2294-2300 QUEENSWAY DRIVE
BURLINGTON, ON

Final

Air Quality Assessment

Project Location:
2294-2300 Queensway Drive
Burlington, ON

Prepared for:
Waggy Inc.
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Hamilton, ON L8P 2J8

Prepared by:
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July 16, 2019

MTE File No.: 45786-100



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1.0 INTRODUCTION

MTE Consultants Inc. (MTE) was retained by Waggy Inc. (the "Proponent") to conduct an Air Quality Assessment (AQA) for the proposed residential development located at 2294-2300 Queensway Drive in Burlington, Ontario (the "Site" or the "Property"). Compass directions described in this report are referenced to "Project North", which runs perpendicular to Queensway Drive.

The Site is located on a rectangular 0.4 hectare (ha) lot on the south side of Queensway Drive west of Guelph Line. MTE understands that the proposed development will comprise twenty-six (26) three-storey townhouse units complete with driveways and landscaped areas.

The Site is bounded by Queensway Drive to the north, abutting residential properties to the south and east and commercial properties to the west. The Queen Elizabeth Way (QEW) is located approximately 55 m to the north of the Site. The Site and surrounding properties are shown on **Figure 1**.

2.0 REGULATORY BACKGROUND

Halton Region's Policy 143 (12) requires Proponents of proposed developments with sensitive land uses in proximity to industrial, transportation and utility sources of noise, vibration, odour and air pollutants to complete appropriate studies and undertake necessary mitigation measures, in accordance with the Halton Region's Land Use Compatibility guidelines, Halton Region Air Quality Impact Assessment guidelines, and any applicable Ministry of the Environment, Conservation and Parks (MECP) guidelines.

More specifically, the Halton Region "Air Quality Guidelines" document provides that air quality studies are applicable when sensitive land uses are proposed with the following conditions present:

- Within 30 metres of a major arterial road or provincial highway or within 150 metres of a provincial freeway;
- In proximity to an industrial use; and
- In proximity to a utility use.

Based on the proposed development's sensitive land use (i.e. residential) and the proximity to the QEW as well as lands designated for utility use (i.e. <150m), an Air Quality Assessment was determined to be required.

3.0 SCOPE OF WORK

The purpose of this Air Quality Assessment (AQA) is to assess emission sources located on-Site and on surrounding properties and to discuss best management practices to reduce or mitigate potential impacts to local air quality. The scope of work for this assignment included the following:

- Review of the Halton Region document entitled "*Air Quality Guidelines*";
- Review of relevant previous reports and available architectural/civil drawings related to the Site;
- Review of publically available information related to the Site and surrounding properties (e.g. aerial photographs, local zoning by-law/schedules, the MECP Access Environment database, NPRI Listings);
- Identification and assessment of current and potential future land uses at neighboring properties (based on currently available information); and
- Assessment of potential impacts resulting from local sources of emissions.

No physical inspection of the Site or surrounding properties and no monitoring activities (i.e. air, odour or dust sampling) were conducted as part of this assignment.

Based on a preliminary assessment of the current and potential future property uses identified through aerial photography and the City of Burlington Zoning By-Law and in consideration of the Ministry document "*Guideline D-6 – Compatibility between Industrial Facilities and Sensitive Land Uses*", a review of actual and proposed activities within 300 metres radius of the Site was deemed appropriate for the purposes of this Study.

Although mentioned in Policy 143 (12), a Halton Region document entitled *"Air Quality Impact Assessment Guidelines"* was not available for review. MTE understands that there are no documents made available to the public under this name.

4.0 RECORDS REVIEW

MTE reviewed the City of Burlington Development Application Pre-Consultation Form, which details the preliminary development concept for the Site. Additionally, the following publically available information was reviewed by MTE as part of this assignment:

- Aerial photography available online;
- MECP Access Environment online database;
- National Pollutant Release Inventory (NPRI) online database; and
- The City of Burlington online Zoning By-Law mapping.

