

# Land Use Compatibility Study (Noise) Proposed Industrial Development Teviotdale, Minto Township, Ontario

Prepared for:

2396584 Ontario Inc.  
10310 6th Line Georgetown, ON  
L7G 4S6


Prepared by:



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Reviewed by



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March 28, 2023

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ACOUSTICS



NOISE



VIBRATION

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## 1 EXECUTIVE SUMMARY

HGC Engineering was retained by 2396584 Ontario Inc. to study the compatibility of a proposed industrial development with neighbouring residential homes with regard to noise. The lands under consideration are located north of the northwest corner of the intersection of Wellington Roads 109 and 123 in Teviotdale, Minto Township, Wellington County Ontario as shown in Figure 1.

This study has been prepared for submission to the Municipality in support of an application to amend the Official Plan and Zoning Bylaw to permit the subject industrial subdivision. It follows Ministry of the Environment Culture and Parks (MECP) guidelines with regard to land use compatibility, recommended separation distances and noise assessment.

The results of the study indicate that the presence of the single family residences to the south and east represent a potential issue of incompatibility with some future industrial uses. These residences preclude the use of Class III (heavy) industry on Lots 1 to 11 and Class II (medium) industries on Lots 1, 2 and 3 due to the minimum required setback distances of 300 m and 70 m respectively.

Noise studies should be conducted for site plan approval for any heavy industrial uses proposing to locate on Lot 12 and any medium industries proposing to locate on Lots 1, 2 and 3 to confirm that their zones of influence can be reduced such that compliance with MECP sound level limits can be achieved at the residences.

## 2 DESCRIPTION OF THE SITE AND SIGNIFICANT NOISE SOURCES

HGC Engineering personnel visited the site in November 2022 in order to investigate the acoustical environment, the site topography and the surrounding land uses.

The lands under consideration are presently zoned for agricultural uses and are located north of the northwest corner of County Roads 109 and 123 in Teviotdale, Minto Township, Wellington County. An area plan is provided as Figure 1. A Draft Plan of Subdivision prepared by MHBC Planning

dated November 28, 2022 is provided as Figure 2. The plan shows the proposed industrial Lots 1 through 12 and their proximity to the surrounding land uses.

There are existing industries on lands zoned RIN, M1, C2 and C5 to the south, southeast and southwest of the subject lands including Teviotdale Truck Service and Repair; Mount Forest Truck Centre; an Esso gas station and restaurant; Chalmers fuels, a Shell and Propane fuel distributor; Raynbow Signs; Weberway Welding and Langs Dehy Limited, a feed dehydrating facility. These are uses are generally light and medium in nature with the possible exception of Langs Dehy as they do not involve 24 hour operations and some have outdoor storage. Institutional lands at the north east of the subject lands are partially occupied by an OPP Station.

There are two residential lots along CR 123 and one on CR 109 in proximity to the subject lands. One of the residential lots along CR 123 is quite deep and backs onto the subject lands. The portions of that lot further than 30 m from the residential building are not considered noise sensitive. The other residential lot on CR 123 is well separated from the subject lands by intervening commercial uses. The residential lot on CR 109 is separated from the nearest proposed industrial lots the internal road allowance and from the remainder by the vacant institutional lands. During the site visit sound from the existing industrial/commercial facilities was not audible at residences due to the elevated background sound levels due to road traffic.

### **3 THE POLICY AND REGULATORY CONTEXT**

There are several regulations, policies and agreements which should be considered in addressing issues of compatibility and noise impact in the context of this development plan.

#### **3.1 The Environmental Protection Act and the Planning Act**

The legislation which applies to industry is the Environmental Protection Act (EPA). It considers sound as a contaminant, and industry is thereby subject to the provision that "no person shall discharge a contaminant ... into the natural environment that causes or is likely to cause an adverse effect". Unless specifically exempt, industries are required to apply for Environmental Compliance

Approvals for their operations under this Act. The MECP has published criteria and guidelines for sound which are used by industry to obtain approvals under the EPA.

