



APPENDIX " D "
to 118
REPORT PLAN2020-013
FILE NO. D44-2019-001

Planning Justification Report

Xplornet Communications
Telecommunication Site: ON 7578 Glenarm

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10/10/2019

Xplornet Communications justification for a proposal to erect a 45.0m tall self support style communications structure and related equipment at 1641 Glenarm Road, Woodville, ON

1.0 Introduction

Forbes Bros Ltd Telecommunications Services has been retained by Xplornet Communications ("Xplornet") with respect to a proposal to build a new freestanding communications base station facility on the lands at 1641 Glenarm Road, Woodville, ON. The purpose of this report is to provide analysis and justification in support of the proposed facility and to assist the land-use authority in providing comments on the proposed development.

2.0 Background

A continual growth in demand for wireless products and their associated services has created a need for increased wireless network infrastructure. Mobile phones and other wireless devices cannot operate without the necessary infrastructure, which is made up of transmitting and receiving antenna sites located on support structures, commonly referred to as "cell towers".

New infrastructure requirements are determined by monitoring the wireless network and identifying areas with weak or insufficient coverage. Xplornet network planners isolate the areas requiring improvements and conduct coverage studies to determine the ideal co-ordinates for a new antenna base station. Real estate investigations determine feasible locations for new sites. New locations include existing towers (colocation), tall buildings or other feasible structures and of course new free-standing support structures.

3.0 Proposal

Xplornet has proposed a new free standing 45.0m tall lite duty self support type communication facility (ON 7578). The proposal supports enhanced wireless voice & data coverage and capacity for the Glenarm area and east towards Highway 21/34.

3.1 Location

Xplornet's proposed location is on property described as PT LT 21 CON 2 FENELON AS IN R452527; KAWARTHA LAKES and has the municipal address 1641 Glenarm Road (Figure 1). The proposed facility would be located approximately 500m northwest of the Glenarm Road and Birch Point Road intersection (Figure 2).

The tower is proposed to be located among existing buildings on the subject property and has the geographic coordinates:

Latitude (NAD83) N 44° 29' 42.38"

Longitude (NAD83) W 78° 51' 27.21"

The proposed facility is approximately 340m away from the nearest residential property.

Figure 1 – Area Map



Figure 2 – Tower Location



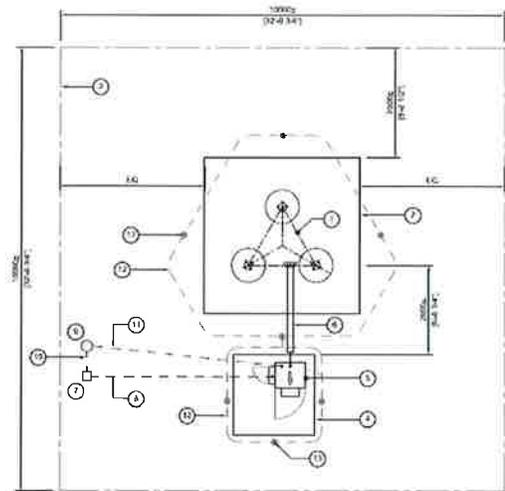
3.2 Design

Xplornet has proposed a 45.0m tall lite duty self support style structure within a 3m x 3m area, transmitting and receiving antennas, and radio equipment (see Figure 3). There is minimal disturbance to the ground during construction as the only requirement is to install tower foundations and a concrete pad for the equipment to sit on. The total area of temporary disturbance would be 10 feet by 10 feet. There is no fencing around the site. Access to the site is via an existing driveway and no grading will be required.

The tower height allows the antenna equipment to propagate wireless signals over top of obstacles (trees, buildings, varying topography) and maintain line of sight connections to other Xplornet facilities in the network.

The proposed installation provides an opportunity to accommodate future technologies as well as potential co-location with other licensed carriers, thus limiting the number of new tower structures required in the area.

Figure 3 –Tower Elevation



SITE LAYOUT & GROUNDING
SCALE: NTS

4.0 Rationale

The selection of a wireless communications site works similarly to fitting a piece into a puzzle. In this case, the puzzle is a complex radio network. Client demand, radio frequency engineering principles, local topography and land use opportunities working in concert with one another direct the geography of Xplornet sites.

