

210 Tetter's St. Teeterville

**For Office Use Only:**

File Number	_____	Application Fee	_____
Related File Number	_____	Conservation Authority Fee	_____
Pre-consultation Meeting	_____	Well & Septic Info Provided	_____
Application Submitted	_____	Planner	_____
Complete Application	_____	Public Notice Sign	_____

**Check the type of planning application(s) you are submitting.**

- ☒ Consent/Severance/Boundary Adjustment  
☐ Surplus Farm Dwelling Severance and Zoning By-law Amendment  
☒ Minor Variance  
☐ Easement/Right-of-Way

**Property Assessment Roll Number:** 491011070000000

**A. Applicant Information**

**Name of Owner** Deyne Farms Ltd. (Greg Deyne)

It is the responsibility of the owner or applicant to notify the planner of any changes in ownership within 30 days of such a change.

**Address** 114 Viola Court,  
**Town and Postal Code** Porcupine ON P0N 1K0  
**Phone Number** \_\_\_\_\_  
**Cell Number** 705-235-3564  
**Email** deyne@vianet.ca

**Name of Applicant** \_\_\_\_\_  
**Address** \_\_\_\_\_  
**Town and Postal Code** \_\_\_\_\_  
**Phone Number** \_\_\_\_\_  
**Cell Number** \_\_\_\_\_  
**Email** \_\_\_\_\_

**Name of Agent** David Roe , Civic Planning Solutions Inc.  
**Address** 61 Trailview Dr.  
**Town and Postal Code** Tillsonburg, ON N4G 0C6  
**Phone Number** \_\_\_\_\_  
**Cell Number** 519-983-8154  
**Email** dfrfez@me.com

Please specify to whom all communications should be sent. Unless otherwise directed, all correspondence and notices in respect of this application will be forwarded to the owner and agent noted above.

☐ Owner ☐ Agent ☐ Applicant

Names and addresses of any holder of any mortgagees, charges or other encumbrances on the subject lands:

\_\_\_\_\_  
 \_\_\_\_\_

**B. Location, Legal Description and Property Information**

1. Legal Description (include Geographic Township, Concession Number, Lot Number, Block Number and Urban Area or Hamlet):

Windham Plan 47B, Block 5, Lots 10 to 13 (Lot to sever)

Windham, Concession 5, Part Lot 13 (Adjacent farm parcel)

Municipal Civic Address: 210 Tetters St. Teeterville

Present Official Plan Designation(s): Hamlet (lot to Sever) Agricultural and Hamlet (Adjacent farm parcel)

Present Zoning: HR and A

2. Is there a special provision or site specific zone on the subject lands?

☐ Yes ☒ No If yes, please specify:

3. Present use of the subject lands:

Vacant residential (Lot to sever)

Agricultural cash crops (Adjacent farm parcel)

4. Please describe **all existing** buildings or structures on the subject lands and whether they are to be retained, demolished or removed. If retaining the buildings or structures, please describe the type of buildings or structures, and illustrate the setback, in metric units, from front, rear and side lot lines, ground floor area, gross floor area, lot coverage, number of storeys, width, length, and height on your attached sketch which must be included with your application:

Vacant dwelling

5. If an addition to an existing building is being proposed, please explain what it will be used for (for example a bedroom, kitchen, or bathroom). If new fixtures are proposed, please describe.

n/a

6. Please describe **all proposed** buildings or structures/additions on the subject lands. Describe the type of buildings or structures/additions, and illustrate the setback, in metric units, from front, rear and side lot lines, ground floor area, gross floor area, lot coverage, number of storeys, width, length, and height on your attached sketch which must be included with your application:

New house to be built in future details not available

7. Are any existing buildings on the subject lands designated under the *Ontario Heritage Act* as being architecturally and/or historically significant? Yes ☐ No ☒

If yes, identify and provide details of the building:

8. If known, the length of time the existing uses have continued on the subject lands:

100 plus years

9. Existing use of abutting properties:

Residential and school

10. Are there any easements or restrictive covenants affecting the subject lands?

☐ Yes ☒ No If yes, describe the easement or restrictive covenant and its effect:

### C. Purpose of Development Application

Note: Please complete all that apply. Failure to complete this section will result in an incomplete application.

#### 1. Site Information (Please refer to Zoning By-law to confirm permitted dimensions)

	Existing	Permitted	Provision	Proposed	Deficiency
Lot frontage	95m	30m	5.7.2 b) i)	95m	no
Lot depth	49.7m				
Lot width	59.6m				
Lot area	3763m <sup>2</sup>	4000m <sup>2</sup>	5.7.2 a)	3763m <sup>2</sup>	237m <sup>2</sup>
Lot coverage					
Front yard	5.54m	6m	5.7.2 c)	5.54m	0.46m
Rear yard	35m	9m	5.7.2 f)		no
Height	1 storey	11m	5.7.2 g)		no
Left Interior side yard	extensive	3m	5.7.2 e) ii)		no
Right Interior side yard	5.66m	1.2m	5.7.2 e) ii)		no
Exterior side yard (corner lot)					
Parking Spaces (number)	2+	2			no
Aisle width					
Stall size					
Loading Spaces					
Other					



2. Please explain why it is not possible to comply with the provision(s) of the Zoning By-law: Existing lot is within Plan 47B which is not a plan of subdivision under

the Planning Act and as the owner owns adjacent farm parcel a consent

is required the lot area is existings and the dwelling is existing

Relief is required for lot area and for front yard setback for existing house

3. **Consent/Severance/Boundary Adjustment:** Description of land intended to be severed in metric units:

Frontage: 95m

Depth: 49.7m

Width: 59.6m

Lot Area: 0.38ha

Present Use: Residential

Proposed Use: Residential

Proposed final lot size (if boundary adjustment):

If a boundary adjustment, identify the assessment roll number and property owner of the lands to which the parcel will be added:

Description of land intended to be retained in metric units:

Frontage: 301.64m

Depth: 672.24m

Width: 311

Lot Area: 20.24ha

Present Use: Agricultural cash crops

Proposed Use: Agricultural cash crops

Buildings on retained land: none

4. **Easement/Right-of-Way:** Description of proposed right-of-way/easement in metric units:

Frontage:

Depth:



Width: \_\_\_\_\_  
Area: \_\_\_\_\_  
Proposed Use: \_\_\_\_\_

**5. Surplus Farm Dwelling Severances Only:** List all properties in Norfolk County, which are owned and farmed by the applicant and involved in the farm operation

Owners Name: n/a  
Roll Number: \_\_\_\_\_  
Total Acreage: \_\_\_\_\_  
Workable Acreage: \_\_\_\_\_  
Existing Farm Type: (for example: corn, orchard, livestock) \_\_\_\_\_  
Dwelling Present?: ☐ Yes ☐ No If yes, year dwelling built \_\_\_\_\_  
Date of Land Purchase: \_\_\_\_\_

Owners Name: \_\_\_\_\_  
Roll Number: \_\_\_\_\_  
Total Acreage: \_\_\_\_\_  
Workable Acreage: \_\_\_\_\_  
Existing Farm Type: (for example: corn, orchard, livestock) \_\_\_\_\_  
Dwelling Present?: ☐ Yes ☐ No If yes, year dwelling built \_\_\_\_\_  
Date of Land Purchase: \_\_\_\_\_

Owners Name: \_\_\_\_\_  
Roll Number: \_\_\_\_\_  
Total Acreage: \_\_\_\_\_  
Workable Acreage: \_\_\_\_\_  
Existing Farm Type: (for example: corn, orchard, livestock) \_\_\_\_\_  
Dwelling Present?: ☐ Yes ☐ No If yes, year dwelling built \_\_\_\_\_  
Date of Land Purchase: \_\_\_\_\_

