July 11, 2022



PH4499-LET.01

ARK Construction Ltd. 255 Michael Cowpland Dr, Suite 103 Ottawa, Ontario K2M 0M5

Attention: Anthony Nicolini

Subject: **Hydrogeological Risk Brief**

Proposed Residential Development 1185 Beaverwood Road, Ottawa, Ontario

Consulting Engineers

9 Auriga Drive Ottawa, Ontario K2E 7T9 Tel: (613) 226-7381

Geotechnical Engineering
Environmental Engineering
Hydrogeology
Materials Testing
Building Science
Rural Development Design
Retaining Wall Design
Noise and Vibration Studies

patersongroup.ca

Dear Anthony Nicolini,

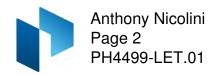
Further to your request and authorization, Paterson group (Paterson) was commissioned to complete a hydrogeological risk brief for the proposed residential development to be constructed at 1185 Beaverwood Road in Ottawa. This letter summarizes the results of the baseline water quality sampling program at the adjacent residences.

Background

A Geotechnical field investigation was previously completed on site in support of Paterson Group (Paterson) Report PG6160 - 1 - Geotechnical Investigation dated April 20, 2022. At the time of the field investigation, the subject site was occupied by a residential property. The subject site is bordered to the north and north-west by residential dwellings, to the east by Scharfield Road and commercial establishments beyond, to the south by Beaverwood Road and further residential dwellings, and to the west by an empty lot and residential dwellings. The ground surface across the site slopes down toward the east side of the property towards Scharfield Road.

Generally, the subsurface profile encountered at the test hole locations consisted of a thin layer of topsoil or asphaltic concrete overlying fill material which is underlain by a silty clay and further underlain by glacial till deposits. Practical refusal to auguring was encountered at select borehole locations ranging from 0.2 to 4.5 m below ground surface (bgs).

Based on available geological mapping (OGS MRD219), bedrock consists of dolostone from the Oxford formation of the Beekmantown group with an overburden drift thickness of approximately 5 to 10 m depth.



At the time of the geotechnical investigation completed at the subject site, groundwater levels at the test hole locations were observed to range from 1.3 to 3.1 m bgs. It should be noted that groundwater levels can fluctuate both seasonally and in conjunction with precipitation events. Therefore, groundwater levels may vary at the time of construction.

Based on groundwater levels measured at the subject site and surrounding area, a local flow direction is anticipated to have an eastern direction. Shallow groundwater flow in the vicinity of the subject site is expected to reflect local topography. Regional groundwater flow is considered to be in a northeasterly direction, towards the Rideau River.

A search of the Ontario Water Well Records online mapping database indicates there are 195 Water Well Records (WWR) in a 500 m radius of the proposed residential development. Many of the WWR's are either erroneously located or have been decommissioned with decommissioning records not being available.

The participating lots were chosen in consultation with City of Ottawa staff based on the nature of the subsurface material present in the area, the theoretical radius of influence related to construction activities at the subject site, the water service locations provided by the City of Ottawa and our understanding of the developed nature of subject area.

The baseline water quality sampling program has been completed to ensure that all parties considered in the project are protected (the developer, the City of Ottawa and the homeowners) should a concern arise during or after construction.

City of Ottawa Pre-consultation

A pre-consultation was completed with a City of Ottawa Hydrogeologist on March 29, 2022 in regards to the Baseline Sampling Program. As a result of the pre-consultation, 8 addresses to the east and south of the subject site were selected to participate in the baseline sampling program, which correlates to a 100 m buffer around the subject site.

As per the discussions with the City of Ottawa, a Reasonable Attempt for this baseline Sampling Program was to consist of sending a registered Letter to each of the proposed addresses. This way, there was documented proof which cannot be refuted of homeowner receipt of the Baseline Sampling Program Letter.

Baseline Sampling Program Participants

The municipal addresses selected, as shown in Figure 1 - Sampling Location Plan, are as follows:

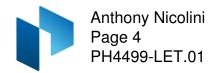
- □ 5533 Colony Heights
- □ 5534 Colony Heights
- ☐ 1186 Maple Avenue
- ☐ 1190 Maple Avenue
- ☐ 1191 Beaverwood Road
- ☐ 1194 Maple Avenue
- ☐ 1195 Maple Avenue
- ☐ 1198 Maple Avenue



Figure 1 - Sample Location Plan

Well Inspection and Testing Program

The homeowners of the aforementioned properties were approached to have their raw well water sampled between May 10 and June 2, 2022 for the purpose of obtaining baseline water quality information prior to the commencement of construction activities at the subject site. Paterson and the City of Ottawa contact information was provided to allow the homeowner to set up a sampling time if they wished or discuss the sampling



program in more detail. Attached is a copy of the letter provided to the homeowners for the baseline water quality sampling program.

Out of the eight properties invited to participate in the baseline Sampling Program, five homeowners contacted Paterson to organize the sampling of their wells. The following are the municipal addresses that were successfully sampled:

1186 Maple Avenue
1190 Maple Avenue
1191 Beaverwood Road
1194 Maple Avenue
1195 Maple Avenue

The owners of 5533 Colony Heights, 5534 Colony Heights, and 1198 Maple Avenue provided no response to the sampling request within the timeframe laid out in the registered letters. Confirmation of the receipt of the registered letters was provided by Canada Post.

