

Compatibility Mitigation Study – Air Quality

60 Henderson Street

Wellings of Port Hope Inc.

372 Taunton Road East, Unit L4B
Whitby, Ontario

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Executive Summary

SLR Consulting (Canada) Ltd. (SLR), was retained by Wellings of Port Hope Inc., to prepare a land use compatibility study focusing on air quality, odour, and dust in support of a planning application for a proposed development at 60 Henderson Street in the Municipality of Port Hope, Ontario (“the Subject site”).

The proposed Subject site development consists of a Supportive Living Housing development, featuring a central four (4) storey apartment building containing 74 apartment-style dwelling units and accessory services, including a restaurant and dining area, a bar, a personal service shop, and a fitness centre. An additional 36 bungalow townhouse dwellings are proposed around the periphery of the site. In total, 110 dwelling units are proposed, as well as 154 parking spaces. This assessment has considered the air quality, odour, and dust emissions between the proposed Subject site and surrounding land uses.

A review of the existing industries surrounding the Subject site with respect to air quality has been performed in accordance with the D-6 Guideline and The Municipality of Port Hope Zoning By-law

The assessment has included a review of air quality from industrial facilities in the area.

With the inclusion of at receptor mitigation and use of Warning Clauses, the Subject site is anticipated to be compatible with the surrounding employment land uses. The mitigation measures include strategic location of fresh air intakes facing, away from the Gilmer’s Home Hardware outdoor storage yard, installation of MERV rated filters, and positive pressurization of the buildings. A summary of the mitigation measures and the Warning Clauses is provided in **Appendix A**.

In addition to the above, and to further reduce fugitive dust emissions from the Gilmer’s Home Hardware storage yard it is recommended that coniferous trees are planted along the property line. As discussed in the latest Ministry of Environment, Conservation and Parks Odour Guideline¹, hotels are defined as sensitive receptors. With the presence of the existing 4-storey Hampton Inn hotel, the development of the Subject site will not introduce a new condition for compliance for surrounding industry.

With the inclusion of the at receptor mitigation and use of Warning Clauses, the Subject site is anticipated to be compatible with the surrounding land uses from an air quality perspective. Further, the Subject site will not affect the ability for industrial facilities to obtain or maintain compliance with applicable Provincial environmental policies, regulations, approvals, authorizations, and guidelines. The requirements of MECP Guideline D-6, Regulation 419/05 are met. As the applicable policies and guidelines are met, the Subject site is:

- Unlikely to result in increased risk of complaint and nuisance claims;
- Unlikely to result in operational constraints for the major facilities; and
- Unlikely to result in constraints on major facilities to reasonably expand, intensify or introduce changes to their operations.

¹ <https://prod-environmental-registry.s3.amazonaws.com/2021-03/Draft%20Odour%20Guidance.pdf>

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1.0 Introduction

SLR Consulting (Canada) Ltd. (SLR), was retained by Wellings of Port Hope Inc., to prepare a land use compatibility study focusing on air quality, odour, and dust in support of a planning application for a proposed development at 60 Henderson Street in the Municipality of Port Hope, Ontario (“the Subject site”).

This assessment has considered the air quality, odour, and dust emissions between the proposed land use and surrounding land uses.

A review of the existing industries surrounding the Subject site with respect to air quality has been performed in accordance with the D-6 Guideline and The Municipality of Port Hope Zoning By-law.

In this assessment, SLR has reviewed the surrounding land uses and major facilities in the area with respect to the following guidelines:

- The Provincial Policy Statement;
- Ministry of the Environment, Conservation and Parks (“MECP”) Guidelines D-1 and D-6;
- Ontario Regulation 419/05: *Air Pollution – Local Air Quality* and its associated air quality standards and assessment requirements; and
- The MECP draft policies on odour impacts and assessment.

This report identifies existing and potential land use compatibility issues and identifies and evaluates options to achieve appropriate design, buffering and/or separation distances between the proposed sensitive land uses, including residential uses, and nearby Employment Areas and/or major facilities.

2.0 Description of Development and Surroundings

2.1 Proposed Development

The proposed Subject site development consists of a Supportive Living Housing development, featuring a central four (4) storey apartment building containing 74 apartment-style dwelling units and accessory services, including a restaurant and dining area, a bar, a personal service shop, and a fitness centre. An additional 36 bungalow townhouse dwellings are proposed around the periphery of the site. In total, 110 dwelling units are proposed, as well as 154 parking spaces. A context plan is provided in **Figure 1**.

2.2 Surroundings

The Subject site, municipally known as 60 Henderson Street, is a vacant irregularly shaped parcel located on the west side of Henderson Street, north of Jocelyn Street. The Subject site is located near the north westerly limits of the Port Hope Urban Area, approximately ±650 metres southeast of the Toronto Road / County Road 2 Highway 401 Interchange (exit 461). The site is under the ownership of Choice Properties REIT (“Choice”), forming part of a ±5.17-hectare commercial land holding. The Subject site represents the northern portion of the Choice lands, having an area of approximately ±1.82 hectares, with ±192 metres of frontage along Henderson Street.

The following land uses are located immediately adjacent to the subject lands:

- **North:** Commercial – Hotel
- **East:** Employment – Health Centre, Registered Massage Therapy, and Sports Rehabilitation Centre
- **South:** Commercial – Grocery Store
- **West:** Commercial – Retail, and Vacant Land

The broader surrounding area features a diverse range of uses. Uses within a ±500 metre radius of the site include (among other things): a hotel, a police station, a hatchery, massage therapy and sports rehabilitation clinics, medical and dental clinics, pharmacies, a grocery store, gas stations, banks, personal service shops, retail stores, restaurants, a veterinary clinic, a gym, a dental clinic, a cemetery, a church, and various forms of residential development. There also remains significant areas of undeveloped vacant land in the vicinity of the subject site.

2.3 Land Use Designations in the Area

2.3.1 Municipality of Port Hope Official Plan

The Municipality of Port Hope Official Plan Map for the area can be seen in Figure 2a. The Subject site and the lands to the north, west and south are designated as General Commercial. The lands to the east are designated as Employment Service. Beyond the immediate surroundings the lands to the north, the lands are designated as General Employment. West of Toronto Street and South of Jocelyn Street, the lands are primarily designated as Residential Low Density.

2.3.2 Municipality of Port Hope Zoning By-Law 20/2010

An excerpt from the Municipality of Port Hope Zoning Map for the area can be seen in **Figure 2b**. The Subject site is designated as General Commercial Areas with holding provision 1 (“COM2(H1)”). The areas to the north, west and south are also designated as General Commercial. The lands to the east are designated as Service Employment with holding provision 1 (“EMP2 (H1)”), while the lands north of Pemberton Drive are designated as General Employment Areas with holding provision 1 (“EMP1 (H1)”).

3.0 Assessment Framework

The intent of this report is to identify any existing and potential land use compatibility issues and to identify and evaluate options to achieve appropriate design, buffering and/or separation distances between the surrounding sensitive land uses, including residential uses, and nearby Employment Areas and/or major facilities. Recommended measures intended to eliminate or mitigate negative impacts and adverse effects are provided.

The requirements of the Ontario planning regime are organized such that generic policy is informed by specific policy, guidance, and legislation, as follows:

- The Ontario Planning Act, Section 2.1 – sets the ground rules for land use planning in Ontario, whereby planning decisions have regard to matters of provincial interest including orderly development, public health, and safety; then
- The Provincial Policy Statement (“PPS”) sets out goals – making sure adjacent land uses are compatible from a health and safety perspective and are appropriately buffered; then
- 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; then
- The MECP D-series of guidelines set out methods to determine if assessments are required (Areas of Influence, Recommended Minimum Separation Distances, and the need for additional studies); then
- MECP and Municipal regulations, policies, standards, and guidelines then set out the requirements of additional air quality studies and the applicable policies, standards, guidelines, and objectives to ensure that adverse effects do not occur.

3.1 Ontario Planning Act

The Ontario Planning Act is provincial legislation that sets out the ground rules for land use planning in Ontario. It describes how land uses may be controlled, and who may control them. “The purpose of the Act is to:

- provide for planning processes that are fair by making them open, accessible, timely and efficient;
- promote sustainable economic development in a healthy natural environment within a provincial policy framework;
- provide for a land use planning system led by provincial policy;

- integrate matters of provincial interest into provincial and municipal planning decisions by requiring that all decisions be consistent with the Provincial Policy Statement and conform/not conflict with provincial plans;
- encourage co-operation and coordination among various interests;
- recognize the decision-making authority and accountability of municipal councils in planning”²

Section 2.1 of the Ontario Planning Act describes how approval authorities and Tribunals must have regard to matters of provincial interest including orderly development, public health, and safety.

3.2 Provincial Policy Statement

The PPS “provides policy direction on matters of provincial interest related to land use planning and development. As a key part of the Ontario policy-led planning system, the Provincial Policy Statement sets the policy foundation for regulating the development and use of land. It also supports the provincial goal to enhance the quality of life for all Ontarians.”

The PPS is a generic document, providing a consolidated statement of the government policies on land use planning and is issued under section 3 of the Planning Act. Municipalities are the primary implementers of the PPS through policies in their local official plans, zoning by-laws and other planning related decisions. The current 2020 PPS came into effect on May 1, 2020. Policy direction concerning land use compatibility is provided in Section 1.2.6 of the PPS.

From the current 2020 version:

“1.2.6 Land Use Compatibility

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

² <https://www.ontario.ca/document/citizens-guide-land-use-planning/planning-act>

- d) potential impacts to industrial, manufacturing, or other uses are minimized and mitigated.”

The goals of the PPS are implemented through Municipal and Provincial policies, as discussed below. Provided the Municipal and Provincial policies, guidelines, standards, and procedures are met, the requirements of the PPS will be met.

3.3 D-Series of Guidelines

The D-series of guidelines were developed by the MECP in 1995 as a means to assess Recommended Minimum Separation Distances and other control measures for land use planning proposals in an effort to prevent or minimize ‘adverse effects’ from the encroachment of incompatible land uses where a facility either exists or is proposed. D-series guidelines address sources including sewage treatment (Guideline D-2), gas and oil pipelines (Guideline D-3), landfills (Guideline D-4), water services (Guideline D-5) and industries (Guideline D-6).

For this assessment, the applicable guideline is Guideline D-6 - *Compatibility between Industrial Facilities and Sensitive Land Uses*.

