

SERVICING REPORT

1919 Estates
168 Kawartha Lakes County Rd 49
Bobcaygeon, ON K0M 1A0

GGG Project No. 21-1-6814

December 2022

Prepared for:

168 Kawartha Lakes County Rd 49
Bobcaygeon, ON K0M 1A0

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1.0 Introduction

The Servicing Study was prepared to satisfy the requirements for the application of the Draft Plan of Subdivision for the proposed development. The site is located at 168 Kawartha Lakes County Rd 49 Bobcaygeon.

1.1. Purpose and Scope

The purpose of this report is to provide details regarding the conditions for servicing the subdivision. This report provides details on the servicing of the subdivision including:

- Water Supply and Sewage Treatment
- Septage Disposal
- Waste Management Services
- Roads and Transportation
- Utilities
 - Natural Gas / Propane
 - Hydro
 - Bell
- Fire Protection
- Municipal Services
 - Health Care
 - School / Education

A Servicing Study was requested by Peterborough County since the development would use some servicing such as private septage disposal and water supplies other than existing municipal services. The Servicing Study follows MOECC Procedure D-5-3 (March 1995). The Study also reviews servicing requirements noted in the Peterborough County and Municipality of Trent Lakes Official Plan and zoning bylaws.

2.0 Existing Conditions

The total property is approximately 48 hectares (119 acres) in land area. However, the initial phase 1 site for development is the southern half of the property with a site area of approximately 21.1 hectares (52 acres). The development site is located to the east of County Road 49 and to the west of Moon Line North, within part of Lot 19, Concession 19 in the Geographic Township of Harvey, in the Municipality of Trent Lakes, County of Peterborough.

The site is designated as a Hamlet on Schedule A-1 to the Official Plan of the Township of Galway-Cavendish and Harvey and is zoned Development (D) on Schedule “A” Map 5 to the Municipality of Trent Lakes By-law No. B2014-070.

3.0 Water Supply

The land uses for the development is for residential only. The overall population density for the development would be hamlet estate lots with a density of about 2.5 people per lot.

The serviced population for the development is expected to be as follows:

Table 3.1: Population Serviced

| Parameter | Planning Value |
|---|----------------|
| Number of Lots | 22 |
| Residential Population (2.5 people/lot ¹) | 55 |
| Development Area: | |
| Residential (ha) | 21.1 |
| Commercial / Other (ha) | 0 |
| Population Density (people/ha) | 2.6 |

¹ typical

4.0 Existing Planning Policy Framework for Servicing Options

4.1. Provincial Policy Statement (PPS)

The Provincial Policy Statement (PPS, 2020) states that municipal sewage and water services are to be utilized where possible. Private communal sewage and water services can be utilized if a Municipality so chooses where municipal services are not available or where established policies exist to ensure the servicing satisfies criteria outlined in Section 1.6.6.3 of the PPS.

The residential development is to be serviced by onsite systems. These systems are not connected to a municipal system and are not communal systems. Therefore, the Municipality is not responsible for ownership as per Section 52 and 53, Ontario Water Recourses Act, R.S.O. 1990, Part VIII, Environmental Protection Act, R.S.O. 1990.

4.2 Procedure D-5-3: Servicing options Statement

A Servicing Options Statement (MOE Procedure D-5-3 (March 1995)) is required for a development where the proposal is to use servicing other than existing municipal services. All possible servicing scenarios including municipal, communal and private servicing were reviewed and onsite services are proposed for this development. The proximity of existing servicing and possible future connections to the existing municipal infrastructure are not expected to be viable for this development. Servicing options are briefly reviewed below with documentation supporting the proposed onsite servicing for the development.

4.3 County of Peterborough Official Plan

The Peterborough County Official Plan requires that non-municipal private servicing be demonstrated to be adequate. The site hydrogeological characteristics and topography is suitable for onsite potable water wells and onsite septic systems. The onsite servicing would meet MOECC and Peterborough County Health Unit requirements.

4.4 Municipality of Trent Lakes Official Plan

The Municipality of Trent Lakes Official Plan allows for onsite private servicing of rural developments. Trent Lakes does not allow for private communal servicing for residential developments.

4.5 Legal and Planning Issues

The property is designated as Hamlet on Schedule A-1 to the Official Plan of the Township of Galway-Cavendish and Harvey and zoned Development (D) on Schedule "A" Map 5 to the Municipality of Trent Lakes By-law No. B2014-070.

5.0 Environmental Suitability

5.1 Geotechnical Investigation

The topography of the site is generally flat with a slight slope from south to north. Most of the development area has been cleared of trees, with a small area on the western edge to be cleared of trees.

