CORPORATION OF THE CITY OF
CLARENCE-ROCKLAND

COMMITTEE OF ADJUSTMENT

May 21, 2020, 7:00 pm
Council Chambers
415 rue Lemay Street, Clarence Creek, Ont.

Pages

1. Information

   PLEASE BE ADVISED THAT THE COMMITTEE OF ADJUSTMENT IS NOW HOLDING ITS MEETING VIRTUALLY THROUGH ZOOM DUE TO THE COVID-19 PANDEMIC SITUATION.

   If you wish to participate in the Zoom meeting, you will find the instructions at the following link: http://www.clarence-rockland.com/index.php/en/committee-of-adjustment

   This meeting will also be made accessible to the public via Facebook Live on the City of Clarence-Rockland
   page: https://www.facebook.com/clarencerockland/

2. Opening of the meeting

3. Reading and Adoption of the agenda

4. Pecuniary declarations

5. Adoption of the minutes 1

6. Minor Variance Applications

   6.1 D-13-20-01 5
   Marc Bourbonnais

   645 Edwards

   6.2 D-13-20-03 11
   Spacebuilders Ottawa Ltd.

   Lot 10, 62 and Block 90 of plan 50M-336

CORPORATION DE LA CITÉ DE
CLARENCE-ROCKLAND

COMITÉ DE DÉROGATION

le 21 mai 2020, 19 h 00
Council Chambers
415 rue Lemay Street, Clarence Creek, Ont.

Pages

1. Information

   VEUILLEZ ÊTRE AVISÉS QUE LE COMITÉ DE DÉROGATION TIENT MAINTENANT SES RÉUNIONS VIRTUELLEMENT VIA ZOOM VU LA SITUATION DE PANDÉMIE COVID-19.

   Si vous désirez participer à la réunion Zoom, vous trouverez les instructions au lien suivant: http://www.clarence-rockland.com/index.php/fr/comite-de-derogation.

   Cette réunion sera également accessible au public par Facebook Live à partir de la page de la Cité de Clarence-Rockland: https://www.facebook.com/clarencerockland/

2. Ouverture de la réunion

3. Lecture et Adoption de l'ordre du jour

4. Déclarations pécuniaires

5. Adoption des procès-verbaux 1

6. Demandes de dérogation mineure

   6.1 D-13-20-01 5
   Marc Bourbonnais

   645 Edwards

   6.2 D-13-20-03 11
   Spacebuilders Ottawa Ltd.

   Lot 10, 62 et bloc 90 du plan 50M-336

CORPORATION OF THE

CITY OF CLARENCE-ROCKLAND

COMMITTEE OF ADJUSTMENT MEETING MINUTES

January 16, 2020
Council Chambers
415 rue Lemay Street, Clarence Creek, Ont.

PRESENT:	Serge Dicaire Guy Desjardins Marie-Eve Belanger Michel Bergeron Samuel Cardarelli Mario Zanth Nicolas Denis
ABSENT:	Michel Levert

1. Opening of the meeting

The Chair opens the meeting at 7:04 pm.

2. Reading and Adoption of the agenda

Moved by Mario Zanth
Seconded By Guy Desjardins

THAT the agenda be adopted as presented.

CARRIED

3. Pecuniary declarations

none

4. Adoption of the minutes

Moved by Michel Bergeron
Seconded By Samuel Cardarelli

That the minutes of December 18, 2019 be approved.

CARRIED

5. Minor Variance Applications

5.1 A/18/19

Mr. Zanth inquired what was the proposed setback between the driveway and the side lot line. Mr. Denis indicated that it was 1.3 metre. The zoning requires 1 metre.

Moved by Samuel Cardarelli
Seconded By Guy Desjardins

QUE le Comité de dérogation accepte la demande de dérogation mineure soumise par Jocelyne Potvin et Marcel Lafontaine, dossier A/18/19, concernant la propriété décrite comme 2140 rue Catherine, dans le but d' :

- Augmenter la largeur maximale de la voie d'accès de 9,0 mètres à 11,0 mètres.

CARRIED

Serge Dicaire President

W Marie-Eve Bélanger Secretary Treasurer

CORPORATION DE LA

CITÉ DE CLARENCE-ROCKLAND

PROCÈS-VERBAL RÉUNION COMITÉ DE DÉROGATION

le 16 janvier 2020
Salle du Conseil
415 rue Lemay Street,
Clarence Creek, Ont.

PRÉSENT: Serge Dicaire
Guy Desjardins
Marie-Eve Belanger
Michel Bergeron
Samuel Cardarelli
Mario Zanth
Nicolas Denis

ABSENT: Michel Levert

1. Ouverture de la réunion

Le président ouvre la réunion à 19h04.

2. Lecture et Adoption de l'ordre du jour

Proposé par Mario Zanth
Appuyé par Guy Desjardins

QUE l'ordre du jour soit adopté tel que présenté.

ADOPTÉE

3. Déclarations pécuniaires

aucune

4. Adoption des procès-verbaux

Proposé par Michel Bergeron
Appuyé par Samuel Cardarelli

Que le procès-verbal de la réunion du 18 décembre soit approuvé.

ADOPTÉE

5. Demandes de dérogation mineure

5.1 A/18/19

M. Zanth demande la distance de l'entrée et de la ligne de côté. M. Denis indique que la distance proposée est de 1,30 mètre. Le zonage requiert 1 mètre.

Proposé par Samuel Cardarelli
Appuyé par Guy Desjardins

QUE le Comité de dérogation accepte la demande de dérogation mineure soumise par Jocelyne Potvin et Marcel Lafontaine, dossier A/18/19, concernant la propriété décrite comme 2140 rue Catherine, dans le but d' :

- Augmenter la largeur maximale de la voie d'accès de 9,0 mètres à 11,0 mètres.

ADOPTÉE

Serge Dicaire Président

W Marie-Eve Bélanger Secrétaire-Trésorière

COMMITTEE OF ADJUSTMENT

REPORT N° AMÉ-20-08-R

Date received	31/01/2020
Date of the meeting	27/02/2020
Submitted by	Nicolas Denis
Object	Minor Variance
File nº	D-13-20-01
Owner	2247201 Ontario Inc.
Applicant	Marc Bourbonnais
Civic address	645 Edwards Street, Rockland
Legal Description	Andrew Bell Plan 1908, Lot 32

1) **GENERAL INFORMATION:**

Designation of the Official Plan of the United Counties of Prescott and Russell:
Urban Policy Area

Designation of the Official Plan of the Urban Area of the City of Clarence-Rockland:
Commercial Core Area

Designation of the Official Plan of Bourget:
N/A

Classification of Zoning By-Law No. 2006-3:

Urban Core Area (CA)

Services:
Municipal water: Yes
Municipal Sewer: Yes
Road access : Edwards Street

2) **PURPOSE :**
Minor Variance in order to reduce the minimum width of a two-way traffic access driveway from 6.0 m to 5.5 m. This would allow the construction of a wheelchair ramp.

3) **VARIANCE REQUESTED :**

	Permitted	**Proposed**
Minimum width of an access driveway	6 metres	5.5 metres

4) **CONDITIONS AND COMMENTS RECEIVED :**

Finance Department:
No objections.

Infrastructure Services:
The handicap ramp might encroach onto the fire route.

Protective Services:
No concerns.

Community Services:
No objections.

Construction Division:
No objections.

United Counties of Prescott and Russell:
No objections.

Planning Services:
On January 31st, Mr. Bourbonnais submitted an application for a minor variance in order reduce the minimum width of a two-way traffic access driveway from 6.0 m to 5.5 m located at 645 Edwards Street (Figure 1). This would allow the construction of a wheelchair ramp.

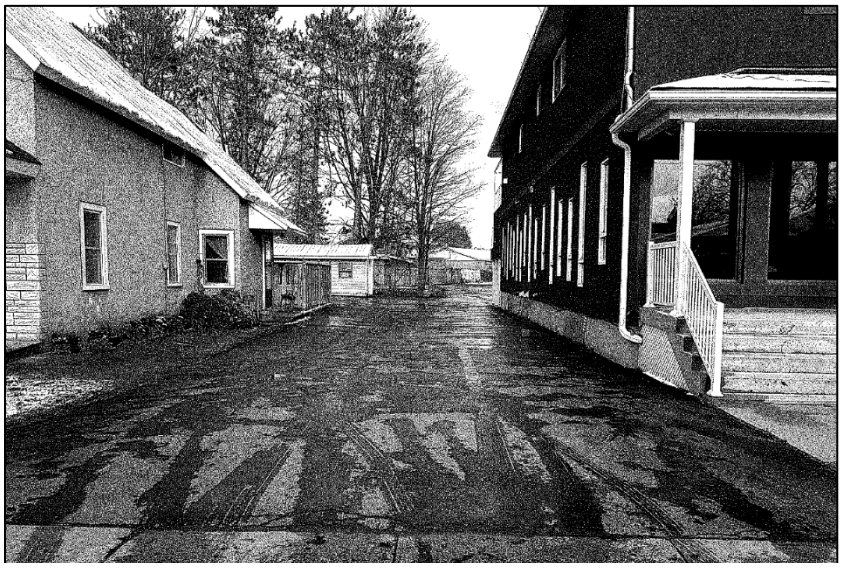

Figure 1: Keymap

The building is currently used for residential and commercial uses. There is a single apartment located on the second floor, seven commercial spaces located on the ground floor and three commercial spaces located in the basement. All parking spaces are located at the rear of the property and are accessible by a two-way traffic access driveway facing Edwards Street.

The owner has recently agreed to accommodate the Canadian Mental Health Association on the ground floor of the building. This tenant will often be providing resources to a group of individuals with disabilities requiring adequate accessibility to the building. Currently, there is no wheelchair ramp available to assist these needs. The owner of the building considered erecting the structure at the rear of the building. This location would have been the least invasive to pedestrian and vehicular circulation. Unfortunately, the current layout of the building does not allow the handicap ramp to be built at this particular location. Alternatively, a wheelchair ramp, built in an accordion pattern, in front of the public entrance would require significantly more space and would encroach on the City's right of way. The only viable option for the owner is to utilize the space available in the access driveway next to the building and gradually slope a wheelchair ramp to the elevation of the current public entrance (Figure 2).

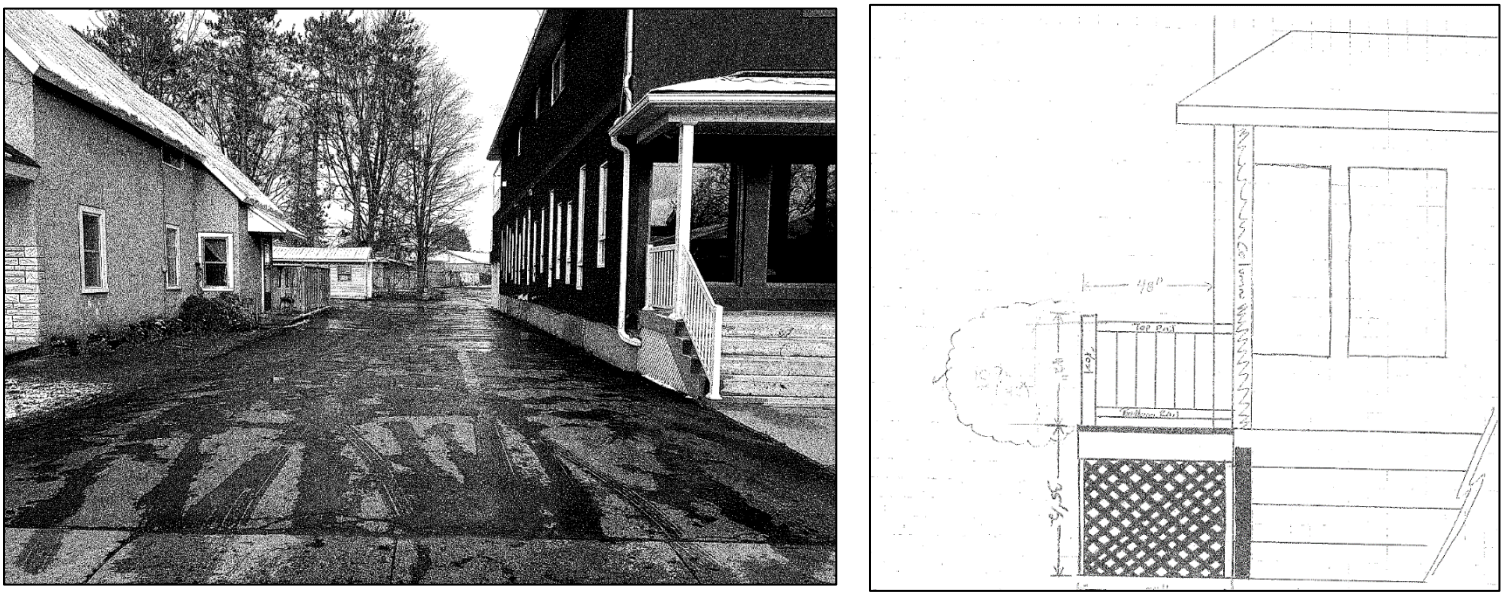

Figure 2: Proposed location of the wheelchair ramp.

Section 5.7 of the Zoning By-law 2016-10 requires that all access driveways designated for two-way traffic have a minimum width of 6.0 meters. That being said, the proposed wheelchair ramp located on the north side of the building would reduce the access driveway width to 5.5 meters. All of the subject property is included under the "*Urban Policy Area*" on Schedule "*A*" of the Official Plan of the United Counties

of Prescott and Russell. Under this policy, mixed uses are permitted.

The entire property is zoned "*Urban Core Area (CA)*" under the Zoning By-law 2016-10.

5) **FOUR TESTS :**

I. The general intent and purpose of the Official Plan are maintained:

All of the subject property is included under the "*Urban Policy Area*" on Schedule "*A*" of the Official Plan of the United Counties of Prescott and Russell. The existing mix uses are permitted within this designation.

Section 3.3 "*Transport*" of the Official Plan explains that the road system, independent from the level of government, needs to be efficient and safe. In this case, the reduced access driveway is not anticipated to add additional circulation onto the property and create any difficulties accessing the property, therefore, maintaining a safe and efficient environment along Edwards Street. In addition, the wheelchair ramp will be located far enough in order to maintain a good visibility for motorists accessing the road network. Furthermore, the proposed reduced access driveway will not impede the activities of the City of Clarence-Rockland in regards to regular services such as snow removal, garbage collection or future road work. The request maintains the general intent and purpose of the Official Plan.

II. The general intent and purpose of the Zoning By-law are maintained:

Although Section 5.7 of the Zoning By-law 2016-10 requires that all access driveways designated for two-way traffic have a minimum width of 6.0 meters, it also states that access driveways designated for two-way traffic in the Urban Core Area along Laurier Street may be 3.0 metres wide. The subject property is located within the Urban Core Area according to Schedule B of the same By-law but is not located along Laurier Street. The property is located approximately 60 meters from the intersection of Laurier Street and Edwards Street (Figure 1). Its close proximity and legal description does inherit general characteristics, lot dimensions and uses found on Laurier Street. The proposed access driveway would be 2.5 meters wider than what is acceptable on Laurier Street.

Moreover, the preliminary plan submitted to the Infrastructure and Planning Department indicates that the access driveway and wheelchair ramp will respect all other prescribed setbacks by the Zoning By-law.

III. The variance is minor:

The variance requested by Mr. Bourbonnais seeks to reduce the minimum width from 6.0 m to 5.5 m. This represents an 8.34% reduction. The Department deems this amendment as minor since the proposed width is not anticipated to have any impact on pedestrian and vehicular circulation. A good visibility will be maintained for motorists accessing Edwards Street.

As previously mentioned, the proposed reduced access driveway will not impede the activities of the City of Clarence-Rockland in regards to regular services such as snow removal, garbage collection or future road work.

Finally, the proposed access driveway will respect all other provisions of the Zoning By-law 2016-10. The variance can therefore be considered minor.

IV. The proposed use of land, building or structure is desirable for appropriate development:

The proposed use of the land is permitted by the Provincial Policy Statement, by the Official Plan of the United Counties of Prescott and Russell, by the Official Plan of the Urban Area of the City of Clarence-Rockland, and by the Zoning By-law 2016-10. The proposed access driveway will respect every other provisions of the Zoning By-law.

6) **RECOMMENDATION FROM THE PLANNING DIVISION**

THAT the Committee of Adjustment accepts the application for Minor Variance submitted by Marc Bourbonnais, for the property identified as 645 Edwards Street, to:

- Allow the reduction of the minimum width of a two-way traffic driveway from 6.0 m to 5.5 m.

COMMITTEE OF ADJUSTMENT

REPORT N° AMÉ-20-22-R

Date received	16/03/2020
Date of the meeting	21/05/2020
Submitted by	Nicolas Denis
Object	Minor Variance
File nº	D-13-20-03
Owner	Spacebuilders Ottawa Ltd.
Applicant	Jocelyn Peloquin
Civic Addresses	310 Sterling, 227 Turquoise and 101-167 Turquoise
Legal Description	Lots 10 & 62 and Block 90 on reference plan 50M-336

1) **GENERAL INFORMATION:**

Designation of the Official Plan of the United Counties of Prescott and Russell:

Urban Policy Area

Designation of the Official Plan of the Urban Area of the City of Clarence-Rockland:

Low Density Residential (lots 10 & 62) and Medium Density Residential (block 90)

Designation of the Official Plan of Bourget:

N/A

Classification of Zoning By-Law No. 2016-10:

Urban Residential First Density – Special - Exception 2 Zone (R1S-2 – lots 10 & 62) and Urban Residential Third Density – Exception 11 Zone (R3-11 – block 90)

Services:

Municipal water: Yes

Municipal Sewer: Yes

Road access : Sterling and Turquoise Street

2) **PURPOSE :**

Minor Variance in order to reduce the minimum exterior side yard from 3.0m to 1.2m on lots 62 and 10 of reference plan 50M-336 and reduce the minimum exterior side yard from 3.0m to 1.5m on block 90 of reference plan 50M-336. This would allow the construction of two single-family dwellings (lots 62 and 10) and a row of townhouses (block 90) as per the approved draft plan of subdivision.

3) **VARIANCE REQUESTED :**

	Permitted	**Proposed**
Minimum exterior side yard – Lots 10 & 62	3.0m	1.2m
Minimum exterior side yard – Block 90	3.0m	1.5m

4) **CONDITIONS AND COMMENTS RECEIVED :**

Finance Department:
No objection.

Infrastructure Services:
No comments

Protective Services:
No comments.

Community Services:
No comments.

Construction Division:
No comments.

United Counties of Prescott and Russell:
No comments

South Nation Conservation:
No comments.

Planning Services:
On March 16th, Mr. Jocelyn Peloquin from Spacebuilders Ottawa Ltd. submitted an application regarding a minor variance to allow the reduction of minimum exterior side yards from 3.0m to 1.2m on lots 62 and 10 of reference plan 50M-336 and reduce the minimum exterior side yard from 3.0m to 1.5m on block 90 of reference plan 50M-336. A minor variance was determined to be required once the developer Longwood submitted plans for a building permit for 227 Turquoise. That being said, the private street Solara Private was not taken into consideration when designing the lot sizes and subsequently, the subject properties do not have enough space to

accommodate the minimum exterior side yard prescribed by the Zoning By-law 2016-10. If approved, this would allow the construction of two single-family dwellings and a row of townhouses as per the approved draft plan of subdivision.

All of the subject properties are included under the "*Urban Policy Area*" on Schedule "*A*" of the Official Plan of the United Counties of Prescott and Russell. Also, lots 10 and 62 of reference plan 50M-336 are included under the "*Low Density Residential*" designation and block 90 of reference plan 50M-336 is included under the "*Medium Density Residential*" designation according to the Official Plan of the Urban Area of the City of Clarence-Rockland. Under these policies, the proposed residential uses are permitted.

The properties are zoned "*Urban Residential First Density – Special - , Exception 2 (R1S-2)*" and "*Urban Residential Third Density – Exception 11 (R3-11)*" under the Zoning By-law 2016-10. Under these zones, the proposed residential uses are permitted.

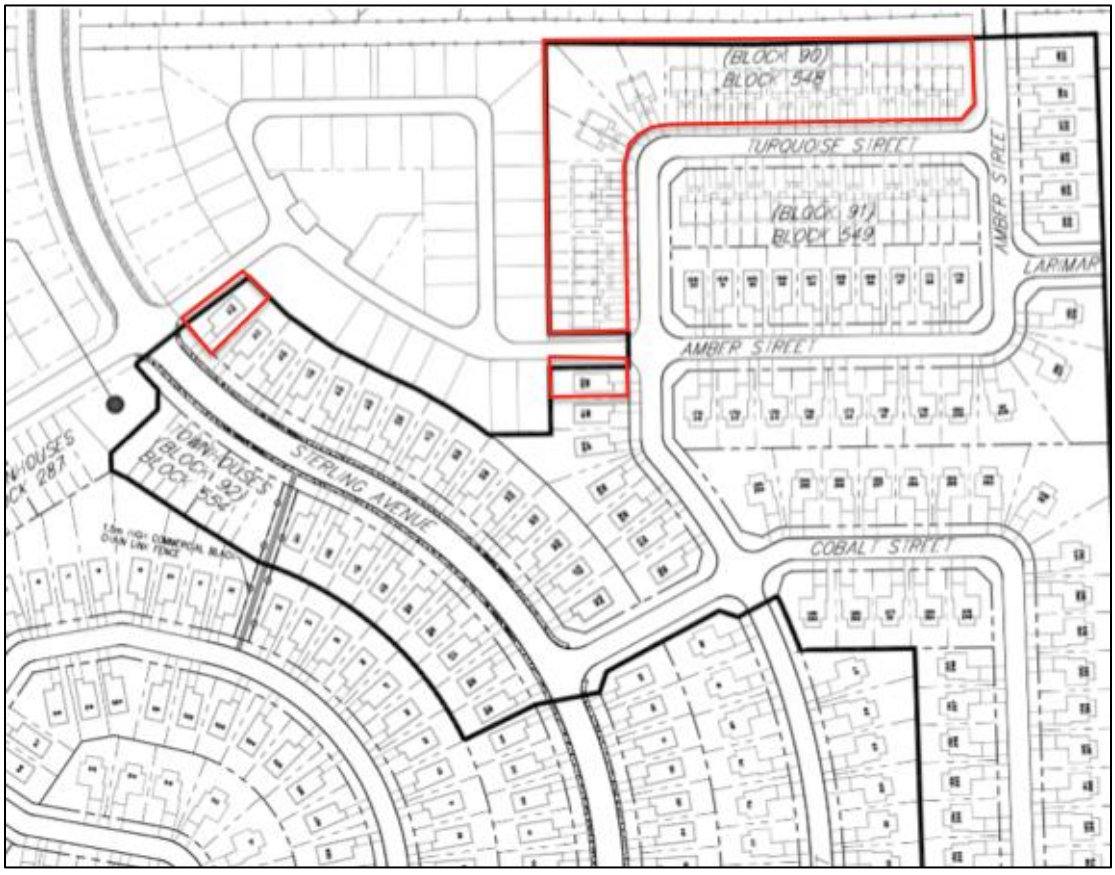

Figure 1 – Location of the subject properties on reference plan 50M-336.

5) **FOUR TESTS :**

I. The general intent and purpose of the Official Plan are maintained:

All of the subject properties are included under the "*Urban Policy Area"* on Schedule "*A*" of the Official Plan of the United Counties of Prescott and Russell. Also, lots 10 and 62 of reference plan 50M-336 are included under the "*Low Density Residential"* designation and block 90 of reference plan 50M-336 is included under the "*Medium Density Residential"* designation according to the Official Plan of the Urban Area of the City of Clarence-Rockland. Under these policies, the proposed residential uses are permitted.

Section 3.3 "*Transport*" of the Official Plan of the United Counties of Prescott and Russell explains that the road system, independent from the level of government, needs to be efficient and safe. In this case, the proposed buildings on the subject properties will be located closer to Solara Private then currently permitted. It is anticipated to have no impact for motorists circulating at low speeds on Turquoise, Sterling and Solara Private. In addition, Solara Private is a private street and only serves its residents. Low volumes of vehicles use this road and therefore reduce the risk for accidents. Visibility triangles will be maintained and will ensure the buildings will not act as a visual obstruction for motorists. The variance requested maintains the general intent and purpose of the Official Plan.

II. The general intent and purpose of the Zoning By-law are maintained:

The properties are zoned "*Urban Residential First Density – Special - Exception 2 (R1S-2)*" and "*Urban Residential Third Density – Exception 11 (R3-11)*" under the Zoning By-law 2016-10. Under these zones, the proposed residential uses are permitted.

A minimum exterior side yard is necessary in order to allow adequate separation between the construction envelope on the lot and the road in question. If the structures are erected with a reduced exterior side yard, the houses will still be 5-7m from the roadway. It is the Department’s opinion that this distance still provides sufficient space to maintain a safe road system and adequate access to the rear yards. The variance respects the general intent and purpose of the Zoning By-Law 2016-10.

