



Site Selection/Justification Report

**Prepared for the Township of Emily (Omemee),
City of Kawartha Lakes**

Bell Mobility's Proposed Wireless Telecommunications Facility

193 Centreline Road

W5089

January 24, 2014



January 23, 2014

Richard Holy
Development Services
City of Kawartha Lakes
180 Kent St. W., Emily (Omeme), ON
K9V 2Y6

Attention: Richard Holy

Re: Formal Application for Proposed Bell Telecommunications Tower
193 Centreline Road (City Owned Lands) – Bell Mobility Site ID: W5089

I am writing with the purpose of initiating the municipal consultation process for the above referenced telecommunications tower proposal.

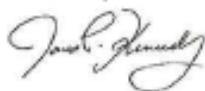
The proposal is to construct a 50.0 metre self-support telecommunication tower on the property municipally known as 193 Centreline Road, on the west side of Centreline Road.

Bell Mobility is regulated and licensed by Industry Canada to provide inter-provincial wireless and data services. As a federal undertaking, Bell Mobility is required by Industry Canada to consult with land-use authorities in siting tower locations. The consultation process established under Industry Canada's authority is intended to allow the local land-use authorities the opportunity to address land-use concerns while respecting the federal government's exclusive jurisdiction in the siting and operation of wireless and data systems.

While the provisions of the *Ontario Planning Act* and other municipal by-laws and regulations do not apply to federal undertakings, Bell Mobility is however required to follow established and documented wireless protocols or processes set forth by land-use authorities. In this instance, Bell Mobility will work in accordance with the City of Kawartha Lakes Telecommunication Systems Protocol to complete the consultation process at 193 Centreline Road.

Should you require further information, feel free to contact me. We look forward to providing enhanced wireless services to residents and visitors in the Emily (Omeme) area.

Yours Truly,



James Kennedy RPP, MCIP
On contract to Bell Mobility

Introduction

The on-going increase in the use of personal cellular telephones and other wireless devices such as Blackberry and broadband internet for personal, business and emergency purposes requires the development of new wireless telecommunications infrastructure including new antennas and their support structures to meet the demands of increased capacity and broadening service areas. Without antennas in close proximity to the wireless device, communications is simply not possible.

The use of wireless telecommunications is firmly entrenched into Canadian society and economy. Canadians currently use more than 18.5 million wireless devices on a daily basis including, wireless phones, pagers, mobile radios, mobile satellite phones and broadband internet devices. Two-thirds of every Canadian household have access to a wireless phone. More importantly, each year Canadians place more than 6 million calls to 911 or other emergency numbers from their mobile phones.

As part of its on-going commitment to provide high quality wireless services, Bell has determined that a new wireless telecommunications facility is required in the City of Kawartha Lakes.

This report documents Bell's site selection process, the details of the proposal, and the applicable Industry Canada provisions.

As a general matter, Bell's site selection process is a balanced exercise that must meet Bell's network coverage objectives, having regard for land use constraints and its obligation to its customers to provide a high quality of service.

Wireless telecommunications facilities are regulated by the Federal Government under Industry Canada and need not follow municipal or provincial planning approvals. However, in recognition of the policy vacuum which exists as a result of that circumstance, Industry Canada requires that wireless telecommunication carriers consult with land use authorities.

Site Selection/Justification Report

Prepared for the City of Kawartha Lakes

Organization of this Report

The information in this letter will be presented in the logical progression of steps that the actual site selection process naturally follows:

STEP 1 - Identification of Need (weakness in network coverage)

STEP 2 - Identification and Evaluation of Different Site Location Options
(including co-location)

STEP 3 - Selection/Justification of Preferred Location

STEP 4 – Public Circulation and Provide Recommendations

STEP 1- Identification of Need

A radio antenna and a tower are the two most important parts of a radio communication system. The antenna is needed to send and receive signals for the radio station. The tower raises the antenna above obstructions such as trees and buildings so that it can send and receive these signals clearly. Each radio station and its antenna system (including the tower) provide radio coverage to a specific geographic area, often called a cell. The antenna system must be carefully located to ensure that it provides a good signal over the whole cell area, without interfering with other stations and can "carry" a call as the user moves from cell to cell.

