



## **10<sup>th</sup> Ave Estates Land Use Compatibility Study**

**Graham Design and Construction**

**1260 2<sup>nd</sup> Ave. East,**

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**Clearwater Shores Inc.  
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**June 4, 2024  
24003**

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# 1 Introduction

Clearwater Shores Inc. has been retained by Graham Design and Construction to conduct a land use compatibility study for the 10th Ave Estates development project in support of Official Plan and Zoning By-law applications. The new development is a 2.53 ha residential development on the northeast side of Owen Sound. The development will extend off the end of 10th Ave East, where there currently exists a residential subdivision. Figure 1 shows an aerial map of the site.

The scope of the evaluation includes the industrial class I lot located at the northeastern corner of 16th Ave East and 23rd St East and the development site at the end of 10th Ave East. The study includes a preliminary review and a professional opinion in terms of anticipated noise, vibration, odor, and air pollution impacts on the development, such as the noise and vibration impacts from transportation sources and emissions from nearby commercial and industrial sources, where applicable. The study is based on the Ontario Ministry of Environment, Conservation and Parks (MECP) Land Use Compatibility Guidelines and other relevant MECP guidelines, as well as digital maps retrieved from the City of Owen Sound.

## 1.1 Objectives

The objectives of this land use compatibility study are to evaluate:

- nature of the sensitive land use;
- all existing and committed facilities within the study area, and those not within it but which would impact the study area;
- duration, timing and types of operational activities, shipping, receiving and other transport activities, and outputs/contaminants (e.g. noise, odour, dust/particulates, vibration) associated with the facility or facilities;
- distance of sensitive land use from facility or facilities or facility/facilities influence area(s)/potential influence area(s);
- hours of operation/normal use periods for both the facilities and sensitive land use;
- site plan details and building fenestration for sensitive land use (i.e. number, type and location of windows);

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- wind patterns, topography and natural and man-made barriers/buffers (e.g. elevation, vegetation, walls, berms, ground and surface water); and
- any existing complaint history associated with the operation of facilities which would impact the sensitive land use site.

And any adverse affects that may be associated with them including:

- 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 use by man,
- loss of enjoyment of normal use of property, and
- interference with the normal conduct of business.

## 1.2 Existing Conditions

The current legal description for the site is RANGE 9 EGR PT PARK LOT 7; PLAN 16M16 BLKS 35 AND 36; AND RP 16R8804 PT PART 1. The site is zoned as Medium Density Residential (R4) by the city of Owen Sound.

The approximate size of the lot is 2.53 hectares. The medium density residential lot is currently vacant with no existing structures. It is bounded on the southwest side by an existing subdivision on 10th Ave East and bounded on the east side by the Kenny Drain, a municipal drain for the City of Owen Sound. To the north of the lot is vacant medium-density residential land (R4) and to the south is Open Space (OS) and general industrial land (M1). The lot slopes from west to east and consists of no wetlands or protected areas.

## 2 Impacts

### 2.1 Nature of Sensitive Land use

The sensitive area that is proposed to be developed will become a residential area. The proposed new development consists of a 29-unit apartment, a 34-unit apartment, two single-story 3-plex residences and four single-story 4-plex residences. The new residential development specifically targets elderly individuals as residents, though it is not in any way mandatory. Residences such as the ones to be built on the development lot are considered to be sensitive 24 hours a day.

### 2.2 Existing and Committed Facilities

Currently there is only one industrial facility within the study area. The facility is currently owned by Enbridge Inc. This facility is classified as a class I industrial facility. The industrial facility consists of one warehouse building and a large gravel parking lot.

### 2.3 Operational Activities

To the knowledge of Clearwater Shores Incorporated, Enbridge Gas uses the location on 23rd St E to store heavy operation equipment such as front-end loaders and excavators as well as transportation vehicles such as trucks. The transportation vehicles are used daily; however, they produce no significant emissions. The heavy machinery are not used often and produce some noise and dust emissions from the gravel parking lot.

### 2.4 Distance of sensitive Land Use

The distance from the industrial lot's fence line to the proposed outermost development line is approximately 20 m as shown in Figure 2; however, the distance between property lines is 19 m. It is noted that the majority of the proposed development lot lies outside of the 70 m potential influence area of the industrial lot. The approximate potential impact area only consists of the bottom southernmost portion of the development lot.

### 2.5 Hours of operation

Because the proposed lot is a residential lot, its hours of operation are considered to be 24 hours per day. Enbridge Gas Company's operational hours are Monday to Friday 8 a.m. to 6 p.m.