Similarly, the MECP has produced guidelines to assist municipalities and developers in preparing applications under the Planning Act which Municipal authorities implement by providing comments when they receive applications. These are discussed below.

### **3.2 MECP Guidelines for Land Use Compatibility and Distance Separation**

MECP Guidelines D-1, "Land Use Compatibility" and D-6 "Compatibility Between Industrial Facilities and Sensitive Land Uses" were prepared to minimize adverse effects caused by sources regulated by the EPA and in relation to land use approvals under the Planning Act. They recommend separation distances and the implementation of mitigation measures based on the results of technical studies in this regard. The recommended minimum separation distances are 20 m for Class I (light) industry, 70 m for Class II (medium) industry and 300 m for Class III (heavy) industry. The classifications are general, and open to interpretation. For example, a Class I industry is described as a small-scale plant with no outside storage, sound not audible off property, daytime operations and infrequent movement of products or heavy trucks. A Class II industry is described as having a medium level of production with outside storage permitted. Sound may occasionally be audible off site, shift operations are permitted and there are frequent movements of products or heavy trucks. A Class III industry is described as a large scale facility with sound frequently audible off property, shift operations and the continuous movement of products or heavy trucks.

The separation distances generally apply between the property lines of the respective uses. Portions of the industrial land can be considered as part of the separation distance if the specific use of that portion of the industrial land is non noise producing and is controlled in a site-specific zoning bylaw, That is the case with regard to the minimum front yard of 7.6 m associated with the Minto Industrial Zoning. Similarly specific portions of lands zoned as residential may be considered as part of the separation distance if those lands are considered as non-noise sensitive. Only the residential dwelling and any point on the residential property within 30 m of the dwelling is considered to be noise sensitive, so the majority of the rear yard of the deep residential lot on CR 123 abutting the subject



lands is not considered to be noise sensitive and may be considered as part of the separation distance.

For planning purposes, the potential zone of influence is 70 m for light industry, 300 m for medium industry and 1000 m for heavy industry. If it can be shown through technical studies which determine actual zone of influence and illustrate that any potential noise impacts can be mitigated through the implementation of site-specific control measures the actual zone of influence can be reduced. These technical studies may be requested by a Municipality under the Planning Act and are required by the MECP to obtain approvals under the EPA depending on the industrial use.

The guideline does not allow for reductions in the minimum setback distance unless lands are to be used for infill developments or are considered “lands in transition”. It is our understanding that the subject lands are not considered “lands in transition” and the minimum distance setbacks apply.

### **3.3 MECP Guidelines for Stationary and Transportation Sources**

MECP Publication NPC-300, entitled "Environmental Noise Guideline, Stationary and Transportation sources – Approval and Planning” establishes sound level limits for stationary sources of sound. Stationary sources of sound can be individual facilities or pieces of equipment or the cumulative sound of activity or conveyances operating on industrial property. NPC-300 is used by industry to determine the impact of their operations at neighbouring noise sensitive receptors to demonstrate compliance for the purpose of obtaining approvals. It is also used by the development industry to determine if there may be significant noise impacts on lands considered for the development of noise sensitive uses. Given the presence of the busy County Roads and other industrial/commercial uses in the area, the lands would be considered to be in an urban or semi-urban area for noise assessment purposes.

NPC-300 recommends sound level limits as a function of the background sound levels due to road traffic and other industry. The objective of the guidelines is to establish a sound level limit at each noise sensitive receptor on the basis of "predictable worst case" impact. In general, the sound level limit must represent the minimum background sound level that occurs during an hour of the day in which the stationary source may operate, subject to exclusionary minima of 45 to 50 dBA, depending upon time of day (daytime, evening or night time) and proximity to the roadways. There are no



indoor sound level criteria associated with NPC-300 for industrial noise sources. This is because the point of reception is generally considered to be outside the building on lands within 30 m of the dwelling on an agriculturally zoned property.