Adverse effect is a term defined in the Environmental Protection Act and “means one or more of

- impairment of the quality of the natural environment for any use that can be made of it,
- injury or damage to property or to plant or animal life,
- harm or material discomfort to any person,
- an adverse effect on the health of any person,
- impairment of the safety of any person,
- rendering any property or plant or animal life unfit for human use,
- loss of enjoyment of normal use of property, and
- interference with the normal conduct of business”.

3.3.1 Guideline D-6 Requirements

The guideline specifically addresses issues of air quality, odour, dust, noise, and litter. To minimize the potential to cause an adverse effect, Areas of Influence and Recommended Minimum Separation Distances are included within the guidelines. The Areas of Influence and Recommended Minimum Separation Distances from the guidelines are provided in the table below.

Table 1: Guideline D-6 - Potential Areas of Influence and Recommended Minimum Separation Distances for Industrial Land Uses

Industry Classification	Area of Influence	Recommended Minimum Separation Distance
Class I – Light Industrial	70 m	20 m
Class II – Medium Industrial	300 m	70 m
Class III – Heavy Industrial	1000 m	300 m

Industrial categorization criteria are supplied in Guideline D-6, and are shown in the following table:

Table 2: Guideline D-6 - Industrial Categorization Criteria

Category	Outputs	Scale	Process	Operations / Intensity	Possible Examples
Class I Light Industry	<ul style="list-style-type: none"> Noise: Sound not audible off-property Dust: Infrequent and not intense Odour: Infrequent and not intense Vibration: No ground-borne vibration on plant property 	<ul style="list-style-type: none"> No outside storage Small-scale plant or scale is irrelevant in relation to all other criteria for this Class 	<ul style="list-style-type: none"> Self-contained plant or building which produces/stores a packaged product Low probability of fugitive emissions 	<ul style="list-style-type: none"> Daytime operations only Infrequent movement of products and/or heavy trucks 	<ul style="list-style-type: none"> Electronics manufacturing and repair Furniture repair and refinishing Beverage bottling Auto parts supply Packaging and crafting services Distribution of dairy products Laundry and linen supply
Class II Medium Industry	<ul style="list-style-type: none"> Noise: Sound occasionally heard off-property Dust: Frequent and occasionally intense Odour: Frequent and occasionally intense Vibration: Possible ground-borne vibration, but cannot be perceived off-property 	<ul style="list-style-type: none"> Outside storage permitted Medium level of production allowed 	<ul style="list-style-type: none"> Open process Periodic outputs of minor annoyance Low probability of fugitive emissions 	<ul style="list-style-type: none"> Shift operations permitted Frequent movements of products and/or heavy trucks with the majority of movements during daytime hours 	<ul style="list-style-type: none"> Magazine printing Paint spray booths Metal command Electrical production Manufacturing of dairy products Dry cleaning services Feed packing plants

Class III Heavy Industry	<ul style="list-style-type: none"> Noise: Sound frequently audible off property Dust: Persistent and/ or intense Odour: Persistent and/ or intense Vibration: Ground-borne vibration can frequently be perceived off-property 	<ul style="list-style-type: none"> Outside storage of raw and finished products Large production levels 	<ul style="list-style-type: none"> Open process Frequent outputs of major annoyances High probability of fugitive emissions 	<ul style="list-style-type: none"> Continuous movement of products and employees Daily shift operations permitted 	<ul style="list-style-type: none"> Paint and varnish manufacturing Organic chemical manufacturing Breweries Solvent recovery plants Soaps and detergent manufacturing Metal refining and manufacturing
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3.3.2 Requirements for Assessments

Guideline D-6 requires that studies be conducted to assess impacts where sensitive land uses are proposed within the Potential Area of Influence of an industrial facility. This report is intended to fulfill this requirement.

The D-series guidelines reference previous versions of the air quality regulation (Regulation 346). However, the D-Series of guidelines are still active, still represent current MECP policy and are specifically referenced in numerous other current MECP policies. In applying the D-series guidelines, the current policies, regulations, standards, and guidelines have been used (e.g., Regulation 419).

3.3.3 Recommended Minimum Separation Distances

Guideline D-6 also *recommends* that no sensitive land use be placed within the Recommended Minimum Separation Distance. However, it should be noted that this is a recommendation only. Section 4.10 of the Guideline allows for development within the Recommended Minimum Separation Distance, in cases of redevelopment, infilling, and transitions to mixed use, provided that the appropriate studies are conducted and that the relevant air quality and noise guidelines are met.

4.0 Nearby Industries

The Guideline D-6 Separation distances from the Subject site are shown in **Figure 3a** and **Figure 3b**. SLR personnel conducted a site visit to the area on February 16, 2023. Local industries within 1 km of the Subject site were inventoried. The lands surrounding the Subject site are generally comprised of commercial, residential and employment uses.

In Ontario, facilities that emit significant amounts of contaminants to the environment are required to obtain and maintain an Environmental Compliance Approval (“ECA”) from the MECP or submit an Environmental Activity and Sector Registry (“EASR”). ECAs/ EASRs within 1 km of the site were obtained from the MECP *Access Environment* website³.

³ <https://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action>

Table 3 lists the identified industries within 1000 m of the Subject site and within their applicable Area of Influence. A more detailed table of all industries within 1000 m is provided in **Appendix B**. Industries which lie within their applicable Area of Influence in respect to the Subject are discussed further below.

Table 3: Identified Industries Within the Potential Area of Influence of the Subject Site

Facility	Type of Operation	Environmental Compliance Approval No.	Industry Class	Area of Influence Dist (m)	Actual Distance to Site (m)	Additional Assessment Required?
Gilmers Home Hardware	Hardware store with lumber yard	N/A	I	70	10	Yes
Trade Tech Industries	Welding	N/A	II	300	75	Yes
Sigus Heavy Machinery	Equipment Fabricator	N/A	II	300	80	Yes
Curtis Chicks	Hatchery	N/A	II	300	200	Yes

The industries listed above were identified inside their Potential Area of Influence and, therefore, require additional assessment:

All other industries, detailed in **Appendix B**, are outside of their respective Guideline D-6 Area of Influence and, therefore, are anticipated to be compatible with the proposed Subject site development.

4.1 Class III Heavy Industries

The area within 1 km of the Subject site was reviewed. As shown in **Figure 3**, there are no Class III Heavy industries within 1 km of the Subject site.

4.2 Class I Light and Class II Medium Industries

The area within 300 m of the Subject site was reviewed. There are a number of Class I light and Class II medium scale industries within 300 m of the Subject site, as shown in **Figure 3**, namely:

- Gilmer’s Home Hardware;
- Trade Tech Industries;
- Sigus Heavy Machinery; and
- Curtis Chicks.

4.2.1 Gilmer’s Home Hardware Building Centre

ADDRESS:	177 Toronto Road
DISTANCE TO SUBJECT Site:	10 m
D-6 CLASSIFICATION:	Class I Light Industry

Gilmer’s Home Hardware Building Centre is a commercial home improvement retailer located

approximately 10 m west of the Subject site. A search of the MECP registry⁴ did not yield a permit or registration for this facility.

On February 16, 2023, SLR personnel conducted a site visit to the area. The facility has an outdoor storage yard where inventory is stored. The storage yard contains two buildings that house inventory and outdoor storage. Forklifts were observed on site moving inventory. The storage yard contains unpaved roads that have the potential to generate dust emissions. During the site visit no dust or odours were observed at the facility.

Typically, retail stores are not classified as industries, however because of the outdoor storage yard, this facility is considered a Class I Light Industry under MECP Guideline D-6, with a Recommended Minimum Separation Distance of 20 m and a Potential Area of Influence of 70 m. The Subject site is located within the Recommended Separation Distance and the Potential Area of Influence. Therefore, additional assessment is warranted and is provided in subsequent sections of this report.

4.2.2 Trade Tech Industries

ADDRESS:	100 Henderson Street
DISTANCE TO SUBJECT SITE:	75 m
D-6 CLASSIFICATION:	Class II Medium Industry

Trade Tech Industries is a steel fabricator that specializes in the fabrication, supply, delivery and erection of structural steel, steel deck, and miscellaneous metals. The facility is located approximately 75 m north of the Subject site. A search of the MECP registry did not yield a permit or registration for this facility.

On February 16, SLR personnel conducted a site visit to the area. No odours or visible dust were observed at the facility at the time of the site visit. Outdoor storage was observed at the north end of the property.

Based on a review of the facility website and the site visit observations, the following operations take place at the facility:

- Waterjet Cutting;
- Precision Bending;
- CNC Shearing; and
- Beam line drilling.

Based on the size and nature of the of facility operations, Trade Tech Industries is considered a Class II Medium Industry under MECP Guideline D-6, with a Recommended Minimum Separation Distance of 70 m and a Potential Area of Influence of 300 m. The Subject site is located outside of the Recommended Separation Distance but is within the Potential Area of Influence. Therefore, additional assessment is warranted and is provided in subsequent sections of this report.

⁴ <https://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action>

4.2.3 Sigus Heavy Machinery

ADDRESS:	85 Henderson Street
DISTANCE TO SUBJECT SITE:	80 m
D-6 CLASSIFICATION:	Class II Medium Industry

Sigus Heavy Machinery is a facility that fabricates and assembles screening equipment for the mining, aggregate extraction, and agricultural sectors. The facility is located approximately 80 m northeast of the Project site. A search of the MECP registry did not yield a permit or registration for this facility.

On February 16, SLR personnel conducted a site visit to the area. The building was self-contained with outdoor storage of the fabricated equipment located at the north end of the property. The building has two bay doors facing north. No odours or visible dust were observed at the facility at the time of the site visit.

Based on the size and nature of the of facility operations, Sigus Heavy Machinery is considered a Class II Medium Industry under MECP Guideline D-6, with a Recommended Minimum Separation Distance of 70 m and a Potential Area of Influence of 300 m. The Subject site is located outside of the Recommended Separation Distance but is within the Potential Area of Influence. Therefore, additional assessment is warranted and is provided in subsequent sections of this report.

4.2.4 Curtis Chicks Ltd.

ADDRESS:	101 Fox Road
DISTANCE TO SUBJECT SITE:	200 m
D-6 CLASSIFICATION:	Class II Medium Industry

Curtis Chicks Ltd. is a chicken hatchery owned by Maple Lodge Farms. The facility is located approximately 200 m northwest of the Subject site. A search of the MECP registry did not yield a permit or registration for this facility.

The facility incubates eggs from poultry farms in Ontario and the United States and distributes chicks to grower barns across southern Ontario.

On February 16, 2023, SLR personnel conducted a site visit to the area. No odours or visible dust were observed at the facility at the time of the site visit.