Owners Name: \_\_\_\_\_  
Roll Number: \_\_\_\_\_  
Total Acreage: \_\_\_\_\_  
Workable Acreage: \_\_\_\_\_  
Existing Farm Type: (for example: corn, orchard, livestock) \_\_\_\_\_  
Dwelling Present?: ☐ Yes ☐ No If yes, year dwelling built \_\_\_\_\_  
Date of Land Purchase: \_\_\_\_\_

Owners Name: \_\_\_\_\_  
Roll Number: \_\_\_\_\_  
Total Acreage: \_\_\_\_\_  
Workable Acreage: \_\_\_\_\_  
Existing Farm Type: (for example: corn, orchard, livestock) \_\_\_\_\_  
Dwelling Present?: ☐ Yes ☐ No If yes, year dwelling built \_\_\_\_\_  
Date of Land Purchase: \_\_\_\_\_

**Note: If additional space is needed please attach a separate sheet.**

**D. All Applications: Previous Use of the Property**

1. Has there been an industrial or commercial use on the subject lands or adjacent lands? ☐ Yes ☒ No ☐ Unknown

If yes, specify the uses (for example: gas station, or petroleum storage):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Is there reason to believe the subject lands may have been contaminated by former uses on the site or adjacent sites? ☐ Yes ☒ No ☐ Unknown

3. Provide the information you used to determine the answers to the above questions:  
knowledge of owner

\_\_\_\_\_  
\_\_\_\_\_

4. If you answered yes to any of the above questions in Section D, a previous use inventory showing all known former uses of the subject lands, or if appropriate, the adjacent lands, is needed. Is the previous use inventory attached? ☐ Yes ☒ No

**E. All Applications: Provincial Policy**

1. Is the requested amendment consistent with the provincial policy statements issued under subsection 3(1) of the *Planning Act*, R.S.O. 1990, c. P. 13? ☒ Yes ☐ No

If no, please explain:

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2. It is owner's responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals, including the Endangered Species Act, 2007. Have the subject lands been screened to ensure that development or site alteration will not have any impact on the habitat for endangered or threatened species further to the provincial policy statement subsection 2.1.7? ☐ Yes ☒ No

If no, please explain:

Residential development within a settlement area

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3. Have the subject lands been screened to ensure that development or site alteration will not have any impact on source water protection? ☐ Yes ☒ No

If no, please explain:

not within a water recharge area

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Note: If in an area of source water Wellhead Protection Area (WHPA) A, B or C please attach relevant information and approved mitigation measures from the Risk Manager Official.

4. All Applications: Are any of the following uses or features on the subject lands or within 500 metres of the subject lands, unless otherwise specified? Please check boxes, if applicable.

**Livestock facility or stockyard (submit MDS Calculation with application)**

☐ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**Wooded area**

☐ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**Municipal Landfill**

☐ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**Sewage treatment plant or waste stabilization plant**

☐ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**Provincially significant wetland (class 1, 2 or 3) or other environmental feature**

☐ On the subject lands or ☒ within 500 meters – distance 50m

**Floodplain** LPRCA regulation line affect a portion of the lot to be severed

☒ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**Rehabilitated mine site**

☐ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**Non-operating mine site within one kilometre**

☐ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**Active mine site within one kilometre**

☐ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**Industrial or commercial use (specify the use(s))**

☐ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**Active railway line**

☐ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**Seasonal wetness of lands**

☐ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**Erosion**

☐ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**Abandoned gas wells**

☐ On the subject lands or ☐ within 500 meters – distance \_\_\_\_\_

**F. All Applications: Servicing and Access**

1. Indicate what services are available or proposed:

**Water Supply**

- ☐ Municipal piped water  
☒ Individual wells  
☐ Communal wells  
☐ Other (describe below)

**Sewage Treatment**

- ☐ Municipal sewers  
☒ Septic tank and tile bed <sup>to be decommissioned</sup> ~~in good working order~~  
☐ Communal system  
☐ Other (describe below)  
New septic system will be required when a new house is built on the lot

**Storm Drainage**

- ☐ Storm sewers  
☒ Open ditches  
☐ Other (describe below)

2. Existing or proposed access to subject lands:

- ☒ Municipal road  
☐ Provincial highway  
☐ Unopened road  
☐ Other (describe below)

Name of road/street:

210 Tetters St. Teeterville

**G. All Applications: Other Information**

1. Does the application involve a local business? ☐ Yes ☒ No

If yes, how many people are employed on the subject lands?

2. Is there any other information that you think may be useful in the review of this application? If so, explain below or attach on a separate page.

#### **H. Supporting Material to be submitted by Applicant**

In order for your application to be considered complete, folded hard copies (number of paper copies as directed by the planner) and an **electronic version (PDF) of the site plan drawings, additional plans, studies and reports** will be required, including but not limited to the following details:

1. Concept/Layout Plan
2. All measurements in metric
3. Existing and proposed easements and right of ways
4. Parking space totals – required and proposed
5. All dimensions of the subject lands
6. Dimensions and setbacks of all buildings and structures
7. Location and setbacks of septic system and well from all existing and proposed lot lines, and all existing and proposed structures
8. Names of adjacent streets
9. Natural features, watercourses and trees

In addition, the following additional plans, studies and reports, including but not limited to, **may** also be required as part of the complete application submission:

- ☐ On-Site Sewage Disposal System Evaluation Form (to verify location and condition)
- ☐ Environmental Impact Study
- ☐ Geotechnical Study / Hydrogeological Review
- ☐ Minimum Distance Separation Schedule
- ☐ Record of Site Condition

Your development approval might also be dependent on Ministry of Environment Conservation and Parks, Ministry of Transportation or other relevant federal or provincial legislation, municipal by-laws or other agency approvals.

**All final plans must include the owner's signature as well as the engineer's signature and seal.**

### I. Transfers, Easements and Postponement of Interest

The owner acknowledges and agrees that if required it is their solicitor's responsibility on behalf of the owner for the registration of all transfer(s) of land to the County, and/or transfer(s) of easement in favour of the County and/or utilities. Also, the owner further acknowledges and agrees that it is their solicitor's responsibility on behalf of the owner for the registration of postponements of any charges in favour of the County.

#### Permission to Enter Subject Lands

Permission is hereby granted to Norfolk County officers, employees or agents, to enter the premises subject to this application for the purposes of making inspections associated with this application, during normal and reasonable working hours.

#### Freedom of Information

For the purposes of the *Municipal Freedom of Information and Protection of Privacy Act*, I authorize and consent to the use by or the disclosure to any person or public body any information that is collected under the authority of the *Planning Act, R.S.O. 1990, c. P. 13* for the purposes of processing this application.

x Greg Deyne  
Owner/Applicant/Agent Signature

Aug 27, 2024  
Date

#### J. Owner's Authorization

If the applicant/agent is not the registered owner of the lands that is the subject of this application, the owner must complete the authorization set out below.

I/We Deyne Farms Ltd. (Greg Deyne) am/are the registered owner(s) of the lands that is the subject of this application.

I/We authorize David Roe, Civic Planning Solutions Inc. to make this application on my/our behalf and to provide any of my/our personal information necessary for the processing of this application. Moreover, this shall be your good and sufficient authorization for so doing.

x Greg Deyne  
Owner

Aug 27, 2024  
Date

I have power to bind the corporation  
Greg Deyne  
Owner

Aug 27, 2024  
Date

**\*Note:** If property is owned by an Ontario Ltd. Corporation, Articles of Incorporation are required to be attached to the application.



**K. Declaration**

I, David Roe (Agent) of Town of Tillsonburg

solemnly declare that:

all of the above statements and the statements contained in all of the exhibits transmitted herewith are true and I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of *The Canada Evidence Act*.

Declared before me at:

Delhi, Ontario

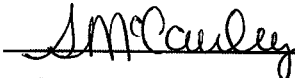


Owner/Applicant/Agent Signature

In Norfolk County

This 29 day of August


A.D., 2024



A Commissioner, etc.

