



ENVIRONMENTAL - REMEDIATION - GEOTECHNICAL ENGINEERING - WORK HEALTH & SAFETY - LABORATORIES - DRILLING

Aargus ref: GS8023-4A

17th November 2020

Mario Pizzolato
C & V Engineering Services Pty Ltd
23-25 Church Avenue , Mascot, NSW.

Dear Mario,

RE: Groundwater well Installation Report : 23-25 Church Ave, Mascot, NSW.

Introduction

As requested by Bayside council, Aargus Pty Ltd carried out installation of three groundwater wells during the additional geotechnical site investigation from 02nd of Nov to 04th of Nov 2020 in the above mentioned site address.

From the information available and the geology of the site, it is understood that additional groundwater wells are installed for the hydrogeological assessment of the groundwater in the future construction stages.

Subsurface Geology (Adopted from GS8023-3A dated 17/11/2020)

The subsoil conditions encountered within the boreholes are summarised in Tables 1, 2 and are described in detail on the attached Engineering Borehole Logs presented in Appendix C. Reference should be made to the logs and/or specific test results for design purposes. Bore holes logs can be found in the report: Ref: **GS8023-3A dated 17/11/2020**

Units	Lithological Description	Unit	BH3 (m bgl)	BH4 (m bgl)	BH5 (m bgl)
Pavement	Concrete.		0.0-0.1	0.0-0.10	0-0.15
Fill	SAND, fine to medium grained, dark brown, pieces of bricks, concrete & gravel.		0.1-1.80	0.1-2.8	0.15-1.8
Alluvial Soil	Clayey SAND, fine to medium grained, pale grey to dark brown to black.		1.8-4.0		
	SAND, fine to medium grained, dark brown to pale brown, with silt.		4.0-6.0	2.8-7.0	1.8-5.5
	Silty SAND, black to pale grey to dark brown to pale grey.		6.0-16.0		5.5-13.0
	Clayey SAND, fine to medium grained, pale brown to dark brown, trace of silt.			7.0-17.5	13.0-15.0
BEDROCK	Clayey SHALE, dark grey, extremely weathered, very low estimated strength, with clay.		16.0-17.65	17.5-19.15	15.0-16.3
	SHALE, laminated, extremely weathered, extremely low estimated strength, estimated Class V Shale			19.15-20.15	
	SHALE, pale grey to dark grey, regular horizontal bedding changing to class III from 21.50m.		17.65-22.92	20.15-24.7 Class III from 22.50m	16.3-25.3 Class III from 23.0m.

Groundwater well Installation details:

Three Groundwater wells have been installed and numbered as GW3 , GW4 & GW5. Installation summary is presented below. Well details can be found in the Bore holes log also.

Borehole/ GW Number	Borehole Depth (m)	Well Depth (m)	Slot interval (m)	Casing Interval (m)	Sand Interval (m)	Bentonite Interval(m)	Concrete Interval (m)
BH3/GW3	22.92	14.0	2.0-14.0	0-2.0	0.15-1 & 2.0-14.0	1.0-2.0	0-0.15
BH4/GW4	24.7	14.0	2.0-14.0	0-2.0	0.15-1 & 2.0-14.0	1.0-2.0	0-0.15
BH5/GW5	25.3	23.0	17.0-23.0	0-17.0	0.15-16.0& 17.0-23.0	16.0-17.0	0-0.15

5. Limitations:

The geotechnical assessment, the conclusions and recommendations presented in this report have been based on available information obtained before and during the groundwater wells installation, and are limited to the locations assessed.

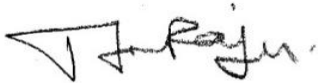
It is recommended that should site features, surface and groundwater conditions encountered during excavation and construction vary substantially from those anticipated within this report, Aargus be contacted immediately for further advice and any necessary review of recommendations. Aargus does not accept any liability for site conditions not observed or accessible during the time of the inspection. This report and associated documentation and the information herein have been prepared solely for the use of **C & V Engineering Services Pty Ltd** and any reliance assumed by third parties on this report shall be at such parties' own risk. Any ensuing liability resulting from use of the report by third parties cannot be transferred to Aargus.

If you have any questions or queries regarding this report, please do not hesitate to contact us.

