

Functional Servicing Report

Proposed Residential Development

**Rural Condominium Subdivision
Heritage Line
Part of Lots 13 and 14
Concession 6**

D.M. Wills Project No. 21-10985



D.M. Wills Associates Limited

Partners in Engineering, Planning and
Environmental Services
Peterborough

June 2022

Prepared for:

**Alina Stewart and Shawn Elmhirst
2564669 Ontario Inc. /
520039 Ontario Limited**

Summary of Revisions

Revision No.	Revision Title	Date of Release	Summary of Revisions
0	ZBA	September 2021	First Submission
1	ZBA	June 2022	Second Submission

This report has been formatted considering the requirements of the Accessibility for Ontarians with Disabilities Act.

Table of Contents

1.0	Introduction	1
1.1	Site Location / Study Area	1
2.0	Site Grading and Servicing.....	3
2.1	Site Grading.....	3
2.2	Sanitary Servicing.....	3
2.3	Storm Servicing.....	4
2.4	Water Servicing	4
2.5	Utility Servicing.....	4
3.0	Conclusion.....	4

List of Figures

Figure 1 – Site Location Map.....	2
-----------------------------------	---

List of Appendices

Appendix A – Draft Plan	
Appendix B – Preliminary Servicing and Grading Plan	
Appendix C – Water Capacity Analysis	
Appendix D – Correspondence	

1.0 Introduction

D.M. Wills Associates Limited (Wills) has been retained by 2564669 Ontario Inc. / 520039 Ontario Limited to prepare a Functioning Servicing Report (FSR) for the property located at Heritage Line, Part of Lots 13 and 14, Concession 6 in the Township of Otonabee-South Monaghan. The Site is located north of 5th Street, south of Edwards Drive, on the east side of Heritage Line. The proposed development is a rural subdivision with 16 single detached houses. The purpose of this report is to provide sufficient information to establish that the proposed development is feasible. The FSR will provide guidance for future detailed design of sanitary (septic), domestic water, stormwater and utility servicing of the Site.

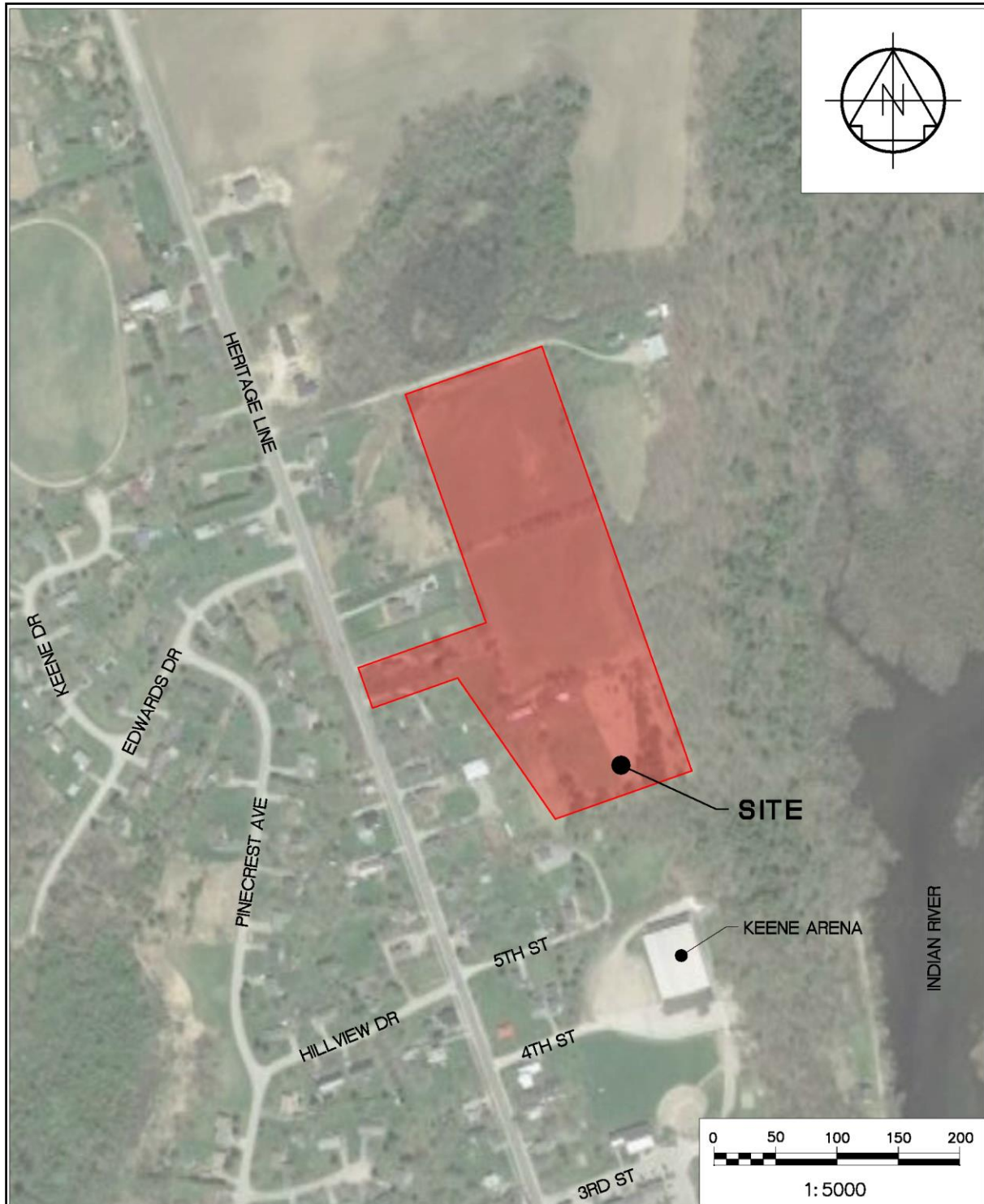
1.1 Site Location / Study Area

The Site is legally defined as Part of Lots 13 and 14, Concession 6, Geographic Township of Otonabee, now in the Township of Otonabee-South Monaghan, County of Peterborough. The surrounding land use is low-density residential to the west, open space to the south, general commercial to the north and the Indian River and wooded Environmental Protection zones to the east (see Figure 1 – **Site Location Map**).

