Prepared By:

Durham Heights Bible Retreat Inc.

Preliminary Functional Servicing Report
423108 Rocky Saugeen Road

GMBP File: 224002

April 2024

GUELPH | OWEN SOUND | LISTOWEL | KITCHENER | LONDON | HAMILTON | GTA
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PRELIMINARY FUNCTIONAL SERVICING REPORT

DURHAM HEIGHTS BIBLE RETREAT INC.

APRIL 2024

GMBP FILE: 224002

1. BACKGROUND

GM BluePlan Engineering Ltd. (GMBP) has been retained by Durham Height Bible Retreat to complete a preliminary Function Servicing Brief and engineering services relating to a proposed Bible Retreat & Spiritual Center located at 423018 the Rocky Saugeen Road within in the Municipality of West Grey.

Specifically, the property is legally defined as Part Lot 16 Concession 1 EGR, PT Div. 2 and PT DIV.3, within the Municipality of West Grey in the former Township of Glenelg.

A preliminary site plan and concept plan has been prepared by Cuesta Planning Consulting Inc. the Durham Bible Retreat demonstrating the proposed location of the retreat within the 38.85 ha (96 acre) property.

We have enclosed the site plan and proposed building layout in Appendix A for your reference.

2. ENTERANCE, DRIVEWAY AND FIRE-ROUTE ACCESS DESIGN:

The site currently is accessed from the Rocky Saugeen Road, by an existing 6.0 m +/- wide gravel driveway installed approximately 260 m East of Provincial Highway No. 6. The exist entrance currently has no culvert installed in the ditch.

The winding driveway follows the current topography of the site an open field where the proposed Bible Retreat will be located and branches off in an easterly direct to access the on-site cabins and recreational pond.

It is the intention of the developer to widen the existing driveway to 9.0 m. Currently, there is no driveway culvert installed under the existing entrance. Should it be a requirement of the Municipality, a new entrance culvert on Rocky Saugeen Road would need to be a minimum of 12 m +/-, 400 mm dia. HDPE (320 kPa) in accordance with the current Municipal Standards.

It should be noted, an entrance permit may be required from the Municipality for the installation driveway culvert and widening of the driveway. Any tree clearing activity to widen the driveway should be undertake prior to April 1, or after August 31st of any given year in accordance with the Migratory Bird Convention Act or be reviewed by a qualified individual to support clearing operations outside the Migratory Bird nesting seasons.

The existing driveway into the cabins and recreation pond will remain and be upgraded to ensure fire & emergency service vehicles can access the area, and in particular, access to the pond as a source of water for fire suppression for the new retreat building. A dry-flow fire hydrant is being proposed to be installed into the pond and will be designed, implemented, and tested by others.

3. TRAFFIC IMPACTS & ACTIVE TRANSPORTATION

The development is located approximately 200 m +/- from Provincial Highway No. 6, which is within the regulatory area of the Ministry of Transportation Ontario – Southwest Region. A separate Traffic Impact Study (TIS) may be required at the discretion of the MTO. Salvini Consulting Inc. – Transportation Engineering and Planning has been retained by the developer to review the traffic requirements and provide the required studies. Salvini Consulting's reports will be submitted under separate cover.

4. ON-SITE STORMWATER MANAGEMENT PLAN:

The preliminary site plan and concept plan has been prepared by Cuesta Planning Consulting Inc. the Durham Bible Retreat demonstrating the proposed location of the retreat within the 38.85 ha (96 acre) property.

The building layout and parking plan has been prepared and provided by Durham Bible Retreat consisting of the following:

- a proposed gathering hall approximately 1,700 m^2;
- proposed gravel parking are approximately 5,250 m^2,
- approximately 112 parking spaces, including 5 accessible spaces; and
- 4 large landscape islands in the parking lot.

4.1 Stormwater Management Criteria:

The stormwater management criteria developed for the site is as follows:

- Provide enhanced water quality treatment for the development site in accordance with Ministry Guidelines (80% TSS removal).
- Promote groundwater infiltration and aquifer recharge where possible; and
- Implement lot-level controls as part of the overall stormwater management treatment train.

Note, the propose developed area is approximately 1.5% of the total are of the site and therefore, water quantity control is not required.

The proposed stormwater management plan for the development will utilize infiltration galleries, lot level controls and on-site water quality measures to mitigate the affects of the building and parking lot construction.

4.2 Rainfall Development and Stormwater Management Peak Runoff Volume Generation:

To determine the maximum volume of surface water runoff generated by the proposed development, the current MTO Rainfall Intensity-Duration-Frequency Curve has been utilized for the site. The 100-year, 6-hour rainfall depth has been determined to be 87.1 mm, which indicates that the 100-year return period storm would create a runoff volume of 605.34 m^3

4.3 Preliminary Stormwater Management Design

As noted in Section 3.2 above, due to the overall size of the property and the relatively small development area, stormwater quantity control is not required as part of the criteria.

As part of the Bible Retreat's development plan, they wish to mitigate the impacts of the development on the natural surround including the surrounding farmland and drainage area within the Rocky Saugeen River watershed.

It is the intention of the Bible Retreat to adequately manage the stormwater on-site to limit the impacts of the development on the natural landscape and to provide as much stormwater volume retention as practically possible. The stormwater management plan for the site has been enhanced to provide water quantity retention on-site in addition to the infiltration and water quality objectives under the current stormwater management criteria.

4.4 Stormwater Management Quantity Storage:

The infiltration galleries have been designed within the large traffic islands proposed in the parking lots as noted on Drawing LG1 included in Appendix F. Based on the current site plan and building layout provided by Cuesta Planning and Durham Bible Retreat, the total surface area available for infiltration and water quality control within the islands is 956 m^2. This area may change during the final design of the infiltration galleries and parking lot layout.

A preliminary infiltration gallery design has been completed based the following criteria:

- current impervious area of 6,950 m^2;
- maximum gallery depth of 1.5 m;
- average gallery width of 3.0 m; and
- a 50 mm clear stone void ratio of 0.4.

The total rainfall volume during a 100-year 6-hour rainfall event was calculated to be 605.34 m^3.

Within each proposed traffic island and above the infiltration galleries, 577m^3 of depression storage (active Storage) is available for surface water ponding and water quality treatment. The active storage depth of available is 0.34 m and is controlled by an overflow bank weir.

The total active storage volume contained within the stone infiltration galleries is 329 m^3 and an additional 248 m^3 of surface ponding/active storage is available within the traffic islands prior to being discharged over the bank weirs. The total stormwater volume retention capacity available is 577 m^3 when not accounting for the actual infiltration provided by the on-site subsurface soil condition. The available capacity volume is based on the current layout and may change during the final site plan.

Soil samples extracted from test pit excavation (Section 5 below) the on-site soils have an average soil infiltration rate of 7.5 $x10^{-6}$ m/s based on an average soil percolation rate (T-time) of 25 min./cm.

Based on the current infiltration gallery design, volume, and location on-site, the combined estimated the infiltration volume infiltrated during the 100 – Year, 6-Hour MTO Storm is 150 m^3 for the infiltration gallery when the subsurface storage capacity is maximized. Therefore, it is estimated the total volume capacity for stormwater storage within the infiltration galleries and in the active surface storage is 727 m^3.

As demonstrate above, the total on-site active surface storage available is 727 m^3, when only 605.34 m^3 is required to retain the 100-year 6-hour rainfall volume. Based on this, there is sufficient capacity on-site to retain the 100-Year, 6-hour MTO IDF Storm Event with approximately 121 m^3 of volume to spare.

Using the modelling software MIDUSS, it is estimated the water elevation during a 100-year 6-hour rainfall event would be approximately 373.80 MASL, which is well below the weir elevation of 374.11 MASL.

We have enclosed the preliminary stormwater calculations in Appendix B and the Preliminary Design Drawings (LG2, LG3 etc.) in Appendix F for reference.

4.5 Stormwater Management Quality Control:

The Stormwater Management Plan for the site it to capture all the stormwater generated by the 100-Year, 6-Hour MTO Rainfall Event and is partially contain within the infiltration galleries. This includes any sediments and deleterious materials within the stormwater itself. During the lower flow storms including the water quality storm (25mm – 4-Hour) event and the erosion control storm (2-year – 6-Hour) event, the total volume of stormwater generated as runoff from the site will be contained within the active storage basins of the infiltration gallery and will retain all sediments and deleterious materials; not allowing for transportation into the downstream watershed. This would equate to 100% TSS removal and 100% Volume treated, which meets and exceeds the requirements for the development.

5. ON-SITE TEST PITS AND SOIL SAMPLE ANALYSIS:

GMBP attended the site in early spring of 2024 to review test pit excavations undertaken by the Bible Retreat staff and collect soil samples for laboratory testing and analysis. Soil analysis tests were undertaken to aid in the estimation of the soil percolation rate (T-time) for the on-site sewage system design and to estimate the soil's coefficient of permeability. A total of four (4) test pits were excavated and corresponding soil samples were collected for these purposes.

A summary of the soil analysis in indicated in Table 1 below.

Table 1 – On-Site Test Pit Information

Test Pit ID No.	Sample No.	Coefficient of Permeability (cm/sec)	Percolation Rate (min/cm)	Description
TH1	S-2334	1.0×10^{-4}	15-20	Depth: +/-0.6 mbgs; Fine Sand, Some Silt; No groundwater observed
TH2	S-2335	9.0×10^{-6}	20-30	Depth: +/-0.6 mbgs; Sand, some gravel, slit; No groundwater observed
TH3	S-2336	12.5×10^{-5}	25-30	Depth: +/-0.6 mbgs; Sand,silt with some gravel No groundwater observed
TH4	S-2337	1.0×10^{-4}	>50	Depth: +/-0.6 mbgs; Silt, some clay No groundwater observed

The test pit location plan and borehole logs are included in Appendix C for reference.

6. POTABLE WATER AND WASTEWATER:

Potable water and wastewater have been addressed in a letter report prepared by GM BluePlan Engineering Limited. The letter report indicates there will be no negative impacts to the groundwater or hydrogeology by providing on-site sewage system disposal and individual wells for water supply to each unit.

We have enclosed a copy of the MECP D-5-4 Report and appendices in Appendix D for reference.

7. HYDRO-ELECTRIC POWER SUPPLY:

Hydro-One has been contacted regarding existing utility installations within the area of the development. They have not responded to our inquiries prior to the preparation of this report.

However, based on the background information provided by the Bible Retreat, there is currently a single-phase hydro service installed and recently upgraded to the site. One of their board members is a licensed electrician, he noted there should not be any problems with the supply or getting an independent 400 Amp service hook up. They noted, the new building would likely require a separate transformer and meter to the building from this line. A propane standby/back-up generator is being proposed for the site, as well, the developer is looking at opportunities for a green energy footprint on-site to supplement power supply (i.e., solar).

A permit will be applied for through the Electrical Safety Authority prior to construction as part of the building permit.

We have enclosed a copy of the correspondence in Appendix E for reference.

8. NATURAL GAS & PROPANE:

Enbridge Gas have been contacted, however, they have yet to confirm the presence of natural gas installation within the immediate area of the development.

Propane distribution and delivery services are available from local suppliers to support each dwelling unit if propane gas should be suitable for the development needs. Sparlings Propane have confirmed they have the capacity and delivery services available in the immediate area to service each unit independently should it be required.

We have enclosed our correspondence including Sparlings Propane Distribution Location Map in Appendix E for reference.

9. COMMUNICATION UTILITIES (BELL CANADA/ROGERS/TELUS/KOODO ETC.):

Bell Canada has confirmed the presence of communication services within the area of the development. They note, legacy copper telephone cables are accessible, however, fiber communication are not. Alternatively, Bell Cellular telephone communication is readily available throughout all Southern Ontario. Television and internet service are available through Bell Canada Satellite.

Rogers has confirmed they have capacity on their 4G ultra-light wireless network for cell phone service and internet connection. We have enclosed copy of their service mapping for reference.

Starlink Satellite ©2024 a division of SpaceX has confirmed through their website portal service is available for this development should they wish to access wireless communications and internet through the digital platform.

We have enclosed a copy of the service information in Appendix E for reference.

10. SOLID WASTE COLLECTION:

Waste Management Canada (WM) hold the current contract for solid waste disposal within the Municipality of West Grey. GMBP contacted the WM District Operations Division – Mount Forest for comment. After speaking with Jim Thompson, District Manager, he has confirmed there is available capacity within their existing Municipal operations to accommodate the additional development.

We have enclosed a copy of the service information in Appendix E for reference.

11. CANADA POST MAIL SERVICE:

Canada Post has been contacted regarding this development proposal; no response has been received at this time. It is anticipated a communal mailbox system will be installed and it has been accounted for on the current site plan.

12. CONCULSIONS AND RECOMMENDATION

GM BluePlan Engineering Ltd. (GMBP) has been retained by Durham Height Bible Retreat to complete a preliminary Function Servicing Brief and engineering services relating to a proposed Bible Retreat & Spiritual Center located at 423018 the Rocky Saugeen Road within in the Municipality of West Grey.

This Preliminary Functional Servicing Report (FSR) has been prepared to summarize the proposed Bible Retreat Development, and specifically how the proposed development will be serviced from a site civil perspective.

The report outlines the proposed civil servicing plan including potable water, on-site sewage system disposal, stormwater management criteria and composite utility service option for the development. Further, the proposed servicing plan satisfies the rural development requirements set out in the current Provincial Policy Statements, relating to site servicing including meeting or exceeding the MECP Stormwater Management Guideline requirements for on-site stormwater management.

We trust this is satisfactory to aid in your review of the proposed development. Should you have any questions or concerns, please do not hesitate to contact our office.

Yours truly,

GM BLUEPLAN ENGINEERING LIMITED
Per:

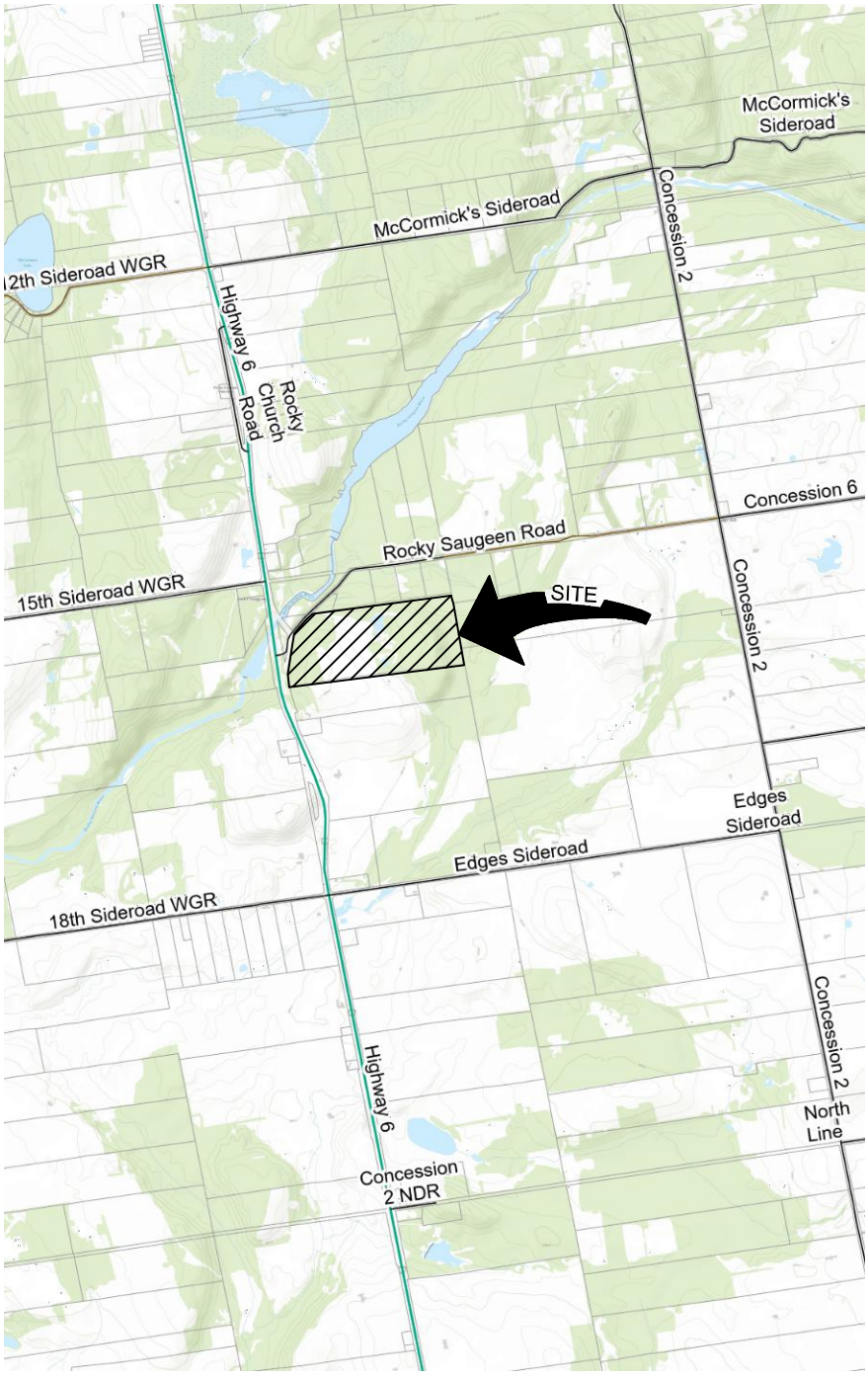
Darren D. Hewgill, B.Eng., P. Eng.
Senior Engineer, Project Manager
DDH/ah

Encl.

cc: Durham Heights Bible Retreat: Abner Wideman - abner@maplelane.ag
Durham Heights Bible Retreat: Cameron Gerber - cg@pebblesrestaurant.ca
Cuesta Planning: Genevieve Scott – genevieve@cuestaplanning.com
GMBP: Matt Nelson – matt.nelson@gmblueplan.ca
File No. 224002

APPENDIX A:
REPORT FIGURES

224002
DURHAM HEIGHTS BIBLE RETREAT INC.



SITE
SCALE = N.T.S.