Database information located within 300 metres from the Site including NPRI, MECP Access Environment records as well as zoning by-law information is shown on **Figure 1.**

4.1 Development Concept

Based on City of Burlington Development Application Pre-Consultation Form, MTE notes that the proposed development will comprise twenty-six (26) three-storey townhouse units, landscaped areas, and asphalt parking.

4.2 Aerial Photography

MTE reviewed aerial photography available online for information pertaining to the Site and surrounding properties. Based on review of a 2018 aerial photograph, MTE notes the following:

- The QEW is evident to the north, approximately 55 metres from the Site; and
- A railway appears to be located approximately 315 metres north of the Site, beyond the QEW.

4.3 Access Environment

The Ministry of the Environment provides information on approvals and registration through Access Environment, which currently displays Environmental Compliance Approvals (ECA) (formerly referred to as Certificates of Approval), Renewable Energy Approvals (REA) and registrations on the Environmental Activity and Sector Registry (EASR) from December 1999 onward.

MTE reviewed the Access Environment online mapping tool for information pertaining to properties within 300 metres of the Site. Based on the search results, MTE identified one record. The record relates to 'All Type Landscaping Inc.', located approximately 245 metres south of the Site at 932 Orpha Street. Based on a review of EASR confirmation of registration (R-004-5111241782) issued on April 24, 2019, MTE understands that All Type Landscaping Inc. is registered as a Waste Management System storage yard involving the collection, handling, transportation and transfer of leaf, yard and wood waste by truck. Based on the nature of the operations and the distance from the Site, concerns related to air quality, dust and odour associated with All Type Landscaping Inc. at 932 Orpha Street is considered to be low.

There were no other records identified for properties within 300 metres of the Site.

4.4 National Pollutant Release Inventory

The National Pollutant Release Inventory (NPRI) was established in 1992 and is legislated under the Canadian Environmental Protection Act (CEPA, 1999). The NPRI requires companies to report information on releases and transfers of pollutants to the

Government of Canada on an annual basis. Only facilities that meet established reporting criteria are required to report to the NPRI. Pollutants from mobile sources such as cars and trucks, households, facilities that release pollutants on a smaller scale and certain sector activities, such as agriculture and education and some mining activities, are not included in the NPRI.

Environment and Climate Change Canada makes the information available to Canadians in an annual public report and maintains a detailed inventory that can be accessed and searched through an online database. Based on a review of the NPRI database, no records were identified for properties within 300 metres of the Site.

4.5 City of Burlington Zoning By-Law 2020

The City of Burlington hosts an interactive online zoning map which provides land use designations for properties throughout the Corporation of the City of Burlington. MTE reviewed the online zoning map for information pertaining to properties within 300 metres of the Site.

Based on a review of the zoning map, MTE notes that lands beyond Queensway Drive to the north are zoned for 'Utility Services'. Permitted uses in this area include transportation, communication or utility use, as well as buildings and structures required to implement the permitted use. A provincial highway (i.e. the QEW) and a railway are located within this area. Other areas within 300 m of the Site are primarily zoned for residential use.

Based on a review of land use designations for surrounding properties, there do not appear to be any properties subject to future industrial/commercial/utility use identified within 300 metres of the Site.

5.0 SUMMARY OF FINDINGS

The records review identified the following activities within 300 metres of the Site that may represent a potential concern with respect to air quality, dust or odour:

Location	Property Description	Approximate Distance from Site (m)*	Potential Air Emissions	Potential Impact
Northwest of the Site	Queen Elizabeth Way	55	By-products of combustion from motor vehicles (i.e. tail pipe emissions)	Medium to High
932 Orphas Street	All Type Landscaping Inc.	245	Dust and odorous emissions from yard waste management operations	Low*

*Based on a review of EASR confirmation of registration (R-004-5111241782).

Pollutants emitted from motor vehicles include particulate matter, carbon monoxide, nitrogen oxides and volatile organic compounds such as benzene. These pollutants have been associated with adverse health effects. The United States Environmental Protection Agency (USEPA) has conducted research to investigate emissions from roadways (although they have also indicated that further research is still required to fully understand longer term health impacts). Based on information published by USEPA, air emissions from vehicles, particularly from highways, have the potential to affect local air quality at nearby properties.

