# **Land Use Compatibility Report**

15 Loyalist Trail, Oakville ON SW24228.00

### **Prepared For**

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#### 1.0 Introduction

At the request of Rowhedge Construction Limited (Client), Thornton Tomasetti (TT) presents this Land Use Compatibility Report regarding the conversion request for the 15 Loyalist Trail lands (the Project).

The purpose of this study is to review the potential land use compatibility impacts between the Project and the surrounding commercial and industrial land uses, based on the request outlined in the Town of Oakville Pre-Consultation Comments Report (revised July 23, 2024).

Where applicable, this report will provide recommendations to meet the requirements of the relevant Land Use Planning Authority (LUPA). LUPAs generally adopt the criteria developed by the Ontario Ministry of the Environment, Conservation and Parks (MECP) and provincial policies, but may also have unique requirements.

### 2.0 Site and Surrounding Area

### 2.1 Planned Development

The proposed development includes five stacked townhouse blocks. The Project site plan is included in Figure 1.

### 2.2 Project Location and Surroundings

The Project is located on the northeast corner of the Sixth Line and Loyalist Trail intersection in Oakville Ontario. The existing lands are currently vacant, with a future fire station on the adjacent lands to the west.

The Halton Region Moore Reservoir is located on the adjacent lands to the north (4115 Sixth Line), with forested lands to the east, residential townhouses to the south on the opposite side of Loyalist Trail, and vacant lands to the west on the opposite side of Sixth Line. A business/commercial plaza is currently under construction to the east, approximately 300 m from the Project lands. In general, the lands to the west and north are vacant.

Highway 407 is located approximately 700 m to the north. The William Halton Parkway is located approximately 300 m to the north, with Trafalgar Road located over 1 km to the east. Sixth line is located approximately 80 m to the west.

An illustration of the project location and surrounding area is shown in Figure 2.

### 2.3 Zoning & Official Plan

#### 2.3.1 Zoning Bylaw

Under the North Oakville Zoning By-Law 2009-189 (Consolidated to April 4, 2023) the Project land is surrounded by:

- Future Development (FD) lands to the north, with a combination of Light Employment (LE) lands, additional FD lands, Stormwater Management Facilities (SMF) and Natural Heritage Systems (NHS) located further to the north.
- NHS lands to the east, with LE and FD lands located beyond these lands.
- General Urban (GU)/Neighborhood Centre (NC) lands to the south on the opposite side of Loyalist Trail, with additional GU, SMF, Institutional (I), Park (P) further to the south
- Institutional Lands (I) to the west on the opposite side of 6<sup>th</sup> Line. Beyond these lands, NHS,
   SMF and FD and GU lands are also included.

An excerpt of the North Oakville Zoning By-law maps are included in Figures 3a and 3b for the surrounding area.

#### 2.3.2 Official Plan

On review of the North Oakville East Secondary Plan (NOESP), the development lands are surrounded by Employment and Natural Heritage lands to the north, east and west, with Transitional Area lands to the south. An excerpt of the NOESP map is shown in Figure 4.

### 3.0 Land Use Compatibility

Industrial and sensitive land uses are commonly separated by LUPAs in their official plans and zoning bylaws. When these types of land use occur near each other there is a potential for conflict due to contaminants such as dust or noise from the industrial land use. While industrial facilities are required to limit their impacts on surrounding sensitive land uses and are often designed with mitigation measures intended to address existing neighbors, the introduction of new sensitive receptors can lead to complaints, thus requiring more stringent mitigation requirements for existing facilities.

### 3.1 Regulatory Background

### 3.1.1 Provincial Policy Statement

The *Provincial Policy Statement, 2020 Under the Planning Act* (PPS), published by the government of Ontario came into effect on May 1, 2020. Section 1.2.6 of the PPS reads as follows:

- 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.

#### 3.1.2 Growth Plan

The A Place to Grow, Growth Plan for the Greater Golden Horseshoe Office Consolidation 2020 (GP), published by the government of Ontario in August 2020 identifies the following instructions regarding land use compatibility:

Section 2.2.5: 7. Municipalities will plan for all employment areas within settlement areas by:
a) prohibiting residential uses and prohibiting or limiting other sensitive land uses that are not ancillary to the primary employment use;

b) prohibiting major retail uses or establishing a size or scale threshold for any major retail uses that are permitted and prohibiting any major retail uses that would exceed that threshold; and c) providing an appropriate interface between employment areas and adjacent non-employment areas to maintain land use compatibility.

