R.J. Burnside & Associates Limited 17345 Leslie Street, Suite 200 Newmarket ON L3Y 0A4 CANADA
telephone (905) 953-8967 **fax** (519) 941-8120 **web** www.rjburnside.com

BURNSIDE
[THE DIFFERENCE IS OUR PEOPLE]

October 28, 2021

Via: Email

Ms. Caroline Hawson, P.Geo.
Hydrogeologist
Lake Simcoe Region Conservation Authority
120 Bayview Parkway
Newmarket ON L3Y 3W3

Dear Ms. Hawson:

Re: Addendum to Hydrogeology Brief
Groundwater Level Readings
Project No.: 300041559.0001

R.J. Burnside & Associates Limited (Burnside) provided a Hydrogeological Brief that summarized hydrogeological conditions within Block 598 of the Bistro 6 West subdivision in Barrie (Burnside, August 10, 2021). The Hydrogeological Brief provided information on the depth to seasonal groundwater high and general groundwater conditions within the block. This current submission provides confirmation of the groundwater levels outlined in the Hydrogeological Brief by way of tables and graphs of the groundwater data.

The work completed by Burnside in 2019 for the larger Bistro 6 subdivision indicated that groundwater in the area of Block 598 varied between 252 meters above sea level (masl) and 254 masl. Groundwater measurements supporting this interpretation were obtained from monitoring wells CD-1 and CD-2 located in the vicinity of Block 598. We have included a map from our 2019 study that shows the location of these wells along with an indication of the location of Block 598. Tabular data supporting the hydrographs is also provided.

As indicated in our Hydrogeology Brief (Burnside 2021) more recent work on groundwater levels has been completed by Peto MacCallum (Peto) in the vicinity of the proposed LID features on Block 598. The most recent report provided by Peto is attached (October 27, 2021) and confirms that seasonal groundwater high varies between 252 masl and 254 masl in the vicinity of the proposed LID measures. Based on the measurements conducted by Peto in 2021 we are of the opinion that these data confirm the previous interpretation by Burnside. For ease of reference, we have also included a map from the original Peto geotechnical report for location references.

We trust that this is satisfactory for your review purposes.