Based on the size and nature of the of facility operations, including daytime, evening and night-time operations, Curtis Chicks is considered a Class II Medium Industry under MECP Guideline D-6, with a Recommended Minimum Separation Distance of 70 m and a Potential Area of Influence of 300 m. The Subject site is located outside of the Recommended Separation Distance but is within the Potential Area of Influence. Therefore, additional assessment is warranted and is provided in subsequent sections of this report.

4.3 Future Uses

A review of development applications in the area indicated that there are 3 active development applications within 1000 m of the Subject site. The following is a summary of the significant applications and excludes committee of adjustment applications such as minor variance or consent. This information

is reflective of those applications listed online at the Municipality of Port Hope [applications information centre](#) as of February 24, 2023:

Table 4: Development Applications in the Area

Address	Date	Development Application Information *	Details
196 Toronto Road	N.A	ZB01/2023	A Zoning By-law Amendment is proposed to re-zone the subject lands to 'RES1-1(T5)' Zone and 'COMR(H3)(T6)' Zone to permit on a temporary basis, up to 10 years, on a portion of the subject lands for the use as a temporary office, laboratory, training facility, and storage of soil samples.
Mason Homes Phase 5 (south of Strachan Street and west of Victoria Street south)	01/2019 & 06.2019	OP01/2019 & ZB06/2019	<ul style="list-style-type: none"> Official Plan Amendment to re-designate a portion of the subject lands on the west side of Victoria Street South to a site specific "Medium Density Residential" in order to facilitate the development of townhouse units. re-designate the lands within 'Special Policy Site Area 9' (Penryn Park Estate), including the portions of the subject lands that were previously part of the Port Hope Golf and Country Club to a site-specific "Low Density Residential-Urban" to allow residential uses consistent with the adjacent approved Mason Homes Plans of subdivision.
60 Henderson Street (Subject site)	02/2022	OP02/2022 & ZB04/2022	<ul style="list-style-type: none"> Official Plan Amendment to re-designate the subject lands to a site specific 'General Commercial' designation in order to facilitate the development of 4 storey, 74-unit seniors independent living residential mid-rise building and 36 bungalow townhouse units on the subject lands.

The above table illustrates that there are surrounding landowners pursuing rezoning applications to enable more efficient use of land and mixed uses including residential.

4.4 Summary

From the list of industries discussed in **Section 4**, four are identified to require further analysis as a result of being within their Area of Influence. These industries include:

- Gilmer's Home Hardware;
- Trade Tech Industries;
- Sigus Heavy Machinery; and
- Curtis Chicks.

5.0 Air Quality, Dust and Odour Assessment

5.1 Industrial Sources

5.1.1 Guidelines and Regulations

Within Ontario, facilities which emit significant amounts of contaminants to the environment are required to obtain and maintain an ECA from the MECP or submit an EASR. Facilities with an ECA/EASR should already meet the MECP guidelines for air quality contaminants at their property line.

5.1.2 Air Quality

Under O.Reg. 419/05, a facility is required to meet prescribed standards for air emissions at their property boundary line and any location off-site. The MECP does not require industries to assess their emissions at elevated points off-site, if a receptor does not exist at that location. While the introduction of mid-rise or high-rise residential buildings could trigger a facility to re-assess compliance at new receptor locations, the introduction of new low-rise receptors does not introduce any new receptors, as the facility is already required to be in compliance at grade-level at their property line.

5.1.2.1 Odour

There are a select few compounds that are provincially regulated from an odour perspective; however, there is no formal regulation with respect to mixed odours. Impacts from mixed odours produced by industrial facilities are generally only considered and regulated by the MECP in the presence of persistent complaints (ECO 2010).

The MECP assesses mixed odours, in Odour Units, following draft guidelines. One odour unit (1 OU) has been used as a default threshold. This is the concentration at which 50 % of the population will just detect an odour (but not necessarily identify/recognize or object to it). Recognition of an odour will typically occur between 3 and 5 odour units. The following factors may be considered:

- **Frequency** – How often the odour occurs. The MECP typically allows odours to exceed 1 OU with a 0.5 % frequency.
- **Intensity** – The strength of the odour, in odour units. 1 OU is often used in odour assessments in Ontario.
- **Duration** – How long the odour occurs.
- **Offensiveness** – How objectionable the odour is.
- **Location** – Where the odour occurs. The MECP assesses at odours where human activity is likely to occur.

The MECP provided proposed clarification of human odour receptors, as shown in the following table:

Table 5: Proposed Clarification of Human Receptors (MECP 2016)

Receptor Category	Examples	Exposure Type	Type of Assessment
Permanent potential 24-hour sensitivity	Anywhere someone could sleep including any residence or house, motels, hospitals, senior citizen homes, campgrounds, farmhouse, etc.	Individual likely to receive multiple exposures	Considered sensitive 24 hours per day
Permanent daily hours but with definite periods of shutdown/closure	Schools, daycares, community centres, soccer fields, farmland, churches, bicycle paths, hiking areas, lakes, commercial or institutional facilities (with consideration of hours of operation such as night clubs, restaurants, etc.)	Individual could receive multiple exposures	Night-time or daytime exclusion only (consider all other hours)
Seasonal variations with clear restrictions on accessibility during the off season	Golf courses, amusement parks, ski hills, other clearly seasonal private property	Short term potential for exposure	Exclusions allowed for non-seasonal use
Transient	Open fields, roadways, easements, driveways, parking lots, pump houses	Very short-term potential for exposure, may not be a single resident exposed to multiple events	Generally, would not be included as human receptors unless otherwise specified.

5.1.2.2 Dust

Ontario Regulation 419/05 also provides limits for dust, including limits for suspended particulates and dust fall. Under Reg. 419/05, these air quality limits must be met at the property line and all points beyond. This is not changed by the addition of the Subject site. That is to say, the existing mutual property line is already a point of reception for dust, and the limits must already be met at that location.

5.1.2.3 Cumulative Assessments

Cumulative impact assessments, examining the combined effects of individual industries, or the combined effects of industry and roadway emissions, are generally not required. Neither the PPS, the D-Series of guidelines, Regulation 419/05, or the current MECP odour assessment protocols require an assessment of cumulative impacts.

Which is not to say that such assessments are never warranted; rather, the need to do so is considered on a case-by-case basis, depending on the nature and intensity of the industrial operation(s), and the nature of the pollutants released. Based on the types of pollutants released by the industries in this area, cumulative effects assessments are not warranted.

5.1.2.4 Local Meteorology

Surface wind data was obtained to generate a wind rose from weather station # 714310 in Cobourg, Ontario from 1991 through 2020, as shown in **Figure 4**. As can be seen in the wind rose, predominant winds are from the west and northwestern quadrants, while winds from the northeast and southeast quadrants may be less frequent.

5.1.3 Site Visits and Odour and Dust Observations

A site visit was conducted to the area on February 16, 2023 by SLR personnel to identify significant sources of air quality emissions and to identify any significant sources of odour or dust in the area surrounding the Subject site. During the site visit, the staff members observed existing industries from the sidewalks and other publicly accessible areas. Wind conditions during the site visit were noted as:

- February 16, 2023 northerly winds, 9 km/h, 1 °C, 76 %RH

No odours or fugitive dust emissions were detected at the Subject site or the surrounding area during the site visit.

5.1.4 Ministry of Environment, Conservation and Parks Facility Information

SLR recognizes that complaint history can be useful in evaluating land use compatibility. SLR typically only requests potential complaints information for facilities located within the potential Area of Influence or where an industry is known to have the potential to generate significant air emissions.

SLR submitted a request related to neighbourhood complaint history with MECP through their Environmental Property Information (EPI) Program. The results are provided in **Appendix C**. The request was submitted for the Curtis Chicks property at 101 Fox Road.

The results of the MECP search identified a Waste Permit and Spills reporting. There were no results on file regarding an air quality permit or complaints relating to dust or odour provided.

5.1.5 Assessment of Potential Air Emissions

The following facilities were identified as being within the Potential Area of Influence for their industrial classification and were identified to require additional review from an air quality perspective:

- Gilmer’s Home Hardware;
- Trade Tech Industries;
- Sigus Heavy Machinery; and
- Curtis Chicks.

Further discussion regarding each of these facilities and potential air emissions is provided below.

All the other industries surrounding the Subject site were outside of the Potential Area of Influence. Therefore, the development of the Subject site is anticipated to be compatible with these facilities from an air quality perspective. In addition, emissions of dust, and/or odour at the Subject are not anticipated. Further the Subject site is not anticipated to limit the ability of these industries to obtain or maintain required MECP permits and approvals.

5.1.5.1 Gilmer’s Home Hardware Building Centre

Gilmer’s Home Hardware Building Centre is a commercial home improvement retailer with an outdoor storage yard located approximately 10 m west of the Subject site. A search of the MECP registry did not yield a permit or registration for this facility.

On February 16, 2023, SLR personnel conducted a site visit to the area. The facility has an outdoor storage yard where inventory is stored. The storage yard contains two buildings that house inventory and

outdoor storage. Forklifts were observed on site moving inventory. The storage yard contains unpaved roads that have the potential to generate dust emissions. During the site visit no dust or odours were observed at the facility.

Typically, retail stores are not classified as industries, however because of the outdoor storage yard this facility is considered a Class I Light Industry under MECP Guideline D-6, with a Recommended Minimum Separation Distance of 20 m and a Potential Area of Influence of 70 m. The Subject site is located within the Recommended Separation Distance and the Potential Area of Influence.

There are existing trees along the fence line between the Home Hardware and the proposed development which provides some mitigation and filtration for potential fugitive emissions from the facility (as recommended by the US EPA for *Construction Roadside Vegetation barriers to Improve Near-Road Air Quality*, 2016).

A wind frequency distribution diagram (a wind rose) is provided in **Figure 4**. Winds with the potential to direct air emissions from the Home Hardware facility towards the Subject site include winds from the west and south quadrants. Winds from this direction are predicted to occur less than 25% of the time.

On-site activity may include the operation of small flat bed trucks for deliveries and forklifts to move products around the site. Based on a review of online information, the Home Hardware operates during daytime hours only, from 7:30am to 8:00pm Monday to Friday, 7:30am to 6:00pm on Saturday, and 9am to 5:00pm on Sunday. Fugitive dust emissions were not observed during the site visit, however, the facility does have the potential to generate fugitive dust emissions. Therefore, it is recommended that a Warning Clause and receptor based physical mitigation measures be included in the architectural design of the proposed Subject site structures.

The mitigation measures include strategic location of fresh air intakes facing, away from the outdoor storage yard, installation of MERV rated filters and positive pressurization of the building. A summary of the mitigation measures and the Warning Clause is provided in **Appendix A**.

