

Appendix A



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March 14, 2019

DELIVERED VIA EMAIL AND HAND DELIVERY

Town Clerk
Clerk's Department
Town of Oakville

Mr. Paul Barrette, Senior Planner
Town of Oakville

1225 Trafalgar Road
Oakville, Ontario
L6H 0H3

Dear Madams/Sirs:

**Re: Oakville Green Development Inc. – Health Sciences and Technology District
Part of Lot 25, Concession 1, North of Dundas Street
Development Applications: Z.1325.07 and 24T-18006/1325**

We act for Whiteoaks Communications Group Limited ("Whiteoaks") with respect to the first phase of the proposed development of the Health Sciences and Technology District by Oakville Green Development Inc. (the "Proposed Development"). Whiteoaks owns and operates two AM radio stations from its property at 1303 Dundas Street West, which is approximately 750 metres away from the Proposed Development.

Our client is writing to provide comments regarding the land use compatibility issues that have the potential to cause significant adverse two-way impacts for Whiteoaks and the Proposed Development, along with supporting expert reports and studies. We have also retained Lawrence Behr Associates Inc. ("LBA") to conduct preliminary modeling of the Proposed Development to (a) assess impacts; and (b) suggest potential avenues to mitigate impacts. Detailed final modeling can only be performed once detailed design of the Proposed Development has been completed.

Based on the LBA Letter of Opinion and other relevant studies, the potential adverse impacts created by the Proposed Development are:

1. potential for electric shock and burn hazards to construction workers, including a risk of fire or explosion;

2. potential disruption and distortion of the radio signals of Whiteoaks' AM stations, causing them to operate outside of its federally licensed parameters and potentially causing interference and loss of coverage for other AM stations; and
3. potential malfunction or damage of electronic equipment, including cranes.

As noted in the LBA Letter of Opinion, LBA expects the adverse impacts for the Proposed Development to be similar to those indicated in the LBA Graydon-Banning/Martillac Report, but potentially to a lesser degree. The Graydon-Banning/Martillac developments are adjacent to the site of the Proposed Development. The adverse impacts identified in the LBA Graydon-Banning/Martillac Report were:

1. disrupt and distort the radio signal of both stations, causing them to be outside of federally regulated and licensed parameters and potentially interfere with other radio stations signals;
2. pose a serious threat to the safety of construction workers and post-construction residents, including contact burns, shocks, and increased risk of catastrophic accidents leading to serious physical injuries and damage to property; and
3. interfere with construction equipment and consumer electronics, leading them to malfunction or fail, including catastrophic failures.

We understand the Town is also greatly concerned about the potential for land use incompatibility resulting from locating sensitive land uses and radio communications facilities in close proximity, which is the reason for its adoption of an Interim Radio communications Facilities Protocol, as amended.

However despite this concern, there has been no assessment by the developer of land use compatibility issues arising from locating new sensitive land uses near to an existing major radiocommunication facility. This is contrary to the applicable planning policies and guidance including the Provincial Policy Statement (PPS), the Region of Halton Official Plan, the 2006 Town Official Plan, the North Oakville East Secondary Plan and the Region's Land Use Compatibility Guidelines and the Ministry of the Environment, Conservation and Parks D-Series Land Use Compatibility Guidelines which all require that land use compatibility issues be assessed and addressed prior to development. As such the Proposed Development has not demonstrated consistency with the PPS or conformity with the Region and Town Official Plans.

Our client believes that this development application is premature. It is in the best interests of the Town, the developer and Whiteoaks to ensure that prior to any approval of the Proposed Development, all necessary studies are conducted and all necessary mitigation measures are adopted to ensure that no adverse effects or impacts will result to Whiteoaks operations, residents and construction workers from the construction of the Proposed Development. Not doing so is likely to result in a situation where all stakeholders lose and suffer significant negative consequences.

What follows is a summary of Whiteoaks' concerns, findings and recommendations to date, together with the following documents:

Appendix "A": "Letter of Opinion" by Lawrence Behr Associates Inc. regarding Oakville Green Development Inc.'s Health Sciences and Technology District ("LBA Letter of Opinion")

Appendix “B”: historical correspondence

Appendix “C”: “Impacts of the Draft West Oak Trails Secondary Plan on the Operational Capacity of CHWO and CJMR Radio Planning Report” by Lehman & Associates and M.A. Tilston Engineering, dated February 1993 (the “Lehman-Tilston Report”)

Appendix “D”: CJMR-CJYE Graydon-Banning/Martillac Developments AM Modeling Report by Lawrence Behr Associates Inc. (the “LBA Graydon-Banning/Martillac Report”)

Appendix “E”: “North Dundas Encroachment and Development Report” by Firmin and Associates, a Division of Sound Reinforcement Limited, dated November 28, 2018 (the “Firmin and Associates Report”)

Appendix “F”: Excerpts from the Provincial Policy Statement (PPS), the Region of Halton Official Plan, the 2006 Town Official Plan and the North Oakville Secondary Plans.