Susan Elaine McCauley, a Commissioner of the  
Province of Ontario  
for John R. Hanselman, Barrister and Solicitor  
Expires May 11, 2025



 Ministry of  
Consumer and  
Commercial Relations

**CERTIFICATE**  
This is to certify that these  
articles are effective on

**MARCH 04**

Ministère de  
la Consommation  
et du Commerce  
**CERTIFICAT**  
Ceci certifie que les présents  
statuts entrent en vigueur le

**MARS, 1998**

Director / Directeur  
Business Corporations Act / Loi sur les sociétés par actions

Ontario Corporation Number  
Numéro de la société en Ontario

**1279046**

Trans Code	Line No	Stat	Comp Type	Method Incorp
<b>A</b>	<b>0</b>	<b>0</b>	<b>A</b>	<b>3</b>
18	20	28	29	30
Share	Notice Req'd	Jurisdiction		
<b>S</b>	<b>N</b>	<b>ONTARIO</b>		
31	32	33	47	

**Form 1  
Business  
Corporations  
Act**

**Formule 1  
Loi sur les  
sociétés par  
actions**

## ARTICLES OF INCORPORATION STATUTS CONSTITUTIFS

1. The name of the corporation is: Dénomination sociale de la société :

[illegible]

2. The address of the registered office is: Adresse du siège social :

## 114 Viola Crescent

(Street & Number or R.R. Number & if Multi-Office Building give Room No.)  
(Rue et numéro ou numéro de la R.R. et, s'il s'agit d'un édifice à bureaux, numéro du bureau)

### South Porcupine, Ontario

(Name of Municipality or Post Office)  
(Nom de la municipalité ou du bureau de poste)

P	0	N	1	K	0
---	---	---	---	---	---

(Postal Code)  
(Code postal)

Town of  
South Porcupine

(Name of Municipality, Geographic Township)  
(Nom de la municipalité, du canton géographique)

in the  
dans le/la

**District of  
Cochrane**  
(County, District, Regional Municipality)  
(Comté, district, municipalité régionale)

3. Number (or minimum and maximum number) of directors is:      Nombre (ou nombres minimal et maximal) d'administrateurs :

Minimum - One  
Maximum - Twenty

4. The first director(s) is/are:

Premier(s) administrateur(s) :

First name, initials and surname  
Prénom, initiales et nom de famille

Residence address, giving Street & No. or R.R. No., Municipality  
and Postal Code

Adresse personnelle, y compris la rue et le numéro, le numéro  
de la R.R. ou le nom de la municipalité et le code postal

Resident  
Canadian  
State  
Yes or No  
Résident  
canadien  
Oui / Non

**Edmund Wayne Deyne**

P.O. Box 68, Teeterville, Ontario  
N0E 1S0

Yes

**Gregory Alfred Deyne**

P.O. Box 7182, PMS,  
South Porcupine, Ontario P0N 1K0

Yes

**SoftDocs® 4**  
Dataprocessing Interface

Document completed  
using *Fest Company*, by  
Do Process Software Ltd.,  
Toronto, Ontario.

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StyleUs Corporation.  
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May 16, 2022  
Revised April 18, 2024

Deyne Farms Ltd.  
c/o Mr. Greg Deyne  
114 Viola Court  
Porcupine, ON  
P0N 1K0

## Wilson Associates

Consulting Hydrogeologists

Dear Mr. Deyne:

Re: Hydrogeological Assessment - Proposed Residential Lots  
Proposed Teeter Street Lots, Teeterville, County of Norfolk

It is proposed to develop residential lots on two parcels of land located on the southeast and east side of Teeter Street in the Community of Teeterville. Parcel 1 is a  $\pm 0.38$ ha property located on the southeast side of Teeter Street, immediately south of the northwards bend of the street, and Parcel 2 is a  $\pm 1.52$ ha parcel that follows the east side of Teeter Street, south of the intersection with Windham Road 5. The attached sketch shows the layout of the sites.

It is proposed to service the lots with individual drilled water wells and individual subsurface sewage disposal systems.

To support the development proposal, a hydrogeological study was conducted involving the following:

- Exploratory test pits were completed within the proposed parcels to collect representative soil samples for percolation rate analyses and to identify shallow groundwater conditions.
- Sewage system development density assessment under current Ministry of the Environment, Conservation and Parks (MECP) Procedure D-5-4 "Technical Guideline For Individual On-Site Sewage Systems : Water Quality Impact Risk Assessment", commonly known as the "nitrate guideline".
- A review of water well records to provide comment regarding aquifer conditions and groundwater supply potential.

At the request of Greg Deyne, the above hydrogeologic investigative requirements were addressed through a test pit and groundwater sampling program conducted March 22, 2022, and a subsequent background hydrogeologic analysis. This report provides a summary of background hydrogeologic information, groundwater availability, upper aquifer water quality, the results of the soils suitability study and comment regarding sewage impact potential.



## **SITE SETTING, GEOLOGY AND HYDROGEOLOGY**

The proposed development parcels are located within the northeast portion of the Community of Teeterville, along the southeast and east sides of Teeter Street. Total frontage along Teeter Street is about 340m, and the maximum depths of the parcels is about 66m. The subject lands are cleared and are in agricultural use. The site exhibits an overall flat relief, with slight slopes to the north and west. Lands to the west, southwest and north are in institutional (school) and residential use. Lands to the south and east are in agricultural use.

An intermittent tributary of Big Creek is mapped along the site's northern property line. Teeter's Pond on Big Creek is situated about 220m to the west of the site.

The site is located within the Norfolk Sand Plain physiographic region of southern Ontario. According to the Ontario Geological Survey Map 2369 "Quaternary Geology of the Simcoe Area", the upper overburden in the vicinity of the site consists of glaciolacustrine shallow water deposits of sand. Local well records indicate that the upper sands are upwards of 15m deep, although the majority of local wells are completed in these sands to a depth of less than about 12m. Although all local reported wells are shallow, the overburden is regionally indicated to be approximately 30m deep, with the lower overburden typically consisting of fine-grained deposits.

The bedrock beneath the site consists of limestone and dolostone of the Dundee Formation and the Detroit River Group.

The majority of local groundwater supplies are obtained from the granular deposits of the upper 5m to 12m of the overburden. The lower overburden typically provides little to no potential for groundwater supply due to its fine-grained character, and the bedrock is less often utilized due to the expense of deep drilling and the potential of obtaining aesthetically poor-quality water.

Shallow groundwater on the site will follow local drainage patterns, with a possibly very slight gradient to the west or northwest.

## **WELL POTENTIAL ANALYSIS**

To establish well yield and basic water quality probabilities, up-to-date MECP records for water wells located within approximately 500 metres of the proposed lots were reviewed. Records for well abandonments, geotechnical or environmental monitoring wells are not included in the summary. The MECP water well record database contains the records for only 11 water wells within the review area, however many wells in the area will be shallow sandpoint wells, which often are unreported to the MECP. The water well records used in the preparation of the review are attached. The following summarizes the reported well record information within the review area.

Number of wells:	11
Drilled Construction:	5
Dug/Bored Construction:	0
Sandpoint Construction:	6

Unknown Construction: 0  
Completed in Overburden: 11 (100%)  
Completed in Bedrock: 0

The following summarizes the reported well performance data.

	Maximum	Minimum	Average
Well Depth (m)	14.0	5.2	9.8
Test Rate (L/min)	363	45	141
Test Period (Hours)	2.5	1	1.5

**Reported Water Quality:**

Fresh: 10 or 91% (no objectionable tastes or odours)  
Sulphurous: none  
Mineralized/Saline: none  
Quality Not Reported: 1 or 9% (common in newer wells where contractors are not reporting quality)  
Dry Well: none

The average reported well within about 500 metres of the proposed lots is of sandpoint or drilled construction, completed near the base of the overburden sand aquifer to a depth of 9.8 metres and yields 141 litres of fresh-quality water per minute over an average period of 1.5 hours. This average yield significantly exceeds the maximum water demand of a normal four bedroom home specified by the MECP (i.e. 18L/min without inline storage). Overall groundwater conditions are favourable for domestic water requirements.