To further reduce fugitive dust emissions from the storage yard it is recommended that coniferous trees are planted along the property line.

With these mitigation measures in place, the facility is anticipated to be compatible with the Subject site from an air quality perspective.

5.1.5.2 Trade Tech Industries

Trade Tech Industries is a steel fabricator that specializes in the fabrication, supply, delivery and erection of structural steel, steel deck, and miscellaneous metals. The facility is located approximately 75 m north of the Subject site. A search of the MECP registry did not yield a permit or registration for this facility.

Based on a review of the facility website and the site visit observations, the following operations take place at the facility:

- Waterjet Cutting;
- Precision Bending;
- CNC Shearing; and
- Beam line drilling.

Based on the size and nature of the of facility operations, Trade Tech Industries is considered a Class II Medium Industry under MECP Guideline D-6, with a Recommended Minimum Separation Distance of 70 m and a Potential Area of Influence of 300 m. The Subject site is located outside of the Recommended Separation Distance but is within the Potential Area of Influence.

On February 16, SLR personnel conducted a site visit to the area. No odours or visible dust were observed at the facility at the time of the site visit. Outdoor storage was observed at the north end of the property.

A wind frequency distribution diagram (a wind rose) is provided in **Figure 4**. Winds with the potential to direct air emissions from the Trade Tech Industries facility towards the Subject site include winds from the north and northwest quadrants. Winds from this direction are predicted to occur less than 25% of the time.

The Trade Tech Industries is beyond the Recommended Minimum Separation Distance of 70 m for a Class II Medium Industry. The Trade Tech Industries operations are buffered from the Subject site by the intervening 4-storey Hampton Inn hotel.

Given the presence of elevated sensitive receptors at the existing hotel, there is already an obligation for surrounding industry to meet the MECP requirements related to air emissions. Therefore, the addition of elevated sensitive receptors at the Subject site will not introduce a condition for environmental compliance.

Based on the above, the Subject site is anticipated to be compatible with the Trade Tech Industries facility from an air quality perspective. Emissions of dust, or odour at the Subject site are not anticipated. Further, the Subject site is not anticipated to limit the ability of Trade Tech Industries to obtain or maintain required MECP permits or approvals.

5.1.5.3 Sigus Heavy Machinery

Sigus Heavy Machinery is a facility that fabricates and assembles screening equipment for the mining, aggregate extraction, and agricultural sectors. The facility is located approximately 80 m northeast of the Subject site. A search of the MECP registry did not yield a permit or registration for this facility.

On February 16, SLR personnel conducted a site visit to the area. The building was self-contained with outdoor storage of the fabricated equipment located at the north end of the property. The building has two bay doors facing north. No odours or visible dust were observed at the facility at the time of the site visit.

A noise impact study was completed in support of the Subject site planning applications. The study was completed by Aercoustics Engineering Ltd. (“Aercoustics”) on May 10, 2022. In conducting this study, Aercoustics reached out to Sigus Heavy Machinery to obtain information regarding their operations. Based on a conversation with the facility owner on January 31, 2022 the following was noted by Aercoustics about the Sigus Heavy Machinery operations:

- Manufacturing takes place indoors;
- No stamping activity;
- No standby generator on site;
- Bay doors to remain closed; and
- No large/high velocity exhaust fans.

Based on the size and nature of the of facility operations, Sigus Heavy Machinery is considered a Class II Medium Industry under MECP Guideline D-6, with a Recommended Minimum Separation Distance of 70 m and a Potential Area of Influence of 300 m. The Subject site is located outside of the Recommended Separation Distance but is within the Potential Area of Influence.

A wind frequency distribution diagram (a wind rose) is provided in **Figure 4**. Winds with the potential to direct air emissions from the Sigus Heavy Machinery facility towards the Subject site include winds from the northeast quadrants. Winds from this direction are predicted to occur less than 15% of the time.

The Sigus Heavy Machinery facility is located beyond the Recommended Minimum Separation Distance of 70 m for Class II Medium Industry. The Sigus Heavy Machinery operations are buffered from the Subject site by the intervening 4-storey Hampton Inn hotel.

The building is self contained as the operations take place indoors with the doors closed at all times to limit fugitive emissions. The facility does not have high velocity fans, therefore it is expected that potential air emissions will occur close to the facility and within the the property boundary. In accordance with the MECP, the facility is required to meet the applicable guidelines of O. Reg. 419/05 at the facility property line.

Given the presence of elevated sensitive receptors at the existing hotel, there is already an obligation for surrounding industry to meet the MECP requirements related to air emissions. Therefore, the addition of elevated sensitive receptors at the Subject site will not introduce a condition for environmental compliance.

Based on the above, the Subject site is anticipated to be compatible with the Sigus Heavy Machinery facility from an air quality perspective. Emissions of dust, or odour at the Subject site are not anticipated. Further, the Subject site is not anticipated to limit the ability of Sigus Heavy Machinery to obtain or maintain required MECP permits or approvals.

5.1.5.4 Curtis Chicks Ltd.

Curtis Chicks Ltd. is a chicken hatchery owned by Maple Lodge Farms. The facility is located approximately 200 m northwest of the Subject site. A search of the MECP registry did not yield a permit or registration for this facility.

The facility incubates eggs from poultry farms in Ontario and the United States. The hatched chicks are then distributed to grower barns across southern Ontario.

On February 16, 2023, SLR personnel conducted a site visit to the area. No odours or visible dust were observed adjacent to the facility at the time of the site visit.

Based on the size and nature of the of facility operations, including daytime, evening and night-time operations, Curtis Chicks is considered a Class II Medium Industry under MECP Guideline D-6, with a Recommended Minimum Separation Distance of 70 m and a Potential Area of Influence of 300 m. The Subject site is located over 2.8 times the Recommended Minimum Separation Distance and is buffered from the Curtis Chicks facility by the intervening 4-storey Hampton Inn Hotel immediately north of the Subject site, and the vegetation located immediately northwest of the Subject site.

A wind frequency distribution diagram (a wind rose) is provided in **Figure 4**. Winds with the potential to direct air emissions from the Curtis Chicks facility towards the Subject site include winds from the northwest quadrants. Winds from this direction are predicted to occur less than 17% of the time.

The closest existing sensitive receptor to the facility is a residential subdivision located on the southwest corner of Fox Road and Pemberton Drive (approximately 140m away). These existing residential land uses are closer in proximity to Curtis Chicks than the Subject site (approximately 200m away). Additionally, the 4-storey Hampton Inn Hotel, which is located immediately north of the Subject site, is also located in closer proximity to the Curtis Chicks facility (120m) than the Subject site (200m).

Given the presence of elevated sensitive receptors at the existing hotel, there is already an obligation for the surrounding industry to meet the MECP requirements related to air emissions. Therefore, the addition of elevated sensitive receptors at the Subject site will not introduce a condition for environmental compliance.

Based on the above, the Subject site is anticipated to be compatible with the Curtis Chicks facility from an air quality perspective. Emissions of dust, or odour at the Subject site are not anticipated. Further, the Subject site is not anticipated to limit the ability of Curtis Chicks to obtain or maintain required MECP permits or approvals.

5.1.5.5 Future Uses

The potential exists for industries to turn over or new industries to be constructed on currently vacant employment lands, therefore SLR completed a review of the Municipality of Port Hope Zoning By-law No. 20/2010 Part 8 Employment uses and Part 7 Commercial Zones have classified the uses in accordance with the MECP D-6 Guidelines. The lands north of the Subject site are zoned EMP1 and the lands east of the Subject site are zoned EMP2. The permitted uses of EMP1 and EMP2 are listed below in **Table 7** and **Table 8**. The lands immediately west of the Subject site are zoned COM2. The permitted uses of COM2 are listed below in **Table 9**.

**Table 6: D-6 Classification of Municipality of Port Hope Zoning By-law No. 20/2010
 General Employment (“EMP1”)- Permitted Uses**

Land Use	Type of Operation	Industry Class	Area of Influence Distance (m)	Recommended Minimum Separation Distance (m)
Animal Shelter	If completed with outdoor animal runs maybe considered as an industry. Expected to be self-contained minimal air/noise emissions	I	70	20
Banquet Hall	N/A	N/A	N/A	N/A
Building Supply Outlet	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Business Office	N/A	N/A	N/A	N/A
Commercial Fitness Centre	N/A	N/A	N/A	N/A
Contractor’s Supply Establishment	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Contractor’s Yard	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Dry Cleaning or Laundry Plant	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Dry Industrial Use	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Emergency Service Facility	N/A	N/A	N/A	N/A

Land Use	Type of Operation	Industry Class	Area of Influence Distance (m)	Recommended Minimum Separation Distance (m)
Equipment Sales and Rental Establishment	N/A	N/A	N/A	N/A
Farm Implement Dealer	Self-contained minimal air/noise emissions	I	70	20
Industrial Use	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II or III	70 or 300 or 1000	20 or 70 or 300
Landscaping Operation	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Laundry Establishment	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Park	Typically a Sensitive Receptor	N/A	N/A	N/A
Medical Marihuana	Classification depends on intensity and use of emission control equipment. Given surrounding land uses expected to be a Class II industry. MECP Permits required for emissions to atmosphere	II	300	70
Motor Vehicle Body Shop	Typically, a Class I industry. MECP Permits required for emissions to atmosphere	I	70	20
Outdoor Display and Sales Area	N/A	N/A	N/A	N/A
Outdoor Storage, Accessory	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Printing and Publishing Establishment	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Public Works Yard	MECP Permits required for emissions to atmosphere	II	300	70
Retail Store, Accessory	N/A	N/A	N/A	N/A
Salvage Yard	MECP Permits required for emissions to atmosphere	II	300	70
Service Shop	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Studio	N/A	N/A	N/A	N/A
Taxi Service Depot	Typically, a Class I industry. MECP Permits required for emissions to atmosphere	I	70	20

**Table 7: D-6 Classification of Municipality of Port Hope Zoning By-law No. 20/2010
 Service Employment (“EMP2”) – Permitted Uses**

Land Use	Type of Operation	Industry Class	Area of Influence Distance (m)	Recommended Minimum Separation Distance (m)
Agricultural Warehouse	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Assembly Hall	N/A	N/A	N/A	N/A
Banquet Hall	N/A	N/A	N/A	N/A
Business Office	N/A	N/A	N/A	N/A
Commercial Fitness Centre	N/A	N/A	N/A	N/A