BACKGROUND

Whiteoaks’ radio stations have been a fixture of the Town of Oakville since 1956, broadcasting to the Halton and Peel regional markets for over 60 years. Whiteoaks owns and operates two AM radio stations: CJYE 1250 kHz & CJMR 1320 kHz & from its lands at 1303 Dundas Street West, where it has been broadcasting since 1979 (the “Transmission Site”). The stations moved to the Transmission Site after relocating from a prior site, in what is now Glen Abbey Estates, due to encroaching development.

Each station transmits 10,000 watts, 24 hours a day, seven days a week and can reach over six million people within the authorized pattern from the Town of Oakville. The Whiteoaks site is unique due to the co-location of two AM Transmitters that share the same set of six (formerly seven) 186-foot-tall radio telecommunication towers, but emit two separate DA-1 radiation patterns – one for each of CJYE and CJMR. The site was one of the first AM colocation sites in Canada, and remains rare to this day. The colocation of two AM stations using the same tower complex makes the site very complex from a radio telecommunication engineering standpoint.

Recently the two stations upgraded the site’s operations with new transmission tuning & phasing apparatus (2016) and provided Innovation, Science and Economic Development Canada (ISED) with the required Proof of Performance for each station which included Safety Code 6 documentation verifying compliance.

AM Radio transmission sites can be adversely impacted by nearby development, compromising their long-term viability and can in turn have adverse effects upon sensitive land uses. For this reason, since 1979, Whiteoaks has expended considerable resources and effort to educate land use authorities, including the Town of Oakville and Halton Region, as well as developers on how to appropriately design and locate new development to prevent or mitigate adverse effects. Key points in this history include:

- 1978: Whiteoaks provided evidence at the OMB hearing of the 1978 Town Official Plan of the impacts of development
- 1986-1988: Michael Caine spearheaded a task force involving the federal Department of

Communications, the CRTC, Industry Canada, the Ontario Ministry of Transportation and Communications, the Ontario Ministry of Municipal Affairs and the broadcasting industry to produce a computer program that identified the location of every broadcast transmitter in Ontario, which was then provided to over 800 municipal planning directors in Ontario

- 1993: Whiteoaks provided comments and expert planning and engineering reports (the Lehman-Tilston Report) for the planning process that led to the West Oak Trails Secondary Plan
- 1999, forward: Whiteoaks participated in and provided comments with respect to the planning process for development of Town lands north of Dundas (OPA #198)
- 2000: Whiteoaks provided comments on a proposed 20,000 seat soccer stadium in close proximity to the Whiteoaks site, as part of the Toronto 2008 Winter Olympics bid
- 2009: Whiteoaks provided comments on the North Oakville draft Zoning By-law
- 2010: Whiteoaks provided comments and advice and attended meetings with Halton Healthcare Services and the Region of Halton regarding the construction of the new Oakville Trafalgar Memorial Hospital
- 2010-2014: Whiteoaks provided comments and advice and attended meetings with respect to the construction of the 16 Mile Creek Dundas Bridge
- 2017-2018: Whiteoaks provided comments and advice with respect to the planning of the proposed new over 16 Mile Creek for the William Halton Parkway
- 2018-2019: Whiteoaks is a party to the LPAT appeal of the proposed Graydon-Banning/Martillac development adjacent to the Transmission Site due to concerns regarding adverse impacts
- 2019: Whiteoaks provided comments to the Town of Oakville regarding the nearby proposed development by 393 Dundas LP (Distrikt Developments) at 393 Dundas Street West

KEY CONCERNS REGARDING THE DEVELOPMENT APPLICATION

As noted, the Proposed Development is located approximately 750 metres from the Transmission Site. The development application and supporting materials submitted by the Oakville Green Development Inc. indicates that the Proposed Development is for four buildings that are each 15 storeys in height.

As stated in the LBA Letter of Opinion, they expect the adverse impacts for the Proposed Development to be similar to those indicated in the LBA Graydon-Banning/Martillac Report, but potentially to a lesser degree. The Graydon-Banning/Martillac developments identified the following adverse impacts:

1. **Interference with the CJYE and CJMR signals:** construction of tall buildings in close proximity to AM transmission facilities adversely impact the radio signal in two main ways:

(a) blocking or weakening the signal thereby reducing the number of households it reaches; and

(b) altering the broadcast pattern of the signal resulting in the stations' signals distorting the authorized transmission patterns, and as result, potentially causing interference to co and adjacent frequencies. Each station must protect 20kHz either side of their assigned frequency. For instance, 1250 kHz must protect 1230, 1240, 1250, 1260, 1270 kHz. While 1320 must protect 1300, 1310, 1320, 1330, 1340 kHz. Each radio station has its own broadcast authorized pattern that is protected by international treaty and domestic legislation.

The LBA Graydon-Banning/Martillac Report found, based on modelling, that "the AM stations' federally regulated patterns will be seriously affected during the construction activities and the presence of the buildings afterwards, causing both stations to be out of compliance with their strict, federally regulated and licensed parameters and potentially interfering with the signals of other AM radio stations." These adverse impacts are principally caused by:

- During construction: metal equipment, especially cranes, cables and construction elevators and components re-radiating the signal. The metal components are co-opted by the electromagnetic signal into becoming part of the antenna array, altering the broadcast pattern through re-radiation.
- Post-construction: the physical bulk of the buildings blocking the signal and the various metallic components within them (metal framing, wiring, re-bar etc.) re-radiating the signal.