III. The variance is minor:

The Department deems this amendment is minor since the situation

is unique. Solara Private was not taken into consideration when designing the lot sizes and subsequently, the subject properties do not contain enough space to accommodate the minimum exterior side yard prescribed by the Zoning By-law 2016-10. Currently, the lots and block cannot be developed as per the approved subdivision agreement. A review of the submitted building permit determined that all other provisions of the Zoning By-law will be respected.

Moreover, the reduced minimum exterior side yards are not anticipated to have any impacts on vehicular circulation due to the fact that the visibility triangles will be maintained and low volumes of vehicular traffic and low speeds characterize the concerned streets. The variance can therefore be considered minor.

IV. The proposed use of land, building or structure is desirable for appropriate development:

The proposed use of the land is permitted by the Provincial Policy Statement, by the Official Plan of the United Counties of Prescott and Russell and by the Official Plan of the Urban Area of the City of Clarence-Rockland. The properties in question will respect every other provision of the Zoning By-law 2016-10. The proposed reduction of the minimum exterior side yards are appropriate and required for the continuation of development of these properties.

6) **RECOMMENDATION FROM THE PLANNING DIVISION**

THAT the Committee of Adjustment accepts the application for Minor Variance submitted by Mr. Jocelyn Peloquin for Spacebuilders Ottawa Ltd., for the property identified as lots 10 & 62 and block 90 of reference plan 50M-336, to:

- Allow the reduction of the minimum exterior side yard from 3.0m to 1.2m for lots 10 and 62 of reference plan 50M-336;
- Allow the reduction of the minimum exterior side yard from 3.0m to 1.5m for block 90 of reference plan 50M-336.

COMITÉ DE DÉROGATION

RAPPORT N° AMÉ-20-22-R

Date reçue	28/04/2020
Date de la réunion	21/05/2020
Soumis par	Nicolas Denis
Objet	Dérogation mineure
# du dossier	D-13-20-04
Propriétaires	Marc et Michelle Brulé
Demandeur	Marc Brulé
Adresse civique	2954 chemin Henrie
Description	Dérogation mineure afin de réduire la cour latérale intérieure minimale de 3,0m à 1,39m.

1) **INFORMATION GÉNÉRALE :**

Désignation au Plan officiel des Comtés unis de Prescott et Russell : Secteur des politiques agricoles

Désignation au Plan officiel de l'aire urbaine de la Cité de Clarence-Rockland : S/O

Désignation au Plan officiel de Bourget :
S/O

Classification de zone du Règlement de zonage n° 2016-10 :
Zone rurale (RU)

Services :
Eau municipale : Non
Égout sanitaire municipal : Non
Accès à la rue : Chemin Henrie

2) **BUT :**
Dérogation mineure afin de réduire la cour latérale intérieure minimale de 3,0m à 1,39m. Ceci permettra la construction d'un garage attaché à la maison.

3) **DÉROGATION DEMANDÉE :**

	Permis	**Proposé**
Cour latérale intérieure minimale	3,0 m	1,39 m

4) **CONDITIONS ET COMMENTAIRES REÇUS :**

Services des finances :
Aucun commentaire.

Services d'infrastructure :
Aucun commentaire.

Services de la protection :
Aucun commentaire.

Services communautaires :
Aucun commentaire.

Division de la construction :
Le garage doit respecter les distances minimales au champ septique (16,5 pieds) ainsi que la fosse septique (5 pieds) .

Comtés unis de Prescott et Russell :
Aucun commentaire.

Conservation de la Nation Sud :
Aucun commentaire.

Aménagement du Territoire :
Le 28 avril, Marc Brulé a présenté une demande de dérogation mineure afin de permettre une réduction de la cour latérale intérieure minimale de 3,0 m à 1,39 m. Cette demande aura pour but de permettre la construction d'un garage attaché à la maison. La structure aura une largeur de 8,23 m, une longueur de 10,4 m et une aire totale de 77,8 m^2. De plus, le garage proposé sera situé à environ 18,6 m de la ligne de propriété avant, 1,39 m de la ligne de propriété latérale intérieure et 18,77 m de la ligne de propriété arrière (Figure 2).

Le lot se retrouve sur le chemin Henrie en proximité du secteur communautaire de Saint-Pascal-Baylon (Figure 1). La règlementation, la forme du terrain et l'emplacement de la maison permettent actuellement un garage d'environ 6 m de largeur. Les propriétaires aimeraient pouvoir obtenir cette dérogation afin de pouvoir construire un garage d'une taille suffisante pour accommoder leurs besoins. Les dimensions proposées permettront de stationner des véhicules ainsi

qu'entreposer des outils, de la machinerie et des équipements.

L'ensemble de la propriété est inclus à l'intérieur de la «désignation agricole» selon l'annexe «A» du Plan officiel des Comtés unis de Prescott et Russell. Un garage attaché à la maison est permis à l'intérieur de cette désignation

Selon le Règlement de zonage 2016-10, l'entièreté de la propriété se retrouve dans la zone « rurale (RU)». Un garage attaché à la maison est permis dans cette zone.

Figure 1 – Vue aérienne du 2954 chemin Henrie

5) QUATRE TESTS :

I. La demande respecte l'objet et les orientations du Plan officiel :

L'ensemble de la propriété est inclus à l'intérieur de la «désignation agricole» de l'annexe «A» du Plan officiel des Comtés unis de Prescott et Russell. Le garage proposé servira pour des fins résidentielles. Le Plan officiel permet des usages résidentiels dans ce secteur. L'objet et les orientations générales des Plans officiels sont respectés.

II. La demande respecte l'objet et les orientations du Règlement de zonage de la Cité de Clarence-Rockland :

Selon le Règlement de zonage 2016-10, l'entièreté de la propriété se retrouve dans la zone « rurale (RU)». Un garage attaché à la maison est permis dans cette zone.

L'intention générale d'une cour latérale intérieure minimale est de permettre un espace adéquat entre les utilisations résidentielles, de maintenir un espace approprié pour la circulation autour de l'habitation et entre les cours, de permettre un drainage approprié sur la propriété et répondre aux exigences établit dans le Code du bâtiment de l'Ontario. La cour latérale intérieure proposée sera réduite de 63 %. Néanmoins, il est l'opinion du Département que cette distance donne suffisamment d'espace afin de conserver son intention général, car le garage attaché sera situé à environ 75 m d'une habitation avoisinante et sera directement à côté d'un boisé. Aussi, il y a plus ou moins 25m entre la maison et la ligne de propriété intérieure de l'ouest, ce qui permet suffisant d'espace pour la circulation.

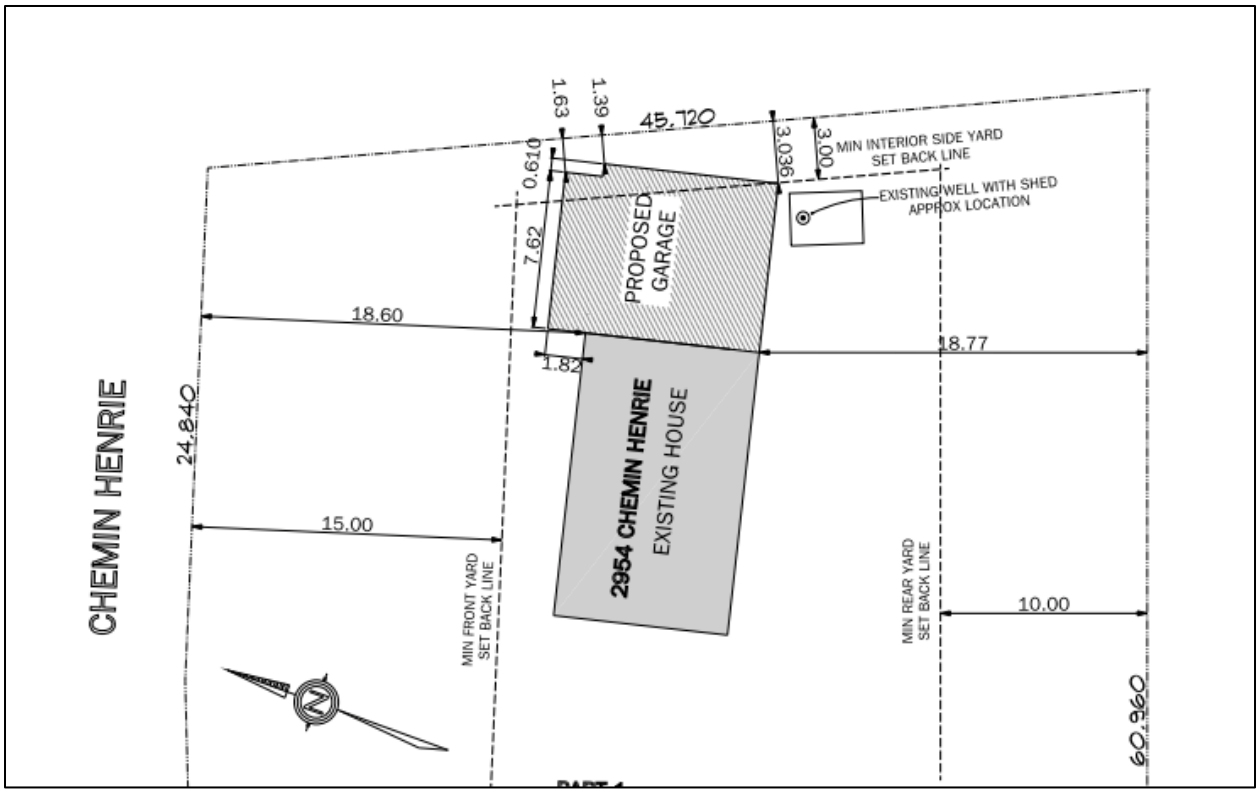

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Figure 2 – Emplacement du garage attaché à la maison proposé.

De plus, un garage attaché à la maison doit respecter les exigences de la zone en question. Dans ce cas ici, la cour latérale intérieure minimale pour la zone rurale (RU) est 3,0m. Ceci étant dit, si le garage en question était détaché, la structure serait soumise aux exigences de la Section 4,1 du Règlement de Zonage 2016-10 quant aux utilisations, bâtiments et constructions accessoires. Ce type de construction aurait pu se retrouver à 1,39m (minimum 1,2 m) de la ligne de propriété intérieure sans aucune nécessité pour

une dérogation mineure. Encore, plusieurs autres zones dans le Règlement de Zonage 2016-10 qui permet une utilisation résidentielle autorisent des garages attachés à la maison à se situer à minimum de 1m de la ligne de propriété.

En outre, la Section 5.9.1 du Règlement de zonage exige qu'une zone d'aménagement paysager d'au moins 1m doit être maintenue entre toute allée, voie d'accès ou ruelle et toute ligne de lot latérale ou ligne de lot arrière. Selon les plans soumis par le demandeur, cette disposition sera respectée.

Suite à la révision des plans et pré-consultations avec les propriétaires, le projet respectera toutes les autres dispositions du Règlement de zonage 2016-10.

III. **La demande est mineure :**

La modification demandée par les propriétaires vise à réduire la cour latérale intérieure minimale de 3,0 m à 1,39 m. Le département d'Infrastructure et de l'aménagement du territoire estime que cette modification est mineure, car cette nouvelle structure proposée n'aura aucun impact sur le voisinage et sera située à une distance suffisante de la ligne de propriété afin de maintenir l'intention générale de la cour latérale intérieure et la zone d'aménagement paysager. De plus, la forme du terrain et l'emplacement de la maison présentent des difficultés pour le propriétaire de construire un garage attaché à la maison suffisant pour leurs besoins. Il est important à noter que ce projet aurait été approuvé, sans la nécessité pour une dérogation mineure, si la bâtisse était détachée ou à l'intérieur d'une différente zone qui permet une utilisation résidentielle. Enfin, la structure proposée complémentera bien la propriété et les requérants respecteront également toutes les autres dispositions du Règlement de zonage 2016-10. La dérogation peut donc être considérée comme étant mineure.

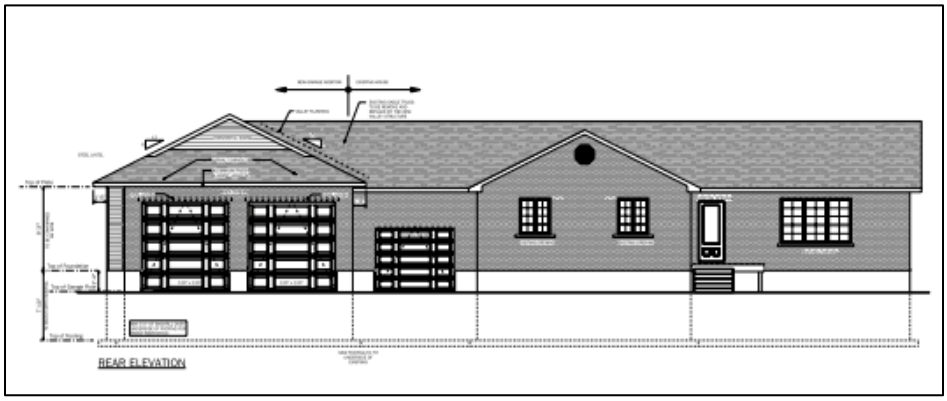


Figure 3 – Garage attaché à la maison proposé.

IV. **La demande de dérogation est opportune par rapport à l'utilisation du terrain :**

L'utilisation proposée du terrain est autorisée par la Déclaration de principes provinciale, le Plan officiel des Comtés unis de Prescott et Russell ainsi que le Règlement de zonage 2016-10. Le garage respectera toutes les autres dispositions du Règlement de zonage. Alors, la demande de dérogation est opportune par rapport à l'utilisation du terrain.

6) **RECOMMANDATION DU SERVICE :**

QUE le Comité de dérogation accepte la demande de dérogation mineure soumise par Marc et Michelle Brulé, dossier D-13-20-04, concernant la propriété décrite comme 2954 chemin Henrie, dans le but de :

- Réduire la cour latérale intérieure minimale de 3,0 m à 1,39 m .

COMMITTEE OF ADJUSTMENT

REPORT N° AMÉ-20-24-R

Submitted by	Marie-Eve Bélanger
Subject	Lot creation
File Number	B-CR-014-2019
Owner	Daniel Rozon for Monique Rozon
Civic Address	3383 Old Highway 17 Unit 11

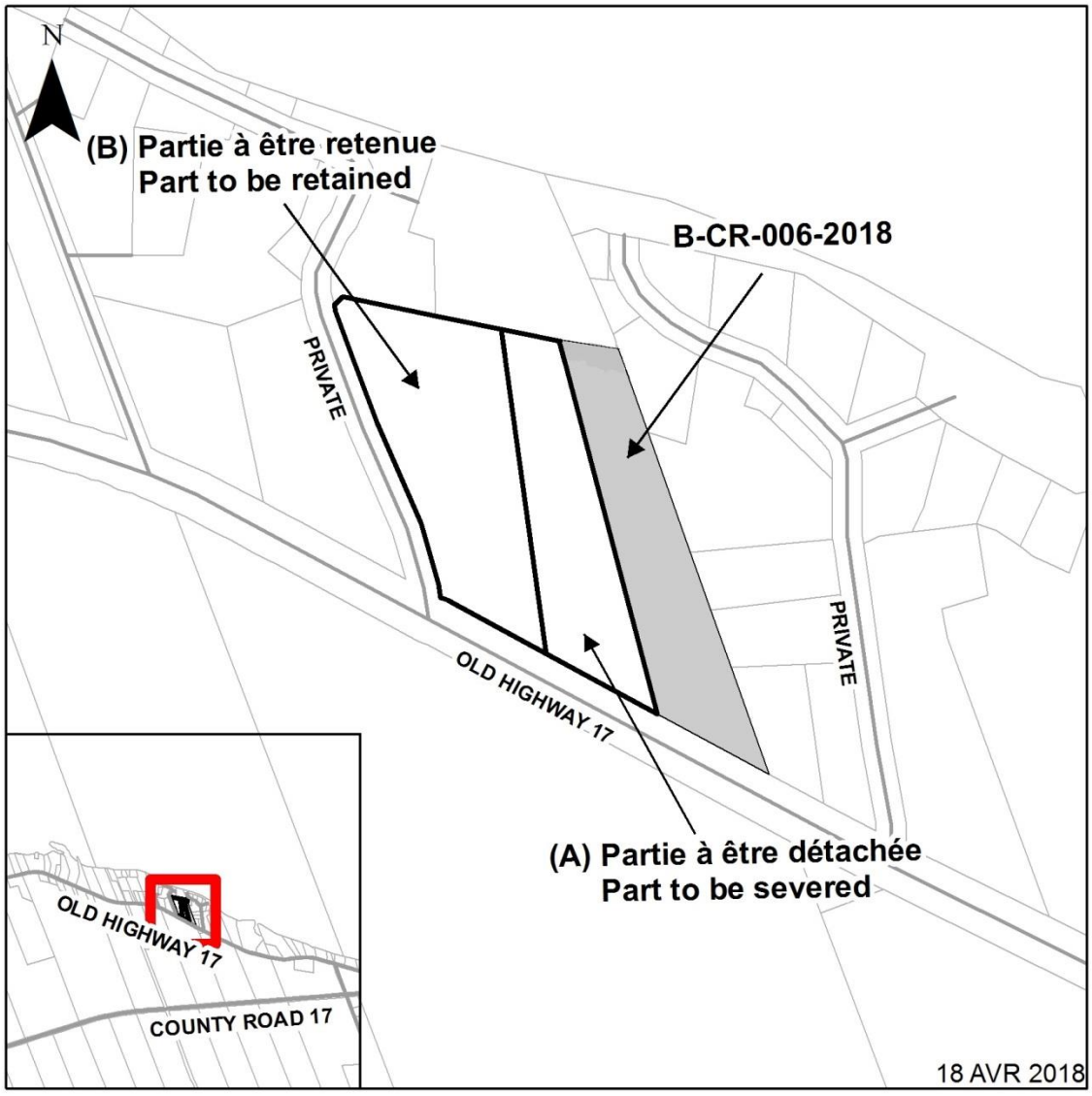


Figure 1 (Keymap)

Planning Services :

The Committee of Adjustment has given conditional consent to B-CR-007-2018 on May 15, 2018. On April 24th, the Committee approved a revised decision with the addition of two new conditions in regards to the hydrogeological study. One of the condition was for the owner to complete a pump test during the dry summer months and the second condition was for the septic system. The revised decision is included in attachment to this report.

On March 6th, 2020, Lascelles Engineering provided a revised hydrogeological study to South Nation Conservation. The revised report is included in attachment. South Nation has revised the report, which is also attached. South Nation has not recommended the hydrogeological study based on the fact that the pump test was not completed as indicated in the condition, being in the dry summer months. The pump test was completed in January. They also indicated that the recovery curve is highly irregular for this proposed lot.

Since planning staff are awaiting a positive response from SNC we cannot approve the severance. The Owner is looking to have the conditions waived in regards to the hydrogeological study. The Owner and SNC will be present at the meeting.

COMMITTEE OF ADJUSTMENT
COMITÉ DE DÉROGATION

FILE NUMBER: B-CR-007-2018
ADDRESS: 3383 Old Highway 17 Unit 11
LEGAL DESCRIPTION: Part of lot 6, concession 1 (O.S), part 1 on plan 50R7070
OWNER: Monique Rozon
APPLICANT: Daniel Rozon
PURPOSE: Lot creation

REVISED DECISION OF THE COMMITTEE

In accordance with the authority delegated by the Council of the Corporation of the City of Clarence-Rockland in By-law No. 2011-33 to the Committee of Adjustment. The above noted request was heard by the Committee of Adjustment on **April 24th, 2019**.

Application Number **B-CR-007-2018** is hereby:

☑ Approved ☐ Refused

Subject to the following condition(s):

1. That the applicant provide to the City of Clarence-Rockland two original paper copies of a registered Reference Plan (plan of survey) that identifies the severance B-CR-007-2018 as approved by the committee, as well as one copy to be submitted electronically in PDF and DWG format directly to the United Counties of Prescott and Russell and to the City of Clarence-Rockland.
2. That the applicant pays the City of Clarence-Rockland an amount equivalent to 5% of the assessed value of the parcel to be severed as cash in lieu of parkland payment. The assessment will be conducted by an appraiser certified by the Appraisal Institute of Canada and hired by the applicant at their expense.
3. That the applicant provide to the Approval Authority of the City of Clarence-Rockland a hydrogeological study and terrain analysis, to be prepared by a professional engineer, to demonstrate that the aquifer can provide a long term sustainable water supply of acceptable quality and quantity, as well as providing evidence through testing that the soil conditions can accommodate the effluent load form a septic field along with the replacement area. This report shall be completed by a professional engineer hired by the applicant and reviewed and approved by South Nation Conservation at the applicant's expense.
4. The applicant provides to South Nation Conservation a pump test showing recovery that meets the D-5-5 Ministry of the Environment, Conservation, and Parks guidelines, conducted during a time of seasonal low groundwater level (e.g. July-September).
5. The applicant demonstrates to South Nation Conservation that the proposed septic systems will be located and/or designed appropriately to protect drinking water wells.

6. That the applicant provide to the Approval Authority of the City of Clarence-Rockland an Environmental Impact Study for the Wildlife Travel Corridor and Fish Habitat to be prepared by a professional in the field, to demonstrate that there will be no negative impacts on the natural features or on the ecological functions for which the features are identified. This report shall be completed by a professional in the field hired by the applicant and reviewed and approved by South Nation Conservation at the applicant's expense.
7. That the Ontario Land Surveyor retained by the applicant determine the width of the road right-of-way presently in place along Old Highway 17 and where such right-of-way is less than 20 metres that a parcel of land representing the missing portion required to achieve a width of 10 metres (measured from the centre line of the road right of way) along the frontage of the severed and retained parcels be transferred to the City of Clarence-Rockland free of fees or encumbrances. In addition, the lawyer of the applicant(s) must register a by-law dedicating the land as public. Fees will be paid to the City of Clarence-Rockland for the preparation of the by-law. A copy of the registered by-law must be sent to the Infrastructure and Planning Department in order for the condition to be considered as fulfilled.
8. That the landowner provides to South Nation Conservation a written undertaking which acknowledges that the proposed property lines must be at a minimum clearing distance of three (3) metres from all existing private sewage systems.
9. That the applicant provides a written engagement indicating that the consent application B-CR-006-2018 be stamped and registered before the consent application B-CR-007-2018.
10. That the applicants provide the Approval Authority of the City of Clarence-Rockland a Transfer/Deed of land conveying the severed land for use for the issuance of a Certificate of Consent.
11. That each condition be fulfilled and that the Consent Approval Authority of the City of Clarence-Rockland be notified in writing within one (1) year of the date of the Decision by the departments and/or agencies having imposed the said conditions.

***Please note*:** Pursuant to Section 53(41) of the *Planning Act*, the applicant shall have a period of ONE (1) YEAR from the date of the Committee of Adjustment giving Notice of the herein Decision to the Applicant to fulfill and comply with all of the above-noted conditions of Consent. Should this requirement not be fulfilled, the application will be deemed to be refused and the file will be closed.

Written and oral submissions

- Written submissions were received by the Secretary-Treasurer of the Committee of Adjustment from the United Counties of Prescott and Russell and South Nation Conservation. These letters helped the Committee to make an informed decision.
- South Nation Conservation has requested the City to include 2 additional conditions on April 23rd, 2019 in regards to the hydrogeological study.
- Oral submissions were received from the owner Mr. Rozon in regards to the water quantity.

Marie-Eve Bélanger
Secretary-Treasurer of the Committee of Adjustment

Date

LASCELLES
ENGINEERING & ASSOCIATES LIMITED
1010 SPENCE AVE. SUITE 14, HAWKESBURY, ONTARIO K6A 3H9
OFFICE: (613) 632-0241

Our File Ref.: 180083 March 06, 2020

Mr. Daniel Rozon
3383 Old Highway 17 – Unit 11,
Rockland, Ontario
K4K 1W1

Subject: Hydrogeological Assessment – Response to Review Comments
Proposed Land Severance – B-CR-006-2018 & B-CR-007-2018
3383 Old Highway 17 – Unit 11, City of Clarence-Rockland

Dear Mr. Rozon,

The following letter report was prepared in response to the comments provided in relation to Lascelles' report entitled Hydrogeological Assessment and Terrain Analysis, dated March 2019, prepared in support of the above noted project; more precisely the letter provided by the City of Clarence-Rockland's Planning Department and from the South Nation Conservation (SNC) authored by Alison McDonald, dated April 19, 2019 as well as a Technical Review Memorandum authored by Michael Melaney, dated April 11, 2019. Furthermore, a meeting was held at the SNC office in Finch, Ontario, on April 23, 2019, to discuss the comments. From this meeting, the following three (3) main concerns were raised and need to be addressed, notably;

1. Additional Pumping Test: Carry out a new pumping test on the new dug well located on B-CR-006-2018 (B-006) during a seasonal period of minimal recharge, at the required yield, to confirm that the well is able to provide adequate long-term water quantity for future residential use.

2. Additional Well: Dig a new well on the other proposed lot B-CR-007-2018 (B-007) and carry out a pumping test during a seasonal period of minimal recharge, at the required yield, to confirm that the well is able to provide adequate long-term water quantity for future residential use. Collect a water sample to confirm the water quality of the new well.