It should be noted that the above summary and analysis is based solely on information contained in the MECP water well record database as reported by drilling contractors and is not subject to quality control, however the overall analytical summary is favourable.

### **SOILS INVESTIGATION**

#### **Test Pits:**

Five exploratory backhoe test pits were excavated within subject lands on March 22, 2022. The test pits were completed depths of 1.5m to 1.8m, the soil profile was logged in each pit and representative soil samples were collected from each identified soil horizon for subsequent classification, analysis and storage. The attached diagram shows the approximate test pit locations. The following table provides a summary of the analytical results for representative soil samples.



**Table 1 : Summary of Soil Analytical Data**

Test Pit/ Sample	Depth (m)	Grain-Size Distribution				"k" (cm/sec)	T-Time (min/cm)
		Clay %	Silt %	Sand %	Gravel %		
TP1 S1	0.5	7	28	65	0	$1 \times 10^{-4}$	15
TP2 S2	1.0	2	8	90	0	$7 \times 10^{-3}$	8
TP4 S3	0.6	0	3	94	3	$3 \times 10^{-2}$	6
TP5 S4	1.0	0	2	93	5	$8 \times 10^{-2}$	5

Note: The above coefficients of permeability ("k" values) and T-times (percolation rates) are estimates based on field observation, laboratory grain-size analysis, experience with similar soils and guidelines of the Ontario Building Code.

In summary, the soil profile at Parcel 1 consisted of fine sand to silty fine sand, which exhibit a percolation rate in the range of 8 to 15 minutes/cm (Unified Soil Classification Types "SM" (Sample 1) and "SP" (Sample 2)). The soil profile across Parcel 2 consisted of sand, which exhibits a percolation rate in the range of 5 to 6 minutes/cm (Unified Soil Classification Type "SP").

The grain-size analysis curves are attached. The following provides a summary of the test pit logs:

**TEST PIT 1 (Parcel 1)**

<u>Depth (m)</u>	<u>Material</u>
0 - 0.2	dark brown sandy TOPSOIL
0.2 - 0.7	red-brown, loose, dry silty SAND with traces of clay (estimated T-time 15 min/cm)
0.7 - 1.5	grey-brown, loose, dry to wet SAND with traces of silt and clay (estimated T-time 8 min/cm)

**TEST PIT 2 (Parcel 1)**

<u>Depth (m)</u>	<u>Material</u>
0 - 0.6	FILL - mixture of topsoil and red-brown silty sand
0.6 - 1.65	grey-brown, loose, dry to wet SAND with traces of silt and clay (estimated T-time 8 min/cm)

**TEST PIT 3 (Parcel 2)**

<u>Depth (m)</u>	<u>Material</u>
0 - 0.3	dark brown sandy TOPSOIL
0.3 - 0.9	red-brown, loose, dry to wet SAND with traces of silt and clay (estimated T-time 6 min/cm)

0.9 - 1.5                      grey-brown, loose, wet SAND with traces of silt and clay (estimated T-time 5 min/cm)

#### **TEST PIT 4 (Parcel 2)**

<u>Depth (m)</u>	<u>Material</u>
0 - 0.3	dark brown sandy TOPSOIL
0.3 - 0.9	red-brown, loose, dry SAND with traces of silt and clay (estimated T-time 6 min/cm)
0.9 - 1.5	grey-brown, loose, dry to wet SAND with traces of silt and clay (estimated T-time 5 min/cm)

#### **TEST PIT 5 (Parcel 2)**

<u>Depth (m)</u>	<u>Material</u>
0 - 0.3	dark brown sandy TOPSOIL
0.3 - 0.6	red-brown, loose, dry SAND with traces of silt and clay (estimated T-time 6 min/cm)
0.6 - 1.8	grey-brown, loose, dry to wet SAND with traces of silt and clay (estimated T-time 5 min/cm)

#### **Shallow Groundwater Conditions:**

Emergent groundwater was observed all test pits, at depths of 0.6m in Test Pit 1, 0.8m in Test Pit 2, 0.7m in Test Pit 3, 0.9m in Test Pit 4 and 1.4m in Test Pit 5. Relatively lower watertable levels in Test Pits 2 and 5 are due to locally higher ground surface elevation.

Shallow groundwater samples were collected by grab technique from Test Pits 1 and 4 on March 22, 2022 for background nitrate content determination. The samples were collected in laboratory-supplied bottles, stored in an ice-packed cooler, and submitted to Bureau Veritas Laboratories under chain of custody for nitrate content determination. The samples contained 31.5mg/L and 24.2mg/L nitrate. It is understood from the proponent that recent agricultural nutrient application was completed on the two parcels, and the indicated elevated nitrate content of shallow groundwater will have resulted from the recent nutrient application. As the land use will change to residential, and agricultural nutrient applications will cease, the nitrate content of shallow groundwater will decline and a background nitrate content of 1mg/L is assumed.

#### **Septic System Design:**

Under the Ontario Building Code, for a Class 4 sewage disposal system to operate effectively, the leaching bed must be located in soil with a percolation rate (T-time) of between 1 and 50 minutes per centimetre and the base of the absorption trenches must be situated at least 0.9m above the high ground water table, bedrock or a soil with a permeability of greater than 50 minutes per centimetre. To achieve a normal, in-ground installation, the high groundwater table, rock or soil with a permeability of greater than 50 min/cm must be situated at least 1.5 to 1.8 metres below grade.



Due to elevated watertable conditions, the bases of tile trenches should be set no lower than 0.3m above current grade over Parcel 1 and the southern half of Parcel 2. Higher ground surface in the northern portion of Parcel 2 will allow the bases of tile trenches to be set at grade to 0.5m below grade. Based on the identified upper soil conditions, a native soil design percolation rate of 15min/cm is recommended for preliminary design purposes on Parcel 1 and 6 minutes per centimetre on Parcel 2.

A standard fill-based sewage disposal system will require a contact area based on a loading rate of 10L/m<sup>2</sup>/day (i.e. 160m<sup>2</sup> for a standard 3-bedroom home with a design sewage flow of 1,600L/day, or 200m<sup>2</sup> for a standard 4-bedroom home with a design sewage flow of 2,000L/day).

It is understood that the County typically requires that a full sewage system reserve area be utilized in lot design. As the lots will each be in excess of 3,800m<sup>2</sup> in area (see below), sufficient area is available for a 160m<sup>2</sup> or 200m<sup>2</sup> primary sewage disposal area, 160m<sup>2</sup> or 200m<sup>2</sup> reserve sewage disposal area. Lot design will need to address setbacks to the house envelope and any on-site and nearby sandpoint wells (30m).

### **SEWAGE SYSTEM IMPACT ASSESSMENT**

Under the current MECP "Technical Guideline For Individual On-Site Sewage Systems : Water Quality Impact Risk Assessment" (Procedure D-5-4, also known as the "nitrate guideline"), each proposed development of five lots or greater utilizing individual on-site sewage systems requires an assessment of groundwater impact potential. The purpose of the assessment is to ensure that the discharge from the individual on-site sewage systems will have a minimal effect on groundwater and the present or potential use of adjacent properties. The assessment involves a three-step process, with the need to advance to the next step dependant on the requirements of the previous step. Where the background nitrate content of shallow groundwater exceeds 10 mg/L, additional development cannot normally be supported.

Per the above discussion (Shallow Watertable Conditions), a background nitrate level of 1mg/L is assumed.

Under Step 1 of the guideline, for developments where the lot size for each private residence within the development is one hectare or larger (with no lots being less than 0.8ha in area), the risk that the limits imposed by the guideline may be exceeded is considered acceptable with no additional hydrogeologic assessment. Step 1 of the guideline is not applicable as the proposed lots will be smaller than 1ha.

Step 2 of the guideline is applicable where groundwater resources can be confidently demonstrated to be hydraulically isolated from potential sewage pathways. As the primary water supply aquifer is the upper sands, groundwater resources are not hydraulically isolated from potential sewage pathways, and Step 2 of the guideline does not apply.