## 2.6 Site Plan Details

The proposed new development consists of a 29-unit apartment, a 34-unit apartment, two single-story 3-plex residences, and four single-story 4-plex residences. Within the area of potential impact, there are two residential buildings, a single-story 3-plex and a single-story 4-plex. Each unit of the 3-plex and 4-plex will have a window and a sliding door that will face towards the industrial lot. The remainder of the buildings are not within the area of potential impact and will not be directly facing the industrial site.

## 2.7 Natural and Man-made Elements

Currently, there are approximately 19 m of open greenspace buffer area with scattered coniferous trees between the existing industrial lot and the proposed development site. The proposed development and the greenspace currently have very little man-made buffers or vegetation. The industrial lot has chain-link fencing around the entirety of the lot, currently acting as the only buffer between the two lots. The proposed development will install significant fencing and treeline on the southern side of the lot. Wind patterns for the Owen Sound area have been generated by Meteoblue using historical weather data from Owen Sound starting in 1985. The wind rose for Owen Sound shows how many hours per year the wind blows from the indicated direction and the relative wind speeds. As seen in Figure 4, winds generally come from the west and blow towards the east.

## 2.8 Existing Complaints

To the best knowledge of Clearwater Shores Inc., to date no complaints have been filed about the industrial lot in question.

# 3 Mitigative Measures

Several mitigative measures are proposed to be or are in place for the development. Firstly, fencing is proposed to be built along the southern side of the development lot; this will act as a buffer to help reduce any noise that occurs at the industrial site as well as act as a visual buffer. It is also proposed that trees are to be planted directly in line with the industrial site. In addition to the fencing, the trees will act as further buffering for visual and audible risks. In addition to the physical barriers on site, it is noted that there will be approximately 50 m between the proposed development and the industrial lot, allowing for dissipation of any airborne risks that could occur such as dust or noise.

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Additionally, the industrial site has chain-link fencing that could provide minimal buffering.

## 4 Overall Risk

From the land use compatibility study, the main sources of potential risk involved with the residential development from the industrial lot are noise and dust emissions. Other sources such as vibration and odour have not been identified as contaminants/outputs for the site. The noise and dust emissions identified would be produced by the movement of heavy machinery within the site. From the generally infrequent movement of the heavy machinery, it is likely that there would be rarely any dust or noise pollution, if any, from the industrial site. From the wind data, it is noted that during the infrequent movement of heavy machinery, if there was dust generated, it would tend to blow eastwards, not northwards towards the residential development. Additionally, the 20 m buffer area between the two lots should allow for significant dissipation and settling of dust as well as dissipation of noise. In combination with the generally low frequency of movement, the buffer area and wind patterns, the installed man-made and vegetative buffers should allow for no adverse effects from the dust or noise to be experienced in the residential.

## 5 Conclusion

It is the opinion of Clearwater Shores Inc. that due to the minimum separation distance not being met, further studies will need to be done to confirm the compatibility of the proposed residential land. It has been demonstrated that a significant part of the proposed residential development will not be within the 70m area, but the closest point of development will be 19m from the industrial lot. Due to the lot being within 20 m, further studies will need to be done in accordance with the MOE D-6 Compatibility Between Industrial Facilities Guidelines. It has been demonstrated that low amounts of pollution along with sufficient buffers and vegetation will be provided, such that no adverse effects will be experienced in the residential lot. However, this alone will not be sufficient to approve land use for the lot because of its distance to the industrial lot.



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**Report Prepared By:**

A handwritten signature in black ink, appearing to read 'Keith Welsh', is written over a faint, light-colored circular stamp or watermark.

Keith Welsh

Clearwater Shores Inc.