3. Septic System Location: Address the concern with the location of the septic system in relation to the new dug wells.

NEW WELL – B-CR-006-2018

As discussed during our meeting, SNC believed the pumping test had been completed at the onset of the fall "freshet", which may have skewed the results, especially on account of the type of well. Consequently, a new pumping test was carried out by Lascelles in August 2019 during a dry spell. It is noted that prior to this pumping test, the Owner also carried out two (2) pumping test on his own on August 02 and August 08, 2019; both pumping test showed that the well could sustain a 6-hour pumping test under the required yield and obtain a 95% recovery within 24 hours.

The 6-hour pumping test was carried out on August 12, 2019 by Lascelles' technical staff using a submersible pump with a generator supplied by the Owner with sufficient hose to discharge the water at a distance where it would not interfere the pumping test. The pumping test started at 8:38AM and the pump was shut off at 15:08PM, which lasted 6.5 hours. Lascelles' staff was on-site to measure the drawdown and recovery of the well. The yield during the pumping test was adjusted and maintained around 18.9 l/min and monitored frequently during the entire pumping test.

Prior to starting the pumping test, the static water level was measured to be 2.60m from the top of well casing. At the end of the 6.5-hour pump test, the water level measured to be 4.40m for a total drawdown of 1.80m or 46.2% of the well's reserve. Although the well's steady state was never reached, the drawdown was measured to be only 0.09m during the last hour of pumping. Following the termination of the pumping test the well's recovery was monitored. After 60min following the end of the pumping test, the well had recovered 19% of its drawdown, and 80% after 18 hours and 96.7% after a bit more than 22 hours. A summary of the well pumping test data is presented in **Table 1** below.

Based on the results of this second pumping test, the new well located at B-006 can provide more than the minimum required yield to supply a single-family dwelling (13.7 l/min) as well as the peak demand rate of 18.75 l/min as per MOE's *"Technical Guideline for Private Wells: Water Supply Assessment – August 1996."* The water quality of this well was already presented and addressed

as part of the initial report (March 2019) and there were no issues to be addressed in regard to its quality.

Table 1: Pumping Test Data Summary – B-006

6-Hour Pumping Test Data					
Drawdown			Recovery		
Time (min)	Water Level (m)	Remaining Well Storage	Time (min)	Recovery (m)	Recovered Drawdown
Static	2.60	100.0%	Static	4.40	0.0%
1	2.70	97.4%	1	4.28	6.7%
2	2.78	95.4%	2	4.25	8.3%
3	2.82	94.4%	3	4.23	9.4%
4	2.86	93.3%	4	4.22	10.0%
5	2.89	92.6%	5	4.21	10.6%
10	3.04	88.7%	10	4.19	11.7%
15	3.15	85.8%	15	4.16	13.3%
20	3.24	83.6%	20	4.15	13.9%
25	3.31	81.8%	25	4.14	14.4%
30	3.38	80.0%	30	4.13	15.0%
40	3.48	77.4%	35	4.12	15.6%
50	3.58	74.9%	40	4.1	16.7%
60	3.66	72.8%	45	4.09	17.2%
120	3.92	66.2%	50	4.08	17.8%
180	4.09	61.8%	55	4.07	18.3%
240	4.18	59.5%	60	4.06	18.9%
300	4.30	56.4%	1080	2.95	80.6%
360	4.39	54.1%	1330	2.66	96.7%
390	4.40	53.8%			

Note: Measurements were taken from top of well casing.
Depth of well: 6.5m from top of casing.

NEW WELL – B-CR-007-2018

<u>Water Quantity:</u>

As discussed during our meeting, SNC requested that a well be installed on this proposed new lot and that a 6-hour pumping test be carried out during a time of low recharge. Following the favourable results obtained from the dug well at B-006, a new well was installed on the proposed lot B-007.

The Proponent retained the same well contractor, Leo Sarault & Fils Inc. who constructed the dug well on B-006 to construct the new well on B-007 in December 2019. The well record for well B-007 is presented as part of **Attachment 1**. Based on the well record provided, 0.2m of clayey topsoil was encountered followed by 2.5m of grey fissured clay, resting over *"greyish blue to blue, elastic to very elastic clay"* to a depth of 6.0m below ground surface. The well casing consists of a 0.3m diameter PVC with a 3.0m slotted section wrapped in geotextile. A large hole is dug

around the base of the casing and filled with filter sand to create a large reserve. The portion of the excavation was sealed with native plastic clay to prevent surface migration of potential contamination to the water supply.

It is noted that the Proponent carried out numerous pumping tests on this newly installed well to develop and to test the well capacity; those tests showed that the well could sustain a 6-hour pumping test under the required yield and obtain a 95% recovery within 24 hours. Nevertheless, Lascelles carried out its own pumping test on this well to confirm the long-term suitability of this local overburden aquifer. On January 22, a 6-hour pumping test was carried out by Lascelles' technical staff using a submersible pump with a generator supplied by the Owner with sufficient hose to discharge the water at a distance where it would not interfere the pumping test. The pumping test started at 9:10AM and the pump was shut off at 15:10PM, which lasted 6.0 hours. Lascelles' staff was on-site to measure the drawdown and recovery of the well. The yield during the pumping test was adjusted and maintained around 18.9 l/min and monitored frequently during the entire pumping test. Considering the time of year (January) and the freezing temperatures and frozen grounds, it is Lascelles' opinion that surficial infiltration/recharge was not occurring or was very minimal during the time of the pumping test.

Prior to starting the pumping test, the static water level was measured to be 3.04m from the top of well casing. At the end of the 6-hour pump test, the water level measured to be 6.38m for a total drawdown of 3.34m or 87% of the well's reserve. Although the well's steady state was never reached, the drawdown was measured to be 0.63m during the last hour of pumping. After 60min following the end of the pumping test, the well had recovered 13.8% of its drawdown, and 95.1 % within 24 hours. A summary of the well pumping test data is presented in **Table 2** below.

Based on the results of this second pumping test, the new well located at B-007 can provide the minimum required yield to supply a single-family dwelling (13.7 l/min) as well as the peak demand rate of 18.75 l/min as per MOE's *"Technical Guideline for Private Wells: Water Supply Assessment – August 1996."*

Table 2: Pumping Test Data Summary – B-007

6-Hour Pumping Test Data					
Drawdown			Recovery		
Time (min)	Water Level (m)	Remaining Well Storage	Time (min)	Recovery (m)	Recovered Drawdown
Static	3.04	100%	Static	6.38	0.0%
1	3.28	94%	1	6.29	2.7%
2	3.22	95%	2	6.24	4.2%
3	3.21	96%	3	6.21	5.1%
4	3.23	95%	4	6.19	5.7%
5	3.26	94%	5	6.17	6.3%
10	3.34	92%	10	6.13	7.5%
15	3.43	90%	15	6.10	8.4%
20	3.46	89%	20	6.07	9.3%
25	3.51	88%	25	6.05	9.9%
30	3.54	87%	30	6.01	11.1%
40	3.58	86%	35	6.00	11.4%
50	3.63	85%	40	5.98	12.0%
60	3.68	83%	45	2.97	12.3%
120	4.07	73%	50	5.96	12.6%
180	4.53	61%	55	2.94	13.2%
240	5.09	47%	60	5.92	13.8%
300	5.75	30%	126	5.66	21.6%
360	6.38	13%	175	5.43	28.4%
			1463	3.21	95.1%

Note: Measurements were taken from top of well casing.
Depth of well: 6.90m from top of casing.

Water Quality:

No water sample was collected following the pumping test as we wanted to make sure that the capacity was confirmed prior to doing water quality testing. It is noted however that at the end of the pumping test the water was very clear with no evidence of colour, sediments or odour. A water sample of the well was collected on February 04, 2020. The client was advised to start the pump one hour prior to our arrival. It was our understanding that the well had been chlorinated by the well contractor upon completion of the well. Prior to collecting the sample, the chlorine residual of the well was measured using a Lamotte Smart 3 Colorimeter. The results showed that the chlorine residual was nil.

The sample was collected using laboratory prepared bottles and submitted to Paracel Laboratories Ltd. of Ottawa, Ontario, and was analysed for a subdivision package. The result summary table is attached with this report as well as the Laboratory Certificates of Analysis as a part of **Attachment 8**. The summary table provides the results of the water analysis in relation to the Ontario Drinking Water Standards (ODWS – O. Reg. 169/03).

In reviewing the laboratory results, the raw water sample meets the ODWS, except for hardness. Hardness is not health related but operational guidelines in drinking water. Finally, it is noted that the sodium levels measured in the raw water is above the notification limits. More detailed information on these parameters is provided below. It is further noted that the water chemistry obtained from the dug well on B-006, also had hardness as an exceeding parameter as well as organic nitrogen. In comparing the water chemistry of both well, they are very similar.

Hardness: The ODWS recommends an operational guideline for hardness in drinking water of between 80 and 100 mg/L. The hardness was measured to be 320 mg/L and is considered hard water. Hard water may cause some scaling, films and staining on plumbing fixtures and dishes. However, hard water can be easily treated using a conventional water softener.

Based on the water chemistry obtained, the Langelier Saturation Index (LSI) and the Ryznar Stability Index (RI) were calculated, which are approximate indicators of the degree of saturation of calcium carbonate in water. Using both indexes, the water's corrosiveness and tendency to scaling can be established, in which a value of 0.79 was obtained for the LSI and a value of 6.32 for the RI. This would suggest that the water facilitates scale formation and growth and is also slightly corrosive to copper piping and metal fixtures. Consequently, water softener is recommended as well as alternative to copper for the water distribution pipes of the dwelling.

Sodium: The aesthetic objective for sodium in drinking water is 200 mg/L, at which it can be detected by a salty taste. The level of sodium measured in the raw water sample was 56.8 mg/L, which meets the aesthetic objective, but is marginally above the notification limit of 20 mg/L.

Sodium is not toxic. Consumption of sodium in excess of 10 grams per day by average adults does not result in any apparent adverse health effects. In addition, the average intake of sodium from water is only a small fraction of that consumed in a normal diet. A maximum acceptable concentration for sodium in drinking water has, therefore, not been specified. Persons suffering from hypertension or congestive heart disease may require a sodium-restricted diet, in which case, the intake of sodium from drinking water could become significant. It is therefore recommended that the measurement of sodium levels be included in routine monitoring programs of water supplies. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L, so that this information could be passed on to local physicians.

It is noted that using a water softener can increase the sodium levels in drinking water when using sodium chloride as the regenerant agent. Alternately, using potassium chloride as the regenerant agent to the water softener system can limit the increase of sodium in the water. The use of a reverse osmosis system at the point of consumption (under counter unit) would also be able to remove the sodium from the drinking water, if required.

LOCATION OF SEPTIC SYSTEM

There were concerns regarding the location of the septic system being potentially upgradient of the dug wells and consequently, which might pose a risk to the water quality of the said wells even though they meet the separation distance (greater than 30m) outlined in the Ontario Building Code.

To this effect, Lascelles carried out a topographical survey of the property to obtain the general slope of the terrain. Based on our survey, a topographical high point was established on the property being located between the existing wells and proposed septic system; north of this contour line, the terrain slopes towards the Ottawa River, whereas south of this contour line, the land slopes towards the Old Highway 17 at an approximate gradient of 0.004 m/m or 0.40%. Therefore, the general surficial groundwater flow would be towards the road ditch and not towards the wells. Refer to **Attachment No. 3** for the general existing topography of proposed new lots.

As part of the design of the septic systems, it is recommended that the septic system for both lots be designed to outlet towards the roadside ditch to ensure that the effluent is not directed towards the wells. Furthermore, considering surficial soil consists of fissured clay, it is also recommended that the subgrade be scarified and compacted using a sheep foot roller to seal the surficial fissures. Finally, in the event that sand beds or seams are encountered at the subgrade level of the septic system, it is recommended that they be removed to a minimum depth of 0.5m and replaced with compactable clay up to the subgrade level. The purposes of these recommendations are to ensure that the subgrade provides a vertical seal to the septic effluent and ensures it is directed away from the wells.

CONCLUSIONS

Based on the results of the 6-hour pumping test carried out on new wells located at B-006 and B-007, it can be concluded that they can provide the minimum required yield to supply a single-family dwelling (13.7 l/min) as well as the peak demand rate of 18.75 l/min as per MOE's *"Technical Guideline for Private Wells: Water Supply Assessment – August 1996."*

Although the targeted aquifer is a low yielding media, the very large underground reserve of permeable soil (sand) that was buried and sealed around the well can provide a long-term supply of water. This reserve acts in the same manner as for a low yielding well, where the peak demand flow would be obtained from providing a reservoir, which get filled up, when there is no demand on the well. In addition, the two wells have undergone several pumping tests at different times of the year by Lascelles as well as the Client, and each time they showed that the well could sustain a 6-hour pumping test at the required yield. Moreover, the volume of water pumped out of the wells was more than 6,800 litres in 6-hour, which is almost three times the water volume that a typical house would use during a day under maximum water taking conditions. The septic system for a typical house is generally designed for about 2,500 litres of day. Therefore, it is Lascelles' opinion that the two wells have demonstrated their ability to provide a long-term water quantity for future residential use.

The quality of the overburden aquifer was found to meet with the ODWS, except for hardness and organic nitrogen (B-006 only). Hardness and organic nitrogen are not health-related parameters in drinking water but operational parameters that can be easily treated using a conventional and readily available water treatment system. It is noted that the water was also found to be above the notification limit for sodium. To this effect, the local Medical Officer of Health should be notified of the levels of sodium found in this area so that this information could be passed on to local physicians. In conclusion, the proposed new lots can be adequately and safely supplied with potable water obtained from the overburden in the long term.

The septic system shall be designed using the percolation time of the imported sand and according to Part 8 of the Ontario Building Code (OBC), latest edition. The septic system shall be constructed above the groundwater table over the imported sand once all organic soils have been stripped from its footprint. A minimum setback of 30m or more shall be respected between any existing dug wells and 15m setback between any existing or new drilled wells. As recommended herein, the subgrade of the septic system will be sloped towards the roadside ditch and shall be scarified and compacted using a sheep foot roller to seal the surficial fissures. In the event that sand beds or seams are found at the subgrade level of the septic system, they shall be removed to a minimum depth of 0.5m and replaced with compactable clay up to the subgrade level. The purposes of these recommendations are to ensure that the subgrade provides a vertical seal to the septic effluent and ensures it is directed away from the wells.

We trust this letter report provides sufficient information for your present purposes and addresses the South Nation Conservation concerns. Upon approval, a comprehensive report would be prepared presenting the findings of the original report along with those provided herein. If you have any questions concerning this report or if we may be of further services to you, please do not hesitate to contact our office.

Yours truly,
Lascelles Engineering & Associates Ltd.

Prepared by:

Shuang Chang, M.A.Sc., P.Eng.

Reviewed by:

Mario Elie, Project Manager

Manon Rodrigue, P. Eng.

Attachment: Well record of B-007 (1 Page)
Laboratory Report of Well B00-7 (8 pages)
Conceptual Development Plan (1 page)

Ontario — Ministry of the Environment and Climate Change

Measurements recorded in: ☑ Metric ☐ Imperial

Well Tag#: A248531

A248531

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
Daniel	Rozon		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
3383 old Hwy 17	Clarence-Rockland	Ont	K4K1W1	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
3383 old Hwy 17	Clarence-Rockland		

County/District/Municipality	City/Town/Village	Province	Postal Code
Clarence Rockland	Rockland	Ontario	K4K1W1

UTM Coordinates Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3 18				

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	To
Brown	clay top soil		compacted	0	.2m
Grey	fissurated clay		" " "	.2m	2.7m
Grey Blue	elastic clay		" " "	2.7m	3.7m
Blue	Very elastic clay		" " "	3.7m	6.0m

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	2.8m	Very elastic Blue clay NATIVE clay From	150.0m³

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)

Duration of pumping ___ hrs + ___ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Water Level (m/ft)	Recovery Time (min)	Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

owner Responsability + also with Jusselle engineer.

Method of Construction

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

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	To
.3m	Schedull 40 P.V.C	1cm	0	6.9m

Status of Well

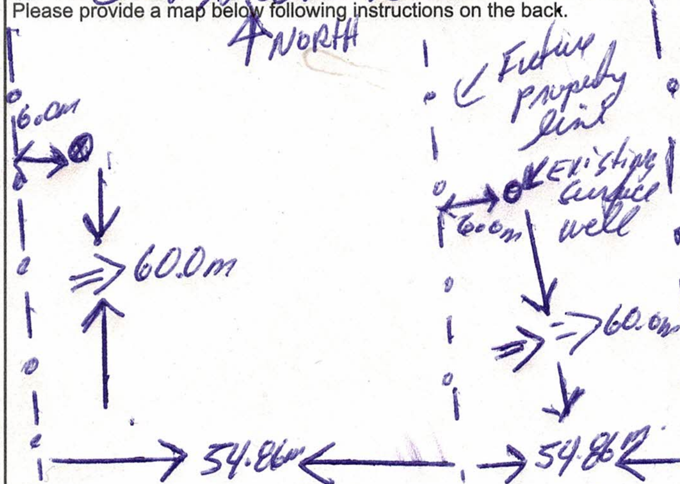
☑ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☐ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify ☐ Other, specify

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To
.34m	Schedule 40 P.V.C	1cm	0	3.0m

Map of Well Location

Please provide a map below following instructions on the back.



Comments: old Hyw 17

Water Details

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

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	2.5m	8.0m
2.5m	5.0m	6.0m
5.0m	6.25m	3.0m

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Léo Sarault & Fils Inc	T6667

Business Address (Street Number/Name)	Municipality
4882 chemin Conto-10	Nation

Province	Postal Code	Business E-mail Address
Ontario	K0B1G0	leosarault@yahoo.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6135245449	Gilles Sarault

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T2124	[signature]	2019 12 14

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No	2019 12 14	2019 12 14

Ministry Use Only

Audit No. Z287255

Received

0506E (2014/11) **Ministry's Copy**

Water Analysis Summary (B-007)
3383 Old Highway 17 - Unit 11
Rockland, Ontario
Lascelles File: 180083

Parameter	Units	MDL	Ontario Drinking Water Standards		MOE D-5-5[5]	Results
			Standard	Type		Raw
Microbiological Parameters						
E. Coli	CFU/100 mL	1	ND	MAC	--	ND
Fecal Coliforms	CFU/100 mL	1	ND	--	--	ND
Total Coliforms	CFU/100 mL	1	5[1]	MAC	--	ND
Heterotrophic Plate Count	CFU/ml	10	--	--	--	ND
General Inorganics						
Alkalinity, total	mg/L	5	30 - 500	OG	--	443
Ammonia as N	mg/L	0.01	--	--	--	0.02
Dissolved Organic Carbon	mg/L	0.5	5	AO	10	2.1
Colour	TCU	2	5	AO	7	5
Conductivity	uS/cm	5	--	--	--	868
Hardness	mg/L	1	80 - 100	OG	--	**320**
pH	pH Units	0.1	6.5 - 8.5	OG	--	7.9
Phenolics	mg/L	0.001	--	--	--	ND
Total Dissolved Solids	mg/L	10	500	AO	--	492
Sulphide	mg/L	0.02	0.05	AO	--	ND
Tannin & Lignin	mg/L	0.1	--	--	--	ND
Total Kjeldahl Nitrogen	mg/L	0.1	--	--	--	0.1
Organic Nitrogen	mg/L	NA	0.15	OG	--	0.08
Turbidity	NTU	0.1	1/5[2]	OG/AO	5	1.8
Anions						
Chloride	mg/L	1	250	AO	250	21
Fluoride	mg/L	0.1	1.5[3]/2.4	MAC	--	0.3
Nitrate as N	mg/L	0.1	10	MAC	10	0.3
Nitrite as N	mg/L	0.05	1	MAC	1	ND
Sulphate	mg/L	1	500	AO	500	14
Metals						
Calcium	mg/L	0.1	--	--	--	73.3
Iron	mg/L	0.1	0.3	AO	10	ND
Magnesium	mg/L	0.2	--	--	--	33.2
Manganese	mg/L	0.005	0.05	AO	1	0.007
Potassium	mg/L	0.1	--	--	--	4.0
Sodium	mg/L	0.2	20[4]/200	AO	200	**56.8**

NOTES

MDL: Method Detection Limit
MAC: Maximum Acceptable Concentration
AO: Aesthetic Objective
OG: Operational Guideline
ND: Not Detected
NA: Not Analyzed

ODWS: Ontario Drinking Water Standards (2006)
-- No Value provided ODWS or D-5-5 guidelines

BOLD: Indicates an excceeding parameter
BOLD: Inidcates an exceedance of notification limit

[1] MOE's D-5-5 Guideline (August 1996)- Table 1: Health-related bacteriological parameters
[2] 1.0 NTU OG if treatment system required to provide filtration. 5.0 NTU AO for all points of consumption
[3] Where supplies of naturally occuring fluoride at levels above 1.5 mg/L but below 2.4 mg/L the Ministry of Health recommends notification of local board of health of levels to avoid excesses exposure from other sources.
[4] Limit at which Local Medical Officer of Health should be notified of Levels.
[5] MOE's D-5-5 guideline (August 1996): maximum concentration considered reasonably treatable

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Certificate of Analysis

Lascelles Engineering Ltd.

1010 Spence Ave, Unit 1014
Hawkesbury, ON K6A 3H9
Attn: Shuang Chang

Client PO:
Project:
Custody: 8518

Report Date: 7-Feb-2020
Order Date: 4-Feb-2020

Order #: 2006114

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2006114-01	180083-2nd Well-Raw

Approved By: Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 07-Feb-2020

Client: Lascelles Engineering Ltd.

Order Date: 4-Feb-2020

Client PO:

Project Description:

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	4-Feb-20	4-Feb-20
Ammonia, as N	EPA 351.2 - Auto Colour	7-Feb-20	7-Feb-20
Anions	EPA 300.1 - IC	4-Feb-20	4-Feb-20
Colour	SM2120 - Spectrophotometric	4-Feb-20	4-Feb-20
Conductivity	EPA 9050A- probe @25 °C	4-Feb-20	4-Feb-20
Dissolved Organic Carbon	MOE E3247B - Combustion IR, filtration	5-Feb-20	5-Feb-20
E. coli	MOE E3407	4-Feb-20	4-Feb-20
Fecal Coliform	SM 9222D	4-Feb-20	4-Feb-20
Heterotrophic Plate Count	SM 9215C	4-Feb-20	4-Feb-20
Metals, ICP-MS	EPA 200.8 - ICP-MS	4-Feb-20	4-Feb-20
pH	EPA 150.1 - pH probe @25 °C	4-Feb-20	4-Feb-20
Phenolics	EPA 420.2 - Auto Colour, 4AAP	4-Feb-20	4-Feb-20
Hardness	Hardness as CaCO3	4-Feb-20	4-Feb-20
Sulphide	SM 4500SE - Colourimetric	5-Feb-20	5-Feb-20
Tannin/Lignin	SM 5550B - Colourimetric	4-Feb-20	4-Feb-20
Total Coliform	MOE E3407	4-Feb-20	4-Feb-20
Total Dissolved Solids	SM 2540C - gravimetric, filtration	5-Feb-20	6-Feb-20
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	5-Feb-20	5-Feb-20
Turbidity	SM 2130B - Turbidity meter	4-Feb-20	4-Feb-20

Certificate of Analysis

Report Date: 07-Feb-2020

Client: Lascelles Engineering Ltd.