In identifying a potential tower location and design, Xplornet examined the local area, assessed the visibility of the structure and considered possible tower designs. Xplornet evaluated the best location for a new facility using the following criteria;

4.1 Technical Requirements

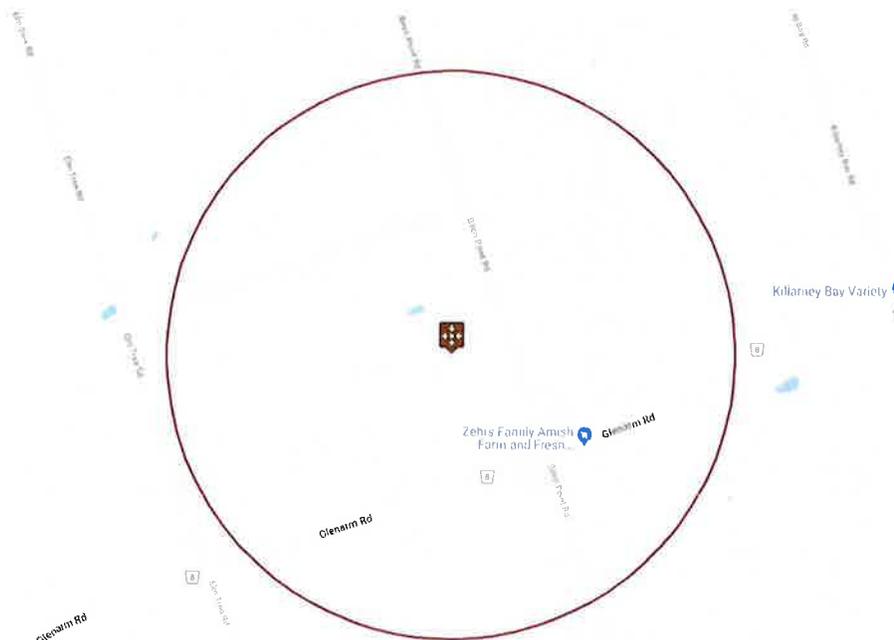
The performance of a wireless network is dependent on the geographical location of its equipment, height of its antennas, line of sight requirements, the demand customers place on the network, as well as proximity to the network users. In expanding its wireless network, Xplornet is seeking to improve service for the Glenarm area and east towards Highway 21/34.

Xplornet can achieve enhanced coverage and capacity with the proposed facility ON7578 at 1641 Glenarm Road.

4.2 Evaluation of Existing Structures

Co-location and rooftop deployment are the first locations considered in achieving new coverage objectives. In order for site sharing to be considered technically feasible, existing telecommunication sites and other tall structures must be located within the search area prescribed by Xplornet network planners and engineers. These locations must also provide adequate deployment height and structural capacity to hold additional equipment.

Site sharing investigations revealed that there are no existing tower facilities within 1.0km of Xplornet proposed location.



4.3 Land-use Consideration

The site is located on property designated Agricultural Zone (A1) and the subject property is abutted by further agricultural zones. Communication Structures are a permitted use in the A1 zone.

Given the coverage objectives of this site we feel it is the best possible location. The proposed facility will enhance coverage for surrounding area as well as to travellers along the roadways while maintaining a significant setback to any residential uses.

5.0 Review of Development Plan

5.1 Municipal Consultation Process

Xplornet is regulated and licensed by Industry Canada to provide inter-provincial wireless voice and data services. As a federal undertaking, Xplornet is required by Industry Canada to consult with land-use authorities in siting new mobile base station locations.

The consultation process established under Industry Canada's authority is intended to provide the local land-use authorities an opportunity to address land-use concerns while respecting the federal government's exclusive jurisdiction in the siting and operation of wireless voice and data systems.

As the provisions of the Ontario Planning Act and other municipal by-laws and regulations do not apply to federal undertakings, wireless communication facilities are not required to obtain municipal permits of any kind. Xplornet is required to follow established and documented telecommunication protocols or processes set forth by land-use authorities.