Yours truly,

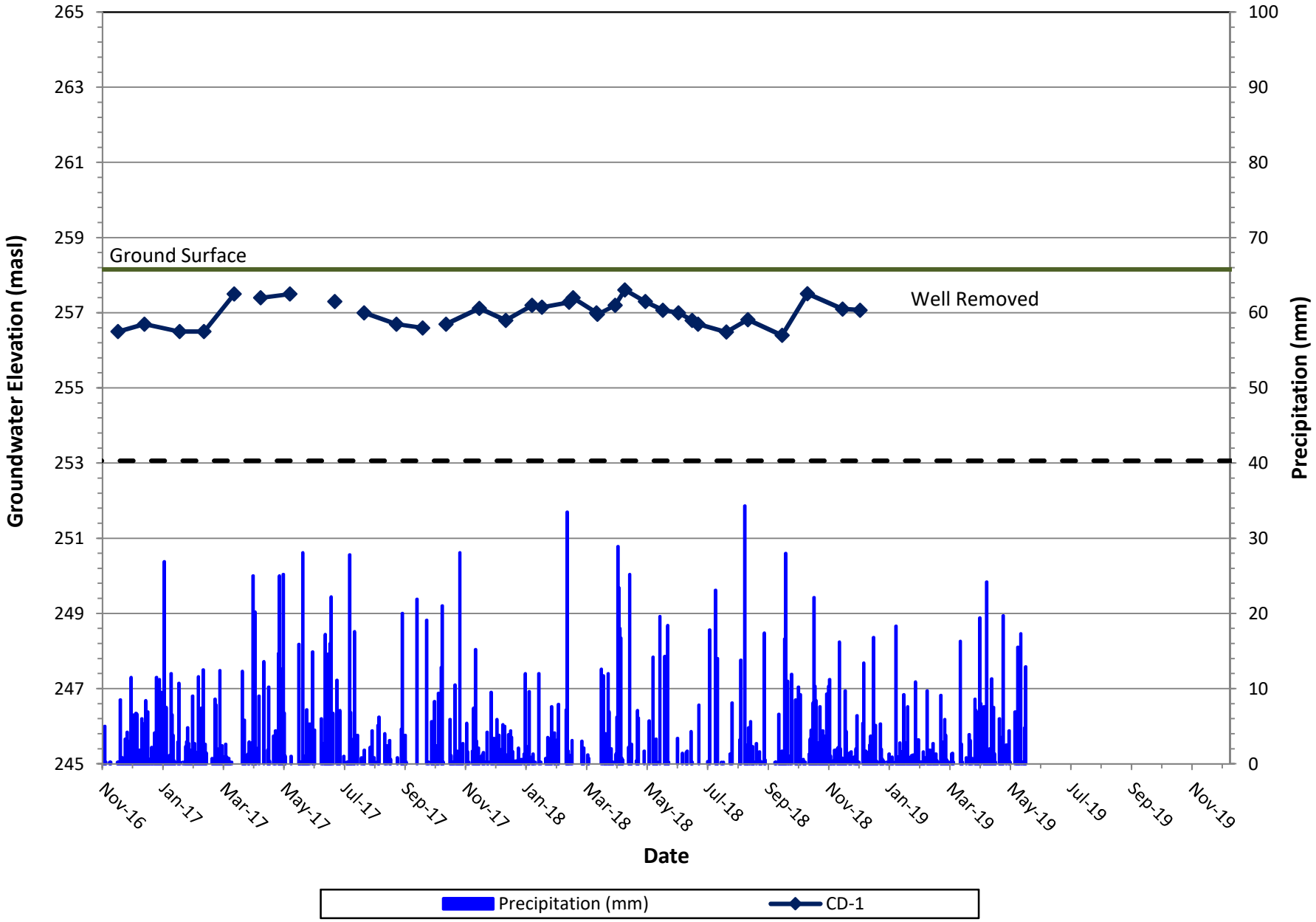
R.J. Burnside & Associates Limited

Dwight Smikle, M.Sc., P.Geo.
Senior Hydrogeologist
DS:cl

Enclosure(s) Hydrographs for Wells CD-1 and CD-2
Table D-1 Groundwater Elevations
Figure 5 Borehole, Well and Cross Section Locations
Groundwater Level Monitoring Letter (Peto MacCallum)
Borehole/Monitoring Well Location Plan (Peto MacCallum)

cc: Mike Flis, Jones Consulting (enc.) (Via: Email)
Taylor Pratt, Pratt Homes (enc.) (Via: Email)

