

Our Reference: NA230008

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21/07/2023

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Attention: Mark Michaelis

Dear Mark

Re: Mackay Hospital Expansion – Geotechnical Brief

This letter outlines a geotechnical brief that can be used to obtain fee proposals for a site investigation.

The geotechnical investigation is to inform the design of a proposed new building (P Block) at the Mackay Base Hospital. The project consists of a 4 storey building with an internal courtyard (refer part site plan below).



It is anticipated that the building will be supported on piles. The magnitude of working loads for the piles is in the order of 12,000kN. It is also expected that some piles will need to resist significant tension loads due to seismic and wind considerations.

We will require the scope of works to include assessment of groundwater levels. Boreholes should include RL of the ground level. Previous geotechnical information indicates rock depths up to 30m in this location. Borehole depths must be sufficient for the design of piles socketed into the rock to achieve the expected loads.

Could you please prepare as a separate item a fee proposal for an acid sulphate management report for consideration by the client.

We will require your scope of works to include, but not be limited, to the following items:

- Site Classification to AS2870 for footing design and plumbing fixture design
- Site Sub-Soil Class to AS1170.4 – 2007, Section 4
- Recommended foundation type(s)
- Bearing pressure on the founding strata
- Predicted ground surface movement 'Ys'
- Founding Levels
- Predicted settlement
- Suitable reuses of cut material
- Compaction Standards
- Stripping Depths
- Trafficability
- Excavatability
- Temporary safe batter angles for cuts
- Fill batter slopes
- Pile type recommendations along with design parameters
- Retaining wall design parameters
- CBR
- Emerson class for top 2m of material (for erosion and sediment control)
- Topsoil depth

The figure below shows the proposed borehole layout. The final layout may need to be adjusted for any site obstructions etc.



Yours faithfully,
ACOR CONSULTANTS PTY LTD

Michael Bugeja

Michael Bugeja
Senior Structural Engineer