The following program was carried out at the sampled addresses:

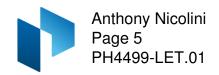
A survey was conducted to determine the construction specifications of the wel
(well type and age, pump type, treatment system, water quality and quantity).
Water samples were recovered from the homeowners well prior to filtration of
water treatment.
The samples were submitted for analytical testing (subdivision package and
E.Coli/Total Coliforms) at an accredited laboratory (Eurofins Environment Testing
Canada Inc.).

Sampling Results

Each of the results provided exceedances of the Ontario Drinking Water Standards (ODWS) outlined in the City of Ottawa's Hydrogeological and Terrain Analysis Guidelines (HTAG) for various aesthetic and operational parameters. The aesthetic parameters would relate to the taste of the water and is a personal preference as to what treatment is used. Operational guidelines, if not controlled, may negatively affect the efficient and effective treatment, disinfection and distribution of the water.

Due to the high Hardness levels recorded (537-1980 mg CaCO₃/L) the use of a water softener is recommended. Dwellings with sodium sensitive residents should be informed of high sodium content, as all of the results indicated elevated sodium levels. Total Coliforms and E.Coli was not detected in any of the samples.

Four (4) of the dwellings have groundwater results which indicate that the water supply well is mineralized. The homeowners were provided the recommended notice as per the City of Ottawa and MECP "Mineralized water", as defined by Ontario Regulation 903 under the *Ontario Water Resources Act*, is well water that has chloride concentrations of



greater than 500 mg/L, sulphate concentrations greater than 500 mg/L or Total Dissolved Solids (TDS) concentrations greater than 6000 mg/L.

Potential Adverse Effects

The subsurface profile encountered at the subject site generally consists of a thin layer of topsoil and/or fill material overlying a silty clay and/or glacial till deposit overlying bedrock. Based on the well records, existing wells located in proximity to the subject site and included in this baseline water sampling program were noted to be accessing an aquifer within the bedrock between 12 and 49 m depth. Due to the horizontal and vertical separation between the existing wells and the subject site, construction activities at the site are not expected to cause any interference to the water supply of surrounding well users or other negative impacts. As bedrock excavation is unnecessary, blasting will be unlikely.

We trust that the current submission satisfies your immediate requirements.

Best Regards,

Paterson Group Inc.

Alexander Schopf, PhD, EIT

Michael Laflamme, P.Geo.





Environment Testing

Report Number: 1979245 Date Submitted: 2022-06-14 Date Reported: 2022-06-20 Project: PH4499 COC #: 891861

PDF	🔅 euro			ertificate	of Analysis	1
Ъ		Environment Test	ting			
ocesse	Client:	Paterson Group 154 Colonnade Rd. South Nepean, ON				Re Da Da
d with Cu	Attention: PO#: Invoice to:	K2E 7T7 Mr. Kirby Magee-Dittburner 54955 Paterson Group				Pro CC
processed with CutePDF evaluation edition www.CutePDF.com					Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1631048 GW 2022-06-13 1186M
ati	Group	Analyte	MRL	Units	Guideline	
9	Anions	Cl	1	mg/L	AO 250	650*
Φ		F	0.10	mg/L	MAC 1.5	0.19
읔		N-NO2	0.10	mg/L	MAC 1.0	<0.10
ᅙ		N-NO3	0.10	mg/L	MAC 10.0	<0.10
 ≤		SO4	1	mg/L	AO 500	136
	General Chemistry	Alkalinity as CaCO3	5	mg/L	OG 30-500	342
		Colour (Apparent)	2	TCU	AO 5	38*
lΩ		Conductivity	5	uS/cm		2590
lŧ		рН	1.00		6.5-8.5	7.55
믿		Phenols	0.001	mg/L		0.002
IН		S2-	0.05	mg/L	AO 0.05	<0.05
2		TDS (COND - CALC)	1	mg/L	AO 500	1680*
		Turbidity	0.1	NTU	AO 5	5.7*
	Hardness	Hardness as CaCO3	1	mg/L	OG 80-100	698*
	Indices/Calc	Ion Balance	0.01			0.99
	Metals	Ca	1	mg/L		141
		Fe	0.03	mg/L	AO 0.3	0.47*
		K	1	mg/L		7
		Mg	1	mg/L		84
		Mn	0.01	mg/L	AO 0.05	0.04
		Na	1	mg/L	AO 200	313*
	Microbiology	Escherichia Coli	0	ct/100mL	MAC 0	0
		Total Coliforms	0	ct/100mL	MAC 0	0
	Nutrients	N-NH3	0.010	mg/L		0.166
		Total Kjeldahl Nitrogen	0.100	mg/L		0.214

Guideline = ODWSOG

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

^{* =} Guideline Exceedence

1186 Maple Avenue



Environment Testing

Analyte

Tannin & Lignin

DOC

MRL

1

0.5

Client: Paterson Group

154 Colonnade Rd. South

Nepean, ON K2E 7T7

Attention: Mr. Kirby Magee-Dittburner

PO#:

Group

Subcontract

Subcontract-Inorg

54955

Invoice to: Paterson Group

Report Number: 1979245 Date Submitted: 2022-06-14 Date Reported: 2022-06-20 Project: PH4499 COC #: 891861

	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1631048 GW 2022-06-13 1186M
Units	Guideline	
mg/L		1
mg/L	AO 5	1.0

