1120 Cooke Boulevard, Burlington, ON

D-6 Land Use Compatibility – Air Quality Assessment

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ADI Developments (Masonry) Inc.

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D-6 Land Use Compatibility – Air Quality Assessment
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Version Control

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1.0	April 16, 2021	Draft	Emily Woronchak	Ron Taylor
1.1	July 8, 2021	Final	Emily Woronchak	Ron Taylor
1.2	November 17, 2021	Final updated drawings	Emily Woronchak	Ron Taylor
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3	December 13, 2023	Final	Amir Bahadori	Ron Taylor

1 Legal Notification

This report was prepared by EXP Services Inc. for the account of ADI Developments (Masonry) Inc.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EXP Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this project.

2 Introduction

EXP Services Inc. (EXP) was retained by ADI Developments (Masonry) Inc. to conduct a D-6 Land Use Compatibility Air Quality Assessment of the compatibility of the proposed mixed-use development of the site known municipally as 1120 Cooke Boulevard (the "subject site"). This report has been prepared in support of the requirements of the City of Burlington for Local Official Plan Amendment and Zoning By-law Amendment.

In order to facilitate the proposed development, amendments to the in-force Burlington Official Plan and Zoning By-law are required. The Subject Site is bound by paved roadways to the northeast and southeast, an undeveloped lot to the northwest and an area of overgrown vegetation to the southwest.

EXP understands the proposed development consists of three residential towers (Building A, Building B and Building C) with grade-related retail in Building B (the "proposed development"). The proposed development will have a total gross floor area of 79,758.54 square metres (9.0 FSI), with 1,1,31 residential and visitor parking spaces located within a five-level underground parking structure and 6 at-grade commercial parking spaces. Tower heights will be 33 stories for Building A, 29 stories for Building B, 31 stories for Building C and 4 stories for the podium with Buildings B and C.

The development plan, surrounding industrial activities, and provincial regulations and guidelines have been considered in this assessment. This report assesses the potential impact by industrial facilities and major transportation corridors on the air quality on the proposed development and potential compliance issues on nearby industry.

3 Method

To complete the above scope of work the following approach was conducted:

- A site visit to the area by EXP personnel
- Review of satellite imagery
- Review of City of Oshawa Official Plan and zoning for the surrounding area and Provincial Policy Statements
- Review of existing and pending MECP Environmental Compliance Approval (ECA) approvals and Environmental Activity Sector Registry (EASR) registrations for industries within 1000 m of Site through the Ontario Access Environment database.
- Review of National Pollutant Release Inventory data through Environment and Climate Change Canada of facilities within 1000 m through ECCC's Single Window Information Manager (SWIM) on line reporting system.
- Recent complaint history available from the applicable MECP District Office regarding air quality.
- Meteorological data for the study area.

The information obtained was then assessed in accordance with the MECP Guidelines D-1 (Land Use Compatibility) and D-6 (Compatibility between Industrial Facilities).

4 Provincial Guidelines and Regulations

The Ministry of the Environment, Conservation and Parks (MECP) D-series of guidelines are meant to identify potential compatibility issues between land uses. In the case of proposed sensitive uses in proximity to industrial uses, the initial assessment determines if there are any potential adverse effects of nearby industrial operations on the proposed location of the sensitive use. Where the potential for compatibility issues are identified a more detailed assessment may be performed.

4.1 D-Series of Guidelines

The MECP guideline, "D-6 Compatibility between Industrial Facilities" (the Guideline) is intended to be applied in the land use planning process to prevent or minimize future land use problems due to the encroachment of sensitive land uses and industrial land uses on one another. The Guideline recommends minimum separation distances of new developments from industrial facilities. These industrial facilities are defined as follows:

- Class I facilities are generally described as a small-scale, self-contained plant or building which produces/stores a product which is contained in a package and has low probability of fugitive emissions.
- Class II facilities are generally described as a medium-scale processing and manufacturing plant with outdoor storage of wastes or material (i.e. has an open process) and/or there are periodic outputs of minor annoyance.
- Class III facilities are generally described as a place of business for large-scale manufacturing or processing, characterized by: large physical size, outside storage of raw and finished products, large production volumes and continuous movement of products and employees during daily shift operations. They have a high probability of fugitive emissions.

The recommended minimum separation distances for new developments from Class I, II and III facilities are shown in Table 4.

Table 4. D-6 Separation Distances

Class	Potential Area of Influence	Minimum Separation distance
I	70	20
II	300	70
III	1000	300

The guideline allows less than the minimum separation distance based on an evaluation of the industrial processes and the potential for off-site impacts (this study).

4.2 Ontario Planning Act

The Ontario Planning Act (Section 2.1) sets the ground rules for land use planning in Ontario and describes how approval authorities and Tribunals must have regard to matters of provincial interest including orderly development, public health, and safety.

4.3 Provincial Policy Statement

The Provincial Policy Statement ("PPS") provides policy direction on matters of provincial interest related to land use planning and development; and sets out goals to ensure adjacent land uses are compatible from a health and safety perspective and are appropriately buffered. Provincial Policy Statement Sections 1.2.6.1 and 1.2.6.2 of Part V of the Provincial Policy Statement 2020 provides guidance similar to the D-6 guidelines and states the following:

"1.2.6.1 Major facilities and sensitive land uses shall be planned and developed to avoid, or if avoidance is not possible, minimize and mitigate any potential adverse effects from odour, noise and other contaminants, minimize risk to public health and safety, and to ensure the long-term operational and economic viability of major facilities in accordance with provincial guidelines, standards and procedures."

"1.2.6.2 Where avoidance is not possible in accordance with policy 1.2.6.1, planning authorities shall protect the long-term viability of existing or planned industrial, manufacturing or other uses that are vulnerable to encroachment by ensuring that the planning and development of proposed adjacent sensitive land uses are only permitted if the following are demonstrated in accordance with provincial guidelines, standards and procedures:
a) there is an identified need for the proposed use;
b) alternative locations for the proposed use have been evaluated and there are no reasonable alternative locations;
c) adverse effects to the proposed sensitive land use are minimized and mitigated; and
d) potential impacts to industrial, manufacturing or other uses are minimized and mitigated"

Section 1.6.8.3 of Part V of the Provincial Policy Statement 2020 further states that:

"New development proposed on adjacent lands to existing or planned corridors and transportation facilities should be compatible with, and supportive of, the long-term purposes of the corridor and should be designed to avoid, mitigate or minimize negative impacts on and from the corridor and transportation facilities."

4.4 Provincial Growth Plan

The Provincial Growth Plan, Section 2.2.5 – builds on the PPS to establish a unique land use planning framework for the Greater Golden Horseshoe, where the development of sensitive land uses will avoid, or where avoidance is not possible, minimize and mitigate adverse impacts on industrial, manufacturing, or other uses that are particularly vulnerable to encroachment;

Burlington Urban Growth Centre and Major Transit Station Area

The Aldershot GO Major Transit Station (MTSA) is one of four strategic intensification areas in the City of Burlington and is part of Burlington Integrated Mobility Plan.

4.5 Risk Assessment Guidelines

Some municipalities require a risk assessment to further assess compatibility with existing industrial facilities in the area. This assessment is based on the Canadian Environmental Protection Act (CEPA) list of hazardous substances and thresholds and the Conseil pour la réduction des accidents industriels majeurs" (CRAIM) list of hazardous substances which was developed using a multi-stakeholder process that reviewed and adopted all the hazardous substances from the Risk Management Program (RMP) developed by the U.S. Environmental Protection Agency (EPA) and a selection of chemicals from the Major Industrial Accident Council of Canada (MIACC) lists. The revised CRAIM List of 174 substances contains: 63 inflammables (RMP), 77 toxics (RMP), 10 inflammables (MIACC / Occupational Safety and Health Administration (OSHA) or National Fire Protection Association (NFPA)), 20 toxic (MIACC / OSHA or NFPA), 3 explosives and 1 miscellaneous. It was designed to take into account the List of hazardous substances from the EPA Risk Management Program (RMP) while also retaining the most hazardous substances from MIACC List 2: (CRAIM 2001). An E2 plan is required for facilities with charge, management or control of a listed substance that is at or above the quantity set out in column 3 of Schedule 1 of the E2 Regulations.

4.6 Ontario Regulation 419/05 – Air Pollution – Local Air Quality

4.6.1 Contaminants

Under Ontario Regulation 419/05 – Air Pollution – Local Air Quality (O. Reg. 419/05) of the Environmental Protection Act, a facility is required to meet prescribed standards for air quality contaminants at any location off-site.

For new developments near industrial sources, the existing land uses, and their approvals, must be considered and an industry has the right to object to a land use which may impact their ability to operate under their existing provincial approval. A developer can support compliance through design (e.g. removing elevated receptors), mitigation (e.g. sealed windows, filtration systems, etc.) or collaborating on at-source mitigation with the industry.

4.6.2 Dust

Under Ontario Regulation 419/05 – Air Pollution – Local Air Quality (O. Reg. 419/05) of the Environmental Protection Act, a facility is required to meet prescribed standards for particulates (dust) at any location off-site.

For new developments near industrial sources, the existing land uses, and their approvals, must be considered and an industry has the right to object to a land use which may impact their ability to operate under their existing provincial approval. A developer can support compliance through design or mitigation (e.g. sealed windows, filtration systems, etc.) or collaborating on at-source mitigation with the industry.

4.6.3 Odour

Odour is the sensation when receptors in the nose are stimulated. Individual response to odour varies and is subjective. Whilst some contaminants are specifically regulated based on odour effects, there is no formal regulation with respect to mixed odours. The MECP apply odour-based standards to locations "where human activities regularly occur at a time when those (odour emitting) activities regularly occur," such as residences and public meeting places. Most odours do not pose a health risk, but exposure to some can lead to headaches, nausea and other symptoms. They are generally only considered and regulated by the MECP in the presence of persistent complaints. Typically, odours are assessed against the following five criteria:

- Frequency – how often a receptor is likely to be exposed to an odour;
- Intensity – strength of the odour;
- Duration – the length of time the odour is likely to be detected by a receptor;
- Offensiveness – subjective character of odour – pleasantness or unpleasantness (hedonic tone); and
- Location – where the odour is likely to occur and with respect to land use. For example, rural smells would be more accepted in rural areas versus urban areas

4.7 Transportation

The Subject Site is located approximately 125 m south of Highway 401. The impact of transportation related air pollutants (TRAP) is well recognized in urban centres, including many existing buildings and sensitive communities in the Greater Toronto Area. The health risk from TRAP is higher within 500 metres of highways with an average daily traffic volume (ADTV) of 100,000 vehicles or more, and within 100 metres of arterial roads with an ADTV of 15,000 vehicles or more (Toronto Public Health, 2017).

Given that Toronto Public Health considers TRAP to be a major local contributor to air pollution and of amplified adverse health impacts due to air pollution, developers should consider reducing exposure to TRAP by implementing on-site mitigation measures for developments residing in close proximity to highways and roads. Highway 401, a highway with significant traffic volumes, is located within 500 m of the Site. Given that the proposed development is located within 125 m of a high traffic volume, mitigation measures should be considered. As such, a review of TRAP emissions is warranted at this time. TRAP mitigation strategies and good practices for residential buildings within an urban setting may include:

- Using air filtration systems to reduce contaminants in indoor air;
- Selecting fresh air intake locations and outdoor amenities away from roadways or loading docks;
- Optimizing timing and quantity of ventilation make-up air;
- Scheduling fresh air intake of HVAC units to avoid peak traffic volumes during rush hours;

- Using mechanical HVAC to create a positive pressure within the buildings (by providing more make-up air than is exhausted) to minimize air pollution infiltration;
- Placing outdoor amenities in locations with physical barriers from a TRAP source;
- Locating residential units and outdoor use areas (particularly ones for prolonged use) as far as possible from the roadways and buffered by transitional uses;
- Vegetation that is designed as a barrier (as a complement to other mitigation measures
- Installing physical barriers in areas of concern;
- Installing a vegetation buffer/barrier to block the property boundary from roadways and to filter emissions (coniferous plants are recommended for year-round efficacy;
- Management of outdoor activities;
- Consideration of prevailing winds when installing barriers or fresh air intakes.
- Including Environmentally Friendly opportunities such as, but not limited to, EV charging readiness, passive transportation, solar panel readiness, and solar lights.

In terms of land use planning at the site level, the following mitigation strategies may be considered:

- Mechanical rather than passive building ventilation with air particle filtration;
- Location of ventilation air intakes away from known pollution sources and roads; and,
- Optimizing timing and quantity of ventilation make-up air;

Based on a review of the architectural drawings for the proposed development traffic on this roadway can be compatible with the proposed development, provided mitigation measures, such as those listed above, considered during the detailed design phase.

5 Description of Development and Surrounding Area

5.1 Proposed Development

The subject site is located at the northeast corner of Masonry Court and Waterdown Road in the City of Burlington. An extended Cooke Boulevard will bound the east side of the subject site. The site is nearly square-shaped with frontages of approximately 91 metres (299 feet) on Masonry Court, 100 metres (328 feet) on Waterdown Road, and 91 metres (299 feet) on Cooke Boulevard. The total site area is 0.95 hectares (2.36 acres).

Currently, the subject site is largely vacant but was historically used as a concrete brick manufacturing plant from 1956 to 2011. A temporary one-storey sales and presentation centre is located within the southwest portion of the subject site associated with Phase 1 of the StationWest project. The proposed development consists of an area of approximately 2.36 acres (0.96 hectares). The Subject Site has a lot frontage of approximately 90.0 metres (295.3 feet) on Masonry Court and a depth of 99.6 metres (326.8 feet).