In this case, road traffic is currently the dominant source of sound at the residences due to the proximity of the County Roads. Noise measurements taken during early afternoon hours utilizing the methods and equipment described in MECP Guideline NPC – 103 indicated sound levels of approximately 67 dBA Leq (20min). A high relatively percentage of heavy truck traffic was noted.

Any future noise study conducted by an industry proposing to locate on the subject lands would consider elevated sound level criteria which would significantly reduce the influence area from the influence area at other sites not in proximity to busy roadways. This effect is taken into account in the recommendations below.

### **3.4 Municipal Noise By-Law**

By-Law No. 5001-05 of the Town of Minto has specific prohibitions for noise generated by specific noise sources. It also has prohibitions by time and place. Generally, there are no prohibitions for industrial noise sources conforming to the applicable zoning. Municipal Bylaw Enforcement is responsible for investigating complaints concerning industrial uses such as the proposed.

### **3.5 Summary**

As an overview of the above regulations, policies and agreements, the industrial developer and the future proposed industries are obliged to provide a suitable distance setback and any additional mitigation to mitigate any potential sound level excesses at the existing residences in accordance the requirements of the EPA through the Certificate of Approval process and the Planning act as per MECP D1, D6 and NPC-300 Guidelines and related documents.

## 4 PROPOSED INDUSTRIAL ZONING

The subject application is to rezone the lands to Industrial (M1) to permit a variety of industrial uses. Most would be considered to be light or medium depending on the specific nature of their operations but several could be considered heavy. For example, a large-scale grain elevator with an outdoor process (grain drier) or a feed mill which may incorporate elevators and driers which are not enclosed within the building and may operate 24 hours a day or a large-scale warehousing facility with cold storage and high levels of truck traffic which may operate 24 hours a day. The permitted uses with the greatest potential for adverse impact from our experience are a large-scale large scale feed mill or grain elevator with outdoor processes like grain drying and high levels of truck traffic.

The recommended minimum distance setbacks are shown in Figure 3.

## 5 DISCUSSION AND RECOMMENDATIONS

The results of the study indicate that the development of the site for industrial uses can be compatible with the existing noise sensitive residential homes in the area. We have the following recommendations.

1. In our opinion, the elevated levels of background sound at the residences due to road traffic reduce the potential zone of influence of Class I (light) industries to approach the minimum recommended distance setback of 20 m and no compatibility issues are anticipated with regard to Class I (light) industries are located on any of the industrial lots.
2. Class II (medium) industrial uses are not recommended on Lots 1, 2 and 3 considering the required 70 m minimum distance setback from the existing residences. The zoning bylaw should include provisions which permit Class II industrial uses on Lots 4 to 12 subject to those industries demonstrating that the actual zone of influence of their operations can be sufficiently reduced through the preparation of noise studies at the discretion of the Municipality. The goal of the studies would be to identify mitigation measures as required,