Scale = N.T.S.
APRIL 2024

SITE LOCATION KEY PLAN

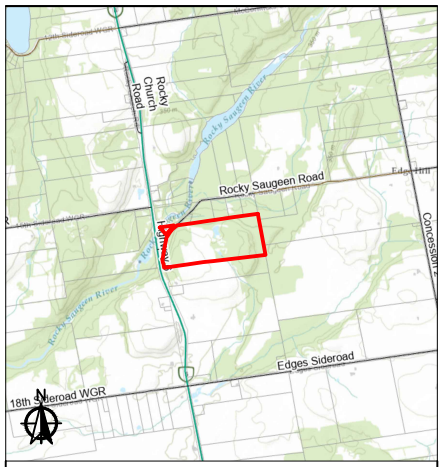
423018 ROCKY SAUGEEN ROAD

MUNICIPALITY OF WEST GREY

Figure No. 1

BluePlan ENGINEERING

BUILDING SITE PLAN & app. ELEVATIONS



423018 ROCKY SAUGEEN ROAD
CON 1 EGR PT LOT 16 PT DIV 2;AND 3
Municipality of West Grey
County of Grey

Legend

- Subject Lands
- Proposed Gravel Laneway and Parking Area
- Proposed Gravel Parking Spaces (Approx. 136 spaces, 5 barrier free)
- Proposed Building (±1800m^2)
- Treed/Landscaped Area
- Existing Drilled Well
- Barn

* measurements are approximate

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Dwn. By:	Date Printed:
V.Muhunthan	November 13, 2023
File:	Project Name:
x22182	Durham Heights

APPENDIX B:
STORMWATER MANAGEMENT CALCULATIONS

Active coordinate

44° 13' 45" N, 80° 49' 44" W (44.229167,-80.829167)

Retrieved: Wed, 27 Mar 2024 14:16:14 GMT

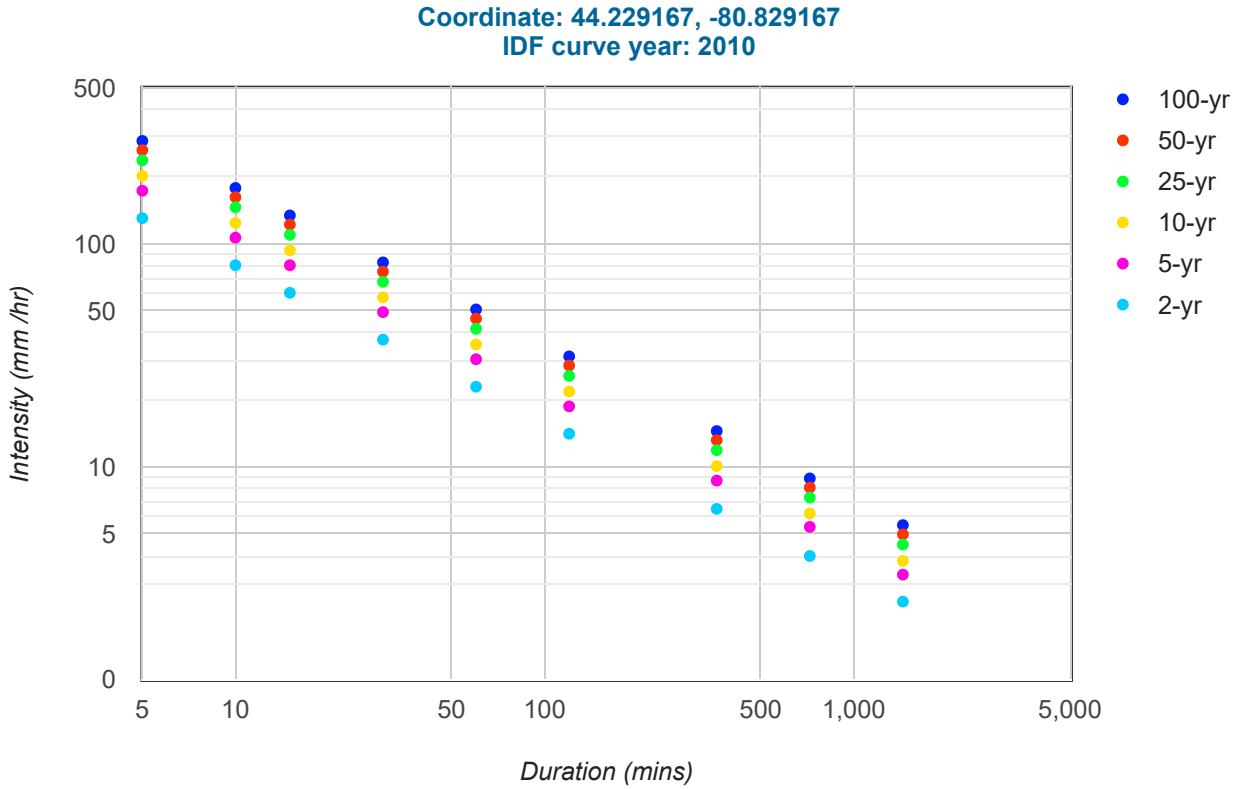
Location summary

These are the locations in the selection.

IDF Curve: 44° 13' 45" N, 80° 49' 44" W (44.229167,-80.829167)

Results

An IDF curve was found.



Coefficient summary

IDF Curve: 44° 13' 45" N, 80° 49' 44" W (44.229167,-80.829167)

Retrieved: Wed, 27 Mar 2024 14:16:14 GMT

Data year: 2010
IDF curve year: 2010

Return period	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
A	22.9	30.4	35.4	41.6	46.2	50.8
B	-0.699	-0.699	-0.699	-0.699	-0.699	-0.699

Statistics

Rainfall intensity (mm hr^{-1})

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	130.1	80.1	60.3	37.2	22.9	14.1	6.5	4.0	2.5
5-yr	172.7	106.4	80.1	49.4	30.4	18.7	8.7	5.4	3.3
10-yr	201.1	123.9	93.3	57.5	35.4	21.8	10.1	6.2	3.8
25-yr	236.3	145.6	109.6	67.5	41.6	25.6	11.9	7.3	4.5
50-yr	262.4	161.6	121.8	75.0	46.2	28.5	13.2	8.1	5.0
100-yr	288.5	177.7	133.9	82.5	50.8	31.3	14.5	8.9	5.5

Rainfall depth (mm)

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	10.8	13.4	15.1	18.6	22.9	28.2	39.3	48.4	59.6
5-yr	14.4	17.7	20.0	24.7	30.4	37.5	52.1	64.2	79.1
10-yr	16.8	20.6	23.3	28.7	35.4	43.6	60.7	74.8	92.1
25-yr	19.7	24.3	27.4	33.8	41.6	51.3	71.3	87.9	108.3
50-yr	21.9	26.9	30.4	37.5	46.2	56.9	79.2	97.6	120.3
100-yr	24.0	29.6	33.5	41.2	50.8	62.6	87.1	107.3	132.2

Terms of Use

Durham Heights
423018 Rocky Saugeen Road, West Grey
Our File: 224002
March 2024

Storage Gallery

ELEV (m)	INC DEPTH (m)	SURFACE AREA (sq m)	INCR. VOL (cu m)	INCR. STORAGE VOL (infiltration Gallery) (cu m)	ACCUM STORAGE VOL (stone Gallery) (cu m)	
372.07	0.00	514	0.0	0.00	0.000	Bottom of the Gallery
372.17	0.10	514	51.4	20.56	20.560	
372.27	0.20	514	51.4	20.56	41.120	
372.37	0.30	514	51.4	20.56	61.680	
372.47	0.40	514	51.4	20.56	82.240	
372.57	0.50	514	51.4	20.56	102.800	
372.67	0.60	514	51.4	20.56	123.360	
372.77	0.70	514	51.4	20.56	143.920	
372.87	0.80	514	51.4	20.56	164.480	
372.97	0.90	514	51.4	20.56	185.040	
373.07	1.00	514	51.4	20.56	205.600	
373.17	1.10	514	51.4	20.56	226.160	
373.27	1.20	514	51.4	20.56	246.720	
373.37	1.30	514	51.4	20.56	267.280	
373.42	1.35	514	25.7	10.28	277.560	Bottom of Freeflow pipe
373.47	1.40	514	25.7	10.28	287.840	
373.57	1.50	514	51.4	20.56	308.400	Top of pipe
373.67	1.60	514	51.4	20.56	328.960	Top of Stone
373.77	1.70	0	0.0	0.00	328.960	Rip Rap
374.11	2.04	956.0	248.1	248.06	577.023	Overflow Weir

Total perimeter 305.0 m
Infilatration rate 27 mm/hour 0.0000075 m/sec

Overflow Weir
Weir Inv. = 374.11 m

ELEV (m)	STAGE (m)	STORAGE VOLUME (cu m)	Infiltration ORIFICE FLOW (cu m/s)	WEIR FLOW (cu m/s)	TOTAL FLOW (cu m/s)	
372.070	0.00	0.0	0.0039	0.000	0.004	Bottom of the Gallery
372.170	0.10	20.6	0.0041	0.000	0.004	
372.270	0.20	41.1	0.0043	0.000	0.004	
372.370	0.30	61.7	0.0045	0.000	0.005	
372.470	0.40	82.2	0.0048	0.000	0.005	
372.570	0.50	102.8	0.0050	0.000	0.005	
372.670	0.60	123.4	0.0052	0.000	0.005	
372.770	0.70	143.9	0.0055	0.000	0.005	
372.870	0.80	164.5	0.0057	0.000	0.006	
372.970	0.90	185.0	0.0059	0.000	0.006	
373.070	1.00	205.6	0.0061	0.000	0.006	
373.170	1.10	226.2	0.0064	0.000	0.006	
373.270	1.20	246.7	0.0066	0.000	0.007	
373.370	1.30	267.3	0.0068	0.000	0.007	
373.420	1.35	277.6	0.0069	0.000	0.007	Bottom of Freeflow pipe
373.470	1.40	287.8	0.0071	0.000	0.007	
373.570	1.50	308.4	0.0073	0.000	0.007	Top of Pipe
373.670	1.60	329.0	0.0075	0.000	0.008	Top of Stone
373.770	1.70	329.0	0.0077	0.000	0.008	Rip Rap
374.108	2.04	577.0	0.0085	1.000	1.009	Overflow Weir

Volume infiltrated in 6 hours 149.9715 m3 Max
Volume infiltrated in 6 hours 83.268 m3 Min

Durham Heights
423018 Rocky Saugeen Road, West Grey
Our File: 224002
March 2024

Storage Gallery Calculations

Stone Gallery Total Area (m2)	514.0
Total Volume Available before spill (m3)	577.0
Infiltration volume during a 6 hour storm (m3)	150.0
Infiltration Rate (m/s)	0.0
Total Volume capacity (m3)	727.0

Based on the Percolation Time of 25 min/cm

Total Impervious Area (m2)	6950.0
Rainfall Depth during a 100 year 6 hour rainfall e	87.1
Total Rainfall volume (m3)	605.3
Excess Volume available (m3)	121.6

Table C 2: Approximate relationships between hydraulic conductivity, percolation time and infiltration rate

Hydraulic Conductivity, K_{fs} (centimetres/second)	Percolation Time, T (minutes/centimetre)	Infiltration Rate, 1/T (millimetres/hour)
0.1	2	300
0.01	4	150
0.001	8	75
0.0001	12	50
0.00001	20	30
0.000001	50	12

Source: Ontario Ministry of Municipal Affairs and Housing (OMMAH). 1997. Supplementary Guidelines to the Ontario Building Code 1997. SG-6 Percolation Time and Soil Descriptions. Toronto, Ontario.

```
"                MIDUSS Output ----------------------------------------------->"
"                MIDUSS version                          Version 2.25  rev. 473"
"                MIDUSS created                       Sunday, February 07, 2010"
"           10   Units used:                                          ie METRIC"
"                Job folder:            C:\Users\rsingh\Desktop\My Jobs\224002"
"                Output filename:        224002-100 year storm water level.out"
"                Licensee name:                                            gmbp"
"                Company                                                      "
"                Date & Time last used:                4/5/2024 at 10:28:08 AM"
" 31          TIME PARAMETERS"
"        5.000   Time Step"
"      360.000   Max. Storm length"
"     3600.000   Max. Hydrograph"
" 32          STORM Canada AES"
"            4   Canada AES"
"       87.100   Rainfall depth"
"      360.000   Duration"
"      126.000   Time to peak"
"        7.000   Decay factor"
"             Maximum intensity            52.707    mm/hr"
"             Total depth                  87.100    mm"
"            6   100hyd   Hydrograph extension used in this file"
" 33          CATCHMENT 101"
"            2   Rectangular"
"            1   Equal length"
"            1   SCS method"
"          101   impervious area"
"      100.000   % Impervious"
"        0.695   Total Area"
"       45.000   Flow length"
"        2.000   Overland Slope"
"        0.000   Pervious Area"
"       45.000   Pervious length"
"        2.000   Pervious slope"
"        0.695   Impervious Area"
"       45.000   Impervious length"
"        2.000   Impervious slope"
"        0.250   Pervious Manning 'n'"
"      100.000   Pervious SCS Curve No."
"        0.000   Pervious Runoff coefficient"
"        0.000   Pervious Ia/S coefficient"
"        0.000   Pervious Initial abstraction"
"        0.015   Impervious Manning 'n'"
"      100.000   Impervious SCS Curve No."
"        1.000   Impervious Runoff coefficient"
"        0.100   Impervious Ia/S coefficient"
"        0.000   Impervious Initial abstraction"
"                     0.102     0.000     0.000     0.000 c.m/sec"
"             Catchment 101          Pervious   Impervious Total Area "
"             Surface Area           0.000      0.695      0.695      hectare"
```

```
"             Time of concentration  19.772     3.655      3.655      minutes"
"             Time to Centroid       123.689    112.952    112.952    minutes"
"             Rainfall depth         87.100     87.100     87.100     mm"
"             Rainfall volume        0.00       605.34     605.34     c.m"
"             Rainfall losses        0.000      0.000      0.000      mm"
"             Runoff depth           87.100     87.100     87.100     mm"
"             Runoff volume          0.00       605.34     605.35     c.m"
"             Runoff coefficient     0.000      1.000      1.000      "
"             Maximum flow           0.000      0.102      0.102      c.m/sec"
" 40          HYDROGRAPH Add Runoff "
"            4   Add Runoff "
"                     0.102     0.102     0.000     0.000"
" 54          POND DESIGN"
"         0.102   Current peak flow    c.m/sec"
"         0.019   Target outflow    c.m/sec"
"         605.3   Hydrograph volume    c.m"
"           20.   Number of stages"
"       372.070   Minimum water level    metre"
"       374.108   Maximum water level    metre"
"       372.070   Starting water level    metre"
"             0   Keep Design Data: 1 = True; 0 = False"
"                   Level Discharge    Volume"
"                 372.070   0.00386     0.000"
"                 372.170   0.00408    20.560"
"                 372.270   0.00431    41.120"
"                 372.370   0.00454    61.680"
"                 372.470   0.00477    82.240"
"                 372.570   0.00500   102.800"
"                 372.670   0.00523   123.360"
"                 372.770   0.00546   143.920"
"                 372.870   0.00569   164.480"
"                 372.970   0.00591   185.040"
"                 373.070   0.00614   205.600"
"                 373.170   0.00637   226.160"
"                 373.270   0.00660   246.720"
"                 373.370   0.00683   267.280"
"                 373.420   0.00694   277.560"
"                 373.470   0.00706   287.840"
"                 373.570   0.00729   308.400"
"                 373.670   0.00752   328.960"
"                 373.770   0.00774   328.960"
"                 374.108     1.009   577.023"
"             Peak outflow                  0.090    c.m/sec"
"             Maximum level               373.798    metre"
"             Maximum storage             349.443    c.m"
"             Centroidal lag                7.468   hours"
"                  0.102     0.102     0.090     0.000 c.m/sec"
" 38          START/RE-START TOTALS 101"
"            3   Runoff Totals on EXIT"
"             Total Catchment area                      0.695    hectare"
```

```
"             Total Impervious area                     0.695    hectare"
"             Total % impervious                      100.000"
" 19          EXIT"
```

APPENDIX C:

TEST PIT LOCATION PLAN & SOIL SAMPLE ANALYSIS

224002

D-5-4 Study and Site Plan

N

N.T.S.

December, 2023

Testhole and Sample Locations

423018
Rocky Saugeen Road,
Durham, ON
N0G1R0

BluePlan ENGINEERING

TH-1

BluePlan ENGINEERING

CLIENT Durham Heights Bible Retreat Inc.
PROJECT NAME D-5-4 Study and Site Plan
PROJECT NUMBER 224002
PROJECT LOCATION 423018 Rocky Saugeen Road. Durham, ON, NOG1R0
DATE COMPLETED December 21, 2023
CONTRACTOR
LOGGED BY BTD
METHOD Excavator
WELL CONSTRUCTION
DATE MEASURED

DEPTH (m)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
					Brown, Moist TOPSOIL with ORGANICS.	
					0.20	
					Brown, moist SILTY SAND and GRAVEL with trace COBBLE.	
0.5	GB					
1.0						
1.5						
					1.85	

Testhole Terminated at 1.85 m.

TH-2

CLIENT Durham Heights Bible Retreat Inc.
PROJECT NAME D-5-4 Study and Site Plan
PROJECT NUMBER 224002
PROJECT LOCATION 423018 Rocky Saugeen Road. Durham, ON, NOG1R0
DATE COMPLETED December 21, 2023
CONTRACTOR
LOGGED BY BTD
METHOD Excavator
WELL CONSTRUCTION
DATE MEASURED

DEPTH (m)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
					Brown, moist TOPSOIL with ORGANICS.	
					0.20	
					Brown, moist SILTY SAND and GRAVEL with trace COBBLE.	
0.5	GB					
1.0						
1.5						
					1.80	

Testhole Terminated at 1.80 m.

TH-3

BluePlan ENGINEERING

CLIENT Durham Heights Bible Retreat Inc.
PROJECT NAME D-5-4 Study and Site Plan
PROJECT NUMBER 224002
PROJECT LOCATION 423018 Rocky Saugeen Road. Durham, ON, NOG1R0
DATE COMPLETED December 21, 2023
CONTRACTOR
LOGGED BY BTD
METHOD Excavator
WELL CONSTRUCTION
DATE MEASURED

DEPTH (m)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
					Brown, Moist TOPSOIL with ORGANICS.	
					0.20	
					Brown, moist SILTY SAND and GRAVEL with trace COBBLE.	
0.5	GB					
1.0						
1.5						
					1.66	

Testhole Terminated at 1.66 m.

TH-4

CLIENT Durham Heights Bible Retreat Inc.
PROJECT NAME D-5-4 Study and Site Plan
PROJECT NUMBER 224002
PROJECT LOCATION 423018 Rocky Saugeen Road. Durham, ON, NOG1R0
DATE COMPLETED December 21, 2023
CONTRACTOR
LOGGED BY BTD
METHOD Excavator
WELL CONSTRUCTION
DATE MEASURED

DEPTH (m)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
					Dark moist TOPSOIL with organics.	
					0.20	
					Brown, moist SILTY SAND and GRAVEL with trace COBBLE.	
0.5	GB					
1.0						
1.5						
					1.83	

Testhole Terminated at 1.83 m.

APPENDIX D:

SITE SERVICING (MECP D-5-4) REPORT

March 4, 2024
Our File: 224002

Durham Heights Bible Retreat Inc.
423018 Rocky Saugeen Road
Durham, ON, N0G 1R0
Attn: Mr. Abner Wideman

Via Email

RE: Preliminary Hydrogeological Feasibility Assessment for Private Servicing for Additional Development: 423018 Rocky Saugeen Road, Municipality of West Grey

Dear Mr. Wideman,

GM BluePlan Engineering Limited (GMBP) has been retained by Durham Heights Bible Retreat Inc. (i.e. the "Client") to provide hydrogeological services to support municipal approvals for the potential addition of an institutional development (church) in the community of Rocky Saugeen within the Municipality of West Grey. The lands under consideration (i.e., the "Site") are located within 423018 Rocky Saugeen Road, located on the east side of Highway 6, approximately 100 m south-southeast of the Saugeen River, bordered on the north by Rocky Saugeen Road and Edges Side Road. The current property is further described as Lot 16, Grey Concession 1, former Township of Glenelg, EGR, within the Municipality of West Grey.

The property is currently used for a combination of agricultural, residential, and undeveloped forest/wetland/greenspace with an approximate lot size of 38.97 ha (96.29 acres, the Site).

The proposed development is to be used for institutional purposes (i.e., a church/religious meeting building) with an access road and parking area. The proposed development will be added onto the existing property, located in part of the current agricultural land, situated away from an existing residence with associated outbuildings. The remainder of the site will persist in the current residential/agricultural/undeveloped usage. See Enclosure A for an approximate site plan.

This preliminary hydrogeological feasibility assessment is intended to establish whether it will be feasible to service the existing lot with a private water well and a private on-site sewage system and to support the planning and permitting process.

GEOLOGICAL SETTING

Physiographic mapping indicates that the Site lies predominantly within kame moraines surrounded by spillway channels associated with the Horseshoe Moraines Physiographic Region (NDMNRF, 2007). The landform in the vicinity of the Site consists generally of the Port Huron Moraine system with glaciofluvial and ice-contact stratified deposits (kames), which extend in a southwest direction surrounded by meltwater stream deposits and spillways (Chapman & Putnam, 1984).

According to map sets available from the Ontario Ministry of Northern Development and Mines (NDMNRF, 2000; NDMNRF, 2010; NDMNRF, 2011), the geological materials underlying the Site are briefly summarized as follows:

- Predominantly coarse-textured ice-contact stratified deposits and coarse-textured glaciofluvial deposits (mainly sand and gravel texture) overlying

- Elma Till (silty to sandy silt texture) and glaciofluvial outwash and ice-contact deposits (mainly gravel and sand texture) overlying
- Guelph Formation (sandstone, shale, dolostone, and siltstone) bedrock

Nearby water well records indicate that the depth to bedrock is predominantly shallow but does range widely. Most records fell within the range of 3.0 to 8.5 m below ground surface with an average depth of 6.3 m based on the surrounding wells in the immediate vicinity of the site.

The coarse-textured glaciofluvial deposits have developed predominantly Pike Lake Series soils, which covers most of the Site (Agriculture Canada, 1979). The Pike Lake Series soil generally consists of 3 inches of very dark grey loam over yellow-brown sandy loam over brown clay loam and poorly sorted gravel interspersed with stony till. As a result of the soil texture, the hydraulic conductivity is expected to be moderate to high, exhibiting good drainage. The topography of these soil deposits is generally moderate to very steeply sloping, but irregular (Agriculture Canada, 1979).

