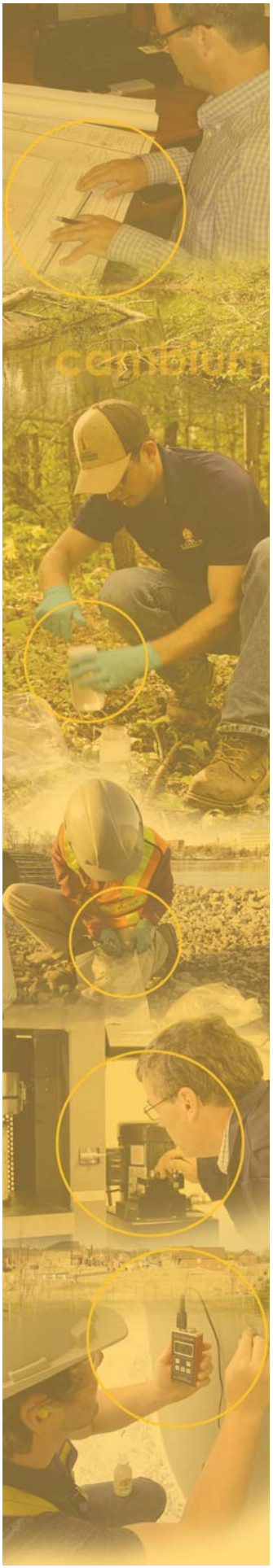

Hydrogeological Assessment - Camperdown Development, Town of the Blue Mountains

Cambium Reference No.: 7072-001

2018-02-15

Prepared for: Romspen FC Homes

Cambium Inc.

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Executive Summary

Romspen FC Homes contracted Cambium Inc. to complete a hydrogeological assessment at the Site located on Part of Lot 26, Concession 6, in the Town of the Blue Mountains, County of Grey and fronts onto Old Lakeshore Road.

The hydrogeological assessment was required by the Grey Sauble Conservation Authority to determine the depth of bedrock and the position of the water table on-site.

In total eight (8) test-pits were advanced across the site to a maximum depth of 3.05 metres below ground surface or to the bedrock contact. Upon completion of the test-pit investigation three soil samples were submitted for grain size analysis.

The results of the test-pit investigation indicate that the thickness of the overburden soils is relatively thin, considering only two of the test-pits were extended to a depth of 3.05 metres below ground surface without encountering bedrock. The grain size analysis determined that the native soils were primarily fine grained, however sporadic deposits of coarser grained soils were encountered.

Groundwater was observed near the overburden/bedrock interface or within the bedrock in five (5) of the eight (8) test-pits advanced on-site.

A review of the Ministry of Environment and Climate Change Water Well Information System indicated that there were seven well records recorded within 500 m of the Site. The well records indicated that the wells were completed into the bedrock at variable depths. The water well records did corroborate the findings of the test-pit investigation which indicated that the overburden deposits are relatively shallow and comprised primarily of fine grained soils (with sporadic coarser grained deposits).

The stormwater management controls designed for the Site should account for the hydrogeological conditions described herein.

Respectfully submitted,

Cambium Inc.

PROFESSIONAL GEOSCIENTIST
02/15/18 C.J.
CAMERON J. MacDOUGALL
PRACTISING MEMBER
2676
ONTARIO

Cameron MacDougall, P.Geo.
Environmental Specialist

CJM

P:\7000 to 7099\7072-001 Rompsen FC Homes - Hydrogeological Assessment - Camperdown, Blue Mountains\Deliverables\REPORT - Hydrogeological Assessment\Final\2018-02-15 Camperdown Hydrogeological Assessment - FINAL.docx

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1.0 Introduction

Cambium Inc. (Cambium) was retained by Romspen FC Homes to complete a hydrogeological assessment at a property located on Old Lakeshore Road in Camperdown, Ontario (hereafter referred to as the Site). The Site has no civic address, but is located just east of the intersection with Camperdown Road. The hydrogeological assessment was required by the Grey Sauble Conservation Authority (GSCA) to determine the position of the water table and depth to bedrock for storm water management implications for a proposed 40 unit residential development at the Site. This report outlines the findings of the hydrogeological assessment completed by Cambium and intends to satisfy the requirements set forth by the GSCA and the Town of the Blue Mountains (Town).

1.1 Site Description

The Site is located in Camperdown, which is approximately 15 kilometres (km) west of Collingwood and is located on Part of Lot 26, Concession 6, in the Town of the Blue Mountains, County of Grey. The total Site area is approximately 6.61 hectares (ha) and fronts onto Old Lakeshore Road. An outline of the property boundaries of the Site has been attached as Figure 1.

The Site is currently undeveloped and exists as forested land. Most of the property exists as relatively flat land that slopes marginally northwards, towards Georgian Bay. The slope increases dramatically in the southern third of the Site (approximately). This area is also heavily vegetated and backs onto a small residential subdivision. The land use to the south and north is residential and rural residential (respectively) and forested lands are found adjacent the Site to the east and west.

According to GSCA mapping, the southern and eastern fringes of the Site fall within regulated areas. Additionally, a small area of regulated land is found on-Site just south of Old Lakeshore Road. A map of the regulated areas has been attached in Appendix A.

According to the Ontario Flow Assessment Tool (Ministry of Natural Resources and Forestry, 2014) there are no streams or rivers found on-Site.

2.0 Methodology

2.1 Background Information

A thorough review of the available relevant background information was undertaken for this study, which included the following:

- Armstrong, D.K. and Dodge, J.E.P., 2007. Paleozoic geology of southern Ontario; Ontario Geological Survey, Miscellaneous Release--Data 219
- Ontario Geological Survey, 2010. Surficial geology of Southern Ontario; Ontario Geological Survey, Miscellaneous Release--Data 128-REV

2.2 Test-Pit Investigation

On January 22, 2018 a test-pit investigation was completed by Cambium to determine the subsurface conditions across the property. Prior to the field work public locates were obtained and a health and safety plan was prepared for the Site.

The test-pits were excavated using a tracked excavator under the supervision of a Cambium technician. A total of 8 test-pits, designated as TP101-18 through TP108-18 were advanced throughout the Site. Samples of each soils horizon were collected and logged. Open test-pits were backfilled with excavated soils and compacted with the excavator bucket. The logs of the test-pits have been attached as Appendix B.

An attempt was made to advance test-pits in the area of the Site that will remain as open space (i.e. the southern portion of the Site). However, the excavator could not safely access these areas due to the relatively steep slopes.

Three (3) soil samples were submitted to Cambium's geotechnical laboratory for grain size analysis. The laboratory results of the grain size analyses are attached in Appendix C. The results of the test-pit investigation and the grain size analyses are discussed in the following sections.

3.0 Hydrogeological and Geological Setting

3.1 Topography and Drainage

As discussed previously, most of the Site is flat and exhibits a shallow slope, dipping northwards towards Georgian Bay, while steep slopes are present along the southern boundary of the Site. Runoff is interpreted to flow northwards off-Site and discharge into a shallow ditch located on the southern side of Old Lakeshore Road.

3.2 Geological and Hydrogeological Conditions

The bedrock in the area of the Site is described as being part of the Blue Mountain Formation (Armstrong, D.K. and Didge, J.E.P., 2007). The Blue Mountain Formation is described as blue-grey to grey-brown shales with thin, minor interbeds of limestone and siltstone (Ontario Geological Survey, 2010).

According to the text titled *Physiography of Southern Ontario (Third Edition)* (Chapman, L.J. and D.F. Putnam, 1984) the Site is primarily located within the physiographic region known as the Beaver Valley. The Beaver Valley is a small, but well defined region of approximately 200 km² that occupies a sharply cut indentation in the Niagara cuesta opening upon Georgian Bay.

The quaternary geology mapping of the Site indicates that there is Paleozoic bedrock found at surface in the area (Ontario Geological Survey, 2010).