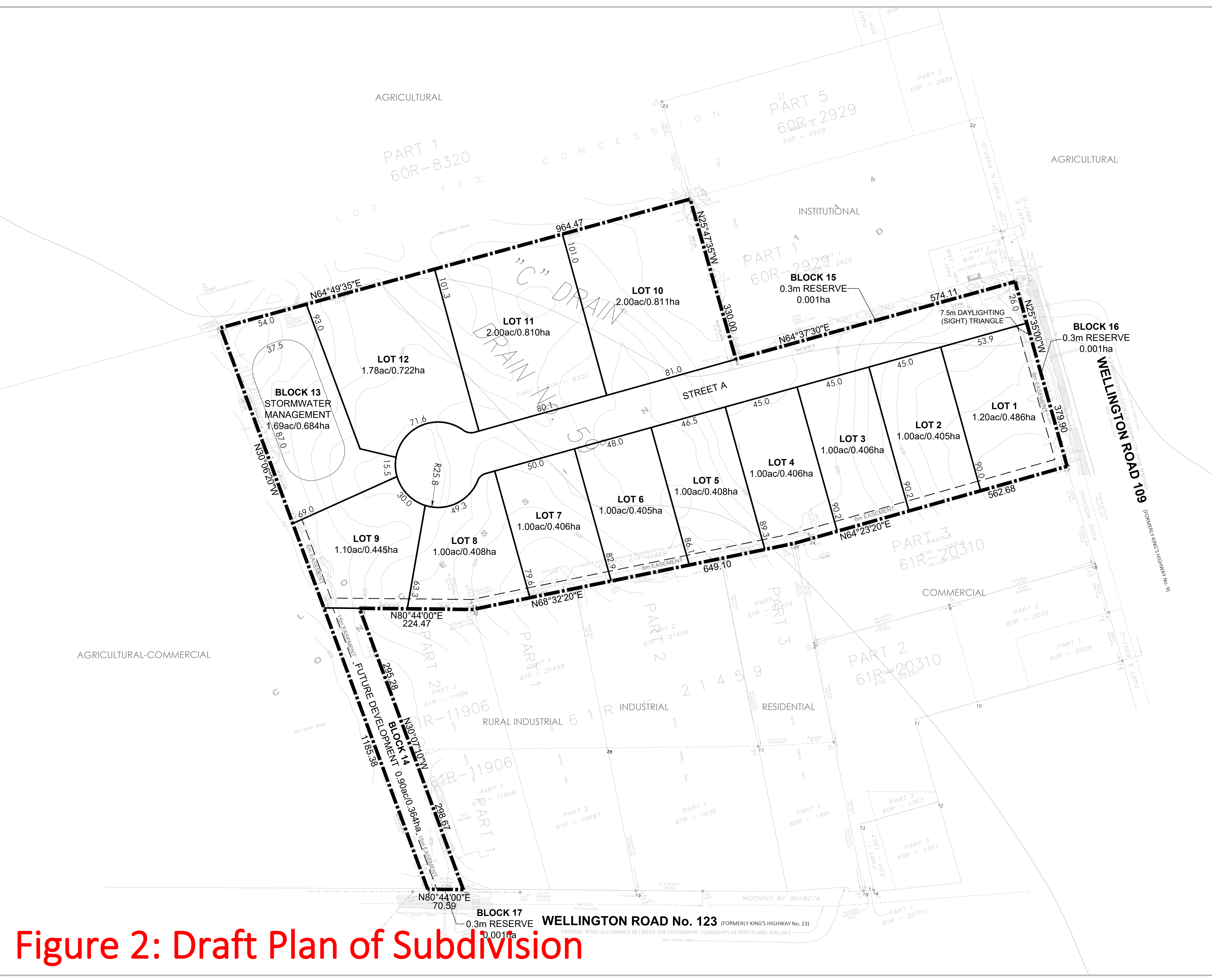
which can be implemented on the site plan and the design of the buildings and equipment to illustrate compliance with the environmental noise criteria contained MECP Guideline NPC-300, resulting in acceptable sound levels at the residences. These studies can be informed by the existing elevated levels of background sound at the residences and the urban character of the acoustical environment.

3. Class III (heavy) industrial uses are not recommended with the possible exception of Lot 12, considering the required 300 m minimum distance setback from the existing residences. The zoning bylaw should include provisions which permit Class III industrial uses on Lot 12 subject to that industry demonstrating that the actual zone of influence of their operations can be reduced to the minimum setback distance of 300 m through the preparation of a noise study at the discretion of the Municipality. The goal of the study would be to identify mitigation measures as required, which can be implemented on the site plan and the design of the buildings and equipment to illustrate compliance with the environmental noise criteria contained MECP Guideline NPC-300, resulting in acceptable sound levels at the residences. The study can be informed by the existing elevated levels of background sound in the residences and the urban character of the acoustical environment.
4. Individual industries may also be required to obtain Environmental Compliance Approvals from the MECP for their operations under the Environmental Protection Act, depending on the nature of the industry and the potential for adverse effects. This may include the preparation of specific Acoustic Assessment reports to support their applications in that regard.



