



Servicing Options Statement Proposed Lot Development Tracy Road, ON

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Servicing Options Statement
Proposed Lot Development
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1. Introduction

EXP Services Inc. (EXP) was retained by Split Crow Partners (“the Client”) to complete a hydrogeological assessment for a proposed subdivision lot development at the property located immediately north adjacent to Deer Foot Trail, east of Monument Road and west adjacent to Lake Mindemoya in the Township of Carnarvan, Ontario; hereinafter referred to as the ‘Site.’ The servicing study is required to address requirements from the Manitoulin Planning Board.

This report provides the results of a servicing options study for the Site.

2. Background

The property is approximately 25 hectares (62 acres) and consists of agricultural areas in the south and generally forested areas in the north. The proposed subdivision is to include thirty-nine (39) lots, with sizes ranging from 1.2 to 3.9 acres (0.5 to 1.6 ha), all of which are adjacent to Lake Mindemoya. The Site Plan for the proposed lots is shown in **Drawing 1**, while proposed lot sizes are shown in **Drawing 3**.

A servicing options study is provided in order to identify the preferred options for water and sanitary services at the Site. This study will address the relevant sections of the provincial 2020 Provincial Policy Statement (PPS) under the Planning Act. Specifically, Section 1.6.6 of the PPS provides direction for the planning of sewage, water and stormwater services:

“...where municipal sewage services and municipal water services are not available, planned or feasible, planning authorities have the ability to consider the use of the servicing options set out through policies 1.6.6.3, 1.6.6.4, and 1.6.6.5 provided that the specified conditions are met.”

3. Scope of Work

The servicing options study addressed the following:

- Evaluation of proximity of full municipal or communal services to the Site, and potential for future connection to these services;
- Assessment of the environmental suitability of the proposed services for the Site;
- Evaluation of the relative potential and merit of each of the servicing options;
- Documentation of the process and rationale that led to the determination of the preferred servicing options; and,
- Documentation of consultations with any affected parties.

4. Site Description

The Site is approximately 62 acres (25 hectares) in size and is currently occupied by agricultural fields to the south and forested areas to the north. Lake Mindemoya is located east and north adjacent to the Site, with undeveloped areas to the west and sparse residential developments to the south. The Site is generally underlain by sand and silt overburden to moderate depth in south areas of the site, while north areas of the Site consisted of a thin layer of sand and silt overburden, atop dolostone/limestone bedrock. Bedrock outcrops were noted in north areas of the Site, as well as in east areas along the

shoreline. No water supply wells or septic systems are currently on the Site, while water supplies on nearby properties consist of both surface water and bedrock wells. Sewage treatment appears to be individual septic systems.

5. Municipal Servicing

The Site is in the boundaries of the Township of Carnarvan, in the Municipality of Central Manitoulin. Based on a review of online documents and the extensive presence of residential well records in areas near to the Site, there does not appear to be municipal services or related infrastructure for sewer and water. A review of online documents showed the presence of municipal services on M'Chigeeng First Nation (approximately 11 km northeast), while extensive municipal water *and* sewer services appear present in Little Current, ON, which is more than 35 km northeast. After email correspondence with Ms. Theresa Carlisle of the Manitoulin Planning Board, the extension of services to the Site from the Municipality of Central Manitoulin (or any other nearby municipality) is not anticipated.

Overall, based on the rural location, sparse population and lack of servicing near the Site, municipal water and wastewater servicing is not considered to be a viable option for the Site.

6. Communal Servicing Options

As outlined via email conversations with Ms. Theresa Carlisle of the Manitoulin Planning Board on October 10, 2023, Policy E.2.2 of the Manitoulin Planning Board's Official Plan States:

'4. Communal servicing systems to service new developments will be discouraged.'

In addition, the location, arrangement of lots and capacity of the wastewater system would impose excessive costs associated with construction and permitting of communal wastewater systems,

Overall, although communal water and wastewater services are a possible option, based on the Official Plan, the arrangement and size of the proposed lots, as well as the extensive costs associated with system implementation and expected permitting suggests communal servicing is not a viable option for the Site.

7. Individual Servicing Options

Water and wastewater services for the Site may be provided by individual systems for each of the lots. For the purposes of this servicing options assessment, smaller systems that service five or less houses will be considered to have individual (as opposed to communal) water and wastewater systems. Presently, the lots for the proposed subdivision are not serviced for water supply and wastewater treatment.

7.1 Individual Water Supply

The proposed subdivision is to be developed with thirty-nine (39) residential lots, with all lots located adjacent to Lake Mindemoya. Due to the location of the Site and the apparent water supplies in adjacent areas, it is expected that the lots will use surface water as a water supply. An assessment of surface water as a potable water source is provided here.

Surface water supplies are often more vulnerable to climate variations, such as drought and winter freezing. Surface water supply is also generally more vulnerable to immediate impacts from contaminants, such as septic field discharges, petroleum spills and stormwater drainage, while also generally being more vulnerable to microbial contaminants.

