situation does, in relation to cladding and weathertightness, is to incentivise cladding systems to achieve a life of ten years. Arguably, the weathertightness of a building should align closer to its structural life, and this should be the basis for exploring where responsibilities and accountability sit, and reasonable tests should apply based on the facts.

There are strong arguments that a special tribunal should be in place with inquisitorial powers to investigate where building failure associated with the likes of

weathertightness or structural failure results, and it should not be subject to an arbitrary time limit of ten years. Such a tribunal should be able to reach findings on responsibility (for government, public bodies, professionals and building owners with duties around maintenance) and liability.

Furthermore, the forum for these matters to be resolved, such as a weathertightness tribunal, should involve transaction costs that do not unreasonably limit participation, and appropriate compensation should be available to those harmed. This is the only way to prompt actors to take responsibility and inject real accountability for those involved in and responsible for shaping New Zealand's building industry.

Scope for improvement

The Hunn report and its findings clarified many of the failures associated with the New Zealand leaky building crisis. However, the information derived from its inquiry suggests that there is a greater need to define responsibilities and achieve a much-improved level of accountability. This could be attempted by way of an initial focus on the nature of the leaky building problem and the critical elements associated with achieving weathertightness. Learning from where the main problems have occurred could be the basis for introducing a matrix or schedule into the appropriate legislation.

The current situation also signals a strong need for further reform of the Building Act if better performance is to be incentivised. The ten-year liability clock is a 'blunt' mechanism which continues to promote repetitive recladding of buildings and system failures at a frequency which diverges significantly from the structural life of most buildings. The ten-year limitation needs to be replaced with mechanisms that allow a tribunal to use inquisitorial powers to derive responsibility and determine liability based on tests of reasonableness. The current absence of a weathertightness tribunal or a legal recourse beyond ten years for these issues is quite inequitable.

The information in the Hunn report, along with the preceding analysis, highlights how inefficiency in the building industry can be directly addressed by ongoing improvements around responsibility, accountability and performance. This is especially important at a time when major cities in New Zealand are looking to high-density housing options involving large capital values. Shortcuts based on low-cost options do not align well with this environment and have historically been shown to produce inefficient outcomes.

Similar systemic failures must not be repeated. Proper accountability is critical. Central government has a key role in ensuring that the incentives are in place to achieve a strongly performing building industry that produces quality and sustainable housing solutions for the New Zealand people.

The incentives still exist for numerous actors to promote low-cost and low-quality outcomes in the construction of housing in New Zealand. A good example of this is the current National-led government's consideration of amending the existing, but recently introduced, Building Standard (May 2023) for insulation in dwellings. This was introduced with an extremely high level of public support by way of submission and in response to the issue of cold damp houses and associated health problems (Gibson, 2024). However, in part as a response to complaints from industry that the current standard imposes unnecessary cost, the government embarked on a plan to revisit the standard.

Housing is where most individuals store their wealth. A weak legislative framework around the industry players and regulators, combined with constrained legal remedies, can only continue to promote inequity and lead to housing which is both more expensive and involves a significant, inequitable transfer of costs. One pathway to improve this situation would be to establish a weathertightness tribunal which was capable of setting aside any arbitrary time limitation to proceedings, particularly where systemic failure has resulted in significant financial loss.

1 On 18 February 2002, the Building Industry Authority appointed a Weathertightness Overview Group to inquire into the weathertightness of buildings in New Zealand in general, and in particular into concerns regarding housing that was leaking, causing decay. The report of the Weathertightness Overview Group to the Building Industry Authority is known as the Hunn report.

2 A code compliance certificate is issued at the completion of construction, certifying that the building has been constructed to the requirements of the Building Code.

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