RUBIDIUM
ENVIRONMENTAL

Professional Engineers Ontario

MEMORANDUM

April 26, 2016

Re: Noise Feasibility Study
105 Avondale & 143 Blue Water Road, Burlington

Rb File #: 2381

First Urban Inc
30 Pennsylvannia Avenue, Unit #1
Concord, ON L4K 4A5

1.0 INTRODUCTION

Rubidium Environmental was retained by First Urban to perform a preliminary noise impact review. It is our understanding that First Urban is proposing a townhouse complex to be located at 105 Avondale & 143 Blue Water Road in Burlington. The proposed development includes for approximately 39 two storey units with underground parking facilities. The surrounding area is predominantly residential with a community park located to the west.

The primary sources of noise with the proposed development are mechanical equipment, and ventilation equipment associated with underground parking lot. This memorandum addresses potential noise concerns raised by the City of Burlington with respect to nearby residences. This memorandum is conducted in accordance with the guidelines of the Ministry of the Environment and Climate Change (MOECC), specifically, NPC-300.

The subject site is located in a Class 1 – Urban noise environmental, where the background noise levels consist primarily of road traffic and urban hum (human activity).

2.0 ENVIRONMENTAL NOISE

Given the lack of commercial/industrial uses in the area, no significant sources of environmental noise could be identified that would impact this development. The most significant source of noise is expected to be road traffic from Lakeshore Boulevard. Given the setback distance is a minimum of 150m from the closest proposed townhome, and that the majority of the line of sight is obstructed by existing residential dwellings, the noise impacts are expected to be de minimis. Further, it is understood that the townhomes will be supplied with central HVAC systems, thus, no adverse noise impacts, as per NPC-300, are anticipated.

3.0 STATIONARY NOISE SOURCES

3.1 Ventilation System

As part of the underground parking lot, supply and exhaust ventilation systems will be required. Traditionally, this is supplied by a series of axial fans. As the equipment selections have not been finalized at this point, it is not known if any engineering controls are required. During the design stage it should be determined if 65 dBA can be met at the supply and exhaust systems with the selected equipment. If not, then a combination of the following might be necessary:

- Oversizing of the axial fans such that they can operate at lower RPMs to reduce noise
- Installation of acoustical louvers
- Installation of dissipative silencers

3.2 Mechanical Equipment

The underground parking lot is also planned to have an elevator with associated equipment (electrical and/or hydraulic). The noise from the mechanical room equipment will be emitted through the various ventilation openings, which can easily be addressed with engineering controls, such as acoustical enclosures or louvres, if necessary.

4.0 CONCLUSION

At this time, there are no adverse noise impacts anticipated from this development. There exists a small potential for elevated noise levels from the ventilation and mechanical equipment associated with the underground parking garage. It is our recommendation that once detailed site plans, and equipment listings are available, that the noise impact be modelled to determine if the noise impact at the nearest residential receptors are within the applicable guideline values. If necessary, specific noise controls can be establish and applied to the project.

Rubidium Environmental Inc.

Prepared by:

Robin Brown, Ph.D, P.Eng, TSRP
President
rbrown@Rb-enviro.com