Although the results of the test-pit investigation indicated that bedrock was not encountered at surface on-site, the depth of the overburden soils were observed to be relatively thin, overlying the shale bedrock. The results of the test-pit investigation are discussed in the following section.

4.0 Results and Discussion

Eight (8) test-pits were advanced across the Site. The test-pits were advanced to depths ranging between 1.22 metres below ground surface (mbgs) and 3.05 mbgs.

Clay and silt/clayey silt soils were encountered at surface at each test-pit. The depth of these soils ranged between 0.76 mbgs and 2.44 mbgs, and were reported to contain some to trace gravel. One representative sample of this soil type was collected from TP103-18 and submitted for grain size analysis.

At test-pits TP101-18, TP102-18, TP107-18 and TP108-18 soils comprising primarily of clay were reported to be underling the clay and silt/clayey silt soils. A sample of the clay soil was collected from TP108-18 and submitted for grain size analysis.

Coarser soils consisting of silty sand and sand and gravel were encountered at test-pits TP101-18 and TP106-18, respectively. These soils were observed beneath the units described above. A sample of the sand and gravel collected from TP106-18 was submitted for grain size analysis.

The soils outlined above were mostly described as being dense/compact and moist to saturated.

It is noted that at test-pit TP104-18 a clay drainage pipe was encountered at a depth of 1.22 mbgs. Some water was observed to be flowing out of the broken pipe.

4.1.1 Grain Size Analyses

As described above, soil samples collected from TP103-18, TP106-18 and TP108-18 were submitted for grain size analysis. The results of the grain size analyses are outlined below:

TP103-18: Sample GS1

- This soil was described as a silty sandy clay, some gravel and cobbles (which were interpreted to be shale) and extended from surface to a depth of 0.76 mbgs.

This soil was classified as CL according to the Unified Soil Classification System and comprised of 27% sand and 73% fines.

TP106-18: Sample GS2

- This soil was described as sandy gravel, some silt, trace clay. Cobbles were also noted in the test-pit but they have been interpreted to be part of the weathered shale bedrock. This soil sample extended from 1.83 mbgs and 2.13 mbgs. This soil was classified as GW according to the Unified Soil Classification System and comprised of 41% gravel, 32% sand and 27% fines.

TP108-18: Sample GS2

- This soil was described as clay and silt. This soil sample extended from 2.44 mbgs and 3.05 mbgs. This soil was classified as CL-ML according to the Unified Soil Classification System and comprised of 100% fines.

4.1.2 Bedrock and Groundwater

The bedrock was observed to be shale. Test-pits TP101-18 through TP106-18 encountered shale at depths ranging between 0.76 mbgs and 2.74 mbgs. Each test-pit, where shale was encountered, was advanced beyond the initial shale contact (with the exception of TP102-18, which was terminated at the assumed shale contact). Test-pits TP107-18 and TP108-18 were advanced to a depth of 3.05 mbgs without encountering bedrock.

Test-pits TP101-18, TP104-18, TP105-18, TP106-18 and TP107-18 reported groundwater flowing into the excavation. The remaining test-pits generally reported moist to wet soils, but no flowing water. The depth at which flowing water was encountered ranged between 1.00 mbgs and 2.44 mbgs.

Information pertaining to the depths at which bedrock and groundwater were encountered at each test-pit has been outlined in Embedded Table 1.

Embedded Table 1 Bedrock and Groundwater Information

Test-Pit	Depth of Initial Bedrock Contact (mbgs)	Depth of Advancement Through Bedrock (m)	Total Depth of Test-Pit (mbgs)	Depth of Groundwater (mbgs)
TP101-18	1.37	0.76	2.13	1.20
TP102-18	2.74	0.00	2.74	Not observed
TP103-18	0.76	0.46	1.22	Not observed
TP104-18	1.22	0.30	1.52	1.30
TP105-18	0.61	0.61	1.22	1.00 to 1.30
TP106-18	2.13	0.92	3.05	1.83 to 2.13
TP107-18	Not encountered	N/A	3.05	2.44
TP108-18	Not encountered	N/A	3.05	Not observed

4.1.3 Water Well Records Review

The Ministry of Environment and Climate Change (MOECC) Water Well Information System (WWIS) was accessed to review borehole records that were found within 500 m of the Site.

In total there were seven (7) water well records found within 500 m of the Site. Of the seven (7) records, two (2) recorded the abandonment of a well. The remaining five (5) reported the installation of a drilled well. The wells were installed to depths ranging between 7.9 mbgs and 25.3 mbgs. Four (4) wells were installed in limestone bedrock and one (1) was installed in shale bedrock.

When the information was included, it was reported that groundwater was encountered between 14.63 mbgs and 24.39 mbgs (in the bedrock). Static water levels were reported to range between 2.44 mbgs and 18.29 mbgs.

The overburden materials were recorded to be fine grained soils, sporadically interbedded with sandy soils.

4.1.4 Summary and Recommendations

The results of the test-pit investigation indicated that the thickness of the overburden found on-Site is relatively thin, since only two (2) test-pits did not encounter bedrock within the upper 3.05 m of overburden. The overburden was comprised primarily of fine grained silt and clay

soils. Coarser grained soils were also reported on-Site, however their presence was sporadic (only being reported at two (2) test-pits).

Five (5) test-pits extended beyond the initial bedrock contact into, what has been interpreted to be incompetent shale bedrock (indicating that the bedrock quality of the shale at the overburden bedrock interface is likely low).

Groundwater was observed to be relatively shallow on-Site, ranging between 1.00 mbgs and 2.44 mbgs. The groundwater was observed to be flowing near the bedrock/overburden interface or within the bedrock itself. The groundwater encountered on-Site is considered to be part of the same aquifer that is found in the overburden and shallow bedrock.

The presence of fine grained soils at surface was corroborated by the review of MOECC water well records. The depth at which groundwater was encountered (when that information was included) was reported to be within bedrock. As such, the groundwater that was reported from the MOECC well logs is likely a part of a deeper bedrock aquifer or aquifers.

The stormwater management controls designed for the Site should account for the geological and hydrogeological conditions described herein.

5.0 Conclusions

Romspen FC Homes contracted Cambium to complete a hydrogeological assessment at the Site located on Part of Lot 26, Concession 6, in the Town of the Blue Mountains, County of Grey and fronts onto Old Lakeshore Road. Upon completion of the hydrogeological assessment it was determined that the overburden soils were relatively thin and comprised mainly of fine grained soils. The bedrock was reported to be of poor quality due to the ability of the excavator to advance through the shale. Groundwater was reported to be relatively shallow across the Site and was observed near the overburden/bedrock interface or within the bedrock.

The stormwater management controls designed for the Site should account for the geological and hydrogeological conditions described herein.

References

Armstrong, D.K. and Didge, J.E.P. (2007). Paleozoic geology of southern Ontario; Ontario Geological Survey, Miscellanesous Release -- Data 219.

Chapman, L.J. and D.F. Putnam. (1984). *The Physiography of Southern Ontario: Ontario Geological Survey, Special Volume 2.*

Ministry of Natural Resources and Forestry. (2014). *Ontario Flow Assessment Tool*. Retrieved 02 05, 2018, from http://www.gisapplication.lrc.gov.on.ca/OFAT/Index.html?site=OFAT&viewer=OFAT&locale=en-US

Ontario Geological Survey. (2010). Surficial geology of Southern Ontario; Miscellaneous RElease -- Data 128-REV.