CD-1 (Well Depth: 6.1 m, Screened in Sand and Silt Till)
Groundwater Elevations



CD-2 (Well Depth: 6.0 m, Screened in Sand and Silt Till)
Groundwater Elevations

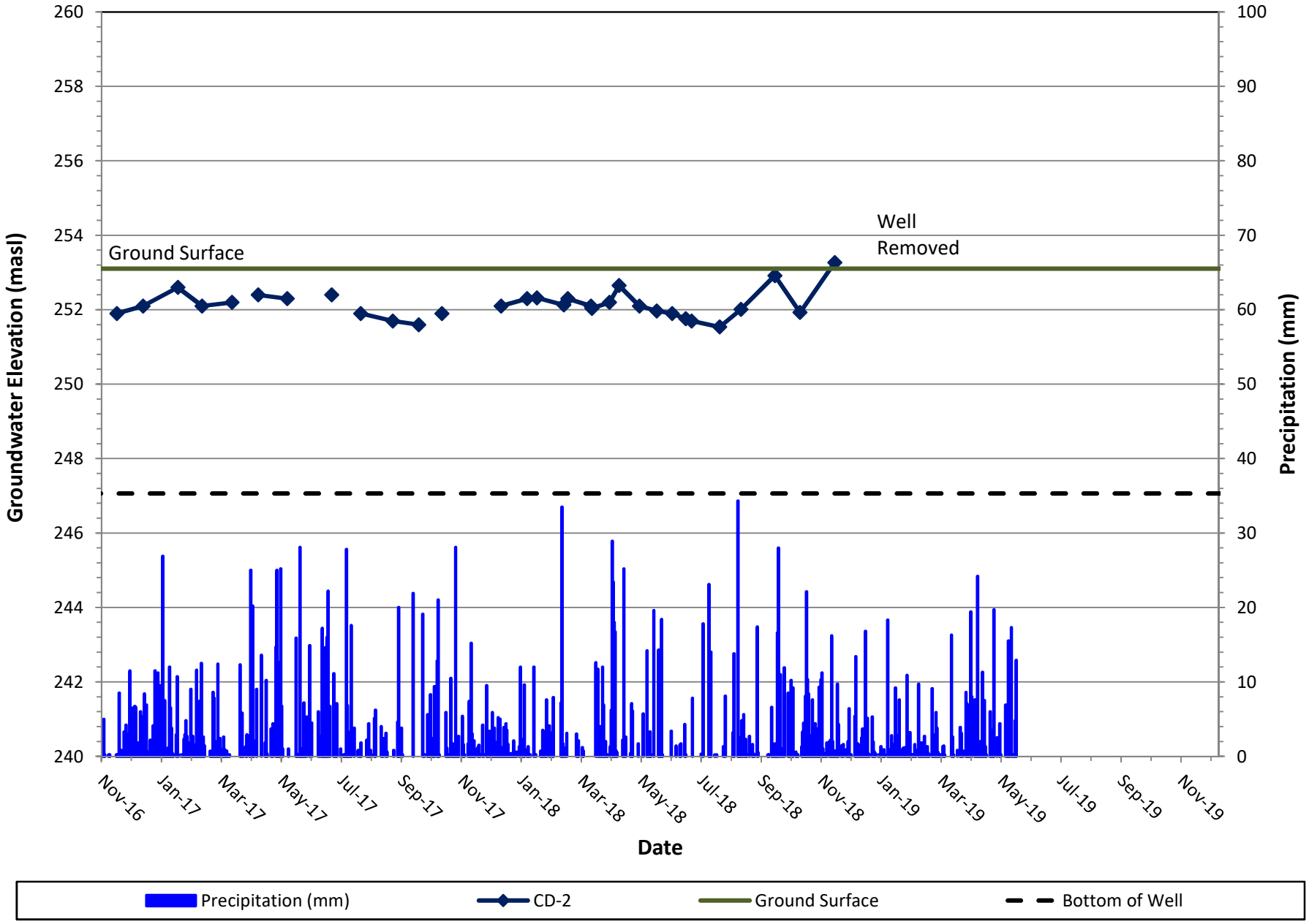


Table D-1

Groundwater Elevations

	Well Depth (mbgl)	Ground Surface Elevation (masl)	22-Nov-2017		25-Jan-2018		22-Feb-2018		23-Mar-2018		20-Apr-2018		29-May-2018		28-Jun-2018	
			Water Level (mbgs)	Water Elevation (masl)	Water Level (mbgs)	Water Elevation (masl)	Water Level (mbgs)	Water Elevation (masl)	Water Level (mbgs)	Water Elevation (masl)	Water Level (mbgs)	Water Elevation (masl)	Water Level (mbgs)	Water Elevation (masl)	Water Level (mbgs)	Water Elevation (masl)
CD-1	6.09	258.15	1.03	257.12	1.00	257.15	0.87	257.28	1.19	256.96	0.54	257.61	1.08	257.07	1.35	256.80
CD-2	6.04	253.10	Flowing	Flowing	0.78	252.32	0.97	252.13	1.06	252.04	0.45	252.65	1.13	251.97	1.34	251.76