2. **Public Health and Safety**: the LBA Graydon-Banning/Martillac Report found that the radiofrequency (RF) intensities at the site will cause safety hazards both during and after construction, unless properly mitigated as follows:

Construction Phase Hazards:

- contact current burns and shocks as well as arcing (sparks flying). These discharges can cause severe burns and other damage to the human body depending on the entry and exit points
- accidents resulting from shocks to construction workers while handling equipment, carrying heavy objects or operating at elevations above ground level
- electric sparks causing materials to combust
- physical injury to persons and property as a result of malfunctioning equipment
- arcing caused by the currents induced on metal structures and cables. The danger of sparks near combustible material is obvious. Static discharges can startle a person and cause the loss of grip on a handrail or an object with the risk of losing balance

Post-Construction Hazards:

- exterior metal railings and other long metal elements (such as aluminum window frames) can result in contact burns and shocks

- compromised integrity of elevator cables
 - malfunctioning garage door equipment
3. **Radio interference with construction equipment and consumer electronics:** the high levels of RF from the Transmission Site can interfere with nearby electronic devices. The interference can result in devices not functioning as predicted, total malfunction or premature failure. Special filters, shielding and excessive grounding will be required but may not eliminate all the effects to a desirable level. The LBA Graydon-Banning/Martillac Report identified the following impacts:
- RF interference with construction equipment, especially cranes, causing equipment to be difficult to operate, inoperable or to malfunction potentially resulting in catastrophic failure and damage to property and bodily injury
 - arcing can damage cranes and elevator hoisting cables, rendering them useless
 - household devices like entertainment systems and the like, alarms, monitoring systems, intercoms, and garage doors will be subject of malfunction or interference, especially the ones connected to cables or cable networks that are long enough to act as antennas at the frequencies involved

The recent experience during the construction of a bridge adjacent to the broadcast transmission site of CJMR/CJYE along Dundas Street is illustrative. High RF levels caused contact burns, while the PLC controlled crane lost several expensive electronic control boards and as a result the project was halted by health and safety personnel. A manual lift crane had to be brought in to complete the project (see Firmin & Associates Report).

In Industry Canada's Spectrum Management CPC-2-0-03 (June 26, 2014) 7.2 it states that land use authorities (LUA):

... have a responsibility to ensure that those moving into these areas, whether prospective residents or industry, are aware of the potential for their electronic equipment to malfunction when located in proximity to an existing broadcasting installation. For example, the LUA could ensure that clear notification be provided to future prospective purchasers.

NEXT STEPS AND RECOMMENDATIONS

The forgoing land-use compatibility issues require a multi-stage impact assessment and mitigation process in order to achieve consistency with the PPS and conformity with the Region and Town Official plans. It is the responsibility of the developer and the Town to ensure the proposed new land uses are compatible with existing land uses. As such, detailed modeling and mitigation is ultimately the responsibility of the developer. Detailed modeling can only be conducted once detailed design has been completed. Based on the LBA Graydon-Banning/Martillac Report, the following steps will need to be undertaken:

1. modeling of both construction phase impacts and impacts post-construction, based on detail design and construction workplans
2. develop a detailed mitigation planning and design, containing the following components:

- a. initial mitigation design based on modeling of the detailed design of the development, based on an iterative modeling and design process
- b. an RF engineer available on-site during the construction phase to adapt mitigation
- c. on-going monitoring of both the construction site and the AM radiation pattern during construction to assess mitigation effectiveness
- d. an emergency response plan for the construction phase to address any issues before they result in serious negative impacts to either the construction workers or the AM radiation pattern
- e. post-construction availability of an RF engineer to address issues on a case-by-case basis
- f. periodic monitoring of the AM radiation pattern and adaptive mitigation as required

3. warning clauses to warn purchasers of the potential risks involved

Our client is willing to cooperate with the Town and developer and provide the necessary technical information on its operations to achieve these goals. This includes the preparation of a preliminary modeling report by LBA which will be submitted to the Town by the end of the month. However, our client wishes to be clear that it has provided the Town and the developer full and detailed warning of its existing operation and any resulting worker injury, resident injury, damage to property or economic loss is solely the responsibility of the developer.

We respectfully request confirmation from the Town that it will be requiring the detailed modeling and mitigation plan, before approving of the Proposed Development, together with appropriate condition of draft approval that will ensure the mitigation plan is carried out and appropriate warning clauses in agreements of purchase and sale.

We are prepared to meet with the Town and the developer to discuss how to best move through this process in a manner that protects the interests of all involved, and to discuss appropriate conditions of approval to address the issues raised in this letter and the Lawrence Behr Associates study.

Yours truly,

O'CONNOR MACLEOD HANNA LLP



Konstantine J. Stavrakos
Encl.