Ontario Geological Survey. (2010). *The Subsurface Paleozoic Stratigraphy of Southern Ontario, Special Volume 7.*

Appended Figures

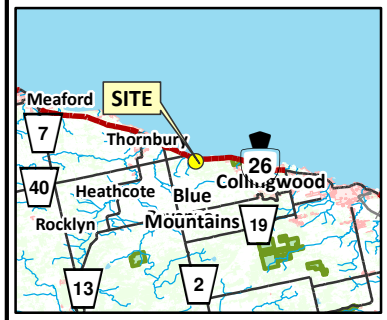
HYDROGEOLOGICAL ASSESSMENT

INNOVATIVE PLANNING SOLUTIONS

Camperdown, Blue Mountains,
Part of Lot 26, Concession 6,
Town of The Blue Mountains,
County of Grey, Ontario

LEGEND

Test Pit Location



Notes:
- Conceptual Draft Plan of Subdivision - Camperdown, Town of the Blue Mountains was obtained from Innovative Planning Solutions, Dated February 9, 2018.
- Base mapping features are © Queen's Printer of Ontario, 2015 (this does not constitute an endorsement by the Ministry of Natural Resources or the Ontario Government).
- Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
- Cambium Inc. makes every effort to ensure this map is free from errors but cannot be held responsible for any damages due to error or omissions. This map should not be used for navigation or legal purposes. It is intended for general reference use only.

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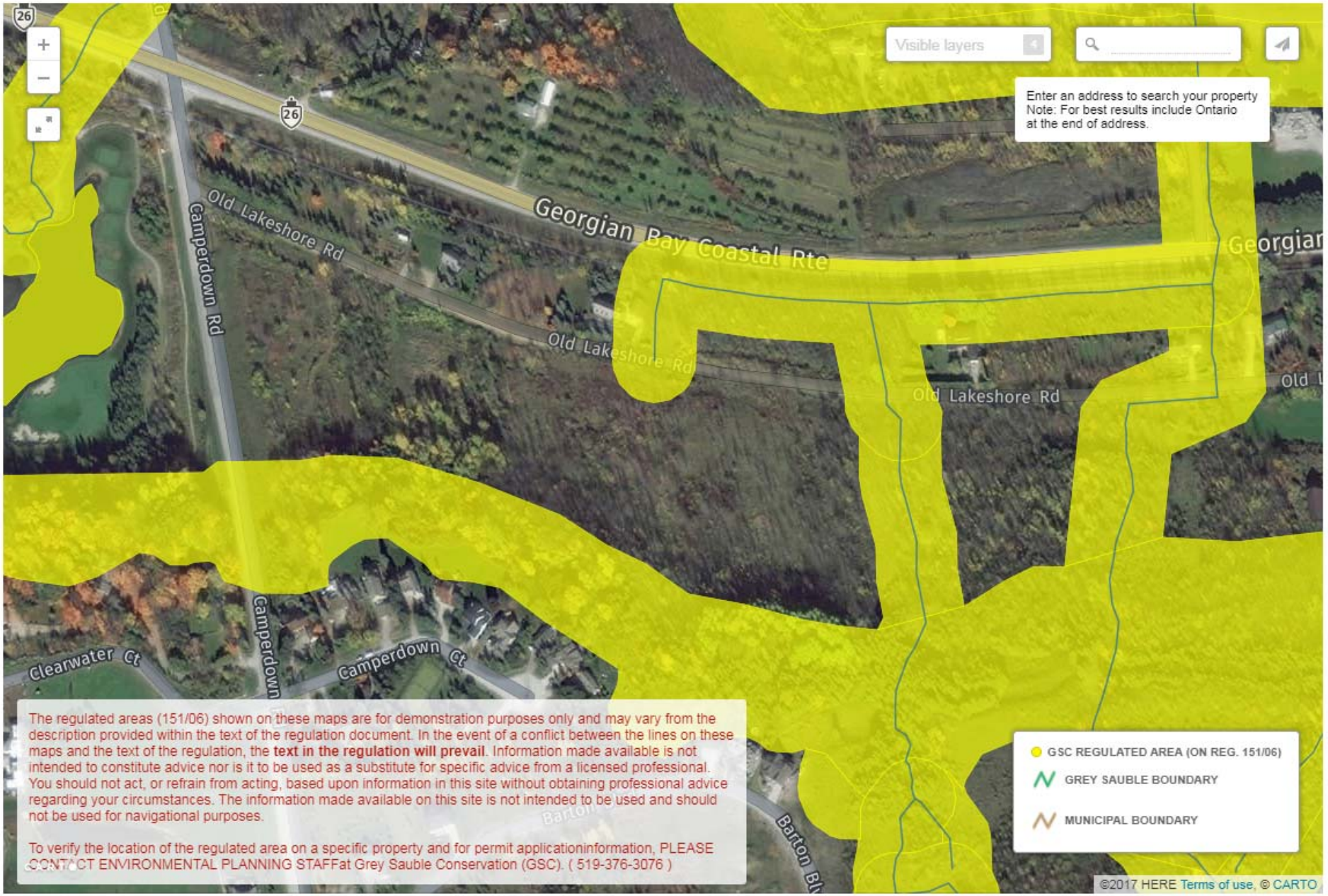
Tel: (705) 742.7900 Fax: (705) 742.7907
www.cambium-inc.com

SITE PLAN

Project No.:	7072-001	Date:	February 2018
		Rev.:	
Scale:	1:2,500	Projection:	NAD 1983 UTM Zone 17N
Created by:	TLC	Checked by:	KW
Figure:	1		

Appendix A
GSCA Regulated Areas



The regulated areas (151/06) shown on these maps are for demonstration purposes only and may vary from the description provided within the text of the regulation document. In the event of a conflict between the lines on these maps and the text of the regulation, the **text in the regulation will prevail**. Information made available is not intended to constitute advice nor is it to be used as a substitute for specific advice from a licensed professional. You should not act, or refrain from acting, based upon information in this site without obtaining professional advice regarding your circumstances. The information made available on this site is not intended to be used and should not be used for navigational purposes.

To verify the location of the regulated area on a specific property and for permit applicationinformation, PLEASE CONTACT ENVIRONMENTAL PLANNING STAFFat Grey Sauble Conservation (GSC). (519-376-3076)