Guideline = ODWSOG

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

1190 Maple Avenue



Environment Testing

Client: Paterson Group

154 Colonnade Rd. South

Nepean, ON K2E 7T7

Attention: Mr. Kirby Magee-Dittburner

PO#: 54840

Invoice to: Paterson Group

Report Number: 1978337

Date Submitted: 2022-06-02

Date Reported: 2022-06-09

Project: PH4499

COC #: 891346

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D. Guideline	1628754 GW 2022-06-01 1190M
Anions	Cl	1	mg/L	AO 250	660*
Allions		0.10	mg/L	MAC 1.5	0.23
	N-NO2	0.10	mg/L	MAC 1.0	<0.10
	N-NO3	0.10	mg/L	MAC 10.0	<0.10
	SO4	1	mg/L	AO 500	127
General Chemistry	Alkalinity as CaCO3	5	mg/L	OG 30-500	345
Control Chombary	Colour (Apparent)	2	TCU	AO 5	14*
	Conductivity	5	uS/cm	7.00	2640
	рН	1.00	46/6/11	6.5-8.5	7.56
	Phenols	0.001	mg/L	0.0 0.0	<0.001
	S2-	0.01	mg/L	AO 0.05	<0.01
	TDS (COND - CALC)	1	mg/L	AO 500	1720*
	Turbidity	0.1	NTU	AO 5	1.3
Hardness	Hardness as CaCO3	1	mg/L	OG 80-100	714*
Indices/Calc	Ion Balance	0.01			1.05
Metals	Ca	1	mg/L		149
	Fe	0.03	mg/L	AO 0.3	0.52*
	K	1	mg/L		8
	Mg	1	mg/L		83
	Mn	0.01	mg/L	AO 0.05	0.04
	Na	1	mg/L	AO 200	349*
Microbiology	Escherichia Coli	0	ct/100mL	MAC 0	0
	Total Coliforms	0	ct/100mL	MAC 0	0
Nutrients	N-NH3	0.010	mg/L		0.180
	Total Kjeldahl Nitrogen	0.100	mg/L		0.783

Guideline = ODWSOG

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

^{* =} Guideline Exceedence

eurofins | Environment Testing

1190 Maple Avenue

Client: Paterson Group

154 Colonnade Rd. South

Nepean, ON K2E 7T7

Attention: Mr. Kirby Magee-Dittburner

PO#: 54840

Invoice to: Paterson Group

Report Number: 1978337

Date Submitted: 2022-06-02

Date Reported: 2022-06-09

Project: PH4499

COC #: 891346

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D. Guideline	1628754 GW 2022-06-01 1190M
Subcontract	Tannin & Lignin	1	mg/L		2
Subcontract-Inorg	DOC	0.5	mg/L	AO 5	1.3

Guideline = ODWSOG

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

1191 Beaverwood Road



Environment Testing

Client: Paterson Group

154 Colonnade Rd. South

Nepean, ON K2E 7T7

Attention: Mr. Kirby Magee-Dittburner

PO#: 54955

Invoice to: Paterson Group

Report Number: 1979244 Date Submitted: 2022-06-14 Date Reported: 2022-06-20 Project: PH4499 COC #: 891860

				Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1631047 GW 2022-06-13 1191B
Group	Analyte	MRL	Units	Guideline	
Anions	CI	1	mg/L	AO 250	396*
	F	0.10	mg/L	MAC 1.5	0.30
	N-NO2	0.10	mg/L	MAC 1.0	<0.10
	N-NO3	0.10	mg/L	MAC 10.0	<0.10
	SO4	1	mg/L	AO 500	88
General Chemistry	Alkalinity as CaCO3	5	mg/L	OG 30-500	298
	Colour (Apparent)	2	TCU	AO 5	15*
	Conductivity	5	uS/cm		1760
	рН	1.00		6.5-8.5	7.47
	Phenols	0.001	mg/L		0.001
	S2-	0.01	mg/L	AO 0.05	<0.01
	TDS (COND - CALC)	1	mg/L	AO 500	1140*
	Turbidity	0.1	NTU	AO 5	2.7
Hardness	Hardness as CaCO3	1	mg/L	OG 80-100	539*
Indices/Calc	Ion Balance	0.01			0.96
Metals	Ca	1	mg/L		117
	Fe	0.03	mg/L	AO 0.3	0.37*
	K	1	mg/L		7
	Mg	1	mg/L		60
	Mn	0.01	mg/L	AO 0.05	0.09*
	Na	1	mg/L	AO 200	169
Microbiology	Escherichia Coli	0	ct/100mL	MAC 0	0
	Total Coliforms	0	ct/100mL	MAC 0	0
Nutrients	N-NH3	0.010	mg/L		0.175
	Total Kjeldahl Nitrogen	0.100	mg/L		0.532

Guideline = ODWSOG

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

^{* =} Guideline Exceedence

***** eurofins

Environment Testing

Client: Paterson Group

154 Colonnade Rd. South

Nepean, ON K2E 7T7

Attention: Mr. Kirby Magee-Dittburner

PO#: 54955

Invoice to: Paterson Group 1191 Beaverwood Road

Report Number: 1979244 Date Submitted: 2022-06-14 Date Reported: 2022-06-20 Project: PH4499 COC #: 891860

Lab I.D. Sample Matrix	1631047 GW
Sample Type Sampling Date Sample I.D.	2022-06-13 1191B
Guideline	
	1
AO 5	1 4

				Sampling Date Sample I.D.	2022-06-13 1191B
Group	Analyte	MRL	Units	Guideline	
Subcontract	Tannin & Lignin	1	mg/L		1
Subcontract-Inorg	DOC	0.5	mg/L	AO 5	1.4

Guideline = ODWSOG

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.