Land Use	Type of Operation	Industry Class	Area of Influence Distance (m)	Recommended Minimum Separation Distance (m)
Contractor's Supply Establishment	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Drive-Through Service	N/A	N/A	N/A	N/A
Dry Cleaner's Distribution	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Dry Cleaning Establishment	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Dry Industrial Use	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Emergency Service Facility	N/A	N/A	N/A	N/A
Farm Implement Dealer	Self-contained minimal air/noise emissions	I	70	20
Financial Institution	N/A	N/A	N/A	N/A
Funeral Home	N/A	N/A	N/A	N/A
Hotel	N/A	N/A	N/A	N/A
Industrial Use	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Laboratory	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Laundry Establishment	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Motel	N/A	N/A	N/A	N/A
Outdoor Display and Sales Area	N/A	N/A	N/A	N/A
Outdoor Storage, Accessory	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Personal Service Shop	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Place of Entertainment	N/A	N/A	N/A	N/A
Printing and Publishing Establishment	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Private Club	N/A	N/A	N/A	N/A
Professional Office	N/A	N/A	N/A	N/A
Research and Development	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Restaurant	N/A	N/A	N/A	N/A
Retail Store, Accessory	N/A	N/A	N/A	N/A
School, Commercial	N/A	N/A	N/A	N/A
School, Private	N/A	N/A	N/A	N/A
Service Shop	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70

**Table 8: D-6 Classification of Municipality of Port Hope Zoning By-law No. 20/2010
 General Commercial (“COM2”) – Permitted Uses**

Land Use	Type of Operation	Industry Class	Area of Influence Distance (m)	Recommended Minimum Separation Distance (m)
Animal Clinic	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Assembly Hall	N/A	N/A	N/A	N/A
Billiard Hall	N/A	N/A	N/A	N/A
Building Supply Outlet	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Business Office	N/A	N/A	N/A	N/A
Commercial Fitness Centre	N/A	N/A	N/A	N/A
Day Nursery				
Drive-Through Service Facility	N/A	N/A	N/A	N/A
Dry Cleaner’s Distribution	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Dwelling, Accessory				
Emergency Service Facility	N/A	N/A	N/A	N/A
Farm Implement Dealer	Self-contained minimal air/noise emissions	I	70	20
Financial Institution	N/A	N/A	N/A	N/A
Funeral Home	N/A	N/A	N/A	N/A
Greenhouse, Commercial	N/A	N/A	N/A	N/A
Hotel	N/A	N/A	N/A	N/A
Laundry Establishment	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Medical Office	N/A	N/A	N/A	N/A
Miniature Golf Course	N/A	N/A	N/A	N/A
Motel	N/A	N/A	N/A	N/A
Motor Vehicle Dealership	N/A	N/A	N/A	N/A
Motor Vehicle Body Shop	Typically, a Class I industry. MECP Permits required for emissions to atmosphere.	I	70	20
Motor Vehicle Gasoline Bar	N/A	N/A	N/A	N/A
Motor Vehicle Repair Garage	Typically, a Class I industry. MECP Permits required for emissions to atmosphere.	I	70	20
Motor Vehicle Service Station	Typically, a Class I industry. MECP Permits required for emissions to atmosphere.	I	70	20
Motor Vehicle Washing Establishment	N/A	N/A	N/A	N/A
Outdoor Display and Sales Area				
Personal Service Shop	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Place of Amusement	N/A	N/A	N/A	N/A
Place of Entertainment	N/A	N/A	N/A	N/A
Private Club	N/A	N/A	N/A	N/A
Recreational Trailer, Vehicle or Boat Sales Establishment	N/A	N/A	N/A	N/A
Restaurant	N/A	N/A	N/A	N/A

Land Use	Type of Operation	Industry Class	Area of Influence Distance (m)	Recommended Minimum Separation Distance (m)
Restaurant, Take Out	N/A	N/A	N/A	N/A
Retail Store	N/A	N/A	N/A	N/A
School, Commercial	N/A	N/A	N/A	N/A
Service Shop	Classification depends on intensity. MECP Permits required for emissions to atmosphere	I or II	70 or 300	20 or 70
Speciality Food Store	N/A	N/A	N/A	N/A
Studio	N/A	N/A	N/A	N/A
Supermarket	N/A	N/A	N/A	N/A
Taxi Service Depot/ Dispatch Establishment	N/A	N/A	N/A	N/A
Theatre	N/A	N/A	N/A	N/A
Transit Station	Typically, a Class I industry. MECP Permits required for emissions to atmosphere.	I	70	20

Based on the above land use characteristics, existing surrounding sensitive land uses, size, and nature of the possible employment land uses, the majority of the possible uses are considered Class I Light Industries under MECP Guideline D-6, with a 70 m Area of Influence and a Recommended Minimum Separation Distance of 20 m. Depending on the intensity of the land uses, Class II Medium Industries and Class III Heavy Industries may also occur on the lands zoned as Employment. Under MECP Guideline D-6, Class II industries have a 300 m Area of Influence and a Recommended Minimum Separation Distance of 70 m, and Class III industries have a 1000 m Area of Influence and a Recommended Minimum Separation Distance of 300 m.

Existing residences are located west of Toronto Road, within 10 m of the COM2 zoned lands. There are also existing residences located west of Victoria Street, adjacent to EMP2 zoned lands. Additionally, the 4-storey Hampton Inn Hotel is adjacent to the COM2, EMP1, and EMP2 zoned lands. Therefore, any future uses are already constrained by existing sensitive land uses and required to meet applicable MECP environmental regulations at these locations.

Facilities with significant emission to atmosphere are required, under the Environmental Protection Act, to ensure compliance with the applicable Provincial air quality regulations and standards as well as noise guidelines at all existing sensitive receptors and any elevated receptor locations.

Based on the above, the Subject site development is anticipated to be compatible with future employment uses from an air quality perspective. Further, the Subject site is not anticipated to limit the ability of future employment uses to obtain or maintain required MECP permits or approvals.

5.1.5.6 Vacant Lots

Under Guideline D-6, the use of vacant lands must be considered in land use compatibility studies. There is a vacant land parcel adjacent to the Subject site to the west. The vacant land parcel is on the southeast corner of the Fox Road and Pemberton Drive intersection. The lands located east of the Subject site are also vacant.

The vacant land parcel located to the west is zoned COM2(H1). The permitted uses for COM2 are discussed above in section 5.1.5.5.

The vacant land parcel located to the east is zoned as EMP2. The permitted uses for EMP2 are discussed above in section 5.1.5.5.

Existing residences are located west of Toronto Road, within 10 m of the COM2 zoned lands. There are also existing residences located west of Victoria Street, adjacent to EMP2 zoned lands. Additionally, the 4-storey Hampton Inn Hotel is adjacent to the COM2 and EMP2 zoned lands. Therefore, any future uses are already constrained by existing sensitive land uses and required to meet applicable MECP environmental regulations at these locations.

If a new industrial operation were to relocate or construct a new facility, these new facilities would be required to obtain an approval from the MECP (either EASR or ECA). In accordance with the MECP permit the facility would be required to meet the applicable guidelines of O. Reg. 419/05 at the facility property line. As part of the permitting process, the facility would be required to meet applicable guidelines at existing and approved residential locations.

6.0 Conclusions

SLR was retained by Wellings of Port Hope Inc., to prepare a land use compatibility study focusing on air quality, odour, and dust in support of a planning application for a proposed development at 60 Henderson Street in the Municipality of Port Hope, Ontario (“the Subject site”).

The proposed Subject site development consists of an independent seniors living community. The proposal features a central four (4) storey apartment building containing 74 apartment-style dwelling units and accessory services, including a restaurant and dining area, a bar, a personal service shop, and a fitness centre. An additional 36 bungalow townhouse dwellings are proposed around the periphery of the site. In total, 110 dwelling units are proposed, as well as 154 parking spaces. This assessment has considered the air quality, odour, and dust emissions between the proposed land use and surrounding land uses.

A review of the existing industries surrounding the Subject site with respect to air quality has been performed in accordance with the D-6 Guideline and The Municipality of Port Hope Zoning By-law

The assessment has included a review of air quality from industrial facilities in the area.

With the inclusion of at receptor mitigation and use of Warning Clauses, the Subject site is anticipated to be compatible with the surrounding employment land uses. The mitigation measures include strategic location of fresh air intakes facing, away from the Gilmer’s Home Hardware outdoor storage yard, installation of MERV rated filters, and positive pressurization of the building. A summary of the mitigation measures and the Warning Clauses is provided in **Appendix A**.

In addition to the above, and to further reduce fugitive dust emissions from the Gilmer’s Home Hardware storage yard it is recommended that coniferous trees are planted along the property line.

As discussed in the latest Ministry of Environment, Conservation and Parks Odour Guideline⁵, hotels are defined as sensitive receptors. With the presence of the existing 4-storey Hampton Inn hotel, the development of the Subject site will not introduce a new condition for environmental compliance for surrounding industry.

With the inclusion of the at receptor mitigation and use of Warning Clauses, the Subject site is anticipated to be compatible with the surrounding land uses from an air quality perspective. Further, the Subject site will not affect the ability for industrial facilities to obtain or maintain compliance with applicable Provincial environmental policies, regulations, approvals, authorizations, and guidelines. The requirements of MECP Guideline D-6, Regulation 419/05 are met. As the applicable policies and guidelines are met, the Subject site is:

- Unlikely to result in increased risk of complaint and nuisance claims;
- Unlikely to result in operational constraints for the major facilities; and
- Unlikely to result in constraints on major facilities to reasonably expand, intensify or introduce changes to their operations.

⁵ <https://prod-environmental-registry.s3.amazonaws.com/2021-03/Draft%20Odour%20Guidance.pdf>

7.0 Statement of Limitations

This report has been prepared and the work referred to in this report has been undertaken by SLR Consulting (Canada) Ltd. (SLR) for Wellings of Port Hope Inc, hereafter referred to as the “Client”. It is intended for the sole and exclusive use of the Client. The report has been prepared in accordance with the Scope of Work and agreement between SLR and the Client. Other than by the Client and the Municipality of Port Hope in their role as a land use planning approval authority, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted unless payment for the work has been made in full and express written permission has been obtained from SLR.

This report has been prepared in a manner generally accepted by professional consulting principles and practices for the same locality and under similar conditions. No other representations or warranties, expressed or implied, are made.

Opinions and recommendations contained in this report are based on conditions that existed at the time the services were performed and are intended only for the client, purposes, locations, time frames and project parameters as outlined in the Scope or Work and agreement between SLR and the Client. The data reported, findings, observations and conclusions expressed are limited by the Scope of Work. SLR is not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. SLR does not warranty the accuracy of information provided by third party sources.

