

Department of Building and Housing

Weathertightness – Estimating the Cost

29 July 2009





Restrictions

This report has been prepared by PricewaterhouseCoopers for the Department of Building and Housing to assist in developing a policy response to weathertightness issues. The report is provided in accordance with the terms and conditions of the contract signed April 2nd 2009.

In preparing this report and forming our views, we have relied upon, and assumed the accuracy and completeness of all information available to us from persons with whom we have spoken in the course of consultation, or from public sources, or furnished to us by the Department of Building and Housing. We have evaluated that information through analysis, inquiry and review but have not sought to verify the accuracy or completeness of any such information. We have assumed the accuracy of the information provided to us by other entities. We have not sought to independently verify this data.

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Executive Summary

Background

The Hunn Report in 2002, a Select Committee inquiry and a Government review in 2003 separately determined there were significant issues with the weathertightness of certain residential buildings constructed in the mid-late 1990s. The issues were largely confined to buildings constructed with monolithic external cladding (either fibre cement, stucco or coated polystyrene) installed over untreated timber framing and without a drainage cavity between the cladding and the external walls.

At the time of the 2002/2003 investigations there were a range of estimates of the scale/cost of weathertightness problems, but no definitive research was done. In 2005 BRANZ estimated 40,000 dwellings could be “at risk”, i.e: dwellings built with monolithic cladding. PricewaterhouseCoopers (PwC) then assessed the likely percentage failure based on the collective views of a range of building experts. It was estimated that 30 percent of the “at risk” dwellings might fail, i.e: 12,000 dwellings, and estimated the repair costs at \$1billion.

Anecdotal information now suggests the number and cost of weathertightness failure could be higher than the 2005 estimates. The Government, therefore, wants to re-estimate the size and economic cost (including repair costs, legal costs and cost to the Crown of providing services) of the weathertightness problem, including:

- total number of affected dwellings
- how many homes have been repaired
- of these how many are beyond the statutory 10 year limit on liability
- who is bearing what costs, under current policy.

Methodology

The approach taken, in the current review, to estimating the extent of weathertightness failures can be summarised by considering two key tasks.

1. The derivation of a **national risk profile** grouped according to a) a risk rating based upon E2 / AS1 and b) the year of construction between 1992 and 2008. The size of this population is determined by a review of building consents over this period and their design characteristics determined by a closer examination of a sample of these consents.
2. The reconciling of **evidenced failure rates**, as reported through the WHRS and the courts, with **expert opinion** from building sector specialists and the experience of WHRS assessors. This reconciliation ensures that the study:
 - a. estimates are based on the evidenced failure data collected from WHRS yet,
 - b. reflects the practical experience that has yet to be rejected in the historical claims process.

Findings

Compared with earlier attempts to estimate the extent of weathertightness failure and damage, there is now considerably more data available.

There is a range of data (of varying nature, robustness, depth, coverage etc) from which potential failure rates might be estimated. There is also a large body of opinion on the likely levels of failures, the sectors of the housing market where these are likely to be concentrated.

To provide some indication of the potential range of failures:

- as a bare minimum the existing claims registered with the WHRS cover approximately 4,500 dwellings, this figure is likely to be an underestimate of the total failures; and
- some experts expect the vast majority of monolithic-clad dwellings constructed before 2006 will suffer weathertightness failures, as well as dwellings with other cladding types, which could amount to over 110,000 failures.

There is a parallel range of potential costs that might arise from failures (both of actual defects requiring repair and the associated transaction costs). This is because costs vary according to the extent of the damage caused by a failure.

Extrapolations can be made from the current recorded evidence of failure (principally WHRS claims). These extrapolations put the estimated total number of (extrapolated) failures in the range of up to 22,000.

There are very good reasons, however, to expect that 22,000 is nonetheless a significant under-estimate of the number of failures. In particular, opinion, both from experts sought and anecdotal evidence gathered during the analysis, provided the view that failures would be much higher. In addition, the evidence suggested that the failures would be concentrated in the segment of the

dwelling population constructed before 2006, particularly those dwellings with so-called monolithic claddings. It is not necessarily the claddings themselves that are the problem. Rather, the use of such claddings during this period appears to coincide with more complicated building designs and construction methods that are vulnerable to water penetration through the exterior of the building and have low resistance to damage when this occurs.

There are a range of reasons for the low level of recorded failure compared to experts' best estimates of the ultimate failure rate, including:

- problems that have yet to visibly manifest (and of which home owners are, therefore, ignorant);
- denial behaviour by home owners of the existence and/or potential severity of problems and hence the urgency of need to address them;
- inability of some home owners to finance any form of major repair;
- the transaction costs of pursuing a claim;
- informal settlements between owners and builders (particularly outside of the major urban areas) or home owners simply fixing problems at their own cost;
- procedural obstructions to bringing claims on behalf of all owners within a multi-unit complex; and
- slower manifestation of problems in drier areas of the country.

There is also a view amongst the experts that the nature of damage and, hence, the cost of repairs, is likely to be weighted heavily towards the severe end of the spectrum. In this view, smaller and targeted repairs may temporarily resolve a visible problem, but experience to date suggests this will likely only postpone the underlying need for larger repairs.

Based on the context described above, the conclusions from modelling of the available data and agreed assumptions are as set out below.

Conclusions

Failure Rates

- a) The total number of affected dwellings is estimated to fall within the range of 22,000 to 89,000. The consensus forecast (see chapter 4 for more detail) is for an estimated 42,000 failures.
- b) Under current policy settings and resolution mechanisms, approximately 3,500 dwellings have undergone some form of repair to date.
- c) It is estimated that approximately 9,000 of the failures will occur beyond the 10 year limitation period for legal liability.
- d) Failure rates since 2006 appear to be much lower than in previous years, suggesting changes in the regulatory requirements and building practices have addressed the major problems identified in the past and reduced the incidence of weathertightness failures.

Failure Costs

- a) For the consensus forecast of 42,000 failures, the total economic cost (i.e. repair and transaction costs) of remediation to all dwellings affected by weathertightness failures, is estimated as \$11.3 billion (in 2008 dollars).
- b) These costs are estimated to be distributed, under current policy, as follows:
 - 69 percent to the owner;
 - 25 percent to councils;
 - 4 percent to third parties (e.g. builders); and
 - 2 percent to the government (the cost of administering WHRS etc).

Owners carry the largest share, as:

- i) they carry their own transaction costs;
- ii) failures occurring after the 10-year liability limit are the owner's responsibility;
- iii) many failures will have gone unrecognised and will, therefore, remain the owner's responsibility; and
- iv) some owners are responsible for the building work (they are the developer) or failed to mitigate damage when recognised (contributory negligence).