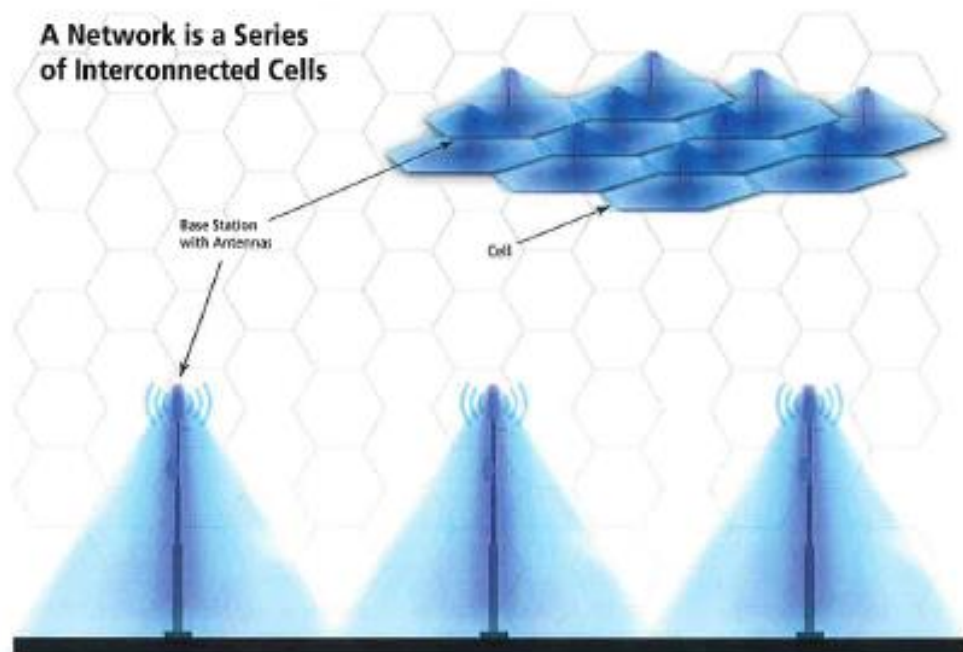


Figure 1

If the station is part of a radio telephone network, the number of stations needed also depends on how many people are using the network. If the number of stations is too small, or the number of users increases people may not be able to connect to the network, or the quality of service may decrease.

Increased Users Creates Gaps in Service

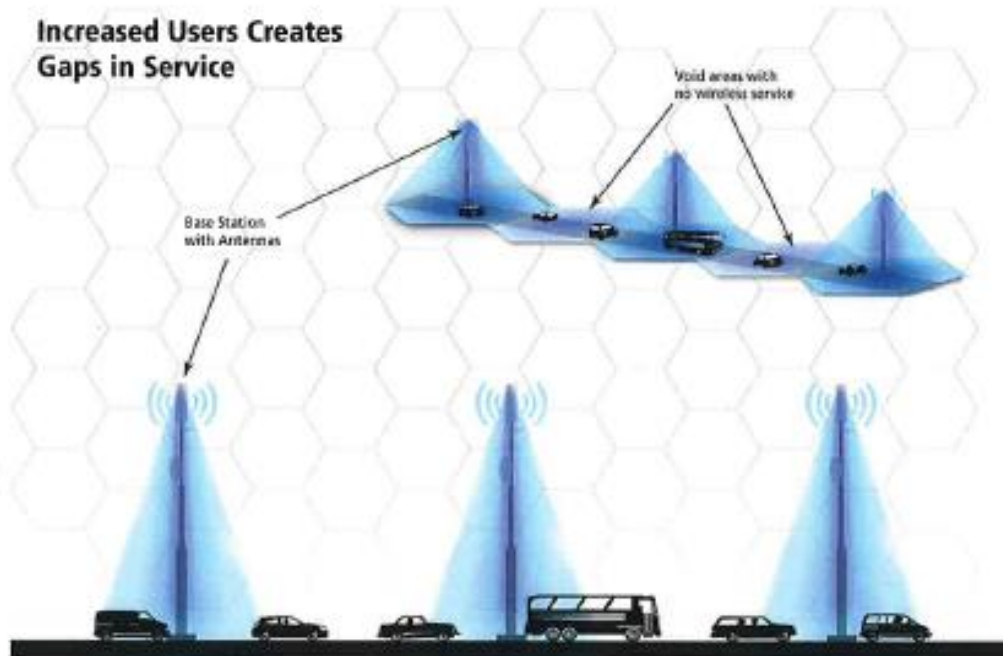


Figure 2

As the number of users exceed the capacity of the radio station to receive and send calls the coverage area for the cell shrinks and the shrinkage between cells create coverage holes.