Order Date: 4-Feb-2020

Client PO:

Project Description:

	Client ID:	180083-2nd Well-Raw	-	-	-
	Sample Date:	04-Feb-20 08:00	-	-	-
	Sample ID:	2006114-01	-	-	-
	MDL/Units	Drinking Water	-	-	-
Microbiological Parameters					
E. coli	1 CFU/100 mL	ND	-	-	-
Fecal Coliforms	1 CFU/100 mL	ND	-	-	-
Total Coliforms	1 CFU/100 mL	ND	-	-	-
Heterotrophic Plate Count	10 CFU/mL	<10	-	-	-
General Inorganics					
Alkalinity, total	5 mg/L	443	-	-	-
Ammonia as N	0.01 mg/L	0.02	-	-	-
Dissolved Organic Carbon	0.5 mg/L	2.1	-	-	-
Colour	2 TCU	5	-	-	-
Conductivity	5 uS/cm	868	-	-	-
Hardness	mg/L	320	-	-	-
pH	0.1 pH Units	7.9	-	-	-
Phenolics	0.001 mg/L	<0.001	-	-	-
Total Dissolved Solids	10 mg/L	492	-	-	-
Sulphide	0.02 mg/L	<0.02	-	-	-
Tannin & Lignin	0.1 mg/L	<0.1	-	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.1	-	-	-
Turbidity	0.1 NTU	1.8	-	-	-
Anions					
Chloride	1 mg/L	21	-	-	-
Fluoride	0.1 mg/L	0.3	-	-	-
Nitrate as N	0.1 mg/L	0.3	-	-	-
Nitrite as N	0.05 mg/L	<0.05	-	-	-
Sulphate	1 mg/L	14	-	-	-
Metals					
Calcium	0.1 mg/L	73.3	-	-	-
Iron	0.1 mg/L	<0.1	-	-	-
Magnesium	0.2 mg/L	33.2	-	-	-
Manganese	0.005 mg/L	0.007	-	-	-
Potassium	0.1 mg/L	4.0	-	-	-
Sodium	0.2 mg/L	56.8	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	ND	1	mg/L						
Fluoride	ND	0.1	mg/L						
Nitrate as N	ND	0.1	mg/L						
Nitrite as N	ND	0.05	mg/L						
Sulphate	ND	1	mg/L						
General Inorganics									
Alkalinity, total	ND	5	mg/L						
Ammonia as N	ND	0.01	mg/L						
Dissolved Organic Carbon	ND	0.5	mg/L						
Colour	ND	2	TCU						
Conductivity	ND	5	uS/cm						
Phenolics	ND	0.001	mg/L						
Total Dissolved Solids	ND	10	mg/L						
Sulphide	ND	0.02	mg/L						
Tannin & Lignin	ND	0.1	mg/L						
Total Kjeldahl Nitrogen	ND	0.1	mg/L						
Turbidity	ND	0.1	NTU						
Metals									
Calcium	ND	0.1	mg/L						
Iron	ND	0.1	mg/L						
Magnesium	ND	0.2	mg/L						
Manganese	ND	0.005	mg/L						
Potassium	ND	0.1	mg/L						
Sodium	ND	0.2	mg/L						
Microbiological Parameters									
E. coli	ND	1	CFU/100 mL						
Fecal Coliforms	ND	1	CFU/100 mL						
Total Coliforms	ND	1	CFU/100 mL						
Heterotrophic Plate Count	ND	10	CFU/mL						

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	20.5	1	mg/L	20.5			0.3	10	
Fluoride	0.29	0.1	mg/L	0.27			5.4	10	
Nitrate as N	0.31	0.1	mg/L	0.32			3.4	10	
Nitrite as N	ND	0.05	mg/L	ND			NC	10	
Sulphate	13.9	1	mg/L	13.9			0.3	10	
General Inorganics									
Alkalinity, total	ND	5	mg/L	37.1			NC	14	
Ammonia as N	0.012	0.01	mg/L	0.018			NC	17.7	
Dissolved Organic Carbon	1.4	0.5	mg/L	1.1			23.2	37	
Colour	2	2	TCU	2			0.0	12	
Conductivity	166	5	uS/cm	169			1.4	5	
pH	8.9	0.1	pH Units	8.9			0.2	3.3	
Phenolics	ND	0.001	mg/L	ND			NC	10	
Total Dissolved Solids	356	10	mg/L	374			4.9	10	
Sulphide	ND	0.02	mg/L	ND			NC	10	
Tannin & Lignin	ND	0.1	mg/L	ND			NC	11	
Total Kjeldahl Nitrogen	ND	0.1	mg/L	0.11			NC	16	
Turbidity	1.9	0.1	NTU	1.8			5.4	10	
Metals									
Calcium	0.8	0.1	mg/L	0.8			3.9	20	
Iron	ND	0.1	mg/L	ND			NC	20	
Magnesium	0.7	0.2	mg/L	0.7			1.6	20	
Manganese	ND	0.005	mg/L	ND			NC	20	
Potassium	0.1	0.1	mg/L	0.1			3.9	20	
Sodium	69.0	0.2	mg/L	71.5			3.5	20	
Microbiological Parameters									
E. coli	ND	1	CFU/100 mL	ND			NC	30	
Total Coliforms	ND	1	CFU/100 mL	1			NC	30	
Heterotrophic Plate Count	130	10	CFU/mL	170			27.0	30	

Certificate of Analysis

Report Date: 07-Feb-2020

Client: Lascelles Engineering Ltd.

Order Date: 4-Feb-2020

Client PO:

Project Description:

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	30.3	1	mg/L	20.5	97.8	77-123			
Fluoride	1.26	0.1	mg/L	0.27	98.6	79-121			
Nitrate as N	1.34	0.1	mg/L	0.32	102	79-120			
Nitrite as N	0.746	0.05	mg/L	ND	74.6	84-117			QR-03
Sulphate	23.4	1	mg/L	13.9	94.8	74-126			
General Inorganics									
Ammonia as N	0.291	0.01	mg/L	0.018	109	81-124			
Dissolved Organic Carbon	10.8	0.5	mg/L	1.1	96.4	60-133			
Phenolics	0.023	0.001	mg/L	ND	91.2	69-132			
Total Dissolved Solids	96.0	10	mg/L	ND	96.0	75-125			
Sulphide	0.50	0.02	mg/L	ND	100	79-115			
Tannin & Lignin	1.1	0.1	mg/L	ND	106	71-113			
Total Kjeldahl Nitrogen	1.88	0.1	mg/L	0.11	88.3	81-126			
Metals									
Calcium	9930	0.10	mg/L	806	91.3	80-120			
Iron	2220	0.10	mg/L	11.1	88.5	80-120			
Magnesium	9240	0.20	mg/L	698	85.4	80-120			
Manganese	49.6	0.01	mg/L	0.920	97.4	80-120			
Potassium	9010	0.10	mg/L	117	88.9	80-120			
Sodium	8990	0.20	mg/L	ND	89.9	80-120			

Qualifier Notes:

Sample Qualifiers :

QC Qualifiers :

QR-03 : The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.
NC: Not Calculated

OTTAWA RIVER

C.N.3383

LAND OWNED BY 3383

EXISTING DWELLING

Existing Septic System

RETAINED LOT

CR-007

CR-006

Existing Surface well

Existing Surface well

PROPOSED DWELLING ±250m²

PROPOSED DWELLING ±250m²

PROPOSED DWELLING ±250m²

Existing Septic System

C.N.3435

Existing Drilled Well

VACANT

C.N.3435

Topographic High Point

Existing Septic System

C.N.3435

VACANT

PRIVATE ROAD

PRIVATE ROAD

SPARE

SPARE

D/W

D/W

TEMPORARY BENCH MARK
TOP OF CASING OF EXISTING WELL ON LOT CR-006
ELEVATION= 100.00

95.34 95.61 96.00 96.63 96.43 97.88 98.56 97.35 97.50 98.09 98.48 98.73 98.89 99.19 99.68 99.22 99.30 99.20 99.31 99.19 99.34 99.42 99.53 99.33 99.51 99.35 99.31 99.13 99.42 99.29 99.12 100.10 100.38 100.13

28.91 24.38 24.38 60.00 30.00 30.00 182.45 156.01 131.32 7.62 49.18 51.82 51.82 29.98

CENTERLINE OF ROADSIDE DITCH
EDGE OF PAVEMENT
CENTERLINE OF ROADSIDE DITCH
EDGE OF PAVEMENT
CENTERLINE OF ROADSIDE DITCH
EDGE OF PAVEMENT

OLD HIGHWAY 17

LEGEND

- PROPERTY LINE
- NEIGHBORING PROPERTY
- EDGE OF SLOPE
- D/W DRIVE WAY

CLIENT:
MR. DANIEL ROZON

DRAWING NAME:
CONCEPTUAL SITE PLAN
PROPOSED CONSENT APPLICATION
B-CR-006-2018 & B-CR-007-2018

PROJECT ADRESS:
3383 Old Highway 17 - Unit 11, Rockland, Ontario

1010 SPENCE AVENUE, SUITE 14
HAWKESBURY ONTARIO
K6A 2W8

OFFICE: (613) 632-0241

LASCELLES
ENGINEERING & ASSOCIATES

DESIGN: M.E. / AUTEUR: M.E.
DRAWN: S.C. / DESSIN : S.C.
DATE: MARCH 2020 / DATE: MARCH 2020
CHECKED: M.E. / VERIFICATION : M.E.

DRAWING No.
No. DE DESSIN

ATTACHMENT 3

FILE No.:
No. DE DOSSIER:

180083

TECHNICAL REVIEW MEMORANDUM

Date: March 18, 2020

To: Alison McDonald

From: Michael Melaney

Subject: Proposed Land Development (Severances), 3383 Old Highway 17 – Unit 11, Clarence-Rockland, Ontario

South Nation Conservation (SNC) is in receipt of the following Report

Report:

Hydrogeological Assessment– Response to Comments, Proposed Land Severance – B-CR-006-2018 & B-CR-007-2018 3383 Old Highway 17 – Unit 11, Clarence-Rockland, Ontario

The following comments should be read in conjunction with the comments provided in April 2019. These comments are specific to quantity testing for severance applications B-CR-006 and B-CR-007 to ensure the long-term viability of potable water supply and compliance with D-5-5 Guidelines.

Detailed Comments

The consultant and South Nation (as the reviewer on behalf of the municipality) described the three following Main Concerns following a meeting at South Nation Conservation:

1. *Additional Pumping Test: Carry out a new pumping test on the new dug well located on B-CR-006-2018 (B-006) during **a seasonal period of minimal recharge,** at the required yield, to confirm that the well is able to provide adequate long-term water quantity for future residential use.*
2. *Additional Well: Dig a new well on the other proposed lot B-CR-007-2018 (B-007) and carry out a pumping test during **a seasonal period of minimal recharge,** at the required yield, to confirm that the well is able to provide adequate long-term water quantity for future residential use. Collect a water sample to confirm the water quality of the new well.*
3. *Septic System Location: Address the concern with the location of the septic system in relation to the new dug wells.*

The conditions of consent following the meeting were defined as:

- ***#4:** The applicant provides to South Nation Conservation a pump test showing recovery that meets the D-5-5 Ministry of the Environment, Conservation, and Parks*

guidelines, ***conducted during a time of seasonal low groundwater level*** *(e.g. July-September). and*

- ***#5:*** *The applicant demonstrates to South Nation Conservation that the proposed septic systems will be located and/or designed appropriately to protect drinking water wells.*

The following comments are provided for each well separately as the conclusions are different.

Water Quantity Assessment:

Aquifer Tests:

1. Water Quantity Assessment (B-CR-006) Main Concern #1, Consent Condition #4:

A pumping test was completed on August 12, 2019 at the new shallow dug well during **a time of seasonal low groundwater level.** Based on a review of the historical weather data and regional climate/monitoring stations for the date in question (Figure 1), August 12, 2019, would be reasonably considered **a period of seasonal low water** with respect to B-CR-006 (Figure 2).

The pumping test for B-CR-006 meets the requirements of D-5-5 having pumped the well at or above the required minimum of 18.75 l/min and achieved 95% recovery in less than 24 hours. SNC has no further comments with regards to water quantity with regards to B-CR-006. However, the conclusions for inherent vulnerability and risk associated with such a well with regards to quantity and quality remain relevant. The well's vulnerability is highlighted by the fact that water recovery is only being supplied by the geological unit between 2.5 and 3.75 m BGS; the silty sand/fine sand.

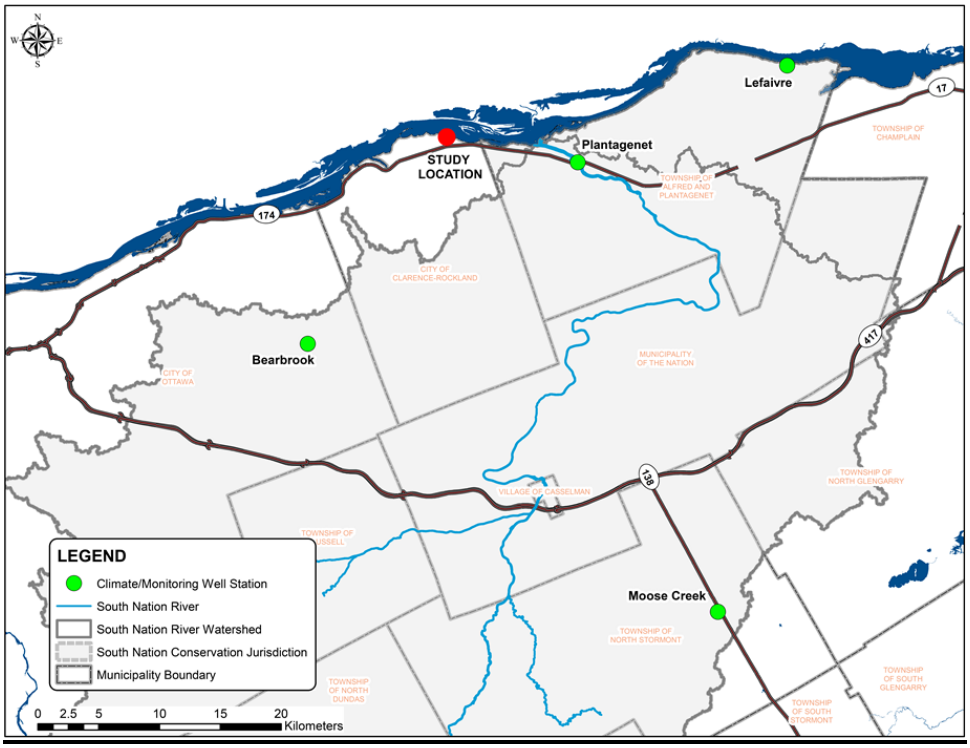


Figure 1: Stations reviewed for identifying periods of seasonal low water conditions.

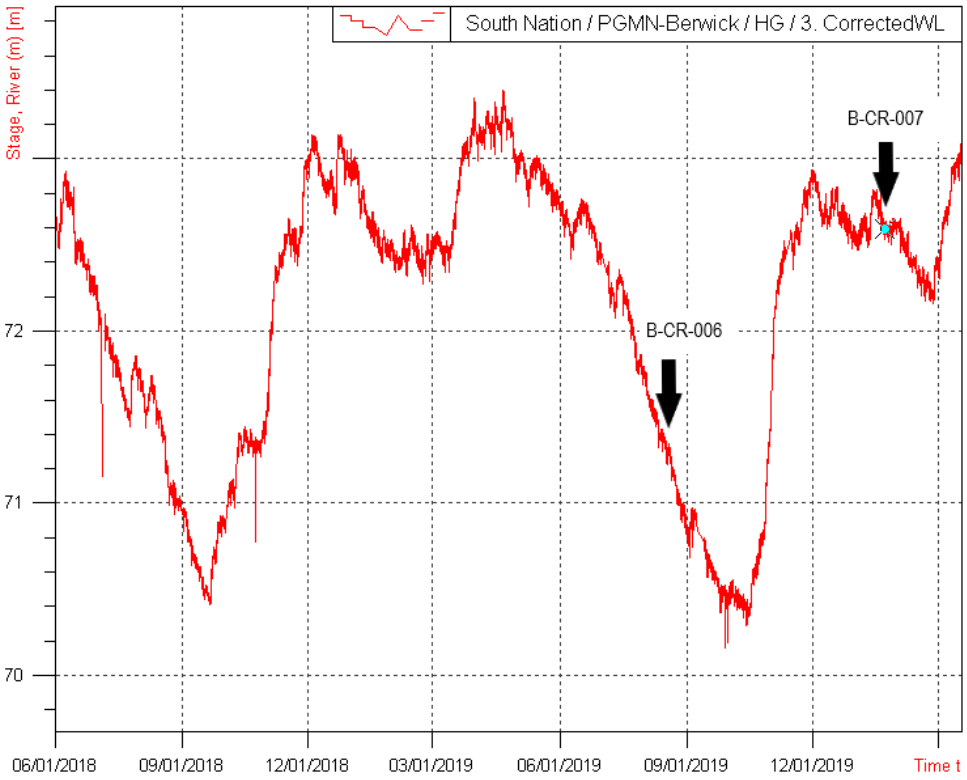


Figure 2: Example of general watershed conditions through groundwater levels.

2. Water Quantity Assessment (B-CR-007) Main Concern #2, Condition #4:

A new well was constructed on the proposed lot severance, B-CR-007; it is very important to note that the well logs for B-CR-006 and B-CR-007 are quite different and were not compared in the report; we have provided the comparison below for review (Table 1).

A summary of the well records was provided to highlight the variability in the stratigraphy. Please note that the ***silty sand/fine sand*** was not encountered at the well installed on B-CR-007. This presents and significant issue since this is likely the only unit providing water to B-CR-006.

Table 1:Well Records For B-CR-006 and B-CR-007

Depth Below Ground Surface (mBGS)	**B-CR-006**
0-2.5	Topsoil and Fissured Clay
2.5-3.75	***Silty Sand/Fine Sand***
3.75 -6.0	Very Elastic Grey Blue Clay

Depth Below Ground Surface (mBGS)	**B-CR-007**
0-2.7	Topsoil and Fissured Clay
2.7-3.75	Elastic Clay
3.75 -6.0	Very Elastic Grey Blue Clay

Based on the well record and as confirmed in the report, B-CR-007 is only receiving water through bypassing the clay "seal" from the surface through fissured clay or a not entirely sealed well bore. This well seal will become more watertight over time and less water will infiltrate (bypass) the seal over time.

Additionally, the elastic to very elastic clay that was removed from the bottom of the well (hole) will be used as the sealing material. This material cannot be both an aquifer and an aquitard (low permeable soil). Essentially, the well is not located in an aquifer based on the well record for B-CR-007.

A 6-hour pumping test was completed on January 22, 2020. The consultant stated:

"Considering the time of year (January) and the freezing temperatures and frozen grounds, it is Lascelles' opinion that surficial infiltration/recharge was not occurring or was minimal during the time of the pumping test"

This statement is anecdotal and has not been demonstrated. Figure 2 shows that the watershed was not in a period of seasonally low water during this time. A significant melt and rainfall event, which equates to recharge, occurred on January 10 and 11 2020 (Figure 3).

This event led to a significant increase in stream flow at the Bear Brook and Plantagenet stream flow stations (Figure 4 and Figure 5).

Based on a review of the available data, this pumping test was completed in a period where the pumping test would provide positive results. The pumping test indicates that over a 6-hour period almost the entire well reserve was removed; if the pumping continued longer the well would have gone dry.

The report states that the recovery achieved 95.1% within 24.4 hours; however, drawdown and recovery curve data indicates that: 1) only water stored within the well (well bore storage) was being pumped; and, 2) the pumping rate far exceeds the recharge rate (even under favourable conditions).

This behaviour is clearly shown by the almost linear response to drawdown (Figure 6). This figure shows how different both B-CR-006 and B-CR-007 are with respect to the aquifers targeted for potable water supply which also supports SNCs original concerns.

Summary

In order to meet the guidelines and demonstrate the well can serve a residential development, a pumping test must be ***conducted during a time of seasonal low groundwater level***. The current pumping test for B-CR-007 was not completed as discussed. It is expected that under the required conditions, the well will not meet the guidelines.

We also note that the recovery curve is highly irregular for B-CR-007. Based on the geology and well construction, we are uncertain how the well could have recovered in a linear fashion. This does not match any example of confined or unconfined expected recovery curves. The pumping test should be completed similar to B-CR-006. Water level should be monitored continuously.

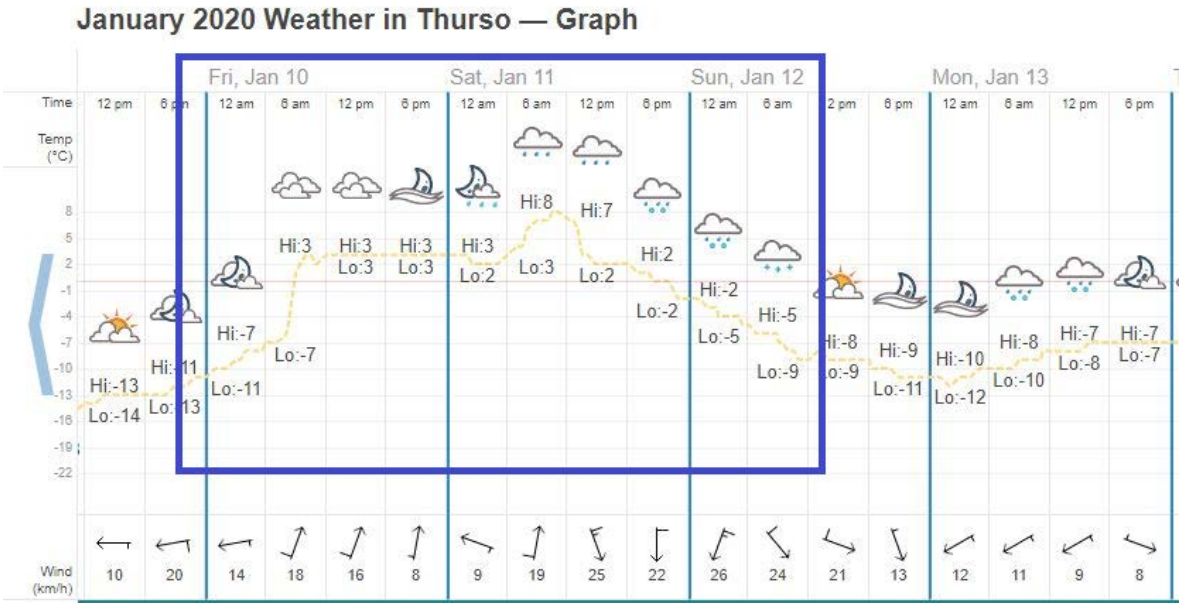


Figure 2: Weather January 10th and 11th of 2020

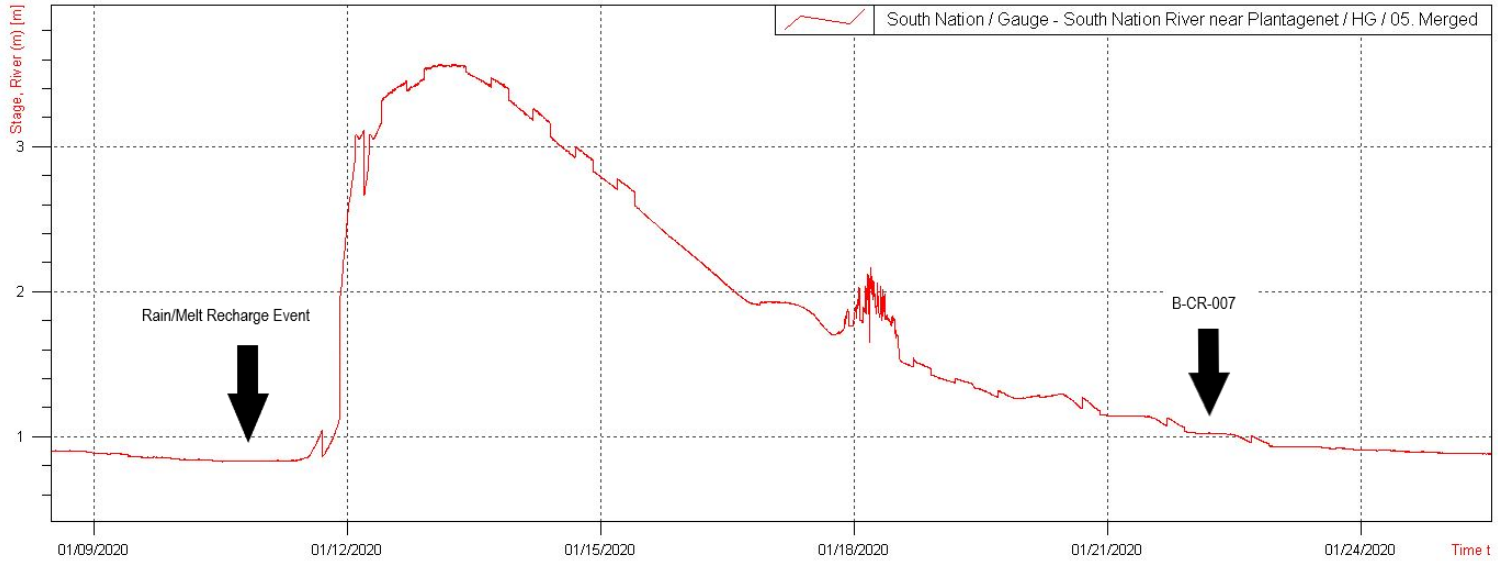


Figure 3: Plantagenet Stream Gauge Station

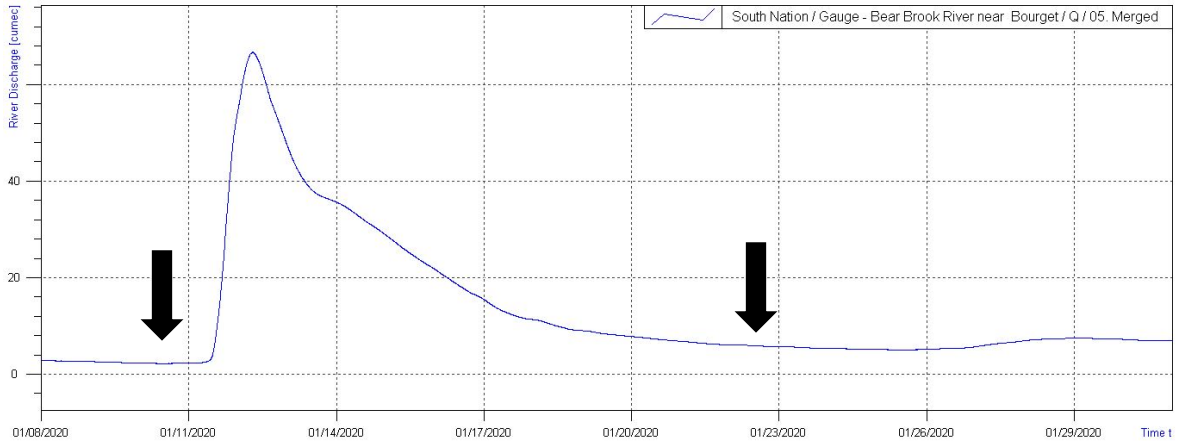


Figure 4: Bearbrook Stream Gauge Station

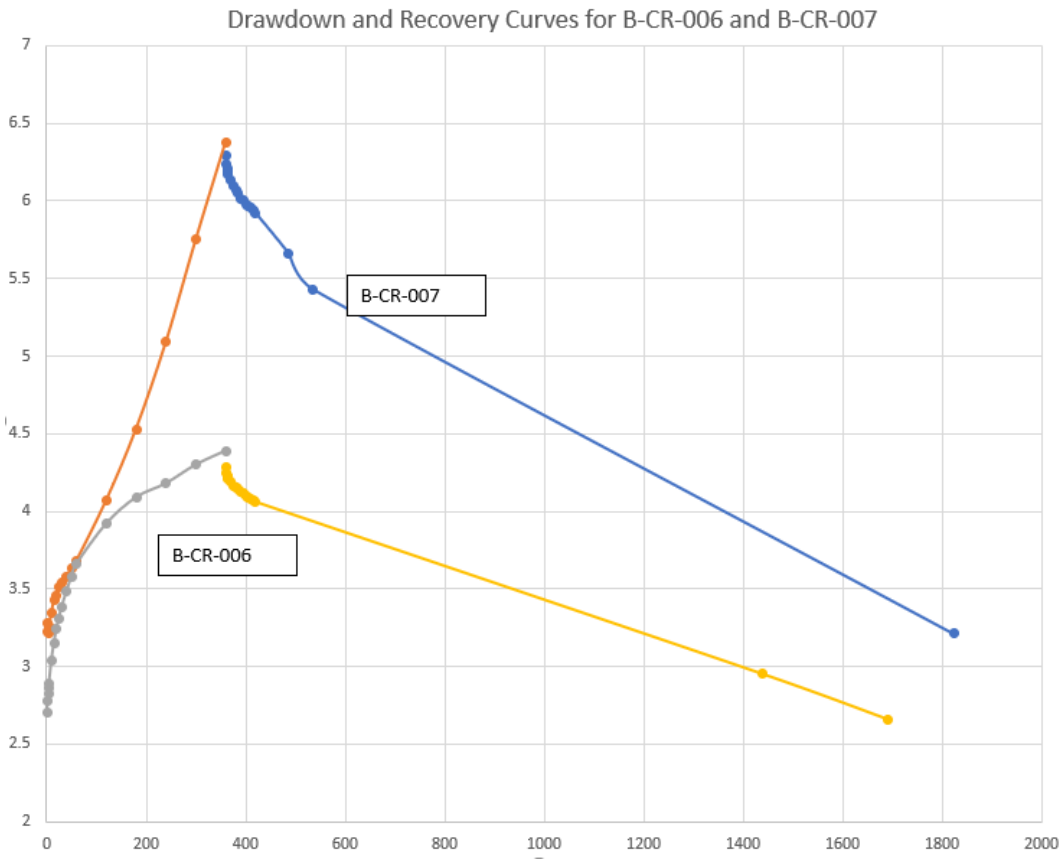


Figure 6: Drawdown response for both wells.