Also present in the vicinity of the coarse-textured glaciofluvial deposits has developed Sargent Series soil, which cover a portion of the middle and east/southeast part of the Site and are generally a well-sorted gravelly outwash that consists of 4 inches of very dark grey loam over light brown loam over brown clay loam and well sorted gravel. As a result of the soil texture, the hydraulic conductivity and drainage are considered to be good. The topography of these soil deposits is understood to be gently sloping and moderately gravelly (Agriculture Canada, 1979).

Based on topographic mapping in addition to the topographic descriptions given, the elevations of the Site and surrounding lands are slightly to moderately hilly. The local topographic high, according to available topographic mapping is situated near or just to the west of the proposed development location. Another elevation high is located on the east side of the property with the site low consisting of wetland and ponded areas located roughly in the middle of the property, near to the existing residence. The Rocky Saugeen River flows in a southwest direction approximately 100 m to the north-northwest of the northern boundary of the Site. Additionally various surface water features are noted around the middle to the east side of the property and several small ponds are present. It can be reasonably assumed that surface runoff and drainage follows the topography and travels to the north and/or towards these low-lying features, with flow into the Rocky Saugeen River of the Saugeen River watershed that eventually discharges into Lake Huron.

The bedrock formation that sub-crops below the Site is the Salina Formation, which tends to be a competent aquifer in terms of quantity but often exhibits poor water quality (Singer S. C., 2003). The water quality of the Salina Formation is affected by the presence of soluble evaporite minerals (e.g., anhydrite and gypsum) which result in elevated total dissolved solids, hardness, and sulphate concentrations.

Groundwater levels on the Site may fluctuate over the course of the year. The presence of well-drained characteristics of the soil across most of the Site may allow for groundwater to infiltrate relatively quickly, but the proximity of the Rocky Saugeen River plus the presence of wetland features and ponds elsewhere on the property, groundwater levels may be high during wet seasons (e.g., winter and spring).

FIELD INVESTIGATION

Four test holes (i.e., TH-1 to TH-4) were advanced by excavator at the Site on December 21, 2023. GMBP staff were not in attendance to record the stratigraphic conditions, but photos, stratigraphic descriptions and soil samples were provided for grain size analysis. The test hole photos are provided in Enclosure B.

The test holes were noted to encounter a top layer of stony topsoil up to 0.25 m thick, followed by medium sand/silty clay mixture with stones. In the vicinity of the proposed weeping bed area, the test hole encountered the same stratigraphy,

but it was not as stony. The test holes were completed to an approximate depth of up to 1.6 to 1.9 mbgs (metres below ground surface). It should be noted that the entirety of each test hole excavation was noted to be dry.

A grain-size distribution analysis was completed for four soil samples collected from each of the test holes (each collected at depths of 0.6 mbgs) and indicated that in three of the test holes (TH-1, TH-2, and TH-3) the soil was approximately 28-41% fines (i.e., silt and clay content). The T-time for these soils was estimated to range between 15 and 30 min/cm (see Enclosure C). For TH-4, the soil was approximately 83% fines. The T-time for the soil was estimated to be greater than 50 min/cm (see Enclosure C).

SERVICING CONSIDERATIONS

On-Site Sewage Systems: Nitrogen Attenuation

The primary concern related to on-site sewage systems for residential development is the effect that these systems may have on the concentration of nitrate in local groundwater. The proposed development must ensure that its sewage management does not negatively impact groundwater quality and preclude its use for other purposes or by other (i.e., off-site/downgradient) users. The most prevalent use for groundwater use is domestic consumption and so typically this means that a given development must not result in nitrate concentrations of 10 mg/L (per Ontario Drinking Water Standards) in the groundwater going off Site. Nitrogen attenuation calculations for the proposed development have been computed as per the method given in the MOE Procedure D-5-4 (1996) and are summarized in Table 1.

It is our understanding the proposed development will be proceeding to ensure the maximum sewage generation for the entire property (i.e., residence plus church building) is less than 10,000 l/day. Sewage systems equal to or greater than 10,000 L/day are regulated by the Ministry of Environment through the Environmental Compliance Approval process, whereas sewage systems under 10,000 L/day are regulated through the Ontario Building Code.

The nitrate loading will depend on the volume of sewage generation at the property. In the case of the single residence, the sewage generation is represented by 40 g/day (or an average flow of 1,000 l/day at 40 mg/L). In the case of the proposed church building, the sewage generation will be dependent on the Ontario Building Code (OBC) requirements related to use and occupancy.

On a practical note, dilution calculations are not required under the D-5-4 Guidelines where individual residential properties are over 1 hectare in size. Assuming a church would generate less sewage than ten (10) individual homes, the property would provide for lot sizes of 3.9 ha each (i.e., 38.96 ha / 10), which indicates that sewage impacts would not be expected. Regardless, sewage dilution calculations have been completed to provide direct evidence of sufficient attenuation and since the property provides for mixed use.

Under Table 8.2.1.3.B. of the OBC, Churches provide for 8 L/day per seat where no kitchen service is provided, and 36 L/day with Kitchen facilities provided. Based on information provided by Mr. Abner Wideman and the site plan, a formal kitchen with dishwashing and cooking services will not be available.

The current proposed occupancy is 300 persons. Therefore, the sewage loading from the Church would be 300 x 8, or 2,400 L/day. At a sewage concentration of 40 mg/L, this corresponds to nitrate loading of 96 g/day. Under this scenario, the resultant nitrate attenuation for the total property use is provided in Table 1.

Table 1: Nitrogen Attenuation for the Property with Church (No Kitchen) 300 Persons

Line	Item	Value	Source
1	Average Annual Precipitation (mm/yr)	1,119	Environment Canada (Durham) 1981-2010 Climate Normals
2	Average Annual Evapotransporation (mm/yr)	550	MNR (1984)
3	Impervious Area Factor	0.40	Estimated, for combination of cultivated and woodland usage, rolling slopes (MTO Drainage Management Manual, Chart 1.07)
4	Lot Area (m^2)	389,672	From Conceptual Plan (see Enclosure A)
5	Hydrologic Input (L/yr)	133,034,000	Line 4 * (Line 1 – Line 2) * (1 – Line 3), units converted
6	Sewage Effluent Input Rate (L/day) – 300 seats @ 8 L/seat/day	2,400	Specified by Procedure D-5-4
7	Annual Sewage Effluent Input (L/yr) - Church	876,600	Line 6, units converted
8	Total Water Input (L/yr)	133,910,621	Line 5 + Line 7, units converted
9	Nitrate Output (g/day) 40 g/day residence 96 g/day church	136	Specified by Procedure D-5-4 – 40 + 96 = 136
10	Annual Nitrogen Loading (g/yr)	49,640	Line 9, units converted
11	Attenuated Nitrogen Concentration (mg/L)	0.4	Line 10 / Line 8, units converted

The attenuated nitrogen concentration for the Site is estimated to be 0.4 mg/L, which is significantly less than the maximum allowable 10 mg/L. As such, it is anticipated that the Site can be serviced using conventional Class 4 sewage systems per the *Ontario Building Code* (i.e., septic tank and tile bed).

Based on the uncertain nature of development and significant available land mass, we have also calculated the estimated Nitrate concentration under sewage loading of up to 10,000 L/day. As provided below in Table 2.

Table 2: Nitrogen Attenuation for the Property with Sewage Generation of 10,000 L/day

Line	Item	Value	Source
1	Average Annual Precipitation (mm/yr)	1,119	Environment Canada (Durham) 1981-2010 Climate Normals
2	Average Annual Evapotransporation (mm/yr)	550	MNR (1984)
3	Impervious Area Factor	0.40	Estimated, for combination of cultivated and woodland usage, rolling slopes (MTO Drainage Management Manual, Chart 1.07)
4	Lot Area (m^2)	389,672	From Conceptual Plan (see Enclosure A)
5	Hydrologic Input (L/yr)	133,034,000	Line 4 * (Line 1 – Line 2) * (1 – Line 3), units converted

6	**Sewage Effluent Input Rate (L/day) – 10,000 L/day**	10,000	Specified by Procedure D-5-4
7	**Annual Sewage Effluent Input (L/yr) - Church**	3,650,000	Line 6, units converted
8	**Total Water Input (L/yr)**	133,910,621	Line 5 + Line 7, units converted
9	**Nitrate Output (g/day)**	400	Specified by Procedure D-5-4 – 10,000 L/day @ 40 mg/L
10	**Annual Nitrogen Loading (g/yr)**	146,000	Line 10, units converted
11	**Attenuated Nitrogen Concentration (mg/L)**	1.1	Line 10 / Line 8, units converted

The calculations indicate that the resultant attenuated nitrate concentration would be 1.1 mg/L. Based on these calculations, and as would follow by the overall large property size, no nitrate impacts are expected at the property for combined sewage use at the property under 10,000 L/day.

On-Site Sewage Systems: Sewage System Sizing

The feasibility of the sewage servicing also depends on whether the lot is large enough to accommodate the on-site sewage system. Based on the lot sizing, it is clear that a sewage system will be able to fit on the lot. Based on the relatively large size of the lot, specific calculations are not deemed warranted within this support document. It is recommended that an approved Designer complete the design of the system to meet the OBC.

Based on the conceptual site plan, the general location and layout of the sewage system appear to be appropriate. Details regarding the exact size and location of the sewage can be determined at the time of the building permit application and are subject to change as project details are developed. It is our opinion that the property size and layout is sufficient to accommodate such changes.

Private Well and Water Supply

Procedure D-5-5 specifies that the per person water supply requirements are 450 L/d (0.3125 L/min) while the peak demand rate is 3.75 L/min/person for 120 minutes a day, and a minimum rate requirement of 13.7 L/min. Assuming 5 persons in the dwelling (i.e., a four bedroom house) as outlined as the requirement in conducting this calculation, this means the well would need to supply 2,250 L/d with a peak demand over 120 minutes of 18.75 L/min. This same procedure does not provide specific guidance or requirements for day-use facilities such as this one.

It should be noted that while the maximum proposed occupancy for the building is 300 persons, with no kitchen or living facilities proposed to be built, the main water draws on a domestic well are eliminated (cooking, dishes, laundry and showers). The only requirements for persons occupying the building will be running toilets and water for personal consumption. And based on the available capacity and recommended yield of the existing onsite well,

Based on the existing domestic well onsite and nearby water well records (see Enclosure E), it appears that the bedrock aquifer in this area can be more than capable of supplying the required flow rates.

The Guelph Formation (bedrock) aquifer has an average transmissivity around 12.1 m^2/d and would be expected to provide sufficient supply for domestic usage (Singer *et al,* 2003). In the vicinity of the Site, bedrock water well records generally indicate sufficient supply. It is apparent that overburden is not very productive in this area due to the lack of records indicating overburden wells.

There are 12 bedrock wells that were tested under conditions equal to or exceeding the peak demand rate and duration (i.e. 18.75 L/min for 120 min), thus indicating sufficient yield for intermittent day-use purposes:

Well ID	Calculated Production Rate LPM	Test Duration min
2503752	138.8	150
2504605	155.4	150
2505143	50.5	90
2505364	58.5	210
2507880	204.4	420
2508456	100.9	480
2509019	124.9	120
2514030	41.9	90
7158712	376.4	120
7197383	68.5	120
7359546	550.3	90
7361093	909.3	60

Based on the information available, it is reasonable to expect that a private water well installed on the Site will be able to supply the required minimum flow rates.

It is recommended that any new water wells be installed (in respect of the separation requirements set forth in the *Ontario Building Code*) at least 15 m away from existing or proposed sewage treatment systems, including those on neigbouring properties. It is further recommended that the water well be constructed with a water-tight casing and annular seal extending from surface and into the target aquifer.

CONCLUSION

A preliminary hydrogeological assessment for the proposed develop of a day-use instiutional facility that will have a maximum seating capacity of 300 persons, but no kitchen facilities, to be added onto the existing property, located within Glenelg Lot 16, Grey Concession 1 East of Owen Sound Road, within the Township of Central Elgin, has been conducted to assess the feasibility for the Site to support the proposed development, which will be serviced by private water wells and private on-site sewage.

The findings of the assessment indicate that:

- the proposed development can be serviced with a Class 4 on-site sewage system while achieving nitrogen attenuation requirements;
- sufficient groundwater supply is likely available from the bedrock (Guelph Formation) aquifer below the Site;
- the hydrogeological conditions generally support the proposed and servicing scheme; and
- the proposed development is feasible from a hydrogeological perspective.

We recommend that:

- the water system for the proposed residence be furnished with a UV disinfection system; and
- the new water supply well for the Site be
    - constructed so as to draw from the bedrock aquifer or deep overburden, as supply and water quality dictate;

  - installed with a watertight casing and annular seal that extends from the surface to the target supply formation;
  - placed in a location at least 15 m away from existing or proposed on-site sewage systems, including those on neighbouring properties.
- the new on-site sewage systems be constructed per the *Ontario Building Code* and in respect of all offsets from any existing or proposed well as specified therein.
- That the final occupancy and sewage sizing for the Church ensure that when added to the sewage flows for the residence, are below 10,000 L/day.

Yours truly,

GM BLUEPLAN ENGINEERING LIMITED

Per:

Kimberly Gilder, P.Geo.

Per:

Matthew Nelson, M.Sc., P.Eng., P.Geo.

Enclosures:

A: Site Plan
B: Test Hole Logs
C: Grain-Size Distribution
D: Water Well Records

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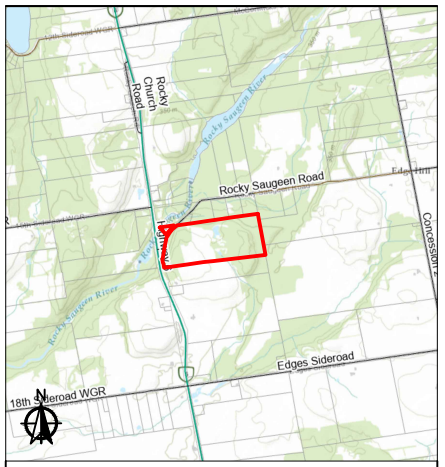
ENCLOSURE A:
SITE PLAN

BUILDING SITE PLAN & app. ELEVATIONS



423018 ROCKY SAUGEEN ROAD
CON 1 EGR PT LOT 16 PT DIV 2;AND 3
Municipality of West Grey
County of Grey

Legend

- Subject Lands
- Proposed Gravel Laneway and Parking Area
- Proposed Gravel Parking Spaces (Approx. 136 spaces, 5 barrier free)
- Proposed Building (±1800m^2)
- Treed/Landscaped Area
- Existing Drilled Well
- Barn

* measurements are approximate

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Dwn. By:	Date Printed:
V.Muhunthan	November 13, 2023
File:	Project Name:
x22182	Durham Heights

ENCLOSURE B:
TEST HOLE PHOTOS

Servicing Feasibility Study — Test Hole Photos

Photo 1. Test Hole 1.

Photo 2. Test Hole 2.

File No. 224002
Photos - December 2023

Servicing Feasibility Study — Test Hole Photos

Photo 3. Test Hole 3.

Photo 4. Test Hole 4

File No. 224002
Photos - December 2023

ENCLOSURE C:
GRAIN-SIZE DISTRIBUTION

GM BluePlan Engineering Limited

Guelph, Owen Sound, Listowel, Kitchener, London, Hamilton, GTA

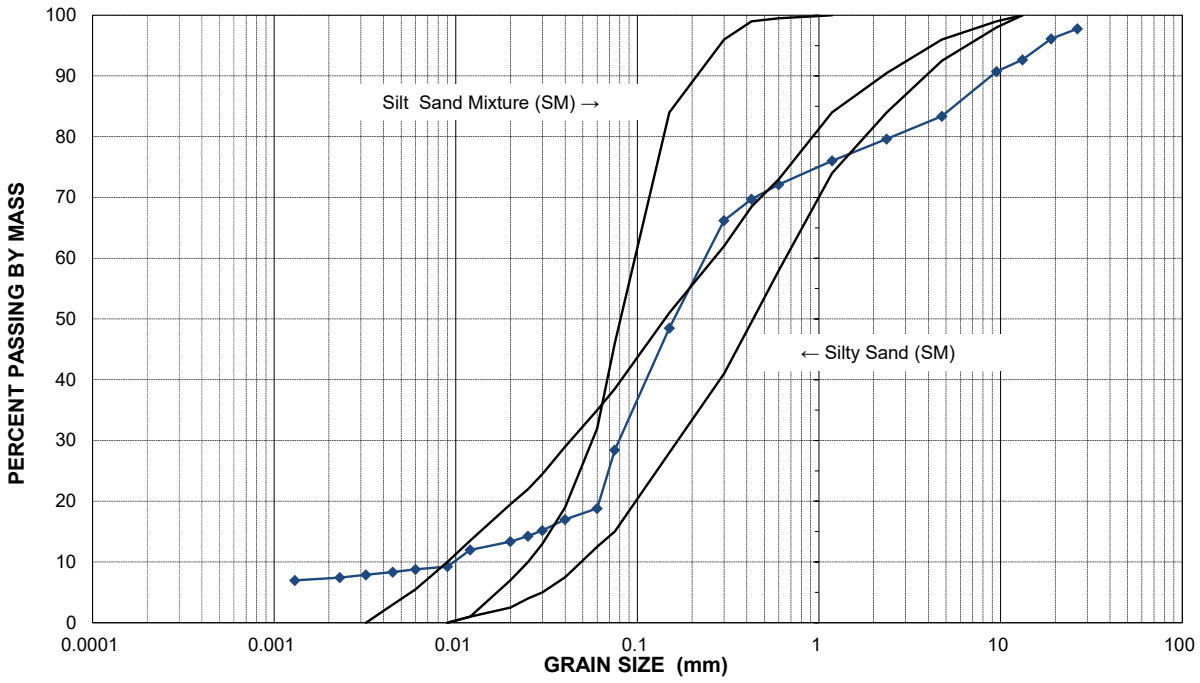
1260 - 2nd Avenue E., Unit 1 Owen Sound, ON N4K 2J3

Phone 519-376-1805 Fax 519-376-8977 www.GMBluePlan.ca

PARTICLE SIZE ANALYSIS

PROJECT:	D-5-4 Study & Site Plan	FILE NO.:	224002
LOCATION:	423018 Rockey Saugeen Road	LAB SAMPLE NO.:	S-5334
CLIENT :	Durham Heights Bible Retreat Inc.	SAMPLE DATE:	Dec 21, Rec: Jan 4
SOIL TYPE:	Fine Sand and Some Silt	SAMPLED BY:	B.T.
GRAPH # :	7 - Silty Sands, Sand-Silt Mixture	SOURCE:	Th 1 @ +/- 0.6m BFG

PARTICLE SIZE DISTRIBUTION



←		FINE	MEDIUM	COARSE	FINE	COARSE
CLAY	SILT	SAND			GRAVEL	

SIEVE SIZE PARTICLE DIA. (mm)	PERCENT PASSING SAMPLE	HYDROMETER PARTICLE DIA. (mm)	PERCENT PASSING SAMPLE
26.5	97.8	0.0600	18.8
19	96.1	0.0400	17.0
13.2	92.7	0.0300	15.2
9.5	90.7	0.0250	14.3
4.75	83.4	0.0200	13.4
2.36	79.6	0.0120	12.0
1.180	76.0	0.0090	9.3
0.600	72.1	0.0060	8.8
0.425	69.7	0.0045	8.3
0.300	66.2	0.0032	7.9
0.150	48.5	0.0023	7.4
0.075	28.4	0.0013	7.0

D_{10} : 0.01 mm **D_{60} : 0.25 mm** **Cu : 25**

Coefficient of Permeability: 1.0×10^{-4} cm/sec **"T" Time : 15 - 20 mins/cm**

Comments:

