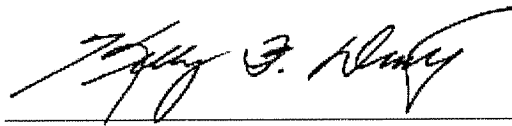


**Harbour East Community Council
October 6, 2011**

TO: Chair and Members of Harbour East Community Council

SUBMITTED BY:



For: Austin French, Manager, Planning Applications

DATE: September 26, 2011

SUBJECT: Case 16986: Telecommunication Tower, Cole Harbour Road, Cole Harbour

SUPPLEMENTARY REPORT

ORIGIN

- Application by Bragg Communications Inc. (Eastlink), for lands of Sci-Com Ltd., for a proposed 40 metre (131 feet) self supporting telecommunication tower and associated equipment shelters at 1000 Cole Harbour Road, Cole Harbour.
- On September 15, 2011 staff presented a report dated September 1, 2011 having a negative recommendation to Industry Canada. Harbour East Community Council (HECC) requested that staff prepare a supplementary report that answers questions raised at the meeting.

BACKGROUND

Eastlink has applied to erect a new 40 metre (131 feet) high self supporting type telecommunication tower on a portion of the lands located at 1000 Cole Harbour Road in Cole Harbour. The subject property is commercially developed and the tower is proposed to be located approximately 120.5 metres (395 feet) from Cole Harbour Road within a small portion of the subject property. Access to the site will be via the existing driveways on the property from Cole Harbour Road.

A public information meeting was held in the community on June 20, 2011.

DISCUSSION

At the September 15, 2011 meeting of Harbour East Community Council staff was directed to respond to questions raised during the meeting at Council's next meeting. Under Industry Canada's Client Procedure Circular-Radiocommunication and Broadcasting Antenna Systems (CPC-2-0-03) the public consultation period with the local land use authority (ie HRM) is intended to be concluded within 120 days. On Sept 15, 2011, the process was sitting at 113 days. Council requested answers to their questions at the October 6, 2011 meeting that exceeds that limit by approximately two weeks. Industry Canada indicated that the process could continue until the October meeting (see Question 14 below). The questions and staff's responses are found below.

1. Concern with the lack of policy in place; having to review on a case by case basis;

The current Municipal Planning Strategies under Harbour East Community Council's jurisdiction do not have specific policies in regards to locating telecommunication towers or antenna systems. The present evaluation format used in the telecommunication application process reviews the proposal in regard to applicable policies in the MPS that are relevant to establishing or introducing new land uses. The criteria is mostly concerned with ensuring the compatibility of the new land use in the community by minimizing adverse effects such as visual and aesthetic impact.

2. There is a need for regulations (guiding policy) in place to assist with Community Council's decision making;

The Regional Municipal Planning Strategy recognizes that an appropriate formal public consultation process and preparation of siting and design guidelines for telecommunication towers and antenna systems should be considered by means of a functional plan. Policy SU-31 of the Regional MPS directs HRM, in cooperation with Industry Canada and industry stakeholders, to prepare such a Plan addressing community concerns regarding aesthetic and environmental impacts of telecommunication structures and facilities. Staff is currently working towards completing this functional plan.

3. There is a need to remove emotion from this matter and focus on the concrete information; concern that the issue has become politicized;

Staff reviews each telecommunications proposal based on the facts and relevant issues and evaluate towers against policy based on community aesthetic and land use preferences. Through this process staff receives feedback from the public on the tower.

4. Unfortunate that this process does not include a public hearing; opportunity for community to engage in dialog and have questions answered;

The final decision on telecommunication tower applications rests with Industry Canada, therefore a public hearing is not required as part of the application process. A public information meeting is organized in the community where the tower or system is proposed as

soon as possible after the application is received. This gives concerned residents the opportunity to hear the applicant's proposal and ask them questions and express any concerns they might have at that meeting. Members of the public or the applicant may request to make a presentation to Community Council through the Clerk's office.

5. Whether there is a reference for the following statement in the petition submitted to the Community; The National Research Council of Canada have issued a report stating that their belief that cell towers should NOT be placed within 500 metres of residential properties, schools, hospitals and daycares. The safety zone should be at least 1000 metres similar to some European countries;

Staff wishes to clarify that the circulated petition read "NRC Research Press" in one version and in another version read "National Research Council of Canada". Councillors and staff attempted to locate this article prior to September 15, 2011, but had no success. The reference has been located and it can be found at: <http://www.21esiecle.qc.ca/files/CRNC%20etudes%20antennes.pdf> or Levitt, B. Blake and Lai, Henry. 2010. Biological effects from exposure to electromagnetic radiation emitted by cell tower base stations and other antenna arrays. Environmental Reviews 18:369-395(2010). doi:10.1139/A10-018. NRC Research Press.

The article reviews existing studies of people living or working near telecommunication facilities and other relevant studies that could apply to long term radiofrequency radiation exposures. The impetus for the study is the contentious land-use issue of siting telecommunication infrastructure in residential neighbourhoods and resistance from residents, often based on fears of adverse health effects despite reassurances of international standards. The authors conclude some research evidence exists to warrant caution in siting facilities and that further epidemiological research is warranted as existing research is sparse and contradictory and because exposure levels are difficult to quantify with increasing radiofrequency radiation from a variety of personal consumer products.