SOUTH NATION CONSERVATION
DE LA NATION SUD

3. Septic System Location, Condition #5:

The consultant has provided a topographic survey indicating that topographic highpoint is located between the wells and the septic fields. The surface elevation difference is approximately 0.5 m.

The margin of error in order to keep the septic effluent from migrating to these wells is very small. If these severances are to proceed, there must be a reliable mechanism to enforce the placement of the septic systems as described in the report.

4. Conclusions:

The pumping test completed at B-CR-007 was not completed as per condition #4 as it was not ***conducted during a time of seasonal low groundwater level.*** The results from such a test is not reliable when considering the long-term viability of the water supply.

The comparison of the drawdown and recovery curves between B-CR-006 and B-CR-007 indicate dramatic differences. The long-term quantity viability for B-CR-007 has not been demonstrated and requires further analyses.

The type of wells recommended by the consultant are also expected to create complication for future development. SNC would like to strongly emphasize that this type of well is highly vulnerable and presents significant risks now and in the future. The submitted MOE well records from these potential new lots may not identify the full extent of the sand reserve.

South Nation Conservation (SNC) has not conducted any independent site investigation to confirm the validity of the data and conclusions presented in the report.

Please let me know if you have any questions.

Michael Melaney, M.Sc., P.Eng.
Hydrogeologist
South Nation Conservation

Monique and Daniel Rozon
3383 Old Highway 17
Unit 11
Clarence-Rockland Ontario
K4K 1K1

URGENT
BY EMAIL

April 23, 2020

Marie-Eve Belanger, Secretary Treasurer of
The Committee of Adjustment
City of Clarence-Rockland
1560 rue Laurier
Rockland ON
K4K 1P7

Revised notice of Decision B-CR-007 (B-007) dated April 24, 2019 (the "Decision")

Dear Ms. Belanger,

This letter and the enclosures are additional material to our letter and presentation dated April 8, 2020.

Our understanding is that several other municipalities in Eastern Ontario either: do not require peer reviews of engineering firm Hydro G reports or; ask other professional engineering firms to perform peer reviews instead of using South Nation Conservation Authority. On that basis, we asked Morey Associates Ltd. Consulting Engineers ("Morey") to perform a peer review of

Lascelles' letter report dated March 6, 2020. That peer review report dated April 16, 2020 and the resume of Mr. C.R. Morey, M. Sc. Eng., P.Eng, are attached.

The conclusion of Morey's peer review is that **both** Rozon wells are more than capable of meeting the MOE minimum peak demand. It is also noteworthy that Morey says **"...the amount of water pumped....would provide domestic use of some 15 to 27 people.**"

Based on the above, the following words (in bold) should be added at the end of paragraphs 3, 4 and 5 of the changes requested in section 2.0 Amendment Request to the B-007 Revised Decision, of our April 8, 2020 letter:

"....shall be accepted as fulfillment of this condition, **in conjunction with the peer review letter of April, 16, 2020 of Morey Associates Ltd. Consulting Engineers."**

We asked that this letter be sent to committee members immediately.

Yours truly,

Daniel Rozon

c/c Christian Simard, councillor Ward 6, City of Clarence-Rockland
Enclosures: Morey Associates report April 16, 2020 and resume of C.R. Morey

MOREY ASSOCIATES LTD.
CONSULTING ENGINEERS

2672 Highway 43, PO Box 184
Kemptville, Ontario. K0G 1J0
T:613-215-0605• F:613-258-0605

April 16, 2020

File: 020240

Mr. Daniel Rozon
3383 Old Highway 17 – Unit 11
Rockland, Ontario
K4K 1W1

RE: LETTER REPORT REVIEW
PROPOSED LAND SEVERANCES
B-CR-006-2018 and B-CR- 007-2018
3383 OLD HIGHWAY 17
CITY OF CLARENCE-ROCKLAND, ONTARIO

Dear Sir:

As requested, this letter provides our comments with regards to a review of the results of well water pumping tests provided in a Lascelles Engineering and Associates Limited letter report concerning the above noted proposed land severances. Based on the results of the review, comments were to be provided as to whether or not it is our opinion that the results of the pumping tests indicate that the pumped wells can supply an adequate quantity of water for typical domestic use.

The letter report subject of this review consists of the Lascelles Engineering and Associates Limited (LEAL) letter report titled "Hydrogeological Assessment – Response to Review Comments, Proposed Land Severance - B-CR-006-2018 & B-CR- 007-2018, 3383 Old Highway 17 – Unit 11, City of Clarence-Rockland", File Ref: 180083, dated March 06, 2020., provided to us by Mr. Daniel Rozon. The specific hydrogeological aspect of that letter that was reviewed consists of the reported results of pumping tests carried out on two dug wells at the proposed severed lots provided in the subject letter under the headings of "NEW WELL – B-CR- 006-2018" and "NEW WELL – B-CR-007-2018".

It is our understanding that the above mentioned "NEW WELL– B-CR- 006-2018" refers to a dug well installed at the proposed severed lot B-CR- 006-2018 and that the "NEW WELL – B-CR-007-2018" refers to a dug well installed at the proposed severed lot B-CR-007-2018. It is further understood that both wells were installed by a licensed well contractor and that they were installed for the purpose of pumping tests for a hydrogeological investigation as part of the requirements of land severance approval, and for future use as domestic water supply for a proposed single family dwelling at each of the proposed severed lots.

Based on the review of the information provided in the subject letter concerning the pumping tests, it is our interpretation that both wells were pumped at a near constant rate of about 18.9 litres per minute for some 6 to 6.5 hours with the pump discharged directed well away from the wells to prevent recharge of the wells from the pumping discharge. It is indicated that during the pumping tests a member of LEAL technical staff supervised the pumping and carried out measurements of

the well water drawdown during pumping and the recovery of the well water level after the pumping ended, and monitored the well pumping rate. The results of the pumping tests presented in Table 1 and Table 2 of the subject letter indicate that during pumping the well water levels were drawn down some 1.8 metres and 3.3 metres relative to the static water levels just prior to pumping and that the wells recovered some 95 and 97 percent of the draw down that occurred during pumping within some 22 to 24 hours following the end of pumping.

Based on the reported pumping test rate and the length of the pumping tests, it is calculated that some 6800 to 7400 litres of water would have been pumped from the wells, and within some 22 to 24 hours essentially that quantity of water would have recharged into the wells zone of influence. The Ministry of the Environment Conservation and Parks (MOE) indicate that typical daily domestic water use per person ranges from 270 to 450 litres. Accordingly, the amount of water pumped from the wells during the pumping tests would provide the daily domestic use of some 15 to 27 people.

The MOE Guideline D-5-5 Section 4.3.2, relates a 450 litres per day per person quantity to an equivalent per person peak demand rate of 3.75 litres per minute. Peak demand is typically considered required for two, 1 to 2 hour periods per day. The MOE further indicates that for a dwelling the likely number of persons per well (per dwelling) is considered to be the number of bedrooms in the dwelling plus one. The MOE guideline requires that regardless of the peak demand rate determined using the above mentioned calculation, the minimum peak demand rate for a well servicing a dwelling should not be less than 13.7 litres per minute.

As such, based on our interpretation of the LEAL pumping tests information, the results of those pumping tests indicate that the subject wells are capable of more than meeting the MOE required minimum peak demand rate of 13.7 litres per minute and that the subject wells are each capable of meeting the MOE peak demand for up to a 4 bedroom dwelling.

We trust this letter provides sufficient information for your purposes. If you have any questions concerning this letter please do not hesitate to contact our office.

Yours truly,
Morey Associates Ltd.

C. R. Morey, M.Sc. Eng., P. Eng.
Senior Consulting Engineer

File: 020240

MOREY ASSOCIATES LTD.
CONSULTING ENGINEERS

C.R. MOREY, P.Eng

LANGUAGE: English

EDUCATION:
B.Sc., Geological Engineering, Queen's University, Kingston, Ontario, 1973.
M.Sc.,(Eng.), Civil Engineering, Queen's University, Kingston, Ontario, 1977.
Graduate courses in Civil and Geotechnical Engineering, Windsor and Carleton Universities, 1980 and 1982.

PROFESSIONAL AFFILIATIONS:
Registered Professional Engineer Ontario
Designated Consulting Engineer

EXPERIENCE:

2012 – PRESENT **Morey Associates (Kemptville, Ontario)**
Senior Engineer

Responsible for supervision of all technical aspects of projects carried out by the firm.

2010 - 2012 **Levac Robichaud Leclerc Associates Ltd. (Rockland & Kemptville, Ontario)**
Director of Geotechnical Department

Responsible for senior level supervision of geotechnical investigations, hydrogeological impact assessments and environmental site assessments and providing QA/QC for the related project letters, memos, reports and drawings.

2005 – 2010 **Kollaard Associates Inc. (Kemptville, Ontario)**
Principal

Responsible for mentoring of professional staff, project letter and report reviews, senior level project supervision, business development, and assisting in office administration.

1994 – 2005 **Morey Houle Chevrier Engineering Ltd. (Kemptville, Ontario)**
President

Responsible for the managerial and technical aspects of the operation of the firm carrying out geotechnical and hydrogeological investigations, environmental site assessments, and construction inspection and testing. Geotechnical and hydrogeological expert witness for Ontario Municipal Board hearings and Ontario Court Provincial Division trials.

1980 - 1994 **Golder Associates Ltd. (Windsor & Ottawa, Ontario)**
Geotechnical Engineer then Associate

Responsible for subsurface investigations and design of roadways, retaining walls, airport runways, residential and commercial developments, buried services, septic systems, wharves, building foundations, dams, municipal drains, stormwater management facilities, building flood proofing.

PUBLICATIONS: Co-author of two papers regarding retrogressive landslides in sensitive marine deposited silty clay of the Ottawa Valley area, published by the Geological Survey of Canada.

Presentation to the
Committee of Adjustment
City of Clarence-Rockland
Revised notice of Decision
B-CR-007-2018 (B-007)
April 8, 2020
From Daniel Rozon

Index


"GATORADE" ILLUSTATION
ROZON & ETTER WELLS
Illustration
Rozon B-006 Well
Illustration
Etter Well

TABLE 1
MOE/Rozon/Etter comparison of well pump tests in volume(in liters)
Pumping for 6 hours and Recharging at 24 hour mark

MOE D-5-5 Yield requirements			Rozon Wells			Etter Well
Min.	Min+Peak		B-006		B-007	
			15/10/2018	12/08/2019	22/01/2020	23/02/2012
		Pumping				
2,250*L*	2,856*L*		13,415*L*	7,371*L*	6,804*L*	2,755*L*
		Recharge				
			13,208*L*	7,002L	6,460*L*	2,811*L*
		Recharge volume %	98.5%	95%	95%	100%
		SNC response	R	A	R	A
		Recharge Ratio MOE Min.	5.9	3.1	2.9	1.2
		Recharge Ratio MOE Min. + Peak	4.6	2.4	2.3	1

R = Rejected by SNC
A = Approved by SNC

Notes on next page

Recharge ratios: Liters recharge divided by MOE D-5-5 Min. (Min. + Peak) yield requirements (ex. 13, 208/ 2,250 = 5.9 ratio; 13,208/2,856 = 4.6 ratio)
L= liters
More notes on next page

Notes to Table 1: MOE/Rozon/Etter comparison of well pump tests by volume (in liters)

1. MOE D-5-5: Ministry of the Environment of Ontario Procedure D-5-5, Technical Guideline for Private Wells: Water Supply Assessment, last revision August 1996 ("MOE D5-5"); (See Schedule "F")

   1.A Minimum yield: as per paragraph 4.3.2 MOE D-5-5 : 450 liters/ day/person X 5 persons = 2,250 liters and as referred to at paragraph 1 b), in LRL report to Etter of May 17, 2012 referred to in Note 3 below;

   1.B Minimum + Peak : 2,250 liters plus peak for 120 minutes - 2250 + [(18.75*L* -13.7*L*} X 120 minutes] = 2,856 liters.

2. Rozon Wells: Refers to Hydrogeological Assessment and Terrain Analysis , Proposed Land Severance Consent Applications B-CR-006-2018 (B-006) & B-CR-007-2018 (B-007) Reports by Lacelles Engineering (Lascelles) dated March 2018 (Table 1 page 8) (See Schedule "N") and March 6, 2020 tables 1 and 2; email of Aug. 15, 2019 from Mario Elie of Lacelles to Mike Melaney of South Nation;(Schedule "H") and email from Mario Elie of Lacelles dated March 23 2020 and April 2, 2020 (See Schedules "O" and "P").

3. Etter well: Refers to May 17, 2012 LRL Associates Engineers report to South Nation Conservation on Hydrogeological Assessment and Terrain Analysis Consent No. B-CR -022-2010, B-CR-023-2010 & B-CR-027-2010 paragraph 1b) page 2 (Schedule "K-1" and "K-2") and Pump Test data appendix.

Table 2
Analysis of October 15, 2018
Rozon B-006 Well
6 hour pump test

Pumping

Time (minutes)	Drawdown (Quantity) Liters	%	Drawdown (Horizontal) Meters	%
5m	300L	2%	0.87M	32%
355m	13,115L	98%	1.85M	68%
360m	13,415L	100%	2.72M	100%

Recharge

Time (minutes)	Recharge (Quantity) Liters	%	Recharge(Horizontal) Meters	%
1,430	13,208	98.5%	1.99	72%

Information drawn from Lascelles Engineering & Associates Ltd. report of March 2018 and email from Lascelle dated March 23, 2020

LEGEND

B-006: Rozon Application B-CR-006-2018 and parcel of land being severed
B-007: Rozon Application B-CR-007-2018 and parcel of land being severed
B-006 Well: Test well on B-006
B-007 Well: Test well on B-007
City: City of Clarence-Rockland
Dug Reservoir Well: Well described in Schedule "A"
Etter: Elianne and Pierre Etter
Etter Applications: Etter 2010 applications to sever 3 residential lots from their farm properties at 3212, 3224 and 3034 Old Highway 17 Clarence Rockland Ontario, numbers B-CR-022-2010, B-CR-023-2010 and B-CR-027-2010
Etter Well: Test well dug at 3224 Old Highway 17 by Etter's contractor in 2012
Hydro G Report: Hydrogeological Assessment and Terrain Analysis reports as issued by the professional Engineering firms
L: liters
Lascelles: Rozon's Licensed Professional Engineering firm
LRL: Etter's Licensed Professional Engineering firm
MOE D-5-5: Ontario Ministry of Environment and Environment Procedure D-5-5, Technical Guideline for Private Wells: Water Supply Assessment (Last Revision 1996)
MOE D-5-5 yield requirements: See Note 1 of Table 1
Rozon: Monique Rozon owner and Daniel Rozon agent for Monique Rozon
Rozon Application(s): Rozon's April 2018 applications to sever 2 residential lots from their property at 3383 Old Highway Clarence Rockland Ontario
SNC: South Nation Conservation Authority

Discussion notes

1.0 Introduction and reliance on Etter Dug Reservoir Well Precedent

From the outset of our 2018 severance Applications, we (Rozon) made it clear that we were relying on the precedent established by SNC's approval of the water quality and quantity of Etter's Dug Reservoir type well (See Schedule "A") in 2012 (See Schedule "B"page 2).

Because of the urgency of the situation and the time it would take to obtain a copy of the Etter Decisions (especially under the present "lockdown" conditions of Covid-19) we have assumed that the conditions regarding water quantity and quality in the Etter Decisions were similar to those of the Rozon Decisions.

This may be a motherhood statement but we assumed that the peer review approval process of the conditions in the Decision would be based on:

- Fairness;
- Common Sense; and
- Impartiality.

Early in the Rozon Application process, Lascelles received verbal confirmation from SNC that acceptance of the Etter's Dug Reservoir well results had established a precedent.

Before approving the Etter Well, SNC expressed "serious concerns" to LRL's numerous reports and correspondence regarding the quantity and quality of water of the Etter Well but at the end of the day, SNC accepted it and the City approved Etter's **three** lot **severances** based on **one test well** (See Schedule "C"pages 1 and 2). We expected the same fair and impartial treatment.

Several years after they purchased the lot, and contrary to the concerns expressed by SNC when they approved the Etter water conditions, the purchasers of the Etter lot with the test well and purchasers of another Etter lot who had the same type of well installed, are satisfied with the quantity and quality of their water. LRL told us that they are not aware of any complaints from these purchasers.

Rozon and some of their neighbours have the same type of wells at their personal homes and are also satisfied with their wells. Lascelles has a significant professional engineering practice in Eastern Ontario and is not aware of any complaints regarding this type of well. (See Schedule "D" para. 6 in conclusion).

- To summarize:
    - Existing Dug Reservoir wells are producing a **good quantity and quality of water;** and
    - Etter had **three lot severances** approved on the basis of **one** Dug Reservoir well and we are relying on this precedent.

2.0 Quantity of water

As shown on Table 1 of page 5, the **quantity of water** pumped and recharged from both Rozon Wells is **significantly more than the MOE D-5-5 yield guidelines**. The volume of water pumped and recharged from both Rozon Wells is also **much greater** than the **volume of the sole Etter Well.**
Lascelles concluded that the soil of the Rozon and Etter properties are the same - clay but the Rozon Well and/or soil also contain sand and have more capacity than Etter's(See Schedule D #2)

To summarize:

- **The Rozon Well and/or soil** also contain sand which means they have **more capacity than the Etter Well**.

3.0 Quality of Water

Lascelles concluded that the quality of water in the Rozon Wells and Etter Well are similar and potable. Both have slightly hard water which can be remedied with water softening equipment. However Etter's water had colour and Rozon's water did not.(See Schedule "D" item #3).

To summarize:

- The **quality of Rozon's water is better than Etter's.**

4.0 Water level of Rozon Well B-006

As shown in Schedule "E" and the "Gatorade" illustration at the front of this presentation, there's more water in Rozon Well B-006 than there was in the Etter Well.

The water in the Rozon B-006 Well rises higher in the casing and **above the top of the sand reservoir**. The water in the Etter Well **did not reach the top** of the sand reservoir (See Schedule "E").
That **difference is significant** when a pump test is done.

Our well contactor explained (and we also observed) that:

- The first 300L (2%) of the quantity drawdown was the water from the casing above the top of the sand reserve (See Table 2 page 4); and
- It can take several days for the level of water to recharge into the part of the casing above the top of the sand reservoir to the "horizontal level" static point.

Table 2 is an analysis of the October 15, 2018 pump test for Rozon Well B-006. During the first 5 minutes of the test, only **300L (2%)** of the quantity of water was pumped out but that represented **32%** of the horizontal level drawdown. So, ⅓ of the horizontal drawdown happened in the **first 5 minutes** of a 6 hour pump test. Those 300L and that "⅓" was the water in the casing **above** the top of the sand reservoir. The other **13,115L (98%)** recharged in 5 hrs and 55 minutes for the other ⅔ of the water approximately **up to the top of the sand reservoir**.
The well recharged **13,208L (98.5%)** of level of quantity, in 24 hours. So, **72%** (about ⅔) of the horizontal level recharged **to approximately the top of the sand reservoir**.

5.0 Significance of the word "level"

The relevant section for yield recovery of MOE D-5-5 says:".....water **level** recovery must be monitored in the test wells until 95% recovery or for 24 hours, whichever is less.....". (See Schedule "F" page 2).

The Oxford Dictionary of Current English fourth edition (See Schedule "G" 2nd page) defines the word *level* as:

"**Level** *n* **1**.horizontal line or surface

2. A position or stage on a scale of **quantity,** extent, rank or quality".

When SNC rejected Lascelles conclusion that the October 15, 2018 pump test met MOE D-5-5 yield levels, it appears to have **relied solely** on the first part of the definition of the word level referring to **"horizontal line"** but does not appear to have given any credence or consideration to the second part of definition that refers to **quantity**. Furthermore, the SNC's Memo **made no reference** to the fact that the quantity of water recovery (recharge) was **98.5%**.
Under the circumstances relying on or at a least referring to, the quantity definition would have shown fairness, common sense and impartiality.

The horizontal level definition of 95% recharge may not have been achieved in the October 15, 2018 pump test for the reasons explained in section 4.0 above but **98.5% did meet the quantity** level definition.

To summarize:

- Lascelles concluded that B-006 and B-007 met the MOE D-5-5 guidelines;
- A **fair, common sense and impartial** peer review analysis should have taken into account the quantity definition of the word *level* and concluded that **98.5 %** recharge **met MOE D-5-5** guidelines.

6.0 October 15, 2018 Rozon pump test

Lascelles' March 2019 HydroG report concluded (and rightly so) that the yield of the B-006 October 15, 2018 pump test combined with soil conditions for B-007 met **MOE D5-5** yield requirements for **B-006 and B-007.**

Rozon's B-006 Well **recharged 13,208L** within 24 hours at **98.5%** of the **volume** pumped, which is almost **6 times more than the MOE D-5-5** minimum yield guideline and almost **5 times more** than the **Etter Well pump test**.

SNC rejected Lascelles' conclusion and said in its April 11, 2019 Technical Review Memorandum "...the well did not meet the required 95% recovery within 24 hours..."as required by MOE D- 5-5.

- We were **"shell shocked"** by SNC's rejection. Lascelles concluded that the test met the MOE D-5-5 yield requirement, the well recharged 98.5% of the volume, a lot more than Etter pump test and the MOE minimum yield, **yet SNC rejected** this information.
- Was it **fair and impartial** that SNC **rejected** the pump test? We say **No it was not!**

7.0 April 24, 2019 amendments to Decision conditions

The original B-006 and B-007 2018 Decisions were expiring on **May 15, 2019.**

Lascelles Hydro G report was issued on **March 28, 2019.** It concluded that the October 15, 2018 pump test and soil tests proved that B-006 and B-007 met MOE D-5-5 quantity and quality guidelines.

