

Mr Gareth Richards
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Dear Mr Richards

Chemical Ground Compaction at Nungarin Post Office, 28 Railway Ave, by Teretek resin injection

The Nungarin Post Office is a single storey brick building; with what appears to be brick footings. The footings may be rubble or stone below ground level. This historic building is typical of buildings Mainmark re-supports across Australia on a very regular basis.

I am a civil engineer with a Bachelor of Engineering (Civil) (hons.) from University of Melbourne and a Masters of Engineering (Construction Management) from Swinburne University. I am a registered civil engineer NPER and Registered Building Practitioner – Civil Engineer (EC 40551). I have worked as an Engineer with Connell Group (now Aurecon). I have held various engineering roles within Smorgon Steel including Chief Engineer. I was Regional Engineer for Humes (Vic/Tas/SA). I have been on several Standards Australia committees, including the AS4671 committee, sub-committee 10 for AS3600 and the swimming pool safety committee. I have over ten years' experience as an engineer for Mainmark and in this time have developed a detailed and comprehensive understanding of the performance of remedial systems for correcting subsided foundations.

I have reviewed the project. Please contact me if you have any queries.

Regards,



James O'Grady
BEng (Civil)(Hons.) MEng (Constr Man)
FIE Aust, CPEng, NPER (Civil)
Registered Building Practitioner EC 40551
Registered Building Practitioner 609170568

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25 March 2021

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Attention: Gareth Richards
Phone: 08 6161 0101 0439 522 212
Email: gareth@gvmsolutions.com.au

Dear Gareth,

**PROJECT: MAINMARK FOUNDATION TREATMENT AND CORRECTION OF
BRICK/RUBBLE/STONE/CONCRETE FOOTINGS**

PROPERTY: Nungarin Post Office, 28 Railway Avenue, Nungarin, WA, 6490

Thank you for the opportunity for Mainmark Ground Engineering Pty Limited ("Mainmark") to provide this Quotation in relation to the above Property.

Conditions observed during the inspection of the Property, attended by Eamonn Daly (Mainmark Representative) on the 23rd March 2021 included:

The total length of footings identified for treatment and quoted is approximately 29 linear metres.

Re-support of the settled section may be achieved without necessarily lifting the structure back to original levels. Due to the way in which the structure has settled, full lift of the settled sections, rotation and/or complete closure of the associated cracks, whilst possible, should be considered unlikely and could potentially be detrimental to the structure. Re-support of the settled section will be confirmed by registering 1mm lift within the area of the scope of Services.

- Property drawing, (marked up to reflect our understanding of the extent of the problem and the full extent of the required Services).

The following will form the scope of the Services to be provided at the Property.

The Teretek Deep Lift method involves the injection of one or more of our engineered structural resins well beneath the sunken sections of the affected construction (see Property drawing), filling any voids encountered to maximise ground support and re-support the settled sections, then, from deeper in the ground, lifting the construction towards level, as site conditions allow, by the controlled force generated by expanding resin.

What We Provide

- Travel to and from establishment at the Property.
- Supervision, labour and materials to execute Mainmark Teretek Deep Lift.
- Mainmark plant, laser and computerised levelling equipment.
- Filling of injection holes in floors, with standard grey cement mortar.
- Avoidance of underground services near the injection area, provided a service locator has been engaged (see below) and a suitable report provided to us.
- Mainmark's conditional 50 year warranty on materials.
- Any other matter or thing set out in the Terms.

Your Responsibilities

- Confirmation of the location of services to or from the Property (within and directly adjacent to our injection area), for example, water, sewerage, telecommunications, gas and electricity by making enquiries of relevant government and authority bodies having jurisdiction for such services, and where necessary, engaging a service locator company to provide the relevant information: Mainmark may have included 'service location' in this quotation, see the cost breakdown below, if you remove that cost then liability for those works reverts to you.
- Rake out and remove all mortar/loose debris from all cracks/previously filled cracks. All making good and adjustments to tiling, flooring, walls and all finishes to any element of the structure and all making good/replacement of any partially lifted, disturbed or damaged paving on completion of the Services; This relates to the general work area and also to any slabs, paving or finishes to any element of the property, drive, driveway, verge, road, hard-standing, access laneway or the like used by the Mainmark works vehicle at the property.
- Where required, providing and making good 'access penetrations' through internal timber floors to permit access to the sub-floor by Mainmark personnel. Any such penetrations should be neatly cut by the Client prior to the commencement of the Services and should measure not less than 400mm x 400mm. Such locations, if any, are shown on the Property sketch but must be confirmed with the Mainmark Representative.
- All making good/adjustments to plumbing and other services that may be required during and/or after the Services are complete. If we are working near services, inspection afterwards by a licensed tradesman (organised by you) is recommended. If pipes are infiltrated by Mainmark material this can usually be removed by an electric eel - also organised by you.
- Arranging access from neighbours' property (as and when required);
- Parking for Mainmark's 24 tonne works vehicle within 60 metres of the farthest point of the Services area from the vehicle, without vehicular traffic over the injection hoses;
- Provision of parking control, if the work is to be carried out on a street with kerbside parking;
- Routine maintenance of the Property to prevent future damage due to tree roots, broken or leaking services, drainage or other causes of variations in ground moisture conditions, i.e. the remediation

of all site conditions that could be contributory factors to the settlement such as (but not limited to) defective water pipes, guttering and/or downpipes, incorrectly positioned soakwells/drainage run-off points, defective/undulating paving and/or exposed ground, tree/shrub management, root barriers, retaining walls/retaining structures, natural or man-made soil movement and any other site condition in need of remediation to prevent ongoing issues of settlement. The prevention of variations in ground moisture conditions is particularly important with clay, peat and sandy, granular type soils. Consideration should also be given to installing helical ties, or equivalent, which are used to stitch the cracks in the brickwork and reintroduce some structural integrity to the settled sections of wall after the Mainmark treatment has been completed.