A geotechnical investigation completed included test pits excavated across the site. The soil physiography for this site is defined as till moraines, with limestone plains exposed at the northeast corner of the site. The bedrock consists of limestone of the Trenton Group. The predominant soil type is gravelly loam till, very stoney.

5.2 Groundwater Supply

Four test wells were completed for the development. All four (4) test wells were determined to produce suitable water quality. Water well records from the vicinity of the site confirm the shallow nature of overburden materials and the varying depths of wells (varying between 6 and 24 m) with anticipated wells yields of 9 to 45 Lpm.

6.0 Servicing Evaluation

6.1 Communal Water Supply and Sewage Treatment Services

Communal water supply and sanitary sewage services are not the selected servicing solution. The Town of Bobcaygeon's water distribution system is provided by a conventional drinking water treatment system supplying water from Big Bob River to 3,000 residents to the southwest of County Road 49 (about 2.5 km from the subdivision site). The system is owned by the City of Kawartha Lakes and operated by the Ontario Clean Water Agency (OCWA). The Municipality of Trent Lakes has two communal well systems supplying water to the Buckhorn Lake Estates Subdivision and the Alpine Lake & Pirates Glen Subdivisions only. The systems are also operated by OCWA. The closest existing municipal sanitary services is also approximately 2.5 km from the site servicing the Town of Bobcaygeon. Extension of the

water supply and sanitary sewage systems to the development area is not expected to occur for the next 20 years' and beyond.

Onsite well water supply and septic sanitary sewage treatment services are the preferred services for this development site.

6.2 Onsite Potable Well Water Supply

A hydrogeological assessment was completed for the development site. A test well plan was developed according to test well requirements in the MOEE "Technical Guideline for Private Wells: Water Supply Assessment" (MOEE (1996)). The assessment included construction and testing of four (4) test wells located across the site to demonstrate the suitability of groundwater resources for onsite potable well water servicing. The four test wells demonstrated the ability to supply 13.6 L/min of water flow without affecting the capacity of adjacent wells based on six (6) hour pump tests and all showed rapid well recovery.

Well water samples were also collected and analyzed. The well water samples met all health related parameters indicating a potable water supply. Water samples indicated elevated levels of aesthetic parameters (primarily hardness and iron), however, these were typically at levels which are considered reasonably treatable using conventional water treatment units including:

- Water softeners to reduce hardness, iron and manganese.
- Greensand filters are an effective way to removing iron and manganese as well as Total Dissolve Solids (TDS).

The onsite potable well systems for the 22 lots would typically consist of the following:

- A well system meeting MOE Regulation 903 and the recommendations of the Hydrogeological report.
- Water treatment, that may be required to reduce aesthetic and operation guidelines parameters to acceptable levels.

Bulk water cisterns are not expected to be required for water storage.

6.3 Onsite Septic Systems

The on-site soils are suitable for conventional septic systems for both gravity or pressure discharge systems depending on the size of septic systems. A preliminary sewage system size has been determined to be 2000 L/day. The preliminary layouts of the proposed septic systems are included in Appendix A. Based on the soil conditions, partially raised septic systems could be required. Septic design should be assessed on a lot-by-lot basis with construction in conformance with regulatory design criteria. System approvals would be secured during the lot development stage through the County of Peterborough.

6.4 Septage Disposal

Septage disposal from approved onsite septic systems would be required approximately every 3 - 5 years. Septage disposal would be the responsibility of the individual land owner. Septage disposal would be completed by a licensed septage hauler to approved septage receiving locations in Peterborough County.

The septage characteristics from the development are expected to be as follows:

Table 6.1: Septage Characteristics

| Parameter | Planning Value |
|--|----------------|
| Number of Lots | 22 |
| Pumping Frequency (yrs) | 3 |
| Septage Volume (m ³ /yr) ¹ | 20.3 |
| # off truckloads (#/yr) ² | 4 |
| Septage Quality: | |
| TSS (mg/L) | 15,000 |
| BOD ₅ (mg/L) | 7,000 |
| Cost (\$/pump-out per lot) | \$350 |

¹ based on 2,800 L/pump-out

² based on 5.6 m³ tanker truck

6.5 Waste Management Services

Waste management in Municipality of Trent Lakes would be provided at the following approved transfer stations:

- Buckhorn Transfer Station (37 Dump Road, Buckhorn)
- Cavendish Transfer Station (3020 County Road 507, Cavendish)
- Bobcaygeon Transfer Station (42 Peterborough County Road 36, Bobcaygeon)
- Crystal Lake Transfer Station (1018 Crystal Lake Road, Crystal Lake)

Transfer stations would provide sanitary waste disposal and recycling services, including electronic recycling, green bin composting, household hazardous waste collection, and blue box product recycling. The transfer stations are open 3 – 4 days per week.