GM BluePlan Engineering Limited

Guelph, Owen Sound, Listowel, Kitchener, London, Hamilton, GTA

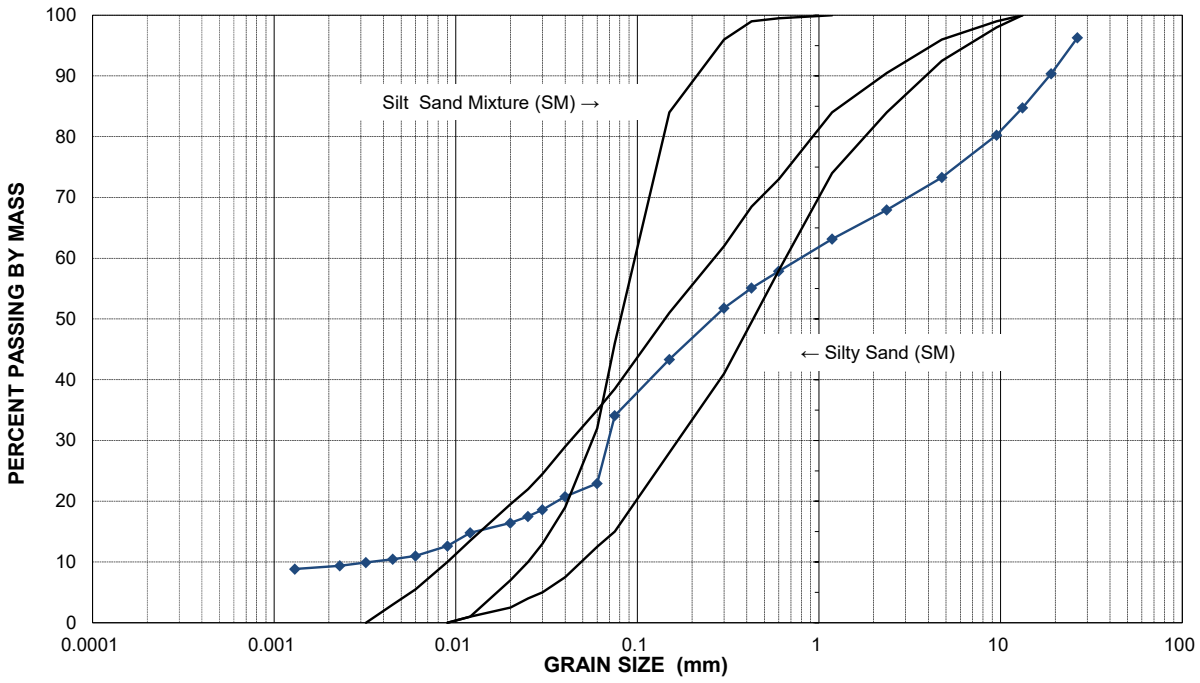
1260 - 2nd Avenue E., Unit 1 Owen Sound, ON N4K 2J3

Phone 519-376-1805 Fax 519-376-8977 www.GMBluePlan.ca

PARTICLE SIZE ANALYSIS

PROJECT:	D-5-4 Study & Site Plan	FILE NO.:	224002
LOCATION:	423018 Rockey Saugeen Road	LAB SAMPLE NO.:	S-5335
CLIENT :	Durham Heights Bible Retreat Inc.	SAMPLE DATE:	Dec 21, Rec: Jan 4
SOIL TYPE:	Sand and Some Gravel and Silt	SAMPLED BY:	B.T.
GRAPH # :	7 - Silty Sands, Sand-Silt Mixture	SOURCE:	TH 2 @ +/- 0.6m BFG

PARTICLE SIZE DISTRIBUTION



←		FINE	MEDIUM	COARSE	FINE	COARSE
CLAY	SILT	SAND			GRAVEL	

SIEVE SIZE PARTICLE DIA. (mm)	PERCENT PASSING SAMPLE	HYDROMETER PARTICLE DIA. (mm)	PERCENT PASSING SAMPLE
26.5	96.3	0.0600	22.9
19	90.4	0.0400	20.8
13.2	84.7	0.0300	18.6
9.5	80.3	0.0250	17.5
4.75	73.3	0.0200	16.4
2.36	68.0	0.0120	14.8
1.180	63.2	0.0090	12.6
0.600	57.9	0.0060	11.0
0.425	55.1	0.0045	10.5
0.300	51.8	0.0032	9.9
0.150	43.3	0.0023	9.4
0.075	34.1	0.0013	8.8

D_{10} : 0.003 mm **D_{60} : 0.83 mm** **Cu : 276.7**

Coefficient of Permeability: 9.0×10^{-6} cm/sec **"T" Time : 20 - 30 mins/cm**

Comments:

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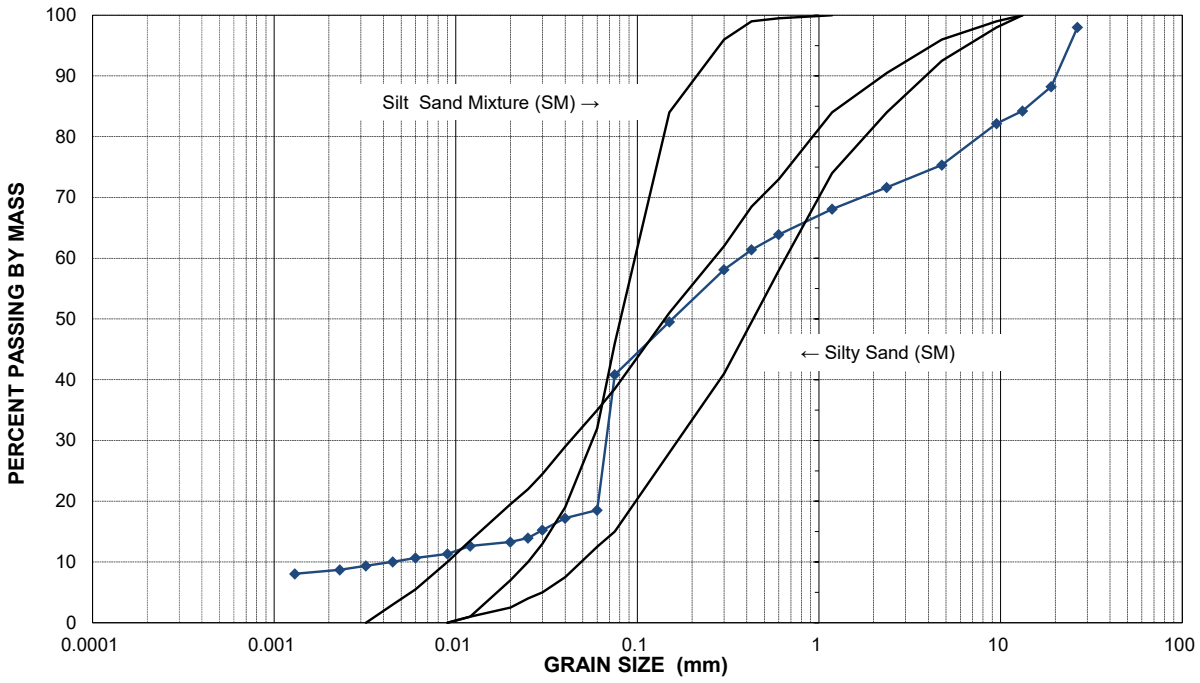
PARTICLE SIZE ANALYSIS

PROJECT:	D-5-4 Study & Site Plan	FILE NO.:	224002
LOCATION:	423018 Rockey Saugeen Road	LAB SAMPLE NO.:	S-5336
CLIENT :	Durham Heights Bible Retreat Inc.	SAMPLE DATE:	Dec 21, Rec: Jan 4
SOIL TYPE:	Sand With Silt and Some Gravel	SAMPLED BY:	B.T.
GRAPH # :	7 - Silty Sands, Sand-Silt Mixture	SOURCE:	Th 3 @ +/- 0.6m BFG

PARTICLE SIZE DISTRIBUTION



←		FINE	MEDIUM	COARSE	FINE	COARSE
CLAY	SILT	SAND			GRAVEL	

SIEVE SIZE PARTICLE DIA. (mm)	PERCENT PASSING SAMPLE	HYDROMETER PARTICLE DIA. (mm)	PERCENT PASSING SAMPLE
26.5	98.0	0.0600	18.5
19	88.2	0.0400	17.2
13.2	84.2	0.0300	15.3
9.5	82.2	0.0250	13.9
4.75	75.3	0.0200	13.3
2.36	71.7	0.0120	12.6
1.180	68.1	0.0090	11.3
0.600	63.9	0.0060	10.7
0.425	61.4	0.0045	10.0
0.300	58.1	0.0032	9.4
0.150	49.5	0.0023	8.7
0.075	40.8	0.0013	8.1

D_{10} : 0.005 mm **D_{60} : 0.37 mm** **Cu : 74**

Coefficient of Permeability: 2.5×10^{-5} cm/sec **"T" Time : 25 - 30 mins/cm**

Comments:

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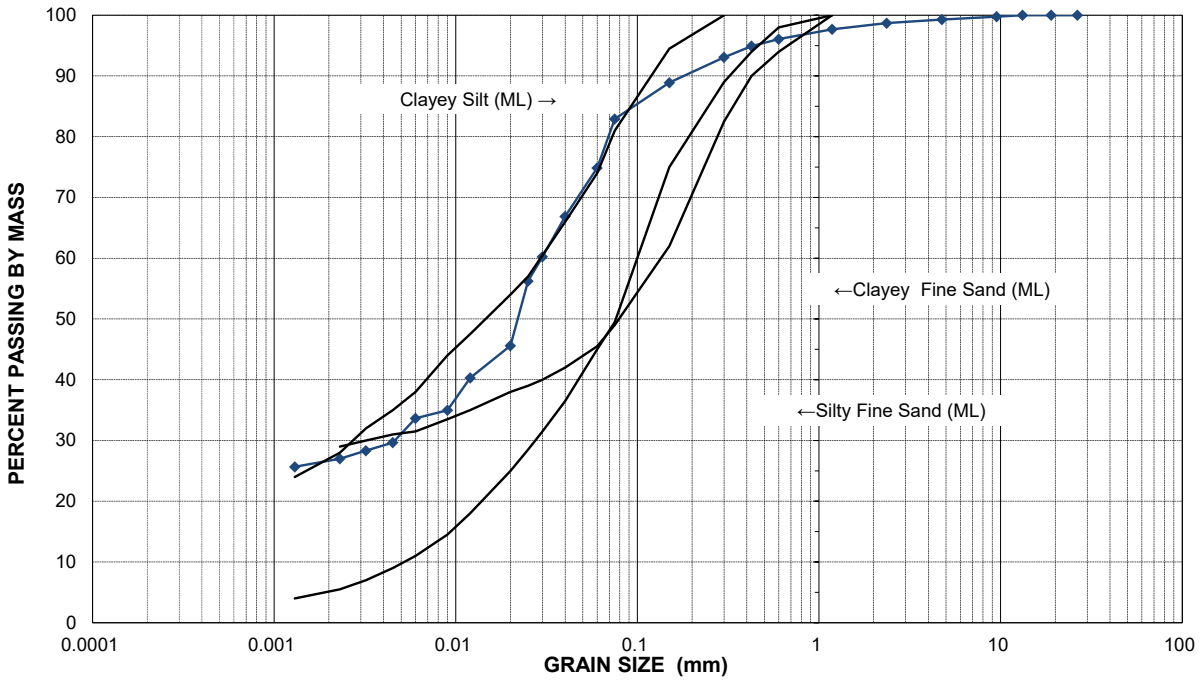
PARTICLE SIZE ANALYSIS

PROJECT:	D-5-4 Study & Site Plan	FILE NO.:	224002
LOCATION:	423018 Rockey Saugeen Road	LAB SAMPLE NO.:	S-5337
CLIENT :	Durham Heights Bible Retreat Inc.	SAMPLE DATE:	Dec 21, Rec: Jan 4
SOIL TYPE:	Silt and Some Clay	SAMPLED BY:	B.T.
GRAPH # :	9 - Inorganic Silts and Very Fine Sands	SOURCE:	TH 4 @ +/- 0.6m BFG

PARTICLE SIZE DISTRIBUTION



←		FINE	MEDIUM	COARSE	FINE	COARSE
CLAY	SILT	SAND			GRAVEL	

SIEVE SIZE PARTICLE DIA. (mm)	PERCENT PASSING SAMPLE	HYDROMETER PARTICLE DIA. (mm)	PERCENT PASSING SAMPLE
26.5	100.0	0.0600	74.9
19	100.0	0.0400	66.9
13.2	100.0	0.0300	60.2
9.5	99.8	0.0250	56.3
4.75	99.3	0.0200	45.6
2.36	98.7	0.0120	40.3
1.180	97.7	0.0090	35.0
0.600	96.1	0.0060	33.6
0.425	94.9	0.0045	29.7
0.300	93.1	0.0032	28.3
0.150	88.9	0.0023	27.0
0.075	82.9	0.0013	25.7

D_{10} : 0.0001 mm **D_{60} : 0.03 mm** **Cu : 300**

Coefficient of Permeability: 1 x 10^{-8} cm/sec **"T" Time : > 50 mins/cm**

Comments:

ENCLOSURE D:
WATER WELL RECORDS

41A/2W.

The Ontario Water Resources Commission Act

WATER WELL RECORD

Water management in Ontario

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11 (1 2) | 2503752 | MUNICIP. 25002 (10 14) | CON. GR. N. C. 01 (15 22 23 24)

COUNTY OR DISTRICT: GREY

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: ~~CLARE~~ BENTINK (3)

CON., BLOCK, TRACT, SURVEY, ETC.: 1 ~~W~~ GR. N.

LOT (25-27): 015 ~~15~~

[redacted] R.R. 3 DURHAM.

DATE COMPLETED (48-53): DAY 13 MO MAR YR 72

UTM ZONE | 17 97525 (24) | RC. 4 (25) | ELEVATION 1125 (26) | RC. 5 (30) | BASIN CODE 22 (31) | II | III | IV (47)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	DEPTH – FEET TO
	TOPSOIL, STONES, & GRAVEL			0	12
	HARD WHITE	LIMESTONE		12	74

31: 0012 0213/11 0074/115

32: (1 3) (10 14 15) (21) (32) (43) (54) (65) (75) (80)

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
0064 (10-13)	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL (14)
~~0074~~ 00 (15-18)	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL (19)
74 (20-23)	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL (24)
(25-28)	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL (29)
(30-33)	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL (34) (80)

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	DEPTH – FEET TO
04" (10-11)	1 ☒ STEEL (12) 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	1/4"	0	~~0020~~ 20
(17-18)	1 ☐ STEEL (19) 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE		20	~~74~~ 0074 (20-23)
(24-25)	1 ☐ STEEL (26) 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			(27-30)

SCREEN

SIZE(S) OF OPENING (SLOT NO.) (31-33)	DIAMETER (34-38) INCHES	LENGTH (39-40) FEET
MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN (41-44) FEET	(80)

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) (80)	

71 PUMPING TEST

PUMPING TEST METHOD (10): 1 ☒ PUMP 2 ~~☐ BAILER~~

PUMPING RATE (11-14): 0010 GPM.

DURATION OF PUMPING (15-16 HOURS 17-18 MINS.): 02 HOURS 20 MINS.

WATER LEVELS DURING (25): 1 ~~☒~~ PUMPING 2 ☐ RECOVERY

STATIC LEVEL (19-21)	WATER LEVEL END OF PUMPING (22-24)	15 MINUTES (26-28)	30 MINUTES (29-31)	45 MINUTES (32-34)	60 MINUTES (35-37)
006 FEET	012 FEET	012 FEET	012 FEET	012 FEET	012 FEET

IF FLOWING, GIVE RATE (38-41): GPM.

PUMP INTAKE SET AT: FEET

WATER AT END OF TEST (42): 1 ~~☒~~ CLEAR 2 ☒ CLOUDY

RECOMMENDED PUMP TYPE: ☒ SHALLOW ☐ DEEP

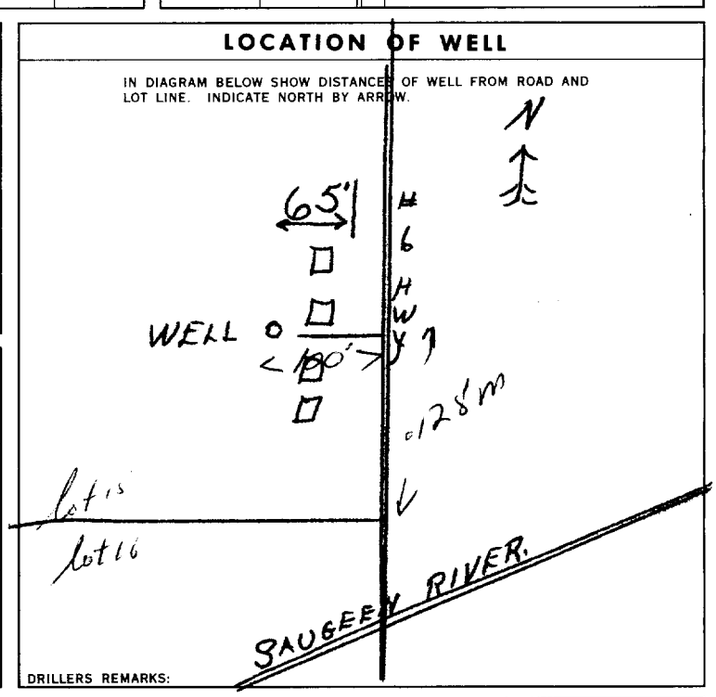
RECOMMENDED PUMP SETTING (43-45): ~~25~~ 028 ~~30~~ FEET

RECOMMENDED PUMPING RATE (46-49): 0010 GPM.

(50-53) 0001.1 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)

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

12

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: DURHAM DRILLING ENT. LTD. | LICENCE NUMBER: 1804

ADDRESS: R.R. 3 DURHAM.