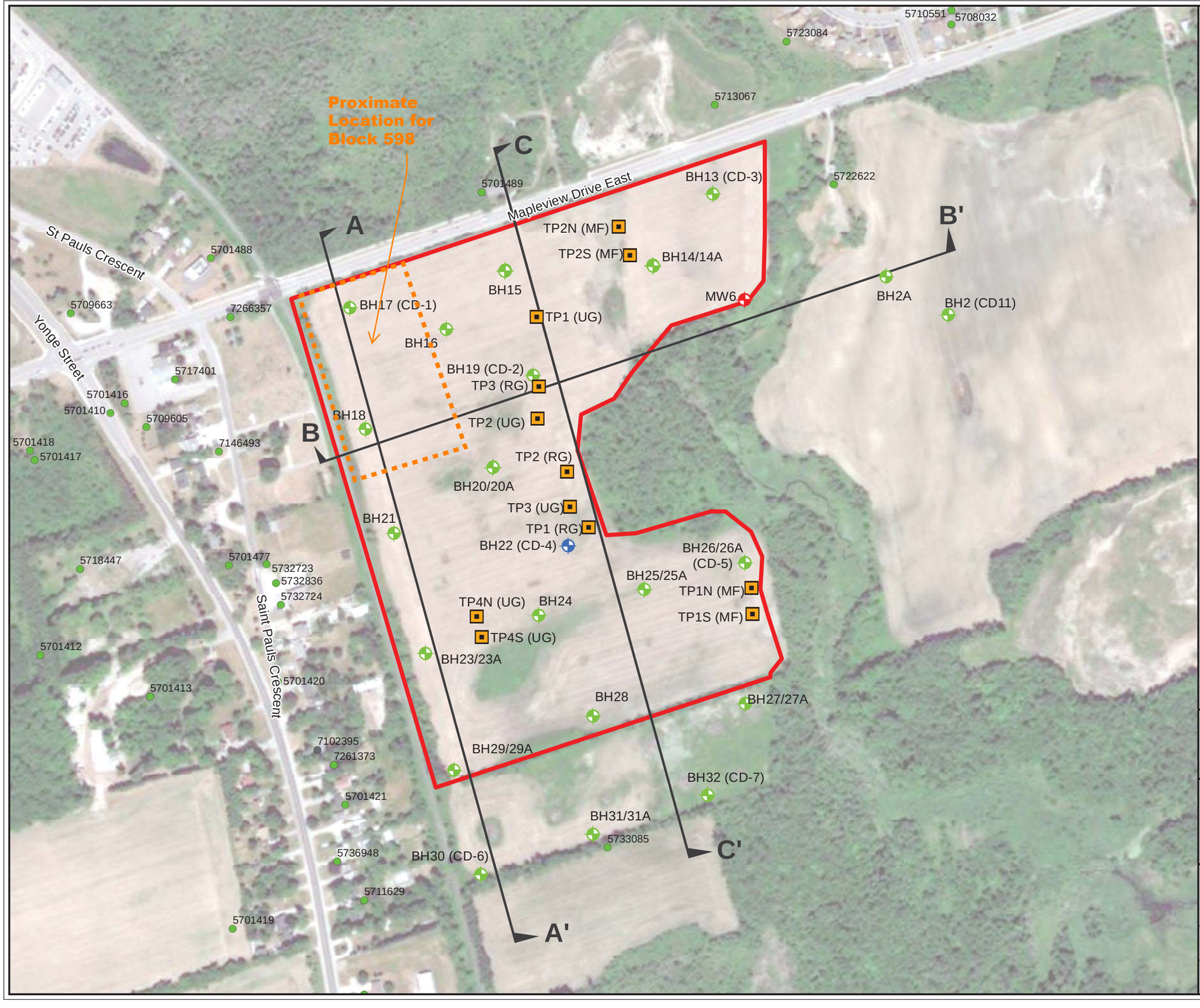
-' denotes data unavailable

Table D-1

Groundwater Elevations

	Well Depth (mbgl)	Ground Surface Elevation (masl)	2-Aug-2018		24-Aug-2018		28-Sep-2018		24-Oct-2018		29-Nov-2018		17-Dec-2018		1-Mar-2019	
			Water Level (mbgs)	Water Elevation (masl)	Water Level (mbgs)	Water Elevation (masl)	Water Level (mbgs)	Water Elevation (masl)	Water Level (mbgs)	Water Elevation (masl)	Water Level (mbgs)	Water Elevation (masl)	Water Level (mbgs)	Water Elevation (masl)	Water Level (mbgs)	Water Elevation (masl)
CD-1	6.09	258.15	1.66	256.49	1.33	256.82	1.75	256.40	1.64	256.51	1.05	257.10	1.08	257.07	Removed	Removed
CD-2	6.04	253.10	1.56	251.54	1.09	252.01	0.18	252.92	1.17	251.93	-0.17	253.27	Removed	Removed	Removed	Removed

-' denotes data unavailable



LEGEND

- SUBJECT LANDS
- MONITORING WELL (PML, JULY 2017)
- MONITORING WELL (PML, JUNE 2017)
- MONITORING WELL (RJB, 2014)
- TEST PIT (PETO MacCALLUM, 2019)

MECP WELL RECORD

- OVERBURDEN
- UNKNOWN
- CROSS SECTION LOCATION KEY

Sources:

1. Ministry of Natural Resources and Forestry, © Queen's Printer for Ontario
2. Natural Resources Canada © Her Majesty the Queen in Right of Canada.

