

Concrete repair—how far do you go?

On every concrete repair project, builders and consultants face a conflict between the technical, practical and financial aspects.

Once a project is under way and unforeseen problems pop up, the right advice can mean the difference between extending the life of the repairs from two to five, five to ten, or 15 to 25 years.

So, how far do you go?

Expectations

The expectation of the asset owner is the first thing. Although a long-term asset management approach is the soundest philosophy, not every asset owner will see it that way.

The main questions asset owners need to answer are:

- How long do you want this structure to last?
- How long do you want these repairs to last?

Technical

While all consultants would like to see a text book repair done every time, budget limitations and practical considerations govern what can reasonably be done.

However, the asset owner needs to understand the implications and risks involved if technical details are too compromised.

As an example, the requirement to chase steel reo suffering carbonation-induced corrosion in a reinforced concrete beam could lead to complete demolition of the affected face.

This can often be predicted by a thorough condition investigation. But lacking this, a judgement call needs to be made on how far to go.

To take another example: if you uncover a repair on a structure that is currently sound, but is not best practice, what do you do?

An understanding of the technical priorities involved in concrete repair is needed



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to make the judgement.

The owner also needs to be informed that if he doesn't have the repair done to the extent required, he faces the increased likelihood of further repairs being demanded sooner rather than later.

Critical focus

The focus must be to identify the critical elements, those that might not be seen in the finished product but that will reveal themselves in the longevity of the repair.

The longer-term costs of taking the "simple way out" are rarely quantified until problems arise and someone in the owner's hierarchy questions what was done and why it is having to be done again so soon.

Some builders and consultants might be more inclined to offer a cheaper "repair" using methods and materials familiar to them, ignorant of the technical issues that must be understood to tender an appropriate concrete repair solution.

On the other hand, technical issues can be used to sell an expensive repair where it is not needed.

In the end, the best solution is a realistic one that addresses the main risks and is tailored to the life and the future maintenance program of the building.

The answer?

Use an ACRA member. They all are required to have an understanding of the issues and options involved in providing best solution to a concrete repair problem. ■