The Site has an existing barn and stable. The 5.63 ha Site is currently zoned for future development with unevaluated wetlands located outside of the legal boundary to the north-west and south-east limits of the Site.

A Draft Plan prepared by Wills defines 16 new single detached houses (**Appendix A – Draft Plan**). A private common element condominium entrance is proposed from Heritage Line to provide access to all the properties.

Figure 1 – Site Location Map



2.0 Site Grading and Servicing

2.1 Site Grading

A topographic survey of the existing Site contours was provided by Elliott and Parr, dated April 29, 2021. There is approximately 18 m of elevation change down to the south-east wetland and approximately 6 m of elevation change toward the existing wetland to the north-west of the Site.

The design relies on a proposed urban roadway within the common element and includes a 2-lane paved roadway, asphalt walking path and infiltration ditches. The grading within the common element will collect drainage and direct it towards the north and south cul-de-sacs. The cul-de-sacs will drain through easements along lot lines and ultimately outlet toward the existing wetlands (for more information regarding storm water management refer to the stand-alone **Preliminary Storm Water Management Report** prepared by Wills, dated June 2022). Proposed grading outside the common element will make use of existing topography wherever possible.

Lot grading will follow the existing topography of the Site. Once building footprints have been established, detailed lot grading including side yard and apron swales will be detailed to direct water away from the dwelling unit and toward the infiltration basins and wetland areas. Refer to **Appendix B – Preliminary Servicing and Grading Plan**.

2.2 Sanitary Servicing

There is no existing sanitary sewer infrastructure located in the Village of Keene. The existing soil conditions are capable of supporting private septic systems for each house (refer to the **Hydrogeological Study** prepared by Wills, dated June 2022).

Each septic system will be sized for the individual dwelling unit and will be comprised of a septic tank and a primary tile field. The septic tank provides the first level of sewage treatment by separating the solids and liquids as well as providing space for the solids to break down. The primary tile field provides the second level of treatment by way of filtration. Liquids exiting the septic tank enter the tile field; the wastewater then percolates into the existing soils or granular structure. Refer to **Appendix B – Preliminary Servicing and Grading Plan**.

2.3 Storm Servicing

There is no existing storm sewer outlet for the Site. Storm servicing will be accommodated through swales and ditches conveying rainfall to the existing wetlands. A 450 mm diameter driveway culvert will be required to access each lot. Refer to the **Preliminary Storm Water Management Report** prepared by Wills, dated June 2022.

2.4 Water Servicing

The existing 150 mm diameter municipal watermain, serviced from the Keene Heights Drinking Water System, terminates at the intersection of Edwards Drive and Heritage Line approximately 125 m north of the Site entrance. An external watermain extension along the west side of Heritage Line will be required to service the Site. The proposed watermain will extend within the common element road to service all of the proposed lots within the Site. Wills has reviewed the available Annual Water Reports (dated 2009-2021) for the Keene Heights Drinking Water System and confirmed there is available capacity to support the proposed development. (Refer to **Appendix C – Water Capacity Analysis**).

2.5 Utility Servicing

Currently hydro is available via overhead aerial cable located on the east side of Heritage Line at the Site entrance. The adequacy of the overhead hydro will be determined by an electrical consultant during the detailed design stage. (Refer to **Appendix D – Correspondence** for plans from Hydro One).

Currently telecommunications are readily available as buried fibre on the east side of Heritage Line at the Site Entrance. (Refer to **Appendix D – Correspondence** for plans from Nexicom).

Currently gas is readily available and located on the east side of Heritage Line at the Site entrance. (Refer to **Appendix D – Correspondence** for plans from Enbridge).

3.0 Conclusion

Servicing for the proposed development is feasible.

1. Stormwater runoff will be accommodated by a system of infiltration ditches and swales that divert water to ultimately outlet into the existing wetlands.
2. Sanitary servicing will be accommodated by individual septic systems (treatment, tanks and tile fields).
3. Domestic water servicing will be provided by extending the existing municipal watermain infrastructure from the Heritage Line and Edwards Drive intersection.

4. Utilities to service the development are readily available within the Heritage Line right-of-way.

If you require any further information, or have any questions, please do not hesitate to contact the undersigned.

Respectfully submitted,



Joseph D. Fleming, C.E.T.
Site Development Group Leader

JDF/MB/af



Mitch Bell
Municipal Project Designer

Statement of Limitations

This report has been prepared by D.M. Wills Associates Limited on behalf of 2564669 Ontario Inc. / 520039 Ontario Limited to address the requirements of the Township of Otonabee-South Monaghan.

The conclusions and recommendations in this report are based on available background documentation and discussions with applicable agencies at the time of preparation.

The report is intended to determine the feasibility of the proposed development with respect to sanitary, water, stormwater and utility servicing of the subject lands. The design information provided in this report is preliminary in nature and should not be used for construction purposes.

Any use that a third party makes of this report other than a functional servicing report for the proposed development is the responsibility of such third parties. D.M. Wills Associates Limited accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or action taken based on using this report for purposes other than a functional servicing report for the subject property located on Heritage Line.

Appendix A

Draft Plan



Appendix B

Preliminary Servicing and Grading Plan



Appendix C

Water Capacity Analysis



Appendix D

Correspondence