NAME OF DRILLER OR BORER: David Watson | LICENCE NUMBER: 1804

SIGNATURE OF CONTRACTOR: P.E. Johnston | SUBMISSION DATE: DAY 14 MO MAR YR 72

OWRC COPY

OFFICE USE ONLY

DATA SOURCE (58): 1 | CONTRACTOR (59-62): 1804 | DATE RECEIVED (63-68): 010572 (80)

DATE OF INSPECTION | INSPECTOR

REMARKS:

P 91

WI

MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

WATER WELL RECORD

Ontario

41A/2W

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11 | 2504605 | MUNICIP. 25007 | CON. GR E | LOT 016

COUNTY OR DISTRICT: GREY

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: GLENELG

CON., BLOCK, TRACT, SURVEY, ETC.: ~~1 EGR~~ G.Rd.E

[redacted]

ADDRESS: DURHAM. Box#60

DATE COMPLETED: DAY 17 MO. 04 YR. 74

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

2504605 17 514353 4897397 4 1110 5 22 APR 06, 1976

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BLACK	TOPSOIL			0	1
BROWN	GRAVEL & SAND			2	12
WHITE	ROCK		HARD	12	70
GREY	ROCK			70	80

OWRC V5 78

OWRC P.8

31 0001802 0012611128 0070126 0080226

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-13: 0070	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
15-18: ~~70~~	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
20-23: ~~80~~	1 ~~☒~~ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
25-28:	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
30-33:	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
10-11: 05"	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	1/4"	0 00/8	13-16
17-18: 05	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE		18	20-23: 0080 ~~80~~
24-25:	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			27-30

SCREEN

SIZE(S) OF OPENING (SLOT NO.) 31-33	DIAMETER 34-38 INCHES	LENGTH 39-40 FEET
MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN 41-44 FEET	80

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
10-13	14-17	
18-21	22-25	
26-29	30-33	80

71 PUMPING TEST

PUMPING TEST METHOD 10	PUMPING RATE 11-14	DURATION OF PUMPING
1 ☐ PUMP 2 ☒ BAILER	0020 GPM	02 HOURS 15-16 20 MINS 17-18

STATIC LEVEL	WATER LEVEL END OF PUMPING	25 WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
19-21: 001 FEET	22-24: 020 FEET	1 ☐ PUMPING 2 ☑ RECOVERY	26-28: 008 FEET	29-31: 006 FEET	32-34: 004 FEET	35-37: 002 FEET

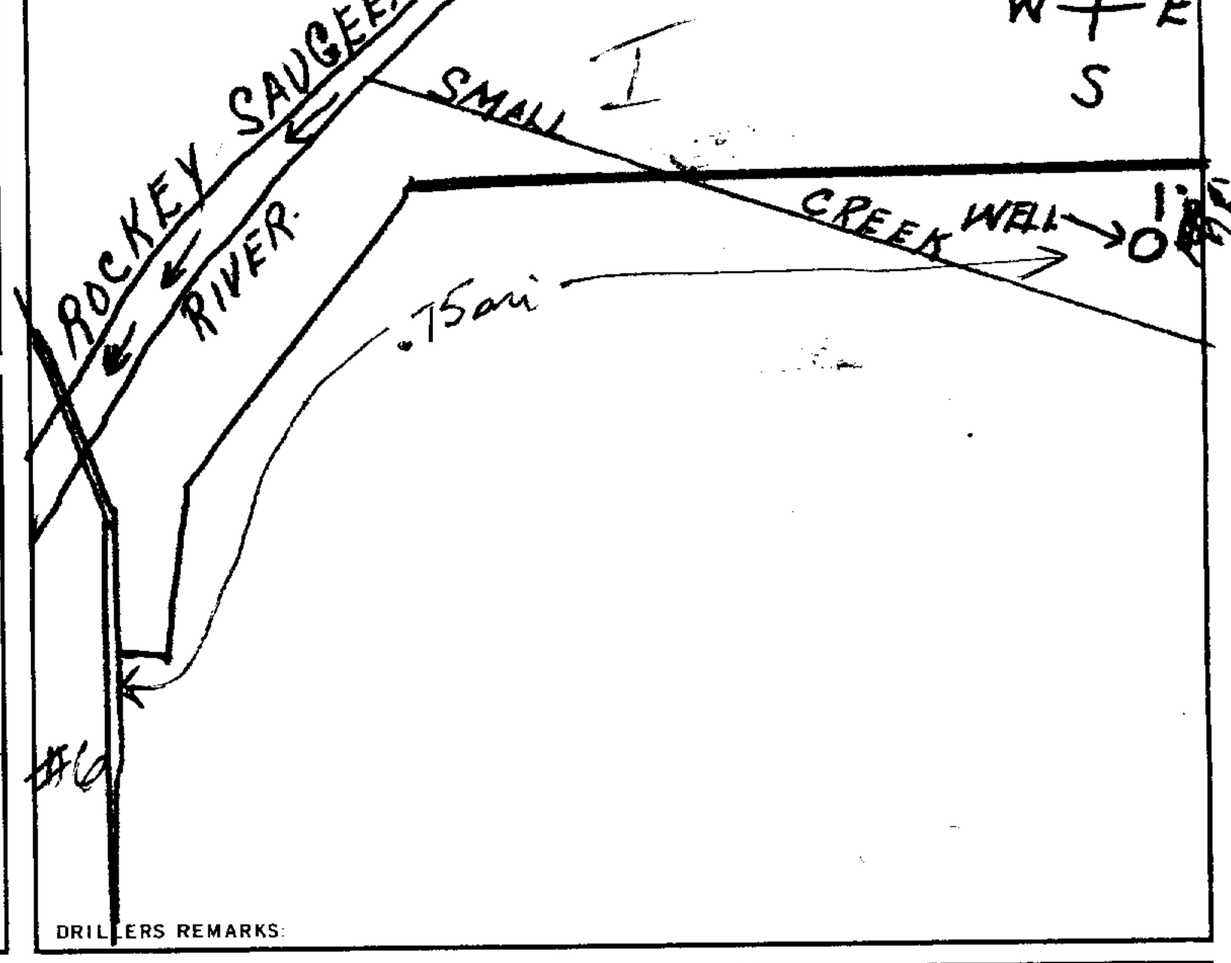
IF FLOWING, GIVE RATE 38-41 GPM	PUMP INTAKE SET AT FEET	WATER AT END OF TEST 42
		1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING 43-45	RECOMMENDED PUMPING RATE 46-49
☐ SHALLOW ☒ DEEP	040 FEET	0010 GPM

50-53: 001.1

LOCATION OF WELL 1497

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



DRILLERS REMARKS:

FINAL STATUS OF WELL 54: 1

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

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~~ DRILLER P. ~~JOHNSTON~~ & S. KORANY — LICENCE NUMBER 1804

ADDRESS CONTRACTOR. DURHAM. DRILLING ENT. LTD

~~NAME OF DRILLER OR BORER~~ R.R.3. DURHAM. — LICENCE NUMBER 1804

SIGNATURE OF CONTRACTOR P.E. Johnston — SUBMISSION DATE DAY 18 MO. 4 YR. 74

OFFICE USE ONLY

DATA SOURCE 58: 1 — CONTRACTOR 59-62: 1804 — DATE RECEIVED 63-68: 130674 — 80

DATE OF INSPECTION: June/6/75 — INSPECTOR: 7

REMARKS: CSS.S8 — P 2 — W1

FORM 7 07-091

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The Ontario Water Resources Act

WATER WELL RECORD

41 A/2W

Ontario

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11 | 2505143 | MUNICIP. 25007 | CON. GR E | 02

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
GREY	GLENELG	2 E.G.Rd.	W036

OWNER (SURNAME FIRST) [redacted] | ADDRESS 185 HADDINGTON AVE TORONTO | DATE COMPLETED DAY 26 MO. 06 YR. 75

ZONE	EASTING	NORTHING	RC	ELEVATION	RC	BASIN CODE			
17	514467	4857415	4	1115	5	22			

2505143 JUL 13, 1977 307

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BLACK	TOPSOIL			0	2
BROWN	GRAVEL			2	8
WHITE	LIMESTONE			8	81
			BLUE & BROWN LAYERS.		

31 | 0002802 | 0008611 | 0081115

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0070	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
78	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
80	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	DEPTH - FEET TO
05"	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	1/4"	0	0020
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE		20	0081
	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	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☒ PUMP 2 ☐ BAILER | PUMPING RATE: 0010 GPM | DURATION OF PUMPING: 01 HOURS 20 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☒ RECOVERY	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
005 FEET	035 FEET		025 FEET	010 FEET	005 FEET	005 FEET

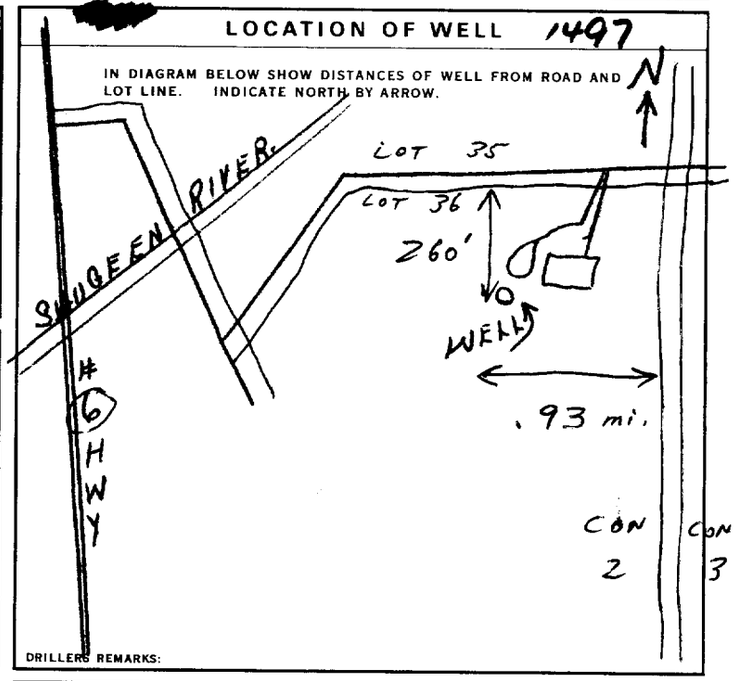
IF FLOWING, GIVE RATE: GPM | PUMP INTAKE SET AT: 70 FEET | WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP | RECOMMENDED PUMP SETTING: 045 FEET | RECOMMENDED PUMPING RATE: 0008 GPM

GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL 1497

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: 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: DURHAM DRILLING ENT LTD | LICENCE NUMBER: 1804

ADDRESS: R.R.3 DURHAM

NAME OF DRILLER OR BORER: BRYANS & HOTCHKISS | LICENCE NUMBER: 1804

SIGNATURE OF CONTRACTOR: P.E. Johnston | SUBMISSION DATE: DAY 28 MO. 6 YR. 75

OFFICE USE ONLY

DATA SOURCE 58: 1 | CONTRACTOR 59-62: 1804 | DATE RECEIVED 63-68: 06 08 75 | 80

DATE OF INSPECTION: June 23/76 | INSPECTOR: J

REMARKS: CSS.S8 | P B.L. | WVS L

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The Ontario Water Resources Commission Act

WATER WELL RECORD

Water management in Ontario

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COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
GREY	BENTINCK	1 [redacted] GR W.	015

[redacted] R.R. 1 DURHAM — DATE COMPLETED: DAY 21 MO. 10 YR. 75

RC. ELEVATION RC. BASIN CODE

[redacted] 97001 4 1140 3 22 JUL 13, 1977 307

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	DEPTH – FEET TO
BROWN	HARDPAN	& STONES		0	58
WHITE	ROCK			58	98
GREY	ROCK			98	102

31 | 0058|14|12 | 0098|26 | 0102|26

32

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
0090	1 ☒ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
TO	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
102	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	DEPTH – FEET TO
05"	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	1/4"	0	0058
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE		58	0102
	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	DEPTH SET AT – FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☒ PUMP 2 ☐ BAILER	00/0 GPM.	03 HOURS 30 MINS.

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
005, 3 FEET	060 FEET	1 ☐ PUMPING 2 ☒ RECOVERY	020 FEET	015 FEET	005 FEET	005 FEET

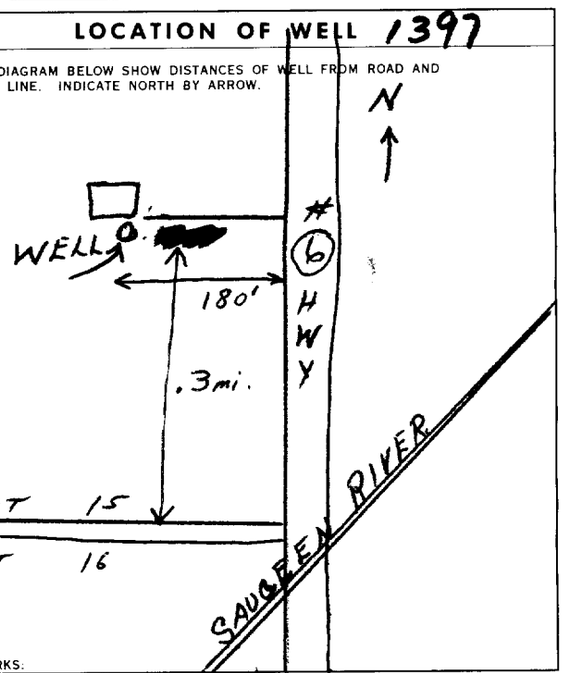
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
GPM.	90 FEET	1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED GPM.
☐ SHALLOW ☒ DEEP	090 FEET	0007 GPM.

GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL 1397

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



DRILLERS REMARKS:

FINAL STATUS OF WELL 54: 1

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: 12

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

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: DURHAM DRILLING ENT. LTD. — LICENCE NUMBER: 1804

ADDRESS: R.R.3 DURHAM

NAME OF DRILLER OR BORER: STEVE KORANYI — LICENCE NUMBER: 1804

SIGNATURE OF CONTRACTOR: P.E. Johnston — SUBMISSION DATE: DAY 24 MO. 10 YR. 75

OWRC COPY

OFFICE USE ONLY

DATA SOURCE 58: 1 | CONTRACTOR 59-62: 1804 | DATE RECEIVED 63-68: 081275 | 80

DATE OF INSPECTION: June 23/76 | INSPECTOR: 7

REMARKS: | P/S. | W/S.

MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

WATER WELL RECORD

41A/2

Ontario

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

(11) 2507880 MUNICIP. 25002 CON. GR W 01

COUNTY OR DISTRICT: GREY

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BENTINCK

CON., BLOCK, TRACT, SURVEY, ETC.: 1 WGR DIV 3

LOT: 06

OWNER (SURNAME FIRST): [redacted]

ADDRESS: R.R.1 DURHAM

DATE COMPLETED: DAY 08 MO. 04 YR. 83

(21) ZONE [redacted] EASTING 513000 NORTHING 4896800 ELEVATION 1100 RC 5 BASIN CODE 22

ADDRESS OF WELL LOCATION: R.R.2 DURHAM

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BLACK	TOPSOIL			0	1
BROWN	STONES	& GRAVEL		1	28
BROWN	ROCK			28	84

(31) 0001802 00286 1211 0084612

(32)

(41) WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
068	1 ☒ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
0084	1 ☒ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
~~28~~ 24	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	DEPTH - FEET TO
05 IC	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	.188	0	0028
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE		28	0084
	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	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

(71) PUMPING TEST

PUMPING TEST METHOD: 1 ~~☒~~ 2 ☒ BAILER

PUMPING RATE: 0015 GPM

DURATION OF PUMPING: 07 HOURS 00 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☒ RECOVERY			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
024 FEET	034 FEET	026 FEET	024 FEET	024 FEET	024 FEET

IF FLOWING, GIVE RATE: GPM

PUMP INTAKE SET AT: 65 FEET

WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP

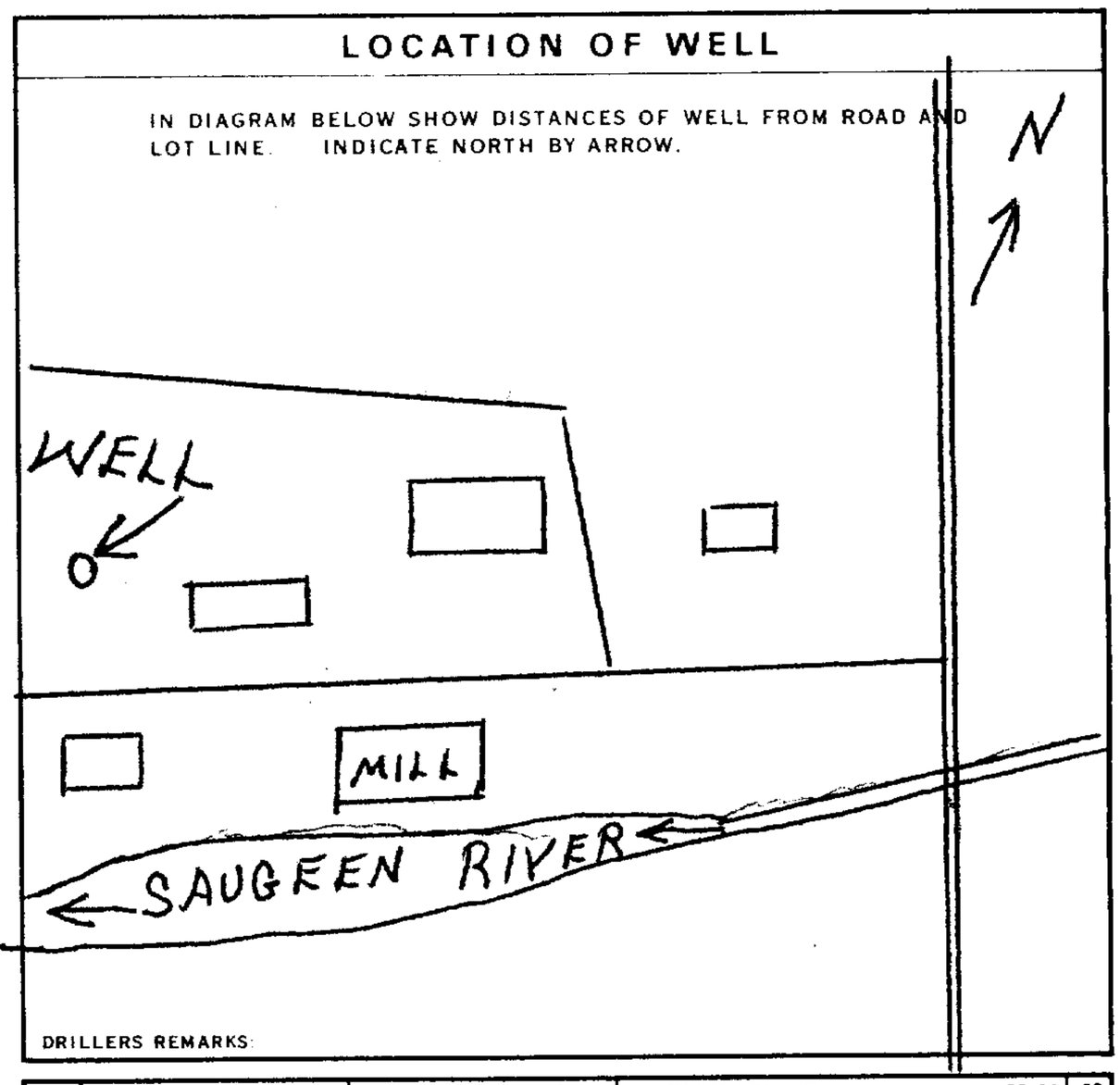
RECOMMENDED PUMP SETTING: ~~060~~ 60-70 FEET

RECOMMENDED PUMPING RATE: ~~0008~~ 8-10 GPM

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: 1

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

WATER USE: 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: 1

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: DURHAM DRILLING ENT. LTD — LICENCE NUMBER: 1804

ADDRESS: R.R.2 DURHAM

NAME OF DRILLER OR BORER: B FIDLER — LICENCE NUMBER: 1804

SIGNATURE OF CONTRACTOR: P E Johnston — SUBMISSION DATE: DAY 8 MO. 4 83

OFFICE USE ONLY

DATA SOURCE: 1 — CONTRACTOR: 1804 — DATE RECEIVED: 20 05 83

DATE OF INSPECTION: [illegible]83 — INSPECTOR:

REMARKS: P P WI

FORM 7 MOE 07-091

MINISTRY OF THE ENVIRONMENT COPY

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

41 A/2W

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

(11) 2508456 MUNICIP 25002 CON. GR W 91

COUNTY OR DISTRICT: GREY
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: BENTINCK
CON., BLOCK, TRACT, SURVEY, ETC.: 1 WGR DIV 3
LOT: 30/6
ADDRESS: RR1 DURHAM
DATE COMPLETED: DAY 20 MO 11 YR 85

(21) UTM ZONE 17 EASTING 513050 NORTHING 4897000 RC 5 ELEVATION 1105 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	DEPTH - FEET TO
BLACK	TOPSOIL			0	1
BROWN	STONES & GRAVEL			1	24
BROWN	ROCK			24	89

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
44	1 ☑ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
TO	1 ☐ FRESH 3 ☐ SULPHUR; 2 ☐ SALTY 4 ☐ MINERAL
89	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	DEPTH - FEET TO
5	1 ☑ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE	188	0	45
	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☑ OPEN HOLE		45	89
	1 ☐ STEEL; 2 ☐ GALVANIZED; 3 ☐ CONCRETE; 4 ☐ OPEN HOLE			

SCREEN

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

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: 10 GPM
DURATION OF PUMPING: 8 HOURS 00 MINS

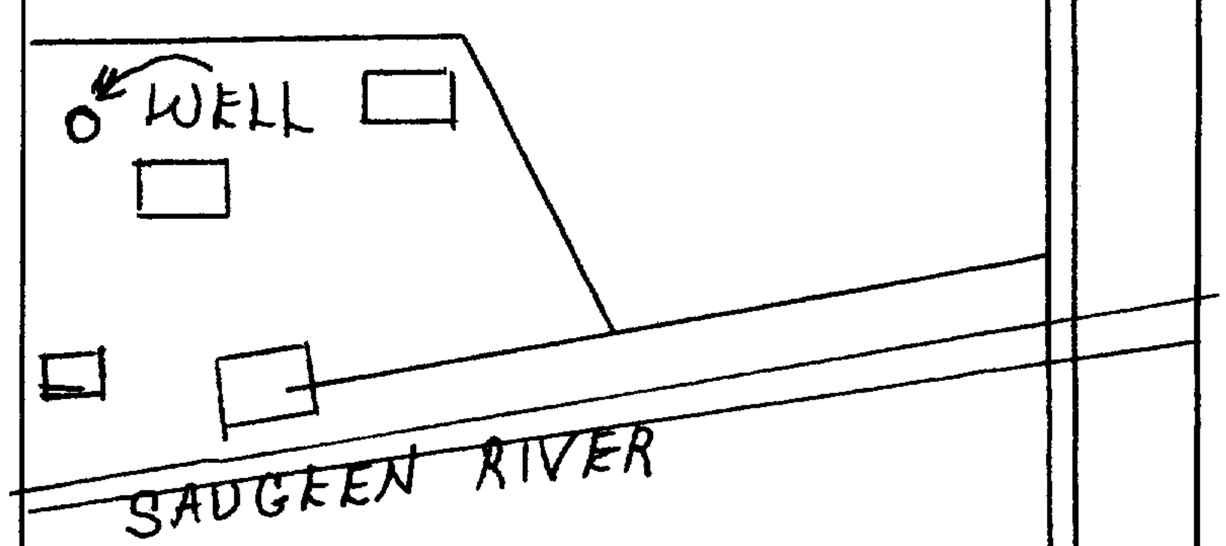
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☐ PUMPING 2 ☑ RECOVERY			
32 FEET	50 FEET	15 MINUTES: 34 FEET	30 MINUTES: 32 FEET	45 MINUTES: 32 FEET	60 MINUTES: 32 FEET

