

CAPABILITY STATEMENT 07—PILE DESIGN AND VERIFICATION

Specification, Construction Support, Testing and Verification of Deep Footings

ON A SOLID FOUNDATION

Many of today's large structures and buildings are founded on piles as engineers and developers continue to push the limits of loading with increasingly larger and more complex buildings on ever more expensive real estate.

Piling is also used in areas where soft or weak ground precludes the use of shallow footings. Piles may be carrying compression, tension or lateral loads or a combination of all three. These load interactions can become complicated and require careful geotechnical consideration.

The design of piles is governed by Australian Standard AS 2159, which details design and testing requirements for piles. Pile testing is an inherent part of the pile design and installation process and the testing type and frequency has a large influence on the size, depth and therefore cost of the piles.

A pile design must take into account the geotechnical conditions, structural requirements and the requirements of the code and the budget constraints of the project.



WHAT ARE THE STEPS INVOLVED?

A good pile design is not limited to a specification on a piece of paper but includes construction quality assurance and testing to make a 'closed loop', confirming that the design assumptions were correct. The steps involved are as follows:

- Investigation and parameter derivation
- Pile design taking into account the constraints of the project (e.g. remote location, aggressive environments)
- Pile specification
- Review of proposals from contractors and assistance in pricing or specification
- Construction support
- Pile testing
- Verification reporting



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WHAT CAN WE DO FOR YOU?

We know what is required from each stage of the piling process, from the initial investigation through to the close-out report. We have close relationships with expert testing companies for static, dynamic and pile integrity testing.

We can handle the geotechnical engineering aspects of your piling project all the way through, including obtaining quotes, arrangement of testing, quality assurance and issuing of verification reports.

We also visit sites during construction of the piles to provide construction support to the piling contractor and ensure that the design assumptions are borne out in the real world of dirt and rock on site. We provide advice in consultation with the project team (including the contractor) to ensure that your piling project is implemented successfully.

At the end of the project, we write up close-out verification reports for inclusion in final reporting.

ON TIME AND ON BUDGET

We will always strive to provide you with an understanding of what is required for the engineering, testing and quality assurance for your piling project up front. We are there when the tender is developed and specifications are written to provide the geotechnical input that is needed to ensure quality.

We will always make ourselves available to be present on site at those critical times when the first piles are installed to make sure that everything is going to plan.



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

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