8.0 Closure

Should you have questions on the above report, please contact the undersigned.

Sincerely,

SLR Consulting (Canada) Ltd.

A handwritten signature in black ink that reads "A Najjar". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Alice Najjar, B.A.
Air Quality Scientist

Jenny Graham, P.Eng.
Senior Air Quality Engineer

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Distribution: 1 electronic copy – Wellings of Port Hope Inc.
 1 electronic copy – SLR Consulting (Canada) Ltd.

9.0 References

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Figures

Compatibility Mitigation Study – Air Quality

60 Henderson Street

Wellings of Port Hope Inc.

SLR Project No. 241.030767.00001

April 17, 2023





Aerial Photography from Google Earth

WELLINGS OF PORT HOPE INC.

60 HENDERSON STREET - PORT HOPE, ONTARIO

CONTEXT PLAN

True North



Scale: 1:7,000

Date: April 17, 2023 Rev 0.0

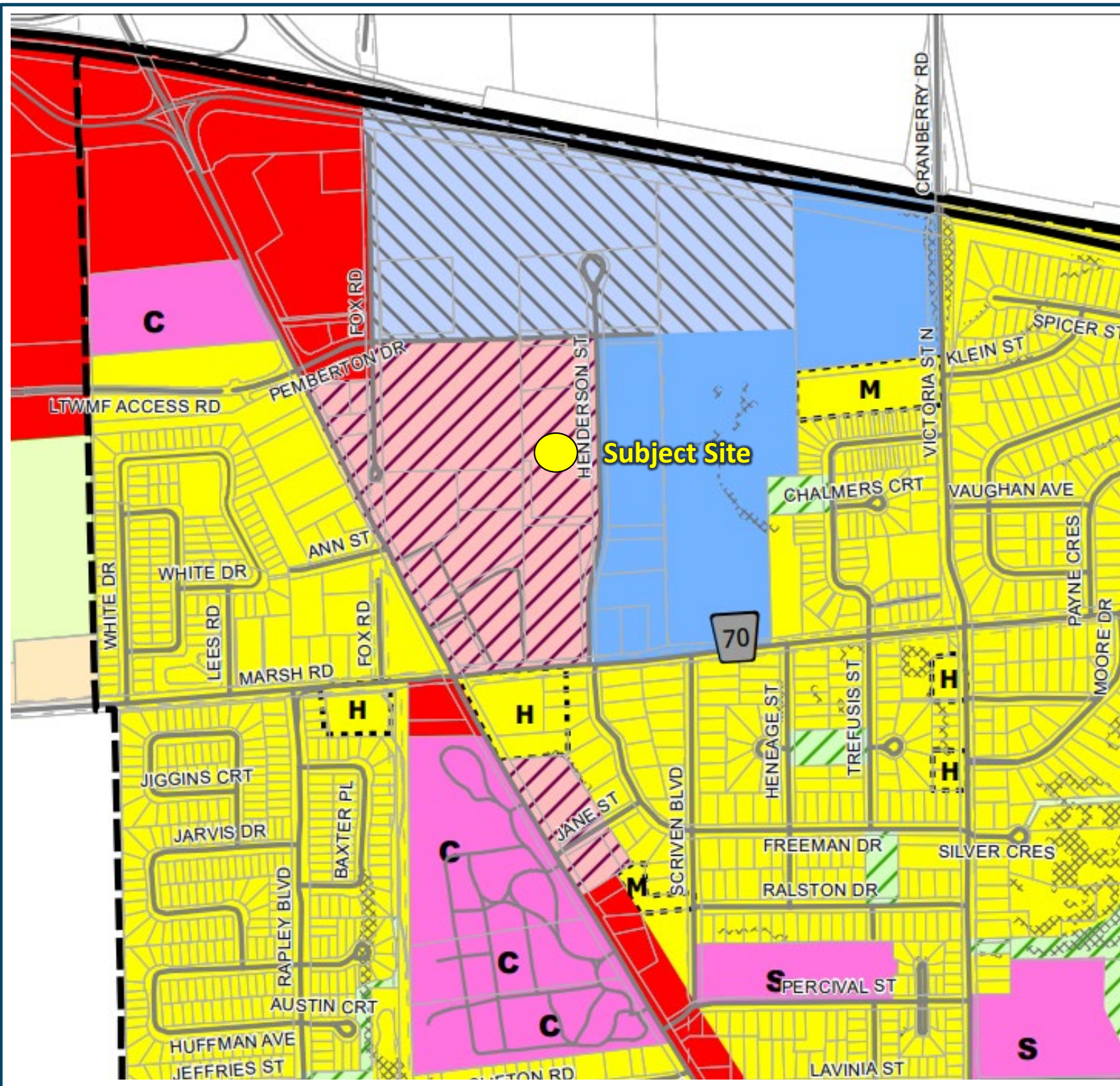
Project No. 241.030767.00001

METRES

Figure No.

1





- LAND USE DESIGNATIONS**
- | | |
|--|-------------------------------|
| RESIDENTIAL - URBAN | COMMERCIAL |
| LOW DENSITY | GENERAL |
| MEDIUM DENSITY | CENTRAL |
| HIGH DENSITY | HIGHWAY |
| EMPLOYMENT | PARKS & OPEN SPACE |
| GENERAL | PARK |
| SERVICE | OPEN SPACE |
| | SCULPTORPE MARSH (PSW) |
| OTHER | C CEMETERY |
| INSTITUTIONAL - MAJOR | S SCHOOL |
| PHYSICAL CONSTRAINT AREA | |
| SPECIAL POLICY SITE WITH NUMBER | |
| WALTON STREET HERITAGE CONSERVATION DISTRICT | |
| JOHN, ONTARIO & QUEEN HERITAGE CONSERVATION DISTRICT | |
| SPECIAL POLICY AREA 9 | |
| RESIDENTIAL | COMMERCIAL |
| RESIDENTIAL 1 | LOCAL COMMERCIAL 1 |
| RESIDENTIAL 2 | LOCAL COMMERCIAL 2 |
| RESIDENTIAL 3 | COUNTRY INN COMMERCIAL |
| OTHER | |
| INSTITUTIONAL - MAJOR | |
| RECREATIONAL OPEN SPACE | |



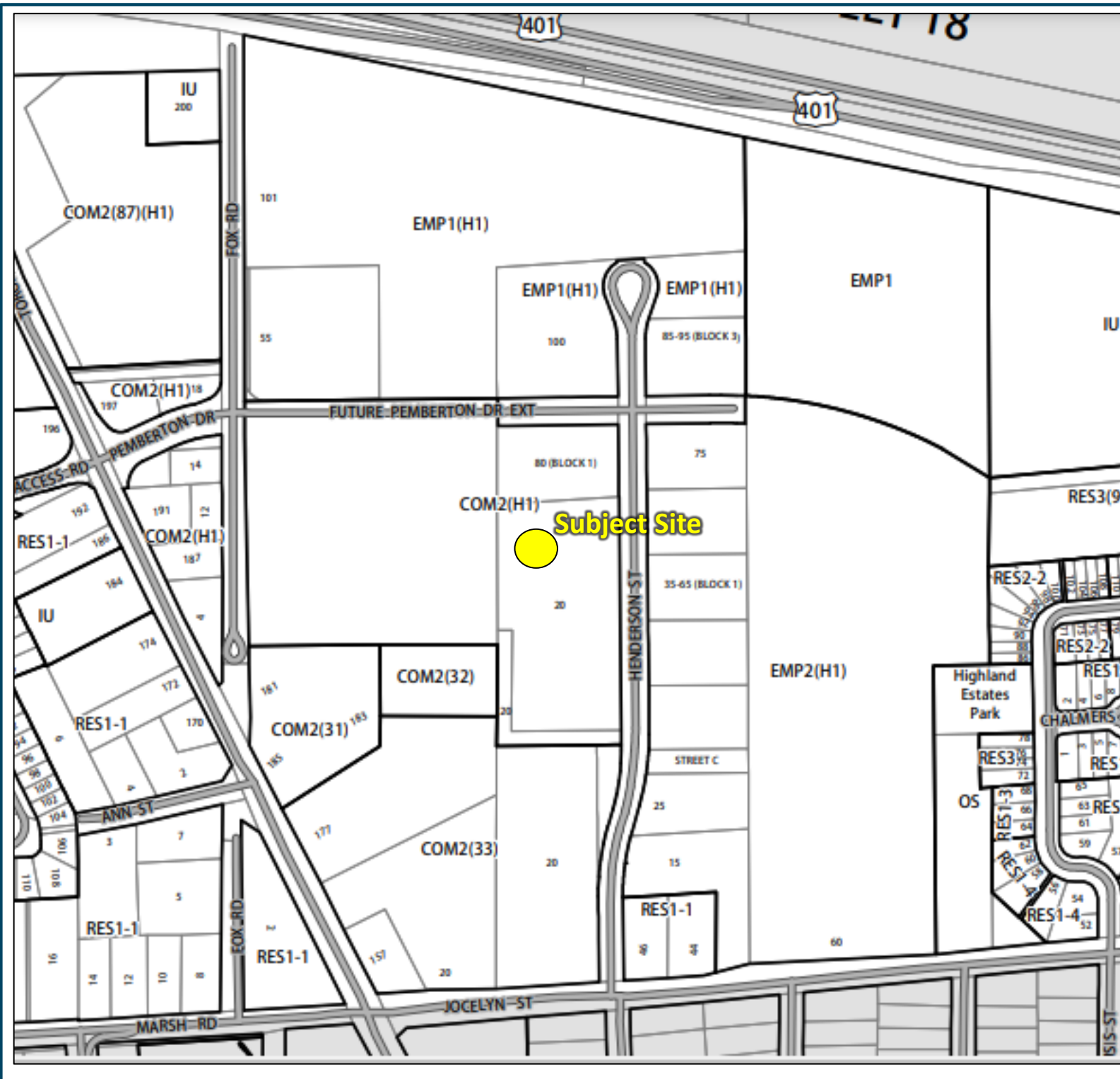
WELLINGS OF PORT HOPE INC.