Appendix B
Test-pit Logs

TEST PIT LOGS

Innovative Planning Solutions - Camperdown, Blue Mountains

Technician: J.Macphail

Cambium Reference No. 7072-001

Completed January, 22, 2018

Test Pit ID	Depth (mbgs[1])	Soil Sample	Material Description	UTM Coordinates Zone 17T
TP101-18	0 - 0.76	GS1	Brown clayey silt, some rootlets & organics, stiff, moist	548241 4931437
	0.76 - 0.91	GS2	Grey brown clay, trace rootlets, stiff, moist	
	0.91 - 1.37	GS3	Light brown silty sand, some gravel, compact, moist to saturated	
	1.37 - 2.13	GS4	Shale Bedrock	
	2.13		Test pit terminated at 2.31 mbgs, free flowing water at 1.2 mbgs	
			Less then 10 cm of water at base of testpit at completion	
TP102-18	0 - 0.76	GS1	Medium brown clayey silt, some rootlets & organics, stiff, moist	548210 4931389
	0.76 - 2.74	GS2	Brownish grey clay, stiff, moist	
			Rootlets at 1.3 mgbs	
	2.74		Test-pit terminated at 2.74 mbgs on bedrock, test-pit dry upon completion	
TP103-18	0 - 0.76	GS1	Darkbrown silty sandy clay, some rootlets & organics, some shale, stiff, saturated	548207 4931441
	0.76 - 1.22	GS2	Shale	
	1.22		Test pit terminated at 1.22 mbgs, test-pit dry upon completion	
TP104-18	0 - 0.61	GS1	Dark brown clayey silt, trace gravel, some organics & rootlets, stiff, saturated	548077 4931425
	0.61 - 0.76	GS2	Shale	
	0.76 - 1.22	GS3	Light brown clayey silt, some shale, stiff, saturated	
	1.22 - 1.52	GS4	Shale, trace sand, very stiff, saturated	
	1.52		Testpit terminated at 1.52 mbgs in bedrock, freeflowing water at 1.3mbgs	
			0.1 m of water at base of test-pit upon completion	
			Note: weeper/drainage pipe was found at 1.22 mbgs	
TP105-18	0 - 0.61	GS1	Darkbrown clayey silt, some rootlets &organics, some gravel, stiff, saturated	548087 4931451
	0.61 - 1.22	GS2	Shale, trace sand, trace clay, stiff, saturated	
	1.22		Test-pit terminated at 1.22 mbgs in bedrock, free flowing water between 1.0 mbgs	
			and 1.3 mBGS	
			0.15 m of water at the base of the test pit upon completion	
TP106-18	0 - 1.83	GS1	Dark brown clayey silt, some gravel and cobbles (shale), some organics and rootlets, stiff,	547998 4931489
			dry to moist	
	1.83 - 2.13	GS2	Brown sandy gravel, some silt, trace clay, dense, moist to saturated	
	2.13 - 3.05	GS3	Shale, saturated	
			No orangics & rootlets after 0.3 mgbs	
	3.05		Test-pit terminated at 3.05 mbgs, free flowing water between 1.83 mbgs and 2.13 mbgs	
			0.25 m of water at the base of the test pit upon completion	
TP107-18	0 - 0.61	GS1	Dark brown clayey silt, trace gravel, some organics and rootlets, stiff, moist to saturated	548106 4931399
	0.61 - 2.44	GS2	Medium brown clayey silt, some sand, some gravel and cobbles, moist to saturated	
	2.44 - 3.05	GS3	Grey clay, very stiff, saturated	
	3.05		Test pit terminated at 3.05 mbgs, free flowing water at 2.44mbgs	
TP108-18	0 - 2.44	GS1	Light brown clay, some silt, some organics and rootlets, stiff, moist	548244 4931365
	2.44 - 3.05	GS2	Grey clay and silt, dense, saturated	
			No organics & rootlets after 0.6 mbgs	
	3.05		Test pit terminated at 3.05 mbgs, and dry upon completion	

Notes: 1. Metres Below Ground Surface

Appendix C
Grain Size Analyses

Grain Size Distribution Chart

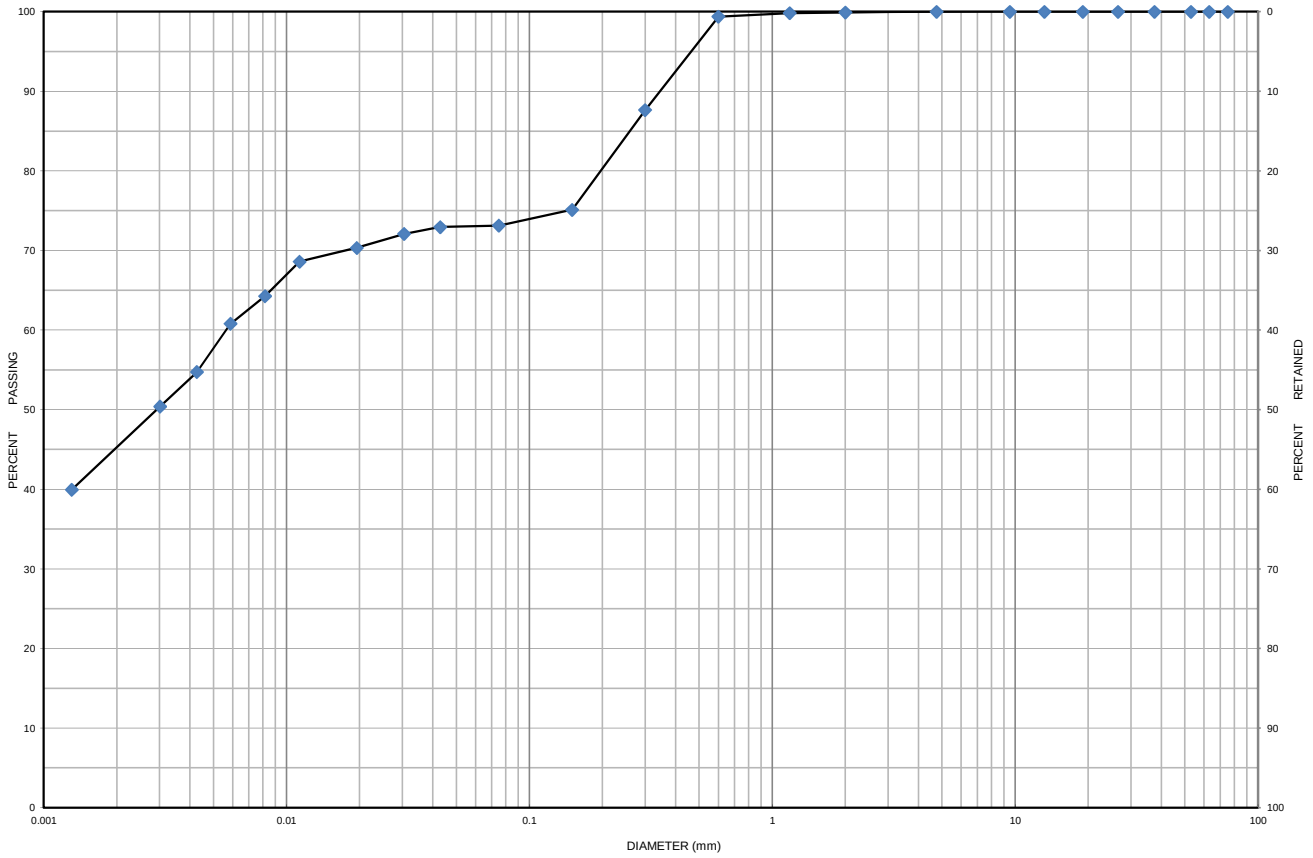
Project Number: *7072-001* **Client:** *Romspen FC Homes*

Project Name: *Hydrogeological Assessment, Camperdown, Blue Mountains*

Sample Date: *January 22, 2018* **Sampled By:** *Jonathan Macphail - Cambium Inc.*

Location: *TP 103-18 GS 1* **Depth:** *0 m to 0.8 m* **Lab Sample No:** *S-18-0059*

UNIFIED SOIL CLASSIFICATION SYSTEM					
CLAY & SILT (<0.075 mm)	SAND (<4.75 mm to 0.075 mm)			GRAVEL (>4.75 mm)	
	FINE	MEDIUM	COARSE	FINE	COARSE



MIT SOIL CLASSIFICATION SYSTEM								
CLAY	SILT	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	BOULDERS
		SAND			GRAVEL			

Location	Sample No.	Depth	Gravel	Sand	Silt	Clay	Moisture
TP 103-18	GS 1	0 m to 0.8 m	0	27	73		39.8

Description	Classification	D_{60}	D_{30}	D_{10}	C_u	C_c
Silty Sandy Clay	CL	0.006	-	-	-	-

Issued By: _____ (Senior Project Manager) *Date Issued:* *February 1, 2018*

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Grain Size Distribution Chart