Environment Testing

Client: Paterson Group

154 Colonnade Rd. South

Nepean, ON K2E 7T7

Attention: Mr. Kirby Magee-Dittburner

PO#: 54840

Invoice to: Paterson Group

1194 Maple Avenue

 Report Number:
 1978169

 Date Submitted:
 2022-05-31

 Date Reported:
 2022-06-08

 Project:
 PH4499

 COC #:
 891272

Q	Accelera	MDI	U-ia-	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D. Guideline	1628347 GW 2022-05-31 1194M
Group	Analyte	MRL	Units		700*
Anions	Cl	1	mg/L	AO 250	780*
	F	0.10	mg/L	MAC 1.5	0.17
	N-NO2	0.10	mg/L	MAC 1.0	<0.10
	N-NO3	0.10	mg/L	MAC 10.0	<0.10
	SO4	1	mg/L	AO 500	155
General Chemistry	Alkalinity as CaCO3	5	mg/L	OG 30-500	366
	Colour (Apparent)	2	TCU	AO 5	6*
	Conductivity	5	uS/cm		2910
	рН	1.00		6.5-8.5	7.56
	Phenols	0.001	mg/L		0.001
	S2-	0.01	mg/L	AO 0.05	<0.01
	TDS (COND - CALC)	1	mg/L	AO 500	1890*
	Turbidity	0.1	NTU	AO 5	1.3
Hardness	Hardness as CaCO3	1	mg/L	OG 80-100	755*
Indices/Calc	Ion Balance	0.01			0.99
Metals	Ca	1	mg/L		154
	Fe	0.03	mg/L	AO 0.3	0.45*
	K	1	mg/L		7
	Mg	1	mg/L		90
	Mn	0.01	mg/L	AO 0.05	0.04
	Na	1	mg/L	AO 200	388*
Microbiology	Escherichia Coli	0	ct/100mL	MAC 0	0
	Total Coliforms	0	ct/100mL	MAC 0	0
Nutrients	N-NH3	0.010	mg/L		0.069
	Total Kjeldahl Nitrogen	0.100	mg/L		0.174

Guideline = ODWSOG

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

^{* =} Guideline Exceedence



Environment Testing

Client: Paterson Group

154 Colonnade Rd. South

Nepean, ON K2E 7T7

Attention: Mr. Kirby Magee-Dittburner

PO#: 54840

Invoice to: Paterson Group

1194 Maple Avenue

 Report Number:
 1978169

 Date Submitted:
 2022-05-31

 Date Reported:
 2022-06-08

 Project:
 PH4499

 COC #:
 891272

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D. Guideline	1628347 GW 2022-05-31 1194M
Subcontract	Tannin & Lignin	1	mg/L		2
Subcontract-Inorg	DOC	0.5	mg/L	AO 5	1.2

Guideline = ODWSOG

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.



Environment Testing

Client: Paterson Group

154 Colonnade Rd. South

Nepean, ON K2E 7T7

Attention: Mr. Kirby Magee-Dittburner

PO#: 54840

Invoice to: Paterson Group

1195 Maple Avenue

 Report Number:
 1978170

 Date Submitted:
 2022-05-31

 Date Reported:
 2022-06-08

 Project:
 PH4499

 COC #:
 891273

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D. Guideline	1628348 GW 2022-05-31 1195M
Anions	CI	1	mg/L	AO 250	840*
	F	0.10	mg/L	MAC 1.5	0.26
	N-NO2	0.10	mg/L	MAC 1.0	<0.10
	N-NO3	0.10	mg/L	MAC 10.0	<0.10
	SO4	1	mg/L	AO 500	148
General Chemistry	Alkalinity as CaCO3	5	mg/L	OG 30-500	331
	Colour (Apparent)	2	TCU	AO 5	6*
	Conductivity	5	uS/cm		3050
	рН	1.00		6.5-8.5	7.67
	Phenols	0.001	mg/L		<0.001
	S2-	0.05	mg/L	AO 0.05	<0.05
	TDS (COND - CALC)	1	mg/L	AO 500	1980*
	Turbidity	0.1	NTU	AO 5	0.5
Hardness	Hardness as CaCO3	1	mg/L	OG 80-100	718*
Indices/Calc	Ion Balance	0.01			0.98
Metals	Са	1	mg/L		154
	Fe	0.03	mg/L	AO 0.3	0.21
	К	1	mg/L		10
	Mg	1	mg/L		81
	Mn	0.01	mg/L	AO 0.05	0.05
	Na	1	mg/L	AO 200	417*
Microbiology	Escherichia Coli	0	ct/100mL	MAC 0	0
	Total Coliforms	0	ct/100mL	MAC 0	0
Nutrients	N-NH3	0.010	mg/L		0.288
	Total Kjeldahl Nitrogen	0.100	mg/L		0.524

Guideline = ODWSOG

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

^{* =} Guideline Exceedence



Environment Testing

Client: Paterson Group

154 Colonnade Rd. South

Nepean, ON K2E 7T7

Attention: Mr. Kirby Magee-Dittburner

PO#: 54840

Group
Subcontract
Subcontract-Inorg

Invoice to: Paterson Group

1195 Maple Avenue

Report Number: 1978170

Date Submitted: 2022-05-31

Date Reported: 2022-06-08

Project: PH4499

COC #: 891273

Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D. Guideline	1628348 GW 2022-05-31 1195M	
Tannin & Lignin	1	mg/L		2	
DOC	0.5	mg/L	AO 5	1.1	