As indicated earlier, the proposed development will have a total gross floor area of 79,758.54 square metres (9.0 FSI), 1,026 residential and visitor parking spaces located within a five-level underground parking structure and four at-grade commercial parking spaces. Tower heights will be 33 stories for Buildings A, 29 stories for Building B, 31 stories for Building C, and 4 stories for the podium with Buildings B and C.

5.2 Nearby Industries – Database Searches

A search of environmental risk databases (National Pollutant Reporting Inventory (NPRI), Environmental Activity and Sector Registry (EASR) and Environmental Compliance Approvals (ECAs)) identified five (5) addresses of interest from an air quality perspective that are located within 1,000 m of the proposed development. The search did not identify any active applications for new approvals / registrations or amendments to existing approvals / registrations in the database.

A summary of the noteworthy findings is provided in Table 1 below:

Table 1. Identified Commercial/Industrial Facilities of Potential Air Quality Concern

Location	Facility	Database*	Activity
1140 Waterdown Road	Bulkwood Products Inc.	ECA – Air	Bulkwood Products Inc. has approval for one (1) horizontal wood grinder, equipped with a diesel fired engine that discharges combustion products to the atmosphere though one (1) stack.
1047 Cooke Boulevard	Etratech Inc.	ECA – Air	Etratech Inc. has approval for the following: • One (1) unused stack measuring 7.8 m above grade; • One (1) stack servicing a test lab and machine shop measuring 6.8 m above grade; • One (1) stack serving two (2) solder machines, two (2) laser marking machines, and one (1) hand soldering station measuring 6.8 m above grade; • One (1) stack serving one (1) soldering machine, one (1) EMC stencil cleaner, one (1) laser marking

Location	Facility	Database*	Activity
			machine, one (1) technician room, and one (1) soldering station measuring 6.8 m above grade; • One (1) stack serving one (1) soldering machine, one (1) coating machine, and hand soldering stations measuring 8.3 m above grade; and • One (1) stack serving one (1) coating machine, three (3) laser marking machines, and hand soldering stations measuring 8.3 m above grade. At the time of the Site visit, the property was occupied by Gentherm Electronics, an electronics manufacturer and engineering company. Based on an online search, Gentherm acquired Etratech Inc. in 2017.
1063 Cooke Boulevard	Category 5 Imaging	ECA – Air	Category 5 Imaging has approval for one (1) large format digital printer and associated airjet dryer; one (1) stack serving the exhaust system for the large format digital printer measuring 8.5 m above grade; one (1) stack serving an exhaust system for the airjet dryer measuring 8.5 m above grade; one (1) natural gas fired HVAC unit; five (5) natural gas fired roof mounted heaters; and one (1) space heater.
1093 Howard Road	St. Marys Cement Inc. (Canada) operating as CBM Ready Mix	ECA – Air	St. Marys Cement Inc. (Canada) operating as CBM Ready Mix (CBM) has approval for one (1) ready-mix concrete batching plant and one (1) portable ready-mix concrete batching plant with equipment including: • One (1) baghouse dust collector serving one (1) silo and one (1) cement pig, containing polyester filter material and a pulse-jet type cleaning system that exhausts through a stack extending 17.5 m above grade; • One (1) baghouse dust collector serving one (1) silo containing polyester filter material and a pulse-jet type cleaning system that exhausts through a stack extending 14 m above grade; • One (1) baghouse dust collector serving one (1) silo containing polyester filter material and a pulse-jet type cleaning system that exhausts through a stack extending 25.5 m above grade; • One (1) baghouse dust collector serving one (1) silo containing polyester filter material and a pulse-jet

Location	Facility	Database*	Activity
			type cleaning system that exhausts through a stack extending 14 m above grade; • One (1) baghouse dust collector serving one (1) cement scale containing polyester filter material and a pulse-jet type cleaning system that exhausts through a stack extending 13 m above grade; and • One (1) loading point dust collection system containing polyester filter material and a pulse-jet type cleaning system that exhausts through a stack extending 10 m above grade.
1077 Howard Road	KMP Industries Ltd.	ECA – Air	KMP Industries Ltd. has approval for one (1) permanent batch-type hot mix asphalt plant with the following equipment: • One (1) dryer/mixer with one (1) natural gas fired burner; • One (1) cyclone separator; • One (1) baghouse dust collector equipped with a pulse jet cleaning mechanism that exhausts through a stack measuring 27.5 m above grade; and • One (1) dust silencer. At the time of the Site visit, the property was occupied by KING Paving & Construction. Based on an online search, KMP Industries Ltd. operates as KING Paving and Construction.

*Facilities with approvals for water and sewer systems only are not listed as they do not have significant air emissions.

The following four (4) facilities identified in the database searches was considered insignificant from an air quality perspective. These are summarized in Table 2.

Table 2. Identified Facilities Considered Insignificant or Not Applicable

Location	Facility	Approval	Description/Assessment
151 North Service Road	The Cumis Group Limited	The Cumis Group Limited has approval for one (1) standby diesel generator for emergency situations that exhausts through a stack measuring 1.5 m above grade and four (4) natural gas fired boilers.	Insignificant.
29 Plains Road West	Aldershot Hardware Ltd.	Aldershot Hardware Ltd. was issued a Pesticides Limited Vendor Licence on April 30, 2020.	Insignificant.
1044 Waterdown Road	Corporation of the City of Burlington	Corporation of the City of Burlington was registered for an EASR – Standby Power System on January 6, 2015.	Insignificant
1035 Howard Road	A. Cupido Transport Limited	A. Cupido Transport Limited has approval for a waste management system serving the province of Ontario for the collection, handling, and transportation of wastes including non-hazardous liquid industrial wastes, hazardous liquid and solid wastes, and various domestic and commercial wastes including dewatered catch basin clean-out material and grease type wastes.	A. Cupido Transport Limited is no longer located at this address. The property is currently occupied by St. Marys Cement Inc. (Canada) operating as CBM Ready Mix which was identified as being a potential for air quality issues (refer to Table 3).

5.3 Site Visit Observation

A site visit was conducted by Emily Woronchak of EXP on April 7, 2021. The site visit comprised a walk through within a one kilometer (1,000 m) radius (Study Area) of the Subject Site to characterize the operations of facilities in the area and to identify odours and potential emissions which may affect the proposed development. Meteorological conditions during the Site visit were clear skies, temperature ranging between 7.1 °C and 8.2 °C, with wind ranging between approximately 12 to 18 km/h from the north-northeast.

The Subject Site is surrounded by a mixture of residential, commercial, and industrial facilities. During the Odour Screening Assessment (refer to Section 2.4) no odours were detected with the Nasal Ranger at all locations illustrated in Figure 4 (Appendix A). The only odours, as detected by human senses, were odours typical of an urban environment (traffic). No significant dust impacts, other odours, or off-site odours were noted at the Subject Site at the time of the site visit from

approximately 12:55 am to 4:45 pm. However, minor dust impacts were noted at truck entrance of CBM off of Howard Road, approximately 560 m southeast from the Subject Site.

It was observed that the further northeast, east, southeast, and south portions of the 1 km Study Area consisted mainly of residential properties while the further southwest portions of 1 km Study Area consisted mainly of vacant land and with some commercial properties. St. Marys Cement Inc. (Canada) operating as CBM Ready Mix, a ready-mix concrete company, and KING Paving and Construction, an asphalt plant and aggregate depot, were observed southwest of the Subject Site, along Howard Road.

Residential properties and residential properties in the early stages of development were observed northeast of the Subject Site along Masonry Court, with the nearest off-site residence located approximately 16 m northeast of the Subject Site on the north side of Masonry Court. EXP understands nearby development applications include the following:

Address	Application	Uses	Height	Density (FAR)	Dwelling Units	Status
1062-1074 Cooke Blvd.	OPA, ZBA	Mixed	30, 32	9.51	809	Under review
1085 Clearview Ave.	OPA, ZBA	Res.	7, 7	-	164	Approved (OLT)
35 Plains Rd.	OPA, ZBA	Mixed	8	4.02	72	Approved
40-70 Plains Rd.	OPA, ZBA	Res.	12	4.33	360	Appealed
53-71 Plains Rd.	OPA, ZBA	Mixed	9, 18	3.58	555	Approved (OLT)
92 Plains Rd.	OPA, ZBA	Mixed	4	1.20	49	Approved (OLT)
1029-1033 Waterdown Rd.	OPA, ZBA	Mixed	29	8.20	295	Appealed

Most of the commercial/industrial facilities identified during the Site visit were located along Cook Boulevard, Plains Road East, Plains Road, West, and Howard Road, located southeast, east to southeast, southeast to south, and southwest of the Subject Site, respectively.

Table 3 lists commercial, light industrial, and industrial facilities that were observed within the Study Area but not identified in the database searches.

Table 3. Industrial/Commercial Facilities Observed during Site visit

Location	Facility	Description/Assessment	Potential issue?
2 Masonry Court	Cougar	Shoe company head office and warehouse	No, based on inferred operations
1026 Cooke Boulevard	KD Installations Megbrook Holdings Inc. Everik International Digital21	Material handling systems installation/sales Real estate/developer/finance Electronic parts supplier Home automation service	No, based on inferred operations
1038 Cooke Boulevard	Burlington Pump Inc. O'Dell Associates Inc.	Industrial pump/valves/controls supplier	No, based on inferred operations

Location	Facility	Description/Assessment	Potential issue?
		HVAC equipment supplier/servicing	
1047 Cooke Boulevard	Gentherm Electronics	Electronics manufacturer and engineering	Yes, based on inferred operations
1050 Cooke Boulevard	Primary Fluid Systems Inc.	Corporate office and manufacturing/sales of metering pump accessories	Yes, based on inferred operations
1074 Cooke Boulevard	PV Labs	High performance image capture and analysis design and development service	No, based on inferred operations
14 Plains Road East	ESSO Circle K Tim Horton	Gas station Convenience store Restaurant	No, based on inferred operations
15 Plains Road East	RBC	Bank	No, based on inferred operations
20 Plains Road East	Russell Williams Family Restaurant	Restaurant	No, based on inferred operations
53 Plains Road East	Solid Gold	Restaurant and entertainment club	No, based on inferred operations
91 Plains Road East	Klippings Hair Salon Eighth Empire Tattoos & Piercings Loony Tunes Abbey Stained Glass	Hair salon Tattoo and piercing service Record store Stained glass supplier/repairs/lessons service	No, based on inferred operations
99 Plains Road East	Royal Inn	Hotel	No, based on inferred operations
115 Plains Road East	Skycraft Hobbies Kavita Salon & Spa	Hobby supply store Hair salon	No, based on inferred operations
133 Plains Road East	West Plains Bistro	Restaurant	No, based on inferred operations
145 Plains Road East	Wendy's	Restaurant	No, based on inferred operations
157 Plains Road East	D.O.T. Furniture	Furniture store	No, based on inferred operations

Location	Facility	Description/Assessment	Potential issue?
172 Plains Road East	3 Peaks	Software company	No, based on inferred operations
175 Plains Road East	Multi-tenant retail/commercial	Butcher Catering company Bakery Travel agency Picture frame shop	No, based on inferred operations
184 Plains Road East	Mortgage Architects	Mortgage broker	No, based on inferred operations
185 Plains Road East	Multi-tenant retail/commercial	Pharmacy Pain management & dependency clinic Stained glass studio Accounting/bookkeeping service Computer repair service	No, based on inferred operations
195 Plains Road East	Multi-tenant retail/commercial	Spa Business development service Driving school House cleaning service Olive oil dispensary Barber shop Wet-cleaning and alterations	No, based on inferred operations
7 Plains Road West	Jerry's Automotive Inc.	Truck and car repair	Yes, based on automotive repair operations
15 Plains Road West	The Fitness Firm	Gymnasium	No, based on inferred operations
18 Plains Road West	Multi-tenant mixed-use development	Retirement residence Clinic Dentist Audiologist Pharmacy Physiotherapy	No, based on inferred operations

Location	Facility	Description/Assessment	Potential issue?
29 Plains Road West	Home Hardware Aldershot FHO Pharmasave Hasty Market Tim Hortons Nail Pro Studio and Spa	Hardware store Doctors office Pharmacy Convenience store Restaurant Spa and nail salon	No, based on inferred operations
38 Plains Road West	Salon Miah	Hair salon	No, based on inferred operations
40 Plains Road West	Redline Office Solutions RK Hair Studio	Office supply store Hair salon	No, based on inferred operations
70 Plains Road West	Multi-tenant retail/commercial	Spa Tennis store Restaurant Clothing shop Tea store Foot clinic	No, based on inferred operations
93 Plains Road West	Baje Auto Services	Automotive repair shop	Yes, based on automotive repair
100 Plains Road West	Multi-tenant mixed-use development	Gymnasium Restaurant Convenience store Nail salon and spa Family doctor and pharmacy Chiropractor Clothing store	No, based on inferred operations
107 Plains Road West	We Care Aldershot Dental Care Evelyn's Gerry Lush Clothiers Ma Cherie Fabrics & Friendships Jaggard's Florist & Garden Aldershot Financial Group	Educational services Dentist Clothing store Clothing store Fabric store Florist Financial service	No, based on inferred operations
127 Plains Road West	Benjamin Moore Paints	Paint store	No, based on inferred operations

Location	Facility	Description/Assessment	Potential issue?
	Ye Olde Squire	Restaurant	
141 Plains Road West	Monarch Dentistry Medisthetics & Laser Clinic	Dentist Cosmetics clinic	No, based on inferred operations
159 Plains Road West	Burlington & Area Midwives	Midwives service	No, based on inferred operations
173 Plains Road West	Gardens Dental	Dentist	No, based on inferred operations
181 Plains Road West	Start Fresh Dental Hygiene Times Nail & Spa Dog Room Basketful Boutique Play 181 Florist	Dentist Nail salon Dog grooming service Clothing store Corporate office Florist	No, based on inferred operations
1032 Howard Road	Argo Wholesale Produce Ltd. Ippolito Group	Produce wholesaler Produce processor/wholesaler	No, based on inferred operations
1060 Howard Road	Ippolito Group Mission Produce Inc.	Produce processer/wholesaler Produce wholesaler	No, based on inferred operations
1077 Howard Road	KING Truck & Equipment Repair	Truck/trailer/heavy equipment repair including welding and fabrication services	Yes, based on automotive repair and welding operations
1176 Howard Road	Ted's Service Centre	Automotive services and repairs	Yes, based on automotive repair operations
1013 St. Matthews Avenue	Full Circle Martial Arts Active Aldershot	Martial arts school Fitness club	No, based on inferred operations
1135 Gallagher Road	Aldershot Greenhouses Limited	Wholesale florist	Yes, based presence of three (3) stacks unable to attribute inferred operations to.