Curbside waste collection services are not provided for the estate lot development. Waste collection is only provided inside of the Bobcaygeon municipal settlement area. Waste disposal at the approved transfer stations is the responsibility of the individual lot owners. The subdivision landowners could contract with private haulers for waste disposal services.

Waste ID Cards would be issued to landowners for access to disposal sites. The disposal allotment per trip is 2 cubic yards of waste. Additional fees for extra bags and other types of wastes would apply.

6.6. Utilities

6.6.1. Hydro Services

Hydro services would be provided by Hydro One. There is an existing 28 KVA overhead primary line at the site entrance on 168 County Road 49. Hydro One will provide servicing design for the final design stage. Concrete pad mount transformers would be provided for the subdivision to extend the 28 KVA primary line into the development site. Hydro One would provide a power line layout with secondary line lot connections and costing for the new development during detailed design.

6.6.2. Bell Communications Services

Bell services will be provided for the new development. Details to be provided by Bell for telephone and high-speed internet services during detailed design.

6.6.3. Natural Gas / Propane

Enbridge Gas Services supply natural gas to different areas of Ontario depending on the location. Enbridge Gas Services has the rights to provide natural gas to this location but confirmed that there is no gas main in this area. Enbridge does have tentative plans to extend services from the Peterborough area up to Bobcaygeon, but it is still in the planning phase and may not occur until 2025. No connection information given for areas North of Highway 36.

Companies that supply propane gas in the area are Superior Propane, Kelly's Fuel, Superior Propane, Endicott Fuel & Propane Limited, Upper Canada Fuel & Burner and Deeth & White / Fitzgerald Fuels. Kelly's Fuel confirmed they would deliver propane to the area.

6.7. Fire Protection

Fire protection will be provided by dry hydrants. These will be located on either side of the development in storm water ponds. The individual ponds will serve the east and west sides of the development respectively.

6.8 Public Education

The closest public school to the site is the Bobcaygeon Public School (30 Balaclava St.) (Trillium Lakelands District School Board) located in Bobcaygeon. Student Transportation Services of Ontario (STSCO) provides busing service for the area and provides bus services for this area.

6.9 Health Care

Regional hospitals in the area include the Ross Memorial Hospital (10 Angeline St. N) in Lindsay and the Peterborough Regional Health Centre (PRHC) (1 Hospital Dr) in Peterborough.

Ambulance services for the area are provided by Kawartha Lakes Emergency Management Services (EMS).

7.0 CONCLUSIONS AND RECOMMENDATIONS

This Servicing Study was prepared to satisfy the requirements for the application of the Draft Plan of Subdivision for the proposed Phase 1 of the Jeffery Homes subdivision development. The conclusions were as follows:

- Municipal services are not an option for water supply and sanitary sewage collection and treatment for the estate lot development.
- Onsite individual potable water wells and septic systems are recommended to service each site. The systems would be privately owned.
- Curbside waste collection would be provided by the Municipality of Trent Lakes up to their current bag limits.
- Utilities would be provided by Hydro One (electrical), Bell (communications), with propane provided privately by one of the several propane suppliers in the area.

8.0 LIST OF REFERENCES

The following are a list of references for this report:

1. Greer Galloway Group (2017). "Topographic Survey". Prepared by the Greer Galloway Group, Peterborough, ON. January 2017, Peterborough, Ontario, Canada.
2. Jp2g Consultants Inc. (2019 re issue October 2021). "Hydrogeological Investigation and Terrain Analysis Proposed Anderson Subdivision". Prepared by JP2G Consultants Inc., Ottawa, Ontario, Canada.
3. '1919 Estates Geotechnical Report' by Terraspec Engineering Inc. of Peterborough, Ontario dated December 2021.
4. MOECC. (1995). "Servicing Options Statement" TORONTO, ONTARIO, CANADA: ONTARIO MINISTRY of the ENVIRONMENT and ENERGY. Retrieved from <https://www.ontario.ca/page/d-5-4-individual-site-sewage-systems-water-quality-impact-risk-assessment>
5. MOECC. (1996). "Technical Guideline for Private Wells" Water Supply Assessment. TORONTO, ONTARIO, CANADA: MINISTRY of the ENVIRONMENT and ENERGY. Retrieved from <https://www.ontario.ca/page/d-5-5-private-wells-water-supply-assessment#section-4>
6. MOECC. (1996). "Planning for Sewage and Water Services" Toronto, Ontario, Canada. Retrieved from <https://www.ontario.ca/page/d-5-planning-sewage-and-water-services#section-3>