60 HENDERSON STREET - PORT HOPE, ONTARIO

EXCERPT FROM OFFICIAL PLAN - SCHEDULE C1

Scale:	n/a	METRES
Date: April 17, 2023	Rev 0.0	Figure No.
Project No. 241.030767.00001		2a





- RESIDENTIAL**
 RES1 - LOW DENSITY RESIDENTIAL ONE
 RES2 - LOW DENSITY RESIDENTIAL TWO
 RES3 - MEDIUM DENSITY RESIDENTIAL
 RES4 - HIGH DENSITY RESIDENTIAL
 RESV1 - HAMLET RESIDENTIAL ONE
 RESV2 - HAMLET RESIDENTIAL TWO
 RESR - RURAL RESIDENTIAL
 RESE - ESTATE RESIDENTIAL
- COMMERCIAL**
 COM1 - NEIGHBOURHOOD COMMERCIAL
 COM2 - GENERAL COMMERCIAL
 COM3 - DOWNTOWN COMMERCIAL
 COMR - RURAL COMMERCIAL
 COMV - HAMLET COMMERCIAL
- COUNTRYSIDE**
 A - AGRICULTURAL
 RU - RURAL
 ORM-EP - OAK RIDGES MORaine - ENVIRONMENTAL PROTECTION
 ORM-C - OAK RIDGES MORaine - CORE
 ORM-L - OAK RIDGES MORaine - LINKAGE
 ORM-RU - OAK RIDGES MORaine - RURAL
 ORM-MX - OAK RIDGES MORaine - EXTRACTIVE INDUSTRIAL
 ORM-V - OAK RIDGES MORaine - VILLAGE
- EXCEPTIONS**
 (P) - Site Specific Exception (See Part 12)
- EMPLOYMENT**
 EMP1 - GENERAL EMPLOYMENT
 EMP2 - SERVICE EMPLOYMENT
 EMPR - RURAL EMPLOYMENT
 EMPX - EXTRACTIVE
 EMPW - WASTE MANAGEMENT AREA
 EMPG - POWER GENERATION
- OTHERS**
 IU - URBAN INSTITUTIONAL
 IR - RURAL INSTITUTIONAL
 OS - OPEN SPACE
 OSR - MAJOR RECREATIONAL
 EP-F - ENVIRONMENTAL PROTECTION - FLOOD PLAIN (OVERLAY - SEE SECTION 11.1.)
 EP - ENVIRONMENTAL PROTECTION
 D - DEVELOPMENT
 DW - DEVELOPMENT WATERFRONT
 T - TRANSPORTATION
 TP - TEMPORARY USE PERMISSION (SEE PART 14 OF BY-LAW)
- HOLDING PROVISIONS (SEE PART 13)**
 (H1) - Development Site
 (H2) - Waste Disposal Assessment Area
 (H3) - LRWM Evaluation Area
 (H4) - Oak Ridges Moraine Environmental
 (H5) - Oak Ridges Moraine New Dwellings
 (H6) - Factory Outlet Mall Site
- NOTE:**



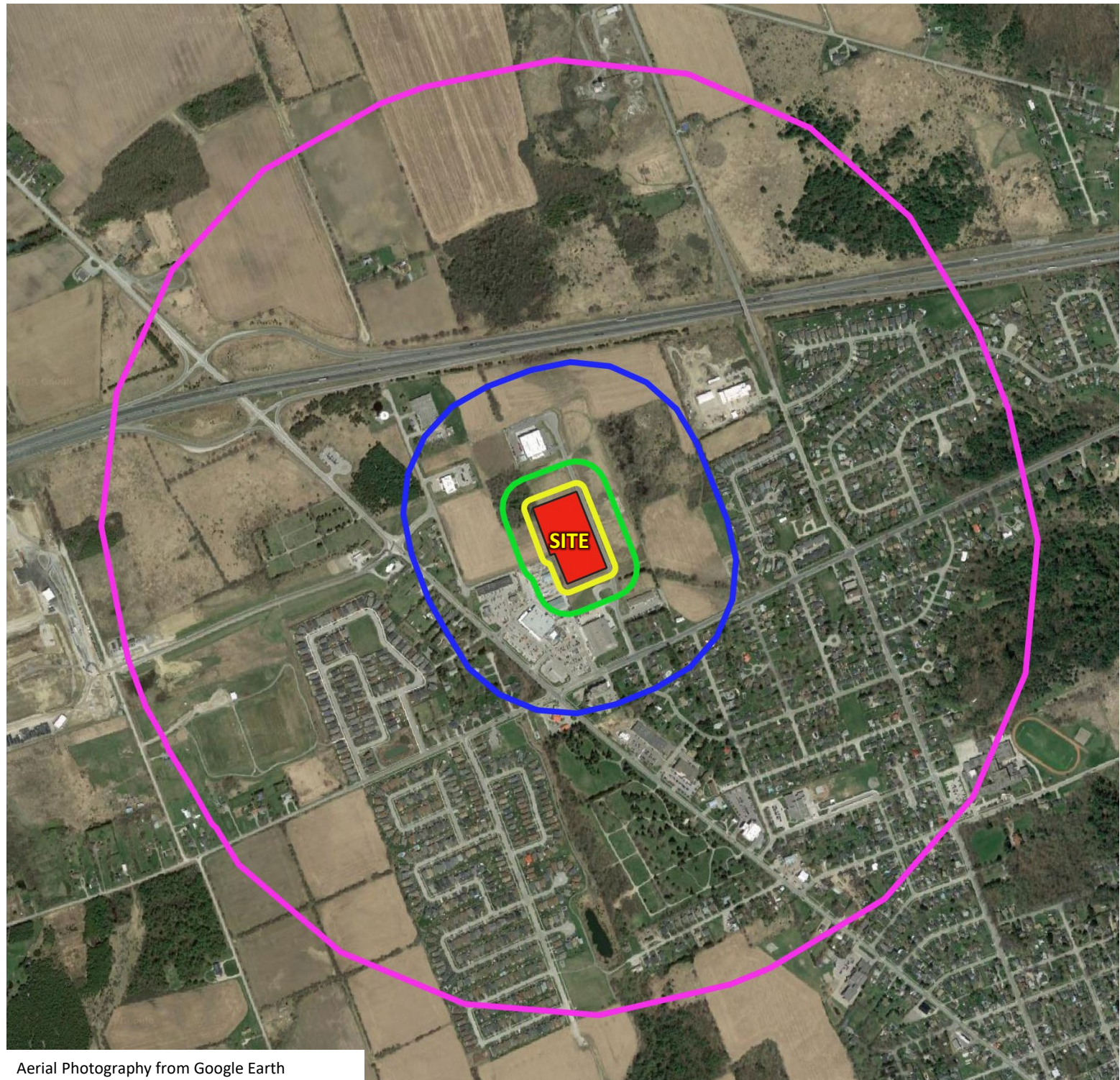
WELLINGS OF PORT HOPE INC.

60 HENDERSON STREET — PORT HOPE, ONTARIO






EXCERPT FROM AREA ZONING MAP

Scale:	n/a	METRES
Date: April 17, 2023	Rev 0.0	Figure No.
Project No. 241.030767.00001		2b

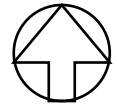




Aerial Photography from Google Earth

-  Facility with MECP Permit (ECA/EASR)
-  20 m Separation
-  70 m Separation
-  300 m Separation
-  1000 m Separation

True North



WELLINGS OF PORT HOPE INC.

60 HENDERSON STREET - PORT HOPE, ONTARIO

GUIDELINE D-6 SEPARATION DISTANCES TO 1000 METRES

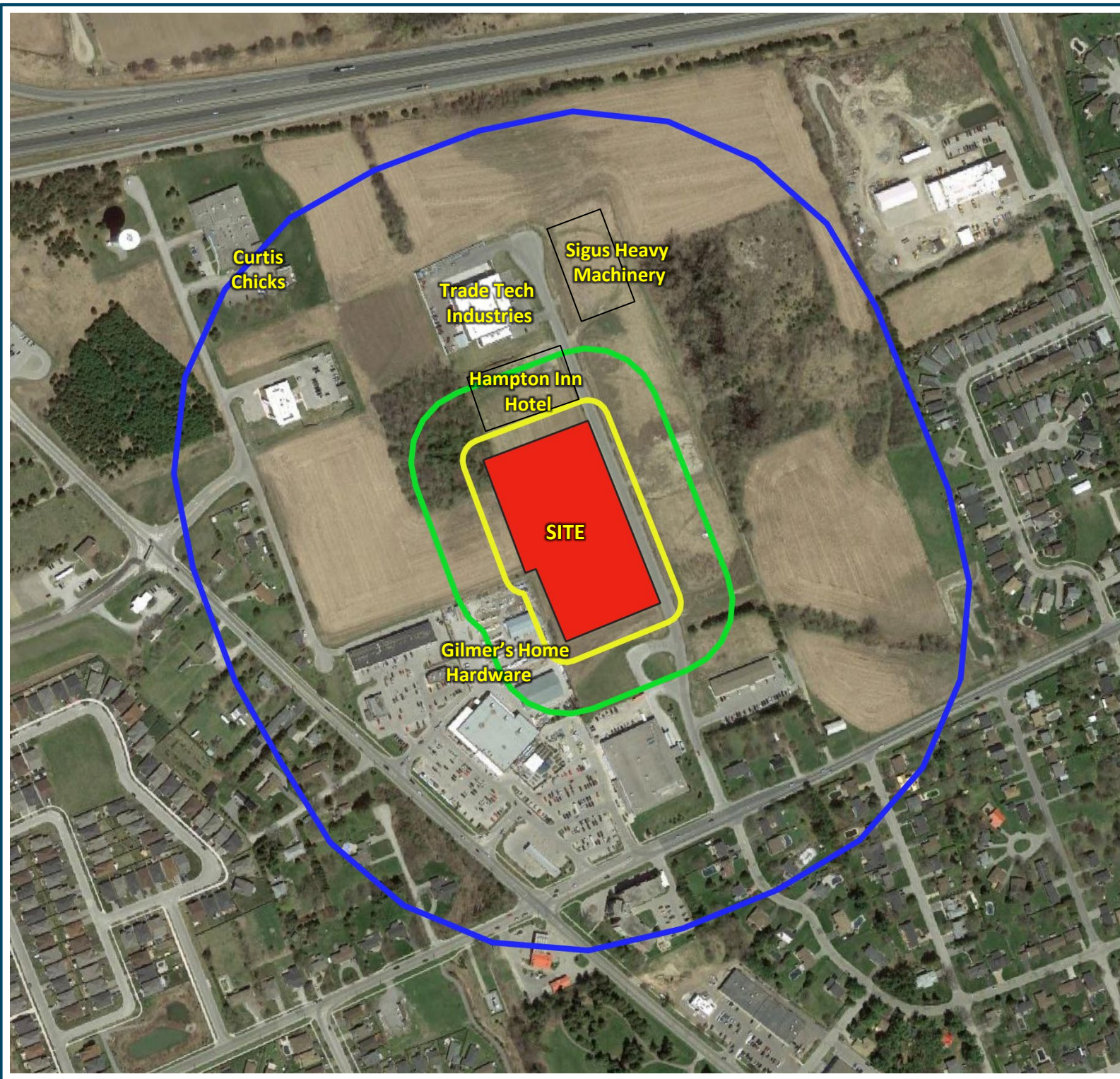
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



Date: April 17, 2023 Rev 0.0 Figure No.