Location	Facility	Description/Assessment	Potential issue?
201 North Service Road	Ippolito Transportation Inc. Ippoito Group	Transportation and warehousing service Produce wholesaler	No, based on inferred operations
166 Flatt Road	Aldershot Landscape Contractors Burlington Tree Farms Limited	Landscaping company Tree farm	No, based on inferred operations
29 Panin Road	Slagter Construction Ltd.	Construction company	Yes, based on inferred operations
1021 Waterdown Road	Dee Signs	Sign shop	No, based on inferred operations
1022 Waterdown Road	Antec Appraisal Group	Real estate appraiser	No, based on inferred operations
1025 Waterdown Road	Feber & Oostdyk	Lawyers office	No, based on inferred operations
1046 Waterdown Road	Burlington Fire Department Station No. 3	Fire station	No, based on inferred operations
1048 Waterdown Road	St. John Ambulance	Emergency training service	No, based on inferred operations
1140 Waterdown Road	B.A.M. Trucking Inc./B.A.M. Pallets	Wood pallet manufacturing and recycling	Yes, based on inferred operations
1160 Waterdown Road	Cosmos Concrete & Paving	Concrete and paving service	Yes, based on inferred operations

5.4 Odour Screening Assessment

An odour screening assessment was conducted in conjunction with the D-6 site visit by EXP on April 7, 2021 to assess any potential off-site odour sources at the Subject Site.

At the time of the odour screening assessment, the Subject Site was occupied by one (1) small presentation centre and an associated paved laneway and parking lot located on the south portion of the property. The remaining portions of the Subject Site were vacant and contained various construction materials and storage bins. Odour measurements were taken using a St.

Croix Nasal Ranger Field Olfactometer at three (3) locations from approximately 1:19 pm to 1:35 pm am, illustrated in Figure 4 (Appendix A). Meteorological conditions during the odour assessment were clear skies, temperature of approximately 13.6 °C, with wind ranging between approximately 1.9 to 11.3 km/h from the east-southeast, southeast, and south-southeast. No odours were detected with <2 odour units (OU) at all locations. The only odours, as detected by human senses, were odours typical of an urban environment (traffic), with no significant industrial source identified. No other odours or off-site odours were detected by human senses at the Subject Site.

5.5 Site Meteorology

Based on five-year (January 2018 to December 2022) Environment Canada historical meteorological data from Hamilton Airport, approximately 15 km from the Site, the annual resultant vector is from the southwest (266°) with an average wind speed of 15.8 m/s. Annual and seasonal wind rose diagrams showing wind direction (blowing from) and wind speed distribution are provided in Figures 1 to 5.

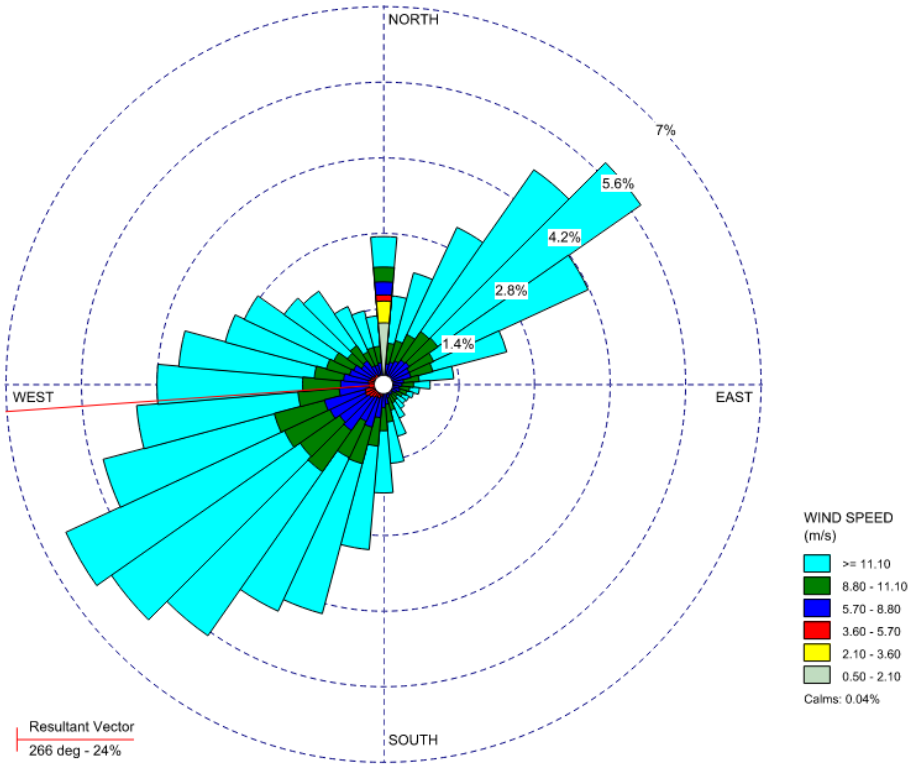


Figure 1. Annual Wind Rose – Hamilton Airport, ON

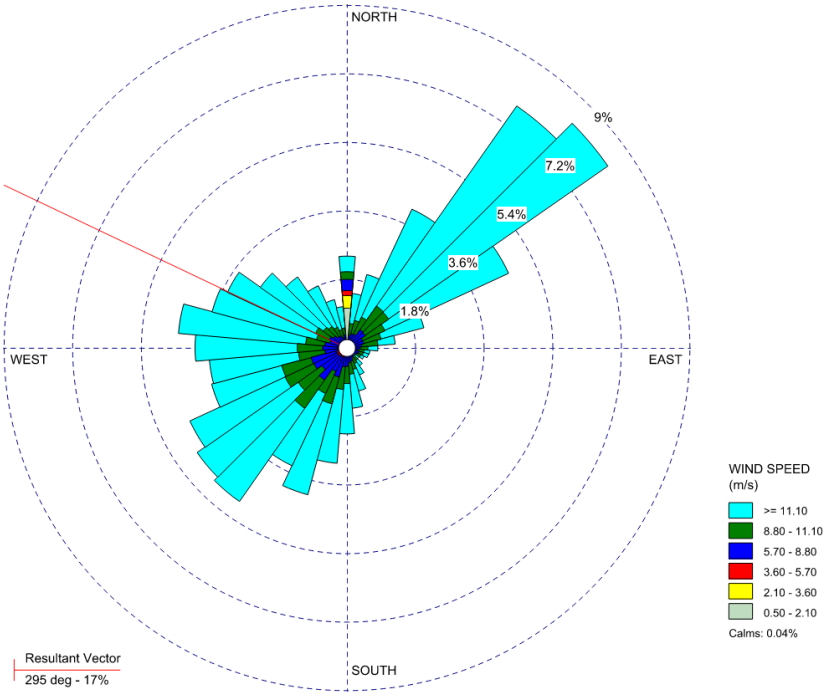


Figure 2. Spring Wind Rose – Hamilton Airport, ON

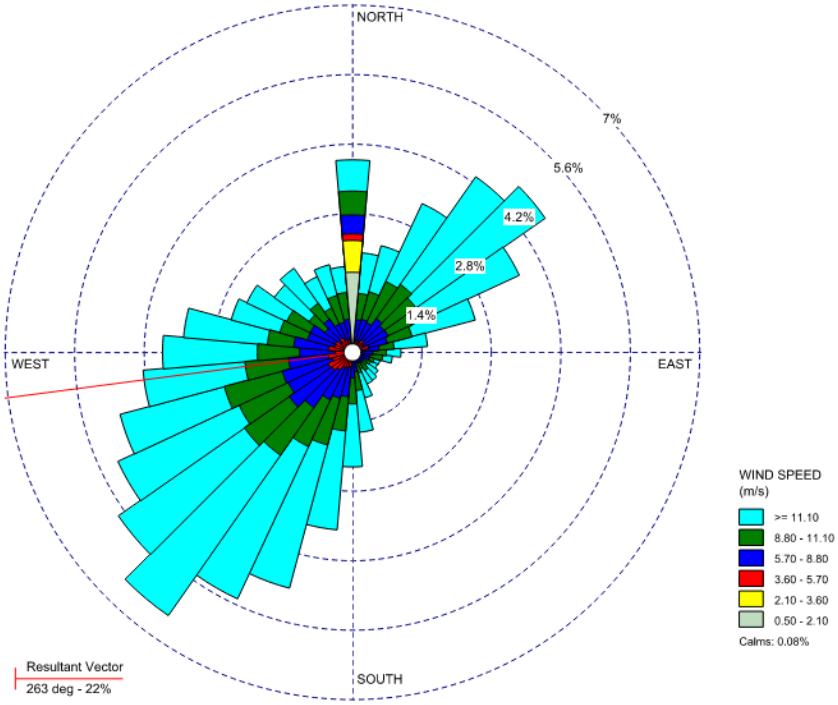


Figure 3. Summer Wind Rose – Hamilton Airport, ON

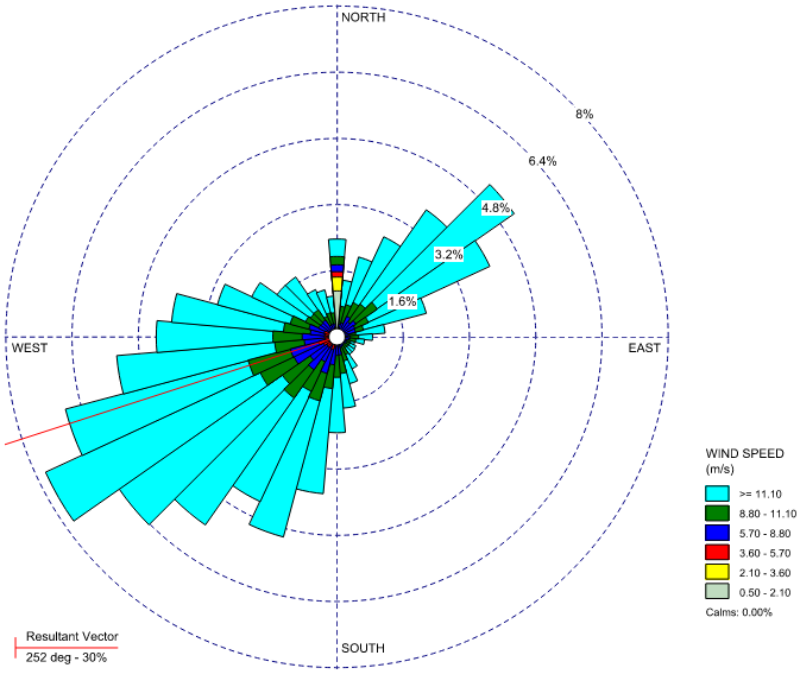


Figure 4. Fall Wind Rose – Hamilton Airport, ON

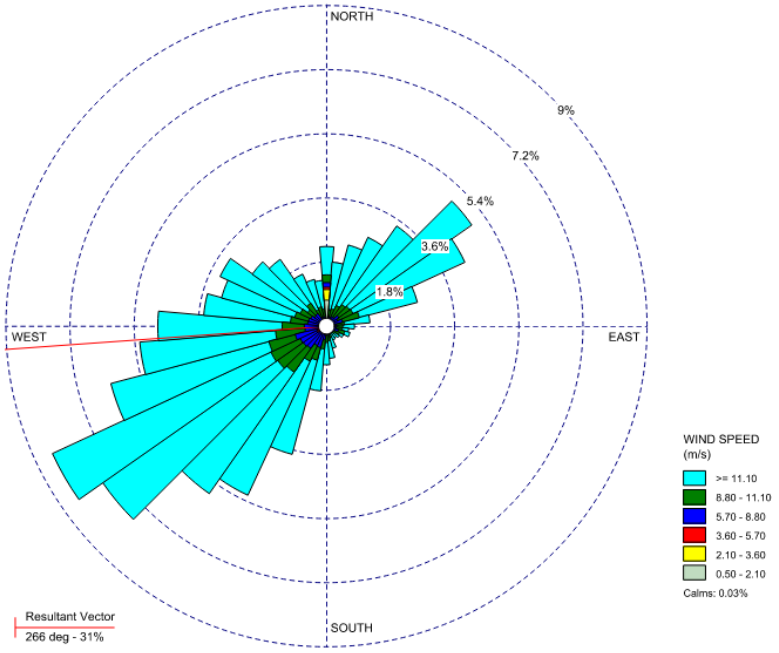


Figure 5. Winter Wind Rose – Hamilton Airport, ON

6 D-6 Classification and Nearby Industries

The commercial and light industries identified within 1 km of the Subject Site are generally of Class I facilities with a low probability of significant fugitive emissions. Based on the database search results and the observations from the Site visit (Table 3), facilities considered for further assessment are provided in Table 4, along with their distance to the Subject Site, facility Class, potential air quality issues, and location (inside or outside) relative to the minimum separation distance and area of influence.