IF FLOWING, GIVE RATE: GPM
PUMP INTAKE SET AT: 80 FEET
WATER AT END OF TEST: 1 ☑ CLEAR 2 ☐ CLOUDY
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP
RECOMMENDED PUMP SETTING: 80 FEET
RECOMMENDED PUMPING RATE: 8-10 GPM

LOCATION OF WELL

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

WELL DATED 8 day 4 mo. 1983 # 6 is eliminated, no longer there. HWY 4



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; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; ☐ OTHER; 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: DURHAM DRILLING ENT LTD | LICENCE NUMBER: 1804
ADDRESS: RR 2. DURHAM
NAME OF DRILLER OR BORER: S.R. KURANYI | LICENCE NUMBER: 1804
SIGNATURE OF CONTRACTOR: P.E. Johnston | SUBMISSION DATE: DAY 25 MO. 11 YR. 85

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR | DATE RECEIVED
DATE OF INSPECTION: 16/7/86 | INSPECTOR: 051285
REMARKS: WDE CSS.SA

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506—4—77 FORM 7

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

41A/12W

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

2509019 MUNICIP 25007 CON 6R E 01

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
GREY	GLENELG	1. EGR PT	16

[redacted] RR1 DURHAM NOGIRO

DATE COMPLETED DAY 18 MO 9 YR 87

ZONE 17 EASTING 514150 NORTHING 4896400 ELEVATION 1100 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
BROWN	CLAY			0	4
BROWN & WHITE	ROCK			4	82

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
72	1 ☑ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
10	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
82	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	DEPTH - FEET TO
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	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	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☐ BAILER — AIR

PUMPING RATE: 12 GPM

DURATION OF PUMPING: 2 HOURS 00 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING
10 FEET	30 FEET

WATER LEVELS DURING: 1 ☐ PUMPING 2 ☑ RECOVERY

15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
10 FEET	10 FEET	10 FEET	10 FEET

IF FLOWING, GIVE RATE: GPM

PUMP INTAKE SET AT: FEET

WATER AT END OF TEST: 1 ☑ CLEAR 2 ☐ CLOUDY

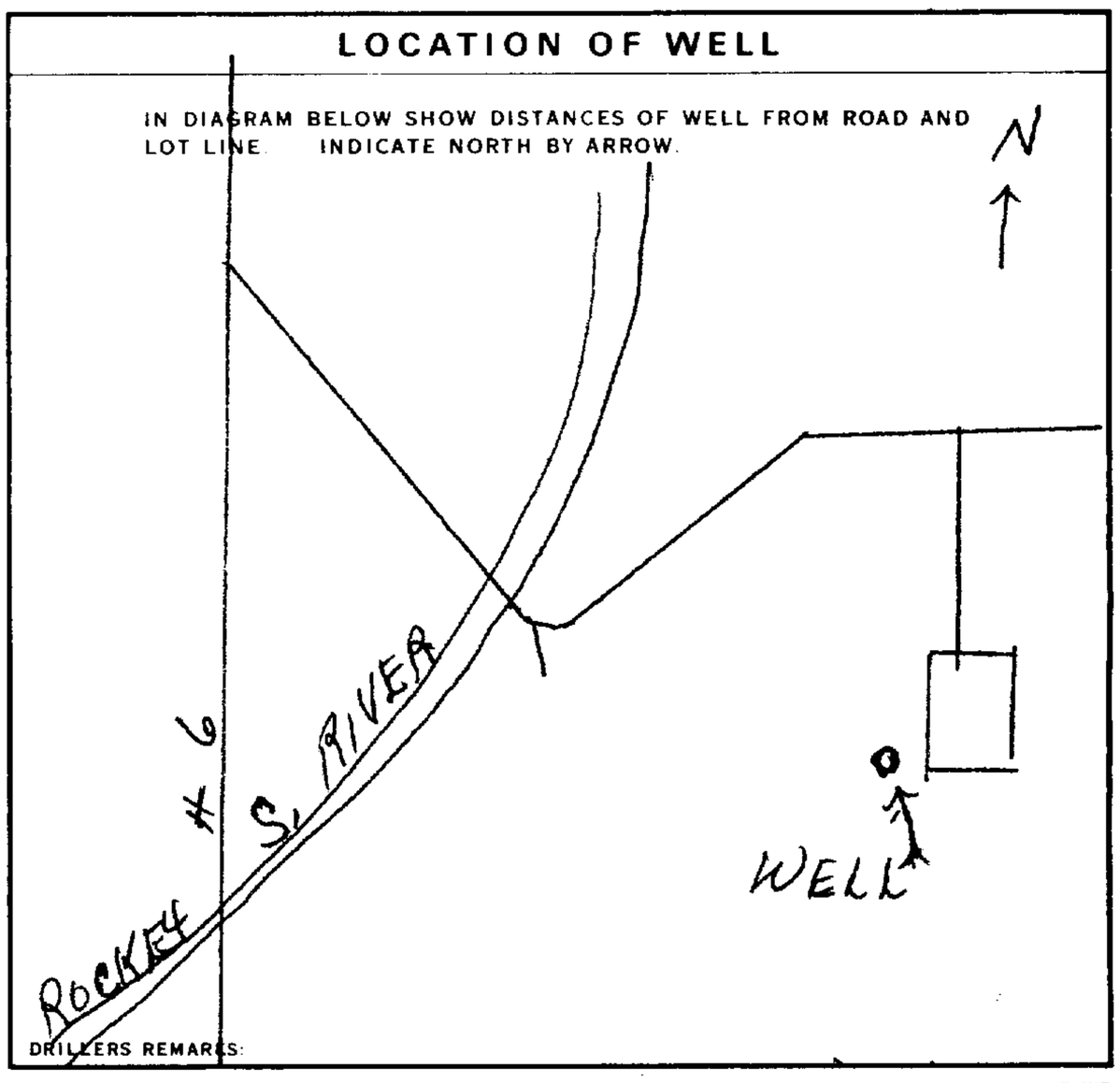
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP

RECOMMENDED PUMP SETTING: 65 FEET

RECOMMENDED PUMPING RATE: 10 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: DURHAM DRILLING ENT LTD — LICENCE NUMBER: 1804

ADDRESS: RR2 Durham NOG 1R0

NAME OF DRILLER OR BORER: K. LANG. J. JACKSON — LICENCE NUMBER: T-0446

SIGNATURE OF CONTRACTOR: [signature] — SUBMISSION DATE: DAY 18 MO. 9 YR. 87

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR | DATE RECEIVED: SEP 24 1987

DATE OF INSPECTION: 13/7/88 | INSPECTOR

REMARKS

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506—4—77 FORM 7

Ontario **Ministry of the Environment**

The Ontario Water Resources Act
WATER WELL RECORD

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

11 (1-2) **2514030**

Municipality 25007 (10-14) Con. GR E (15) 01 (22-24)

E.GR.

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot (25-27)
GREY	GLENELG.	1	16

[redacted]

Address: RR#1 DURHAM

Date completed: 22 (day) 09 (month) 99 (year)

21 (1-2) | UTM (10) | Easting (12-17) | Northing (18-24) | RC (25) | Elevation (26-30) | RC | Basin Code (31-47) | ii | iii | iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
		TOPSOIL		0	2
		SANDY CLAY		2	60
		LIMESTONE		60	146

31 | 32 (10 14 15 21 32 43 54 65 75 80)

41 WATER RECORD

Water found at - feet	Kind of water
10-13: 146	1 ☒ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (14)
15-18	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (19)
20-23	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (24)
25-28	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (29)
30-33	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (34)

60

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
10-11: 6	1 ☒ Steel (12) 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.188	0	13-16: 62
17-18	1 ☐ Steel (19) 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		62	20-23: 146
24-25	1 ☐ Steel (26) 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			27-30

SCREEN

Sizes of opening (Slot No.) (31-33)	Diameter (34-38) inches	Length (39-40) feet

Material and type	Depth at top of screen (41-44) feet	30

61 PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
10-13	14-17	
18-21	22-25	
26-29	30-33	80

PUMPING TEST

71 Pumping test method (10): 1 ☐ Pump 2 ☐ Bailer AIR

Pumping rate (11-14): 9 GPM

Duration of pumping (15-16): 1 Hours (17-18): 30 Mins

Static level (19-21)	Water level end of pumping (22-24)	Water levels during (25): 1 ☐ Pumping 2 ☒ Recovery			
		15 minutes (26-28)	30 minutes (29-31)	45 minutes (32-34)	60 minutes (35-37)
35 feet	100 feet	35 feet	35 feet	35 feet	35 feet

If flowing give rate (38-41)	Pump intake set at	Water at end of test (42)
GPM	AIR 146 feet	☒ Clear ☐ Cloudy

Recommended pump type	Recommended pump setting (43-45)	Recommended pump rate (46-49)
☐ Shallow ☒ Deep	115 feet	7 GPM

50-53

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 ☐ Abandoned (Other) 8 ☐ Dewatering 9 ☐ Unfinished 10 ☐ Replacement well

WATER USE (55-56)

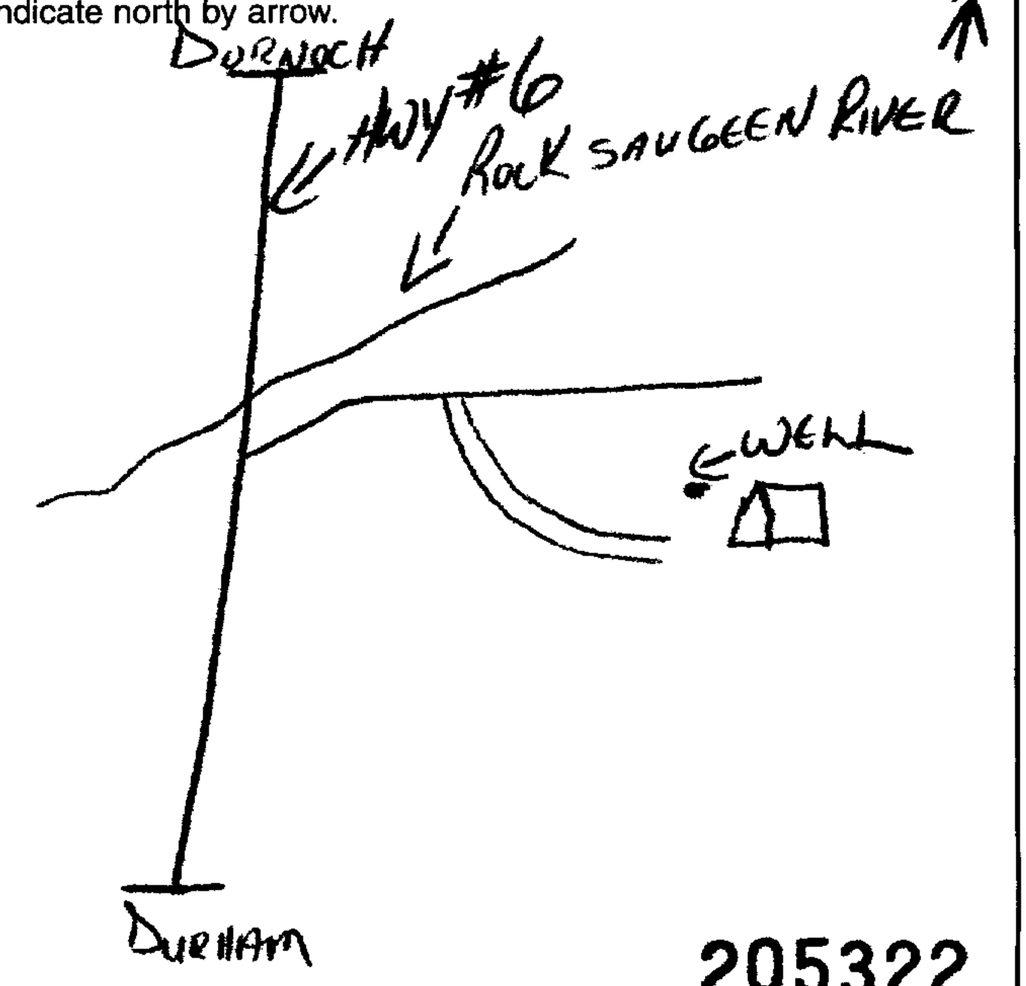
1 ☒ Domestic 2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial 5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning 9 ☐ Not use 10 ☐ Other .....

METHOD OF CONSTRUCTION (57)

1 ☐ Cable tool 2 ☒ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☐ Rotary (air) 5 ☐ Air percussion 6 ☐ Boring 7 ☐ Diamond 8 ☐ Jetting 9 ☐ Driving 10 ☐ Digging 11 ☐ Other .....

LOCATION OF WELL

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



205322

Name of Well Contractor	Well Contractor's Licence No.
KAUFMAN INVESTMENTS LTD	6634
Address: RR#3 ELMWOOD, ONTARIO	
Name of Well Technician	Well Technician's Licence No.
KAUFMAN & KINGSTON	TT-1922
Signature of Technician/Contractor	Submission date: 29 (day) 09 (mo) 99 (yr)

MINISTRY USE ONLY

Data source (58)	Contractor (59-62)	Date received (63-68)	80
	6634	OCT 04 1999	

Date of inspection	Inspector

Remarks: CSS.ES0

0506 (11/98) Front Form 9

2 - MINISTRY OF THE ENVIRONMENT COPY

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. (Place Sticker and/or Print Below) A109461 | A109461

Well Record

...ation 903 Ontario Water Resources Act

Page 1 of 1

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
422907 SIDE ROAD 15	BENTINCK	16	1 WGR

County/District/Municipality	City/Town/Village	Province	Postal Code
GREY COUNTY		Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	512972	4896918		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	STONES, GRAVEL LIMESTONE	GRAVEL STONES		0	12
	GRAVEL	STONES		12	25
	LIMESTONE			25	142

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	36	Bentonite Grout	1.3 m³

Method of Construction

☐ Cable Tool ☐ Diamond
☑ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☑ Air percussion
☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used
☑ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4	STEEL	.188	+2	38
6"	OPEN HOLE		38	142

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To

Status of Well

☑ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify
☐ Other, specify

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
54	☐	☑ Fresh ☐ Untested	
	☐	☐ Fresh ☐ Untested	
126	☐	☐ Fresh ☐ Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)

Results of Well Yield Testing

After test of well yield, water was:
☑ Clear and sand free
☐ Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM): 24 GPM

Duration of pumping: 2 hrs + ____ min

Final water level end of pumping (m/ft): 64

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft): 130

Recommended pump rate (l/min / GPM): 20-22 GPM

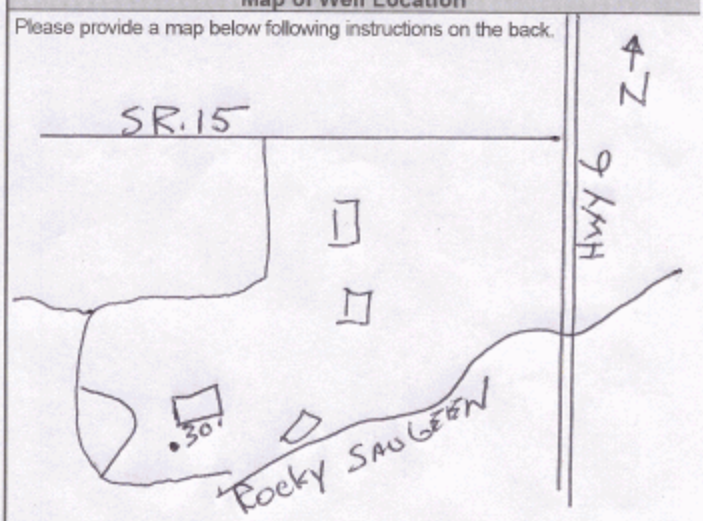
Well production (l/min / GPM): 24 GPM

Disinfected? ☑ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	43		66
1	47	1	47
2	50	2	43
3	52	3	43
4	54	4	43
5	55.7	5	43
10	60	10	↓
15	61.9	15	
20	62.5	20	
25	63.2	25	
30	63.7	30	
40	63.7	40	
50	63.7	50	43
60	63.7	60	43

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
NEUMANN WELL DRILLING	7015

Business Address (Street Number/Name)	Municipality
RR#4	DUNDALK

Province	Postal Code	Business E-mail Address
ONT	N0C1B0	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
5199233203	GILLIES TOM

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
1958		Y Y Y Y M M D D

Well owner's information package delivered: ☑ Yes ☐ No

Date Package Delivered: 2010/11/23

Date Work Completed: 2010/11/23

Ministry Use Only

Audit No. z123687

Received FEB 02 2011

Ministry's Copy

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

We [redacted] rint Below)

Tag#: A131449

A131449

Well Record

Regulation 903 Ontario Water Resources Act

Page _____ of _____

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
314203 HWY #6 RR#1 DURHAM	COLEMAN	15	1 GRE
County/District/Municipality	**City/Town/Village**	**Province**	**Postal Code**
WESTGREY		Ontario	N0G 1R0
UTM Coordinates NAD 83	**Zone** 17	**Easting** 513312	**Northing** 4897670
Municipal Plan and Sublot Number		**Other**	

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	TOPSOIL			0	2FT
	CLAY & STONES			2	8FT
GREY	LIMESTONE		HARD	8	95FT
BROWN	LIMESTONE		HARD	95	175FT

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	20FT	50 gal GROUT SLURRY / 50 LBS 3/8 Holeplug.	