Under Step 3 of the guideline, a mass-balance calculation is used to determine the minimum size of the proposed lots. Under the current MECP guideline only infiltrating precipitation and the volume of water contained in the sewage may be considered as dilutants for the nitrate



contained in septic effluent. To establish the infiltration rate, the percentage of the local water surplus which may infiltrate is calculated using the Rational Method approach. According to the soil evaluation, the soil profile consists of sand (infiltration factor 40%), the overall relief is flat (infiltration factor 30%) and the cover is cleared (infiltration factor 10%), all resulting in an infiltration factor of 80%. According to the 2009 Long Point Region, Kettle Creek and Catfish Creek Integrated Water Budget Final Report, the water surplus for the area is in the range of 400mm per year (Big Creek sub-watershed above Delhi, precipitation 950mm/year, evapotranspiration 550mm/year). As such, the annual infiltration rate will be 320mm (80% of 400mm), representing 34% of average annual precipitation in the sub-watershed.

The following mass-balance formula is used to calculate the maximum density of the proposed development (total area of both parcels = 1.93ha) under the MECP guideline:

$$Q_T C_T = Q_S C_S + Q_P C_P$$

Where:

$Q_T$  = Sum of  $Q_S$  and  $Q_P$

$C_T$  = Nitrate concentration (10mg/L, maximum permitted under the guideline)

$Q_S$  = Volume of sewage (1,000 L/day/lot, per MECP guideline)

$C_S$  = Nitrate content of sewage (40 mg/L)

$Q_P$  = Infiltration (320mm/year x 1.93ha x 10,000L/mm/ha =  $6.18 \times 10^6$  L/yr)

$C_P$  = Nitrate content of shallow groundwater (1mg/L assumed, see above)

Therefore:

$$(Q_S + 6.18 \times 10^6 \text{ L/yr}) \times 10 \text{ mg/L} = (Q_S \times 40 \text{ mg/L}) + (6.18 \times 10^6 \text{ L/yr} \times 1 \text{ mg/L})$$

$$Q_S = 1.85 \times 10^6 \text{ L/year}$$

$$\text{Number of Lots} = 1.85 \times 10^6 \text{ L/yr} \div 1,000 \text{ L/day/lot} \div 365 \text{ days/yr} = 5 \text{ Lots}$$

Based on the MECP-specified daily volume of sewage for the purposes of the Procedure D-5-4 assessment, and an infiltration rate of 320mm/year, the maximum number of lots on the two parcels (1.93ha total) under the MECP guideline is 5 using conventional sewage disposal systems. Minimum lot sizes of 0.386ha will be viable using the above approach ( $1.93\text{ha} \div 5 \text{ lots} = 0.386\text{ha lot minimum}$ ).

Should a smaller lot size be contemplated or required due to available land limitations, the lot(s) will be required to utilize an individual subsurface sewage disposal system equipped with tertiary treatment capable of nitrate reduction. The use of such systems is not contemplated for this purpose (or any other purpose) in the MECP guidelines due to the age of the guidelines (ca. 1996), however nitrate reducing treatment systems are now commonly used in the Province under CAN/BNQ 3680-600 Certified Treatment Technologies for total nitrogen reduction. An N-I rated system will be required due to the size of the smaller lot, and is required to be capable of a nitrate reduction in the order of 50%, or 20mg/L.

The above assessment approach, conducted in accordance with MECP guidelines, does not consider sewage dilution by groundwater flow-through nor does it consider denitrification processes in the subsurface. As such, the assessment will over-estimate the actual degree of



groundwater impact of the proposed lots, this considered a safety factor.

### **CONCLUSIONS AND RECOMMENDATIONS**

1. The average reported well within about 500 metres of the proposed development is of sandpoint or drilled construction, completed near the base of the overburden sand aquifer to a depth of 9.8 metres and yields 141 litres of fresh-quality water per minute over an average period of 1.5 hours. This average yield significantly exceeds the maximum water demand of a normal four bedroom home specified by the MECP (i.e. 18L/min without inline storage). Overall groundwater conditions are favourable for domestic water requirements.
2. Due to elevated watertable conditions, the bases of tile trenches should be set no lower than 0.3m above current grade over Parcel 1 and the southern half of Parcel 2. Higher ground surface in the northern portion of Parcel 2 will allow the bases of tile trenches to be set at grade to 0.5m below grade.
3. Based on the identified upper soil conditions, a native soil design percolation rate of 15min/cm is recommended for preliminary design purposes on Parcel 1 and 6 minutes per centimetre on Parcel 2.
4. A standard fill-based sewage disposal system will require a contact area based on a loading rate of 10L/m<sup>2</sup>/day (i.e. 160m<sup>2</sup> for a standard 3-bedroom home with a design sewage flow of 1,600L/day, or 200m<sup>2</sup> for a standard 4-bedroom home with a design sewage flow of 2,000L/day). Sufficient area is available for a 160m<sup>2</sup> or 200m<sup>2</sup> primary sewage disposal area, 160m<sup>2</sup> or 200m<sup>2</sup> reserve sewage disposal area. Lot design will need to address setbacks to the house envelope and any on-site and nearby sandpoint wells (30m).
5. The nitrate content of shallow groundwater will decline with an end of agricultural nutrient applications with the change of land use to residential.
6. Under MECP Procedure D-5-4, the maximum number of lots on the two parcels (1.93ha total) under the MECP guideline is 5 using conventional sewage disposal systems. Minimum lot sizes of 0.386ha will be viable using the above approach (1.93ha ÷ 5 lots = 0.386ha lot minimum).
7. Should a smaller lot size be contemplated or required due to available land limitations, the lot(s) will be required to utilize an individual subsurface sewage disposal system equipped with tertiary treatment capable of nitrate reduction (i.e. CAN/BNQ 3680-600 Certified Treatment Technologies for total nitrogen reduction).
8. Based on the findings of the preceding analysis, development of the subject lands as residential lots serviced by private sewage disposal systems is considered viable, subject to the conclusions, limitations and recommendations outlined in this report.

Should there be any questions regarding the above information and discussion, please do not hesitate to contact this office.