Note that while the D-6 guideline suggests the operation of paint-spray booths as a Class II facility, all identified auto-repair facilities have been deemed Class I facilities since paint types now used are less odorous (water- versus solvent-based) and the MECP has a specific Environmental Activity and Sector Registry, including Ontario Regulation 347/12: Regulations under part II.2 of the Act – Automotive Refinishing, for this industry that requires specific operating conditions which further reduces emissions.

Table 4. D-6 Facility Classifications and Assessment

No	Facility	Address	Distance to Site (m)	Class*	Potential Issue	Rationale for Classification	Issue Identified?**
1	Gentherm Electronics	1047 Cooke Boulevard	36 m east	I	PHC/VOC emissions, fugitive emissions	Facility with ECA-Air (Etratech Inc., obtained by Gentherm Electronics in 2017), medium scale electronics manufacturing, no outdoor storage of wastes or material, not an open process, and infrequent movement of products/heavy trucks.	Yes. Outside minimum separation distance and inside area of influence. No odours or dust detected at the time of the Site visit.
2	KMP Industries Ltd. (operating as KING Paving and Construction) KING Truck & Equipment Repair	1077 Howard Road	63 m south	III	PHC/VOC emissions, fugitive emissions, dust	Large scale permanent batch-type hot mix asphalt plant with ECA-Air (KMP Industries Ltd.), medium scale truck/trailer/heavy equipment repair including welding and fabrication	Yes. Inside minimum separation distance and area of influence. No odours detected at the time of the Site visit.

No	Facility	Address	Distance to Site (m)	Class*	Potential Issue	Rationale for Classification	Issue Identified?**
						services, open process, frequent movement of heavy trucks, and dust likely to be persistent.	
3	Category 5 Imaging	1063 Cooke Boulevard	95 m south m	II	PHC/VOC emissions, fugitive emissions	Medium scale large format printing facility with ECA-Air, presence of three (3) stacks, no outdoor storage of wastes or material, and not an open process.	Yes. Outside minimum separation distance and inside area of influence. No odours detected at the time of the Site visit.
4	Bulkwood Products Inc. B.A.M. Trucking Inc./B.A.M. Pallets	1140 Waterdown Road	108 m west	II	PHC/VOC emissions, fugitive emissions, dust	Facility with ECA-Air (Bulkwood Products Inc.), medium scale wood pallet manufacturing and recycling facilities, and outdoor storage of wastes and materials	Yes. Outside minimum separation distance and inside area of influence. No odours or dust detected at the time of the Site visit.
5	Primary Fluid Systems Inc.	1050 Cooke Boulevard	140 m southeast	I	PHC/VOC emissions, fugitive emissions	Small scale corporate office and manufacturing/sales of metering pump accessories, no dust/noise/vibrations detected, no outside storage of wastes or materials.	No. Outside minimum separation distance and area of influence. No odours or stack observed at the time of the Site visit.
6	Cosmos Concrete & Paving	1160 Waterdown Road	157 m west	II	Fugitive emissions, dust	Medium scale concrete and paving service, outside storage of materials, and dust likely to be frequent	Yes. Outside minimum separation distance and inside area of influence. No odours or stack observed at the

No	Facility	Address	Distance to Site (m)	Class*	Potential Issue	Rationale for Classification	Issue Identified?**
						and occasionally intense.	time of the Site visit.
7	St. Marys Cement Inc. (Canada) operating as CBM Ready Mix	1093 Howard Road	284 m south	III	Fugitive emissions, dust	Ready-mix concrete batching plant with ECA-Air, noise audible off property, large production levels, open process, frequent movement of heavy trucks, and dust likely to be persistent.	Yes. Inside minimum separation distance and area of influence. No odours detected at the time of the Site visit. Dust detected on Howard Road.
8	Jerry's Automotive Inc.	7 Plains Road West	316 m south	I	PHC/VOC emissions, fugitive emissions	Small scale auto body garage, no outdoor storage of wastes or material, and not an open process.	No. Outside minimum separation distance and area of influence. No odours or stack observed at the time of the Site visit.
9	Baje Auto Services	93 Plains Road West	451 m south	I	PHC/VOC emissions, fugitive emissions	Small scale auto body garage, no outdoor storage of wastes or material, and not an open process.	No. Outside minimum separation distance and area of influence. No odours or stack observed at the time of the Site visit.
10	Slagter Construction Ltd.	29 Panin Road	465 m south	II	Fugitive emissions, dust	Small scale construction company and outdoor storage of soil/gravel.	No. Outside minimum separation distance and area of influence. No odours or stack observed at the

No	Facility	Address	Distance to Site (m)	Class*	Potential Issue	Rationale for Classification	Issue Identified?**
							time of the Site visit.
11	Ted's Service Centre	1176 Howard Road	560 m southwest	I	PHC/VOC emissions, fugitive emissions	Small scale auto body garage, no outdoor storage of wastes or material, and not an open process.	No. Outside minimum separation distance and area of influence. No odours or stack observed at the time of the Site visit.
12	Aldershot Greenhouses Limited	1135 Gallagher Road	796 m northeast	I	PHC/VOC emissions, fugitive emissions	Medium scale wholesale florist, presence of three (3) stacks, no outdoor storage of wastes or material, and not an open process.	No. Outside minimum separation distance and area of influence. No odours observed at the time of the Site visit.

7 Assessment – Potential Air Quality Impacts

7.1 General Air Quality Contaminants

1047 Cooke Boulevard

The Class I facility located at 1047 Cooke Boulevard is outside the minimum separation distance and inside the area of influence, as defined under the D6 Guidelines. This facility includes Gentherm Electronics, an electronics manufacturing facility. Etratech Electronics, obtained by Gentherm Electronics in 2017, has an ECA-Air for their operations. As such, they are required to meet the standards for air quality at their property line and beyond. The proposed development will have elevated receptors, which may not have been considered in the approval process and could be impacted by the emissions from this facility. It is also noted at this time, that existing residences are present within the minimum separation distance of this facility, with the closest being north adjacent to the facility. Due to the presence of existing residential properties in the area, it is anticipated that, with respect to general air quality contaminants regulated under Ontario Regulation 419/05, the Subject Site is compatible with surrounding lands.

1077 Howard Road

The Class III facility located at 1077 Howard Road is KMP Industries Ltd., operating as KING Paving and Construction, (permanent batch-type hot mix asphalt plant) and KING Truck & Equipment Repair (truck/trainer/heavy equipment repair including welding and fabrication services). This facility is inside the minimum separation distance and the area of influence as

defined under the D6 Guidelines. KMP Industries Ltd. has an ECA-Air for its operations. As such, they are required to meet the standards for air quality at their property line and beyond. The proposed development will have elevated receptors, which may not have been considered in the approval process and could be impacted by the emissions from this facility. EXP has reviewed the emissions information available in the posted ECA-Air for King Paving and Construction to assess potential impact at elevated receptors on the proposed developments. Based on the available information and conservative assumptions and assessment at additional receptors placed at each floor height and amenity areas, the existing ECA is adequate to protect impacts at elevated receptors at the proposed development. It is also noted that existing residences are present within the minimum separation distance and area of influence of this facility, with the closest being east adjacent to the facility, on the south side of Waterdown Road, and approximately 191 m north, on the north side of Masonry Court. It is noted that a retirement residence is located approximately 124 m southeast of the facility. Due to the presence of existing residential properties, it is anticipated that, with respect to general air quality contaminants regulated under Ontario Regulation 419/05, the Subject Site is compatible with surrounding lands.

As a heavy equipment servicing facility where welding operations take place on-site, acetylene use is expected. Acetylene is a Major Industrial Accidents Council of Canada (MIACC) List 1 substance with a threshold of 50 tonnes. Exceeding this quantity is unlikely but has not been confirmed. No large outside storage of compressed gases were observe during the site visit.

1063 Cooke Boulevard

The Class II facility located at 1063 Cooke Boulevard is Category 5 Imaging and is outside the minimum separation distance but within the area of influence, as defined under the D6 Guidelines. Category 5 Imaging is a large format printing facility and has an ECA-Air for its operations. As such, they are required to meet the standards for air quality at their property line and beyond. The proposed development will have elevated receptors, which may not have been considered in the approval process and could be impacted by the emissions from this facility. It is also noted at this time that existing residences are present within the minimum separation distance and area of influence of this facility, with the closest being south adjacent to the facility. Due to the presence of existing residential properties in the area, it is anticipated that, with respect to general air quality contaminants regulated under Ontario Regulation 419/05, the Subject Site is compatible with surrounding lands.

1140 Waterdown Road

This Class II facility located at 1140 Waterdown Road is Bulkwood Products Inc. and B.A.M. Trucking Inc./B.A.M. Pallets, wood pallet and manufacturing and recycling facilities. This facility is outside the minimum separation distance but within the area of influence as defined under the D6 Guidelines. Bulkwood Products Inc. has an ECA for their operations. As such, they are required to meet the standards for air quality at their property line and beyond. The proposed development will have elevated receptors, which may not have been considered in the approval process and could be impacted by the emissions from this facility. It is also noted at this time that existing residences are present within the area of influence of this facility, with the closest being approximately 215 m northeast of the facility. Due to the presence of existing residential properties, it is anticipated that, with respect to general air quality contaminants regulated under Ontario Regulation 419/05, the Subject Site is compatible with surrounding lands.

1160 Waterdown Road

The Class II facility located at 1160 Waterdown Road is Cosmos Concrete & Paving and is located outside the minimum separation distance but within the area of influence as defined under the D6 Guidelines. No environmental permissions (EASR or ECA) were identified for this facility, but approval would be required if their operations released contaminants to the air, such as with a welding booth or dust collector, that would ensure no off-site impacts. As such, while no significant odours or air quality impacts are anticipated for this facility, air quality at the proposed Site can be protected with enforcement of the MECP approval process.

It is also noted that existing residences are present within the area of influence of Cosmos Concrete & Paving with the closest being approximately 215 m northeast of the facility. Due to the presence of existing residential properties, it is anticipated that, with respect to general air quality contaminants regulated under Ontario Regulation 419/05, the Subject Site is compatible with surrounding lands.

1093 Howard Road

The Class III facility is located at 1093 Howard Road and is inside the minimum separation distance and the area of influence as defined under the D6 Guidelines. St. Marys Cement Inc. (Canada), operating as CBM Ready Mix, a ready-mix concrete batching plant, has an ECA-Air for its operations. As such, they are required to meet the standards for air quality at their property line and beyond. The proposed development will have elevated receptors, which may not have been considered in the approval process and could be impacted by the emissions from this facility. EXP has reviewed the Emissions Summary Dispersion Modelling (ESDM) Report submitted for the approved ECA-air CMB Ready Mix located at 1093 Howard Road to assess potential impact at elevated receptors on the proposed developments. Using the same source input parameters in the ESDM and was reviewed and approved by the MECP for the ECA approval, EXP conducted dispersion modelling in accordance with Air Dispersion Modelling Guideline For Ontario [Guideline A11] Guideline to determine the impact at ground and elevated receptors at the proposed buildings. Over 1,200 discrete receptors were placed on the proposed buildings at amenity areas and each floor from ground level to penthouse. The ECA, modelling input summary table and emissions summary for the building receptors are provided in Appendix C. Based on assessment with additional receptors placed at each floor height and amenity areas the existing ECA is adequate to protect impacts at elevated receptors at the proposed development. It is also noted that existing residences are present within the minimum separation distance and area of influence of this facility, with the closest being approximately 128 m southeast of the facility. It is noted that a retirement residence is located east adjacent to the facility. Due to the presence of existing residential properties in the area, it is anticipated that, with respect to general air quality contaminants regulated under Ontario Regulation 419/05, the Subject Site is compatible with surrounding lands.

7.2 Dust

During the site visit, no significant fugitive dust emissions were observed on the Subject Site or within the 1 km Study Area radius. However, minor dust impacts were noted at truck entrance of CBM off of Howard Road, approximately 560 m southeast from the Subject Site. Review of existing ECAs within the buffer areas identified that KMP Industries Ltd. and St. Marys Cement Inc. (Canada), operating as CBM Ready Mix, may be significant particulate sources. Associated material stockpiles were observed on each property and each property was unpaved. While these facilities have ECAs for their emissions, it is important to note that approvals are likely based on impact at existing receptors at or near ground level without consideration of future development. The proposed development will have elevated receptors, which may be impacted by the emissions of these facilities.

Based on observations made at the time of the site visit, Cosmos Concrete & Paving may also be a particulate source as an uncovered stockpile of road demolition rubble was observed on the property. It is additionally noted that the surrounding road network is paved within the Study Area.

A request was made to the Halton Region to gather additional information regarding dust and/or odour complaints related to the identified Class II and Class III facilities. A response from a Public Health Inspector at the Halton Region indicated that complaints regarding outdoor pollution (including dust and odor) that are reported to Halton Region Health Department are referred to the Ministry of the Environment, Conservation and Parks (MECP) Spills Action Centre (SAC). A request was made to the MECP to gather more information and no odour issues related to the nearby facilities were reported.