SNC's rejected Lascelles findings on **April 12, 2019.**

An urgent meeting was held between representatives of SNC, the City, Lascelles and Rozon on **April 23, 2019.**

We believed at the time and more so today, that SNC's rejection of the Lascelles report was **not fair or impartial or based on common sense** but we were being **pressured by time constraints** - we were **between a rock and hard place.** There was only one more Committee meeting left before the May 15, 2019 deadline, so we **reluctantly** accepted amendments of the conditions which were basically: "...a pump test.. conducted during a time of seasonal low groundwater level (e.g. July- September) and "....appropriately located and/or designed septic system...".
The amendments were incorporated in the Committee's Revised Decision on April 24, 2019.

8.0 B-006 Pump test August 12, 2019

To satisfy the Revised Decision of April 24, 2019, the B-006 Well was pumped tested on August 12, 2019. The results were **sent to SNC on August 15, 2019.**
The test met MOE D-5-5 yield requirements. There were 7,371L pumped and 7,002L recharged (95%). That is **3 times more** than the **MOE** Minimum requirement and **2 ½** times more than the **Etter Well.**

Lascelles also informed SNC that Rozon had previously tested the well on August 2, 2020 and August 10, 2020 (See Schedule "H" pages1 and 2). In less than 10 days **more than 20,000L (4,500 gallons)** were pumped from the well. That amount of water **will fill a 16 foot diameter above ground swimming pool.** And **then it recharged at 95% within 24 hours** after the August 12, 2019 pump test, **in a period of seasonal low groundwater level.**

Even though the results were overwhelmingly clear, SNC "pondered" and was not responding on the pump test for B-006. However, before making its decision known on B-006, SNC spoke to Lascelles at the end of August/early September 2019 and basically told them that:"...irregardless of the final determination on the B-006 test SNC would recommend to the City that a well should be installed and tested on B-007."
Once we were given that information by Lascelles, we started to clear the forested area on the B-007 lot and our contractor did some preliminary work. We were expecting a response on the B-006 test before completing the B-007 well.

SNC finally called Lascelles on **November 27, 2020** (almost **3 ½ months after** receiving the information) and said "..**even if I do not like it, I guess I have no choice but to approve it...".** (See Schedule "I").
To say the least we were **taken aback** by the tenor of SNC's response. Let's be clear, we had not yet received a written response from SNC on the B-006 pump test. In fact we only received written confirmation of approval of the B-006 test on March 20, 2020., **7 ½ months after** SNC received the results of the August 12, 2019 pump test.

To summarize::

- 20,000L of water **(enough to fill a 16 foot diameter above ground swimming pool)** was pumped from B-006 in less than 10 days in the **middle of summer in 2019** and **recharged** at **95%**;
- The August 12, 2019 B-006 pump test volume recharge was over **3 times** more than the **MOE D-5-5** minimum requirement and **2 ½ times** more than **Etter's well**;
- Even though it was **abundantly clear** that B-006 **met MOE D-5-5** yield requirements, it took SNC **3 ½ months** to verbally say that they "reluctantly" approved and **7 ½ months** to confirm in writing;
- Was the tenor of **SNC verbal response impartial?** Our answer is **no**.
- We had been **expecting a fair, timely and impartial process. That's not what was happening.**

9.0 January 22, 2020 pump test of B-007

Based on SNC's "so called verbal" confirmation on November 27, 2019 that B-006's was approved, our well contractor completed the B-007 test well in December 2019.

The pump test was done on January 22, 2020.

Lascelles' March 06, 2020 report **concluded** that the **quantity and quality** of the Rozon B-007 pump test **met the MOE D-5-5 guidelines.** (See Schedule "J" bottom of page).

Lascelles's e mail of March 28, 2020 says "**.....Did something change in the guidelines -no**..." (Schedule "D" **#** 7 in conclusion).

B-007 recharged at a volume of **2.9 times** more than the minimum MOE D-5-5 guideline and over **2 times** more volume than Etter's Well.
Etter's Well recharged at a ratio of about **1** or basically at the minimum MOE D-5-5 guideline

Etter's pump test was done in the **dead of winter of 2012** (See Schedule "K1") and the Rozon **B-007** pump test was done **in the dead of winter.** so once again we said "**what is good for the goose is good for the gander**", but that is not what was happening.

It should be noted that condition #4 of the Revised Decision of B-007 **did not preclude** a winter pump test. Furthermore Lascelles wrote ``Considering the time of year (January) ....it is Lascelles' opinion that surficial infiltration/recharge was not occuring or was very minimal during the time of the pumping test." (See schedule "J" middle of page).

The Bottom line is that under the same conditions: **Etter's** Well pump test was **approved** by SNC, **Rozon's** was **rejected.**

An extract of SNC's March 18, 2020 Technical Review Memorandum is at Schedule "L". A significant part of SNC's B-007 rejection is based on the premise that there is sand in B-006 but none in B-007 and that the soil in **"B-007 is Elastic Clay and very elastic grey blue Clay."**

One of LRL's 11 test pit logs for Etter is at Schedule "M". The soil in the 11 **Etter** test pits are basically the same - **Clay, Grey and brown, dry to moist.**

Lascelles' correspondence of March 28, 2020 states: " Lascelles reviewed the test pit logs, soil descriptions etc provided in the Etter report **and they are the same as your (Rozon) lots (clay).....** " (See schedule "D" #2).

The soil in Rozon's B-007 is the same (and probably better) than Etter's Well. Yet, **Etter's Well was approved** by SNC and **Rozon's** B-007 was **rejected**!

Is that fair and does that make any common sense? Our answer is NO and Lascelles' answer is NO. Reading the entire March 28, 2020 email from Lascelles at Schedule "D" is enlightening.

It is also noteworthy that SNC Technical Memorandum of March 18, 2020 did not make any reference to the quality of Rozon's B-007 well (which met the guidelines) nor did it address the septic system condition (which was met for B-006). We do not understand the fairness of these omissions.

In Summary:

- Lascelles' professional conclusions were once again disregarded by SNC;
- **Etter's** Well which is in clay, recharges at the MOE D-5-5 minimum, is pumped in the dead of winter and is **approved by SNC.**
- **Rozon's** B-007 Well which is in clay, recharges at almost 3 times the volume of MOE D-5-5 minimum and 2 times more than than Etter's Well, is pumped in the dead of winter and is **rejected by SNC**.
- Same guidelines, **opposite results**;
- **Our view is that there appears to be a lack of fairness, common sense and impartiality in this process.**

10.0 Conclusion and request

The results of the Rozon Wells stand on their own merit based on the Lascelles reports. It was shown time after time that both Rozon wells have the quantity and quality of water that meets MOE D-5-5 guidelines.

The Rozon Wells recharge volumes exceeded those of Etter and the quality of Rozon's water is better.

Etter's well was pumped in the dead of winter as was one of Rozon's wells.

Etter received 3 lot severances based on 1 well. Rozon was pressured to install a well on both lots.

Lascelles has noted that "Rozon went above and beyond and still SNC does not want to support. It does not matter what you do to prove that the wells are appropriate, SNC will never approve it, which is why you are requesting support".(See Schedule "D" conclusion #8).
This is a very strong and very significant statement and from a professional engineer.

In our introduction we said we were relying on the Etter precedent - that precedent has not been followed. **Rozon is being held to a higher standard and that is not fair.**

~~Page 15~~

We were relying that SNC's peer review process would be based on fairness, common sense and impartiality - that has not happened.

We are requesting that the Committee of Adjustment take a fair, common sense and impartial approach and amend conditions #4 and #5 of the Revised Decision of B-007 to simply state that **conditions #4 and #5 have been met and are approved based on the Lascelles reports.**

Supplementary information

1. Etter made their Application in 2010 to sever 3 residential lots from their farm properties located at 3212, 3224 and 3034 on the south side Old Highway 17. Two of of the lots (3212 and 3224) are in close proximity but not adjacent, the 3rd lot (3034) is approximately ½ a kilometer further west. The Rozon property is located at 3383 Old Highway 17, less than 1km from Etter's properties (See Schedule "Q");

2. The Rozon and Etter properties are not in the South Nation Basin watershed (See Schedule "R") . The water in the area of the Rozon and Etter properties flow from the south directly downward toward the north into the Ottawa River. Rozon hired the same well contractor who installed the Etter Dug Retention Well. This contractor has been in business for over 50 years and in the last several years has been installing approximately 40 of these wells per year. Before Rozon submitted their application for severances, their well contractor visited the Rozon property and showed them that the water flowing to their property came from the escarpment to the south of highway 17 and probably south beyond Baseline Road (about ½ way between Baseline Road and St Pascal de Baylon). This is relevant because the water is flowing downhill and underground from approximately 5 kilometers from the south to the Rozon property towards the Ottawa River, and that is the long term source of water to the Rozon property. In other words, as long as rain and snow are falling from the sky in Eastern Ontario, the Rozon property will have water. See Schedules "S".

3. The Ashley family purchased the lot at 3212 Old Highway 17 (with the Etter test Dug Reservoir Well) and the Chartrand family purchased the lot at 3224 Old Highway 17 from Etter and had the

same type of well installed. Both families built houses on the lots at least 3 years ago. Daniel Rozon spoke to both of them in March 2020 and was told that both were satisfied with the quantity and quality of the water from their wells. They both installed water softners but that is common in rural eastern Ontario. Schedule "T" is an email from Chartrand confirming their satisfaction. We were not able to contact the purchasers of 3034 Old Highway 17 due to time constraints but it appears that they installed a regular concrete tile dug well on the lot. Daniel Rozon has also spoken to Christian Robichaud, one of the engineers who owns LRL, and he confirmed that he never had any complaints from the purchasers of the Etter lots.

Schedule

"A"

Schedule A

LRL ASSOCIATES • ASSOCIÉS ENGINEERS INGÉNIEURS

1-2884 Chamberland Street
Rockland, Ontario
K4K 1M6

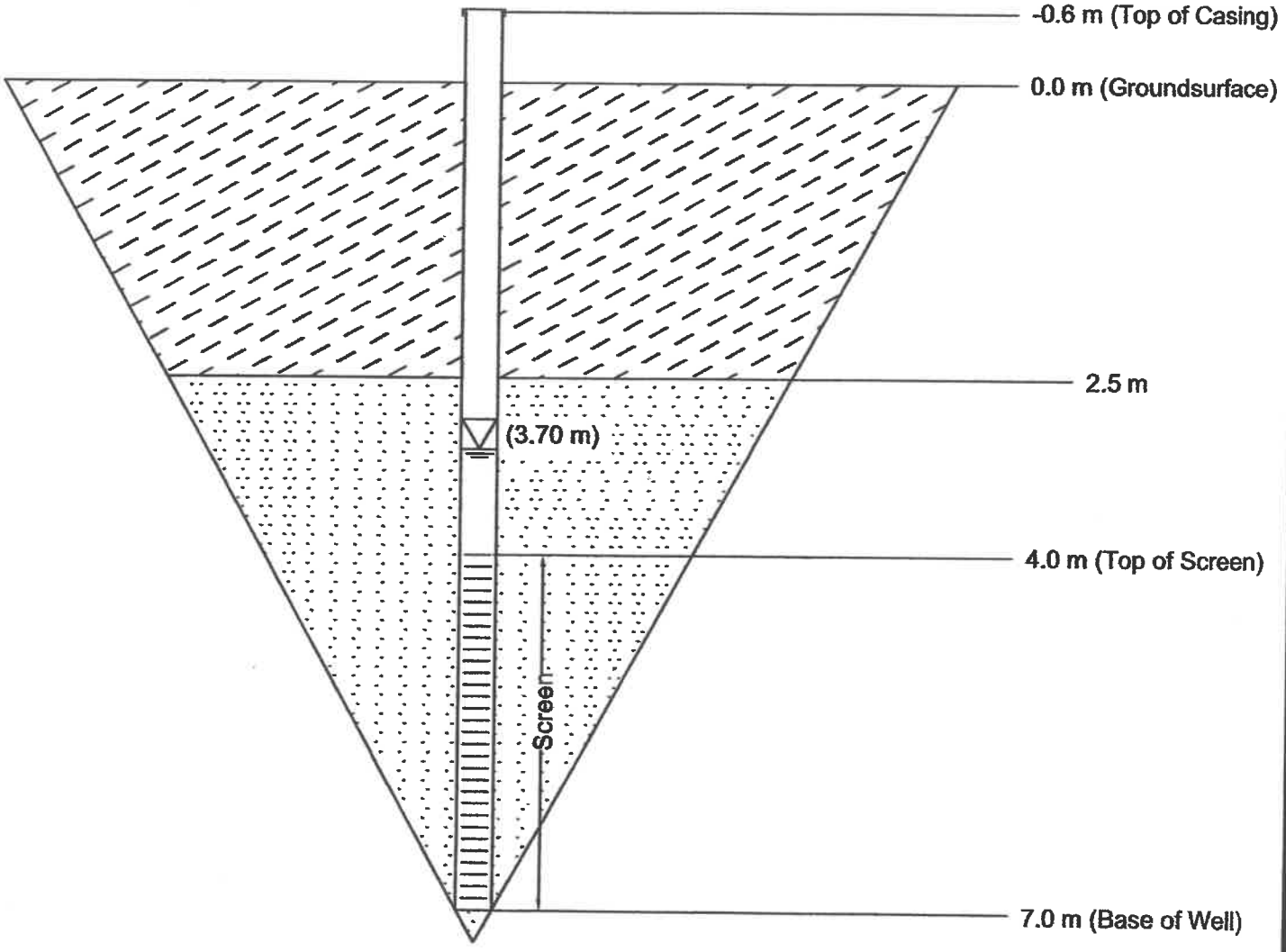
Tel: (613) 446-7777
(877) 632-5664
Website: www.LRL.ca
Fax: (613) 446-1427

PROPOSED RESIDENTIAL DEVELOPMENT
3216 OLD HIGHWAY 17
ROCKLAND, ONTARIO

DRAWING TITLE

WELL CONSTRUCTION
CROSS SECTION

CLIENT	DATE	PROJECT	
PIERRE & ELIANNE ETTER	MAY 2012	10352	**FIGURE 7**



Legend

Sand

Native Clay

(99.99) Groundwater level below top of casing

Schedule

"B"

Schedule B

Monique Rozon

11-3383 Old Highway 17

Clarence Rockland ON

K4K 1W1

April 4, 2018

Infrastructure & Planning Department

City of Clarence-Rockland

1560 Laurier Street

Rockland ON

K4K 1P7

B-006
+ B-007

Re: Application for consent to create a new lot of 0.405 Hectares, on PT 6, Part 1, Concession 1 Old Survey Clarence, Reference Plan 50R-7070

To whom it may concern,

Enclosed are the following:

- Application for Consent for creation of new lot
- Cheques as follows: City of Clarence-Rockland $1,200; South Nation Conservation $450; United Counties of Prescott and Russell $350
- Undertaking for Ontario Municipal Board Appeal
- Schedules D-1 and D-2, Sketches of parcel to be severed
- Transfers of Property to Monique Rozon for above property dated December 19, 2008

The above property as it exists presently has 153.12 meters of frontage on Old Highway 17. We are making this application to sever (create) a new lot of 0.405 Hectares concurrently with

another Application for Consent to sever (create) another adjacent new lot of 0.438 Hectares immediately to the east of this new lot.

Based on our meetings with representatives of the Infrastructure and Planning Department we understand that this Application meets all existing requirements of the City of Clarence-Rockland and those of the United Counties of Prescott and Russell to create a new lot.

The plan is that the new lot would have a "retention basin" type of well. We understand that these types of wells were approved by South Nation Conservation in 2012 for lots located west of our property on Old Highway 17 (South Nation Conservation file numbers B-CR-022-2010, B-CR-023-2010 and B-CR-027-2010).

We ask that this matter be expedited and put on the agenda for the meeting of April 24, 2018. One of our family members may be purchasing one of these lots and the plan is to start to build as soon as possible this summer.

Please contact my husband Daniel Rozon (my agent on this matter) at 613 282 5151 for any questions on the above or enclosed.

Yours Truly

Monique Rozon

Monique Rozon

Schedule

"e"

Schedule C




613-984-2948 • Fax 613-984-2872 • Toll Free 1 877 984 2948 • 38 Victoria St, Casselman, ON K0A 1M0 • www.nation.on.ca

Via Email Transmission

August 8, 2012

Ivan Burton, Municipal Planner
City of Clarence Rockland
1560 Laurier Street
Rockland, ON K4K 1P7

Re: Hydrogeological Report
SNC Final Review
B-CR-022-2010 & B-CR-023-2010
Old Highway 17
Concession 1, Part Lot 7, 8, 9
Former Clarence Township
City of Clarence Rockland

Dear Mr. Burton,

South Nation Conservation (SNC) is in receipt of a Response Letter dated July 17, 2012 (revised Recommendations received August 2nd, 2012) regarding the report entitled *Hydrogeological Assessment and Terrain Analysis, Consent No. B-CR-022-2012, B-CR-023-2010 and B-CR-027-2010, Part Lot 7, 8 and 9, Concession 1, City of Clarence-Rockland, Ontario* submitted by Levac Robichaud Leclerc Associates (LRL) (herein referred to as the Response Letter).

The Response Letter was prepared to address comments from SNC dated June 25, 2012 regarding a previous response letter from LRL dated May 17, 2012. The May 17, 2012 response letter was prepared in response to SNC comments dated March 22, 2012 and additional concerns described in an e-mail from SNC on March 15, 2012 regarding the first response letter from LRL dated March 8, 2012. The March 8, 2012 response letter from LRL was prepared to address comments in the letter from South Nation Conservation dated September 23, 2011 which provided comments on the report entitled *Hydrogeological Assessment and Terrain Analysis Consent Application No. B-CR-022-2010, B-CR-023-2010 and B-CR-027-2010* (herein referred to as the Report) dated August 10, 2011, prepared by the same firm.

The Report pertains to three land severance applications in the Municipality of Clarence-Rockland. The Report indicates that the property on Part Lot 8 and 9, Concession 1 (Old Survey) is approximately 31 ha in size and is to be severed into two lots; the severed lot (Lot A) is approximately 1.17 ha. The property on Part Lot 7 and 8, Concession 1 (Old Survey) is approximately 36 ha in size and is to be severed into

three lots; the severed lots (Lot B and Lot C) are approximately 0.6453 ha (originally proposed as 0.58 ha). The north portion of the 36 ha lot contains a former driving range which has a private dug well and septic system which serviced the operation. Single family residential dwellings will be constructed on the three proposed severed properties (Lot A, Lot B and Lot C); the proposed dwellings would be serviced by private wells and private on-site sewage systems. The Report was reviewed for water quantity, quality and septic impacts as per applicable provincial regulations and guidelines including the document MOEE Hydrological Technical Information Requirements for Land Development Applications (April, 1995). Comments on the groundwater quality have also accounted for the Ontario Drinking Water Standards, Objectives and Guidelines (ODWSOG) prescribed in the Provincial document titled "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, Revised June 2006) and Tables 1 to 3 in "Procedure D-5-5 Technical Guideline for Private Wells: Water Supply Assessment" (MOE, Revised 1996).

It is noted that the July 17, 2012 Response Letter has addressed the outstanding concerns and comments provided from SNC on September 23, 2011, March 22, 2012 and June 25, 2012 related to water quantity, quality and septic impacts. **However, it is also noted that the site is not an ideal location for a domestic well and a shallow well installed in this setting will be vulnerable to contamination from surficial sources; therefore, SNC offers the following comments regarding the hydrogeologic setting of development site:**

The development site is not an ideal setting for a domestic well, however a new well was installed on one of the lots and the consultant has demonstrated that the new well was:

1) installed as per the Wells Regulations (O. Reg. 903),
2) can produce the water quantity required for a single-family residence (as per MOE Technical Guideline D-5-5), and
3) the water is of suitable quality (as per MOE 1996, and MOE 2006).

It is understood that new wells will be installed to supply water to residences on the remaining severed lots. As stated in the Response Letter, the source of the water to the well is likely the shallow fractures in the clay which may vary in thickness across the development site, so the water quantity that can be supplied from new wells installed on the other lots may vary as a result. As recommended by the consultant, new wells should be installed following the minimum design specifications outlined in the Response Letters and the well should be tested for water quality and quantity and reviewed by a professional prior to development on the remaining lots.

In addition, the shallow well is vulnerable to surficial contamination due to the presence of shallow fissured clay. Recommendations have been developed support a safe drinking water supply for this setting, the final recommendations that should be considered are provided at the end of the July 17th, 2012 Response Letter. **The Reviewer stresses the importance of adherence to all recommendations and advises that future well owners be made aware of the vulnerable nature of the water supply so that precautions are employed.**

Schedule

"د"

Schedule D

Gmail

Daniel Rozon <darozon1@gmail.com>

Review - Etter vs Rozon

Mario Elie <melie@lascelleseng.com> Sat, Mar 28, 2020 at 8:11 AM
To: Daniel Rozon <darozon1@gmail.com>
Cc: Manon Rodrigue <mrodrigue@lascelleseng.com>

Salut Daniel,

1. In reviewing LRL report prepared for Etter, you can see that there was numerous back and forth with the SNC – they tried many times to refuse it, and I am guessing that the City stepped in at one point.
2. Lascelles reviewed the test pit logs, soil descriptions, etc. provided in the Etter report and they are the same as your lots (clay), with the exception that you have sand beds, seems or pockets within the clay deposit, which is better as it provide more storage/reserve to the dug well.
3. The quality of the water is very similar for both sites with exceeding parameters being hardness and organic nitrogen, but Etter also had colour, which you did not. So you have better water.
4. They did the pumping test near the end of February – nothing was mention with regard to recharge or time of year for the pumping test. You had to redo the first pumping during a summer drought. What would have happen if we did not have a drought and we would have gotten a wet summer ? We would have needed to postpone until next year ? He is using watercourse/River data for suggesting overburden recharge is occurring during the winter months, while the data is simply showing that run-off is occurring.
5. They dug one well for three severances – you dug one well per lot and carried out a pumping test for each.

In conclusion,

1. Both sites are in the same geological unit – clay.
2. Both sites are located very close to each other.
3. Both are using the same type of well, which again has been proven to provide sufficient water for a dwelling. They did one pumping test – we did three (3) pumping test with all favorable results on two wells. Significantly more water was pumped from these wells versus what the daily consumption of a dwelling would be.
4. Both have basically the same water chemistry, which is potable and meet with the provincial guidelines.
5. This aquifer is of better quality than that of the very deep bedrock aquifer. There is no alternate aquifer available, which is why were are targeting this one.
6. It is our understanding that these type of dug wells have not reported any issues that relate to quantity and quality. Lascelles has never received any calls or heard of any issues with these types of well. This was also confirmed by Gilles Sarault. Did SNC or the City received any complaints the relate to these types of well ? If so, please provide the info/data.
7. SNC should explain why the Etter severances were accepted in 2012 and they are now being refused those of Mr. Rozon (2020), when more info/data, wells and pumping test were provided ? They should provided the major differences or issues on why the Etter severances were accepted

and not yours. Did something change in the guidelines – no ? The only main difference that we can see is the SNC reviewer ?

8. Rozon went above and beyond and still SNC does not want to support.
9. At this point, it does not matter what you do to prove that the wells are appropriate, SNC will never approve it, which is why you are requesting support.

Mario Elie,

Lascelles Engineering & Associates Ltd.