6. The community suggests that there are health risks associated with cell towers;

Each telecommunications tower application received by HRM is accompanied by an attestation that the proposed antenna system to be located is in compliance with Safety Code 6 (2009). This document contains Health Canada's human exposure guidelines to radiofrequency electromagnetic energy and is also accompanied by a technical guide to assist users in understanding and assessing the safety of electromagnetic exposure in working and living environments. Industry Canada has adopted this guideline for the purpose of protecting the general public based on current biomedical studies in Canada and other countries which indicates there is no scientific or medical evidence that a person will experience adverse health effects from exposure to radio frequency fields provided the installation complies with Safety Code 6. The local land use authority is not permitted to comment on Safety Code 6.

7. The correspondence received from Robert Chisholm, MP, suggests that there are alternative locations;

Eastlink reviewed two alternative sites as noted in the September 1, 2011 staff report. According to Industry Canada if the service provider investigates at least one other site this is considered to fulfill the requirements of Industry Canada. Under the HRM Telecommunication Application there is a request to the applicant to provide a comprehensive analysis demonstrating that all types of installations have been considered as listed under CPC-2-0-03. In speaking to Industry Canada regulators were of the opinion that if HRM requested this information from Eastlink that under CPC-2-0-03 they are obligated to provide all considered locations. The applicant provided a detailed rationale to HRM as to why these types of installations were unattainable. Industry Canada also explained that in the particular case of Eastlink there are technical aspects they must consider due their authorized higher frequency, with a shorter transmitting signal, requiring towers to be located closer together.

8. Concern with rationale of some of the information provided (i.e. compatibility problems, visual effects, health risks);

The discussion in the September 1, 2011 staff report concerning compatibility is typical of discussions regarding proposed new land uses in development applications. Staff used the policy criteria under the Community Commercial designation of the Cole Harbour/Westphal MPS as a framework to evaluate compatibility issues such as community character and adverse effects (visual impacts, aesthetic impact). This approach was consistent with the evaluation method used in other recent telecommunication tower applications. Staff did not provide any comment on health risks other than provide information on Safety Code 6 and potential hazard from tower collapse.

9. Concern with signatures in the petition from residents who do not live in HRM; whether Industry Canada representatives would be able to identify locations outside of the community in question;

Mandatory information on petitions submitted to HRM Regional and Community Councils includes: purpose of petition clearly stated; name, civic address, telephone number or email address or originator of petition; name, address and date of signing of everyone signing the petition; and the date the petition was started. In any petition "Anonymous" signatures are not counted by the Clerk's office. Signatures from outside the concerned community are permitted to remain and are counted as long as the required information is provided.

10. The September 1st staff report suggests Portland Hills Terminal as an alternate location; on average there are approximately 4,342 HRM residents within 150 metres of Terminal on a daily basis;

The Portland Hills Metro Transit Terminal was investigated as an alternative site by Eastlink but the coverage was found to be limited by topography and only achieved 50% of Eastlink's coverage objective. Council saw locating the tower at a Transit Terminal instead of proximate a residential community as relocating a problem from one community to another.

In staff's opinion the population at the Transit Terminal is constantly shifting and moving from that location to another and does not spend extended time at the station. However, a residential development in close proximity would have a significantly longer experience to the tower for the residents.

11. A submission received from Robert Chisholm, MP, expresses concern with falling ice; there is falling ice from telephone poles;

Falling ice from vertical structures such as telecommunication towers is a societal hazard in northern climates, especially where there is the potential for ice build up from the accretion of atmospheric ice and freezing rain storms. A research database compiled by the U.S. Army Cold Regions Research and Engineering Laboratory indicates that ice build up on towers causes signal interference, structural fatigue from dynamic loading, guy wire stretch, ice-fall damage when the ice sheds and complete tower failure. The database also notes that falling ice damages the tower and associated equipment and ice debris shedding from the tower has damaged commercial and residential buildings, vehicles, electrical transmission lines and crops. The data also show that when towers fall from ice build up and low wind conditions the debris is usually contained within a radius of 50% of the tower's height; towers with a fall radius greater than 50% were generally the result of unusual circumstances. The resolution of cost from damage to private property is a legal issue between the tower owner and the effected property owner.

12. There is confusion between mono tower versus stealth tower;

A monopole¹ (Attachment A) is a self supporting (without guy cables) columnar-form steel tube used by the telecommunications industry in suburban and urban areas where a small "footprint" is desirable because of limited space. These towers are of varying diameters at the base and are commonly affixed within a concrete footing. The antenna system is mounted externally on the tower and may be of various configurations. The stealth tower (Attachment B) proposed by Eastlink (see Question 13 below) is a monopole that has the antenna system installed internally and out of view.