**IAN D. WILSON ASSOCIATES LIMITED**

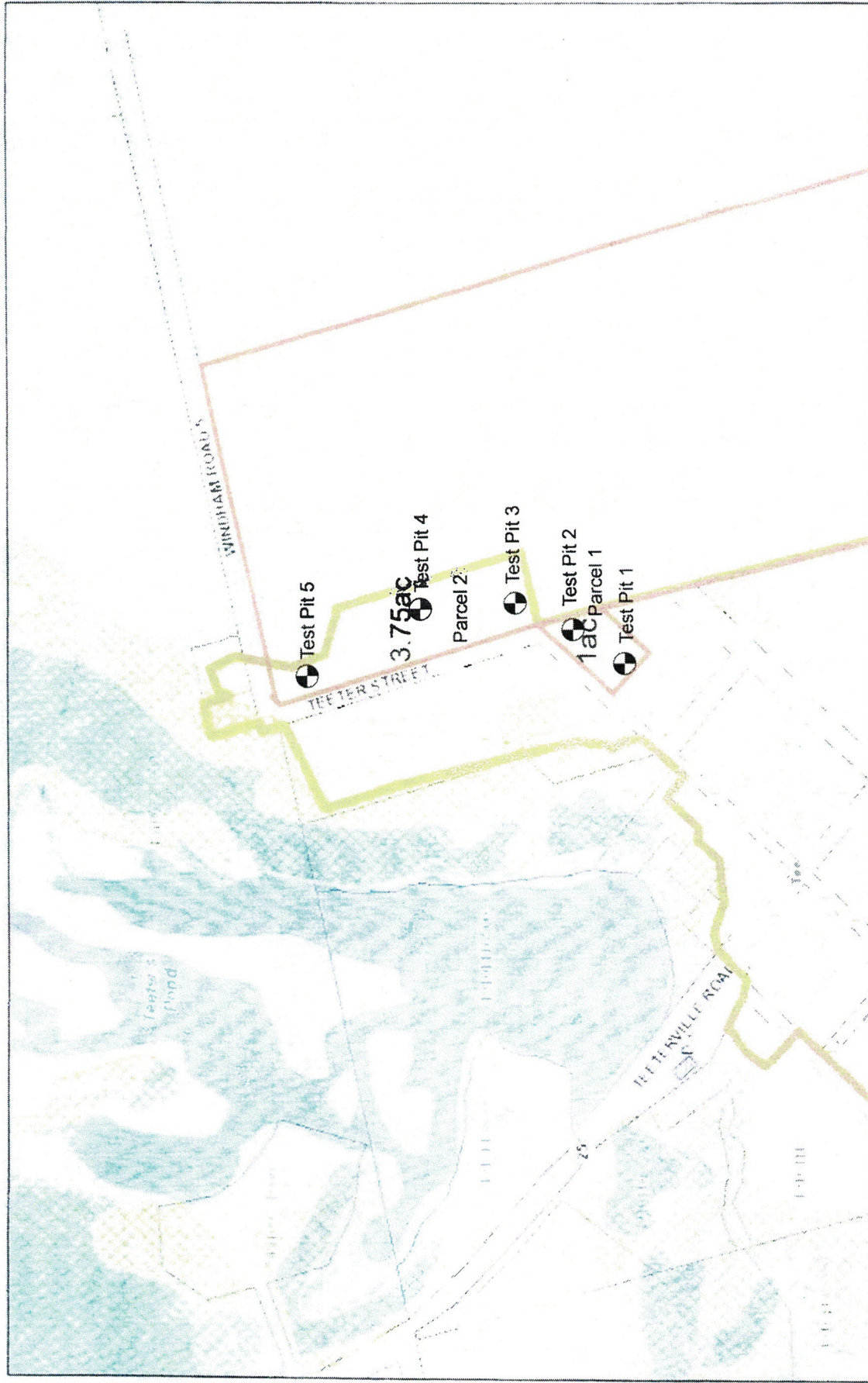


Geoffrey Rether, B.Sc., P.Geol.





# MAP NORFOLK - Community Web Map



9/4/2020, 11:24:23 AM

## Community Boundaries

- Urban Area Boundary
- Hamlet Area Boundary



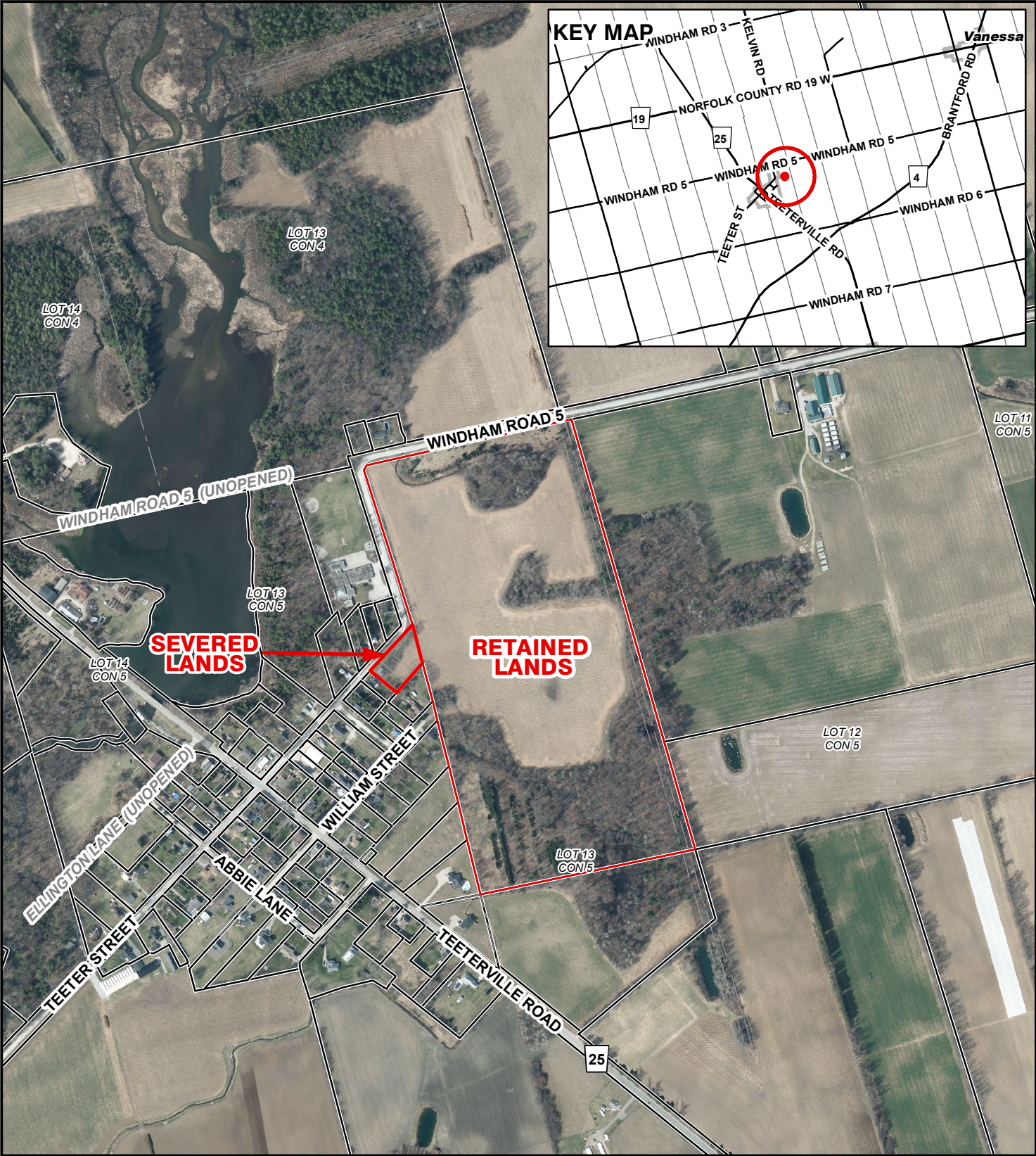
Industrial Influence Area  
SITE LAYOUT AND APPROXIMATE  
TEST PIT LOCATIONS