Guideline = ODWSOG

* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

patersongroup

Consulting Engineers

154 Colonnade Road South Ottawa, Ontario Canada, K2E 7J5 Tel: (613) 226-7381

> Geotechnical Engineering Environmental Engineering Hydrogeology Geological Engineering Materials Testing Building Science

www.patersongroup.ca

May 10, 2022

File No.: PH4499

Attention: Owner / Occupant

Subject: Baseline Water Well Testing

Dear Sir/Madam:

Paterson Group Inc. (Paterson), an Ottawa based Geotechnical, Environmental and Hydrogeological Engineering Consulting Firm, is carrying out a baseline well water sampling program in your area, along with a short interview. This baseline well sampling program is being completed as a requirement by the City of Ottawa prior to starting construction works for the proposed development to be located at 1185 Beaverwood Road in Ottawa. The sample results will be used as a baseline to provide a reference water quantity and quality in the unlikely event that construction works impact your well.

We are anticipating carrying out the well sampling program over a three week period (May 10 through June 2, 2022). We would like to take this opportunity to schedule an appointment to sample your well when convenient.

As part of the baseline well sampling program, we are requesting access to your property to collect a raw water sample from an untreated tap / spigot. It is preferred to sample an untreated outdoor location to reduce potential for close contact and maintain social distancing. Participants will be asked if they can provide a copy of the Well Record from when the well was installed, but water samples will be taken even if the record is not available. The program will consist of a brief interview with our field staff regarding the well history, determining the location of the well on the property and taking a water sample from an exterior tap/spigot should the water not be subject to any filtration or treatment measures. The entire process will take **15 to 20 minutes**. The interview can be done either in person at the time of sampling, or over the phone in order to limit social interaction.

The purpose of the sampling program is to protect homeowners against possible effects of construction on the adjacent properties, for which contingency plans will be in place. Well water testing includes several chemical parameters (not only bacteria) and the results will be provided to you **free of charge** (value of approximately \$350).

Owner/Occupant

Page 2

File: PH4499

Homeowner names, addresses with related analytical results and contact information will **not** be released publicly by Paterson or the client. The information will be provided to the City where they have noted they will not share the report and that all personal information will remain private. If there are any questions as to how a party will handle your information, please reach out to the appropriate person noted below.

Please contact Kirby Magee-Dittburner at Paterson Group (613-218-3444) or via email at (kmageedittburner@patersongroup.ca) to schedule an appointment to sample your well. Please contact Michel Kearney at the City of Ottawa (613-606-5862) or via email at (Michel.Kearney@Ottawa.ca) should you require further information or if you have questions about the City's requirement for the well water sampling program.

We will continue to follow Public Health Ontario and Ottawa Public Health recommendations related to COVID-19 throughout these times. Please let us know if there are any health related concerns you may have in regards to the sampling.

Best Regards,

Paterson Group Inc.

Kirby Magee-Dittburner, B.Eng., EIT



The Ontario Water Resources Commission Act

WATER WELL RECORD

316 da'A'

