CERC- NZIBS Submission – 13 August 2012

ROLES & RESPONSIBILITIES IN THE BUILDING & CONSTRUCTION INDUSTRY

Introduction

The New Zealand Institute of Building Surveyors (NZIBS) members inspect buildings already built so as to determine the nature, extent and cause of various defects; whereas most of the industry is focussed on creating or altering buildings, often unaware of the outcomes of its activities.

Earthquakes of the scale that hit Christchurch are relatively infrequent, but when they do occur the subsequent devastation reveals not just the strengths and weaknesses of buildings, but also the virtues and shortcomings of the industry and the regulatory and compliance framework which underpins it.

Over the last twenty five years New Zealand has suffered an equivalent catastrophe – at least in terms of cost, through the slow but steady materialisation of the leaky building problem. The NZIBS and its members have worked at the heart of this crisis, gaining in the process a wealth of knowledge and experience of the predominant causes and consequences.

While the Hunn Report (2002) identified a complex and systematic failure within parts of the New Zealand building industry, rather than appoint a Royal Commission to fully investigate the nature and depth of the problem, the reaction of the Government at the time was to legislate. This has proven to be an ineffective response, mainly because this problem exists at both a technical and behavioural level; so progress in addressing the problem areas has been mixed.

The NZIBS believes that a sound understanding of the underlying causes and drivers of the leaky building problem can help to provide a solid basis for the consideration and implementation of suitable changes to the regulatory framework, with the aim of mitigating future building failures, regardless of their origin.

In our view the underlying causes of the leaky building crisis were:

1. Poor scientific understanding of weather-tightness.
2. A lack of professional accountability and responsibility in the industry,
3. Inadequate industry education, largely as a result of the above two causes.

These causes allowed traditional building knowledge, methods and skills to be displaced and readily replaced by untested and unproven systems. Buildings became increasing complex and new products and systems were used without being proven..

The main behavioural driver that led to leaky buildings and allowed their continuation was the **self-interest** of a number of leading and influential players within the construction industry.

In short:

1. The BIA, through one of its employees with “green” beliefs, incorrectly thought that the removal of Boron, a relatively safe chemical which provides fungal protection to framing timber, would be good for the environment.

   So in accepting this change to NZS3602 for Radiata framing timber and cited the document, the BIA failed to adequately consider the performance requirements of the building code. As it happened, the Standard required only that framing timber to have insect protection – the requirement for fungal protection having been lost with the realignment of the Standard with Australia, under CER. And while the requirement in the building code for ventilation of cavities remained, this was handily ignored from the 1970s onwards in favour of enabling wall insulation in wall cavities; the subsequent lack of ventilation compounded levels of damage to the materials in damp-affected cavities.

2. Carter Holt, was seeking to rationalize and enhance its business operation thus increase profits.

   It exploited the inherent weakness in this Standard i.e. not requiring fungal protection; and pushed for kiln-dried untreated Radiata pine to be approved as a framing timber. It was able to promote a rewrite of the relevant clauses under the guise of realignment with the (then) new building code.

3. Standards, always short of funds, were happy to oblige. The Standards Committee seemed to lack the appropriate expertise and went ahead despite misgivings from Forest Research.

4. BRANZ failed to rescind its Appraisals on both at-risk claddings and timber, apparently due to concern about attracting legal claims.

   Due to commercial pressures and differing schools of thought within its own organisation, BRANZ was both a supporter and opponent of change. While it was concerned with countering weather-tightness problems and advocating good construction practice e.g. through publication of its Good Stucco Practice (1996), it had also published appraisals for direct-fixed monolithic claddings and untreated Radiata pine; products which feature heavily in leaky building statistics.

   Their appraisal for untreated Radiata pine was based solely on NZS3602. There was no testing, no appropriate expert advice sought from Forest Research and no relevant history of use to support its findings. Similarly its cladding appraisals were largely based on opinion. To compound this, it failed to remove these deficient appraisals until change was mandated.