Method of Construction

☐ Cable Tool ☑ Rotary (Conventional) ☐ Rotary (Reverse) ☐ Boring ☐ Air percussion ☐ Other, specify _____

☐ Diamond ☐ Jetting ☐ Driving ☐ Digging

Well Use

☐ Public ☑ Domestic ☐ Livestock ☐ Irrigation ☐ Industrial ☐ Other, specify _____

☐ Commercial ☐ Municipal ☐ Test Hole ☐ Cooling & Air Conditioning

☐ Not used ☐ Dewatering ☐ Monitoring

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 INCH	STEEL	.188	0	22FT

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To

Status of Well

☑ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☐ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify _____ ☐ Other, specify _____

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
100 (m/ft)	☐	☑ Fresh ☐ Untested	
170 (m/ft)	☐	☑ Fresh ☐ Untested	
(m/ft)	☐	☐ Fresh ☐ Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	20FT	10 inch
20	22FT	9 inch
22	175FT	6 inch

Results of Well Yield Testing

After test of well yield, water was: ☑ Clear and sand free ☐ Other, specify _____

If pumping discontinued, give reason:

Pump intake set at (m/ft): AIR-PUMP 175FT

Pumping rate (l/min / GPM): 14 GPM

Duration of pumping: 2 hrs + ____ min

Final water level end of pumping (m/ft): 120 FT

If flowing give rate (l/min / GPM):

Recommended pump depth (m/ft): 155 FT

Recommended pump rate (l/min / GPM): 10 GPM

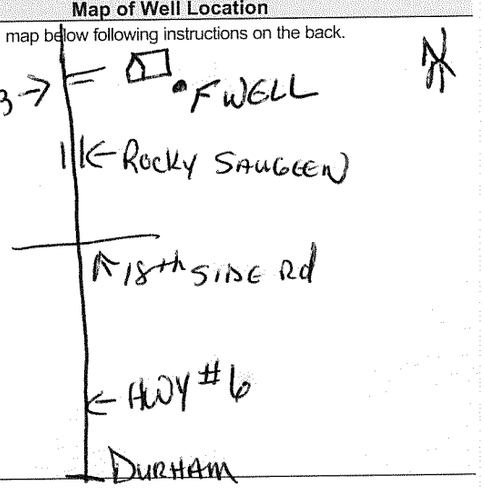
Well production (l/min / GPM): 14 GPM

Disinfected? ☑ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	0			120FT
1	10		1	110
2	20		2	100
3	30		3	90
4	40		4	80
5	50		5	70
10	100		10	20
15	120FT		15	0FT
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
KAUFMAN INVESTMENTS LTD.	6634
Business Address (Street Number/Name)	**Municipality**
314023 HWY #6 RR#1 DURHAM	WESTGREY
Province	**Postal Code**	**Business E-mail Address**
ONTARIO	N0G 1R0	
Bus. Telephone No. (inc. area code)	**Name of Well Technician (Last Name, First Name)**
5193693344	KAUFMAN PAUL
Well Technician's Licence No.	**Signature of Technician and/or Contractor**	**Date Submitted**
1920	Paul Kaufman	2012 06 22

Well owner's information package delivered	Date Package Delivered	Ministry Use Only
☐ Yes ☑ No	2012 06 19	Audit No. Z151535
	Date Work Completed	Received FEB 15 2013
	2012 06 19	

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Ontario

Ministry of the Environment, Conservation and Parks

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)* A247932

Well Record

Regulation 903 Ontario Water Resources Act

Page _____ of _____

[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
#422907 15th Sideroad	Bentinck	#16	#1W
County/District/Municipality	**City/Town/Village**	**Province**	**Postal Code**
Grey		Ontario	
UTM Coordinates Zone / Easting / Northing	**Municipal Plan and Sublot Number**	**Other**	
NAD 8 3 / 17 / 513126 / 4899702			

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (mft) From	Depth (mft) To
Brown	Sand	Gravel	Fill	0	5
Brown	Clay	Gravel		5	10
Grey	Limestone	Brown layers	Hard	10	156

Annular Space

Depth Set at (mft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (mft³)
0'	20'	Holeplug	8.3 ft³

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☑ Other, *specify* Air, D.R

Well Use

☐ Public ☐ Commercial ☐ Not used
☑ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (mft) From	Depth (mft) To
6"	Steel	.188"	+2'	24'
6"	Open Hole		24'	156'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To

Status of Well

☑ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth	Kind of Water	
48 (mft) ☐ Gas	☑ Fresh ☑ Untested ☐ Other, *specify*	
122 (mft) ☐ Gas	☑ Fresh ☑ Untested ☐ Other, *specify*	
147 (mft) ☐ Gas	☑ Fresh ☑ Untested ☐ Other, *specify*	

Hole Diameter

Depth (mft) From	To	Diameter (cm/in)
0'	20'	10"
20'	156'	6"

Results of Well Yield Testing

After test of well yield, water was:
☑ Clear and sand free
☐ Other, *specify* _____

If pumping discontinued, give reason:

Pump intake set at (mft): 150

Pumping rate (l/min / GPM): 13 GPM

Duration of pumping: 1 hrs + 30 min

Final water level end of pumping (mft): 28'6

If flowing give rate (l/min / GPM)

Recommended pump depth (mft): 140'

Recommended pump rate (l/min / GPM): 15 GPM

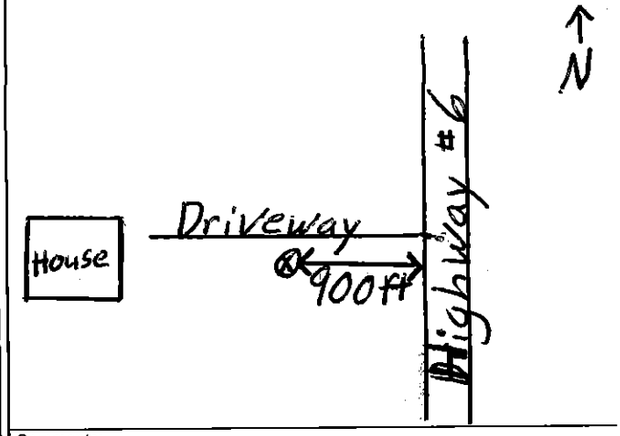
Well production (l/min / GPM): 16 GPM

Disinfected? ☑ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (mft)	Recovery Time (min)	Recovery Water Level (mft)
Static Level	17'4		
1	21'5	1	23'8
2	22'8	2	22'
3	23'6	3	21'1
4	24'4	4	20'5
5	24'6	5	20'2
10	26'1	10	19'3
15	26'7	15	19'
20	27'1	20	18'5
25	27'8	25	18'1
30	27'8	30	17'7
40	28'2	40	17'5
50	28'3	50	17'4
60	28'6	60	17'4

Map of Well Location

Please provide a map below following instructions on the back.



Comments: F.C.R = 150 MG/L

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Highland Water Wells	2516
Business Address (Street Number/Name)	**Municipality**
Box 141 Durham	Grey
Province / **Postal Code** / **Business E-mail Address**	
Ont / N0G1R0 / highlanddrilling@bmts.com	
Bus. Telephone No. (inc. area code)	**Name of Well Technician (Last Name, First Name)**
5193696363	Wilson, Clint
Well Technician's Licence No.	**Signature of Technician and/or Contractor** / **Date Submitted**
3456	Clint Wilson 2020/05/15

Well owner's information package delivered: ☑ Yes ☐ No

Date Package Delivered: 2020/05/14

Date Work Completed: 2020/05/14

Ministry Use Only

Audit No. Z319031

Received MAY 27 2020

0506E (2018/12)

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Ontario — Ministry of the Environment, Conservation and Parks

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)* A276803

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
422907 15th Side Rd	West Grey (Bentinck)	16	Con 1 WOSR

County/District/Municipality	City/Town/Village	Province	Postal Code
Grey	Rocky Saugeen	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	17	513122	4897019		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Black	Topsoil			0	1
Brown	gravel	clay Stones		1	4
White	Limestone			4	39
Brown	Limestone			39	102
Grey/Brown	Limestone			102	198

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	20	Bensea1	7.5 ft³

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☒ Other, *specify* DR

Well Use

☐ Public ☐ Commercial ☐ Not used
☑ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6	Steel	.188	+2	23
6	OH		23	198

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To

Status of Well

☑ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth	Kind of Water	
51 (m/ft) ☐ Gas	☑ Fresh ☑ Untested	☐ Other, *specify*
136 (m/ft) ☐ Gas	☑ Fresh ☐ Untested	☐ Other, *specify*
189 (m/ft) ☐ Gas	☑ Fresh ☐ Untested	☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	20	10"
20	198	6"

Results of Well Yield Testing

After test of well yield, water was:
☑ Clear and sand free
☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at (m/ft): 90

Pumping rate (l/min / GPM): 10

Duration of pumping: 1 hrs + ____ min

Final water level end of pumping (m/ft): 19.1

If flowing give rate (l/min / GPM):

Recommended pump depth (m/ft): 125

Recommended pump rate (l/min / GPM): 18

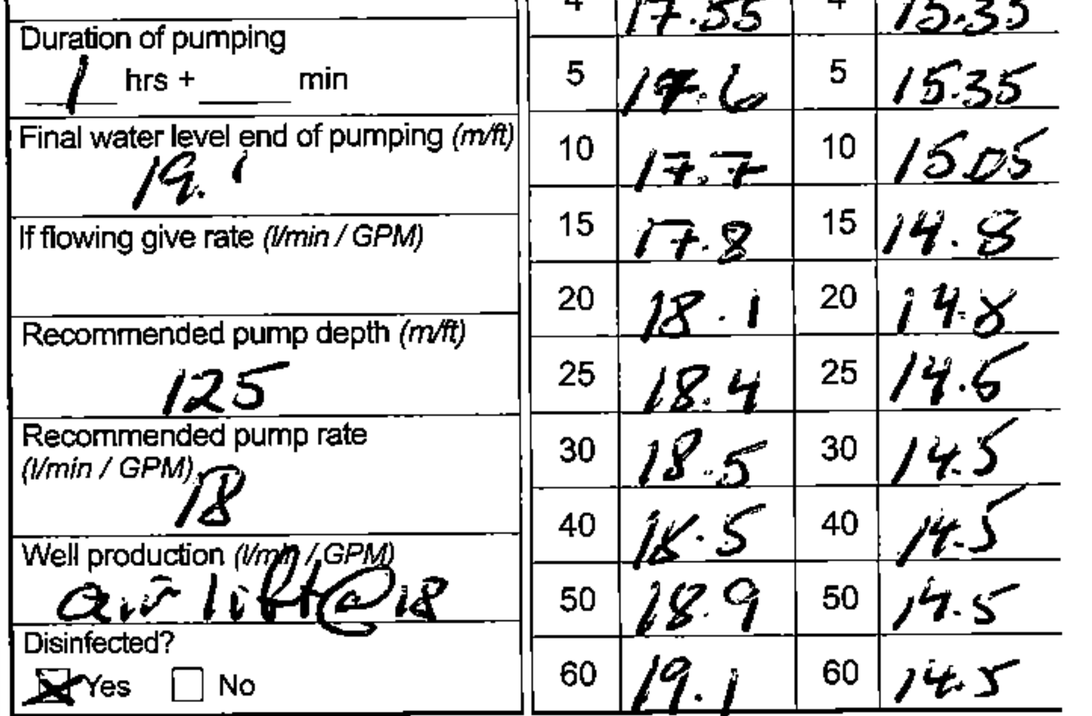
Well production (l/min / GPM): air lift @ 18

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	14.5		
1	17.3	1	16.1
2	17.4	2	15.4
3	17.45	3	15.4
4	17.55	4	15.35
5	17.6	5	15.35
10	17.7	10	15.05
15	17.8	15	14.8
20	18.1	20	14.8
25	18.4	25	14.6
30	18.5	30	14.5
40	18.5	40	14.5
50	18.9	50	14.5
60	19.1	60	14.5

Map of Well Location

Please provide a map below following instructions on the back.



Comments: FCR 10 m/L

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Highland Water Wells	2576

Business Address (Street Number/Name)	Municipality
225 Elm St Dorham	

Province	Postal Code	Business E-mail Address
Ont	L0G1R0	highlanddrilling@bmts.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
519 369 6363	Wilson Clint

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
7013		2020/06/02

Well owner's information package delivered	Date Package Delivered	Ministry Use Only
☑ Yes ☐ No	2020/06/19	Audit No. Z319022
	Date Work Completed: 2020/06/02	Received JUN 26 2020

0506E (2018/12) **Ministry's Copy**

APPENDIX E:

COMPOSITE UTILITY INFORMATION

Darren Hewgill - GM BluePlan

From: Kellar, Nicholas <nicholas.kellar@bell.ca>
Sent: Tuesday, March 26, 2024 10:09 AM
To: Darren Hewgill - GM BluePlan
Subject: [EXT] RE: 224002 - 423018 Rocky Saugeen Road, Municipality of West Grey

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL EMAIL

Hi Darren. What services would you be looking for? All we have out in that area today is legacy copper. Telephone would be available but no internet on the cable infrastructure. You would likely have to explore wireless options for internet unless another telco has something more modern out there. Thank you.

Nick Kellar
Implementation Manager
Owen Sound, ON
870 4th Ave E, N4K 2N7
office: 519-371-3125
fax: 519-376-3563
email: nicholas.kellar@bell.ca

From: Darren Hewgill - GM BluePlan <Darren.Hewgill@gmblueplan.ca>
Sent: March-26-24 9:56 AM
To: Kellar, Nicholas <nicholas.kellar@bell.ca>
Subject: [EXT]224002 - 423018 Rocky Saugeen Road, Municipality of West Grey

Hi Nick,

We are working on a preliminary functional servicing report for the above noted property.

The proposed construction is a 4-season bible retreat.

Does Bell capacity to service this development through their current infrastructure system?

Darren D. Hewgill, B.Eng., P.Eng.
Senior Project Manager

GM BluePlan Engineering Limited
1260-2nd Avenue East | Owen Sound ON N4K 2J3
t: 519.376.1805 ext. 2222 | c: 519.379.4270
darren.hewgill@gmblueplan.ca | www.gmblueplan.ca

Darren Hewgill - GM BluePlan

From: Darren Hewgill - GM BluePlan
Sent: Tuesday, March 26, 2024 11:05 AM
To: Gabriel.Arabia@hydroone.com
Subject: 224002 - 423018 Rocky Saugeen Road, Municipality of West Grey
Attachments: 22182_Wideman_Site Plan_Subject Lands_Nov 13 2023.pdf

Hi Gabriel,

We are working on a preliminary functional servicing report for the above noted property.

The proposed construction is a 4-season bible retreat, likely requiring a small commercial power supply, or a large residential service.

Does Hydro-One have capacity to service this development through their current infrastructure system?

Darren D. Hewgill, B.Eng., P.Eng.
Senior Project Manager

GM BluePlan Engineering Limited
1260-2nd Avenue East | Owen Sound ON N4K 2J3
t: 519.376.1805 ext. 2222 | c: 519.379.4270
darren.hewgill@gmblueplan.ca | www.gmblueplan.ca

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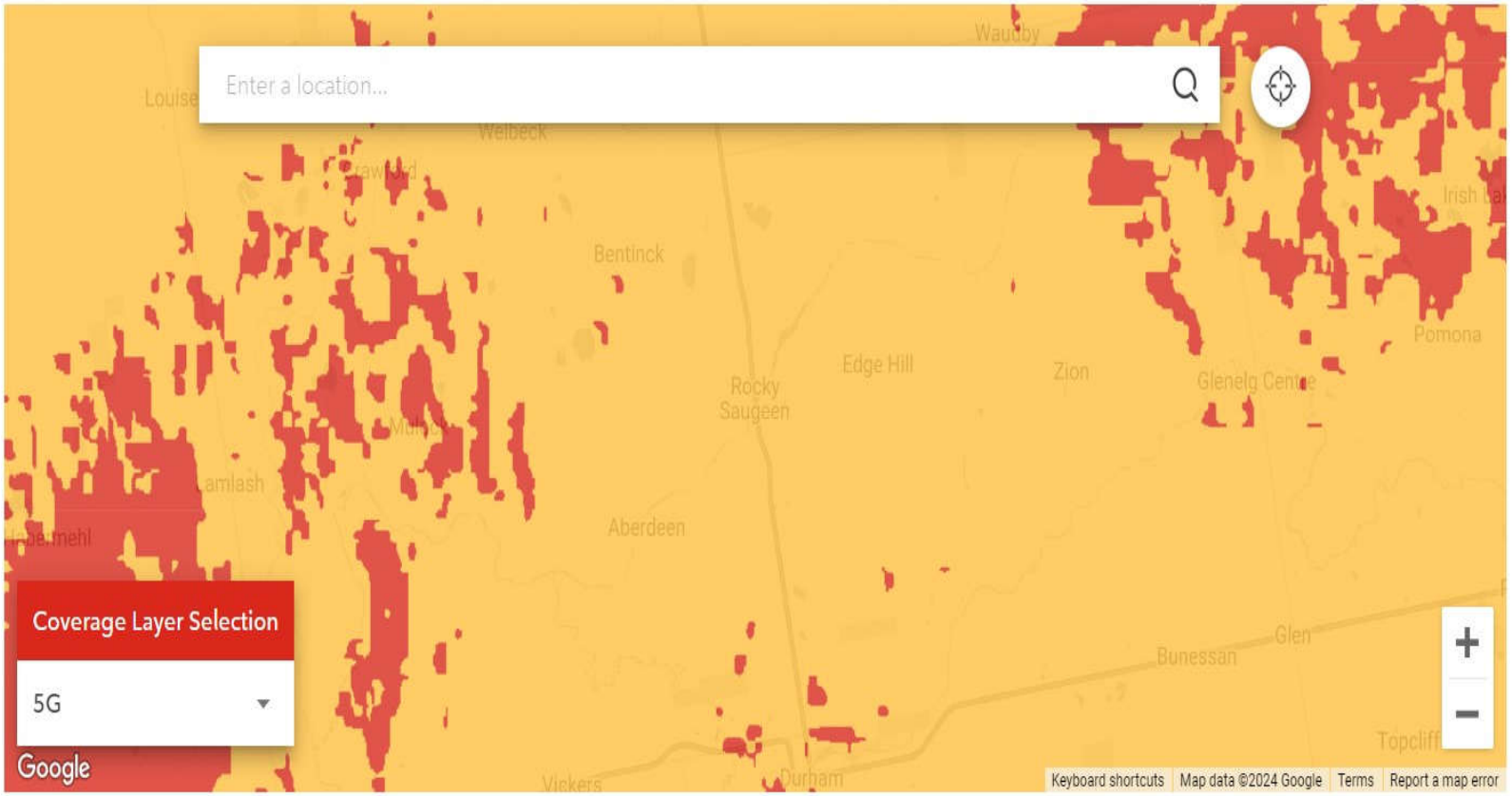


Darren Hewgill - GM BluePlan

From: Kenneth Pringle <Grant.Pringle@parkland.ca>
Sent: Thursday, March 28, 2024 5:23 PM
To: Darren Hewgill - GM BluePlan
Subject: [EXT] RE: 224002 - 423018 Rocky Saugeen Road, Municipality of West Grey

EXTERNAL EMAIL

Thanks Darren , 100 percent we can ! (sorry just got back from Vegas today) Grant

From: Darren Hewgill - GM BluePlan <Darren.Hewgill@gmblueplan.ca>
Sent: Tuesday, March 26, 2024 10:04 AM
To: Kenneth G. Pringle <Grant.Pringle@parkland.ca>
Subject: [External] 224002 - 423018 Rocky Saugeen Road, Municipality of West Grey

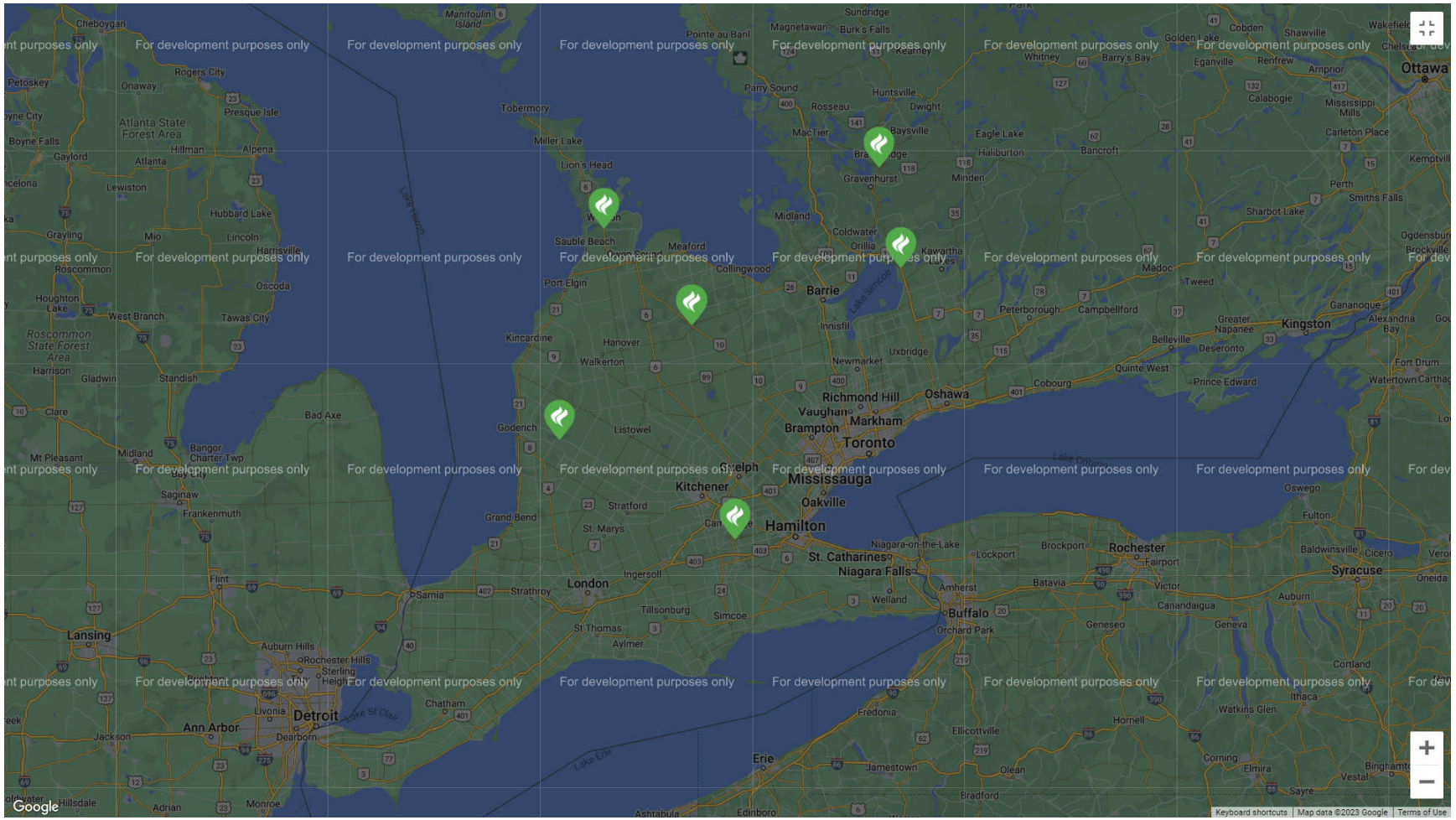
Hi Grant,

I am working on another Functional Servicing Report for a rural bible retreat development. Does Sparling's have capacity in the area to service this development should the Owner need propane?