Imagery ©2022 CNES / Airbus, Maxar Technologies, Map data ©2022 200 ft

Figure 1: Area Plan



# DRAFT PLAN OF SUBDIVISION

**LEGAL DESCRIPTION**  
 PART OF LOT 114  
 CONCESSION D  
 TOWN OF MINTO  
 COUNTY OF WELLINGTON

**OWNER'S CERTIFICATE**  
 I HEREBY AUTHORIZE MACNAUGHTON HERMSEN BRITTON CLARKSON PLANNING LIMITED TO SUBMIT THIS PLAN FOR APPROVAL.

DATE: \_\_\_\_\_ DOUG TAYLOR, OWNER  
 FRONTIERS DESIGN BUILD INC.

**SURVEYOR'S CERTIFICATE**  
 I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LAND TO BE SUBDIVIDED ON THIS PLAN AND THEIR RELATIONSHIP TO THE ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

DATE: \_\_\_\_\_ JOHN S. SCOTT, OLS  
 VAN HARTEN SURVEYING INC.

**KEY PLAN**

Subject Lands

SCALE: NTS

Additional Information Required Under Section 51(17) of the Planning Act R.S.O. 1990, c.P.13 as Amended

A. AS SHOWN	B. AS SHOWN	C. AS SHOWN
D. RURAL INDUSTRIAL, STORMWATER MANAGEMENT, OPEN SPACE	E. AS SHOWN	F. AS SHOWN
G. AS SHOWN	H. NOT APPLICABLE	I. LOAM / CLAY LOAM
J. AS SHOWN	K. ALL SERVICES AS REQUIRED	L. AS SHOWN

**AREA SCHEDULE**

	LOTS/BLOCKS	AREA	
		(ha.)	(ac.)
RURAL INDUSTRIAL	1-12	6.118	15.12
STORM WATER MANAGEMENT	13	0.684	1.69
FUTURE DEVELOPMENT	14	0.364	0.90
0.3m RESERVE	15-17	0.003	0.00
ROADS		1.091	2.70
<b>TOTAL</b>	<b>15</b>	<b>8.260</b>	<b>20.41</b>

**Notes**  
 1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN

Revision No.	Date	Issued / Revision	By
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200-540 BINCEMANS CENTRE DR., KITCHENER, ON, N2B 3K9 | P: 519.576.2650 F: 519.576.0121 | WWW.MHBCPLAN.COM





<b>Approval Stamp</b>	Date	March 14, 2023
	File No.	22343A
	Plan Scale	1:1,000 (Arch D)
	Drawn By	LC
<b>Project</b>	TEVIOTDALE	<b>Checked By</b> PC
<b>Applicant</b>	FRONTIERS DESIGN BUILD INC.	
<b>File Name</b>	DRAFT PLAN OF SUBDIVISION	<b>Dwg No.</b> 1 of 1