Project No. 241.030767.00001

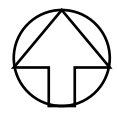
3a





-  Facility with MECP Permit (ECA/EASR)
-  20 m Separation
-  70 m Separation
-  300 m Separation

True North



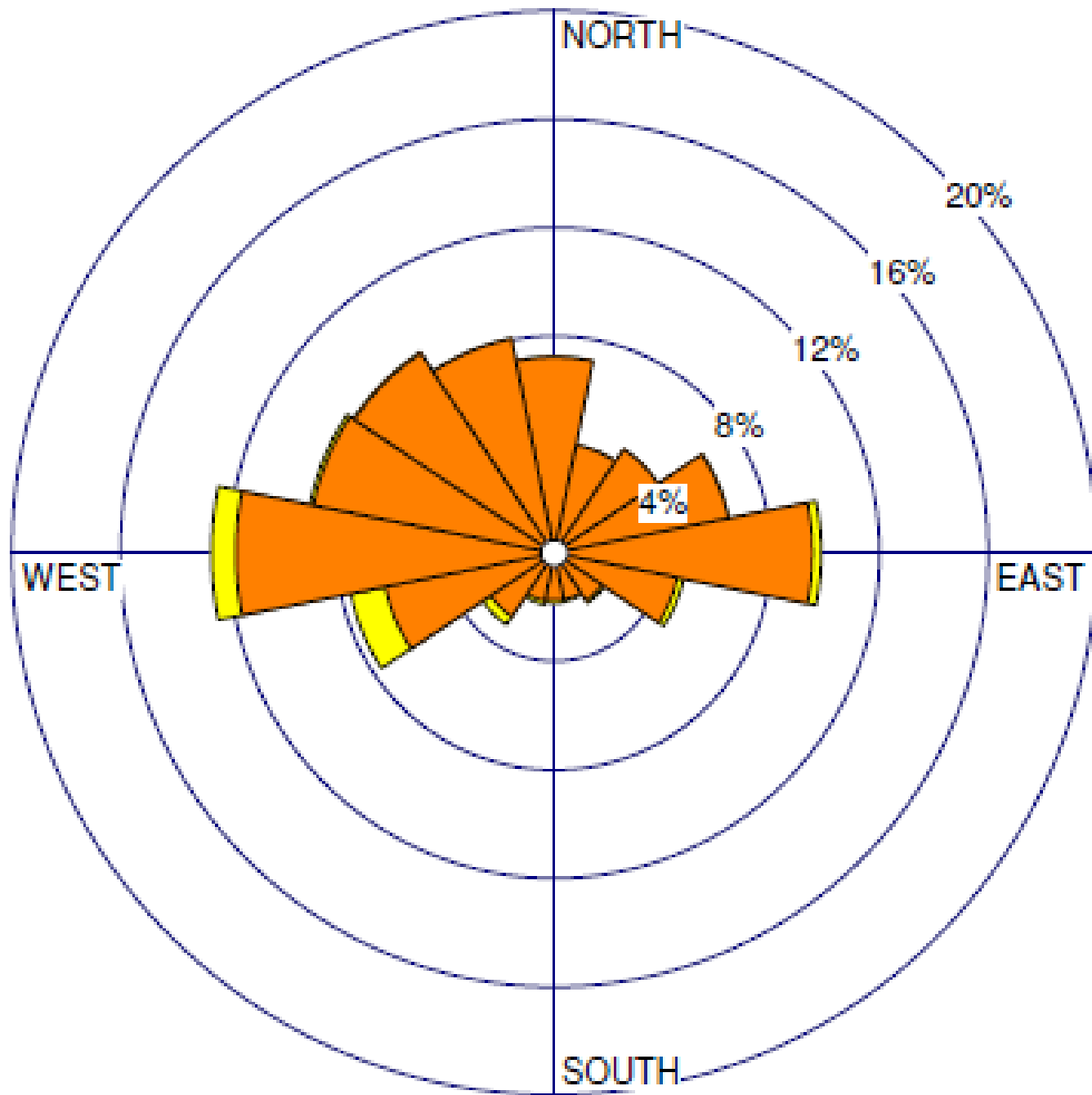
WELLINGS OF PORT HOPE INC.

60 HENDERSON STREET – PORT HOPE, ONTARIO

GUIDELINE D-6 SEPARATION DISTANCES TO 300 METRES

Scale:	1: 7,000	METRES
Date: April 17, 2023	Rev 0.0	Figure No.
Project No. 241.030767.00001		3b





True North



WELLINGS OF PORT HOPE INC.

60 HENDERSON STREET – PORT HOPE, ONTARIO

ANNUAL WIND FREQUENCY DISTRIBUTION DIAGRAM (WIND ROSE)
COBOURG WEATHER STATION #714310

Scale: n/a METRES

Date: April 17, 2023 Rev 0.0 Figure No.

Project No. 241.030767.00001

4



Appendix A Warning Clause

Compatibility Mitigation Study – Air Quality

60 Henderson Street

Wellings of Port Hope Inc.

SLR Project No. 241.030767.00001



SUMMARY OF MITIGATION MEASURES AND WARNING CLAUSES

Warning Clauses

Warning Clauses may be used individually or in combination. The following Warning Clauses should be included in agreements registered on Title for the residential units, and included in all agreements of purchase and sale or lease, and all rental agreements:

Industrial Sources

Air Quality, Odour, Dust Emissions

“Purchasers/tenants are advised that due to the proximity of Gilmer’s Home Hardware Outdoor Storage Yard, dust and odours from these facilities may at times be perceptible.”

Receptor-Based Physical Mitigation Measures

Ventilation System Design

Air Intake Locations

Air intakes for building mechanical systems, central air conditioning units and heat recovery units shall be located in areas of least impact, on the lea-side of the building (east facades), facing away from the Gilmer’s Home Hardware Outdoor Storage Yard to the west of the development, or behind a significant intervening building or structure.

Mandatory Carbon/ Dust Filters

All air intakes for building mechanical systems, make-up air units, HVAC units, central air conditioning units and heat recovery units shall include carbon and/or dust filters. The filtration system is to be designed to supply the space with 100% odour filtered air drawn from outside the building envelope.

Positive Pressurization

The building mechanical systems, make-up air units, HVAC units, central air conditioning units and heat recovery units shall be designed to maintain positive pressurization under normal weather conditions of all occupied areas, in accordance with current ASHRAE recommendations.

Appendix B Surrounding Industry List

Compatibility Mitigation Study – Air Quality

60 Henderson Street

Wellings of Port Hope Inc.

SLR Project No. 241.030767.00001

April 17, 2023



Appendix C EPI/FOI Search Results

Compatibility Mitigation Study – Air Quality

60 Henderson Street

Wellings of Port Hope Inc.

SLR Project No. 241.030767.00001

April 17, 2023





**Ministry of the Environment,
Conservation and Parks**

Corporate Management Division

**Ministère de l'Environnement, de la
Protection de la nature et des Parcs**

Division de la gestion ministérielle

March 14, 2023

Alice Najjar
SLR Consulting Ltd.

Dear Alice Najjar
RE: Request #: EPI-2023-2000002110
Requestor provided Client Reference: 241.030767.00001
Site address: 101 Fox Road, Porth Hope

This letter confirms that, after conducting a thorough search of its source system applications, the ministry has identified potential records related to your property request. Our search indicates that the ministry may hold the following records:

- Waste Generator number/classes
- Spills

If you would like to submit a Freedom of Information (FOI) request to the ministry, please return to the table on the Requests tab of the EPI application and select "Submit FOI" under the Actions column in the row identified by EPI-2023-2000002110.

If you have any questions regarding the matter, please contact the ministry at eproperty@ontario.ca.

Sincerely,

Environmental Property Information (EPI) Program

Disclaimer

This search result is provided for informational purposes only and is not intended to provide specific advice or recommendations. The Ministry of the Environment, Conservation and Parks (MECP) cannot and does not guarantee that the information provided is current, accurate, complete, or free of errors. Any reliance upon this information is solely at the risk of the user.

¹ In addition to the core reports (e.g Environmental Compliance Approval), there may be extensive supporting documentation associated with this record type. When transferring your request over to FOI, we encourage you to refine the scope of your request to only the supporting documentation required for your purposes, as the inclusion of this additional documentation can add significant processing time.

Le 14 mars 2023

Alice Najjar
SLR Consulting Ltd.

Madame,
Monsieur, Alice Najjar
Objet : No de demande : EPI-2023-2000002110
Le demandeur a fourni une référence client: 241.030767.00001
Adresse du site: 101 Fox Road, Porth Hope

La présente lettre confirme que, après avoir effectué une recherche exhaustive dans ses applications de système source, le ministère a circonscrit des dossiers potentiels reliés à votre demande concernant des biens immobiliers. Notre recherche indique que les dossiers suivants peuvent être en possession du ministère:

- Waste Generator number/classes
- Spills

Si vous souhaitez soumettre une demande de liberté d'information (FOI) au ministère, veuillez retourner au tableau de l'onglet Requêtes de l'application EPI et sélectionner "Soumettre FOI" dans la colonne Actions de la ligne identifiée par EPI-2023-2000002110.

Si vous avez des questions concernant votre demande, nous vous invitons à communiquer avec le ministère à l'adresse électronique suivante : eproperly@ontario.ca.

Veillez recevoir mes salutations les plus sincères,

Programme d'Information Environnementale de la propriété

Avertissement

Ce résultat de recherche est fourni uniquement à titre informatif et n'a aucunement pour but de donner des conseils particuliers ou des recommandations. Le ministère de l'Environnement de la Protection de la nature et des Parcs (MEPP) ne peut pas garantir que les renseignements

fournis sont à jour, exacts, complets et exempts d'erreurs. L'utilisateur qui se fie à ces renseignements le fait à ses seuls risques.

¹ En plus des rapports de base (par exemple, l'approbation de conformité environnementale), il peut y avoir de nombreux documents justificatifs associés à ce type d'enregistrement. Lors du transfert de votre demande vers FOI, nous vous encourageons à affiner la portée de votre demande en ne tenant compte que des pièces justificatives requises pour vos besoins, car l'inclusion de ces documents supplémentaires peut ajouter un temps de traitement important.

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