#### 3.1.3 Environmental Protection Act

Section 9 of Ontario's Environmental Protection Act (EPA) requires that industrial facilities obtain an approval to operate from the MECP.

#### Approval, plant or production process

- 9 (1) No person shall, except under and in accordance with an environmental compliance approval,
- (a) use, operate, construct, alter, extend or replace any plant, structure, equipment, apparatus, mechanism or thing that may discharge or from which may be discharged a contaminant into any part of the natural environment other than water; or
- (b) alter a process or rate of production with the result that a contaminant may be discharged into any part of the natural environment other than water or the rate or manner of discharge of a contaminant into any part of the natural environment other than water may be altered.

In order to obtain and maintain this approval, industrial facilities are required to demonstrate that their emissions (including noise emissions) are within applicable limits at nearby sensitive receptors.

#### 3.1.4 Halton Region Guidelines

The Halton Region's Land Use Compatibility Guidelines, Regional Official Plan Guidelines, version 1.0 dated June 18, 2014, goal is to minimize adverse effects of "industrial, transportation and utility" uses that emit noise (vibration), odour or air pollution on sensitive uses (e.g. residential). A "development" is defined in the Regional Official Plan as:

"the creation of a new lot, a change in land use, or the construction of buildings and structures, any of which requires approval under the Planning Act or that are subject to the Environmental Assessment Act."

Under Section 143(10) of the Regional Official Plan (2009), Halton Region's Land Use Compatibility Guidelines purpose is to :

"develop, in consultation with the local municipalities, the Province, the Federal government and the railway agencies, Land Use Compatibility Guidelines to minimize the adverse effects of noise, vibration, odour and air pollution from industrial, transportation and utility sources on sensitive land uses, including the application of separation distance between these non-compatible uses."

The Halton Region's guidelines provide an approach to assessing land use compatibility in support of the implementation of Regional Official Plan policies in identifying a development application processes for sensitive land uses based on the MECP's D-Series guidelines.

#### 3.2 Recommended Setbacks

The *D-6 Compatibility Between Industrial Facilities* (D6) guideline published by the MECP was last revised in July 1995, and sets out potential influence areas, as well as minimum recommended separation distances for industrial facilities from sensitive land uses.

The D6 guidelines are generally accepted as applicable screening standards for demonstrating compliance with the PPS and GP requirements for land use compatibility. In cases where a sensitive land use would be located within the identified minimum recommended separation distance, additional consideration and mitigation is typically recommended to ensure that the sensitive land use is not subject to adverse effects, and the industrial facility is not unreasonably limited in its operations.

The separation distances may be determined from different points on the properties depending on the site conditions; however, the typical measurement is based on the property lines. Table 1 provides the potential influence area and recommended minimum separation distance from the industrial facility to the sensitive land use. Table 2 is a list of applicable criteria for the categorization of the industrial facilities.

Table 1: D-6 Separation Distances for Industry Classes

Category	Potential Influence Area	Recommended Minimum Separation Distance
Class I	70m	20m
Class II	300m	70m
Class III	1000m	300m

Table 2: D-6 Industrial Categorization Criteria

Category	Outputs	Scale	Process	Operation/Intensity
Class I	<ul> <li>Sound not audible off property</li> <li>No ground borne vibration on plant property</li> <li>Infrequent and not intense dust and/or odour</li> </ul>	- No outside storage  - Small scale plant or scale is irrelevant in relation to all other criteria for this Class	<ul> <li>Self-contained plant or building which produces/stores a packaged product</li> <li>Low probability of fugitive emissions</li> </ul>	- Daytime operations only  - Infrequent movement of products and/or heavy trucks
Class II	- Sound occasionally audible off property  - Possible ground borne vibration, but cannot be perceived off property  - Frequent and occasionally intense dust and/or odour	<ul><li>Outside storage permitted</li><li>Medium level of production allowed</li></ul>	<ul><li>Open process</li><li>Periodic outputs of minor annoyance</li><li>Low probability of fugitive emissions</li></ul>	- Shift operations permitted  - Frequent movement of products and/or heavy trucks with the majority of movements during daytime hours
Class III	- Sound frequently audible off property  - Ground borne vibration can frequently be perceived off property  - Persistent and/or intense dust and/or odour.	<ul><li>Outside storage of raw and finished products</li><li>Large production levels</li></ul>	<ul><li>Open process</li><li>Frequent outputs of major annoyances</li><li>High probability of fugitive emissions</li></ul>	- Continuous movement of products and employees - Daily shift operations permitted

### 3.3 Surrounding Commercial and Industrial Facilities

### 3.3.1 Existing Facilities

A review was completed based on the available satellite imagery, zoning maps, existing MECP approvals in the vicinity of the Project area, and publicly available information. Based on our review, various Class I and Class II industries are located within a 1000 m radius, with no Class III facilities identified. A summary table of industries reviewed is included in Appendix and shown in Figure 2.