**Figure 2: Draft Plan of Subdivision**

# Noise Setback Distances

PART OF LOT 114 CONCESSION D  
TOWN OF MINTO  
COUNTY OF WELLINGTON

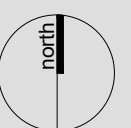
## LEGEND

-  Subject Lands
-  20m Setback
-  70m Setback
-  300m Setback



**Figure 3:**  
**Recommended Minimum Setback Distances**

DATE: March 2023  
SCALE: 1: 2,000  
FILE: 22343A  
DRAWN: LC



K:\22343A - TEVIOTDALE, WELLINGTON\RP\NOISE SETBACK\_28MARCH2023.DWG

# Appendix A

## Zoning Information



ACOUSTICS



NOISE



VIBRATION



# **CORPORATION OF THE TOWN OF MINTO**

## **ZONING BY-LAW 01-86**

**August 2022 Consolidation**

**The Corporation of the Town of Minto  
5941 Highway 89  
R.R. #1  
Harriston, ON N0G 1Z0**

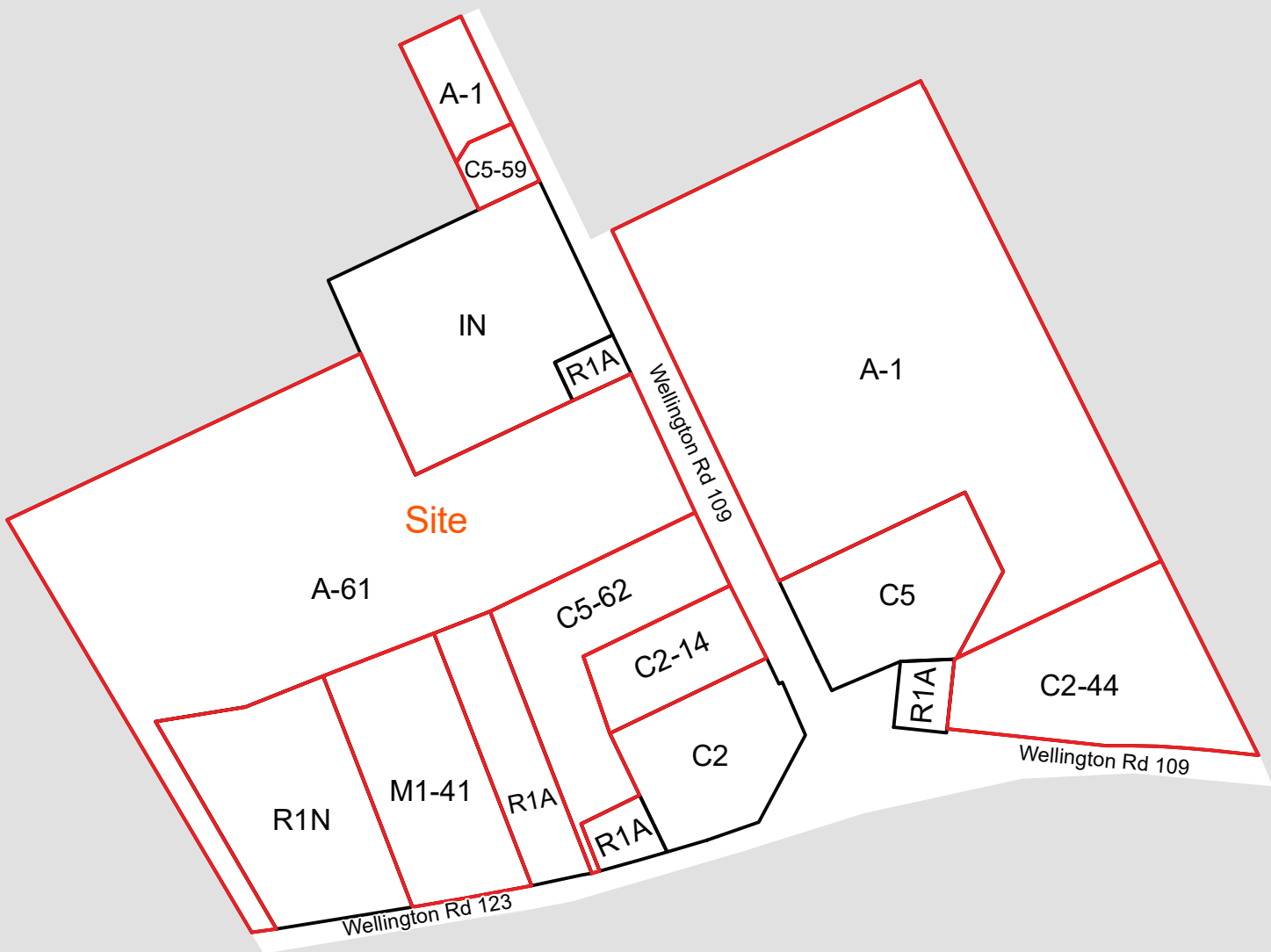
## **SECTION 24 – M1 – INDUSTRIAL ZONE**