7.3 Odour

Odours are only required to be assessed at locations where human activity (receptors) is likely to occur. Nearby identified industries would not have been required to assess odours outside of their boundaries as a condition of their provincial Environmental Compliance Approval (ECA) applications if receptors did not exist at the time of their approval.

During the Odour Screening Assessment (refer to Section 2.4), no odours were detected with the Nasal Ranger (OU) at all locations illustrated in Figure 4 (Appendix A). The only odours, as detected by human senses were odours typical of an urban environment (traffic), with no significant industrial source identified. No other odours or off-site odours were detected by human senses at the Subject Site.

During the site visit, no significant odours were observed within the 1 km Study Area radius of the Subject Site, with the exception of traffic odours throughout the Study Area. However, significant industrial sources were identified with the potential to impact air quality at the proposed development. These facilities were identified as KMP Industries Ltd. and St. Marys Cement Inc. (Canada), operating as CBM Ready Mix. While these facilities have ECAs for their emissions, it is important to note that approvals are likely based on impact at existing receptors at or near ground level without consideration of future development. The proposed development will have elevated receptors, which may be impacted by the emissions of these facilities. It is also noted that they are outside of the minimum separation distance for Class III facilities, as defined under the D6 Guidelines, and near the outer boundary of the area of influence.

Given the proximity of the Subject Site to the commercial and industrial businesses surrounding the Subject Site and introduction of elevated receptors, there is a potential for members of the proposed development to experience odours, or periodic odours and/or general urban occurrences of odour. As such, it is recommended that best practices of building pressurization and filtration be included in the mechanical design or installed in the future if complaints arise.

A request was made to the Halton Region to gather additional information regarding dust and/or odour complaints related to the identified Class II and Class III facilities. A response from a Public Health Inspector at the Halton Region indicated that complaints regarding outdoor pollution (including dust and odor) that are reported to Halton Region Health Department are referred to the Ministry of the Environment, Conservation and Parks (MECP) Spills Action Centre (SAC). A request was made to the MECP to gather more information and no odour issues related to the nearby facilities were reported.

7.4 Transportation Sources

The Subject Site is located approximately 125 m south of Highway 401. TRAP mitigation strategies and good practices for residential buildings within an urban setting may include:

- Using air filtration systems to reduce contaminants in indoor air;
- Selecting fresh air intake locations and outdoor amenities away from roadways or loading docks;
- Optimizing timing and quantity of ventilation make-up air;
- Scheduling fresh air intake of HVAC units to avoid peak traffic volumes during rush hours;
- Using mechanical HVAC to create a positive pressure within the buildings to minimize air pollution infiltration;
- Placing outdoor amenities in locations with physical barriers from a TRAP source;
- Locating residential units and outdoor use areas (particularly ones for prolonged use) as far as possible from the roadways and buffered by transitional uses;
- Vegetation that is designed as a barrier (as a complement to other mitigation measures
- Installing physical barriers in areas of concern;
- Installing a vegetation buffer/barrier to block the property boundary from roadways and to filter emissions (coniferous plants are recommended for year-round efficacy;

- Management of outdoor activities;
- Consideration of prevailing winds when installing barriers or fresh air intakes.
- Including Environmentally Friendly opportunities such as, but not limited to, EV charging readiness, passive transportation, solar panel readiness, and solar lights.

In terms of land use planning at the site level, the following mitigation strategies may be considered:

- Mechanical rather than passive building ventilation with air particle filtration;
- Location of ventilation air intakes away from known pollution sources and roads; and,
- Optimizing timing and quantity of ventilation make-up air;

Based on a review of the architectural drawings for the proposed development traffic on this roadway can be compatible with the proposed development, provided mitigation measures, such as those listed above, considered during the detailed design phase.

Burlington is a member of the Greater Toronto Area Clean Air Council (GTA CAC), which promotes the reduction of air pollution and greenhouse gas emissions and increased awareness of regional air quality and climate change issues in the Greater Toronto Area through the collective efforts of all levels of government. The Council identifies and promotes the most effective initiatives to reduce the occurrence of air pollution and greenhouse gas emissions.

The City of Burlington Zoning By-law 2020 does not include requirements for the provision of bicycle parking spaces for residential buildings. However, planning documents, including the Halton Region Active Transportation Master Plan (May 2015) recognizes the benefits to including bicycle parking in order to provide residents with greater transportation options and reduce auto dependency. The proposed design includes significant bicycle parking spaces to support this and hence enhance air quality.

The closest railway, the Aldershot GO Station servicing commuter rail, is approximately 185 m to the northeast of the proposed development. This is well outside the standard building setbacks (15m for spur and branch lines, 30 m for secondary and principle main, 300 m for Freight Rail Yard) for new residential developments recommended by the Railway Association of Canada and Federation of Canadian Municipalities Guidelines for New Development in Proximity to Railway Operations (May 2013). Based on the GO Rail Network Electrification Environmental Project Report Addendum – Lakeshore East Study air quality impacts decrease sharply with distance and are generally low (within 50% of background) beyond 50 meters. Therefore, with a 185 m separation distance, the proposed development has sufficient separation.

7.5 Future Industrial Uses

Based on a review of the Environmental Registry of Ontario there are no pending / active applications for amendments to ECAs for any facilities within 1,000 metres. Intensification, in most cases, would already be restricted by existing residential uses. Therefore, the proposed development is not expected to have a significant effect on the ability of new uses to locate in the employment area.

7.6 (CRAIM Risk) Substances

A search of environmental risk databases (National Pollutant Reporting Inventory (NPRI), Environmental Activity and Sector Registry (EASR) and Environmental Compliance Approvals (ECAs)) did not identify any addresses located within 1000 m of the proposed development that would be considered a risk based on the revised CRAIM List of 174 substances contains. No facilities with charge, management or control of a listed substance that is at or above the quantity set out in column 3 of Schedule 1 of the E2 Regulations were identified.

8 Conclusions and Recommendations

Based on the information obtained from the database searches, site visit and web searches, the following findings have been obtained:

- The proposed location of the development is surrounded by residential, commercial and light industrial properties.
- A total of twelve (12) facilities were identified as facilities with potential air quality issues, including two (2) Class III facilities and four (4) Class II facilities, with the remaining facilities classified as Class I.
- Two (2) Class III facilities are inside the minimum separation distance as defined under the D6 Guidelines. These facilities were identified as KMP Industries Ltd., operating as KING Paving and Construction, a permanent batch-type hot mix asphalt plant; KING Truck & Equipment Repair, a truck/trailer/heavy equipment repair facility including welding and fabrication services; and St. Marys Cement Inc. (Canada), operating as CBM Ready Mix, a ready-mix concrete batching plant. It is noted that these facilities, except for KING Truck & Equipment Repair, have approved ECAs and emissions are controlled (e.g. baghouse. As such, they are required to meet the standards for air quality at their property line and beyond. Additional assessment at elevated receptors on the proposed development indicates the existing ECAs are adequate to protect impacts at elevated receptors at the proposed development.
- One (1) Class I facility and three (3) Class II facilities were outside the minimum separation distance but within the area of influence, as defined under the D6 Guidelines.
- The Class II facilities with ECAs for their operations include Category 5 Imaging, a large format printing facility, and Bulkwood Products Inc., regulating emissions outside of their respected property boundaries. Having ECAs, emissions are controlled and, as such, facilities are required to meet the standards for air quality at their property line and beyond. As such, they are required to meet the standards for air quality at their property line and beyond. The proposed development will have elevated receptors, which may not have been considered in the approval process and could be impacted by the emissions from these facilities. It is also noted at this time, that existing residences are present within the minimum separation distance and area of influence of these facilities.

  The remaining Class II facilities, Cosmos Concrete & Paving and B.A.M. Trucking Inc./B.A.M. Pallets would require MECP approval if operations released contaminants to the air, such as with a baghouse or welding operations, and air quality at the proposed Site can be protected with enforcement of the MECP approval process. The proposed development will have elevated receptors, which may also be impacted by the emissions from these facilities. It is also noted that they are outside of the minimum separation distance for Class II facilities as defined under the D6 Guidelines.
- The Class I facility with an ECA for its operation is Etratech Inc., obtained by Gentherm Electronics in 2017 and observed as Gentherm Electronics at the time of the Site visit. Having an ECA, emissions are controlled and, as such, facilities are required to meet the standards for air quality at their property line and beyond. The proposed development will have elevated receptors, which may be impacted by the emissions from this facility. It is also noted at this time that they are outside of the minimum separation distance for Class I facilities as defined under the D6 Guidelines.
- Residential properties and residential properties in the early stages of development were observed northeast of the Subject Site along Masonry Court, with the nearest off-site residence located approximately 16 m northeast of the Subject Site on the north side of Masonry Court. It is noted that the residences within the Study Area are within the area of influence from the facilities identified with potential air quality issues, with some being within the minimum separation distance. Due to the presence of existing residential properties in the area, it is anticipated that, with respect to general air quality contaminants regulated under Ontario Regulation 419/05, the Subject Site is compatible with surrounding lands.
- During the Odour Screening Assessment (refer to Section 2.4), no odours were detected with <2 odour units (OU) at all locations illustrated in Figure 4 (Appendix A). The only odours, as detected at the time of the visit by human senses on Site and within the 1 km radius were odours typical of an urban environment (traffic), with no significant industrial source

identified. Given the proximity of the Subject Site to the commercial and industrial businesses surrounding the Subject Site and introduction of elevated receptors, there is a potential for members of the proposed development to experience odours, or periodic odours and/or general urban occurrences of odour.

- The Subject Site is located approximately 365 m southeast of Highway 403 m. The impact of transportation related air pollutants (TRAP) is well recognized in urban centres, including many existing buildings and sensitive communities in Greater Toronto Area. The health risk from TRAP is higher within 500 metres of highways with an average daily traffic volume (Toronto Public Health, 2017). Burlington currently has many existing buildings within this distance in the vicinity of the Subject Site.
- A request was made to the Halton Region to gather additional information regarding dust and/or odour complaints related to the identified Class II and Class III facilities. A response from a Public Health Inspector at the Halton Region indicated that complaints regarding outdoor pollution (including dust and odor) that are reported to Halton Region Health Department are referred to the Ministry of the Environment, Conservation and Parks (MECP) Spills Action Centre (SAC). A request was made to the MECP to gather more information and no odour issues related to the nearby facilities were reported.

9 Recommendations

Based on the findings of this assessment, the facilities identified within the Study Area are not expected to pose an unacceptable air quality, dust or odour issue to the Subject Site. With the presence of Class III facilities within the area of influence, it is recognized these facilities have or are required to have ECAs for their emissions. Additional assessment at elevated receptors on the proposed development indicates the existing ECAs for the Class III facilities are adequate to protect impacts at elevated receptors at the proposed development.

It is recognized that there is potential for an odour and/or dust impact due to proximity of the Subject Site to Highway 403, from smaller facilities identified at neighbouring commercial and industrial properties and/or from general urban occurrences. It is recommended that air conditioners be installed in the proposed development and the buildings' mechanical designs include best practices of building pressurization and filtration be considered in the final design.

10 References

1. Environment and Climate Change Canada, Reported Facility Greenhouse Gas Data, available at: Greenhouse Gas Reporting Program (GHGRP) - Facility Greenhouse Gas (GHG) Data - Open Government Portal (canada.ca)
2. Environment, Conservation and Parks Greenhouse Gas Emissions Reporting by Facility, available at: https://data.ontario.ca/dataset/greenhouse-gas-emissions-reporting-by-facility
3. Environment and Climate Change Canada, National Pollutant Release Inventory (NPRI), available at: Environment and Climate Change Canada - NPRI Data Search
4. Ontario Ministry of the Environment and Climate Change, Environmental Registry, available at: http://www.ebr.gov.on.ca/ERS-WEB-External/
5. Ontario Ministry of the Environment and Climate Change, Access Environment, available at: http://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action
6. Environmental Compliance Approvals (ECA) database, available at: https://www.ontario.ca/page/list-environmental-approvals-and-registrations
7. Ministry of the Environment and Climate Change (MECP). 1995. D-6 Compatibility between Industrial Facilities, July. Available at https://www.ontario.ca/page/d-6-compatibility-between-industrial-facilities
8. Major Industrial Accidents Council of Canada (MIACC). 1994. MIACC Lists of Hazardous Substances, October 1994.
9. Major Industrial Accidents Council of Canada (MIACC). 1994. Risk-based Land Use Planning Guidelines, June 1995.
10. Federation of Canadian Municipalities, The Railway Association of Canada (FAC/RAC) and DIALOG J.E. Coulter Associates Limited. 2103. Guidelines for New Development in Proximity to Railway Operations, Prepared for The Federation of Canadian Municipalities and the Railway Association of Canada.
11. City of Toronto. 2017. Reduced Health Risks from Traffic-Related Air Pollution (TRAP) in Toronto, prepared by Medical Officer of Health and Deputy City Manager, Internal Corporate Services. Available at: Reducing Health Risks from Traffic-Related Air Pollution (TRAP) in Toronto
12. D-2 Compatibility between Sewage Treatment and Sensitive Land Use, available at https://www.ontario.ca/page/d-2-compatibility-between-sewage-treatment-and-sensitive-land-use.
13. GO Rail Network Electrification Environmental Project Report Addendum – Lakeshore East Study (https://www.metrolinxengage.com/sites/default/files/appendix_f4_-_go_rail_network

11 General Limitations

The information and conclusions in this report are considered to be privileged and confidential and have been prepared exclusively for ADI Developments (Masonry) Inc. The purpose of this report is to provide ADI Developments (Masonry) Inc. with an assessment of the potential impacts from operation of commercial and industrial facilities where the proposed developments fall within the industrial facility Potential Influence Area.

