



Report:

The Georgian Group
Air Quality Study – Dust and Odour Nuisance
Mixed Use Building, 35 Plains Road East, Burlington, Ontario

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1	December 22, 2015	None
2	February 18, 2016	Halton Guidelines/MIACC Criteria

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1. INTRODUCTION

ORTECH was retained by the Georgian Group to provide an Air Quality Compatibility Study and Report for a proposed residential development site on 35 Plains Road East in Burlington, Ontario, as indicated on Figure 1.

The objective of the study was to evaluate the air quality compatibility with regard to dust and odour impacts on the site due to the existing land uses in the vicinity, with reference to the Ontario Ministry of the Environment and Climate Change (MOECC) Guideline D-1 on Land Use Compatibility and D-6 on Compatibility between Industrial Facilities and Sensitive Land Uses, the Region of Halton Land Use Compatibility Guidelines and the Major Industrial Accidents Council of Canada (MIACC) risk criteria.

This report describes the surrounding industrial and commercial facilities that have a potential to impact dust and odour levels at the development site. The assessment was based on readily available information (e.g. MOECC and facility websites, etc.) and direct observations during a site visit to the area.

Guideline D-6 recommends a 1000 metre Study Area for land use proposals and defines three classes of industrial facilities: Class I, Class II and Class III. It also defines Minimum Recommended Separation Distances, Potential Influence Areas and Actual Influence Areas between industrial facilities and sensitive uses for each Class. The class designations are based on the potential for noise, dust and odours.

Although the D-6 guideline suggests that distances are normally measured from property line to property line, there is allowance for measuring from specific sources to sensitive receptors. D-6 also provides for exceptions to the Minimum Recommended Separation Distances for certain development sites including infilling.

The D-6 guideline provides definitions and examples to illustrate the three classes. The definitions and examples in the MOE Guidelines relevant to odour and dust concerns were used to characterize each of the nearby facilities. Facilities that do not meet the definition of any one of the three classes are expected to have virtually no potential for creating odour or dust that would give rise to complaints (noted in this report as Class 0, or not applicable [NA]).

As noted above, ORTECH was retained to specifically evaluate and provide this study report to address the compatibility of potential adjacent dust and odour sources with the proposed residential development site. Noise sources are not addressed in this report.

2. IDENTIFIED FACILITIES WITH ODOUR AND DUST EMISSION POTENTIAL

Table 1 provides the name and address of each of the identified industrial and commercial facilities within 1,000 metres and summarizes:

- the minimum property line to property line distance from each facility to the development site;
- preliminary identification of operations of each facility;
- the identification of potential odour emission sources; whether the facility has MOECC air permits (ECAs) and the anticipated MOECC industry Class for each facility based on potential for dust and odour impact

The following provides an overview of the area and information on how the MOECC classes were assigned to the surrounding facilities. This assessment methodology for the proposed development site at 35 Plains Rd. East follows protocols and guidelines outlined in the MOECC D Series Guidelines and the Region of Halton Land Use Compatibility Guidelines.

The area immediately surrounding the 35 Plains Road East proposed residential site includes The Cooke Blvd. Industrial Park to the north, retail along Plains Road, both East and West, with residential across Plains Road to the south. On Plains Road, west of Waterdown Road, there are retail and commercial businesses and further to the west are two manufacturing facilities.

3. POTENTIAL AIR EMISSION IMPACTS

All surrounding facilities within 1 kilometre are considered Class II or less. As per Guideline D-6, Class II facilities have a Minimum Recommended Separation Distance of 70 metres and a Potential Influence Area of 300 metres. Class I facilities have a Minimum Recommended Separation Distance of 20 metres and a 70 metre diameter Potential Influence Area.

The Region of Halton Land Use Compatibility Guidelines refer to MOECC regulatory permitting requirements and the D –Series guidelines. In addition, the Region of Halton Land Use Compatibility Guidelines refer to Ministry of Transportation required approval for buildings within ‘control areas’. For controlled access highways, such as Hwy 403, MTO ‘control area’ permits are required for buildings within 395 metres of the highway intersections.

The Major Industrial Accidents Council of Canada (MIACC) risk criteria address major industrial plants which store, handle and process large quantities of hazardous materials, such as strong acids, flammable petroleum products and toxic organic compounds. Adverse risk to public health is assessed based on the probability of major accidents such as spills, releases to atmosphere and explosions.

The CBM / St. Mary's Cement (Blue Circle Canada Inc.) operation is a Class II facility located at a minimum separation distance of 325 metres from property line to property line of the proposed development. The CBM ready-mix concrete facility faces Howard Road, with shipping and receiving occurring at the entrance to the site off Howard Rd. Material storage for batch concrete production occurs north east of the Howard Road entrance and the concrete plant. The separation distance from the proposed development site west boundary to the potential dust emission source at the material storage area is approximately 375 metres. The concrete plant is located approximately 570 metres from the proposed development site. This facility operates typically 5 days per week during the hours of 7 am to 7 pm. This facility does not store or handle large quantities of hazardous materials.

KPM Industries Ltd. is a Class II facility located at a minimum separation distance of 300 metres from property line to property line of the proposed development. The KPM industries hot-mix asphalt facility is permitted at a moderate production rate of 190 tonnes per hour and operates seasonally from early May to early December. The KPM hot-mix asphalt and aggregate handling facility faces Howard Road, shipping and receiving occurs at both the Howard Road entrance and an entrance to the east off of Railway Road. Material Storage for hot mix asphalt production occurs in the east part of the project boundary, closest to the Railway Road entrance. This facility does not store or handle large quantities of hazardous materials.