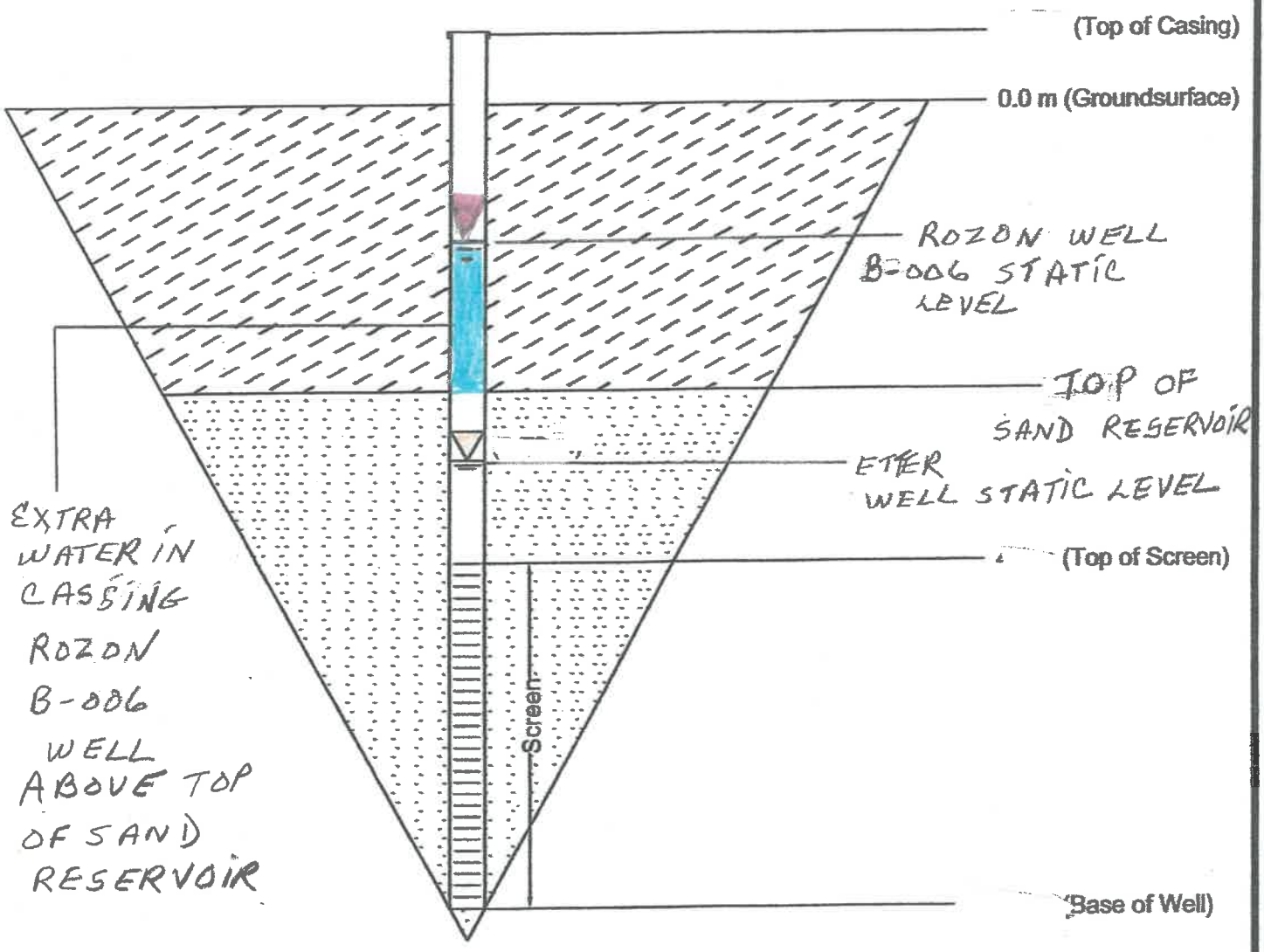
Schedule

"E"

Schedule E

STATIC LEVEL OF ROZON + ETER WELLS
ILLUSTRATION

NOT TO SCALE



Schedule

"F"

Schedule F

i5^'^/eoi

D-5-5

PROCEDURE D-5-5

TECHNICAL GUIDELINE FOR PRIVATE WELLS;
WATER SUPPLY ASSESSMENT

Last Revision

August 1996

D-5-5

Table of Contents

potential for supply interference and site aquifer characteristics such as hydraulic gradient, transmissivity and boundary conditions. (Note that in most cases where on-site sewage systems are proposed, the impact assessment requires a determination of the hydraulic gradient .)

4.3.1 Piamp Test Procedure

The following pumping test procedure is recommended:

• the test wells should be fully developed prior to the pumping test in order to avoid unacceptable turbidity levels at the time of sampling;

• the pumping test must begin with a static water level and must be performed at a fixed rate (±5%) for a minimum period of six hours^ (longer where supplementary storage systems are necessary) of "continuous" pumping (no stoppages) ; water levels must be monitored in the test well and observation wells at an appropriate frequency; water must be discharged at an appropriate distance from the test wells to ensure that artificial recharge does not occur;

• immediately following the pumping test, water level recovery must be monitored in the test wells until 95% recovery occurs or for 24 hours, whichever is less; where sufficient recovery does not occur, the issue of the long-term safe yield of the aquifer is especially significant and must be addressed; and

• the test rate will be at least the minimum rate discussed below (also see Section 4.4.1.) .

4.3.2 Calculation of Minimum Test Rate and Well Yield

The minimum pumping test rate and well yield required for a particular development must be calculated as follows:

The per-person requirement shall be 450 litres per day. Peak

The minimum duration of six continuous hours incorporates safety factors with respect to seasonal variables.

demand occurs for a period of 120 minutes each day\ This is equivalent to a peak demand rate of 3.75 litres/minute for each person. The basic minimum pumping test rate is this rate multiplied by the "likely number of persons per well" which, for a single family residence, shall be the number of bedrooms plus one. Unless it is otherwise established to MOEE ' s satisfaction, a minimum of four bedrooms shall be used in the calculation. However, regardless of the results of this calculation, this rate shall not be less than 13.7 litres /minute.

The only instance where rates lower than these may be used is where preliminary results indicate that the pumping test rate cannot be sustained in the long term, and consideration is given to systems which would compensate for low well yields. In this case, the rate of test pumping may be decreased, but the duration must be proportionately increased such that the total amount pumped equals the amount that would have been pumped if the test had been conducted using the procedures and minima discussed above. The yield requirement must then be applied to the well and to the compensatory system on a daily basis. These systems and any special water treatment devices that may be necessary for their proper functioning must be fully described in the report.

Regardless of whether systems to compensate for low yields are required, the report must demonstrate that future domestic wells will sustain repeated pumping at the test rate and duration at 24-hour intervals over the long-term.

Where a test well can safely provide water at the calculated rate, it is not acceptable to conduct pumping tests at low rates and subsequently recommend the use of systems to compensate for low well yields simply in order to limit the migration of poorer quality water into the well.

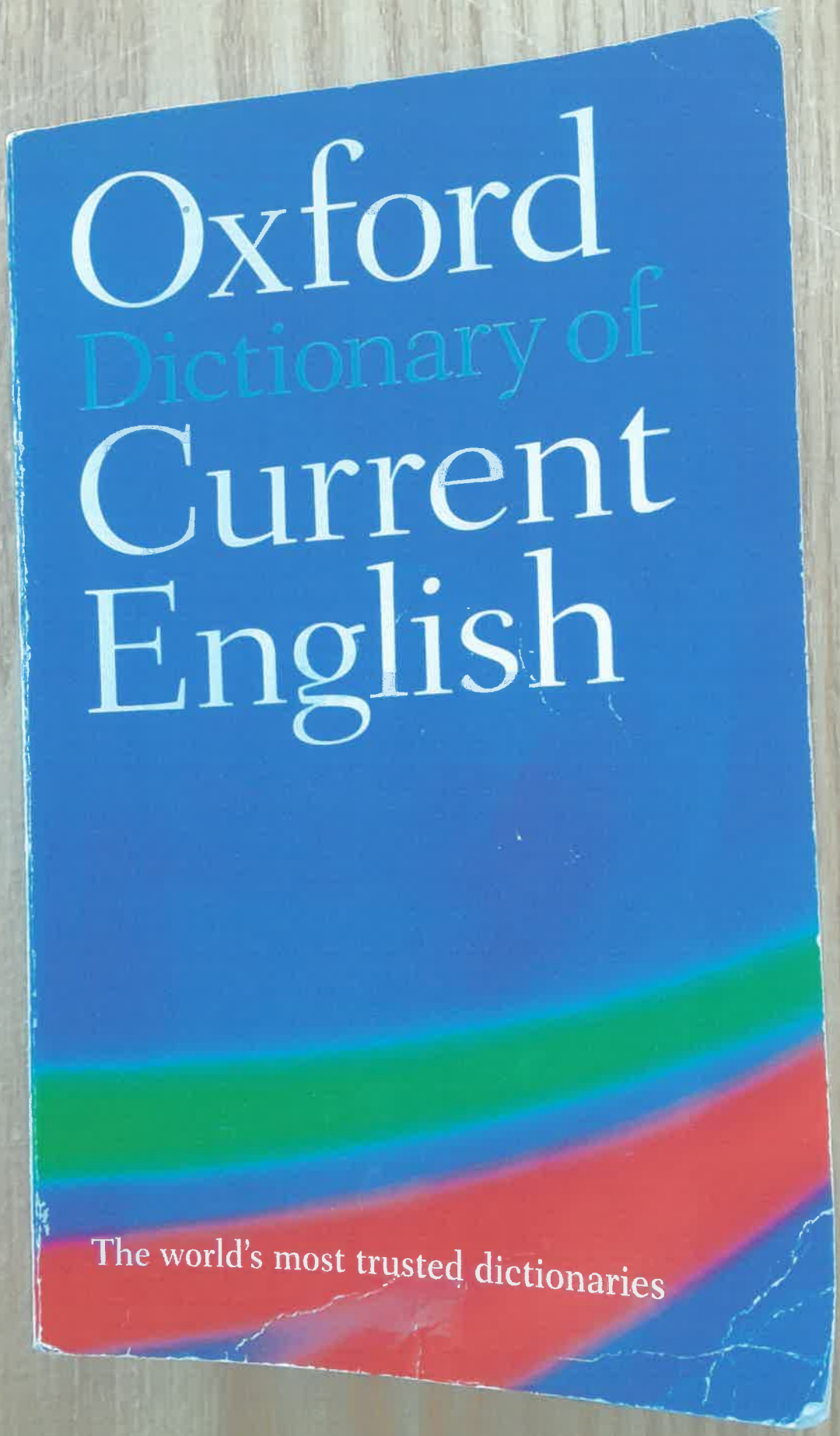
Consultants must provide a statement indicating that, in their professional opinion, the probable well yields determined on the basis of their investigations are representative of the yields which residents of the development are likely to obtain from their wells in the long term.

Refer to page 5 of the MOEE publication entitled "Water Nells & Ground Water Supplies in Ontario" , 1989. The per-person daily demand used here is the upper limit of the

Schedule

"G"

Schedule G


Oxford
Dictionary of
Current
English
The world's most trusted dictionaries

– ORIGIN French.

levee[2] /lev-i/ • n. **1** an embankment built to prevent a river from overflowing. **2** a ridge of sediment deposited naturally alongside a river.

– ORIGIN French.

level • n. **1** a horizontal line or surface. **2** a position or stage on a scale of quantity, extent, rank, or quality: *a high level of unemployment*. **3** a height or distance from the ground or another base. **4** a floor within a multi-storey building. • adj. **1** having a flat, horizontal surface. **2** at the same height as someone or something else. **3** having the same position or value. • v. (**levels**, **levelling**, **levelled**; US **levels**, **leveling**, **leveled**) **1** make or become level. **2** aim or direct a weapon, criticism, or accusation. **3** (**level with**) informal be honest with.

– PHRASES **on the level** informal honest; truthful.

– DERIVATIVES **leveller** n. **levelly** adv.

– ORIGIN Old French *livel*.

level crossing • n. Brit. a place where a railway and a road cross at the same level.

level-headed • adj. calm and sensible.

lever • n. **1** a bar resting on a pivot, used to move a load with one end when pressure is applied to the other. **2** an arm or handle that is moved to operate a

Schedule

"H"

Schedule H

Gmail

Daniel Rozon <darozon1@gmail.com>

FW: 180083 ; B-CR-006 & 007-2018

Mario Elie <melie@lascelleseng.com>
To: Daniel Rozon <darozon1@gmail.com>

Mon, Aug 19, 2019 at

FYI

Mario Elie, Project Manager, Director

Lascelles Engineering & Associates Ltd.

1010 Spence Avenue – Suite 14

Hawkesbury, Ontario K6A 3H9

Tel: (613) 632-0241 – Ext 102

Cell: (613) 677-4399

Email: melie@lascelleseng.com

From: Mario Elie <melie@lascelleseng.com>
Sent: August 15, 2019 5:12 PM
To: 'Michael Melaney' <mmelaney@nation.on.ca>
Cc: Shuang Chang <schang@lascelleseng.com>; Manon Rodrigue <mrodrigue@lascelleseng.com>
Subject: FW: 180083 ; B-CR-006 & 007-2018

Hi Mike,

Sending you the results of the pump test that we recently carried out for the Rozon severance. So near the end of July and the start of August, it got pretty dry – grass stopped growing and was turning yellow/brown. Therefore, Mr. Rozon (which we agre wanted to start testing his well under summer (low water) conditions.

To save on cost and just in case the results would not be favourable, he wanted to test the well himself. He did an initial pumping test on his own on August 02 at a flow rate 16 l/min for 6-hours+; total drawdown of 1.51m (see results below). When he t the results, we told him that he should have done the test at least 18.75 l/min (peak demand). Therefore on August 08, he redid the test at 18.8 l/min for 6-hour again – total drawdown of 1.71m.

On August 12, 2019, we (Lascelles) did our own pumping test. In our opinion, the results appear good. The well still showed a slow recovery however, but got the 95% after 24-hour. As we discussed, this is likely due to the media providing the water to t well. What makes this well work, it is its large underground reserve of pervious soil (sand) that was buried and sealed around the well. This reserve acts the same as it would for a low yielding well, where the peak demand flow would be obtained from providing a reservoir, which get filled up, when there is no demand on the well.

We basically pumped a more than 20,000 litres out of this well during the three (3) pumping tests carried out in less than 10 days. The amount of water pumped out of the well during the test is almost three times the water a typical house would use du day under maximum conditions. The septic system for a typical house is generally designed for about 2,500 litres of day. We pumped at the peak water demand and we were still above the 50% of the well's capacity. We are not trying to prove quantity f residential subdivision but for two single lots.

Anyway let me know what you think. If you are agreeable, we will move forward on addressing the other concerns raise with your review.

Thanks !

Pumping Test by	Date	Yield L/Min	Lengh of Pumping Test (min)	Volume of Water Pumped (L)	Total Drawdown (m)	Remaining Well Storage (%)	1 hr Recovery (%)	24 hr Recovery (%)
Lascelles	Oct-15, 2018	29 - 60	360	12,820	2.72	36	28	73
Rozon	Aug-02, 2019	16.00	400	6,400	1.51	70	NM	NM
Rozon	Aug-08, 2019	18.80	360	6,768	1.71	62	NM	NM
Lascelles	Aug-12, 2019	18.80	390	7,332	1.80	59	19	96

20,500 L

Pumping			Recharging			
Time (min)	water level (m)	Remaining Well Storage	Time (min)	(m) (m)	Recovered Drawdown (%)	Recovered Drawdown (m)
static	2.60	100.00%	initial	4.4	0.00%	1.80
1	2.70	97.73%	1	4.28	6.67%	1.68
2	2.78	95.91%	2	4.25	8.33%	1.65
3	2.82	95.00%	3	4.23	9.44%	1.63
4	2.86	94.09%	4	4.22	10.00%	1.62
5	2.89	93.41%	5	4.21	10.56%	1.61
10	3.04	90.00%	10	4.19	11.67%	1.59
15	3.15	87.41%	15	4.16	13.33%	1.56
20	3.24	85.45%	20	4.15	13.89%	1.55
25	3.31	83.86%	25	4.14	14.44%	1.54
30	3.38	82.27%	30	4.13	15.00%	1.53
40	3.48	80.00%	35	4.12	15.56%	1.52
50	3.58	77.73%	40	4.1	16.67%	1.50
60	3.66	75.91%	45	4.09	17.22%	1.49
120	3.92	70.00%	50	4.08	17.78%	1.48
180	4.09	66.14%	55	4.07	18.33%	1.47
240	4.18	64.09%	60	4.06	18.89%	1.46
300	4.30	61.36%	1080	2.95	80.56%	0.35
360	4.39	59.32%	1410	2.68	95.56%	0.08
390	4.4	59.09%				

Mario Elie, Project Manager, Director

Lascelles Engineering & Associates Ltd.

1010 Spence Avenue – Suite 14

Hawkesbury, Ontario K6A 3H9

Tel: (613) 632-0241 – Ext 102

Cell: (613) 677-4399

Email: melie@lascelleseng.com

Schedule

"I"

Schedule 1

Gmail

Daniel Rozon <darozon1@gmail.com>

1 er terrain et puit

Mario Elie <melie@lascelleseng.com>
To: Daniel Rozon <darozon1@gmail.com>

Wed, Nov 27, 2019 at 1:19 PM

Mike m'a donné son approbation verbale – «even if I do not like it, I guess I have no choice but to approve it, but there will be language in there about the risk to this type of well«

Il y aussi l'affaire avec la localisation du champs septique en amont du puits. Je crois que la municipalité va falloir qu'elle approuve en bout ligne. SNC donne des recommandations !

Si tu vends ce lot ci et l'autre ne fonctionne plus, tu as plus de lot pour des enfants ?

Mario Elie, Project Manager, Director

Lascelles Engineering & Associates Ltd.

1010 Spence Avenue – Suite 14

Hawkesbury, Ontario K6A 3H9

Tel: (613) 632-0241 – Ext 102

Cell: (613) 677-4399

Email: melie@lascelleseng.com

[Quoted text hidden]

Schedule

"J"

around the base of the casing and filled with filter sand to create a large reserve. The portion of the excavation was sealed with native plastic clay to prevent surface migration of potential contamination to the water supply.

It is noted that the Proponent carried out numerous pumping tests on this newly installed well to develop and to test the well capacity; those tests showed that the well could sustain a 6-hour pumping test under the required yield and obtain a 95% recovery within 24 hours. Nevertheless, Lascelles carried out its own pumping test on this well to confirm the long-term suitability of this local overburden aquifer. On January 22, a 6-hour pumping test was carried out by Lascelles' technical staff using a submersible pump with a generator supplied by the Owner with sufficient hose to discharge the water at a distance where it would not interfere the pumping test. The pumping test started at 9:10AM and the pump was shut off at 15:10PM, which lasted 6.0 hours. Lascelles' staff was on-site to measure the drawdown and recovery of the well. The yield during the pumping test was adjusted and maintained around 18.9 l/min and monitored frequently during the entire pumping test. Considering the time of year (January) and the freezing temperatures and frozen grounds, it is Lascelles' opinion that surficial infiltration/recharge was not occurring or was very minimal during the time of the pumping test.

Prior to starting the pumping test, the static water level was measured to be 3.04m from the top of well casing. At the end of the 6-hour pump test, the water level measured to be 6.38m for a total drawdown of 3.34m or 87% of the well's reserve. Although the well's steady state was never reached, the drawdown was measured to be 0.63m during the last hour of pumping. After 60min following the end of the pumping test, the well had recovered 13.8% of its drawdown, and 95.1 % within 24 hours. A summary of the well pumping test data is presented in Table 2 below.

Based on the results of this second pumping test, the new well located at B-007 can provide the minimum required yield to supply a single-family dwelling (13.7 l/min) as well as the peak demand rate of 18.75 l/min as per MOE's *"Technical Guideline for Private Wells: Water Supply Assessment – August 1996."*

Schedule

"K1"

(b)

The well was designed (by G & G Sarault Sand & Gravel) to act as a reservoir. The volume of the reservoir is approximately 75 m^3. Using a porosity of 30% for sand and the water level of 3.6 m below ground surface at the day of the pump test (February 23, 2012), the volume of water is 5,500 L.

According to the well record, the upper 2.75 m of clay was described by the well driller as being fissured and the well was sealed for the upper 2.5 m. Leaving 0.25 m of the annual space open to the fissured clay. The presence of the fissured clay makes the site hydrogeologically sensitive. A minimum 30 m setback of the well from any sources of contamination is required to protect the well from surficial contamination.

A pumping test was performed on February 23, 2012. The well was pumped at constant flow rate using a submersible pump installed at a depth of approximately 4.5 m below ground surface, with a flow rate of 3.6 to 5.0 ImpGPM (from 13.6 to 18.9 L/m)). Following the termination of the pumping test, the well's recovery was measured until 95% recovery was obtained or 24 hrs has passed, whichever came first. The field data of the pumping test, which include flow rates, water levels and measurement intervals, are attached. A graph showing the drawdown and pump rate verses time is also attached. At the end of the 6 hour pump test the total drawdown was 0.82 m. One hour after the pump test ended the drawdown was 0.38 m which represents 54 % recovery. 100% recovery occurred after 23 hours.

The MOE's procedure D-5-5 defines the minimum aquifer yield requirement for a domestic well as 2250 L/day (5 person at 450 L/day). Peak demand occurs for a period of 120 minutes/day which is equivalent to a peak demand rate of 3.75 L/minute/person. The total is 18.75 L/minute (5 GPM) for a four-bedroom dwelling (five-person) or a minimum of 13.7 L/min (3.6 GPM) as stated in the procedures. During the 24 hour recovery period, approximately 2,800 L of water recharged the well, which is greater than the minimum daily requirement.

c) Water Table & Groundwater Flow

The standpipes were placed in the open test pits and then filled in using the excavated material using a backhoe. The water level was measured one day after the piezometers were installed. The clay was described as fissured near the surface becoming massive with depth.

2. Water Quantity

The MOE's procedure D-5-5 defines the minimum aquifer yield requirement for a domestic well as 2250 L/day (5 person at 450 L/day). Peak demand occurs for a period of 120 minutes/day which is equivalent to a peak demand rate of 3.75 L/minute/person. The total is 18.75 L/minute (5 GPM) for a four-bedroom dwelling (five-person) or a minimum of 13.7 L/min (3.6 GPM) as stated in the procedures.

The pump test has shown that a minimum flow rate of 13.6 L/min can be sustained for at least 6 hours. This represents a specific capacity of 2.7×10^{-4} $m^3/s/m$. Based on the relatively small drawdown, a minimum pump rate of 3.6 GPM could be achieved.

The volume of water pumped from the well (based on the drawdown) was estimated to be 2.8 m^3 which is 45% of the available water in the well. During the 24 hour recovery period, approximately 2,800 L of water recharged the well, which is greater than the minimum daily requirement.

3. The groundwater chemistry of the proposed supply aquifer was obtained by collecting water sample from the well during the pump test. To determine the evolution of the water quality

Schedule

"K2"

Schedule K2

Pump Test Data
Hydrogeological Assessment - Consent Application No. B-CR-022-2010, B-CR-023-2010 & B-CR-027-2010
3017 and 3216 County Road 17, Clarence-Rockland, Ontario
LRL File No. 10352

Date:	2/23/2012	**Technician:**	J. Arthurs	**Sand porosity**	0.3
Well Number:	TW1	**Pump Depth (m):**	4.7 m		
Depth of Well (m bgs):	7.6	**Start Time:**	9:10 AM		
Ground Surface Elev. (m):	100.756	**End Time:**	3:10 PM		
Top of Casing Elev. (m):	100.671	**Average Pump Rate (ImpGPM):**	4.1		

				Field Parameters				
Time (min)	Water Level (m BTC)	Draw down (m)	Flow Rate (ImpGPM)	Turbidity (NTU)	Residual Chlorine (mg/L)	Colour (TCU)	Cumulative Volume of Water Pumped from Well (L)	Cumulative Volume of Water into Well During Recovery (L)
0.0	3.70	0.00	4.5					
0.5	3.99	0.29	4.5				1052	
1.0	3.96	0.26	4.5				947	
1.5	3.94	0.24	4.5				877	
2.0	3.92	0.22	4.5				806	
2.5	3.92	0.22	4.5				806	
3.0	3.95	0.25	4.5				912	
3.5	3.98	0.28	4.5				1017	
4.0	4.00	0.30	4.5				1087	
4.5	4.05	0.35	4.5				1260	
5.0	4.09	0.39	4.5				1399	
6.0	4.11	0.41	4.5				1464	
8.0	4.15	0.45	4.5				1598	
9.0	4.17	0.47	5				1665	
10.0	4.19	0.49	5				1698	
15.0	4.24	0.54	5.08				1895	
20.0	4.26	0.56	5.08				2024	
25.0	4.25	0.55	3.7				1927	
30.0	4.22	0.52	3.7				1829	
40.0	4.26	0.56	3.8				1959	
50.0	4.26	0.56	4.2				2024	
60.0	4.34	0.64	5.08	0.52	0.11	0	2215	
120.0	4.37	0.67	3.57	0.1	0.09	1.3	2310	
180.0	4.42	0.72	3.7	0.06	0	1.3	2485	
240.0	4.46	0.77	3.66	0.06	0.03	0.5	2624	
300.0	4.52	0.82	3.61	0.55	0	0	2755	
360.0	4.52	0.82	3.3	0.46	0.04	1.2	2755	
360.5	4.46	0.76	0					167
361.0	4.41	0.71	0					320
361.5	4.38	0.68	0					414
362.0	4.36	0.66	0					476
362.5	4.35	0.65	0					524
363.0	4.33	0.63	0					571
363.5	4.32	0.62	0					619
364.0	4.30	0.60	0					667
364.5	4.29	0.59	0					699
365.0	4.28	0.58	0					731
366.0	4.27	0.57	0					779
367.0	4.26	0.56	0					812
368.0	4.25	0.55	0					844
369.0	4.24	0.54	0					877
370.0	4.23	0.52	0					909
375.0	4.19	0.49	0					1024
380.0	4.17	0.47	0					1107
385.0	4.15	0.45	0					1157
390.0	4.14	0.44	0					1190
400.0	4.11	0.41	0					1291
410.0	4.10	0.40	0					1325
420.0	4.09	0.39	0					1410
1390.0	3.69	-0.02	0					2811

BTC: Below Top of Casing
NM: Not Measured

Schedule

"L"

Schedule L

SOUTH NATION CONSERVATION
DE LA NATION SUD

2. Water Quantity Assessment (B-CR-007) Main Concern #2, Condition #4:

A new well was constructed on the proposed lot severance, B-CR-007; it is very important to note that the well logs for B-CR-006 and B-CR-007 are quite different and were not compared in the report; we have provided the comparison below for review (Table 1).