Industries located within the Area of Influence (AOI) include a single Class I industry, based on our review. The following sections provide a detailed discussion of facilities within the AOI and TT's assessment of potential impacts.

#### **Halton Region Moore Reservoir**

The Halton Region Moore Reservoir is a man-made water storage facility located on the adjacent property to the north. The facility is considered to be a Class I industry, and located within the 20 m Minimum Separation Distance (MSD). No significant air emission or noise sources are associated with it's operation. Therefore, air emissions or noise impacts are not a concern for the Project and additional analysis is not considered necessary.

#### 3.3.2 Vacant Lands

### **Future Fire Station**

A future fire station is proposed on the adjacent lot to the west. The facility is expected to be a typical fire station housing fire-fighting equipment (trucks, hoses, PPE and other specialized equipment) and accommodations for the fire-fighting personnel. An outdoor emergency generator is anticipated to be located on the lands.

### Air Emissions

Air emission sources would typically include HVAC equipment, general exhaust fans (kitchen, bathroom) and the emergency generator testing. Air emissions are required to comply with applicable provincial air quality standards at the boundary of the source property, regardless of the adjacent land uses. These types of sources can typically be exempted from approval, and/or readily designed to comply with applicable air contaminant limits.

The proposed development is not expected to be subject to any significant air quality impacts from the operations of the future fire station.

#### Noise Emissions

Noise from HVAC equipment, general exhaust fans and emergency generator testing have the potential to impact the proposed development. Existing residential homes are located to the south on the opposite side of Loyalist Trail, hence, noise from the HVAC equipment, general exhaust fans and emergency generator would already be subject to limited sound emissions. As the future fire station had not been designed, the MECP NPC-300 guideline limits can be met at the surrounding existing homes and the Project with the appropriate selection and placement of equipment. Compliance with the NPC-300 guideline limits are anticipated to be feasible, as fire stations are frequently located in residential areas, adjacent to residential properties. Therefore, a detailed assessment is not considered necessary on the part of this development.

Periodic siren testing and the operation of sirens during emergencies is anticipated at the future fire station. Sirens are not considered noise sources in NPC-300, and are normally addressed in a qualitative manner in the municipal by-laws. On review of the City of Oakville Noise Bylaw (2008-098), operation of a siren is prohibited by time and place unless required or authorized by law. As the fire-station operation of the siren is considered to be required and authorized by law, an assessment of siren noise impacts is not considered necessary.

#### **Light Employment Lands**

Light Employment (LE) lands are located to the north, west and east of the Project lands, with the closest LE lands approximately 200 m to the north. As LE lands are expected to include Class I industries only, all LE lands are located outside of the 70 m AOI. Therefore, additional air quality and noise studies are not considered necessary.

#### Institutional Lands

Institutional (I) land is located to the west on the opposite side of 6<sup>th</sup> Line. Institutional lands would be considered a Class I industry, with a 70 m AOI. As the Institutional land is located approximately 100 m to the west and outside of the AOI, additional air quality and noise studies are not considered necessary.

### 3.4 Transportation Corridors

Surrounding transportation sources include the following roadways:

- Highway 407, approx. 700 m to north, including planned Bus Rapid Transit (BRT) from Brant Street in Burlington to Enfield Drive in Durham Region;
- Trafalgar Road, approx. 1 km to east;
- William Halton Parkway, approx. 300 m to north;
- Burnhamthorpe Road, approx. 270 m to the south; and
- 6<sup>th</sup> Line, approx. 80 m to the west.

Railways are not located within 1000 m of Project lands, and are not a concern for the development regarding noise and vibration.

#### Air Emissions

Transportation related air pollution (TRAP) is considered a major local contributor to air pollution and can result in adverse health impacts for people living near highways and roadways, as noted in the 2017 Toronto Public Health 'Avoiding the Trap' Technical Report – Land Use Planning at the Project site Level'.