The separation distance from the proposed development site west boundary to the boundary where potential dust emission sources from material handling is located is approximately 300 metres. The separation distance from the proposed development site property line to where the potential odour emissions from the hot-mix asphalt plant are located is approximately 580 metres.

Also associated with the KPM Industries site is the King Truck Centre, where trucks are serviced. This truck centre is a Class I facility with incidental dust emissions from vehicle traffic on the unpaved on-site roads. The King Truck Centre is located 600 metres from the proposed development site.

Both the CBM concrete plant and the KPM Industries hot-mix asphalt plant operations are well beyond the Minimum Recommended Class II Separation Distance (70 metres). The potential sources of dust from material handling at the CBM facility are beyond the potential Class II influence area of 300 m at 375 metres. The KPM facility's material handling dust source is just at the 300 m influence area designation for Class II sources. However, the hot-mix asphalt plant odour source is well beyond the 300 m distance at 580 metres. The KPM hot-mix asphalt plant has the potential of causing infrequent odours in the neighbourhood. Winds will blow from the KPM hot-mix asphalt plant towards the development site approximately 20% of the time.

As previously stated the Cooke Blvd Business Park is located immediately north of the proposed development site. This industrial park includes a mix of service businesses, offices, an analytical laboratory, digital printing and high tech manufacturing. See Table 1. These facilities are considered Class I, 0 or not applicable, with very little or no potential to release dust or odours. These facilities are located at distances from a shared property line to 200 metres from the proposed development site at 35 Plains Road East.

In addition to these surrounding facilities and businesses, the intersection of Highway 403 is located 780 metres north of the proposed development site and, therefore, an MTO 'control area' permit is not required

4. SUMMARY AND CONCLUSION

The land use and facilities surrounding the 35 Plains Road East, Burlington proposed residential site would not be expected to cause odour or dust complaints at the proposed development. Most of the industrial and commercial facilities are anticipated to be Class I, 0 or not applicable (i.e. no potential for odour or dust issues) and are beyond the minimum separation distances, and in many cases beyond the potential influence area, for their class.

The Class II CBM ready-mix concrete plant dust emissions are not anticipated to have an adverse impact on the 35 Plains Road East Site. The Class II KPM hot-mix asphalt plant dust and odours emissions are also not anticipated to have an adverse impact on the 35 Plains Road East Site. There is only one Class I facility (Category 5 Imaging printing) north of the site on Cooke Blvd, with the other businesses and facilities have very little or no potential for emissions or adverse impacts. With Category 5 Imaging at 170 from the site and beyond both the Class I Minimum, 20 metres, and Potential Influence Area 70 metre separation distances, there is no potential for adverse impact on the site.

Since there are no facilities which store or handle large quantities of hazardous materials, there is no risk of a major industrial accident which would adversely impact public health.

Table 1: Summary of Industries with Potential Air Emission Issues

Facility Name	Address	Operations	MOECC ECA	Potential Emissions	Approximate Distance from Proposal (PL to PL) (m)	D-6 Guideline Class for Air Emissions
CBM/St. Mary's Cement (Blue Circle)	1093 Howard Road	Ready-Mix Concrete Batch Plant	Yes	Dust	325	II
KPM Industries Ltd.	1077 Howard Road	Permanent batch-type hot mix asphalt plant	Yes	Dust/Odour	300/580	II
Ted's Service Centre Ltd.	1176 Howard Road	Auto Repair	No	Incidental	Greater than 500 m	0
Cosmos Concrete & Paving	1160 Waterdown Rd.	Concrete contractor	No	Dust	Greater than 500 m	I
Cougar Boots	2 Masonry Crt.	Office		na	200 m	na
King Truck Centre	1077 Howard Rd.	Truck repair centre	No	Dust	Greater than 500 m	0
Etratech Inc.	1047 Cooke Blvd.	Circuit Boards	Yes	Incidental	135 m	0
pv labs inc.	1074 Cooke Blvd.	Aerial imaging systems	No	Incidental	200 m	0
Category 5 Imaging Ltd.	1062 Cooke Blvd.	Printing	Yes	Incidental	170 m	I
Primary Fluid Systems	1050 Cooke Blvd.	Process equipment supply		na	115 m	na
ISI Investigative Science Inc.	1050 Cooke Blvd.	Analytical Laboratory	No	Incidental	115 m	0
Burlington Pump	1038 Cooke Blvd.	Pump supply		na	75 m	na
Burlington Toner	1038 Cooke Blvd.	Toner cartridges supply		na	75 m	na
Odell Associates	1038 Cooke Blvd.	HVAC System design		na	75 m	na
Burlington Steel	1026 Cooke Blvd.	Welding supplies		na	Shared property line	na
DeLuca Roofing	1026 Cooke Blvd.	Office, Roofing Contractor		na	Shared property line	na
Jerry's Automotive Inc.	7 Plains Rd. W.	Auto Repair	No	Incidental	135 m	0
Plains Road Auto	93 Plains Rd. W.	Auto Repair/Sales	No	Incidental	450 m	0
Burlington Retirement Group Inc.	300 Plains Road W.	Retirement Home (standby diesel generator)	Yes	Incidental	Greater than 500 m	0

PL – Property Line

ECA – Environmental Compliance Approval

MOECC – Ministry of the Environment and Climate Change

na – not applicable

Figure 1: 35 Plains Road East and Surrounding Area