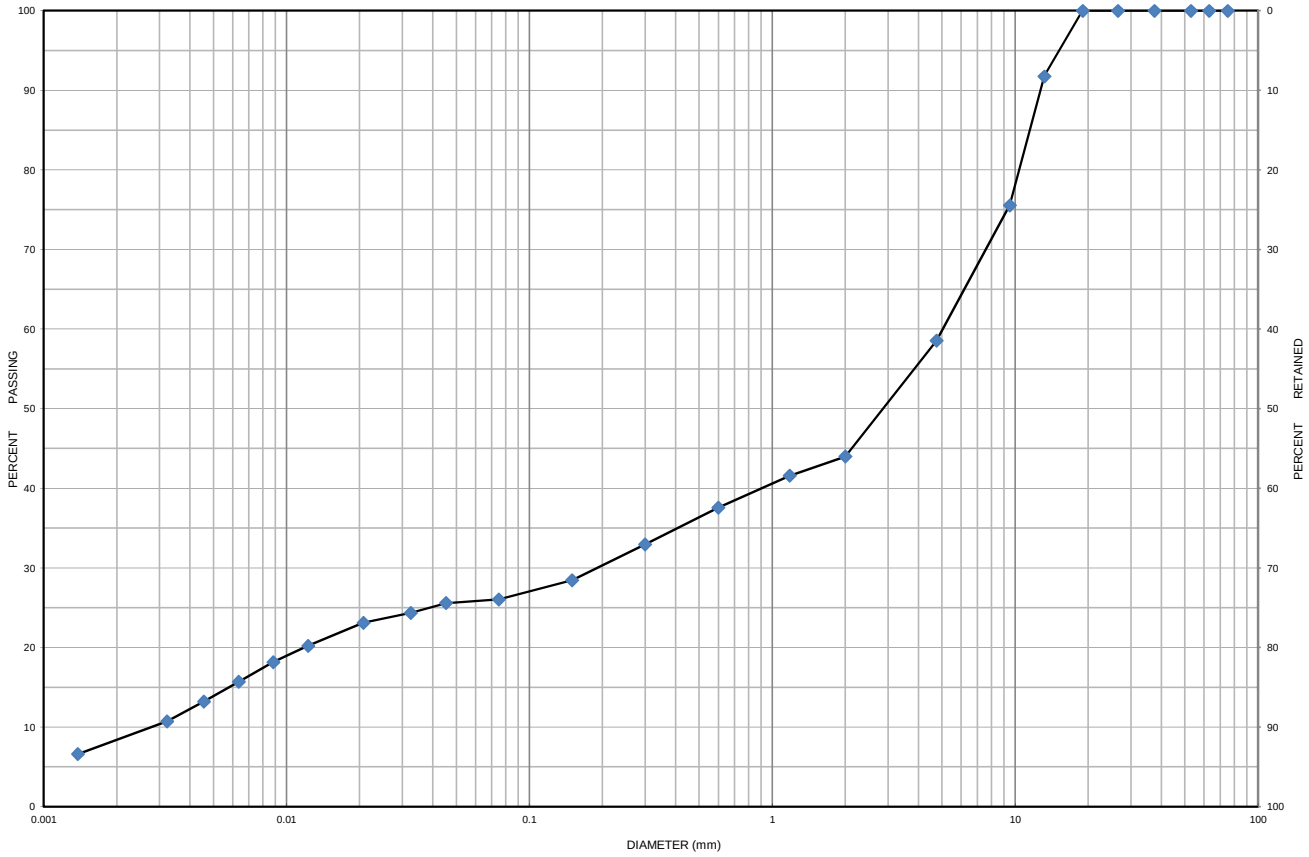
Project Number: *7072-001* **Client:** *Romspen FC Homes*

Project Name: *Hydrogeological Assessment, Camperdown, Blue Mountains*

Sample Date: *January 22, 2018* **Sampled By:** *Jonathan Macphail - Cambium Inc.*

Location: *TP 106-18 GS 2* **Depth:** *1.8 m to 2.1 m* **Lab Sample No:** *S-18-0060*

UNIFIED SOIL CLASSIFICATION SYSTEM					
CLAY & SILT (<0.075 mm)	SAND (<4.75 mm to 0.075 mm)			GRAVEL (>4.75 mm)	
	FINE	MEDIUM	COARSE	FINE	COARSE



MIT SOIL CLASSIFICATION SYSTEM								
CLAY	SILT	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	BOULDERS
		SAND			GRAVEL			

Location	Sample No.	Depth	Gravel	Sand	Silt	Clay	Moisture
TP 106-18	GS 2	1.8 m to 2.1 m	41	32	27		17.4

Description	Classification	D_{60}	D_{30}	D_{10}	C_u	C_c
Sandy Gravel some Silt trace Clay	GW	5.200	0.190	0.0029	1793.10	2.39

Issued By: _____ *Date Issued:* *February 1, 2018*

(Senior Project Manager)

Cambium Inc. (Laboratory)

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701 The Queensway | Units 5-6 | Peterborough | ON | K9J 7J6

Grain Size Distribution Chart

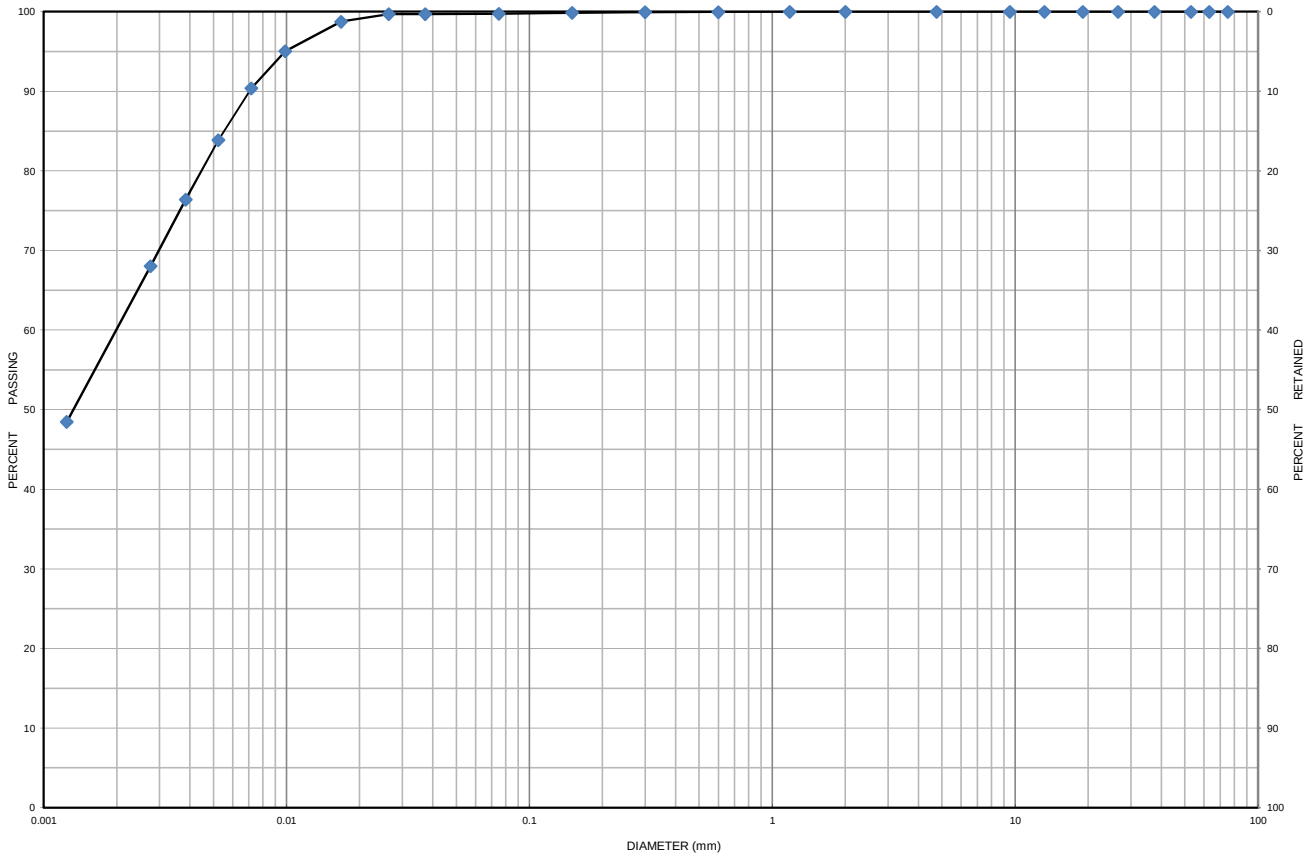
Project Number: *7072-001* **Client:** *Romspen FC Homes*

Project Name: *Hydrogeological Assessment, Camperdown, Blue Mountains*

Sample Date: *January 22, 2018* **Sampled By:** *Jonathan Macphail - Cambium Inc.*