- Resort Area Boundary
- Site Specific Policy Area
- Special Policy Areas





FIGURE 1 SCALE: as shown

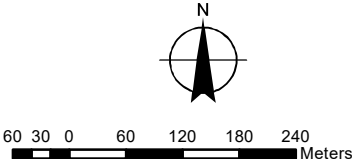




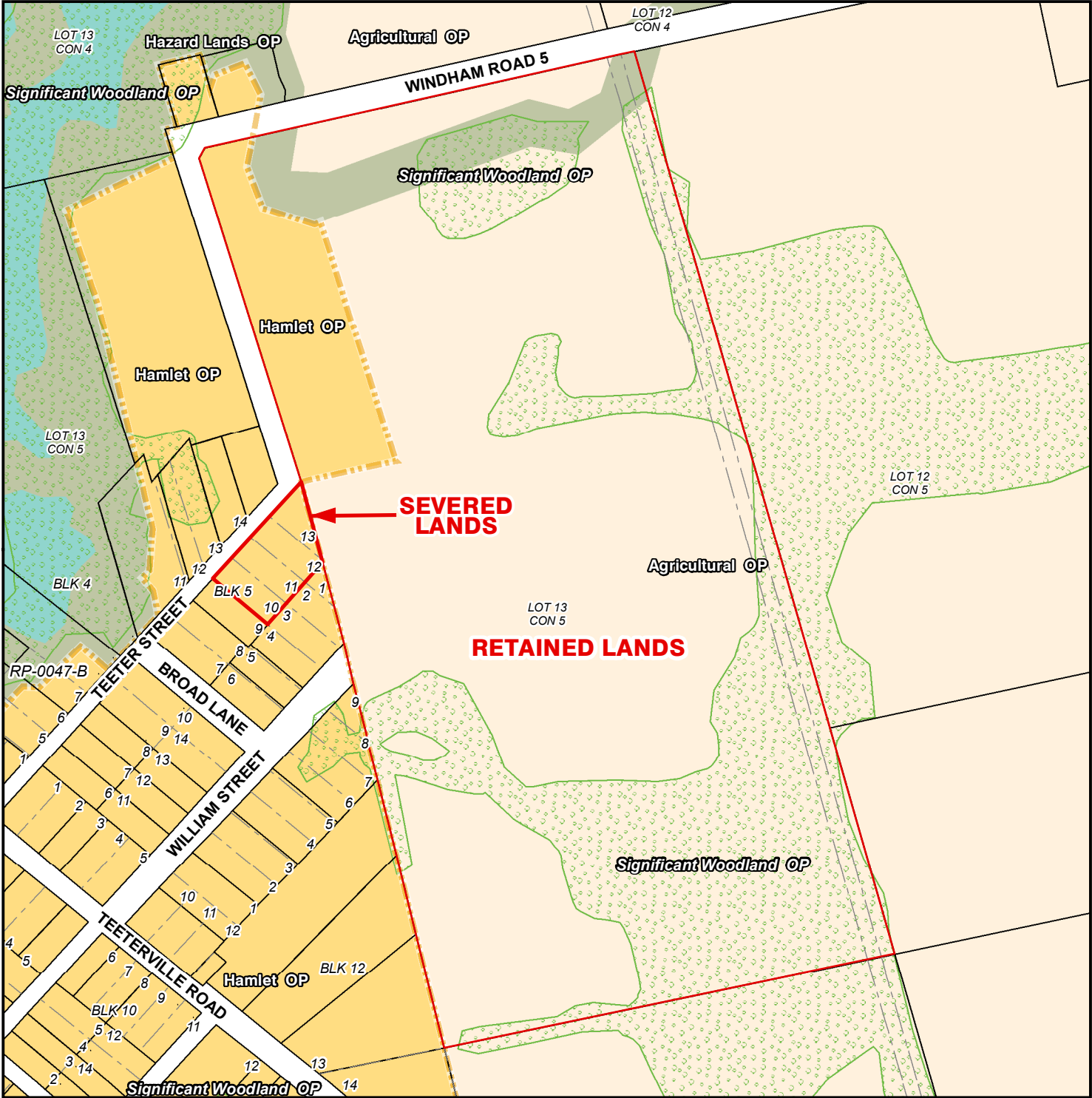
Legend

-  Subject Lands
-  Lands Owned

2020 Air Photo





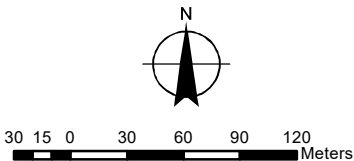


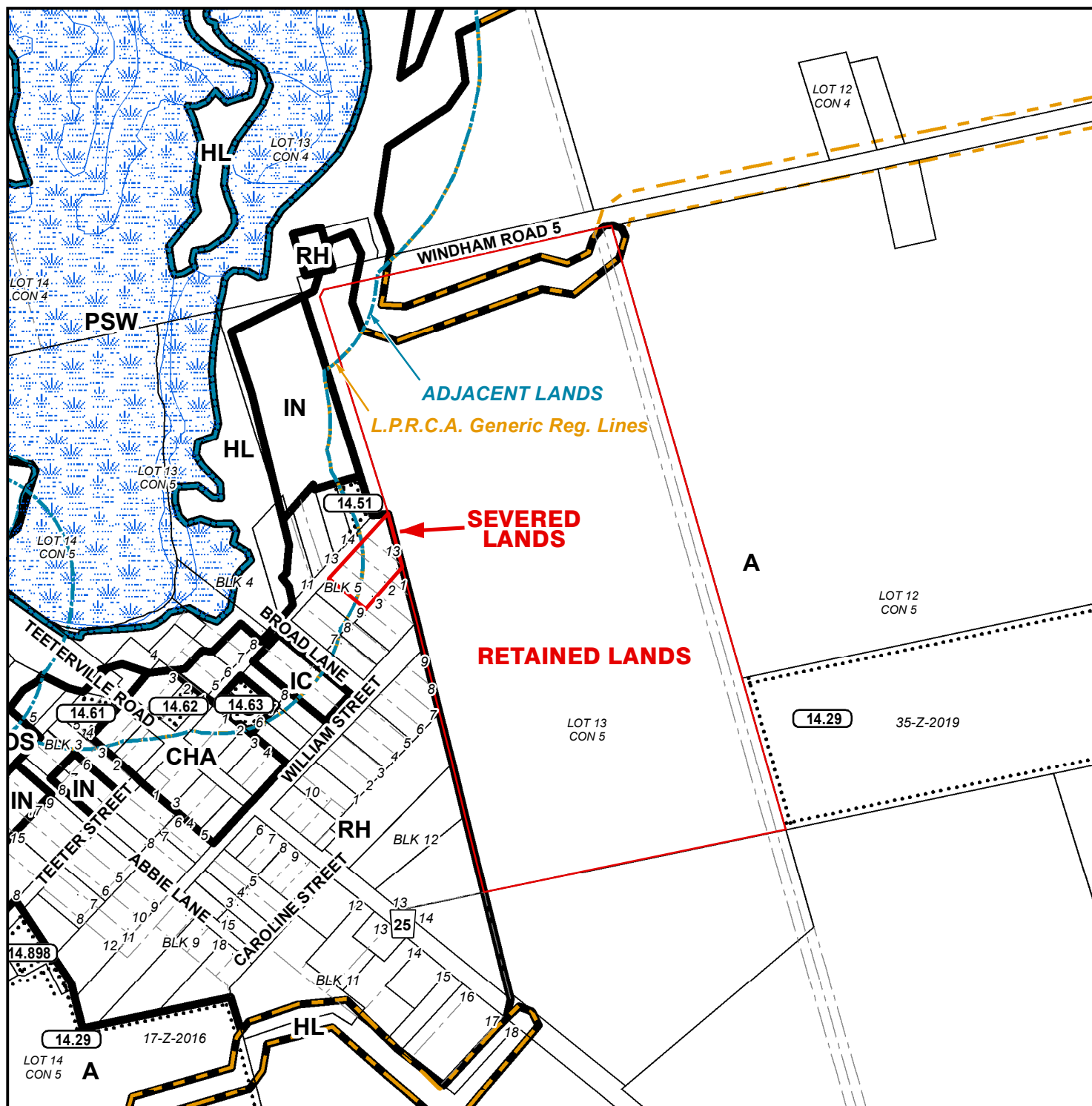
Legend

- Subject Lands
- Lands Owned

- Official Plan Designations
- Agricultural
  - Hazard Lands
  - Provincially Significant Wetland
  - Hamlet
  - Hamlet Area Boundary
  - Significant Woodland

10/30/2024





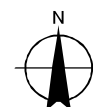
**LEGEND**

- Subject Lands
- Lands Owned
- Adjacent Lands
- Wetland
- LPRCA Generic RegLines

ZONING BY-LAW 1-Z-2014

10/30/2024

- (H) - Holding
- A - Agricultural Zone
- CHA - Hamlet Commercial Zone
- IC - Community Institutional Zone
- RH - Hamlet Residential Zone
- HL - Hazard Land Zone
- IN - Neighbourhood Institutional Zone
- OS - Open Space Zone
- PSW - Provincially Significant Wetland Zone