Please note the precautions you should take to protect and maintain the Property including those recommended in/by:

- CSIRO BTF 18 "Foundation Maintenance and Footing Performance: A Homeowner's Guide"
- CC&AA Technical Note 61 "Articulated Walling"

Based on the information available to us we believe the Mainmark injection treatment should be successful. However, should this not be the case and in the unlikely event that it is not possible to treat the structure, element or area (for whatever reason on the day of injection) then the cost to you will be limited to the Travel and Establishment cost plus the amount of Teretek material injected up until the time it was agreed with you that the works shall cease. The Teretek material used will be charged at the reduced unit rate.

The Terms – Important Notice

The Terms apply to this Quotation when accepted and to each and every variation to the Services (including each and every additional or varied service and/or supply of materials). It is your responsibility to read and understand the Terms and the other Information provided before you accept this quotation.

If you are unclear on any of these and their application to the Services, please do not accept this quotation but contact the Mainmark Representative. We would be pleased to answer any questions that you may have.

To review our full Terms of Engagement, please visit our website - <https://mainmark.com/terms-conditions/>

Yours sincerely,



Eamonn Daly
Project Manager
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Phone: 1800 623 312
Email: edaly@mainmark.com

Driveway to rear parking area

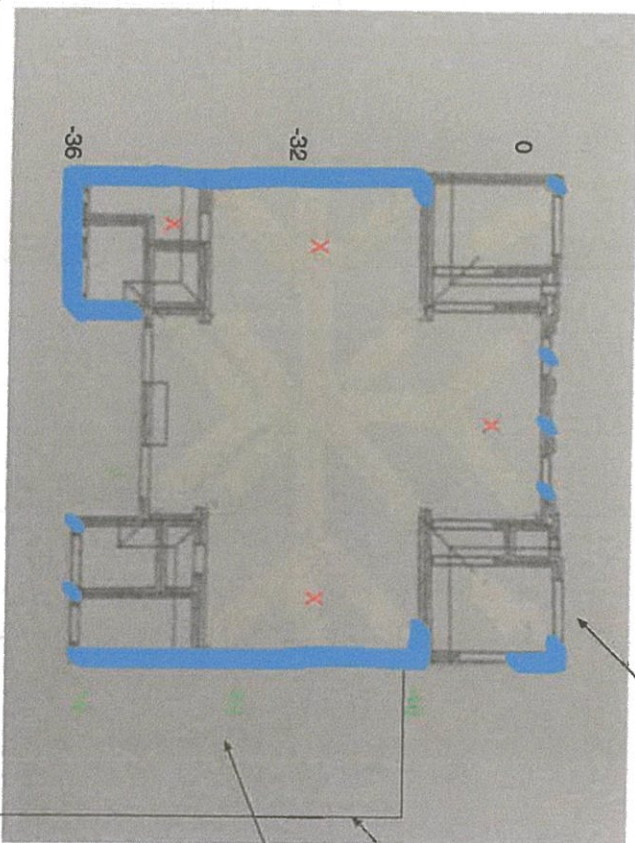
Path

Road and Truck
Truck to be parked on the side driveway if the overhead Telstra wire is high enough

Main Entrance

Fence

Rear parking area



The existing propping arrangement is to be retained upon completion of the work. During the work, the props are to be loosened off and re-tightened by GVM under the instruction of the Mainmark Site Supervisor

Client is aware that any previously filled and patched areas that are not raked out may compress further and cause minor cracks that will need to be filled and patched by them after the Mainmark treatment has been completed

Client is aware that any ground conditions and/or service pipework/drainage that require attention will need to be remediated to ensure the property is protected as best possible from the general weather and site conditions to avoid possible ongoing issues of settlement

X = Floor Access Point required (arranged by Client)

● = Ancillary Support Injection Point

■ = Mainmark treatment area for void fill and re-support

Job No:	W21D100 QT1	Date:	23 March 2021	Drawn By:	ED	Scale:	n/a
Site Address:	Nungarin Post Office, 28 Railway Avenue, Nungarin, WA						
Contact Name:	Gareth Richards	Phone:	0439 522 212	Email:	n/a	Confirmed By:	
Services Located By:	Mainmark to engage Service Location Co.	Client Comments:	Crew to closely monitor all adjacent surfaces during the treatment procedure.				
KG Estimated:	525	Contingency:	TBA	Signature:		Date:	

Legend:	● Sewer pipe	○ DownPipe	↔ Underfloor access	↑ Electrical
	■ Affected area	▭ Window/Door	↘ Door	⌘ Crack
	■ Injection Point	■ Treated area	⌘ Sub-access Cutout	⌘ Acro Prop
			Revision:	