A summary of the well records was provided to highlight the variability in the stratigraphy. Please note that the ***silty sand/fine sand*** was not encountered at the well installed on B-CR-007. This presents and significant issue since this is likely the only unit providing water to B-CR-006.

Table 1:Well Records For B-CR-006 and B-CR-007

Depth Below Ground Surface (mBGS)	B-CR-006
0-2.5	Topsoil and Fissured Clay
2.5-3.75	***Silty Sand/Fine Sand***
3.75 -6.0	Very Elastic Grey Blue Clay

Depth Below Ground Surface (mBGS)	B-CR-007
0-2.7	Topsoil and Fissured Clay
2.7-3.75	Elastic Clay
3.75 -6.0	Very Elastic Grey Blue Clay

Based on the well record and as confirmed in the report, B-CR-007 is only receiving water through bypassing the clay "seal" from the surface through fissured clay or a not entirely sealed well bore. This well seal will become more watertight over time and less water will infiltrate (bypass) the seal over time.

Additionally, the elastic to very elastic clay that was removed from the bottom of the well (hole) will be used as the sealing material. This material cannot be both an aquifer and an aquitard (low permeable soil). Essentially, the well is not located in an aquifer based on the well record for B-CR-007.

A 6-hour pumping test was completed on January 22, 2020. The consultant stated:

"Considering the time of year (January) and the freezing temperatures and frozen grounds, it is Lascelles' opinion that surficial infiltration/recharge was not occurring or was minimal during the time of the pumping test"

This statement is anecdotal and has not been demonstrated. Figure 2 shows that the watershed was not in a period of seasonally low water during this time. A significant melt and rainfall event, which equates to recharge, occurred on January 10 and 11 2020 (Figure 3).

Schedule

"M"

Schedule M

LEVAC ROBICHAUD LECLERC

Test Pit Log: TP2

Date: 15 June, 2011

Project No.: 10352

Client: Pierre and Elianne Etter

Logged By: Andrey Belokurov

Project: Hydrogeological Investigation

Entered By: Andrey Belokurov

Location: Old Hwy 17, Rockland, Ontario

Checked By: Michelle Hanna

Excavation Method: Backhoe

Depth (ft, m)	Symbol	Soil Description	Elev./Depth (m)	Sample Type	Sample Number	Laboratory Analysis	Combustible Soil Vapours (% LEL: 20, 40, 60, 80; ppm: 200, 400, 600, 800)	Water Level (Standpipe or Open Excavation)
-0.5		Ground Surface	99.20					
0.0		**Topsoil** Loam brown, moist	0.00					
1.0			98.75					
0.5		**Clay** Grey and brown, dry to moist	0.45					
1.5								
2.5			96.20					
3.5		End of Test Pit	3.00					
4.5								

Water Level: 98.305 m (16/06/11)

NOTES
G Grab Sample
Measured water level
Inferred water level

Easting (X): 0484334

Northing (Y): 5047181

Site Datum: Nail on the elect. pole #34421

Groundsurface Elevation: 99.199

Top of Riser Elev.: 99.644

Schedule

"N"

Schedule N

at 240min into the pumping test to 29 l/min (6.4 IGPM) until the end. At the end of the 6-hour pump test, the water level measured to be 5.49m for a total drawdown of 2.72m or 64.3% of the well's reserve, although the well's steady state was never reached and during the last hour of pumping the drawdown was measured to be only 0.14m. The well's specific capacity was estimated to be 31.1 l/min/m. A summary of the well pumping test data is presented in **Table 1** below.

The well recovered over 30% of its drawdown within 100min and over 50% within 15 hours. The well had almost fully recovered (88.85%) within 3 days of the pumping test. Slow recovery of wells that are not under artesian pressure is typical. Nevertheless, the data suggest that the overburden aquifer supply this well is moderate yielding and the well's long-term supply is ensured by the capacity of its large reserve that was created around the well at the time construction.

Table 1: Pumping Test Data Summary

6-Hour Pumping Test Data					
Time (min)	Water Level (m)	Remaining Well Storage	Time (min)	Recovery (m)	Recovered Drawdown
Initial pumping yield: 60 l/min (13.2 IGPM)					
Static	2.77	100%	Initial	5.49	0.00%
1	3.23	89.13%	1	5.34	5.40%
2	3.37	85.82%	2	5.22	9.71%
3	3.47	83.45%	3	5.12	13.31%
4	3.56	81.32%	4	5.07	15.11%
5	3.64	79.43%	5	5.03	16.55%
10	3.96	71.87%	10	4.96	19.06%
15	4.19	66.43%	15	4.92	20.50%
20	4.29	64.07%	20	4.88	21.94%
Pumping reduced to 37 l/min (8.1 IGPM)					
25	4.17	66.90%	25	4.85	23.02%
30	4.17	66.90%	30	4.82	24.10%
40	4.19	66.43%	40	4.78	25.54%
50	4.28	64.30%	50	4.75	26.62%
60	4.34	62.88%	70	4.68	29.14%
120	4.73	53.66%	97	4.61	31.65%
180	5.09	45.15%	920	4.07	51.08%
240	5.36	38.77%	1430	3.50	71.58%
Pumping reduced to 29 l/min (6.4 IGPM)					
300	5.35	39.01%	5520	3.02	88.85%
360	5.49	35.70%			

-912

Based on the results of the pumping test, the well located at CR-006 can provide more than the minimum required yield to supply a single-family dwelling (13.7 l/min) as well as the peak

demand rate of 18.75 l/min as per MOE's *"Technical Guideline for Private Wells: Water Supply Assessment – August 1996."*

5.2 Water Quality

It is noted that at the start of the pumping test the water was cloudy and contained visible sediments, which was likely due to the disturbance during the well construction and the fact that the well was never developed. The water cleared up and was found be very clear and with no evidence of smell at around the 2-hour mark of the pumping test.

A water sample was collected at 5.5 hour into the pumping test. It was our understanding that the well had been chlorinated by the well contractor upon completion of the well. Prior to collecting the complete sample, the chlorine residual of the well was measured using a Lamotte Smart 3 Colorimeter. The results showed that the chlorine residual was nil.

The sample was collected using laboratory prepared bottles and submitted to Paracel Laboratories Ltd. of Ottawa, Ontario. The sample was analysed for a subdivision package. A summary table is included in **Appendix F** of the report as well as the Laboratory Certificates of Analysis. The summary table provides the results of the water analysis in relation to the Ontario Drinking Water Standards (ODWS – O. Reg. 169/03).

In reviewing the laboratory results, the raw water sample meets the ODWS, except for hardness, organic nitrogen and microbiological parameters, notably E. Coli, Fecal Coliforms and Total Coliforms. Hardness and organic nitrogen are not health related but operational guidelines in drinking water. However, E. Coli, Fecal Coliforms and Total Coliforms are health related parameters. Finally, it is noted that the sodium levels measured in the raw water is above the notification limits. More detailed information is provided below on these parameters.

Hardness: The ODWS recommends an operational guideline for hardness in drinking water of between 80 and 100 mg/L. The hardness was measured to be 198 mg/L and is considered hard water. Hard water may cause some scaling, films and staining on plumbing fixtures and dishes. However, hard water can be easily treated using a conventional water softener.

Based on the water chemistry obtained, the Langelier Saturation Index (LSI) and the Ryznar Stability Index (RI) were calculated, which are approximate indicators of the degree of

7 CONCLUSIONS

7.1 Water Quantity and Quality

As presented herein, the proposed new lots can be supplied by an overburden aquifer, which can adequately yield more than the minimum requirement of supplying a single-family dwelling at the peak demand rate of 18.75 l/min as per MOE's *"Technical Guideline for Private Wells: Water Supply Assessment – August 1996"*.

The test pitting program confirmed that the sand aquifer that supplies the on-site test well on CR-006 is also present on CR-007. The long-term supply of the well can be ensured by the large reservoir created around the well; consequently, the manner in which the well is constructed is important. Furthermore, A 30m separation distance should be respected between each well to limit influence interference between the wells.

The quality of the overburden aquifer was found to meet with the ODWS, except for hardness and organic nitrogen. Hardness and organic nitrogen are not health-related parameters in drinking water but operational parameters that can be easily treated using a conventional and readily available water treatment system. It is noted that the water was also found to be above the notification limit for sodium. To this effect, the local Medical Officer of Health should be notified of the levels of sodium found in this area so that this information could be passed on to local physicians.

In conclusion, the proposed new lots can be adequately and safely supplied with potable water obtained from the overburden in the long term.

7.2 Lot Size

As presented herein, both the retained and severed lots are greater than the minimum lot size (0.4ha) outlined in the County's official plan.

The size of the new lots will provide sufficient space to construct a dwelling supplied with a dug well and serviced by a fully raised conventional septic system in accordance with the latest Ontario Building Code, along with a replacement area in the event that one would be required, while meeting the required and recommended setbacks. A conceptual plan was prepared demonstrating this fact and is included as part of **Appendix G.**

Schedule

"O"

Schedule O

[Quoted text hidden]

Mario Elie <melie@lascelleseng.com>
To: Daniel Rozon <darozon1@gmail.com>

Mon, Mar 23, 2020 at 11:12 AM

Based on the pumping test done for each well.

B-007 – volume of water pumped out of the well after 6-hour: 6,804 litres (about 1,500 gallons).

Volume of water recovered after 60 minutes – 885 litres and after 24 hours - 6,460 litres.

B-006 – volume of water pumped out of the well after 6.5-hour: 7,371litres (about 1,625 gallons).

Volume of water recovered after 60 minutes – 1,400 litres and after 24 hours - 7002 litres.

[Quoted text hidden]

Daniel Rozon <darozon1@gmail.com>
To: Mario Elie <melie@lascelleseng.com>

Mon, Mar 23, 2020 at 11:14 AM

Merci

[Quoted text hidden]

Schedule

"P"

Schedule P

Gmail

Daniel Rozon <darozon1@gmail.com>

Pump test of October 15 2018 for well B-006

5 messages

Daniel Rozon <darozon1@gmail.com> Thu, Apr 2, 2020 at 11:01 AM
To: Mario Elie <melie@lascelleseng.com>

Salut Mario

Please confirm that the the results of the pump test of the well on the lot for severance B-CR-006-2018 of October 15 2018 that 12,820 liters were pumped and at the 24 hour mark 12,251 liters had recharged the well.

Merci
Daniel Rozon

Mario Elie <melie@lascelleseng.com> Thu, Apr 2, 2020 at 11:18 AM
To: Shuang Chang <schang@lascelleseng.com>
Cc: Daniel Rozon <darozon1@gmail.com>

See below !

Please figure out the volume of water pumped out of the wells using the various flows during the 6-hour pump test in Oct. 2018.

Thanks !

[Quoted text hidden]

Daniel Rozon <darozon1@gmail.com> Thu, Apr 2, 2020 at 11:20 AM
To: Mario Elie <melie@lascelleseng.com>

Merci
[Quoted text hidden]

Shuang Chang <schang@lascelleseng.com> Thu, Apr 2, 2020 at 3:15 PM
To: Mario Elie <melie@lascelleseng.com>
Cc: Daniel Rozon <darozon1@gmail.com>

Hi Daniel,

Below is my calculation

0 – 25min: 60L/min

25-300min: 37L/min

300-360min: 29L/min

So the total volume of water pumped out is 25 x 60 + 275 x 37 + 60 x 29 = 13,415L

Total recharge is: 13,415 – [0.3 x 0.3 x 3.14 x (3.5 – 2.77)] x 1000 = 13,208L

Shuang Chang, M.A.Sc, P. Eng

Lascelles Engineering & Associates Ltd.

1010 Spence Avenue, Suite 14

Hawkesbury, Ontario K6A 3H9

Tel: (613) 632-0241

Cell: (613) 677-4343

After work (450) 566-4715

Email: schang@lascelleseng.com

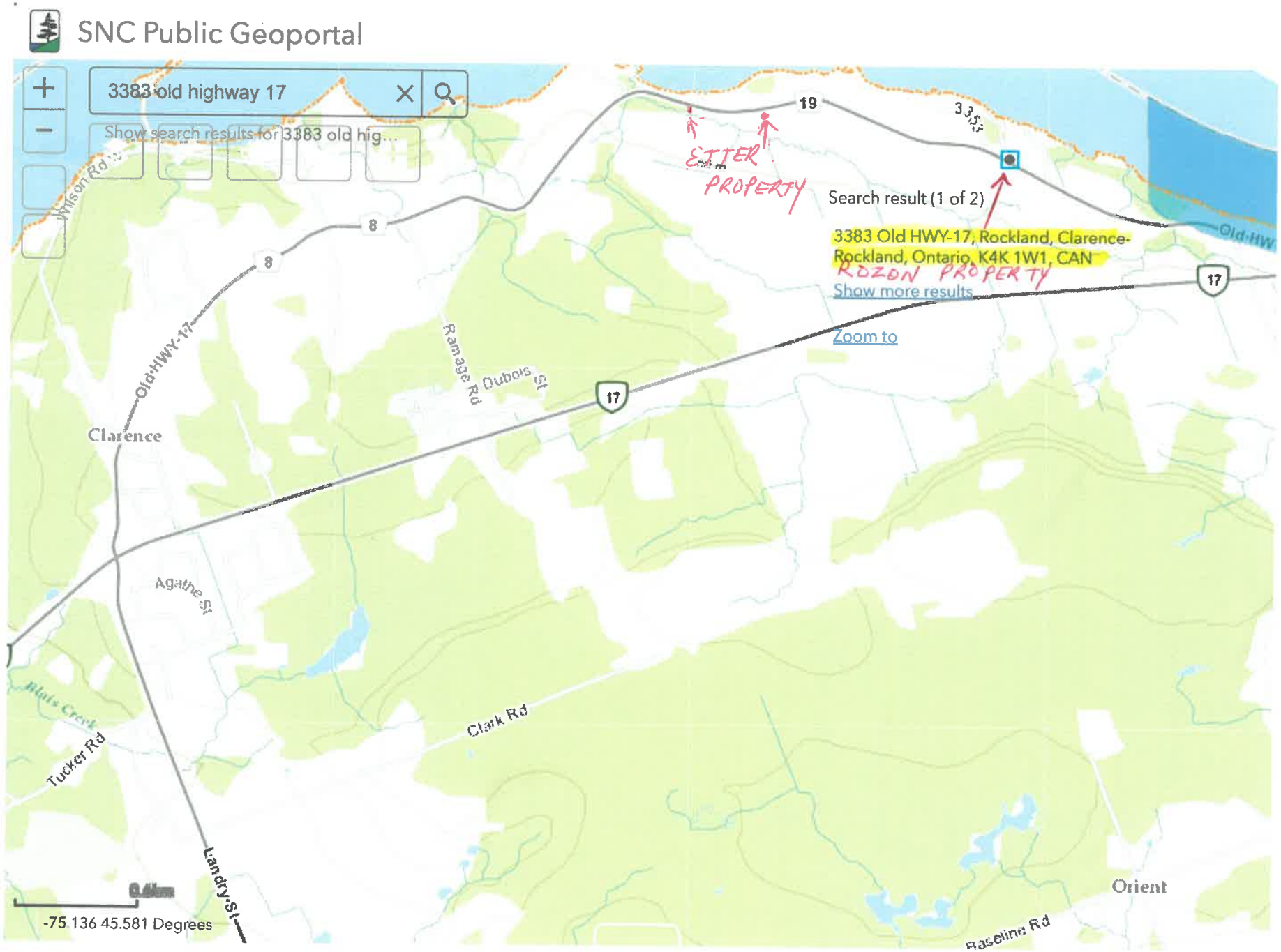
[Quoted text hidden]

Daniel Rozon: <darozon1@gmail.com> Thu, Apr 2, 2020 at 3:19 PM
To: Shuang Chang <schang@lascelleseng.com>
Cc: Mario Elie <melie@lascelleseng.com>

Thanks Shuang
[Quoted text hidden]

Schedule

"Q"

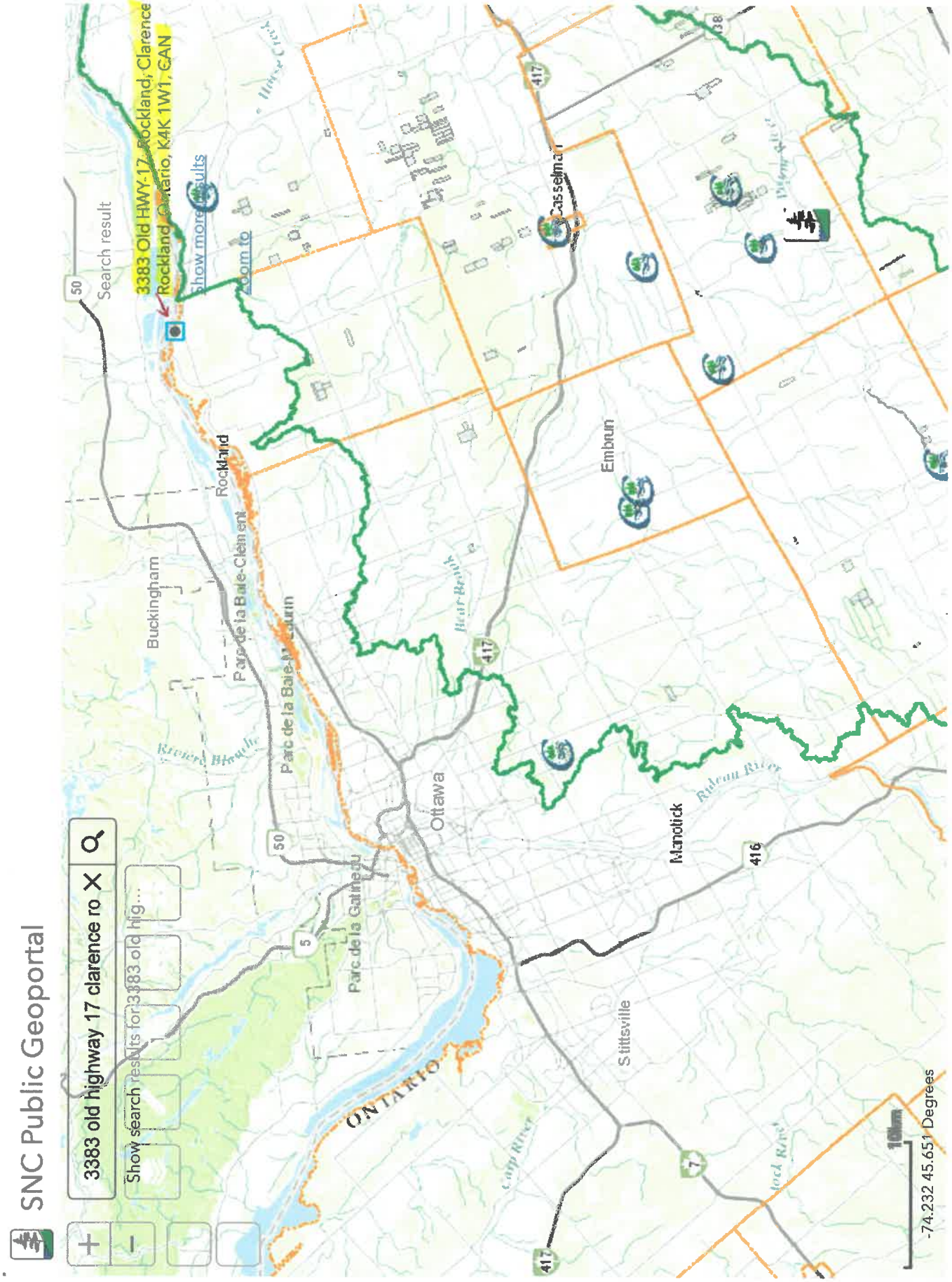

SNC Public Geoportal
3383 old highway 17
Show search results for 3383 old hig...
ETTER PROPERTY
Search result (1 of 2)
3383 Old HWY-17, Rockland, Clarence-Rockland, Ontario, K4K 1W1, CAN
ROZON PROPERTY
Show more results
Zoom to
19
17
8
Old HWY-17
Ramage Rd
Dubois St
Clarence
Agathe St
Clark Rd
Tucker Rd
Landry St
Orient
Baseline Rd
-75.136 45.581 Degrees

Schedule Q

Schedule

"R"

Schedule R


SNC Public Geoportal
3383 old highway 17 clarence ro
Show search results for 3383 old hig...
3383 Old HWY-17, Rockland, Clarence
Rockland, Ontario, K4K 1W1, CAN
Search result
Show more results
Zoom to
Rockland
Buckingham
Parc de la Baie-Clément
Parc de la Baie-Alfred-Laurin
Rivière Blanche
Ottawa
Parc de la Gatineau
ONTARIO
Embrun
Casselman
Manotick
Rideau River
Stittsville
Petite Nation River
Castor River
417
50
5
7
416
-74.232 45.651 Degrees

Schedule

"S"

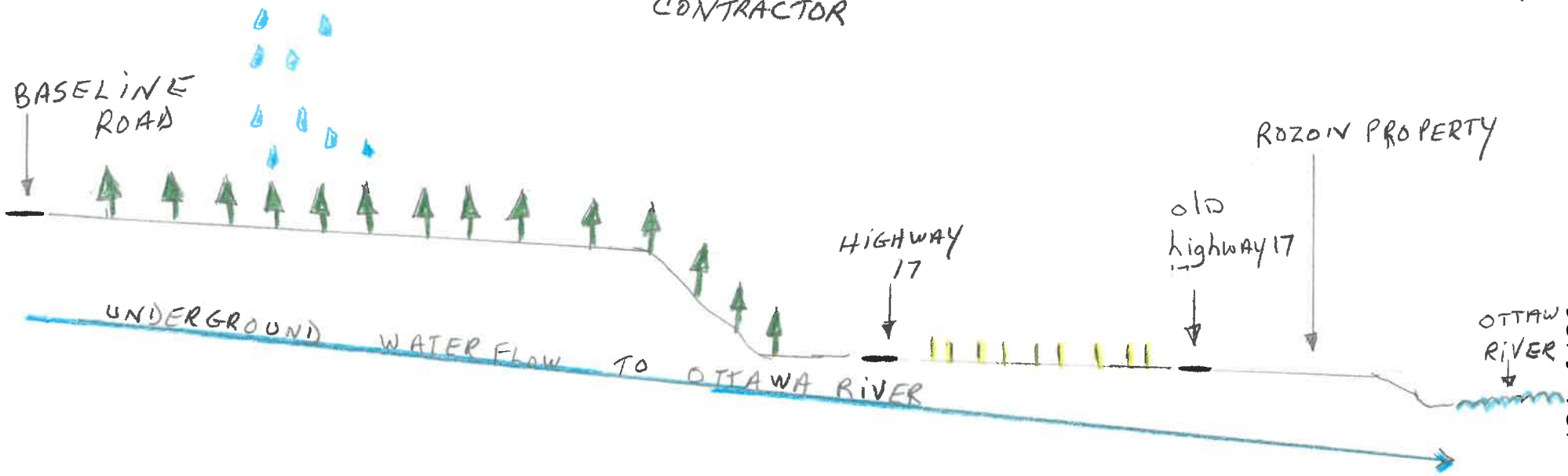
Schedule 5

CROSS SECTION OF LAND SOUTH OF ROZON PROPERTY AND SOURCE OF ROZON WATER AS EXPLAINED BY THEIR WELL CONTRACTOR

NOT TO SCALE

← South

North →



APPROX. 5KM FROM SOUTH OF BASELINE ROAD TO ROZON PROPERTY

WOODED AREA

HAYFIELD

RAIN & SNOW PRECIPITATION

Schedule

Schedule T

Gmail

Daniel Rozon <darozon1@gmail.com>

3224 Old highway 17 Clarence Rockland ON purchase of land by Chartrand from Etter

3 messages

Daniel Rozon <darozon1@gmail.com> Wed, Apr 1, 2020 at 1:15 PM
To: hemptekbuilder@gmail.com

Salut Benoit
As discussed this afternoon I understand that you and your spouse purchased the vacant lot above and built your house on it about 3 years ago.

I also understand you had a "Dug Reservoir type Well" installed on your lot (same type of well as your neighbour Jordan Ashley); you had a water softner installed but you are satisfied with the quality and quantity of water from your well.

Appreciated if you can reply that you agree with above statement.

Merci
Daniel Rozon

B Chartrand <hemptekbuilder@gmail.com> Thu, Apr 2, 2020 at 11:29 AM
To: Daniel Rozon <darozon1@gmail.com>

Yes, I agree.

Benoit Chartrand
3224 old hwy 17
rockland on
k4k 1w3
[Quoted text hidden]

Daniel Rozon <darozon1@gmail.com> Thu, Apr 2, 2020 at 8:20 AM
To: B Chartrand <hemptekbuilder@gmail.com>

Merci
[Quoted text hidden]