5.2 Public Consultation

In accordance with Industry Canada procedures, public consultation is required for most new telecommunication facility proposals. Per Industry Canada's guidelines default public consultation is conducted via written notification to property owners within three times (3x) the height of the tower measured from the base or outer most point of the tower. Depending on the height of the proposed facility a public notice in a locally circulated newspaper may also be warranted.

Both forms of notice must contain basic information about the proposal (location, design etc.) as well as contact information for the proponent and a thirty (30) day window to submit comments or questions to the proponent.

Public consultation requirements may vary where an established local policy or protocol is in effect.

5.3 Federal Requirements

In addition to the requirements for consultation with municipal authorities and the public, Xplornet must also fulfill other important obligations including the following:

Canadian Environmental Assessment Act

Industry Canada requires that the Installation and modification of antenna systems be completed in a manner that complies with appropriate environmental legislation. This includes the Canadian Environmental Assessment Act, 2012 (CEAA 2012), where the antenna system is incidental to a physical activity or project designated under CEAA 2012 or is proposed to be located on federal lands.

Xplornet attests that the antenna system proposed will be installed and operated in a manner that respects the local environment and complies with all statutory requirements.

Transport Canada's Aeronautical Obstruction Marking Requirements

Aerodrome safety is under the exclusive jurisdiction of NAV Canada and Transport Canada. An important obligation of wireless proponents is to comply with Transport Canada / NAV Canada aeronautical safety requirements. Transport Canada performs an assessment of the proposal with respect to the potential hazard to air navigation and notifies Xplornet of any painting and/or lighting requirements for the antenna system. Xplornet does not anticipate that the proposed installation will require any painting or lighting and has submitted the necessary applications to the appropriate parties to obtain the required approvals.

- NAV Canada: confirmed no objections to the site location (September 9, 2019)
- Transport Canada: application submitted on June 28, 2019; response expected Nov. 2, 2019

For additional information, please see the Transport Canada website at:

<http://www.tc.gc.ca/eng/civilaviation/regserv/cars/part6-standards-standards621-3808.htm>

Health Canada's Safety Code 6 Compliance

Health Canada is responsible for research and investigation to determine and promulgate health protection limits for exposure to radio-frequency (RF) electromagnetic energy. Accordingly, Health Canada has developed a guideline entitled "Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3Khz to 300Ghz – Safety Code 6".

The exposure limits specified in Safety Code 6 are established by reviewing all peer-reviewed scientific research in the area of human health and RF exposure. Included in this review are hundreds of studies conducted over the past 50 years.

Radiocommunication, including technical aspects related to broadcasting, is under the responsibility of the Ministry of Industry (Industry Canada) which has the power to establish standards, rules, policies and procedures. Industry Canada, under this authority has adopted Safety Code 6 for the protection of the general public. With this adoption, Industry Canada requires all proponents and operators to ensure that their installations comply with Safety Code 6 at all times, including any changes to the code and including any combined effects from other installations in the nearby radio environment.

Xplornet attests that the radio antenna system described will comply with Health Canada's Safety Code 6 limits, as may be amended from time to time, for the protection of the general public including any combined effects of additional carrier co-locations and nearby installations within the local radio environment.

Engineering Practices

Xplornet attests that the radio antenna system as proposed for this site will be constructed in compliance with the National Building Code and the Canadian Standards Association and comply with good engineering practices including structural adequacy.

6.0 Summary and Conclusion

As communities continue to grow to depend on wireless products and their services, it will be necessary to improve network coverage and quality. Improving network coverage and quality is achieved by increasing mobile base station infrastructure to fill coverage gaps and increase capacity for current and future wireless users.

In response to the demand for high quality wireless services in Ontario and specifically in the City of Kawartha Lakes, Xplornet has proposed a communications site that achieves the technical requirements of the network while maintaining a significant setback to any residential land uses.

I look forward to working with the City in providing enhanced wireless services to the community. Should you require any further information please do not hesitate to contact me at 905.808.0073 or by email at cghassabeh@forbesbrosLtd.ca

Sincerely,

Cyrus Ghassabeh

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