Water management in Ontario 1. PRINT ONLY IN S	PACES PROVIDED	1151	1745 ₋ 1	MUNICIP US	94 °C.	_	- 4 η · ·
COUNTY OR DISTRICT	TOWNSHIP BOROUGH CITY, TOWN, VILLAN	CE .		BLOCK, TRACT, S	14 15/	1111	22 23 24 LOT 25-27
OWNER (SURNAME FIRST) 28-47	LODDES WANDS	CK	227		DATE COM	IPXETED CO.	# 00% 48-53
	2/"D"	T LAY	RENT	BLVI	DAY 2	-02	1_vr72
	01017773	9 0071	ANT	BASIN CODE	\$0 "	<u> </u>	<u> v</u>
LO	G OF OVERBURDEN AND BED	ROCK MATER	IALS (SEE I	NSTRUCTIONS)			
GENERAL COLOUR COMMON MATERIAL	OTHER MATERIALS		GENERA	L DESCRIPTION		DEPTH FROM	- FEET
Brown 10/8016						0	12
Brown WATEL	0 /				Z ³	12	36
Drown commone	Koch		med	um	hard	36	8-2
						•	
		53		*			
		Y					
				.,,,			
31) 100/216/02 1 1 1003/6	61/11 1 1 1008361/51 1 1						
32 10 14 15 21	32	43					
WATER RECORD		E RECORD	Z SIZE(S)	OF OPENING O.)	31-33 DIAMET	ER 34-38 L	75 80 ENGTH 39-40
AT - FEET KIND OF WATER 10-13 1 RESH 3 SULPHUR 14	DIAM. MATERIAL THICKNESS INCHES	DEPTH - FEET FROM TO	1151	AL AND TYPE	*	INCHES DEPTH TO TOP OF SCREEN	41-A RO
2 SALTY! 4 MINERAL	10-11 X STEEL 12 2 GALVANIZED 3 CONCRETE	0 0036	S		*		FEET
2 SALTY 4 MINERAL 20-23 1 FRESH 3 SULPHUR 24	17-18 1 STEEL 19	20-23		UGGING	& SEAL	TYPE (CEM	ENT GROUT,
2 SALTY 4 MINERAL 25-28 1 FRESH 3 SULPHUR 25-28 1 FRESH 3 SULPHUR 25-28 1 FRESH 3 SULPHUR	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE		FROM 10-13	TO 14-17	MATERIAL AND	LEAD I	PACKER, ETC.)
2 SALTY 4 MINERAL	24-25 1 STEEL 26 2 GALVANIZED	27-30	18-21	22-25			
1 FRESH 3 SULPHUR 34 80 2 SALTY 4 MINERAL	3 CONCRETE 4 OPEN HOLE		26-29	30-33 80			
71 PUMPING TEST METHOD 10 PUMPING RATE	11-14 DURATION OF PUMPING 15-16 O D17-18 GPM HOURS O DMINS		, ro	CATION	OF WEL	L	
STATIC WATER LEVEL 25	GPM HOURS WINS 1 PUMPING 2 RECOVERY	H IN	DIACHAM BELOV	V SHOW DISTANCE TE NORTH BY ARE	ES OF WELL FRO	M ROAD AND	
19-21 22-24 15 MINUTES 26-28	30 MINUTES 29-31 45 MINUTES 32-34 60 MINUTES 35-37		1 1			MATA	
TELET OF SEET	T AT WATER AT END OF TEST 42	-	1 2		\leftarrow	W.	
RECOMMENDED PUMP TYPE RECOMMENDED	FEET CLEAR 2 CLOUDY 43-45 RECOMMENDED 46-49		12 34	4	\	#	
SHALLOW DEEP SETTING 16	FEET PUMPING OF GPM.	(\)	12 6	~ (~			
	5 ABANDONED, INSUFFICIENT SUPPLY] -	18	2-1	r		
STATUS 3 □ TEST HOLE	6 ABANDONED, POOR QUALITY	4	13	0			(s)
55-56 DOMESTIC	► COMMERCIAL		1		ta		3 4
WATER 2 STOCK 3 IRRIGATION 4 INDUSTRIAL	6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING	7	Beave	rwood	BO	Ć	χ
□ OTHER	9 □ NOT USED		1	× 1	1100	-\	Ì
METHOD 57 CABLE TOOL ROTARY (CONVENTION							
OF DRILLING 3 □ ROTARY (REVERSE) 4 □ ROTARY (AIR) 5 □ AIR PERCUSSION	8	1				/ D	
NAME OF WELL CONTRACTOR	LICENCE NUMBER	DRILLERS REMAR	KS: 58 CONTR		QNOTICE		63-68 80
Maurie Cayer	5 15 MZ	SOURCE DATE OF INSPE	etion /	5/7	100	<u>572 </u>	
NAME OF DRILLER OR BORER	Ort	SE SE	····	1	\prec	·	Tre-
Z O SIGNATURE OF CONTRACTOR	LICENCE NUMBER	1 1 1 3	a H			Р	K
Maurine Cayer	DAY A MOTANI YR 72	OFFICE				w	
OWRC COPY	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<u> </u>					<u>A</u>