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APPENDIX A – FIGURES

- Figure A-1 - Site Location Plan
- Figure A-2 - Aerial Photo of Site

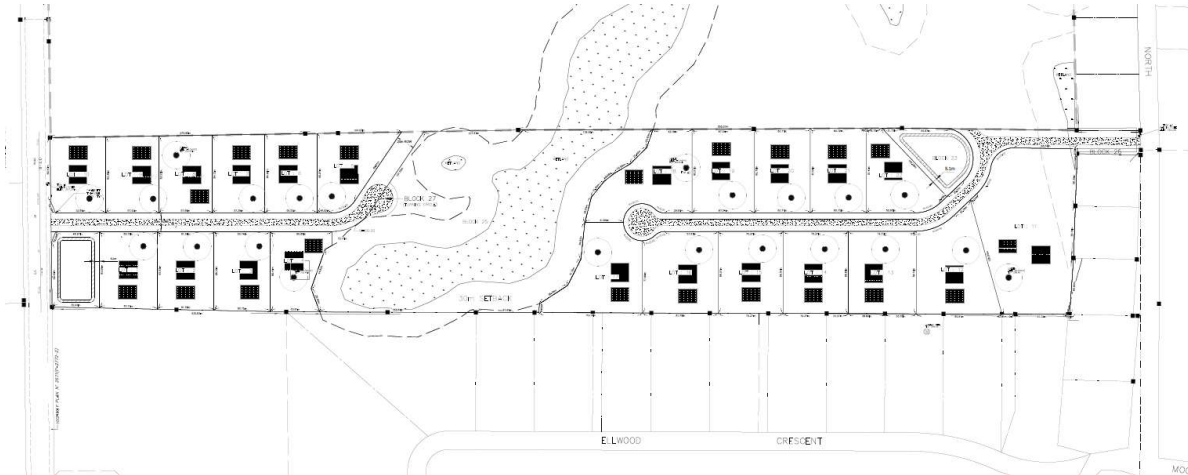


Figure A-1. Site Location Plan

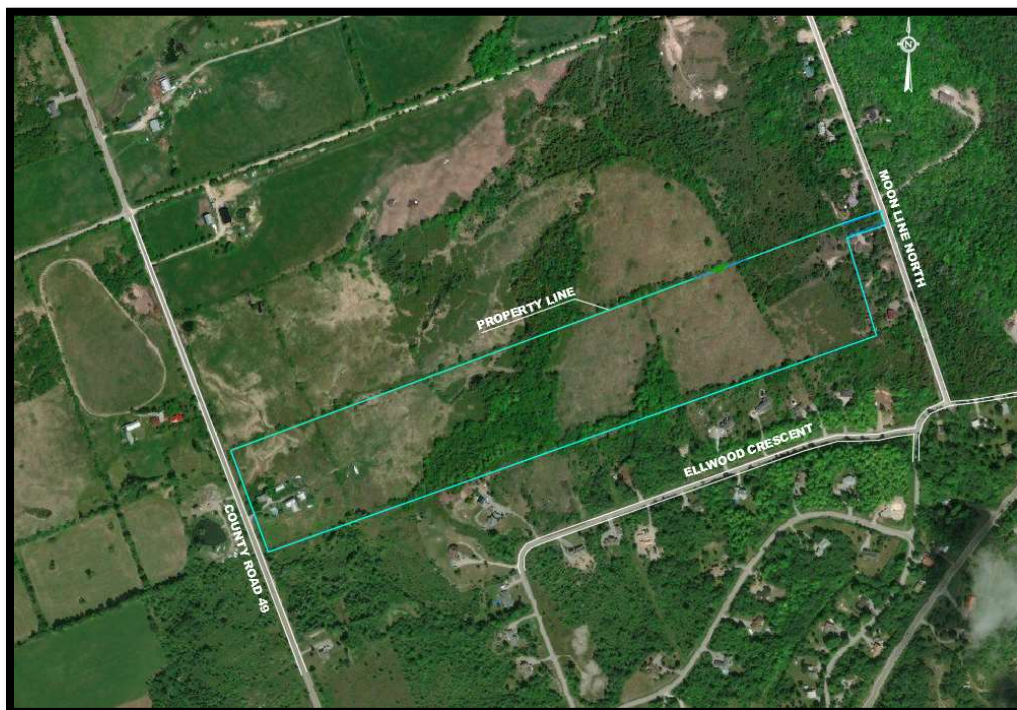


Figure A-2. Aerial View of the Project Site (2015)
Image Source: Toronto Maps v2