Location: *TP 108-18 GS 2* **Depth:** *2.4 m to 3 m* **Lab Sample No:** *S-18-0061*

UNIFIED SOIL CLASSIFICATION SYSTEM					
CLAY & SILT (<0.075 mm)	SAND (<4.75 mm to 0.075 mm)			GRAVEL (>4.75 mm)	
	FINE	MEDIUM	COARSE	FINE	COARSE



MIT SOIL CLASSIFICATION SYSTEM								
CLAY	SILT	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	BOULDERS
		SAND			GRAVEL			

Location	Sample No.	Depth	Gravel	Sand	Silt	Clay	Moisture
TP 108-18	GS 2	2.4 m to 3 m	0	0	100		37.2

Description	Classification	D_{60}	D_{30}	D_{10}	C_u	C_c
Clay and Silt	CL-ML	0.002	-	-	-	-

Issued By: _____ *Date Issued:* *February 1, 2018*

(Senior Project Manager)

Cambium Inc. (Laboratory)

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701 The Queensway | Units 5-6 | Peterborough | ON | K9J 7J6

Appendix D
MOECC Water Well Records

UTM 17 Z 547800 E

5 R 4931660 N

Con VI

Elev. 5 R 0590

Lot 27

Basin 23

41A/9 d

GROUND WATER BRANCH
25 No. 519
JUN 2 1959
ONTARIO WATER
RESOURCES COMMISSION

The Ontario Water Resources Commission Act, 1957

WATER WELL RECORD

County or ~~District~~ GREY .... Township, ~~Village, Town or City~~ COLLINGWOOD

[redacted] completed 12 (day) May (month) 1959 (year)

[redacted]ess 6th Line

Casing and Screen Record

Inside diameter of casing 4"

Total length of casing 11'

Type of screen

Length of screen

Depth to top of screen

Diameter of finished hole 4"

Pumping Test

Static level 8'

Test-pumping rate 4 G.P.M.

Pumping level 11'

Duration of test pumping 2 hrs

Water clear or cloudy at end of test Clear

Recommended pumping rate 4 G.P.M.

with pumping level of 11'

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
Brn clay	0	7			
Shale	7	16			
Limestone Rock	16	26'6"	18	10'	Fresh

For what purpose(s) is the water to be used?

Household

Is well on upland, in valley, or on hillside?

Drilling Firm R. Nimmo

Address

Licence Number 127

Name of Driller Robt Nimmo

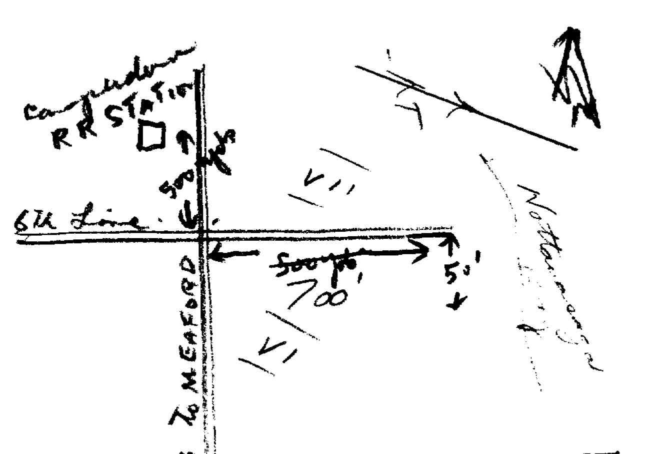
Address 302 Birch St Collingwood

Date May 12/59

Robt Nimmo per Ed
(Signature of Licensed Drilling Contractor)

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Form 5
15M-58-4149

The Ontario Water Resources Commission Act

WATER WELL RECORD

47 M/NW

Water management in Ontario

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11 | 2503696 | MUNICIP. 25003 | CON. GRN | 06 | LOT 25-27 04 27

COUNTY OR DISTRICT: GREY

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Collingwood Thornbury Ont.

CON., BLOCK, TRACT, SURVEY, ETC.: 11

DATE COMPLETED: DAY 01 MO 06 YR 71

31600 | RC 4 | ELEVATION 0590 | RC 5 | BASIN CODE 22

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	TO
Brown	SAND & clay			0	4½
Grey	shale			4½	10
Grey	Limestone Rock			10	80

OWRC P-9

31 | 00040 2805 | 00102 17 | 00802 15

32

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
0048	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
80 0080	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	TO
6 06	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	188	0	10 0010
06	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE		10	80 0080
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET
MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN FEET	

61 PLUGGING & SEALING RECORD

DEPTH SET AT – FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER

PUMPING RATE: 0001 GPM

DURATION OF PUMPING: 01 HOURS 00 MINS.

1 ☒ PUMPING 2 ☐ RECOVERY

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING 15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
011 FEET	070 FEET	070 FEET	070 FEET	070 FEET	070 FEET

IF FLOWING, GIVE RATE: GPM.

PUMP INTAKE SET AT: FEET

WATER AT END OF TEST: ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP

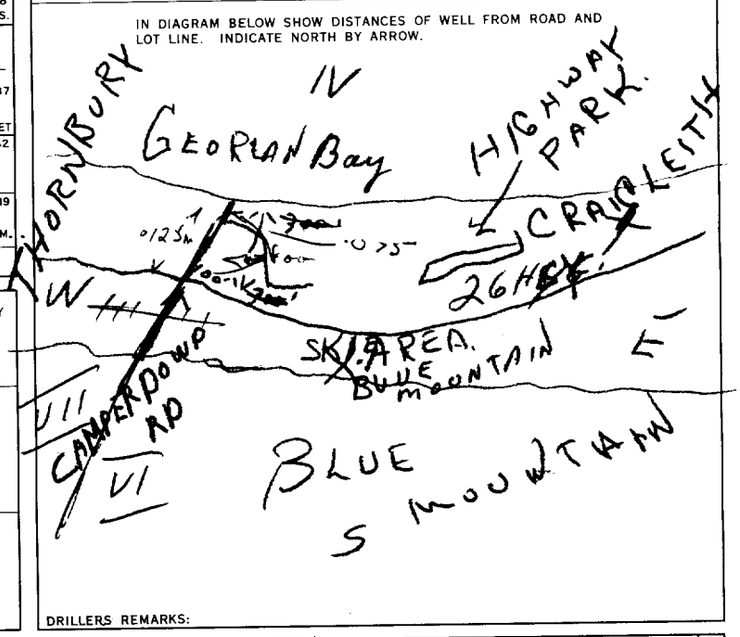
RECOMMENDED PUMP SETTING: 070 FEET

RECOMMENDED PUMPING RATE: 0001 GPM.

50-53 0000 GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLERS REMARKS:

FINAL STATUS OF WELL

54: 1 ☒ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED

WATER USE

55-56: 01

1 ☒ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED

METHOD OF DRILLING

57: 1 ☒ CABLE TOOL; 2 ☐ ROTARY (CONVENTIONAL); 3 ☐ ROTARY (REVERSE); 4 ☐ ROTARY (AIR); 5 ☐ AIR PERCUSSION; 6 ☐ BORING; 7 ☐ DIAMOND; 8 ☐ JETTING; 9 ☐ DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: Ken Mighton & Sons — LICENCE NUMBER: 3602

ADDRESS: Stayner

NAME OF DRILLER OR BORER: Larry Mighton — LICENCE NUMBER: 3643

SIGNATURE OF CONTRACTOR: Kenneth B. Mighton

SUBMISSION DATE: DAY 29 MO Jan YR 72

OWRC COPY

OFFICE USE ONLY

DATA SOURCE 58: 1 — CONTRACTOR 59-62: 3602 — DATE RECEIVED 63-68: 030272

DATE OF INSPECTION — INSPECTOR

REMARKS:

P — WI

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

2508641

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11

MUNICIP | CON.