As demand increases for mobile phones and new telecommunication services, additional towers are required to maintain or improve the quality of service to the public and restore contiguous wireless service.

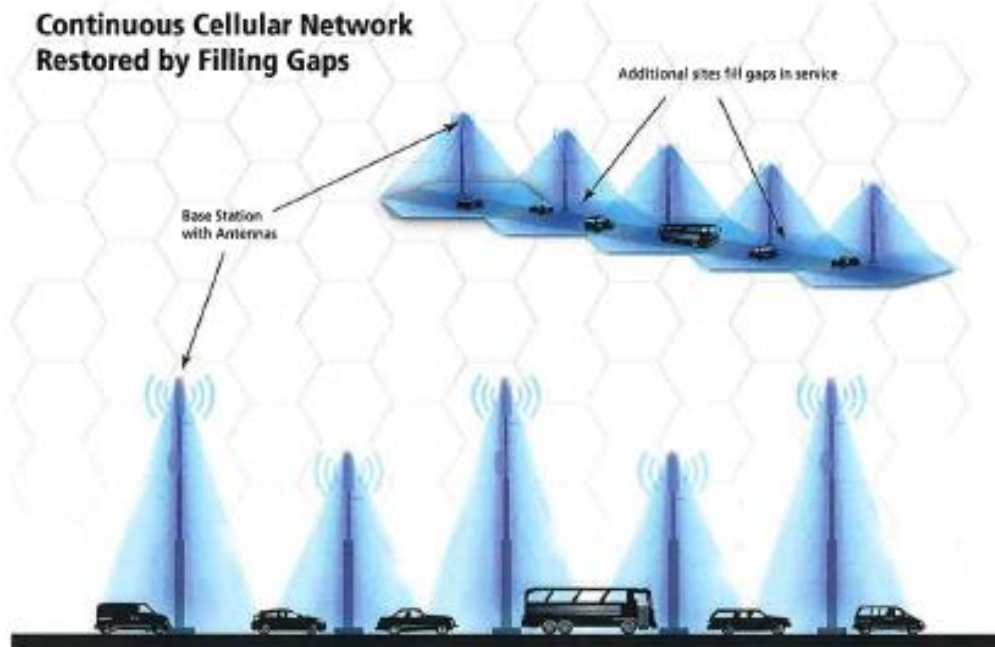


Figure 3

In this case, Bell's Radio Frequency Engineering department has determined the need for a service upgrade to adequately provide contiguous coverage and service to our existing and future customer base in Oakville. Currently, our network is burdened by a combination of poor voice and data quality in this very residential area. In some cases, the coverage is so poor that a handset would be unable to place a mobile call at all in the subject location and surrounding area. The result of this situation is on-going customer complaints, high "dropped call" rates, and in extreme circumstances, the potential inability to place a mobile call that may be absolutely critical in an emergency situation.

Bell is committed and mandated by its licence to ensure the best coverage and service to the public and private sectors. The proposed site Oakville is extremely important in terms of providing coverage to an under-served area. Bell wants to provide infrastructure necessary to ensure that both residents and visitors to the area have access to the service they are accustomed to in other parts of the GTA.

STEP 2 - Identification and Evaluation of Different Site Location Options

Based on Bell's Radio Frequency Engineering team, the search area identified to place a telecommunications facility was in the area of Centreline Road and Shamrock Road. The map below (Figure 4) would be the ideal solution provided for excellent coverage in the area. From an engineering point of view, the solution meets the coverage objectives of Bell's network. The subject property is located on City owned lands.



Figure 4 – Search area

(The information presented above is based on the most recent, available, mobile phone tower inventory. The search area radius shown above is of 500 metres.)

