

### CAPABILITY STATEMENT 05—GROUND IMPROVEMENT

Geotechnical Investigation, Design, Construction Support and Verification of Ground Improvement

#### WHAT DO YOU MEAN, WEAK GROUND?

As new developments push beyond the boundaries of the easily developed, geotechnically straightforward sites, ground improvement is becoming a greater issue in Australia.

In coastal, estuarine or lake areas, areas of deep soft mud, loose sand and other weak soils can be present which require specific attention before construction of your project.

In an era of increasing environmental regulation, the “excavate and replace” option is becoming less easy and more costly to implement, especially in areas of acid sulfate soils (ASS).

It could be a greenfields site or an existing structure built on a substandard foundation— there are options for both.

Weak ground doesn't have to mean that your project falls over before it starts. Ground improvement techniques are a reliable way to create the foundation you need for your project.



#### WHAT CAN BE DONE?

A number of ground improvement techniques are available depending on the type of development and the nature of the weak ground underlying it, including:

- Cement or lime stabilisation (either shallow, for roads, or deep, for bridge or building foundations)
- Deep soil mixing (DSM)
- Permeation grouting
- Pressure grouting
- Jet grouting
- Stone or sand columns
- Piling
- Deep compaction methods
- Preloading
- Geotextile reinforcement



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#### WHAT CAN WE DO FOR YOU?

From the start, Galt can help. Firstly, we can schedule and carry out an appropriate geotechnical site investigation to characterise your site. This will allow both us and the team to understand what is there before deciding how to deal with it.

We can then recommend options for ground improvement techniques suitable to the area. We don't work in isolation and we have numerous industry contacts who can provide assistance and recommendations for appropriate ground improvement techniques bearing in mind your timeframe and desired outcomes.

We can then develop a ground improvement specification that can be implemented by a contractor. During construction, we will be available to undertake construction support and quality assurance including performance monitoring of the improved ground to ensure that the ground improvement is carried out in accordance with industry standards. Naturally, this includes documentation and verification of the project.

#### WE'RE UP AGAINST A DEADLINE

At Galt, we will work with contractors using innovative solutions that minimise the time taken for ground improvement. There is often a trade-off between cost and time when it comes to ground improvement, particularly in deep, weak soils. We can give you that advice and work with your schedule to meet the project deadlines. At the same time, we'll be straight with you if something realistically can't be done, so that a realistic timeline can be developed.



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Galt can help. Give us a call and we can discuss your needs.

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