The information presented in this report is based on information provided by others and visual observations as identified herein. Achieving the objectives stated in this report has required us to arrive at conclusions based upon the best information presently known to us. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing the information obtained and in the formulation of the conclusions. Like all professional persons rendering advice, we do not act as absolute insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching those conclusions.

Any use which a third party makes of this report, or any part thereof, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EXP accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Air quality conditions at various times may differ from those assessed. In addition, any changes to the proposed design or introduction of new processes and/or sources may render the conclusions of this report inaccurate or invalid. In the event of any such changes, EXP should be contacted to re-evaluate the conditions within the assessed areas and make appropriate revisions to the original conclusions of this report.

We trust this summary report is satisfactory for your purposes. If you have any questions regarding our submission, please do not hesitate to contact this office.

Sincerely,

EXP Services Inc.

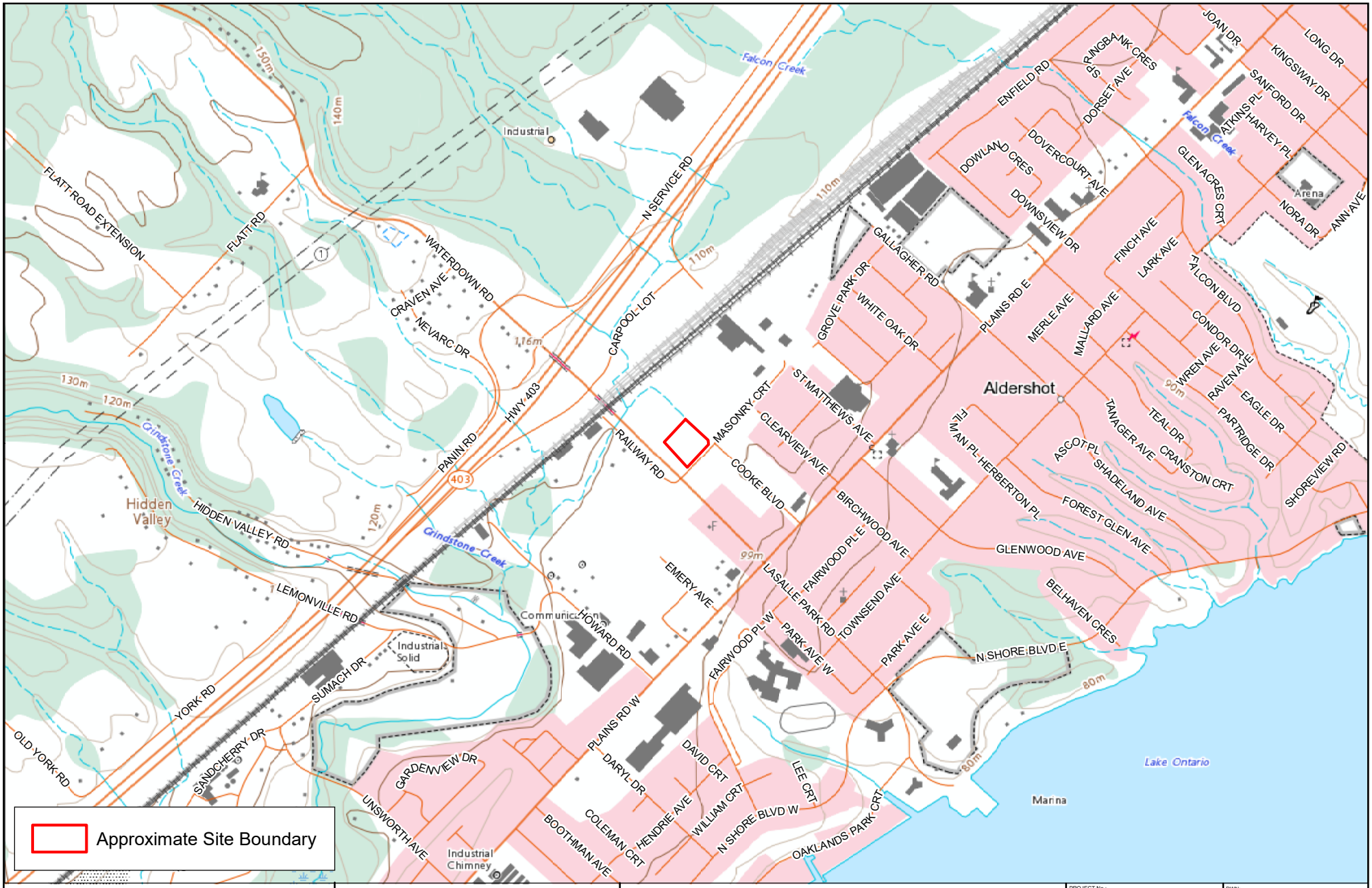




Amir Bahadori, M. Sc., P. Eng.
Senior Air Quality Engineer
Environmental Services

Ron Taylor, M.Sc., C.Chem., CIH
Discipline Lead, Air Quality & Industrial Hygiene
Environmental Services

Appendix A – Figures



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Brampton, ON L6T 4V1
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•BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
•INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY•

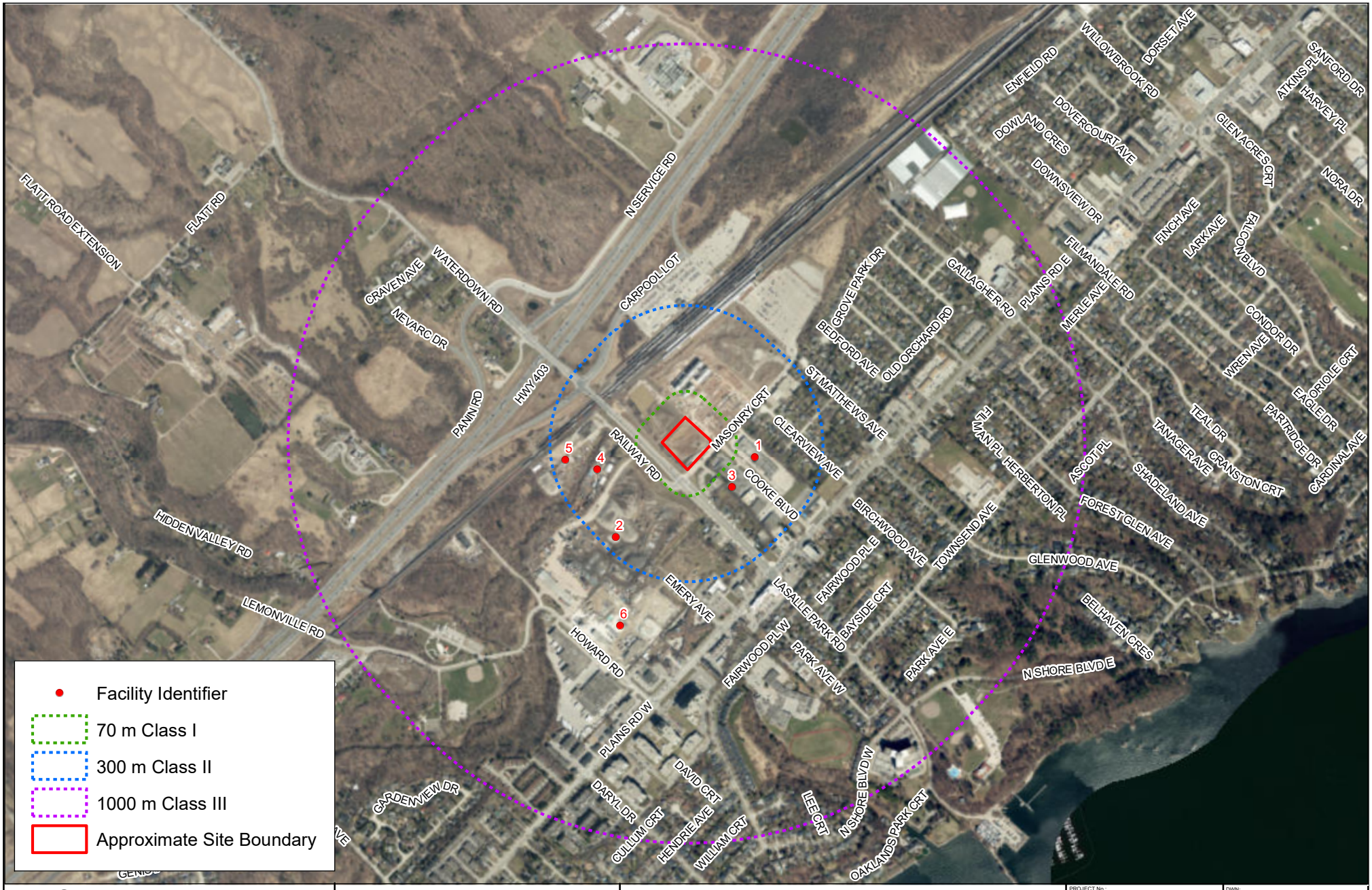
N

0 150 300 450 600 750 m

TITLE AND LOCATION:

SITE LOCATION PLAN
D6 Air Study
1120 Cooke Boulevard
Burlington, Ontario

PROJECT No.: BRM-00074068-A0	DWN: AC
SCALE: AS NOTED	CHKD: RT
DATE: APRIL 2021	FIG. No.: 1



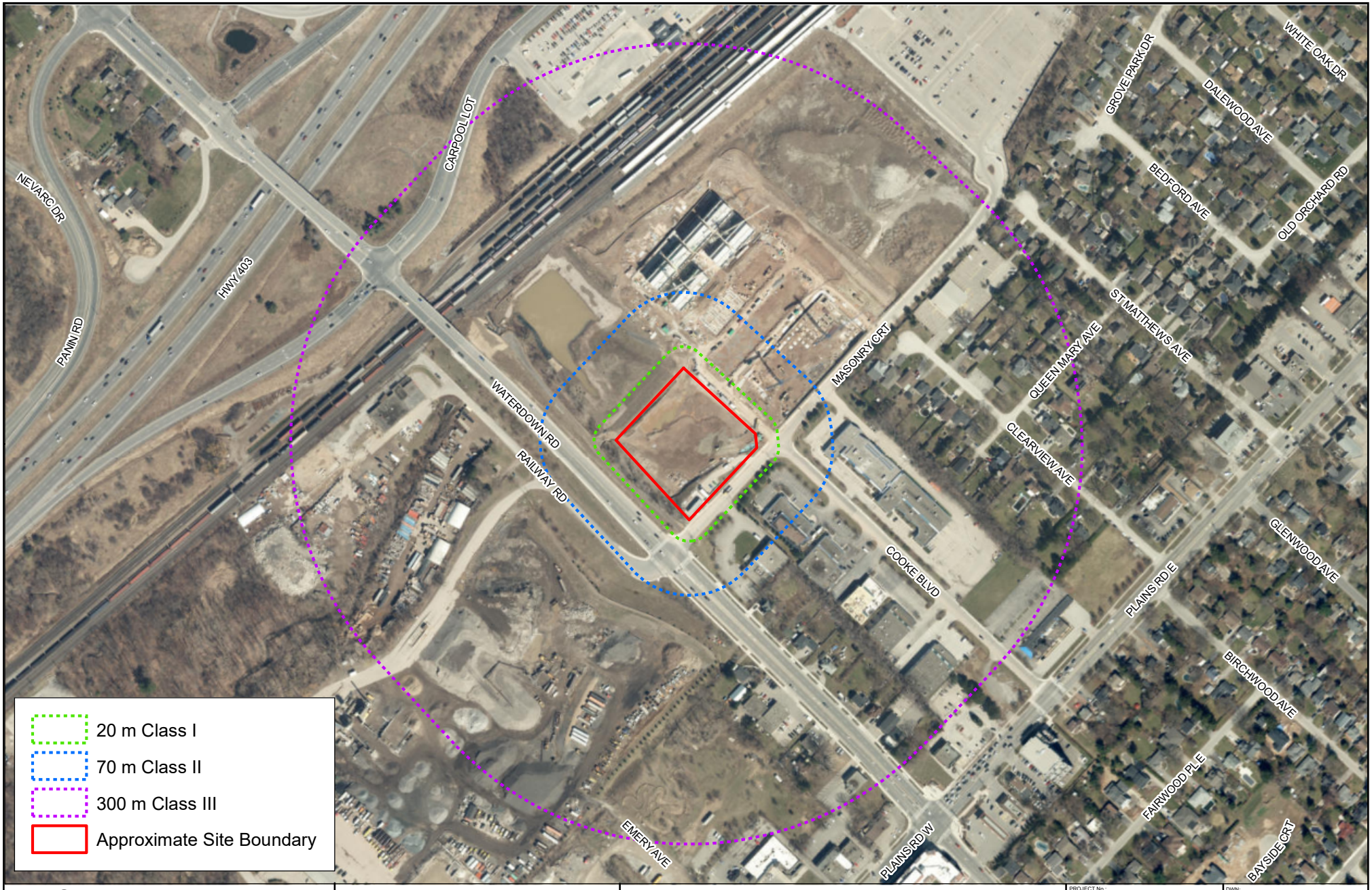
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TITLE AND LOCATION:

AREA OF INFLUENCE
D6 Air Study
120 Cooke Boulevard
Burlington, Ontario

PROJECT No.: BRM-00074068-A0	DWN: AC
SCALE: AS NOTED	CHKD: RT
DATE: MARCH 2021	FIG. No.: 2



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• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

N

0 40 80 120 160 200 m

TITLE AND LOCATION:

MININUM SEPARATION
D6 Air Study
1120 Cooke Boulevard
Burlington, Ontario

PROJECT No.: BRM-00074068-A0	DWN: AC
SCALE: AS NOTED	CHKD: RT
DATE: MARCH 2021	FIG. No.: 3

Appendix B – Site Plan Drawings

PROPERTY LINE

PARKING ENTRANCE

(+108.72) 2.9% SLOPE 7.50m

(+108.52) 3% SLOPE 6.00m

(+108.34) 7.5% SLOPE 11.17m

107.50

12% SLOPE 49.23m

RAMP

39005

8630

2100

2100

5275

BALCONY @LEVEL 8-33

CANOPY@LEVEL 8

EXTERIOR MECHANICAL AREA @ LEVEL 34 ROOF

EL 208.26

BUILDING A

ROOF OF MECHANICAL ROOM @LEVEL 35

EL 213.76

BALCONY @LEVEL 14-33

BALCONY @LEVEL 8-33

CANOPY @LEVEL 13

3.8m FROM FIRE DEPARTMENT CONNECTION TO RESIDENTIAL ENTRANCE

4.5m FROM FIRE DEPARTMENT CONNECTION TO RESIDENTIAL ENTRANCE

EXTERIOR MECHANICAL AREA @ LEVEL 34 ROOF

EL 208.26

BALCONY @LEVEL 8-33

3 M HIGH WIND/NOISE BARRIER

RESIDENTIAL ENTRANCE

EXIT

FIRE DEPARTMENT CONNECTION @ GROUND FLOOR

2.2 M HIGH VERTICAL WIND SCREEN

2.2 M HIGH VERTICAL WIND SCREENS

WASTE STAGING AREA

OUTDOOR AMENITY @LEVEL 13

EL 143.16

INTAKE SHAFT

INFORMAL LOADING SPACE

SNOW STORAGE

FIRE DEPARTMENT CONNECTION @ GROUND FLOOR

20.4m FROM PROPOSED FIRE HYDRANT TO FIRE DEPARTMENT CONNECTION

TRUCK SPACE

3.5m (W) x 18.0m (L) x 7.5m (H) MIN. CLEARANCE

DROP OFF

1500

RETAIL

RETAIL

RETAIL

RETAIL

RETAIL

RETAIL

RETAIL

PHASE 1 PHASING LINE

PHASE 2 PHASING LINE

1500

19700

6000

23040

27560

R13000

FIRE ROUTE

PROPERTY LINE

7955

DN

23235

2825

SNOW STORAGE

PHASE 1 PHASING LINE

PHASE 3 PHASING LINE

INFORMAL LOADING SPACE PARKING ENTRANCE

R13000

R13000

12% SLOPE

16050

19750

2100

1500

6% SLOPE 5.50m

PARKING ENTRANCE

CANOPY@ LEVEL 4

PRIVATE TERRACE @ LEVEL 4

EL 115.56

3000

BALCONY @ LEVEL 8-29

2100

12.6m FROM EXISTING FIRE HYDRANT TO FIRE DEPARTMENT CONNECTION

18.9m FROM PROPOSED FIRE HYDRANT TO FIRE DEPARTMENT CONNECTION

EXIT

RESIDENTIAL ENTRANCE

FIRE DEPARTMENT CONNECTION @ GROUND FLOOR

SNOW STORAGE

INFORMAL LOADING SPACE PARKING ENTRANCE

2.1m FROM FIRE DEPARTMENT CONNECTION TO RESIDENTIAL ENTRANCE

BUILDING B

ROOF OF MECHANICAL ROOM @ LEVEL 31

EL 201.76

EXTERIOR MECHANICAL AREA @ LEVEL 30

EL 196.26

EXTERIOR MECHANICAL AREA @ LEVEL 30

EL 196.26

BALCONY @LEVEL 7-29

CANOPY @LEVEL 7

CANOPY @LEVEL 7

GROUND FLOOR F.F.H.

EL 105.06

10.8m FROM FIRE DEPARTMENT CONNECTION TO RESIDENTIAL ENTRANCE

BALCONY @ LEVEL 7-29

1500

30800

18645

19300

47655

19300

TRUCK SPACE

3.5m (W) x 18.0m (L) x 7.5m (H) MIN. CLEARANCE

F.F.H

EL 105.06

OUTDOOR AMENITY @ LEVEL 7

EL 125.16

RETAIL ENTRANCE

RETAIL ENTRANCE

PHASE 3 PHASING LINE

PHASE 2 PHASING LINE

5100

5100

5935

6355

RETAIL ENTRANCE

BALCONY @ LEVEL 7-29

CANOPY @ LEVEL 7

PROPERTY LINE

R13000

WATERDOWN ROAD

PROPERTY LINE

2100

19750

16050

1500

2.2 M HIGH VERTICAL WIND SCREENS

BALCONY @LEVEL 7-31

CANOPY @LEVEL 7

BALCONY @LEVEL 7-31

BALCONY @LEVEL 7-31

CANOPY @LEVEL 7-31

RESIDENTIAL ENTRANCE

EXIT

17.2m FROM FIRE DEPARTMENT CONNECTION TO RESIDENTIAL ENTRANCE

INFORMAL LOADING SPACE PARKING ENTRANCE

SNOW STORAGE

BIKE RACKS 8 UNITS.

EXTERIOR MECHANICAL AREA @ LEVEL 32

EL 202.15

BUILDING C

ROOF OF MECHANICAL ROOM @ LEVEL 33

EL 207.65

EXTERIOR MECHANICAL AREA @ LEVEL 32

EL 202.15

CANOPY @LEVEL 7

CANOPY @LEVEL 7

INFORMAL LOADING SPACE

INFORMAL LOADING SPACE

FIRE DEPARTMENT CONNECTION @ GROUND FLOOR

22380

EXIT

BIKE RACKS 6 UNITS.

3 M HIGH WIND/NOISE BARRIER

OUTDOOR AMENITY @ LEVEL 7

EL 125.05

1.7m FROM FIRE DEPARTMENT CONNECTION TO RESIDENTIAL LOBBY ENTRANCE

6915

3000

RESIDENTIAL ENTRANCE

RETAIL ENTRANCE

BALCONY @LEVEL 7-31

CANOPY @LEVEL 7

67.3m FROM EXISTING FIRE HYDRANT TO FIRE DEPARTMENT CONNECTION

REFER TO CIVIL DRAWING FOR EXISTING FIRE HYDRANT LOCATION

108.59 FIRE DEPARTMENT CONNECTION @ SECOND FLOOR

107.73

107.15

106.66

106.14

105.71

105.20 EX

PROPERTY LINE

MASONRY COURT

42015

OUTDOOR AMENITY

44755

2.2 M HIGH VERTICAL WIND SCREENS

2.2 M HIGH VERTICAL WIND SCREEN

2.2 M HIGH VERTICAL WIND SCREENS

BIKE RACKS 22 UNITS.

2.2 M HIGH VERTICAL WIND SCREEN

DASHED LINE DENOTES CISTERN LOCATED AT P-1.

DASHED LINE DENOTES CANOPY @ GROUND LEVEL.

2.2 M HIGH VERTICAL WIND SCREEN

COMMERCIAL PARKING 6 SPOTS

ENTIRE LOADING AREAS AND TRUCK ROUTE SHALL BE DESIGNED TO SUPPORT LOADS IMPOSED BY COLLECTION VEHICLES (35 TONNES) AND SURFACE TO BE ACCESSIBLE IN ALL CLIMATE CONDITIONS

PROPOSED FIRE HYDRANT

BIKE RACKS 10 UNITS.

DASHED LINE DENOTES CANOPY @ GROUND LEVEL.

WASTE STAGING AREA

BIKE RACKS 10 UNITS.

EXISTING FIRE HYDRANT

20.4m FROM PROPOSED FIRE HYDRANT TO FIRE DEPARTMENT CONNECTION

2.2 M HIGH VERTICAL WIND SCREEN

BIKE RACKS 10 UNITS.

DASHED LINE DENOTES CANOPY @ GROUND LEVEL.

3 M HIGH WIND/NOISE BARRIER

COOKE BLVD

LIMIT OF FOUNDATION WALL

MAX 3:1

UG PARKING BELOW

LEGEND

REGULATION PARKING

BARRIER FREE PARKING

HORIZONTAL BICYCLE PARKING

VERTICAL BICYCLE PARKING

TYPICAL CONVEX MIRROR

EV ELECTRICAL CHARGING STATION

No.	Revisions	Date
03	ISSUED FOR DISCUSSION	05 JUNE 2023
02	RE-ISSUED FOR OPA/ZBA	10 FEBRUARY 2023
01	ISSUED FOR OPA/ZBA	07 OCTOBER 2021

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WWW.COREARCHITECTS.COM

1120 COOKE BLVD

PHASE 2
BURLINGTON ONTARIO

Drawn: AZ	Scale: 1:200
Checked: DL	Date: 05 JUNE 2023

Title: SITE PLAN

Project No.: 20-129

Drawing No.: A103

Appendix C – Environmental Compliance Approval CBM

Modelling Parameters

Dispersion Modelling Input Summary Table

Relevant Section of Regulation 419	Section Title	Description of How the Approved Dispersion Model was Used
Section 6	Approved Model Version	AERMOD 19191
Section 8	Negligible Sources of Contaminant	Section 3.1 of ESDM
Section 9	Same Structure Contamination	Not Applicable
Section 10	Operating Conditions	See Section 4.1 of ESDM
Section 11	Source of Contaminant Emission Rate	See Appendix F and Table 2 of ESDM
Section 12	Combined Effect of Assumptions for Operating Conditions and Emission Rates	See section 4 of ESDM
Section 13	Meteorological Conditions	See Section 6.1.4 of ESDM (Since the facility is located within 3 km from a major water body (i.e. Lake Ontario), The MECP provided site specific hourly surface and upper air meteorological data set that was used
Section 14	Area of Modelling Coverage	See Section 6.1.6 of ESDM (addition of 1,216 discrete receptors at proposed buildings)
Section 15	Stack Height for Certain New Sources of Contaminant	Not applicable
Section 16	Terrain Data	See section 6.1.5 (Tile 82 and 83, Datum NAD83, UTM Zone 17)
Section 17	Averaging Period	1 hr, 2hr

Contaminant Name	CAS No.	Total Facility Emission Rate (g/s)	Air Dispersion Model Used	Maximum POI Concentration* (µg/m³)	Averaging Period (hr)	Ministry POI Limit (µg/m³)	Limiting Effect	Regulation Schedule #	Percentage of MECP POI Limit (%)
Particulate Matter	PM	3.46E-01	AERMOD	7.3	24 hr	120	Visibility	3	6.1
Respirable Crystalline Silica (quartz) (PM_{10})	1408-60-7	3.03E-04	AERMOD	0.0057	24 hr	5	Health	Guideline	0.11
Portland Cement	65997-15-1	5.56E-02	AERMOD	1.1	24 hr	90	Health	SL-MD	1.22
Slag	65996-69-2	1.85E-02	AERMOD	0.35	24 hr	26	Health	SL-MD	1.35
Gypsum (Calcium Sulfate)	13397-24-5	5.34E-03	AERMOD	0.78	24 hr	12	Health	SL-JSL	6.50
Calcium Oxide	1305-78-8	2.39E-03	AERMOD	0.044	24 hr	10	Corrosion	3	0.44
Magnesium Oxide	1309-48-4	3.21E-03	AERMOD	0.061	24 hr	120	Particulate	3	0.05
Calcium Carbonate	471-34-1	1.57E-01	AERMOD	3.45	24 hr	15	Health & Particulates	SL-JSL	23
Magnesium Carbonate	546-93-0	7.70E-02	AERMOD	1.7	24 hr	20	Health	SL-JSL	8.50
Nitrogen Oxides	10102-44-0	1.17E-01	AERMOD	0.02	24 hr	200	Health	3	0.01
		1.17E-01		0.26	1 hr	400	Health	3	0.07

Content Copy Of Original

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 9841-BNUR2A
Issue Date: April 29, 2020

St. Marys Cement Inc. (Canada) operating as CBM Ready Mix
55 Industrial Street
Toronto, Ontario
M4G 3W9

Site Location: 1093 Howard Road
Burlington City, Regional Municipality of Halton

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act , R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

one (1) ready-mix concrete batching plant (Main RMC Plant), having a maximum production rate of 1000 cubic metres per day, including the following equipment:

- one (1) baghouse dust collector, to control emissions from storage Silo #1 having a storage capacity of 65 tonnes and a cement pig having a storage capacity of 140 tonnes, complete with polyester filter material having a filtering area of 16.7 square metres and a pulse-jet type cleaning system, discharging to the air with a maximum volumetric flow rate of 0.43 cubic metre per second through a stack having an exit diameter of 0.2 metre, extending 17.5 metres above grade;
- one (1) baghouse dust collector, to control emissions from storage Silo #2 having a storage capacity of 45 tonnes, complete with polyester filter material having a filtering area of 28.8 square metres and a pulse-jet type cleaning system, discharging to the air with a maximum volumetric flow rate of 0.43 cubic metre per second through a stack having an exit diameter of 0.2 metre, extending 14 metres above grade;
- one (1) baghouse dust collector, to control emissions from storage Silo #3a having a storage capacity of 69 tonnes, complete with polyester filter material having a filtering area of 16.2 square metres and a pulse-jet type cleaning system, discharging to the air with a maximum volumetric flow rate of 0.43 cubic metre per second through a stack having an exit diameter of 0.2 metre, extending 25.5 metres above grade;
- one (1) baghouse dust collector, to control emissions from storage Silo #3b having a storage capacity of 73 tonnes, complete with polyester filter material having a filtering area of 16.2 square metres and a pulse-jet type cleaning system, discharging to the air with a maximum volumetric flow rate of 0.43 cubic metre per

second through a stack having an exit diameter of 0.2 metre, extending 25.5 metres above grade;