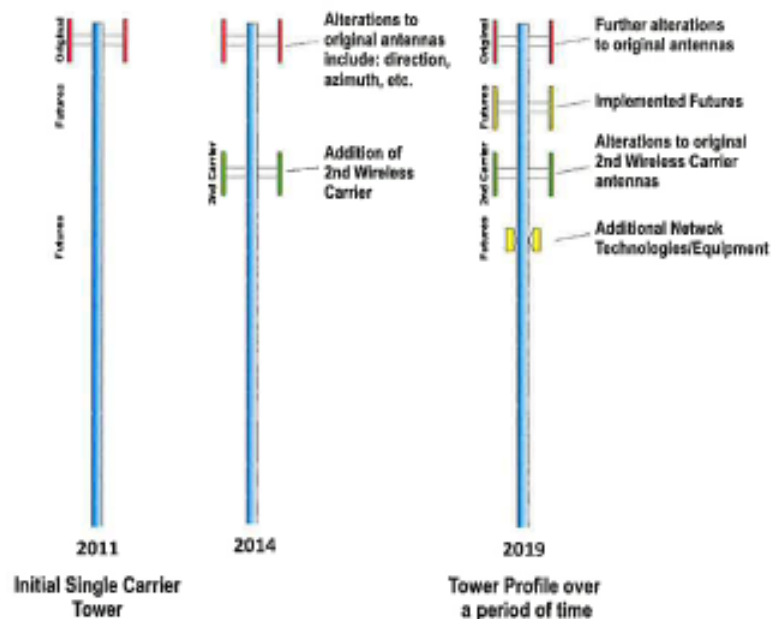
A review of existing telecommunication installations within the search area revealed an absence of telecommunication facilities within the 500 metres of the search radius. The current bell coverage in the Emily Park area near Pigeon Lake is very poor. The nearest Bell towers are 6.5 kilometers to the south near King St E, 12 kilometres to the north near Highway 36 and towers near the Lindsay area to the west of the site. The purpose of this tower is to provide coverage to passing by traffic along Highway 121, businesses and the residents within the area.

Bell strongly supports co-location on existing towers and structures and designed the tower to accommodate future carriers on the tower. The use of existing structures minimizes the number of new towers required in a given area and is generally a more cost effective way of doing business. However, tower infrastructure is a finite resource and over time most towers reach their engineered maximum. This normally results when more than two carriers occupy the same tower as illustrated below (Figure 5). The

height of the proposed tower is 50.0 metres and will support another carrier on the tower. See **Appendix B** for example images of the tower.

Towers are limited in terms of both allowable space and engineering capacity. Each antenna array requires a separation of vertical space so they do not cause interference with each other.

Unfortunately, as indicated on **Figure 4** there are no suitable pre-existing towers with which to co-locate, and given the low average height of structures in the area, a rooftop antenna installation is also not viable.



STEP 3 - Selection/Justification of Preferred Location

Proposed Site Location

The location which Bell Mobility proposes for a wireless telecommunications site in Emily is on the property municipally known as 193 Centreline Road, Kawartha Lakes (Figure 7). The overall property is owned by The City of Kawartha Lakes and comprises an area of approximately 40 hectares (100 acres). The property is rectangular in shape and is located on the west side of Centreline Road, south of Tracey's Hill Road in an industrial area.

The property's legal description is:

PT S1/2 LT 12 CON 8 EMILY AS IN VT49214, A12249; KAWARTHA LAKES

Further site specific information is available on the survey attached as **Appendix A**.

Figure 7 – Proposed location



The geographic coordinates for the site are as follows;

Latitude (NAD 83) 44° 21' 42.4"N

Longitude (NAD 83) 78° 32' 39.0"W

STEP 4 - Public Circulation

In recognition of the Federal Government's exclusive jurisdiction and in an attempt to promote balance, Industry Canada requires that proponents of telecommunication facilities consult with land use authorities as part of their licensing process. The requirement to consult can be found in Industry Canada's document, Client Procedure Circular CPC-2-0-03. According to the CPC, the purpose of consultation is to ensure that land use authorities are aware of significant antenna structures and/or installations proposed within their boundaries so antenna systems are deployed in a manner which considers local surroundings. Consultation must respect the Federal Government's exclusive jurisdiction and specifically does not give a municipality the right to veto the proposal. General information relating to antenna systems is available on Industry Canada's Spectrum Management and Telecommunications website <http://strategis.ic.gc.ca/antenna>; however, as it pertains to consultation with the general public, Bell Mobility will adhere to the processes and timeline expectations as outlined in Industry Canada's Default consultation process.