40 20 0 40 80 120 160 Meters



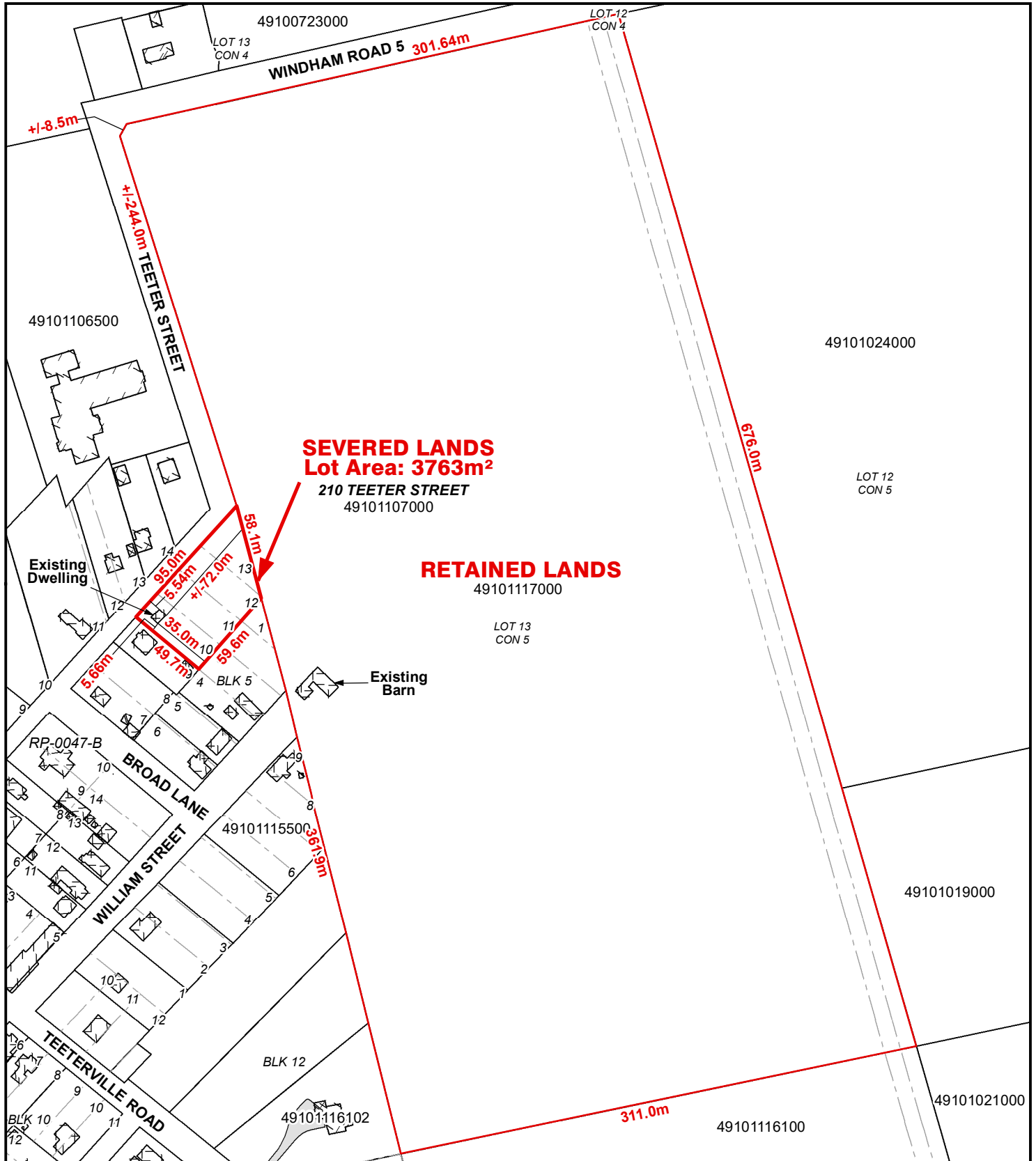
# MAP D

## CONCEPTUAL PLAN

Geographic Township of Windham

BNPL2024312

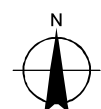
ANPL2024317



### Legend

- Subject Lands
- Lands Owned

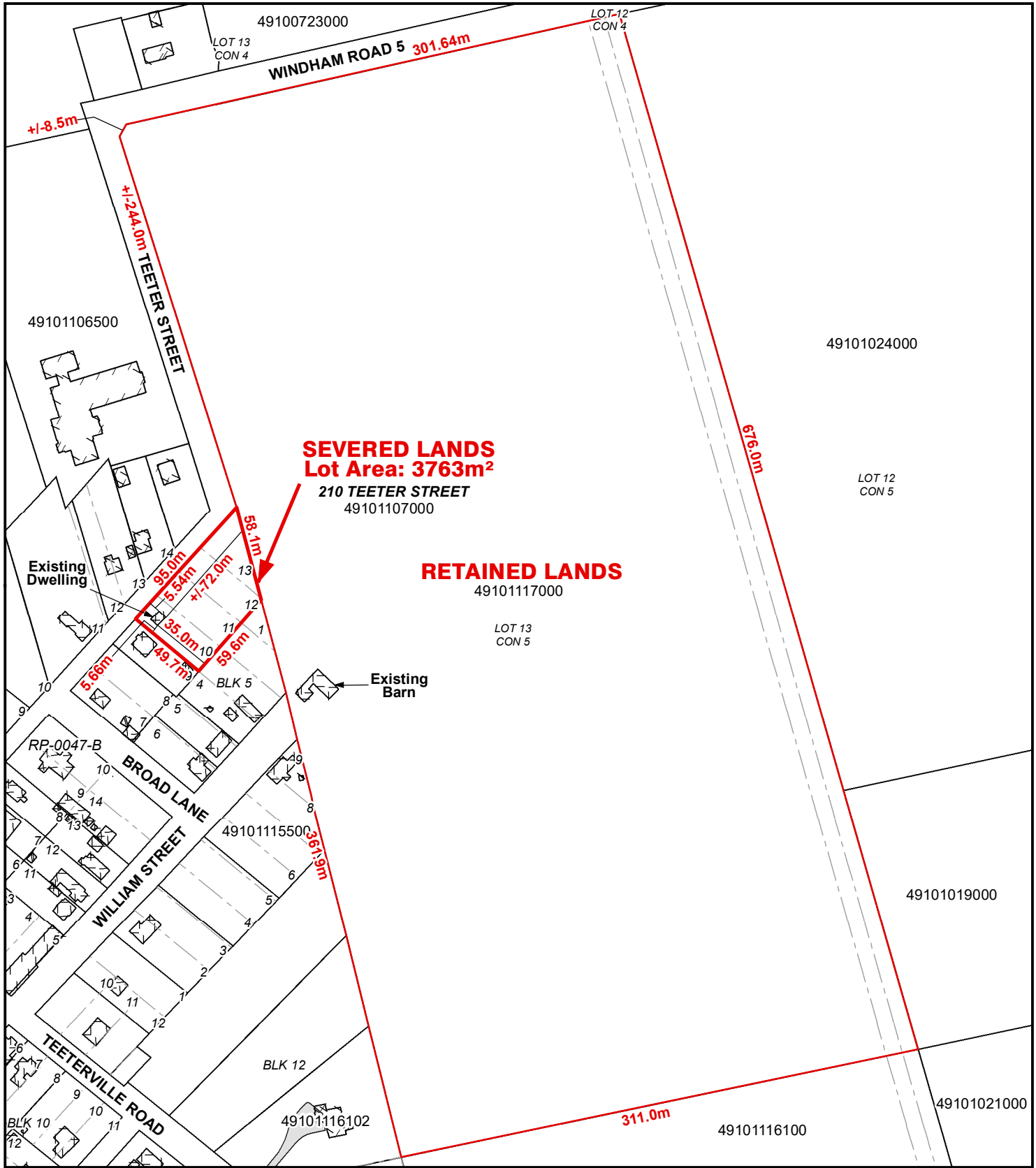
10/30/2024



25 12.5 0 25 50 75 100 Meters

LOCATION OF LANDS AFFECTED  
CONCEPTUAL PLAN  
Geographic Townshp of Windham

BNPL2024312  
ANPL2024317



Legend

- Subject Lands
- Lands Owned

10/30/2024