For and on behalf of

Aargus Pty Ltd

Attachment



Sai Turlapati

Geotechnical Engineer

B.Tech Civil. M.E Civil. MIEAust



Shyam Ghimire

Principal Engineering Geologist

B.Sc, M.Sc, MAIG

- ATTACHMENT 1-GROUNDWATER WELL LOCATION PLAN

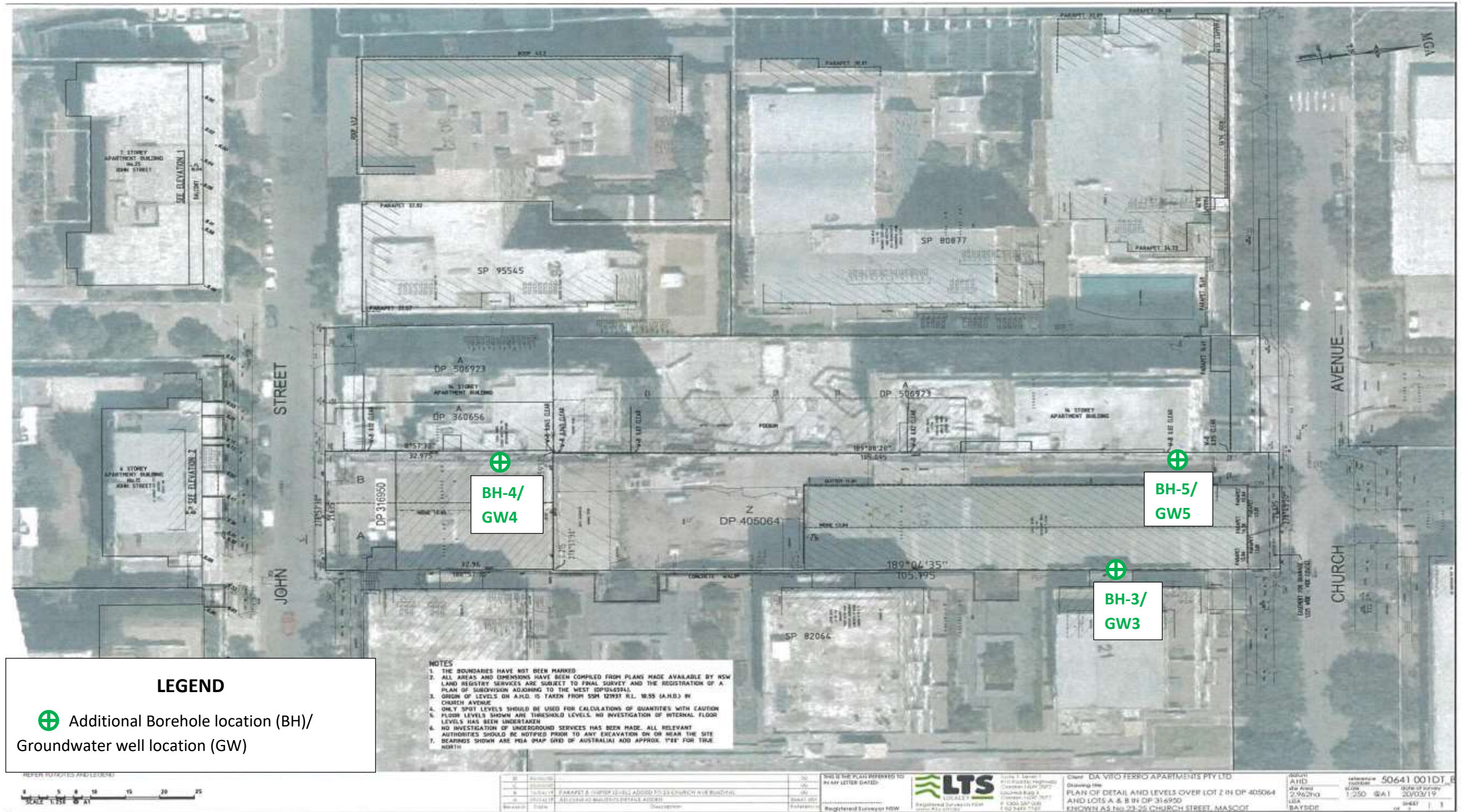


Image Source

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Drawn	SP
Checked	SG
Date	5 th November 2020
Scale @ A3	NTS

C & V Engineering Services Pty Ltd
Additional Geotechnical Investigation
23-25 Church Avenue, Mascot, NSW



Figure	1
Title	Site Plan
Job No	GS8023-3A