

BMC Bradford Microfine Chemical Injection Microfine Chemical Grout Soil Stabilization : Design Notes and Specifications

The information supplied is to assist the supplier and installer of BMC products. Product specifications including:

- 1) engineering;
- 2) proposed chemical grout treatment location and ground conditions;
- 3) recommended installation techniques;
- 4) after job care and maintenance:

BMC Chemical Grout Injection offers a cost effective solution compared to other soil stabilization underpinning methods such as Contiguous Piling or Shore Piling. A unique advantage being there is no disruption or movement to adjacent properties whilst works are being carried out.

BMC Chemical Grout materials must be manufactured and installed as per BMC engineering recommendations to ensure superior results. If guidelines are not followed closely (particularly with after treatment care) the treated area may be prone to movement or slight failure.

Generally, any grout treatment proposal over 900mm deep should have an engineer grout block design to be submitted with a building license showing future retaining. It is recommended to contact BMC for further information and technical advice prior to job commencement.

GENERAL DESCRIPTION

BMC specialize in a soil stabilization and underpinning process using a mixture of chemicals and micro fine cements.

The manufacture and application of the BMC grout treatment must be done by a specialist authorized BMC contractor.

The micro fine grout mixture is batched on site and pumped under high pressure into the ground forming a continuous cementious mass. The compressive strength achieved by various grout block treatments can provide long term support to existing buildings, retaining walls etc.

The grout treatment work to excavations is classed as temporary only. The treated area is designed to provide a load bearing mass suitable for soil retention whilst excavation and permanent engineer designed retaining methods are installed.

BMC use ultrafine and micro fine Portland cement products for injection. Chemical admixtures included in the batching process ensure a superior product and best results.

It is recommended the grout treatment area always be 300mm lower than the proposed maximum excavation depth. A maximum 3000mm grout block treatment and excavation can be achieved with suitable conditions. With any treatment greater than 900mm it is recommended to REFER TO ENGINEER DESIGN RECOMMENDATIONS.

LOCATION AND APPLICATION CONDITIONS

There are a number of factors that can add to the effectiveness of the proposed BMC grout treatment.

Not all soil types are suitable for BMC injection. Typical Perth A-Class soil types are preferred for grout injection. When considering soil suitability REFER TO ENGINEER SOIL REPORTS and specialist BMC recommendations upon site inspection.

Grout mixture blends differ with different soil types and site variances. A specialist BMC contractor upon site inspection will recommend the preferred treatment best suited for the application.

Ground contamination such as rocks, gravel, tree roots, building refuse etc can affect the suitability of the treatment. These factors can only be determined upon site inspection and soil testing.

The client is responsible for obtaining a signed letter of authorization for any grout treatment where the grout block encroaches onto the neighbouring property including underground.

EXCAVATION AND AFTER TREATMENT CARE

Correct procedures must be followed to ensure maximum effect is achieved to the grout treated area.

A minimum of 7 days must be given prior to any excavation works being carried out next to the treated area.

It is recommended that if the ground adjacent to the treated area is to be machine excavated it is done under supervision at all times.

Trimming or cutting back of the grout treatment must be carried out manually with hand tools only, unless specified by BMC.

Client must ensure the void created between the temporary grout block and proposed fixture be filled to a suitable compaction level. REFER TO ENGINEER DESIGN RECOMMENDATIONS or BMC specialist advice.



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