5. Master Builders were opposed to reverting to treated timber, presumably due to an inherent trust of ‘the system’ and influence from the timber industry through sponsorship and the like.

6. James Hardie was the largest and most sophisticated cladding supplier. While aware of and concerned by weather-tightness issues, its strategy appeared to be to support rather than lead change so it would not end up 'owning' the problem and thus attracting legal claims. Other cladding suppliers appeared to trust BRANZ's guidance.

The Industry

The industry trusted the system, but due to a lack of understanding and self-interests of most of the leading organisations, it was let down. We note there has been no major systemic change to the industry other than the replacement of the BIA with the DBH, which in itself has not been very successful. Industry practices have improved, but poor behaviour remains an on-going problem.

The NZIBS believes that as an organisation, the now defunct BIA provided a better platform to lead the industry than the DBH (now MBIE). At the time of the crisis, under newly-appointed chairperson Barry Brown, the BIA initiated a return to mostly treated timber and largely completed a rewrite of E2/AS1 which has revolutionized roof, wall cladding and deck construction practices.

Sadly, under the DBH and now MBIE today, this type of radical improvement was and may be well nigh impossible. A marked degree of factionalism, represented by a variety of different interest groups, the inherent bureaucratic and political blockages, limits the opportunity for such change.

Standards New Zealand would also have difficulty developing and publishing such a far reaching document, because technical experts can be dominated by industry representatives on committees – although this is not such a worrisome issue with the more demanding technical standards.

We note E2/AS1 introduced the concept of using a risk matrix analysis for weather-tightness. The most relevant driver within this is building complexity; the number and difficulty of construction junctions relates directly building failure.

Identifying and managing risk should underlie all of our building code documents. As yet, in a practical sense we are unable to do this. We have a performance-based building code BUT we do not monitor or measure outcomes.

Councils audit processes, but are ill-equipped to do more. They cannot avoid liability for consumer-owned property, so ratepayers have carried an unfair burden. Councils, due to on-going litigation, have sensibly become more risk averse, but mainly to reduce their legal liability rather than to deliver sound and reliable outcomes.

We offer the following for your consideration:

1. Outcomes. MBIE should be required to survey outcomes so as to audit the regulatory system, its compliance documents, its processes and its participants. New Zealand needs to be reasonably assured its commercial and residential building stock is reliable and durable.

2. Reduced Complexity. There is a risk of greater non-compliance with overly complex standards, so the NZIBS favours a 3-tier system for compliance documents consisting of:

A. Non specific design for low risk buildings.
B. Specific design for moderate risk buildings adopting a conservative approach.
C. Specific design for high risk buildings and building elements.

(Tiers B & C could be included in the same standard to avoid proliferation).

Many buildings would be built under categories A & B which should encourage better understanding, more straightforward buildings in terms of design, with commensurably better outcomes.

Where higher-risk, more complex buildings are desired or required, the higher-level standard would apply. This should encourage realistic fees so better design should lead to better construction with more reliable outcomes.

3. Home Warranty. In order to find a lasting and realistic solution for consumers we believe the construction industry, possibly with some assistance from Government, should implement a national home warranty system similar to that administered by the National House Building Council (NHBC) in Great Britain, which has been in operation for 75 years; refer www.nhbc.co.uk

This organisation should be an independent, non- profit organization comprised of industry and consumers, possibly Councils, and work in co-operation with Government.

It needs to be non-mandatory so it can avoid direct Government involvement and also so it can choose to decline offering warranties for overly-complex, high-risk homes.

Most importantly it would monitor defects, investigate their causes and assist in providing remedial solutions when outcomes are found to be inadequate. The industry would learn from rather than hiding from or litigating its mistakes

Accordingly such an organization would re-align the interests of industry with that of the consumer. It would approve and monitor design & construction, building systems & products, designers & builders. It may develop its own construction requirements and it would enhance the development of building standards..

4. Further Information: We have raised a number of issues to which the CERC may request further information. We would be happy to oblige.

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