N

0 50 100 150 200 250 300

Metres

BURNSIDE

Client

CRISDAWN CONSTRUCTION LIMITED
BARRIE, ONTARIO

HYDROGEOLOGICAL STUDY
BISTRO 6 SUBDIVISION

Figure Title

BOREHOLE, WELL AND CROSS-SECTION LOCATIONS

Drawn	Checked	Date	Figure No.
SK	SC	August 2019	5
Scale		Project No.	
1:4,000		300041559	

File Path:N:\gel\Shared Work Areas A:\041559 Crisdawn\Bistro 6 Subdivision\041559 Site Well Location Plan.mxd Print Date: 2019/08/07 Time: 02:18 PM

Peto MacCallum Ltd.
CONSULTING ENGINEERS

October 27, 2021

PML Ref.: 21BF002
Report: 6

Ms. Taylor Pratt
Pratt Hansen
301 King Street
Barrie, Ontario
L4N 6B5

Dear Ms. Pratt

Ground Water Level Monitoring
Proposed Bistro 6 West Development (Elements)
Kneeshaw Drive
Barrie, Ontario

Peto MacCallum Ltd. (PML) herein provides our report for the ground water level monitoring program inclusive of the September 2021 reading, for the above noted project. Authorization for this work was provided by Ms. T. Pratt, in an email dated January 15, 2021.

In accordance with the Terms of Reference, the ground water levels within the six monitoring wells installed during the geotechnical investigation are to be measured monthly for six months (April 2021 to September 2021) following installation.

The data is included in Table 6-1, attached.

The highest ground water levels were recorded in April and May.

We trust this report is complete within our Terms of Reference. Please do not hesitate to call if you have any questions.

Sincerely

Peto MacCallum Ltd.

Geoffrey R. White, P.Eng.
Director
Manager, Geotechnical Services

GRW:tc

Enclosure(s):
Table 6-1 – Ground Water Level Measurements

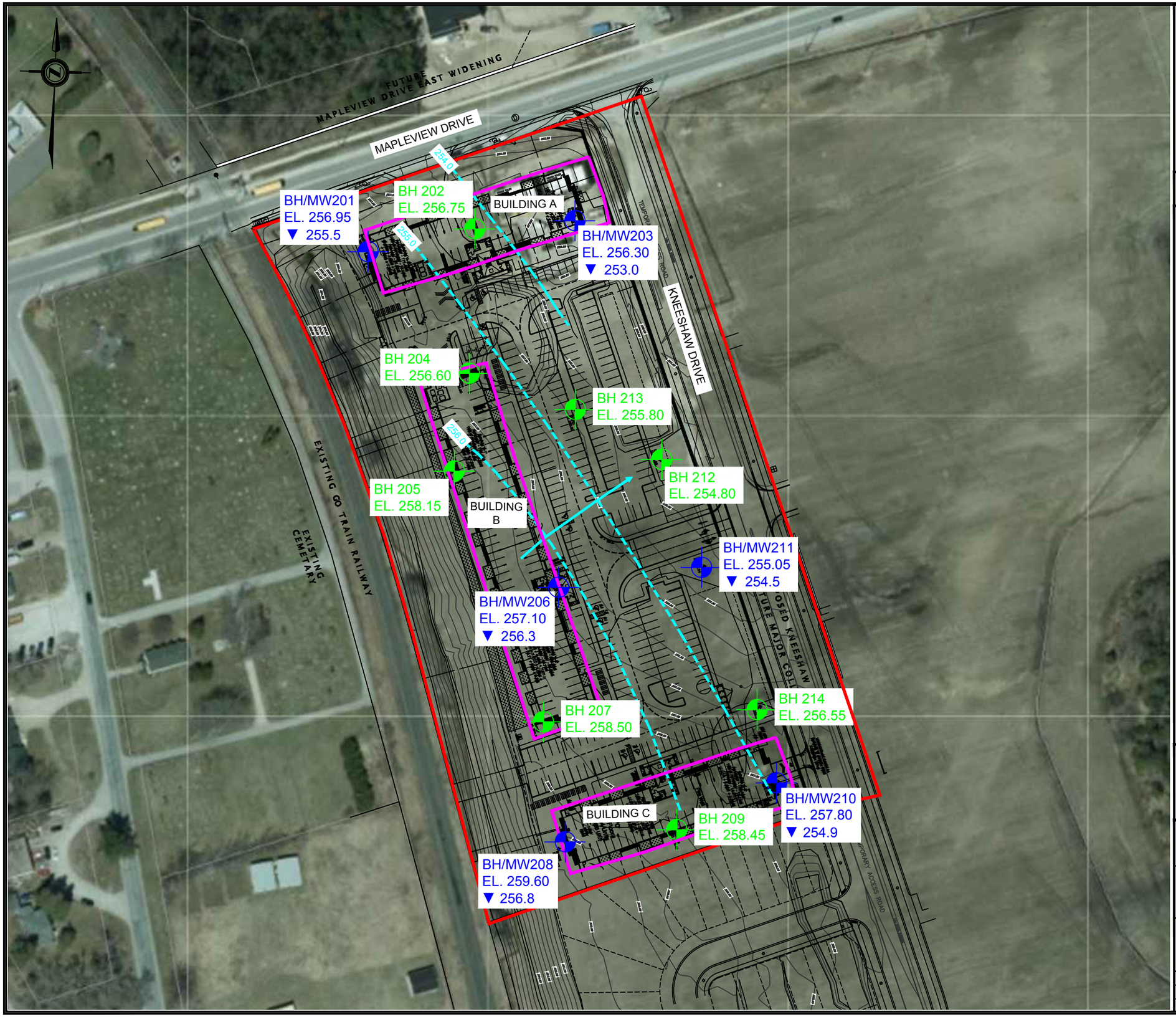
Distribution:
1 cc: Ms. T. Pratt, Pratt Hansen (email only: taylor@pratthomes.ca)
1 cc: Mr. D. Richardson, The Jones Consulting Group Ltd. (email only: DRichardson@jonesconsulting.com)
1 cc: PML Barrie

