Are your foundations ok after the earthquake?

What if your building has been damaged in an earthquake, but not beyond repair – how can you tell if your foundations are also damaged?

The risks involved with not knowing are too great – either occupying a building that isn't safe (dangerous) or demolishing one that could be repaired (costly and wasteful).

To find this out you need high-quality seismic geotechnical engineering solutions.

Until now these solutions have not been easily executable or practical.

Our solution for assessing the integrity of your foundations.

In the past the likelihood of foundation damage was often ignored altogether - except in the academic space.

Our methodology moves these assessments from academic theory into a commercial and practical space – where safety, time and cost saving benefits can be achieved by the property owner.

Checking for damage at the interface between the pile and the pile cap.

If there has been an earthquake and you are lucky enough that your building is found to be repairable there is still always the unknown element of the in-ground structure. Previously, without expensive and intrusive tests, it was impossible to tell what the damage was.

The challenge here is to evaluate the structural integrity of existing in-service piles without removing or exposing them in their entirety.

By modelling inputs using data from the original foundation details, geotechnical analysis of the ground conditions and a seismic assessment we can build a comprehensive picture. Detailed analysis enables assessment of the type of movement that the foundations might have experienced - so the integrity of the foundation after the earthquake can be assessed. See our model at the end of this document.

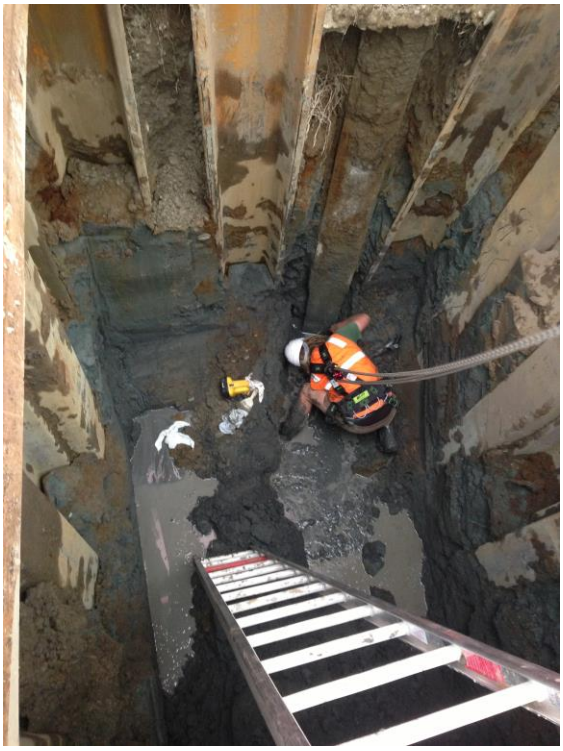
Ingenuity@Coffey

How this solution can help you.

Your building, be it a shopping mall, a hospital, high rise office block, school or home, has been damaged by an earthquake but not beyond repair.

As a property owner you need to understand the likelihood and extent of damage that occurred to the foundations of your building so you can decide the best way forward.

With our developed solution we can check the structural integrity of the piled foundations. This will enable a structural engineer to evaluate if the whole building, above and below ground, is safe, meets code requirements and if it can safely withstand a future earthquake. Also - if you are entitled to an insurance payout for damage to your foundations.



Checking for damage in the upper 4 m of the pile. Our analysis determined that damage, if any, would be found in this part of the pile.

What next?

We can provide a starting point to answering these questions and getting you back into your building.

If you have a property that has been damaged in an earthquake and would like to discuss this approach to pile damage assessment contact:

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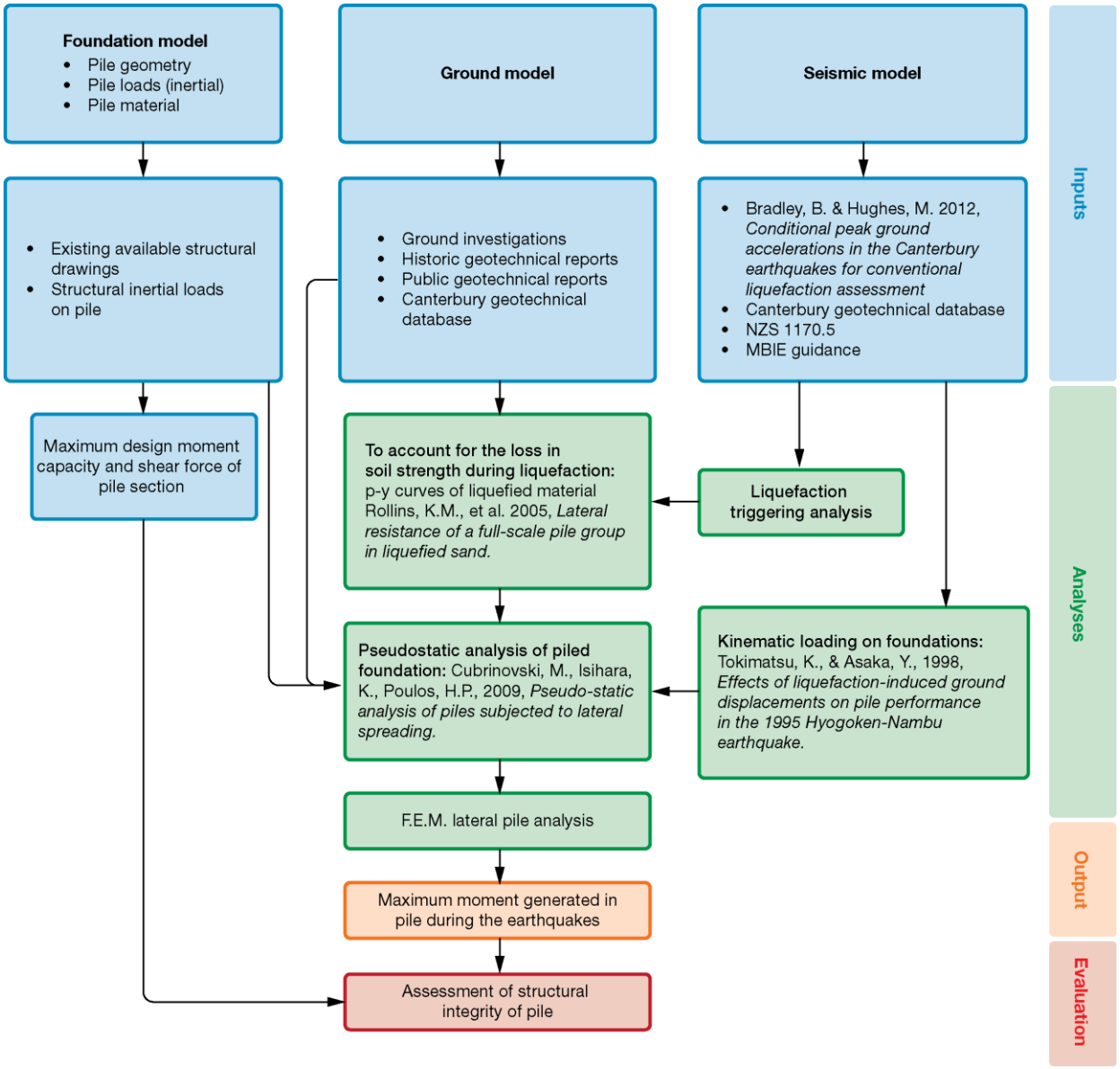

Our model for the assessment.