### **24.1 PERMITTED USES**

- Manufacturing, processing, assembly, repair, fabricating, milling except for a motor vehicle recycling and salvage or wrecking facility, junk or scrap yard, fertilizer manufacturer, abattoir, rendering plant or any use considered offensive by the Public Health Act or uses restricted in all zones as per section 6.35.
- Automotive Body Repair Shop
- Bakeries
- Builder or Contractor’s Yard
- Building Supply Outlet
- Bulk Fuel Depot
- Business or Professional Office
- Custom Workshop
- Dry Cleaning Plant
- Farm Machinery Sales and Service
- Feed Mill, Seed plant, Grain Elevator
- Heavy Equipment Sales and Rental
- Industrial Mall
- Mini-Storage Facility
- Parking Area
- Parking Lot
- Rental Outlet
- Research and Laboratory Facilities
- Service Industry
- Service or Repair Shop
- Printing Establishment
- Public Works Yard
- Sewage Treatment Facility
- Transport Establishment
- Warehouse
- Water Treatment Facility
- Wholesale Outlet
- Accessory Uses, Buildings and Structures including cafeteria for employees, factory outlet, storage yards, showrooms and places of recreation

### **24.2 REGULATIONS**

<b>24.2.1</b>	<b>LOT AREA, Minimum</b>	929.0 m <sup>2</sup> (10,000 ft <sup>2</sup> )
<b>24.2.2</b>	<b>LOT FRONTAGE, Minimum</b>	20.0 m (65.6 ft)
<b>24.2.3</b>	<b>FRONT YARD, Minimum</b>	7.6 m (24.9 ft)



**Zone Definitions**

- AGRICULTURAL
- R1A UNSERVICED RESIDENTIAL
- R1B LOW DENSITY RESIDENTIAL
- R1C LOW DENSITY RESIDENTIAL
- R2 MEDIUM DENSITY RESIDENTIAL
- R3 HIGH DENSITY RESIDENTIAL
- ER ESTATE RESIDENTIAL
- MH MOBILE HOME PARK
- C1 CENTRAL COMMERCIAL
- C2 HIGHWAY COMMERCIAL
- C3 NEIGHBOURHOOD COMMERCIAL
- C4 SHOPPING CENTRE COMMERCIAL
- C5 HAMLET COMMERCIAL
- MU1 MIXED USE
- MU2 MAIN STREET MIXED USE
- AC AGRICULTURAL COMMERCIAL
- M1 INDUSTRIAL
- M2 LIGHT INDUSTRIAL
- RIN RURAL INDUSTRIAL
- EI EXTRACTIVE INDUSTRIAL
- IN INSTITUTIONAL
- OS OPEN SPACE
- FD FUTURE DEVELOPMENT
- NE NATURAL ENVIRONMENT
- FL FLOOD WAY
- FF1 FLOOD FRINGE OVERLAY ZONE ONE
- FF2 FLOOD FRINGE OVERLAY ZONE TWO
- (H) HOLDING PROVISION

**Legend**

- Wellhead Protection Area Overlay
- Site Specific Exception
- Zone Boundary
- Natural Environment
- Property Line
- Watercourse

**TEVIOTDALE**  
**Town of Minto**  
 Schedule 'A'  
 Map 5



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Sources:  
 County of Wellington  
 Planning and Development Department 2019.  
 Ministry of Natural Resources 2008.

**Consolidation Date: August 2022**  
**Date printed: August 2022**