The Ontario Water Resources Commission Act

WATER WELL RECORD 3164g A

	in O ntario _{1.} Print only in Spa 2. Check (X) Correct	BOX WHERE APPLICABL)	1512	263	MUNICIPE 1	0.04	con. C.O.N.		J J
COUNTY OR DISTRICT	rleton	TOWNSHIP, BOROUGH	i, city, town, vill	AGE	3	CON.	, BLOCK, TRAC	T, SURVEY, ET	rc.	7 ~	LOT 25-27
OWNER (SURNAME E	IRST) 26 47	JAPPARES F	m	+ ·			apri		COMPLETED	اکد"	8-53
		HING	7.6.1.01	RC ICI	ELEVATION	O RCAG	BASIN CODE	DA`		o. 200	YR/2_ IV
	LOG	OF OVERBURE	OFN AND RE		26 MATEDI	ALS 1055	26				4
GENERAL COLOUR	MOST COMMON MATERIAL		MATERIALS		MATERI	· · · · · · · · · · · · · · · · · · ·	AL DESCRIPTI			DEPTH	- FEET
8 0		. 1		17.0					F	ROM	10
Breca	limestane	Han								0	37
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31) 1003	921412 100801	7/1/1	[] .] . [. 11.	. !		-		1 1		1 1 1
32					 		- 				
41 WATE	R RECORD	CASING &	OPEN HO	LE RE	ECORD	✓ (SLOT	OF OPENING	31-33	65 DIAMETER	34-38 LE	75 80 NGTH 39-40
WATER FOUND AT - FEET	KIND OF WATER	INSIDE DIAM MATERIAL INCHES	WALL THICKNESS INCHES	DEPTH FROM	- FEET	W MATER	IAL AND TYPE		DEPTH 1	INCHES	FEET
0080 2	SALTY 4 MINERAL	10-11 1 STEEL S	12		13-16	SC			OF SC	REEN	FEET
	FRESH 3 SULPHUR 19 SALTY 4 MINERAL	3 CONCRETE 4 OPEN HOL	188	0	0039	61 P	LUGGIN	G & S	EALING	RE	CORD
	FRESH 3 SULPHUR 24 SALTY 4 MINERAL	17-18 1 STEEL 2 GALVANIZE			20-23	FROM	TO TO	<u> </u>	AND TYPE	(CEME LEAD PA	ENT GROUT, ACKER, ETC.)
25-28 1	FRESH 3 SULPHUR 29 SALTY 4 MINERAL	3 CONCRETE 4 OPEN HOL			27-30	10-1					
30-33	FRESH 3 SULPHUR 34 80	2 GALVANIZE 3 CONCRETE	D			26-2					
PUMPING TEST METH	SALTY 4 MINERAL HOD 10 PUMPING RATE	4 OPEN HOLE				<u></u>					
<i>∤</i> [71] <i>J</i>	2 (SAILER 00/0	GPM D	15-16 0 017- HOURS 0 017-	18 IS.			CATIO				
STATIC LEVEL	PUMPING	2	PUMPING RECOVERY		IN D LOT	IAGRAM BELO LINE. INDICA	W SHOW DISTA TE NORTH BY	NCES OF WEL	L FROM ROAL	DAND	
19-21	22-24 15 MINUTES 26-28	30 MINUTES 45 MINU 29-31	32-34 60 MINUTES 35-3	37		A		1 0	D		
Z IF FLOWING, GIVE RATE	38-41 PUMP INTAKE SET /	WATER AT E	_	12		7		\ '	x'		
RECOMMENDED PUMP		FEET 1 CLE	_	1		g g) (A		
SHALLOW	PUMP SETTING 06	FEET RATE (30	∂5 , GPI	<u> </u>	į	الإ	-1		\$		
	GPM./FT. SPECIFIC C				d	50 60	$\cdot / ,$	1 2	§ :		
FINAL STATUS	2 OBSERVATION WELL 3 TEST HOLE	5 ☐ ABANDONED, IN 6 ☐ ABANDONED, PO 7 ☐ UNFINISHED	SUFFICIENT SUPPLY DOR QUALITY		d	mo	al a	ce 4)		
OF WELL	4 RECHARGE WELL					2		34			
WATER	2 ☐ STOCK 6	☐ COMMERCIAL ☐ MUNICIPAL ☐ PUBLIC SUPPLY			Ī	byc	か	73			
USE O		COOLING OR AIR CO	ONDITIONING OT USED			σ		Moh			
METHOD	57 CABLE TOOL	§ 6 ☐ BORING		+	-			1			
OF	2 ROTARY (CONVENTIONA 3 ROTARY (REVERSE)	8 🗆 JETTING						}			
DRILLING	4 ROTARY (AIR) 5 AIR PERCUSSION	9 DRIVING		DRILL	ERS REMARKS	s. MAP	LE 1	Ve.	LOT	18	
NAME OF WELL CO	NTRACTOR	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	LICENCE NUMBER	٦	DATA SOURCE /	58 CONT	RACTOR 5	9-62 DATE REC	EIVED		63-68 80
O Maus ADDRESS	w ayar		13/7	1 - 1	DATE OF INSPECT		INSPECT)R	1101	<u> </u>	
NAME OF DRILLER		D	LICENCE NUMBER		REMARKS:					<u> </u>	
O SIGNATURE OF COM	TRACTOR	SUBMISSION DATE		OFFICE						Р	<u> </u>
mauri	_		her YR 71	 				_C55.5	3	WI	
OWRC C	,										Δ



The Ontario Water Resources Commission Act

WATER WELL RECORD

31949

Water management in Ontario 1. PRINT ONLY II 2. CHECK ☒ COI	N SPACES PROVIDED RECT BOX WHERE APPLICABLE	1511819 NICIP. CON.	by A .
COUNTY OR DISTINCT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLEGE	CON. BLOCK, TRACT, SURVEY, ETC.	0 0 LOT 25-27
OWNER/SURNAME FIRST)	ADDRESS	#Seaverhood S	MPLETED) 7/48-13
James Constitution of the	Commond Northing at 2 7 mg R	DAY RC BASIN CODE	MO TO YELL
	5.915 5007740 4	30 31	47
GENERAL COLOUR MOST	LOG OF OVERBURDEN AND BEDR	***	DEPTH - FEET
COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	FROM TO
ney clay	loudden		0 20
I all)000000		0 34
grey limestone			24 84
10			3 / 6 /
	- Company of the Comp	4	
	A STATE OF THE STA		
31 1003412105113 1100	842/5		
32	32	43 54 65	
WATER RECORD		E RECORD Z SIZE(S) OF OPENING	75 80 ETER 34-38 LENGTH 39-40
KIND OF WATER KIND OF WATER O 13 SULPHUR 14	INCHES HATERIAL THICKNESS INCHES FF	ROM TO MATERIAL AND TYPE	INCHES FEET DEPTH TO TOP 41-44 80 OF SCREEN
2 SALTY 4 MINERAL 15-18	10-11 1 STEEL 12 2 GALVANIZED 3 CONCRETE	003 0	FEET
2 SALTY 4 MINERAL 20-23 1 FRESH 3 SULPHUR 24	4 OPEN HOLE /0/ OPEN HOLE 17-18 I STEEL 19	DEPTH SET AT - FEET MATERIAL AND	LING RECORD
2 SALTY 4 MINERAL 25-28 1 FRESH 3 SULPHUR 29	2 ☐ GALVANIZED 3 ☐ CONCRETE 4 OPEN HOLE	CO84 FROM TO 10-13 14-17	LEAD PACKER, ETC.)
2 SALTY 4 MINERAL	24-25 1 STEEL 26 2 GALVANIZED	27-30 18-21 22-25	
1 FRESH 3 SULPHUR 34 2 SALTY 4 MINERAL	3 ☐ CONCRETE 4 ☐ OPEN HOLE	26-29 30-33 80	
PUMPING TEST METHOD 10 PUMPING RA	15-16	LOCATION OF WE	LL
STATIC WATER LEVEL 25	GPM. HOURS MINS. I PUMPING 2 RECOVERY	IN DIRECT MELOW SHOW DISTANCES OF WELL FR	OM ROAD AND
19-21 22-24 15 MINUTE	5 30 MINUTES 45 MINUTES 60 MINUTES 35-37	30	
Z IF FLOWING, 38-41 PUMP INTAKE	SET AT WATER AT END OF TEST 42	707.6	
GPM. RECOMMENDED PUMP TYPE RECOMMENDE	FEET 1 CLEAR 2 CLOUDY 43-45 RECOMMENDED 46-49	2 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
SHALLOW DEEP SETTING C	50 FEET RATE COLO GPM.	2'	
FINAL S4 WATER SUPPLY		17	
STATUS 2	5 ABANDONED, INSUFFICIENT SUPPLY 6 ABANDONED, POOR QUALITY 7 UNFINISHED	Majde and 1431	
OF WELL 4 RECHARGE WELL 55-56 1 COMESTIC	5 COMMERCIAL	Sec.	
WATER 2 STOCK 3 IRRIGATION	6 MUNICIPAL 7 PUBLIC SUPPLY		
O/ 4 Industrial OTHER	8 COOLING OR AIR CONDITIONING 9 NOT USED		
METHOD 1 A CABLE TOOL 2 ROTARY (CONVEN	6 ☐ BORING TIONAL) 7 ☐ DIAMOND	7,	
OF 3 A ROTARY (REVERSI	8 ☐ JETTING 9 ☐ DRIVING	M + 4	
5 ☐ AIR PERCUSSION	LICENCE NUMBER	DRILLERS REMARKS: Manuflook DATA 58 CONTRACTOR 59-62 DATE RECEIVED	63-68 80
o Henry Mans We	Whiling 3644	SOURCE / 36 44 I	80872
1 3d6, Ke	christ Ort	ш <u>у</u>	
NAME OF DRILLER OR BOREN	LICENCE NUMBER	REMARKS:	PK
Signature for constactor Main	DAY MOLLY Y	OFFICE CONTRACTOR OF THE PROPERTY OF THE PROPE	WI
OWRC COPY			