COUNTY OR DISTRICT | TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE | CON. BLOCK, TRACT, SURVEY, ETC. | LOT

[redacted] | Collingwood | VX | E½ 25

DATE COMPLETED: DAY 03 MO 09 YR 86

NG | RC. | ELEVATION | RC | BASIN CODE | II | III | IV

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	TO
	Top soil			0	1
	Clay sand gravel & stone			1	50
	Limestone			50	64

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
64	1 ☒ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	TO
	1 ☒ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☒ OPEN HOLE		0	50
6"		188	50	64
	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE			
	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET

MATERIAL AND TYPE | DEPTH TO TOP OF SCREEN FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☒ PUMP 2 ☒ BAILER | PUMPING RATE: 6 GPM | DURATION OF PUMPING: 15 HOURS ____ MINS

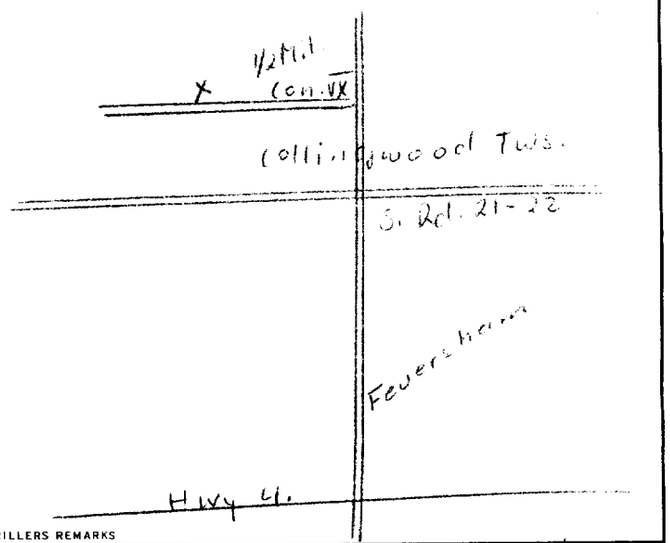
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☒ PUMPING 2 ☐ RECOVERY	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
60 FEET	60 FEET		60 FEET	60 FEET	60 FEET	60 FEET

IF FLOWING, GIVE RATE: ____ GPM | PUMP INTAKE SET AT: 63 FEET | WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☐ DEEP | RECOMMENDED PUMP SETTING: 63 FEET | RECOMMENDED PUMPING RATE: 6 GPM

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLERS REMARKS

FINAL STATUS OF WELL

1 ☒ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED

WATER USE

1 ☒ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED

METHOD OF DRILLING

1 ☐ CABLE TOOL; 2 ☒ ROTARY (CONVENTIONAL); 3 ☐ ROTARY (REVERSE); 4 ☐ ROTARY (AIR); 5 ☐ AIR PERCUSSION; 6 ☐ BORING; 7 ☐ DIAMOND; 8 ☐ JETTING; 9 ☐ DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: S. Neumann | LICENCE NUMBER: 3512

ADDRESS: R.R. 4 Dundalk Ont.

NAME OF DRILLER OR BORER | LICENCE NUMBER

SIGNATURE OF CONTRACTOR: S. Neumann | SUBMISSION DATE: DAY ____ MO ____ YR ____

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR | DATE RECEIVED 00986

DATE OF INSPECTION | INSPECTOR

REMARKS

CSS.ES

FORM NO. 0506—4—77 FORM 7

MINISTRY OF THE ENVIRONMENT COPY

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11

2509911 MUNICIP. 25093 CON. CON 06

COUNTY OR DISTRICT [redacted] TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE Collingwood CON BLOCK, TRACT, SURVEY, ETC Con 6 LOT 26

[redacted] Governors Rd Toronto DATE COMPLETED DAY 4 MO 5 YR 89

21 M 3,1360 RC ELEVATION 600 RC BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	TO
	Topsoil			0	1
Black	Sand			1	6
Black	Shale			6	15
Brown	Shale		Hard	15	30
Gray	Shale	Limestone	Hard	30	50
Brown	Limestone			50	110
Gray	Limestone			110	140
Blue	Limestone			140	163

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
163	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☑ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	TO
6	1 ☑ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	+1	21
6	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☑ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET
MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN FEET	

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER ETC.)

71 PUMPING TEST

PUMPING TEST METHOD 1 ☐ PUMP 2 ☐ BAILER

PUMPING RATE GPM

DURATION OF PUMPING HOURS MINS

STATIC LEVEL FEET	WATER LEVEL END OF PUMPING FEET	WATER LEVELS DURING 1 ☐ PUMPING 2 ☐ RECOVERY	15 MINUTES FEET	30 MINUTES FEET	45 MINUTES FEET	60 MINUTES FEET

IF FLOWING GIVE RATE GPM

PUMP INTAKE SET AT FEET

WATER AT END OF TEST 1 ☐ CLEAR 2 ☐ CLOUDY

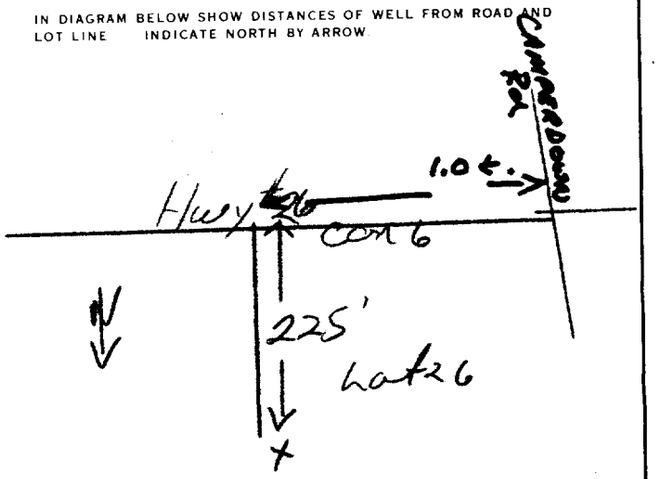
RECOMMENDED PUMP TYPE ☐ SHALLOW ☐ DEEP

RECOMMENDED PUMP SETTING FEET

RECOMMENDED PUMPING RATE GPM

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



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DRILLERS REMARKS

FINAL STATUS OF WELL

1 ☐ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☑ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED ☐ DEWATERING

WATER USE

1 ☐ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL ☐ OTHER 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☑ NOT USED

METHOD OF CONSTRUCTION

1 ☐ CABLE TOOL 2 ☐ ROTARY (CONVENTIONAL) 3 ☐ ROTARY (REVERSE) 4 ☐ ROTARY (AIR) 5 ☐ AIR PERCUSSION 6 ☐ BORING 7 ☐ DIAMOND 8 ☐ JETTING 9 ☐ DRIVING ☐ DIGGING ☐ OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: Highland Water Wells — WELL CONTRACTOR'S LICENCE NUMBER: 2576

ADDRESS: Box 141 Durham

NAME OF WELL TECHNICIAN: E. Wilson — WELL TECHNICIAN'S LICENCE NUMBER: 70113

SIGNATURE OF TECHNICIAN/CONTRACTOR: E. Wilson — SUBMISSION DATE: DAY 4 MO 5 YR 89

OFFICE USE ONLY

DATA SOURCE — CONTRACTOR: 2576 — DATE RECEIVED: MAY 16 1989

DATE OF INSPECTION — INSPECTOR

REMARKS

FORM NO. 0506 (11/86) FORM 9

MINISTRY OF THE ENVIRONMENT COPY

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11 — 2511087 — MUNICIP 25003 — CON. CON — 96

COUNTY OR DISTRICT: [redacted]
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Gollinwood
CON. BLOCK, TRACT, SURVEY, ETC: 6
LOT: 36
DATE COMPLETED: DAY 23 MO 10 YR 90
ADDRESS OF WELL LOCATION: Mill St. Nottawa Ont
UTM: 731083 — RC — ELEVATION: 809 — RC — BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
			Top Soil	0	2
			Sand Brown	2	19
			Grey Clay	19	31
			Grey Clay & Stones	31	33
			Brown Limestone	33	68
			Blue Limestone	68	83