- one (1) baghouse dust collector, to control emissions from the cement scale, complete with polyester filter material having a filtering area of 11.1 square metres and a pulse-jet type cleaning system, discharging to the air with a maximum volumetric flow rate of 0.43 cubic metre per second through a stack having an exit diameter of 0.2 metre, extending 13 metres above grade;
- one (1) loading point dust collection system, to control emissions from the loading point, complete with polyester filter material having a filtering area of 56 square metres and a pulse-jet type cleaning system, discharging to the air with a maximum volumetric flow rate of 2.36 cubic metre per second through a stack having an exit diameter of 0.4 metre, extending 10 metres above grade;
- one (1) natural gas fired hot water boiler, having a maximum thermal input of 8,850,000 kilojoules per hour, discharging to the air through a stack having an exit diameter of 0.45 metre, extending 9 metres above the roof and 13 metres above grade; and
- fugitive emissions resulting from the delivery, storage and transfer of materials associated with the ready-mix concrete batching operations;

one (1) portable ready-mix concrete batching plant (Portable RMC Plant) operated on a permanent basis, having a maximum production rate of 375 cubic metres per day, including the following equipment:

- one (1) baghouse dust collector to control emissions from storage Silo #1 having a storage capacity of 44 tonnes); storage Silo #2 having a storage capacity 40 tonnes; cement weight scale and loading point, complete with polyester filter material having a filtering area of 100.6 square metres and a pulse-jet type cleaning system, discharging to the air with a maximum volumetric flow rate of 3.1 cubic metre per second through a stack having an exit dimension of 0.5 metre x 0.4 metre extending 3.7 metres above grade; and
- fugitive emissions resulting from the delivery, storage and transfer of materials associated with the ready-mix concrete batching operations;

all in accordance with the Environmental Compliance Approval application submitted by St. Marys Cement Inc. (Canada), dated April 30, 2019 and signed by Colin Evans, Director, Lands and Environment; the supporting Emission Summary and Dispersion Modelling report prepared by BCX Environmental Consulting, dated April 30, 2019 and signed by Jaime Anderson and Colin Evans; additional air emissions related information provided by BCX Environmental Consulting on April 22, 2020; and the *Acoustic Assessment Report* prepared by HGC Engineering, dated June 28, 2019 and signed by Swetha Kulandaivelan.

For the purpose of this environmental compliance approval, the following definitions apply:

1. "*Acoustic Assessment Report"* means the report, prepared in accordance with *Publication NPC-233* submitted in support of the application, that documents all sources of noise emissions and *Noise Control Measures* present at the *Facility*. *"Acoustic Assessment Report"* also means the Acoustic Assessment Report prepared by HGC Engineering, dated June 28, 2019 and signed by Swetha Kulandaivelan;
2. "*Approval"* means this Environmental Compliance Approval, including the application and supporting documentation listed above;
3. "*Best Management Practices Plan"* means the measures to minimize dust emissions from the *Facility* roads, storage piles and material handling sources and includes the document titled "Best Management Practices Plan for the Control of Fugitive Dust Emissions, CBM Burlington Plant, 1093 Howard Road, Burlington, January 2017", as amended;
4. "*Company"* means St. Marys Cement Inc. (Canada) operating as CBM Ready Mix, that is responsible for the construction or operation of the *Facility* and includes any successors and assigns;
5. "*District Manager"* means the District Manager of the appropriate local district office of the *Ministry,* where the *Facility* is geographically located;
6. "*EPA"* means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended ;
7. "*Equipment"* means the ready-mix concrete batching equipment described in the *Company*'s application, this *Approval* and in the supporting documentation submitted with the application, to the extent approved by this *Approval;*
8. "*Facility"* means the entire operation located on the property where the *Equipment* is located;
9. "*Manual"* means a document or a set of documents that provide written instructions to staff of the *Company;*
10. "*Ministry"* means the ministry of the government of Ontario responsible for the *EPA* and includes all officials, employees or other persons acting on its behalf;
11. "*Noise Control Measures"* means measures to reduce the noise emission from the *Facility* including, but not limited to silencers, acoustic louvres, enclosures, absorptive treatment, plenums and barriers. It also means the noise control measures outlined in the *Acoustic Assessment Report;*
12. "*Publication NPC-233"* means the *Ministry* Publication NPC-233, "Information to

be Submitted for Approval of Stationary Sources of Sound", October, 1995 as amended;

13. "*Publication NPC-300"* means the *Ministry* Publication NPC-300, “Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300”, August 2013, as amended.
14. "*Technical Bulletin: Management Approaches for Industrial Fugitive Dust Sources"* means the *Ministry* publication "Technical Bulletin: management approaches for industrial fugitive dust sources", March 8, 2017, as amended; and
15. "*Truck(s)"* means ready-mix truck(s), aggregate truck(s), sand trucks or cement powder tanker truck(s);

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. **OPERATION AND MAINTENANCE**
    1. The *Company* shall ensure that the *Equipment* is properly operated and maintained at all times. The *Company* shall:
        a. prepare, not later than three (3) months after the date of this *Approval,* and update, as necessary, a *Manual* outlining the operating procedures and a maintenance program for the *Equipment,* including:
            i. routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the *Equipment* suppliers;
            ii. emergency procedures, including spill clean-up procedures;
            iii. procedures for any record keeping activities relating to operation and maintenance of the *Equipment;*
            iv. all appropriate measures to minimize noise emissions from all potential sources; and
            v. the frequency of inspection and replacement of the filter material in the *Equipment;*
        b. implement the recommendations of the *Manual.*
    2. The *Company* shall ensure that the RMC Plant building/Aggregate Storage building at the Main RMC Plant is fully enclosed and is not vented through a general ventilation system. All building doors shall be kept closed at all

times, except when being used for entrance and exit of personnel and/or movement of equipment.

2. **RECORD RETENTION**
    1. The *Company* shall retain, for a minimum of two (2) years from the date of their creation, all records and information related to or resulting from the recording activities required by this *Approval,* and make these records available for review by staff of the *Ministry* upon request. The *Company* shall retain:
        a. all records on the maintenance, repair and inspection of the *Equipment;*
        b. all records related to the preventative and control measures implemented as required by the section titled "Fugitive Dust Control" of this *Approval;*
        c. all records related to environmental complaints made by the public as required by Condition 3 of this *Approval.*
        d. all records of any environmental complaints, including:
            i. a description, time and date of each incident to which the complaint relates;
            ii. wind direction at the time of the incident to which the complaint relates;
            iii. the name(s) of *Company* personnel responsible for handling the incident;
            iv. the cause of the incident; and
            v. a description of the measures taken to address the cause of the incident to which the complaint relates and to prevent a similar occurrence in the future.

3. **NOTIFICATION OF COMPLAINTS**
    1. The *Company* shall notify the *District Manager,* in writing, of each environmental complaint within two (2) business days of the complaint. The notification shall include:
        a. a description of the nature of the complaint;
        b. the time and date of the incident to which the complaint relates;
        c. the wind direction and other weather conditions at the time of the incident; and
        d. the name(s) of *Company* personnel responsible for handling the incident.

4. **FUGITIVE DUST CONTROL**
    1. The *Company* shall:
        a. update the *Best Management Practices Plan* within six (6) months from the issuance of the this *Approval,* to include measures to minimize fugitive dust emissions from the Portable RMC Plant. The update shall be carried out consistent with the *Ministry* document *"Technical Bulletin: Management Approaches for Industrial Fugitive Dust Sources"*
        b. review and evaluate on an annual basis, the *Best Management Practices Plan.*
        c. record the results of each annual review and update as required the *Best Management Practices Plan* within two (2) months of the completion of the annual review;
        d. maintain the updated *Best Management Practices Plan* at the *Facility;*
        e. implement, at all times, the most recent version of the *Best Management Practices Plan.*
    2. The *Company* shall record, either electronically or in a log book, each time a specific preventative and control measure described in the *Best Management Practices Plan* is implemented. The *Company* shall record, as a minimum:
        a. the date when each emission control measure is implemented, including a description of the control measure;
        b. the date when each new preventative measure or operating procedure to minimize emissions is implemented, including a description of the preventative measure or operating procedure; and
        c. the date, time of commencement, and time of completion of each periodic activity conducted to minimize emissions, including a description of the preventative measure/procedure and the name of the individual performing the periodic activity.

5. **NOISE**
    1. The *Company* shall:
        a. implement not later than six (6) months from the date of this *Approval,* the *Noise Control Measures* as outlined in the *Acoustic Assessment Report;*
        b. following the implementation of the *Noise Control Measures,* comply with the limits set out in *Publication NPC-300;*
        c. properly maintain the *Noise Control Measures* ensuring that they continue to meet the acoustical performance outlined in the *Acoustic*

Assessment Report;

d. limit *Trucks* arrivals and departures during the daytime hours of 7 a.m. to 7 p.m. for the Main RMC Plant, in accordance with the following:
    i. a maximum of fourteen (14) ready-mix trucks per sixty (60) minute period;
    ii. a maximum of eight (8) aggregate or sand trucks per sixty (60) minute period;
    iii. a maximum of two (2) cementitious material tanker trucks per sixty (60) minute period;

e. limit *Trucks* arrivals and departures during the evening-time hours of 7 p.m. to 11 p.m. for the Main RMC Plant, in accordance with the following:
    i. a maximum of fourteen (14) ready-mix trucks per sixty (60) minute period;
    ii. a maximum of eight (8) aggregate or sand trucks per sixty (60) minute period;
    iii. a maximum of two (2) cementitious material tanker trucks per sixty (60) minute period;

f. limit *Trucks* arrivals and departures during the night-time hours of 11 p.m. to 7 a.m. for the Main RMC Plant, in accordance with the following:
    i. a maximum of four (4) ready-mix trucks per sixty (60) minute period;
    ii. a maximum of eight (8) aggregate or sand trucks per sixty (60) minute period;
    iii. a maximum of one (1) cementitious material tanker trucks per sixty (60) minute period.

g. limit *Trucks* arrivals and departures during the daytime hours of 7 a.m. to 7 p.m. for the Portable RMC Plant, in accordance with the following:
    i. a maximum of eleven (11) ready-mix trucks per sixty (60) minute period;
    ii. a maximum of five (5) aggregate or sand trucks per sixty (60) minute period;
    iii. a maximum of one (1) cementitious material tanker truck per sixty (60) minute period;

h. limit *Trucks* arrivals and departures during the evening-time hours of 7

p.m. to 11 p.m. for the Portable RMC Plant, in accordance with the following:

i. a maximum of eleven (11) ready-mix trucks per sixty (60) minute period;

ii. a maximum of five (5) aggregate or sand trucks per sixty (60) minute period;

iii. a maximum of one (1) cementitious material tanker truck per sixty (60) minute period; and

i. limit *Trucks* arrivals and departures during the night-time hours of 7 p.m. to 7 a.m. for the Portable RMC Plant, in accordance with the following:

i. a maximum of six (6) ready-mix trucks per sixty (60) minute period; and

ii. a maximum of five (5) aggregate or sand trucks per sixty (60) minute period;

2. The *Company* shall::

a. restrict the operation of the cement powder tanker trucks serving the Portable RMC Plant to the hours from 7 a.m. to 11 p.m.; and

b. ensure that the Main RMC Plant and the Portable RMC Plant do not operate simultaneously during the night-time hours from 11 p.m. to 7 a.m.

The reasons for the imposition of these terms and conditions are as follows:

1. Conditions No. 1 and 4.1 are included to emphasize that the *Equipment* must be maintained and operated according to a procedure that will result in compliance with the *EPA,* the Regulations and this *Approval.*
2. Conditions No. 2 and 4.2 are included to require the *Company* to keep records and to provide information to staff of the *Ministry* so that compliance with the *EPA,* the Regulations and this *Approval* can be verified.
3. Condition No. 3 is included to require the *Company* to notify staff of the *Ministry* so as to assist the *Ministry* with the review of the site's compliance.
4. Condition No. 5.1 is included to provide the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the *Facility.*

5. Condition No. 5.2 is included to ensure that operation of the *Equipment* is not extended beyond the stated hours to prevent an adverse effect resulting from the operation of the *Equipment.*

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 5639-ABLLKT issued on October 24, 2016.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993, the Minister of the Environment, Conservation and Parks, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Minister of the Environment, Conservation and Parks will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Minister of the Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto, Ontario
M7A 2J3

AND

The Director appointed for the purposes of Part II.1 of the Environmental Protection Act
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or** www.ert.gov.on.ca

This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at https://ero.ontario.ca/, you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 29th day of April, 2020

Rudolf Wan, P.Eng.
Director
appointed for the purposes of Part II.1 of the *Environmental Protection Act*

SA/
c: District Manager, MECP Halton-Peel District Office
Jaime Anderson, BCX Environmental Consulting