

Installing services can sabotage a good build

You built well. And you added protection against attack by the elements. So that leaves no worries about the structural integrity of your building, right? Wrong!

In this column's second "believe-it-or-not" (see the previous issue), learn about a gremlin of a different kind.

In the course of inspecting a nearby building, one of ACRA's consultant members was astounded to see its roof beam not quite as the structural engineers had designed it and the builder had built it.

This was thanks to tradies failing to recognise a beam as supporting the roof. The team had been called to install split system air-conditioning.

Imagine being a fly on the wall watching this team at work as they encountered an inconvenient obstacle in the process of running the line from the heat exchanger outside through to the cooling units inside. The obstacle was of course the roof beam!

Imagine watching the debate about their options. Then the horror you would feel as you heard their decision to core through the beam! Right through, including the bottom four rebars midspan.

The bottom four!

That is, the rebars in tension which contribute most (because of their distance from the neutral axis) to resisting the bending stresses!

You would, of course, want to yell "No, not *there*." But flies can't yell and it would be too late anyway once the "what was that?" came at the crack and groan of the concrete unzipping vertically upwards.

Needless to say, the ACRA man quickly called for repairs entailing splicing in new reo and new mortar cover to reinstate the beam to its



CORE CUT THE BOTTOM REBARS

full design strength, leaving the air-conditioning line to be re-routed around the beam as it should have been in the original installation.

Stand over them?

As if there aren't enough gremlins out to erode the soundness of your structures!

Few owners have the time to stand watching tradies as they install new or add-on services. You normally trust such contractors to know how best to get on with the job. The trouble often arises because of the temptation to go with the cheapest quote from contractors who, faced with the tight margins they set to clinch the work, look for shortcuts.

The result might be cheap up front; but as in this case, clearly it won't turn out to be the cheapest longer term.

Inspect often

If you can't stand around for hours inspecting installations, you can at least do spot inspections and call a halt to anything that leads you to believe there are "cowboys at work" here.

Letting doubtful work go unchallenged can end up being very costly, even fatal. Of course, if you take the precaution of engaging an ACRA member to conduct frequent inspections, this kind of attack on your building's integrity will not remain undetected for long.

Bear in mind that not all such attacks are obvious. Sometimes patch-up jobs cover up previous bad installation or repair practices, which you won't know about until concrete cancer, failure or costly deterioration sets in.

Best to be sure. Ask the ACRA experts. ■