What lies beneath?

As the Christchurch rebuild gathers momentum industry professionals are worried substandard assessments of quake-damaged houses are a ticking time bomb akin to the leaky building saga.

Add in growing dissatisfaction with the Fletcher EQR contracting system, and the picture is an unhappy one. Architects, builders, engineers and homeowners are not short of horror stories about serious earthquake damage missed in EQC assessments.

Take the resident told to move out for six weeks while his large tilt slab house underwent cosmetic repairs. Dubious about the thoroughness of the EQC inspection, he acted on the advice of builder friend Daryl Hewitt and asked an architect to take laser levels.

They revealed sections of the house had dropped by more than 60 mm, something confirmed by a further $70 000 worth of sophisticated testing.

Hewitt has personally checked about 10 0 homes for clients. Eight of those destined for superficial “scrape, stop and paint” fixes turned into rebuilds, and others were later found to need more extensive repairs. “A lot of those are coming down now too.”

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That’s all the more reason to get the system sorted says Dave Sturman, a building consultant and southern chapter president of the New Zealand Institute of Building.

He warns that failure to uncover the true extent of residential damage means Christchurch faces a potential “earthquake pandemic” in years to come.

Sturman worries there is too much emphasis on speed and cost-cutting and not enough emphasis on quality, so minor tell-tale signs that could point to major issues are overlooked.

By way of example he says painters are being appointed as principal contractors on repair jobs (something EQR says is very unlikely when they are the least qualified of all tradesmen). “I’ll give you a simple scenario,” says Sturman.

“A painter is painting a room and he comes to an almighty bulge in the skirting. He wouldn’t have a clue why that bulge has occurred, whereas a builder would say, ‘we’ll better take that skirting off, there’s been damage here,’ and all of a sudden you find that the studs and bottom plate have parted from one another which have issues around structural loads, so minor ailments lead to major stuff!”

Engineer Warren Lewis agrees inexperienced assessors are missing signs of damage. “Ripped paint” on weatherboards is evidence of racking which causes nails to “slot” gib board so it loses strength. That damage is then exacerbated by strong winds and continued earth tremors.

Owners of a house scheduled for cosmetic EQC repairs called him because they were anxious about the way it lurched in the wind post-quake and weatherboards revealed widespread slotting of EQC says a mediation service provided by the Arbitrators’ and Mediators’ Institute will be launched in August.

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The true extent of the damage was revealed when the owners removed gib wall board.

"So I calculated how much gib board we needed to brace the house and it was about twice the amount they had," Lewis says cracking of plaster around the first floor level of multi-storey homes warrants a closer look. "You've got to take the thing apart and investigate it. You don't just scrape, stop and paint which seems to be the favoured thing with EQC."

At Hill home the nozzle of a hose lying on a first floor deck was found jammed under a first floor deck with EQC. "Lewis says cracking of plaster around the first floor level of multi-storey homes warrants a closer look. By the time it came down and when it came down, all the nails were bent over...there was nothing left to stop the top floor sliding off," says Lewis.

Christchurch architect Colin Hill was involved in formulating changes to bracing standards and is far from satisfied with the current residential inspection and repair regime.

Since the late 1970s he says homes have relied heavily on wallboards as a bracing element, but that the quakes stressed essential hold down fixings required to transfer the load to the floor and foundations.

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These fixings are hidden, so they need to be opened up, and replaced or re-fixed, says Hill. Failure to do this means weakened houses are no longer code compliant.

"This could potentially lead to significant structural failures causing loss of life, particularly in homes with heavy concrete roofs and brick chimneys removed to roof or ceiling level. EQC, EQR and POMs are not addressing the problem he says and there are numerous cases of cracks opening up again after cosmetic fixes.

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EQC national operations manager Reid Stiven responded to Progressive Building questions via email through a communications person. He defended EQC's standards and says laser, zip or pneumatic levels and spirit levels are used "as needed" in inspections. Just over 1,500 properties have been partially or fully re-inspected for damage but he could not say with any certainty "how many went over cap as a result." Our best estimate is between 20 and 120 properties.

There would be a good reason for more invasive checks such as removing wall linings, says Stiven, particularly as cracking in wall linings is usually due to improper installation.

"This is not an indicator that wall lining should be removed to check for structural damage and we don't do additional damage where it's not warranted," says Stiven.

EQC offers cash settlements for such properties based on the average cost of replacing or repairing earthquake damaged parts of the equivalent weather tight home.

Chaplin, who is a quality assurance reviewer for the Weather Tight Homes Tribunal says that is a sensible approach.

But determining whether a home is "leaky" or just quake damaged could be open to dispute, and he points out the definition of a leaky home also covers defects that could be capable of leaking in the future.

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