TRAP studies are typically completed for major highways located within 100 m of a proposed development. As Highway 407 and planned BRT are located approximately 700 m from the Project, a TRAP study is not considered necessary.

### Noise Emissions

Roadway noise has the potential to impact the proposed development, due to the proximity to 6<sup>th</sup> Line (approx. 80 m to west) and William Halton Parkway (approximately 300 m to north). An assessment of roadway noise is considered necessary to confirm if noise controls are required for the development.

## 4.0 Concluding Comments

A land use compatibility assessment was completed for the Project, considering the potential for air quality, dust, odour, noise and vibration impacts from industrial and transportation source impacts on the Project.

### 4.1 Nearby Facilities

The Moore Reservoir is located on adjacent lands to the north, and within the MSD for a Class I industry. As no significant air emission or noise sources are associated with its operation, air emissions and noise impacts are not a concern for the Project and additional analysis is not considered necessary.

A future fire station will be located on adjacent lands to the west. It is anticipated to include HVAC equipment, general exhaust fans, an emergency generator and sirens. Air emissions from these sources are not typically a concern, and additional analysis is not considered necessary on the part of the proposed development. An additional analysis of stationary noise on the part of the proposed development is not considered necessary as the design of the future fire station can meet the NPC-300 guideline limits at the surrounding existing homes and the Project with the appropriate selection and placement of equipment.

All other existing industries, future LE industries, institutional lands are located outside of the AOI. Therefore, no further assessment of air, dust, odour, noise, or vibration associated with stationary sources is considered to be necessary on the part of the proposed development.

### 4.2 Transportation Sources

Highway air emissions are not a concern for the Project given the large separation distance from Highway 407 and planned BRT. Therefore, a TRAP study is not considered necessary.

Roadway noise has the potential to impact the proposed development, due to proximity of 6<sup>th</sup> Line and William Halton Parkway. An assessment of roadway noise impacts on the Project is considered necessary to confirm if noise controls are required for the development.

#### 4.3 Closure

Based on our review, the Project is considered compatible with the surrounding employment uses, institutional land, future fire station, and transportation corridors. The conversion of the Project lands:

- will not affect the compliance of local industrial facilities with applicable Provincial environmental policies, regulations, approvals, authorizations, and guidelines;
- are not likely to result in an increased risk of complaint and nuisance claims;
- are not likely to result in operational constraints for the surrounding industries and commercial operations;
- are not likely to result in constraints on surrounding industries to reasonably expand, intensify or introduce changes to their operations; and
- are not likely to result in constraints for new industries to reasonably be established in the surrounding Light Employment and Institutional lands, including the future fire station on the adjacent lands.

The following study is recommended:

 An Environmental Noise Study to address roadway noise from 6<sup>th</sup> Line and William Halton Parkway, identifying potential noise control measures, ventilation and warning clause recommendations.

Please do not hesitate to contact us if there are any questions.



Reviewed by:

Robert Fuller, P.Eng. Project Engineer

#### **Disclaimer**

This report is provided in accordance with the contractual agreement between TT and the Client. In addition to our contractual obligations TT notes the following general disclaimers and qualifications regarding the content of this report.

In preparing this report, TT has relied upon the accuracy and completeness of information provided by the Client and other third parties (manufacturers, other consultants, etc.) and accepts no responsibility for errors or omissions by other parties in the information provided to TT.

This report has been prepared solely for the benefit of the Client and the content of this report is intended for informational purposes only. This report shall not be relied upon by any other parties, including but not limited to other consultants retained by the Client, or utilized for any other purposes.

Ultimate responsibility for the design and construction remains solely with the architect/engineer of record and/or the contractor(s). Achieving the required mitigation requirements relies on correct incorporation of mitigation recommendations into Architectural and Mechanical drawings and specifications, as well as correct installation during construction. It is recommended that the implementation of mitigation measures be reviewed by a qualified consultant.

On request, TT will provide a proposal for additional work such as to peer review mitigation measures or observe on-site conditions as appropriate; however, notwithstanding the foregoing, it is expressly understood and agreed that TT shall not have control or charge of, and shall not be responsible for the acts or omissions, including but not limited to means, methods, techniques, sequences and procedures, of the Design Professionals and/or Contractors performing design and/or construction on the Project. Accordingly, TT shall not be held responsible for the failure of any party to properly incorporate the mitigation measures stated in this report.