6.0 RECOMMENDATIONS

Based on the findings of this assessment, MTE offers the following recommendations that should be considered in the design and construction of the proposed development to reduce local air quality impacts:

- The setback of the buildings from the QEW should be considered to minimize impacts from motor vehicles (i.e. tail pipe emissions);
- It would be preferred if operable windows on the North side of the building (facing the QEW) were avoided if possible;
- Sound walls, cut sections and roadside vegetation should be considered for installation in the north portion of Site (between the QEW and the proposed buildings) to mitigate air and noise impacts;
- In situations where buildings are mechanically-ventilated, intake systems equipped with air filtration should be considered to improve indoor air quality;
- The setback of building exhausts from building intakes should be considered to minimize re-entrainment of emissions and improve indoor air quality; and
- Installation of exhaust stacks with vertical unimpeded flow and at high elevations (i.e. above the roof line) should be considered to improve air dispersion and minimize re-entrainment of emissions.

7.0 LIMITATIONS

Services provided by **MTE Consultants Inc**. (MTE) were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the Environmental Engineering & Consulting profession. No other warranty or representation, expressed or implied, as to the accuracy of the information, conclusions or recommendations is included or intended in this report.

This report was completed for the sole use of MTE and their client. It was completed in accordance with the Scope of Work referred in the text. As such, this report may not deal with all issues potentially applicable to the Site and may omit issues, which are, or may be, of interest to the reader.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such third parties. MTE accepts no responsibility for liabilities incurred by or damages, if any suffered by any third party as a result of decisions made or actions taken, based upon this report. Others with interest in the Site should undertake their own investigations and studies to determine how or if the condition affects them or their plans.

We trust the completed work meets your current requirements. If you have any questions or concerns, please do not hesitate to contact the undersigned.

Yours truly,

MTE CONSULTANTS INC.

Robert Reaume, P. Eng.
Division Manager, Environmental

Amitoj Khurana, E.I.T
Environmental Engineer-in-Training

ASK:dem

8.0 REFERENCES

The following list of references and sources were reviewed for the purposes of preparing this Study:

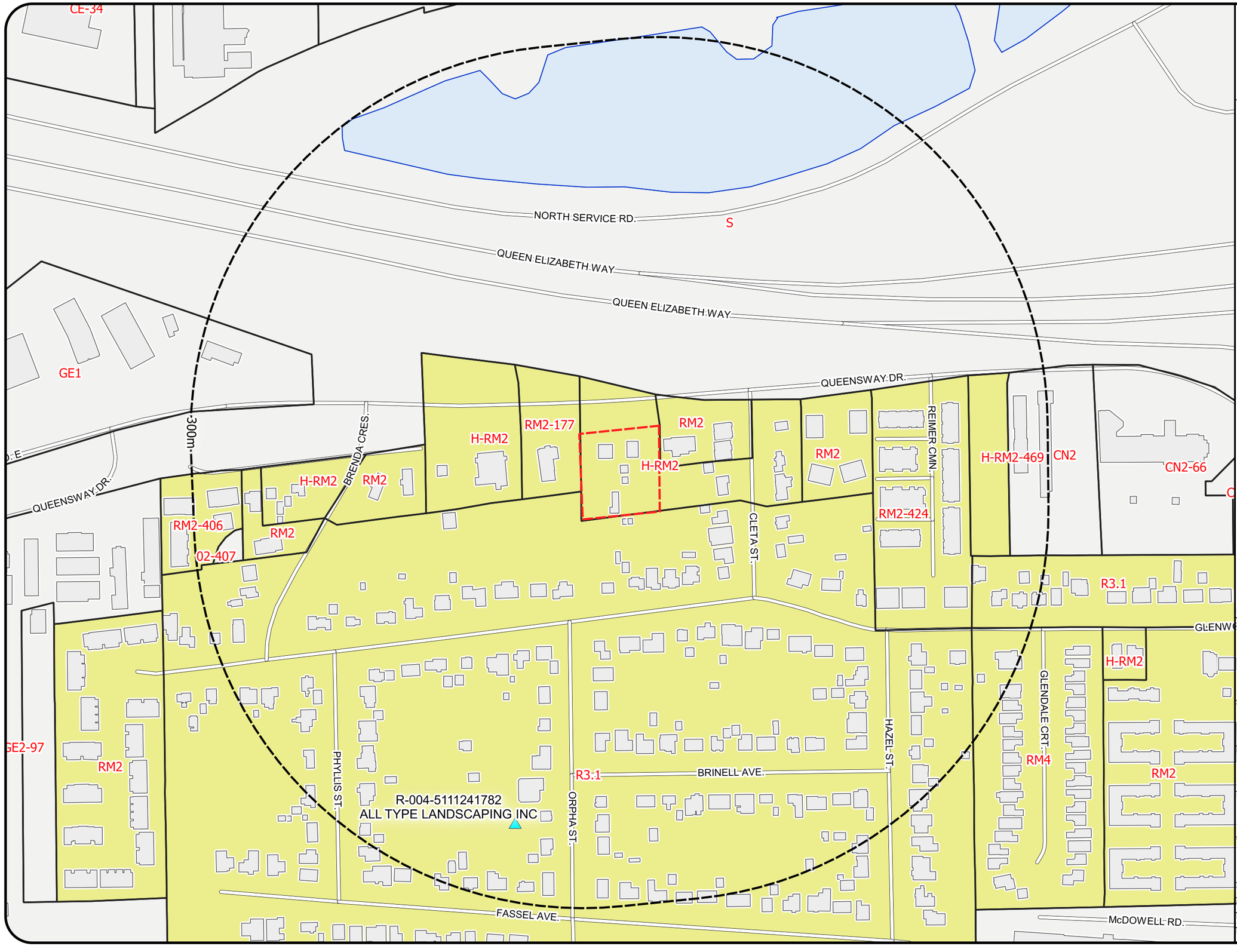
Reference / Source	Date
“Air Quality Guidelines.” Halton Region Official Plan Guidelines	-
“Halton Region Official Plan” Halton Region	June 19, 2018
City of Burlington Development Application Pre-Consultation Form	January 9, 2019
Aerial photographs, Google Earth	2018
Ontario Ministry of the Environment and Climate Change Access Environment (website)	June 11, 2019 (date of search)
Environment Canada National Pollutant Release Inventory (website)	June 11, 2019 (date of search)
City of Burlington Zoning By-Law 2020 – Interactive Zoning Map (website)	June 11, 2019 (date of search)
“Near Roadway Air Pollution and Health: Frequently Asked Questions.” Prepared by the USEPA Office of Transportation and Air Quality.	August 2014

FIGURES

Project No: 45786-100 Q:\45786\100\GIS\45786-100.qgz

AQA1.1

June 18, 2019 - 16:32 - Plotted By: jcunningham



NORTH

PROJECT NORTH

Legend

- Study Area (300m Buffer)
- Site Boundary
- EASR-Waste Management System
- Road
- Zoning Bylaw
- Residential Zones
- Ponds

Zoning Types:
Commercial (CN)
Employment (GE)
Mixed Use (MXE, MXT)
Parks and Open Spaces (P)
Residential (R, RM)
Utility Services (S)
Holding (H prefix)

Data Sources:

Ministry of the Environment, Conservation and Parks, Accessed May 8, 2019

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0 20 40 60 80 100 m

Scale (11x17): 1:2750

Project CRS: NAD83(CSRS) / UTM zone 17N

MTE
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Client: Waggy Inc.

Project: Air Quality Assessment

Site: 2294-2300 Queensway Drive

Title: **Site and Surrounding Properties**

Reviewed By	RMR		
Prepared By	FMK	Project No	45786-100
Drawn By	JKC	Figure No	1
Date	Jun. 2019		