13. Whether camouflaging has been discussed with the community;

Camouflaging of telecommunications towers has not been discussed with the community. Camouflaged towers are commonly referred to as stealth towers by the industry and in visual impact literature. These may be fabricated to look like a coniferous tree, a street lamp standard, a church steeple or spire, a palm tree or clock tower. A participant at the public meeting enquired if an "invisible" tower had been considered for the site. Staff and the applicant both understood this to mean a stealth tower. Eastlink came forward later to staff with a version of a monopole stealth tower (Attachment B); so called because it had no "pinwheels" supporting the antennas, that are located inside the stealth tower. If Council

¹ A monopole may sometimes be referred to as a monopole tower. In technical literature regarding telecommunication and radiocommunication towers "monopole" often refers to a type of antenna.

wished to pursue a camouflage or stealth tower this would be negotiated with the applicant in order to come to a resolution.

14. Whether there is an opportunity to defer this matter to obtain more information from staff;

Staff contacted the Director of Spectrum Management and Telecommunications Directorate for Nova Scotia. Spectrum Management and Telecommunications is the regulatory arm of Industry Canada that licences available frequencies to wireless and other telecommunications providers. Staff requested that the application be allowed to proceed beyond the 120 days allotted for completion of the public consultation under the CPC-2-0-03 in order to bring more information forward to Community Council at the October 6, 2011 meeting. The Director supported the continued consultation process on Eastlink's application if both parties were actively engaged and the matter was dealt with in a timely manner.

15. Concern with the lack of information/history of the poles falling or blowing over; Identify the percentage of poles that fall down on average per decade in Canada;

Telecommunication towers must adhere to all applicable design standards and codes. Qualified engineers are responsible for certifying all telecommunication tower designs for both new towers and tower modifications. The engineer's design calculations must show the tower is capable of handling wind and ice loadings, proposed antenna systems and future additional antenna systems. Industry Canada is not aware of the collapse of any telecommunications towers in our region and cannot comment on the other regions under their jurisdiction. Communication towers may collapse for a variety of reasons but most are due to failures caused by rare extreme natural events such as blizzards, hurricanes and earthquakes. The U.S. Army Cold Regions Research and Engineering Laboratory data for communication tower collapse due to atmospheric ice accretion show:

- 26 Canadian communication towers collapsed from 1958 to 2002;
- 4 communication towers in Montreal and 1 in Kingston collapsed during the severe ice storm of 1998 by a build up of ice; and
- 140 United States communication towers collapsed from 1959 to 2002 (only one tower was known to be freestanding).

16. Did the applicant/proponent follow all the required steps in the process as set out by Industry Canada?

In addition to roles and responsibilities set out by Industry Canada for site sharing, land use consultation, and public consultation the applicant has also fulfilled other important obligations including: compliance with Health Canada's Safety Code 6 guideline for the protection of the general public; compliance with radio frequency immunity criteria; notification of nearby broadcasting stations; environmental consideration and Transport Canada/NAV CANADA aeronautical safety responsibilities. Applicants must follow the process outlined in the *Client Procedures Circular: Radiocommunication and Broadcasting Antenna Systems* (CPC-2-0-03) when installing an antenna system. The installation of an

antenna system or operation of a currently existing antenna system that is not in accordance with the CPC-2-02-03 process may result in its alteration or removal or sanctions against the operator in accordance with the *Radiocommunication Act*.

BUDGET IMPLICATIONS

The costs to process this planning application can be accommodated within the approved operating budget for C310.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Project and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Project and Operating reserves, as well as any relevant legislation.

COMMUNITY ENGAGEMENT

The community engagement process is consistent with the intent of the HRM Community Engagement Strategy. The level of community engagement was consultation, achieved through a Public Information Meeting. A public hearing by Council is not required under the Telecommunication Application Process.

The Public Information Meeting (PIM) was held on June 20, 2011. The main concerns brought forward by the public were the health effects from radio frequency and electromagnetic radiation fields, aesthetic concerns, property devaluation and property damage from tower collapse (setbacks).

For the Public Information Meeting, notices were posted on the HRM website, in the newspaper and mailed to property owners within the notification area.

ATTACHMENTS

Attachment A	Monopole Tower
Attachment B	Stealth Tower

A copy of this report can be obtained online at <http://www.halifax.ca/commcoun/cc.html> then choose the appropriate Community Council and meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by: Darrell Joudrey, Planner, 490-4181

Report Approved by: Kelly Denty For: Austin French, Manager, Planning Services, 490-6717

A tall, slender lattice tower, likely a radio or television transmission tower, stands vertically. At the top, a horizontal cross-arm structure is visible, supported by guy wires. The tower itself is a lattice of vertical and horizontal beams. At the base of the tower, a small, dark building is partially visible. The background is a light, textured sky.

EASTLINK

WIRELESS

PROJECT INFORMATION		REVISIONS	
TITLE:		NO.	DATE:
SIMULATION OF MONOPOLE 40m			DESCRIPTION
SITE NAME: FOREST HILL			
DATE: MAY 2010			
SITE ID: NSA062			
CHECK BY: J. PIPER			
DRAWING ID: NSA062-SA-MP-001			
DRAWN BY: A. PINTO			

Attachment B: Stealth Tower