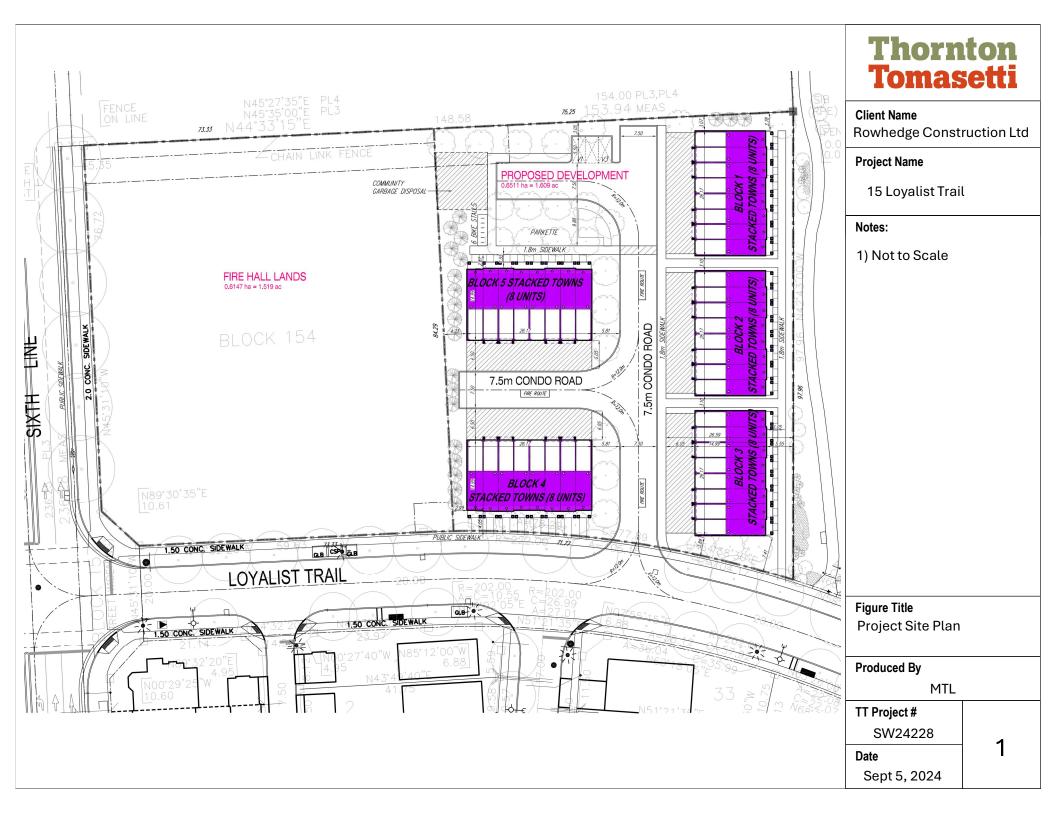
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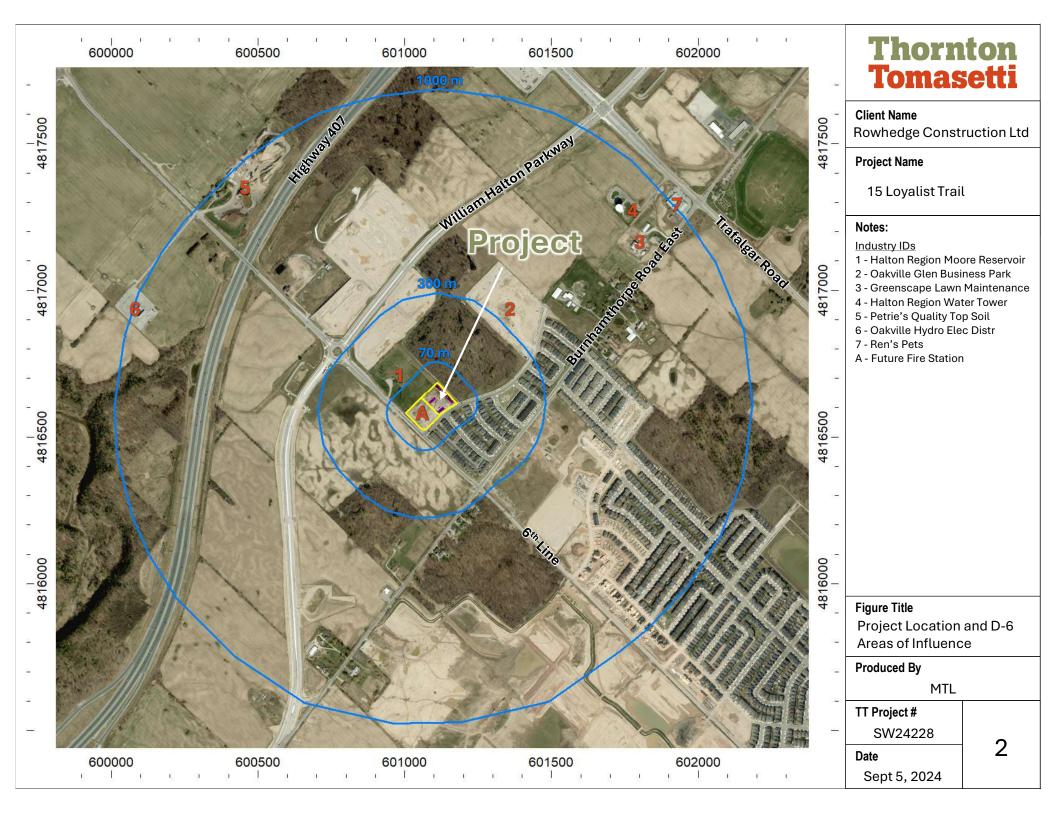
## **Figures**