19 Churchill Drive, Barrie, Ontario L4N 8Z5
Tel: (705) 734-3900 Fax: (705) 734-9911
E-mail: barrie@petomaccallum.com
BARRIE, COLLINGWOOD, HAMILTON, KITCHENER, LONDON, TORONTO

TABLE 6-1

GROUND WATER LEVEL MEASUREMENTS

Borehole / Monitoring Well	Borehole Ground Surface Elevation	Depth of Water Below Surface (m) / Elevation					
		Date					
		2021-04-07	2021-05-06	2021-06-25	2021-07-07	2021-08-10	2021-09-08
201	256.95	1.5 / 255.5	1.5 / 255.5	2.1 / 254.9	1.8 / 255.2	1.5 / 255.5	2.9 / 254.0
203	256.30	3.3 / 253.0	3.3 / 253.0	3.8 / 252.5	3.4 / 252.9	3.2 / 253.1	3.5 / 352.8
206	257.10	0.8 / 256.3	0.8 / 256.3	1.2 / 255.9	1.0 / 256.1	0.9 / 256.2	1.0 / 256.1
208	259.60	2.7 / 256.9	2.8 / 256.8	3.1 / 256.5	3.0 / 256.6	2.8 / 256.8	2.9 / 256.7
210	257.80	2.9 / 254.9	2.9 / 254.9	3.3 / 254.5	3.0 / 254.8	3.1 / 254.7	3.0 / 254.8
211	255.05	0.7 / 254.4	0.6 / 254.5	1.2 / 253.9	1.0 / 254.1	0.9 / 254.2	3.2 / 251.9



KEY PLAN
BARRIE, ONTARIO

LEGEND:

- SITE LIMITS
- APPROXIMATE BUILDING LOCATIONS
- BH 202 EL. 256.75 — BOREHOLE 202 SURFACE ELEVATION
- BH/MW 201 EL. 256.95 ▼255.5 — BOREHOLE 201 (WITH WELL) SURFACE ELEVATION GROUND WATER ELEVATION (2021-04-07)
- INFERRED HYDROSTATIC GROUND WATER
- INTERPRETTED GROUND WATER FLOW DIRECTION

REFERENCE:

BASE PLAN PROVIDED BY CLIENT.

0m 20 40 60 80 100

SCALE

BOREHOLE/MONITORING WELL LOCATION PLAN

PROPOSED BISTRO 6 WEST DEVELOPMENT
KNEESHAW DRIVE
BARRIE, ONTARIO

Peto MacCallum Ltd.
CONSULTING ENGINEERS

DRAWN	AK	DATE	SCALE	PML REF.	DRAWING NO.
CHECKED	GW	MAY 2021	AS SHOWN	21BF002	2-1
APPROVED	GW				