The Ontario Water Resources Commission Act ATER WELL RECOR 1511320 1. PRINT ONLY IN SPACES PROVIDED 2. CHECK X CORRECT BOX WHERE APPLICABLE TOWNSHIP, BOROUGH CITY north DAY 30 25 LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) MOST GENERAL COLOUR DEPTH - FEET OTHER MATERIALS GENERAL DESCRIPTION COMMON MATERIAL pac sand 0 10 & boulders d 10 56 رو aa/adasa9 1 | aasa2asa9/13 | aag92ist 1 | 1 | 1 | 1 | 1 10 14 15 21 32 43 54 32 SISCISION OPENING (SLOT NO.) M MATERIAL AND TYP O 51 CASING & OPEN HOLE RECORD WATER RECORD WALL THICKNESS INCHES KIND OF WATER MATERIAL MATERIAL AND TYPE 1 ERESH 2 SALTY 3 🗌 SULPHUR STEEL GALVANIZED 188 4 🗌 MINERAL 0 3 SULPHUR 4 MINERAL 1 ☐ FRESH 3 ☐ CONCRETE 59 61 PLUGGING & SEALING RECORD 2 SALTY STEEL DEPTH SET AT - FEET 1 TRESH 3 T SULPHUR 2 ☐ GALVANIZED FROM 14-17 3 ☐ CONCRETE 0089 OPEN HOLE 1 TERESH ³ □ SULPHUR 4 MINERAL 22-2 2 SALTY 2 GALVANIZED 1 🔲 FRESH 3 ☐ SULPHUR 4 ☐ MINERAL 3 ☐ CONCRETE 2 ☐ SALTY 4 - OPEN HOLI PUMPING RATE 71 LOCATION WELL ΟF 0010 15-16 ² ☐ BAILER 00 17-18 FROM ROAD AND WATER LEVEL END OF PUMPING 22-24 PUMPING TEST WATER LEVELS DURING 2 RECOVERY 080 U Z TEST ²□ CLOUDY 1 CLEAR Σ RECOMMENDED PUMP SETTING OF SOME 7 DEEP ☐ SHALLOW OOO, 4GPM./FT. SPECIFIC CAPACITY WATER SUPPLY 5 ABANDONED, INSUFFICIENT SUPPLY **FINAL** 2 OBSERVATION WELL 3 TEST HOLE ABANDONED, POOR QUALITY **STATUS** 7 UNFINISHED OF WELL 4 ☐ RECHARGE WELL BOMESTIC 5 COMMERCIAL 6 MUNICIPAL ² ☐ STOCK WATER 3 | IRRIGATION 7 ☐ PUBLIC SUPPLY USE O/ 4 | INDUSTRIAL 8 COOLING OR AIR CONDITIONING 9 I NOT USED ☐ OTHER 1 CABLE TOOL 6 D BORING **METHOD** 2 ROTARY (CONVENTIONAL) 3 ROTARY (REVERSE) 8 DETTING 9 DRIVING OF BOTARY (AIR) AIR PERCUSSION DRILLING DRILLERS REMARKS 58 CONTRACTOR 59-62 DATE RECEIVED 190871 ONLY CONTRACTOR 58 INSPECTION tour USE OFFICE WΙ OWRC COPY