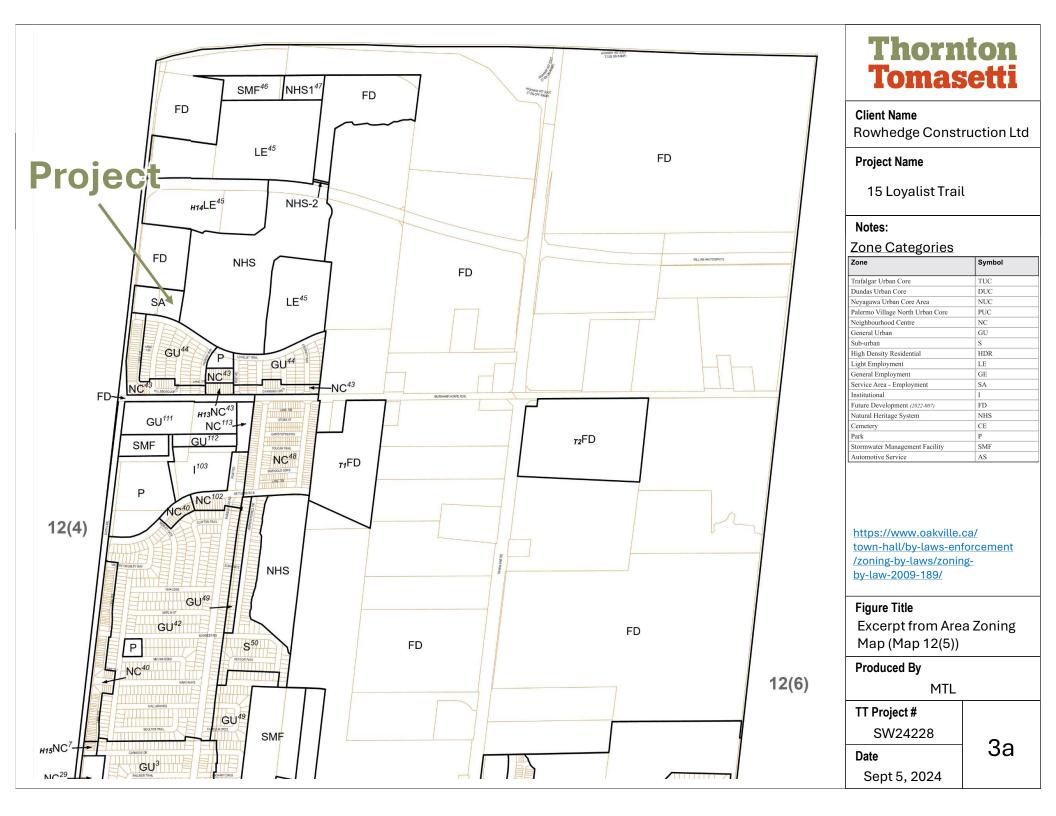
Figure 1: Project Site Plan

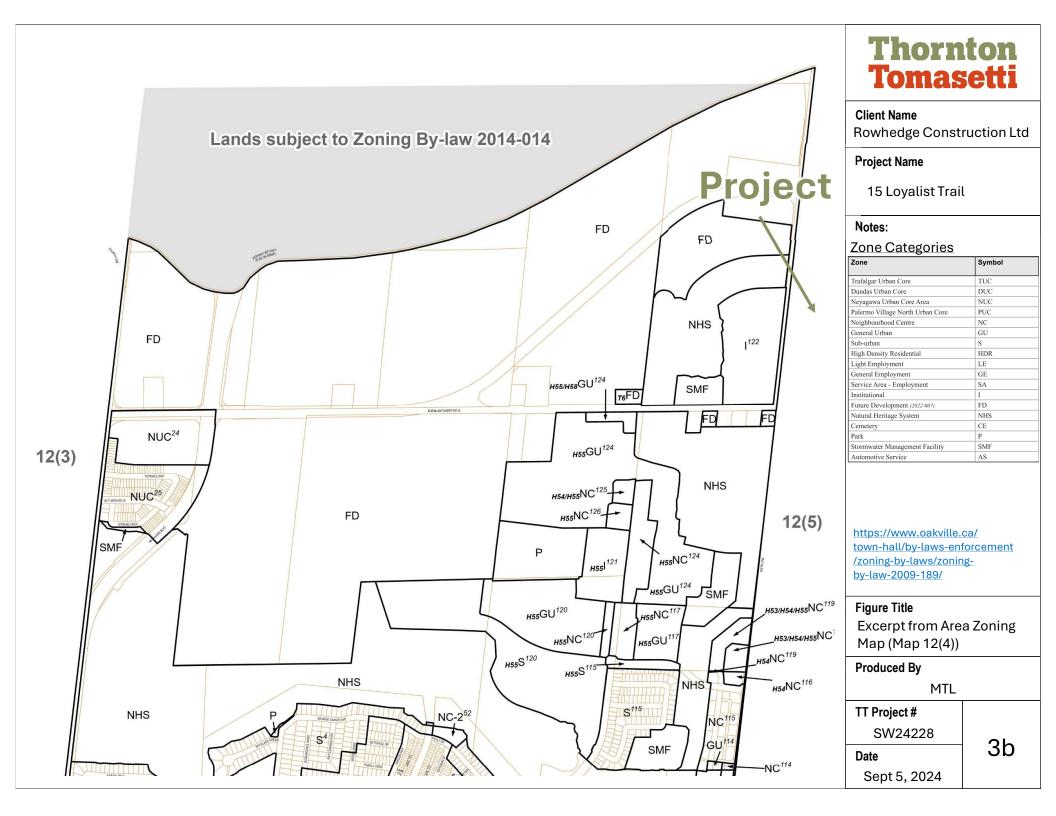
Figure 2: Project Location & D-6 Areas of Influence Figure 