31
32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
65	1 ☒ FRESH 2 ☐ SALTY 3 ☒ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
72	1 ☒ FRESH 2 ☐ SALTY 3 ☒ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6 1/4	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	+2	33
6	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE 5 ☐ PLASTIC		33	83
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET
MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN FEET	

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
10-13	14-17	
18-21	22-25	
26-29	30-33	

71 PUMPING TEST

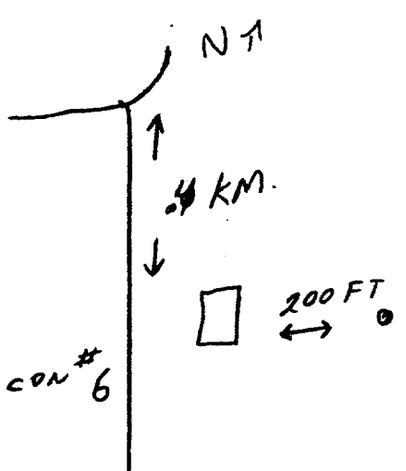
PUMPING TEST METHOD: 1 ☒ PUMP 2 ☐ BAILER
PUMPING RATE: 3 GPM
DURATION OF PUMPING: 1 HOURS 30 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☐ RECOVERY			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
30 FEET	83 FEET	83 FEET	73 FEET	63 FEET	63 FEET

IF FLOWING, GIVE RATE: — GPM
PUMP INTAKE SET AT: — FEET
WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP
RECOMMENDED PUMP SETTING: 78 FEET
RECOMMENDED PUMPING RATE: 10 3 GPM

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



75979

DRILLERS REMARKS:

FINAL STATUS OF WELL: 1 ☒ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED; ☐ DEWATERING

WATER USE: 1 ☒ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED

METHOD OF CONSTRUCTION: 1 ☐ CABLE TOOL; 2 ☐ ROTARY (CONVENTIONAL); 3 ☐ ROTARY (REVERSE); 4 ☒ ROTARY (AIR); 5 ☐ AIR PERCUSSION; 6 ☐ BORING; 7 ☐ DIAMOND; 8 ☐ JETTING; 9 ☐ DRIVING; ☐ DIGGING; ☐ OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: Georgian Bay Well Drilling
WELL CONTRACTOR'S LICENCE NUMBER: 6433
ADDRESS: RR4 Meaford Ont
NAME OF WELL TECHNICIAN: Ian Hynot
WELL TECHNICIAN'S LICENCE NUMBER: 10282
SIGNATURE OF TECHNICIAN/CONTRACTOR:
SUBMISSION DATE: DAY 26 MO 10 YR 90

OFFICE USE ONLY

DATA SOURCE: CONTRACTOR 6433
DATE RECEIVED: DEC 04 1990
DATE OF INSPECTION:
INSPECTOR:
REMARKS: CSS 58

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 | 2513429 | Municipality 25003 | Con. CON 07

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot
[redacted]	Collingwood	7	Pt Lot 25

Address	Date completed
Camperdown Rd. Collingwood.	14 day 08 month 97 year

21 | Northing | RC | Elevation | RC | Basin Code | ii | iii | iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	To
			Brown clay gravel	0	22
			Blue Clay	22	40
			Blue Shale	40	80

31

32

WATER RECORD (41)

Water found at – feet	Kind of water
59	☑ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas
	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas
	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas
	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas
	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals ☐ Gas

CASING & OPEN HOLE RECORD (51)

Inside diam inches	Material	Wall thickness inches	Depth – feet From	To
8 1/4	☒ Steel ☐ Galvanized ☐ Concrete ☐ Open hole ☐ Plastic	.188	+4	44
6 5/8	☐ Steel ☐ Galvanized ☐ Concrete ☐ Open hole ☒ Plastic	SLOTTED	40	80
	☐ Steel ☐ Galvanized ☐ Concrete ☐ Open hole ☐ Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter inches	Length feet

Material and type	Depth at top of screen feet

PLUGGING & SEALING RECORD (61)

☐ Annular space ☐ Abandonment

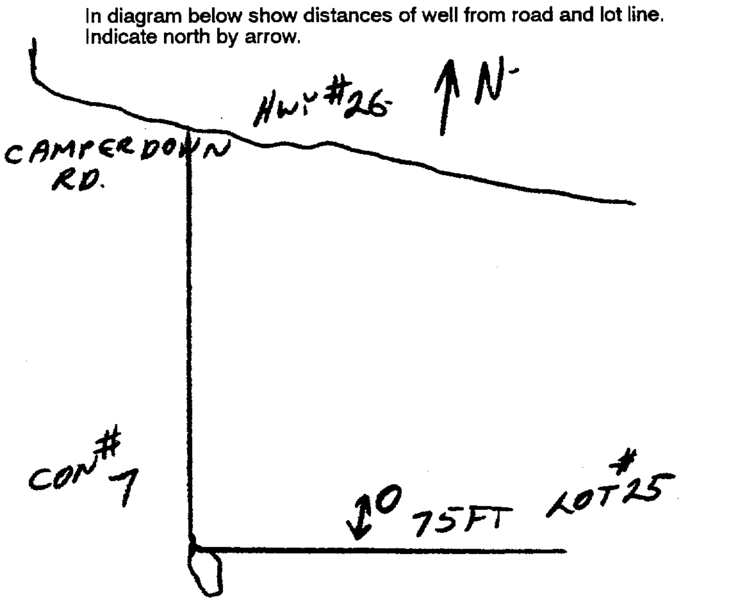
Depth set at – feet From	To	Material and type (Cement grout, bentonite, etc.)
		HOLE PLUG -
		CONCRETE.

PUMPING TEST (71)

Pumping test method	☐ Pump ☐ Bailer
Pumping rate	17 GPM
Duration of pumping	.... Hours .... Mins
Static level	feet
Water level end of pumping	feet
Water levels during	☐ Pumping ☐ Recovery
15 minutes	feet
30 minutes	feet
45 minutes	feet
60 minutes	feet
If flowing give rate	— GPM
Pump intake set at	70 feet
Water at end of test	☐ Clear ☑ Cloudy
Recommended pump type	☐ Shallow ☑ Deep
Recommended pump setting	70 feet
Recommended pump rate	10 12 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.



162039

FINAL STATUS OF WELL

☒ Water supply ☐ Observation well ☐ Test hole ☐ Recharge well ☐ Abandoned, insufficient supply ☐ Abandoned, poor quality ☐ Abandoned (Other) ☐ Dewatering ☐ Unfinished ☐ Replacement well

WATER USE

☒ Domestic ☐ Stock ☐ Irrigation ☐ Industrial ☐ Commercial ☐ Municipal ☐ Public supply ☐ Cooling & air conditioning ☐ Not used ☐ Other ....

METHOD OF CONSTRUCTION

☒ Cable tool ☐ Rotary (conventional) ☐ Rotary (reverse) ☐ Rotary (air) ☐ Air percussion ☐ Boring ☐ Diamond ☐ Jetting ☐ Driving ☐ Digging ☐ Other ....

Name of Well Contractor	Georgian Bay Well Drilling
Well Contractor's Licence No.	6433
Address	RR4 Meaford Ont
Name of Well Technician	Geo. Hodgkinson
Well Technician's Licence No.	T 1857
Signature of Technician/Contractor	George Hodgkinson
Submission date	20 day 08 mo 97 yr

MINISTRY USE ONLY

Data source	
Contractor	6433
Date received	DEC 16 1997
Date of inspection	
Inspector	
Remarks	CSS.S8

0506 (07/94) Front Form 9

2 - MINISTRY OF ENVIRONMENT & ENERGY COPY