Darren D. Hewgill, B.Eng., P.Eng.
Senior Project Manager

GM BluePlan Engineering Limited
1260-2nd Avenue East | Owen Sound ON N4K 2J3
t: 519.376.1805 ext. 2222 | c: 519.379.4270
darren.hewgill@gmblueplan.ca | www.gmblueplan.ca

SPARLINGS PROPANE REGIONAL DISTRIBUTION MAP – SOUTHERN ONTARIO – 2024



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Darren Hewgill - GM BluePlan

From: Johnson, Jim <Jhjohnso@wm.com>
Sent: Tuesday, March 26, 2024 10:14 AM
To: Darren Hewgill - GM BluePlan
Subject: [EXT] Re: 224002 - 423018 Rocky Saugeen Road, Municipality of West Grey

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL EMAIL

Hi Darren,
Yes we have capacity and this would fall under the municipal collection provided they use the bag tags.

Sent from my iPhone

> On Mar 26, 2024, at 9:55 AM, Darren Hewgill - GM BluePlan <Darren.Hewgill@gmblueplan.ca> wrote:
>
> Hi Jim,
>
> We are working on a preliminary functional servicing report for the above noted property.
>
> The proposed construction is a 4-season bible retreat.
>
> Would Waste Management have capacity to service this development through the Municipal collection system?

Darren D. Hewgill, B.Eng., P.Eng.
Senior Project Manager

GM BluePlan Engineering Limited
1260-2nd Avenue East | Owen Sound ON N4K 2J3
t: 519.376.1805 ext. 2222 | c: 519.379.4270
darren.hewgill@gmblueplan.ca | www.gmblueplan.ca

<image001.png>

<22182_Wideman_Site Plan_Subject Lands_Nov 13 2023.pdf>

APPENDIX F:

PRELIMINARY DESIGN DRAWINGS

GENERAL NOTES

1. DRAWINGS ARE NOT TO BE SCALED.
2. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON THE SITE PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER BEFORE PROCEEDING.
3. TOPOGRAPHIC SURVEY INFORMATION PROVIDED BY GM BLUEPLAN ENGINEERING LIMITED, DATED JANUARY 11, 2024 WHICH MAY NOT BE FINAL, ACCURATE OR COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL GEODETIC INFORMATION PROVIDED HEREIN.
4. BUILDING DRAWINGS PREPARED BY _____, DATED _____ 2024 , WHICH MAY NOT BE FINAL OR COMPLETE.
5. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE STANDARD MUNICIPAL, COUNTY, MTO, DRAWINGS AND OPSS ARE TO CONSTITUTE PART OF THIS CONTRACT AND DRAWINGS.
6. DRIVEWAYS SHALL BE SETBACK A MINIMUM CLEARANCE OF 1.5m FROM ALL ABOVEGROUND SERVICES OR OTHER OBSTRUCTIONS.
7. LOCATION AND ELEVATION OF EXISTING SERVICES ARE APPROXIMATE ONLY. IT IS THE OWNER/DEVELOPERS RESPONSIBILITY TO VERIFY LOCATION AND ELEVATION.
8. THE BUILDER IS RESPONSIBLE TO VERIFY THE LAYOUTS AND ELEVATIONS AGAINST THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.
9. THE DIMENSIONS FROM THE LOT LINES TO THE STRUCTURES ARE APPROXIMATE AND ARE SHOWN FOR INFORMATION PURPOSES TO ASSIST WITH GRADING

GRADING

1. ALL GRADING TO CONFORM TO OPSS.MUNI.201 AND OPSS.MUNI.206.
2. CONTRACTOR TO RESTORE AREAS ON PUBLIC R.O.W. OR ADJACENT LANDS THAT HAVE BEEN DISTURBED DURING CONSTRUCTION TO PREVIOUS CONDITION OR BETTER.
3. ALL DRIVEWAY AND GRADING MATERIAL AND CONSTRUCTION METHODS MUST CONFORM TO CURRENT MUNICIPALITY STANDARDS AND SPECIFICATIONS.
4. ALL FILL WITHIN THE SITE TO BE COMPACTED TO A MIN. OF 98% STD. PROCTOR DRY DENSITY. MATERIAL COMPACTION TO OPSS.MUNI.501.
5. ALL DISTURBED AREAS TO RECEIVE MINIMUM 100mm TOPSOIL AND SEED.
6. DRAINAGE SWALE GRADE SHALL BE MIN. 0.5%, MAX. 6%. ALL SWALES 1% OR LESS REQUIRE 100mmØ PERFORATED SUBDRAIN c/w CLEAR STONE WRAPPED IN FILTER FABRIC.
7. SLOPES IN LANDSCAPE AREAS AND ON BERMS SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL, UNLESS NOTED OTHERWISE.
8. UNDERSIDE OF DWELLING/GARAGE SLAB TO BE 0.5m ABOVE SEASONAL HIGH GROUNDWATER ELEVATION.
9. IT IS THE OWNER/DEVELOPERS RESPONSIBILITY TO VERIFY THE SUITABILITY OF FOUNDING SOILS.
10. THE CONTRACTOR IS RESPONSIBLE TO ADJUST THE UNDERSIDE OF FOOTING ELEVATION IN THE FIELD TO ENSURE A FROST COVER OF 1.22m MINIMUM MEASURED DOWN FROM FINISHED GRADE.
11. WHERE FOOTINGS ARE INSTALLED IN GROUNDWATER, ALL FOOTINGS SHALL BE DESIGNED IN ACCORDANCE WITH OBC 2012 (AS AMENDED), OR AS DIRECTED BY THE STRUCTURAL ENGINEER OR GEOTECHNICAL CONSULTANT.
12. PONDING MAY OCCUR WHERE EXISTING TREE LINE IS MAINTAINED (TYP.)
13. SEWAGE SYSTEM DESIGN AND ASSOCIATED GRADING SHALL BE THE RESPONSIBILITY OF THE SYSTEM DESIGNER. CONTRACTOR IS TO ENSURE THE GRADING AROUND THE SEWAGE SYSTEM COMPLIES WITH THE GENERAL INTENT OF THE APPROVED LOT GRADING PLAN.
14. ENGINEERED FILL REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. REFER TO CURRENT GEOTECHNICAL REPORT FOR DETAIL. CONTRACTOR TO PROVIDE MINIMUM 48-HOURS NOTICE TO GEOTECHNICAL CONSULTANT PRIOR TO IMPORTING AND PLACING ENGINEERED FILL.
15. ALL EAVE DOWNSPOUTS AND DISCHARGE OUTLET PIPES TO BE DIRECTED ONTO CONCRETE SPLASH PADS.
16. ALL MATERIALS SHALL COMPLY WITH OPSS, CSA, TSSA, AND TOWNSHIP STANDARDS.
17. SEEDING, HYDRO-MULCHING OR SEEDING SHALL BE DONE IN AREAS WITHIN THE MUNICIPAL RIGHT-OF-WAY.
18. CONTRACTOR TO REFER TO MANDATORY NOTES OUTLINED IN THE MUNICIPAL POLICY DESIGN CRITERIA SECTION 4.0.

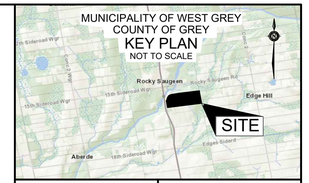
ELEVATIONS

ELEVATIONS HEREIN ARE GEODETIC, REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1928 (CGVD28) BY CONVERTING ELLIPSOIDAL HEIGHTS TO ORTHOMETIC ELEVATIONS USING THE HTv2.0(2010) GEOID MODEL PROVIDED BY NATURAL RESOURCES CANADA.
COORDINATES HEREIN ARE ADJUSTED GROUND COORDINATES CONVERTED FROM GRID COORDINATES OF THE UTM 17N NAD83(CSRS-V7) COORDINATE SYSTEM AND ARE BASED ON OBSERVATIONS FROM A NETWORK OF PERMANENT GPS/GNSS REFERENCE STATIONS. THIS PLAN CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO.

DISCLAIMER

THIS IS NOT A LEGAL PLAN. LEGAL BOUNDARY IS APPROXIMATE. INFORMATION IS BASED OF GREY COUNTY GIS MAPPING, WHICH MAY NOT BE COMPLETE OR CURRENT. CONTRACTOR TO REFER TO ORIGINAL PLAN TO VERIFY ALL INFORMATION.

ALL BUILDINGS, STRUCTURES AND UNDERGROUND INSTALLATIONS (HYDRO, GAS, SEWAGE SYSTEM, ETC.) COMPONENTS ARE TO BE PINNED & VERIFIED BY AND ONTARIO LAND SURVEYOR (OLS) PRIOR TO CONSTRUCTION (IF REQUIRED) TO ENSURE ALL REQUIRED SETBACKS ARE MAINTAINED IN ACCORDANCE WITH MUNICIPAL STANDARDS, ZONING BY-LAWS AND THE ONTARIO BUILDING CODE (OBC 2012).



CLIENT:	CONTRACTOR:
DURHAM HEIGHTS BIBLE RETREAT INC.	N/A

THE ELEVATION AND LOCATION OF THE BUILDING TO BE ERECTED ON THE LOT AND THE GRADING OF THE LOT ARE IN GENERAL CONFORMITY WITH THE GRADING AND DRAINAGE PLAN APPROVED BY GM BLUEPLAN ENGINEERING LTD.

P. ENG.

GM BLUEPLAN ENGINEERING LIMITED

LEGEND:

EXISTING CONDITIONS ELEVATION	x 215.90
MATCH EXISTING GRADE ELEVATION	214.98
PROPOSED ELEVATION	214.98
PROPOSED ELEVATION BELOW DECK	214.98
SWALE DRAINAGE	
SURFACE DRAINAGE	
PROPOSED BUILDING ACCESS	
DOWN SPOUT DIRECTION	

LOT CALCULATIONS - A2 ZONING

OVERALL LOT AREA	386,954m²
AREA OF BUILDING FOOTPRINT	1806 m²
LOT COVERAGE IN PERCENTAGE	0.46%

#1 BENCHMARK ELEV. - m

TBD

#2 BENCHMARK ELEV. - m

TBD

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PRELIMINARY
NOT FOR CONSTRUCTION

LOT GRADING ONLY

NO.	DATE	REVISION DESCRIPTION	CHKD
1	04/05/2024	ISSUED FOR REVIEW	D.D.H.

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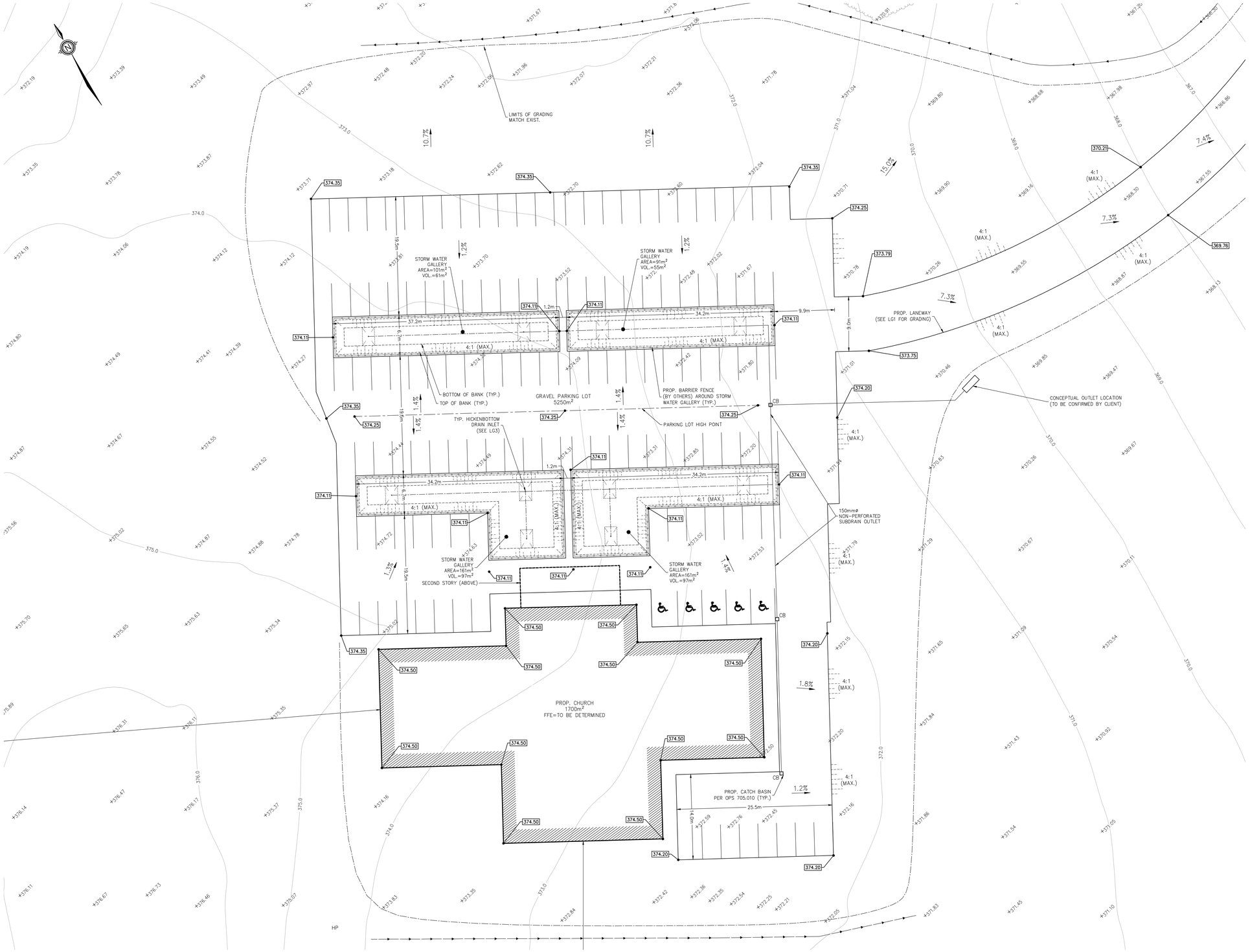
224002
LOT GRADING
CON 1 EGR, PT LOT 16
MUNICIPALITY OF WEST GREY
423018 ROCKY SAUGEEN ROAD

DRAWN BY :	APPROVED BY :	PROJECT NO. :	DRAWING NO. :
T.W.	D.D.H.	224002	LG1
DESIGNED BY :	DATE :	SCALE :	
D.D.H.	JAN 24, 2024	1:1000	



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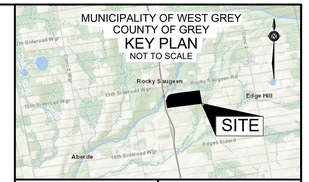
LAST SAVED BY: t.wagner, 4/5/2024 2:11:05 PM, PLOTTED BY: t.wagner, 4/5/2024 2:11:46 PM

MUNICIPALITY OF WEST GREY
COUNTY OF GREY

KEY PLAN

NOT TO SCALE



CLIENT:	CONTRACTOR:
DURHAM HEIGHTS BIBLE RETREAT INC.	N/A

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PROPOSED ELEVATION	214.98
PROPOSED ELEVATION BELOW DECK	214.98
SWALE DRAINAGE	
SURFACE DRAINAGE	
PROPOSED BUILDING ACCESS	
DOWN SPOUT DIRECTION	

#1 BENCHMARK ELEV. - m

TBD

#2 BENCHMARK ELEV. - m

TBD

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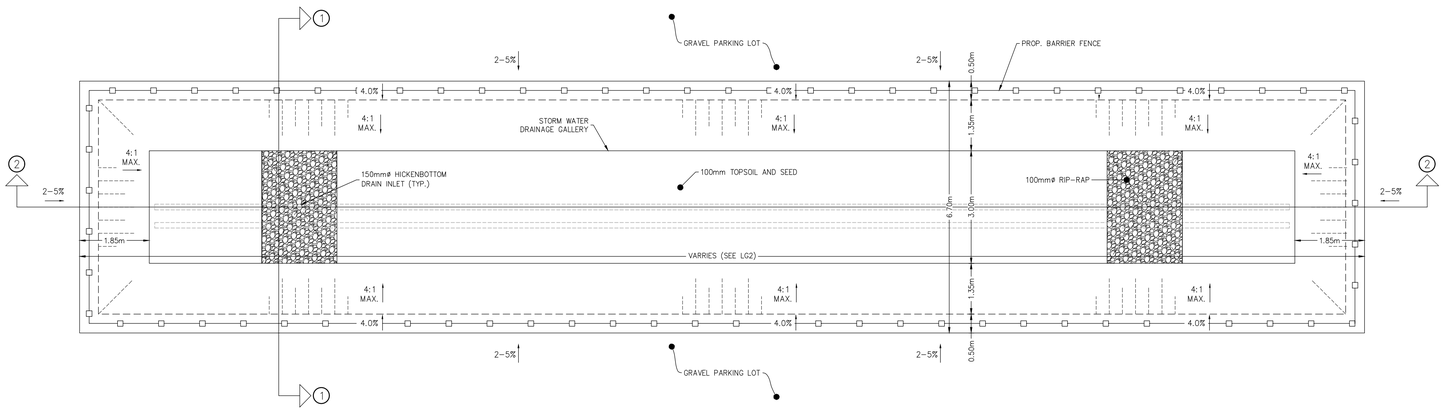
224002
DEVELOPMENT GRADING
CON 1 EGR, PT LOT 16
MUNICIPALITY OF WEST GREY
423018 ROCKY SAUGEEN ROAD

DRAWN BY :	APPROVED BY :	PROJECT NO. :	DRAWING NO. :
T.W.	D.D.H.	224002	LG2
DESIGNED BY :	DATE :	SCALE :	
D.D.H.	JAN 24, 2024	1:300	



TYP. STORM WATER GALLERY PLAN

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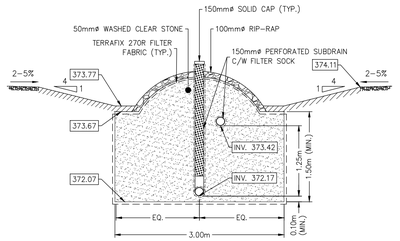
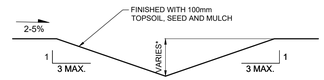


TYP. STORM WATER GALLERY SECTION 1

SCALE = 1:50

TYP. STORM WATER GALLERY SECTION 2

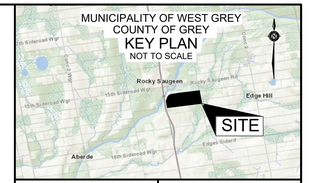
SCALE = 1:75



* DEPTH OF SWALE TO BE NO LESS THAN 0.15m

TYPICAL SWALE DETAIL

SCALE = N.T.S.



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LEGEND:

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- MATCH EXISTING GRADE ELEVATION — 214.98
- PROPOSED ELEVATION — 214.98
- PROPOSED ELEVATION BELOW DECK — 214.98
- SWALE DRAINAGE
- SURFACE DRAINAGE
- PROPOSED BUILDING ACCESS
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224002
SECTIONS & DETAILS
CON 1 EGR, PT LOT 16
MUNICIPALITY OF WEST GREY
423018 ROCKY SAUGEEN ROAD

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D.D.H.	JAN 24, 2024	1:300	