During the sampling event, surface water samples were collected from eight (8) surface water locations. Overall, water quality results showed exceedances for E. Coli and Total Coliform at several locations, while also showing exceedances for hardness and aluminum (PWQO exceedance). However, water quality did not show any elevated levels for nutrient runoff, including phosphorus, nitrate and ammonia. As such, surface water quality in Lake Mindemoya was relatively good and could be conditioned/treated with standard water treatment systems to ensure water quality meets ODWS/ODWO drinking water standards and is safe to drink.

7.2 Individual Wastewater Treatment

Ontario Regulation 350/06 under the Building Code Act stipulates the requirements for individual sewage systems. The regulation provides for a minimum clearance between on-site sewage systems and property lines of 3 m and 15 m from residential wells. In addition, septic systems must be at least 15 m from a lake receptor (Lake Mindemoya). Septic fields in the proposed subdivision can be designed to maintain this minimum clearance. Previous geotechnical investigations of soils showed predominantly moderate-permeability soils (sand, silt and clay) with varying thickness across the Site.

Based on the above, individual water supply (via surface water) and wastewater services are considered viable options for the proposed subdivision lots.

8. Summary and Recommendations

EXP was retained to complete a servicing options statement for a proposed thirty-nine (39) lot subdivision near Deer Foot Trail (Tracy Road) and adjacent to Lake Mindemoya in the Municipality of Central Manitoulin, Ontario. The purpose of the servicing options statement is to demonstrate that the potential for servicing the Site on full municipal services, communal services and individual services has been investigated. Based on this investigation, the following conclusions are provided:

- No municipal water and wastewater services are in areas near the Site and/or extension of municipal services to the Site area not anticipated. Based on the location of the Site, extension of municipal services to the Site are not anticipated in the immediate future and, as such, municipal water servicing for the Site is not considered to be a viable option.
- A communal water supply may be obtained from a surface water source and communal septic systems could be installed; however, construction and applicable permitting could provide significant costs to the developer. In addition, the implementation of communal services is discouraged by the Manitoulin Planning Board and, as such, communal water and wastewater servicing for the Site is not considered to be a viable option.
- Areas adjacent to the Site are not serviced by any municipal services and *all* properties are currently serviced by individual water wells or surface water. As such, individual water supplies for each lot (via surface water) are considered to be a viable option for the Site.
- Areas adjacent to the Site are not serviced by any municipal services and *all* properties are currently serviced by individual septic systems. As such, individual sewage systems for each lot are considered to be a viable option for the Site.

The lots are proposed to be developed as year round residences. It is recommended that the Site be serviced by individual sewage systems and individual water supplies from surface water via Lake Mindemoya. Water supplies must be treated to ODWS requirements, prior to use as a potable source.

9. Qualifications of Assessor

Jamie Batten is a GIT and Intermediate Hydrogeologist with EXP, and has over five years of experience in consulting. He has conducted several environmental assessments, water supply and quality assessments, and wastewater assessments across Ontario. Delwar Ahmed, P. Geo., is a Professional Geoscientist with 15+ years of experience in the consulting industry working on hydrogeological assessments, that includes development and execution of aquifer testing, municipal water supply well study, water well survey, hydrogeological investigations for construction dewatering and related permitting, site plan approval application, environmental and groundwater impact assessment studies for private, municipal, provincial and federal infrastructure projects.

10. Limitations

The information presented in this report is based on a limited investigation designed to provide information to support an assessment of the current water and wastewater servicing options within the subject property. The conclusions and recommendations presented in this report reflect Site conditions existing at the time of the investigation. More specific information with respect to the conditions may become apparent during site development operations.

The environmental investigation was carried out to address the intent of applicable provincial and municipal Regulations, Guidelines, Policies, Standards, Protocols and Objectives administered by the Ministry of Environment and the 2020 Provincial Policy Statement under the Planning Act. It should also be noted that current Regulations, Guidelines, Policies, Standards, Protocols and Objectives are subject to change, and such changes, when put into effect, could alter the conclusions and recommendations noted throughout this report. Achieving the study objectives stated in this report has required us to arrive at conclusions based upon the best information presently known to us. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing the information obtained and in the formulation of the conclusions. Like all professional persons rendering advice we do not act as absolute insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching those conclusions.

Our undertaking at EXP, therefore, is to perform our work within limits prescribed by our clients, with the usual thoroughness and competence of the engineering profession. It is intended that the outcome of this investigation assist in reducing the client's risk associated with environmental impairment. Our work should not be considered 'risk mitigation'. No other warranty or representation, either expressed or implied, is included or intended in this report.

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11. Closure

We thank you for the opportunity of working for you on this project. If you have any questions regarding the content of this report or related issues, please contact the undersigned directly.

Yours truly,

EXP Services Inc.



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Drawings