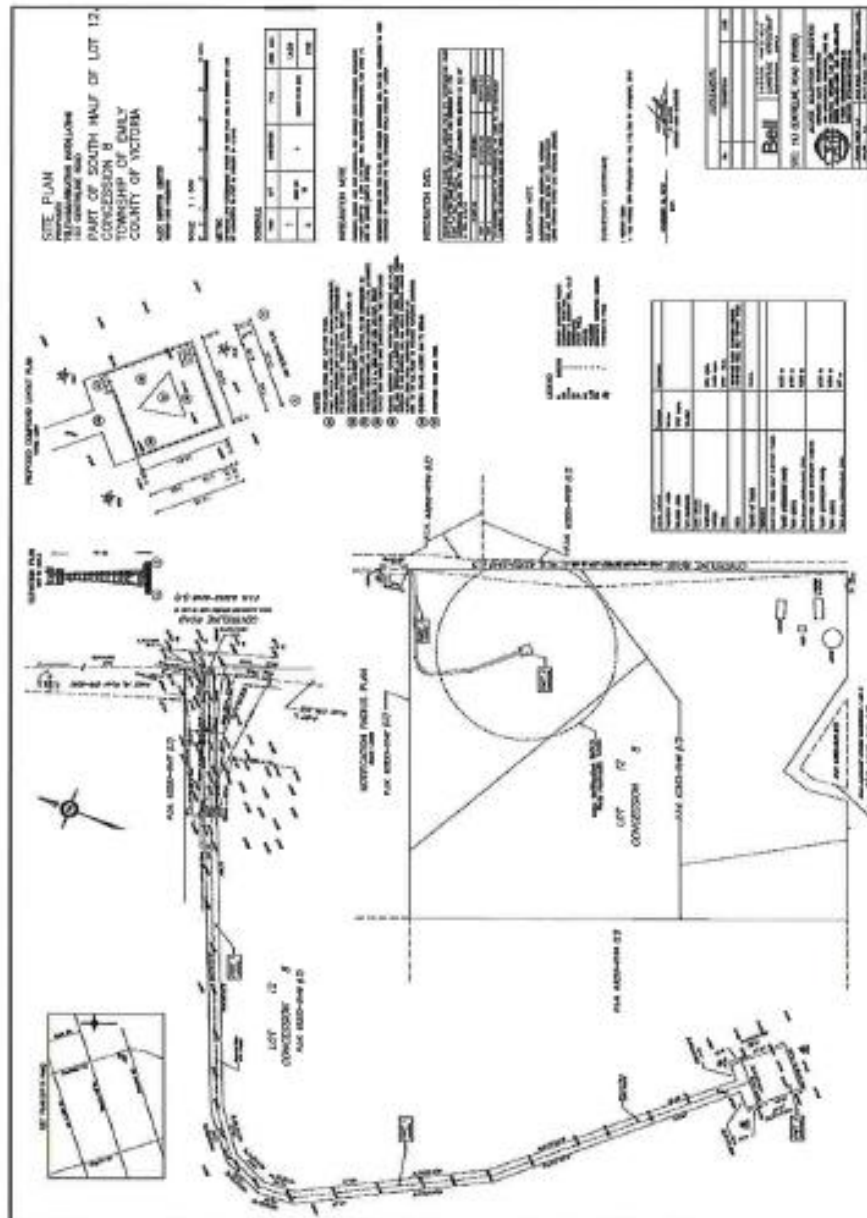
As a result of the Federal Government's jurisdiction, this proposed wireless facility does not require permitting analogous to those of other development proposals. Similarly, zoning by-laws and site plan approvals, in the standard sense, are not applicable to these facilities. Furthermore Bell Mobility attests that the radio antenna system described in this Site Selection package is excluded from the environmental assessment process under the *Canadian Environmental Assessment Act*.

Notwithstanding the Federal Government's jurisdiction, Bell Mobility is committed to consultation with the Local Land-use Authority and, as such Bell Mobility will undertake a public circulation in line with the requirements outlined by the City of Kawartha Lakes Telecommunication Systems Protocol.

In addition to the public, NAV and Transport Canada have been notified of the proposal. They have not provided clearance as of yet. Once the documents are made available they will be forwarded to City staff.

Appendix A

Site Survey Plan



Appendix B
Example Photo



END