3: Excerpt from Area Zoning Map

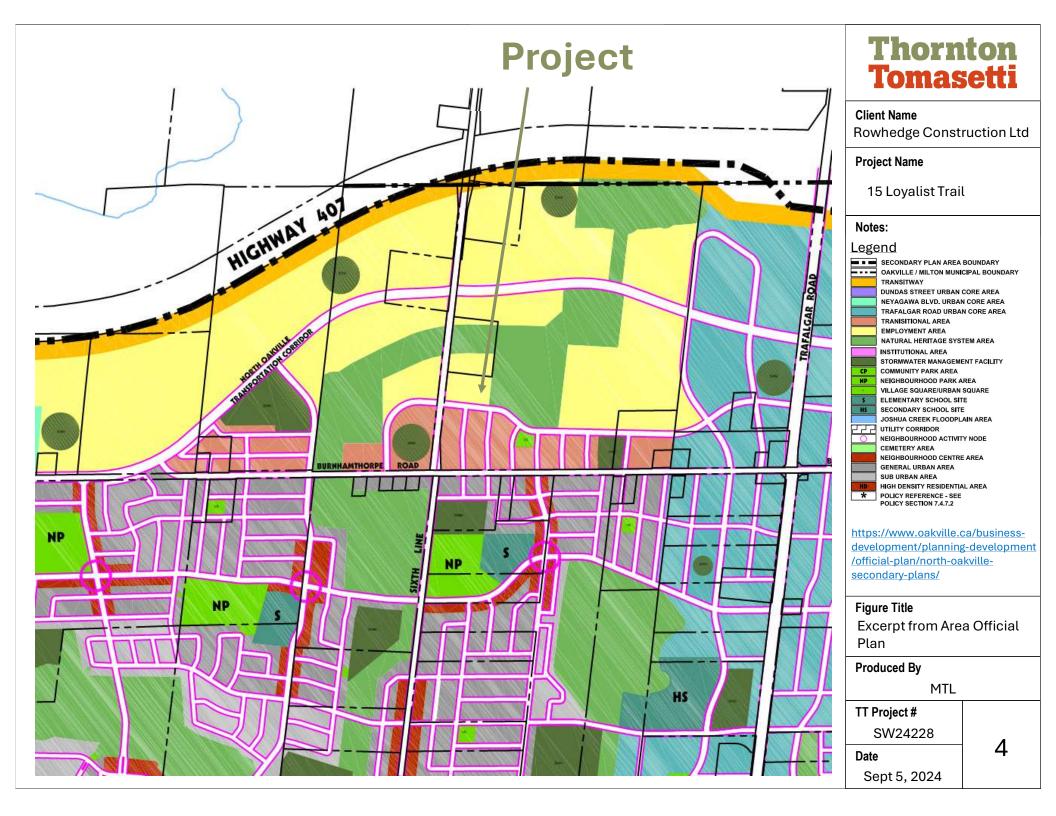
Figure 3: Excerpt from Area Zoning Map Figure 4: Excerpt from Area Official Plan











**Appendix A: D-6 Industry Review** 

Table A.1: D-6 Review of Existing Industrial Facilities Surrounding the Project 15 Loyalist Trail (SW24228)

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MAP NUMBER	BUSINESS NAME	ADDRESS	APPROVAL TYPE	APPROVAL / REGISTRATION NUMBER	DESCRIPTION	D-6 CLASS	SEPARATION DISTANCE (m) [1]	AREA OF INFLUENCE (m)	MINIMUM SEPARATION DISTANCE (m)	WITHIN AREA OF INFLUENCE? (YES/NO)	WITHIN MININIMUM SEPARATION DISTANCE? (YES/NO)
1	Halton Region Moore Reservoir	4115 Sixth Line	-	-	The facilty is a man-made water storage facility. The lands are covered grass and other vegetation. A single building is located on the side of the elevated grade, facing west, approximately 180 m from the Project lands. Air Quality and Noise Sources are not typically associated with a water storage facility and not a concern for the Project.	Class I	0	70	20	Yes	Yes
2	Oakville Glen Business Park	65-89 Loyalist Trail	-	-	A Business/Commercial plaza currently under construction, consisting of 5 commercial buildings. Tenans are anticipated to include various commercial and retail businesses. As the lands are zoned Light Employment (LE), only smaller facilities are anticipated to be potential tenants. As the facility is under construction, current tenants could not be identiifed. Anticiapted air and noise are anticiapted to include rooftop heating and coolign equipment. As the lands are zoned LE, no significant industrial operations are anticipated to be included as tenants.	Class I	265	70	20	-	-
3	Greenscape Lawn Maintenance	273 Burnhamthorpe Road	-		A landscape and care service provider. Facilityincludes outdoor storage of equipment, and small scale maintenance activitivies. No signficant Air Emissions are anticipated for the facility. Noise sources are expected to include air tools, periodic operation of equipment (lawn mowers, etc.) and infrequent on-site equipment movement.	Class II	770	300	70	-	-
4	Halton Region Water Tower	4030 Trafalgar Road	-	-	The Halton Region Water Tower, with no signficant activity or equipment located at the site. No significant air or noise emission sources are anticipated at the facility.	Class I	825	70	20	-	-
5	Petrie's Quality Topsoil Ltd	4321 Sixth Line	-	-	Soils, mulches, and aggregates supply faclity. Materials are stored within outdoor areas across the majority of the site. On-site sources are anticapted to include loaders, and dump trucks. Air emissions are anticipated to include fugutive dust from onsite equipment movement. Noise sources include the periodic use of the loaders and idling trucks.	Class II	850	300	70	-	-
6	Oakville Hydro Electricity Distribution Facility	4322 Sixth Line	-	-	A transformer station, with no significant air quality sources anticiapted at the site. Noise sources include transformers and transformer cooling.	Class I	925	70	20	-	-
7	Ren's Pets	4002 Trafalgar Road	-	-	A retail faciliy, specializing in pet supplies. The facility is understood to include warehouse and retail space, with no obvious outdoor storage. Air emission and noise sources are anticipated to include HVAC and ventilation equipment.	Class II	980	300	70	-	-
						N/A		-	-	-	-

Notes: [1] Measured from property-line to property-line