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Appendix A

Appendix A

Figures

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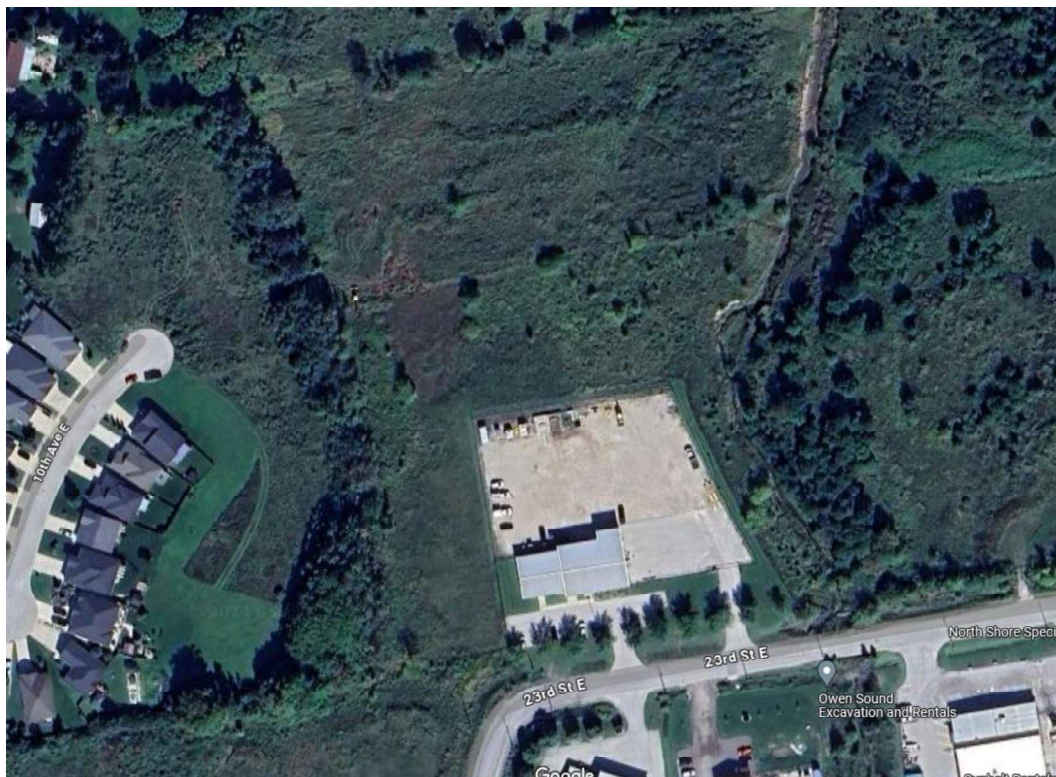


Figure 1: Aerial Photo of development site and industrial lot.



Figure 2:

distance between the edge of the development and the industrial lot

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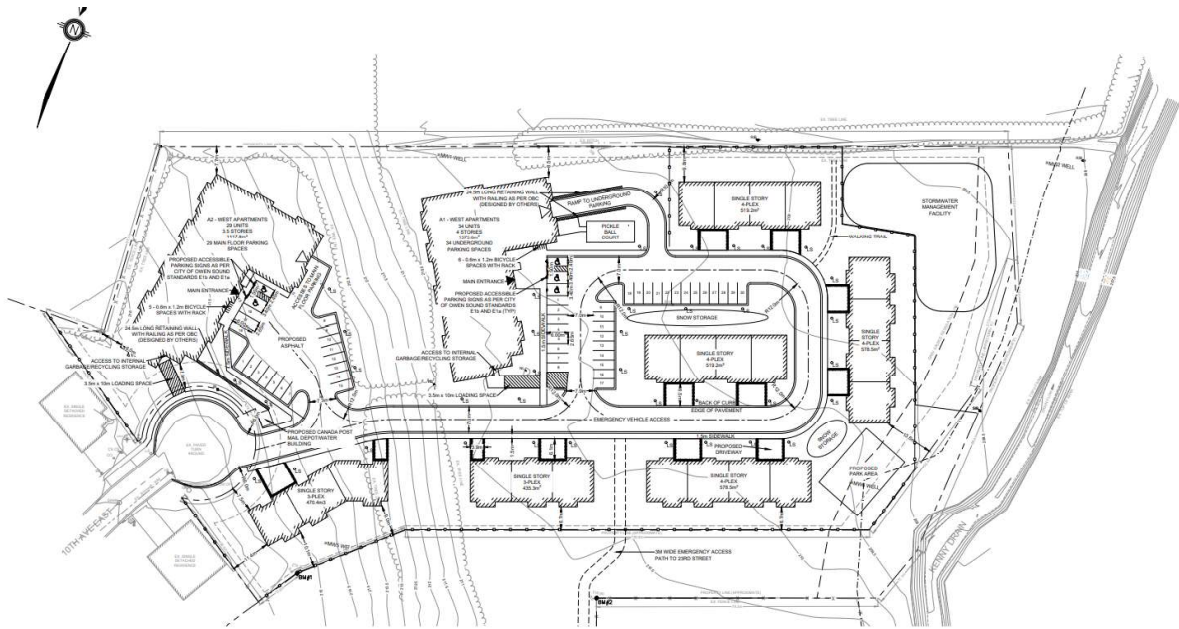


Figure 3: Site Plan for the proposed residential development

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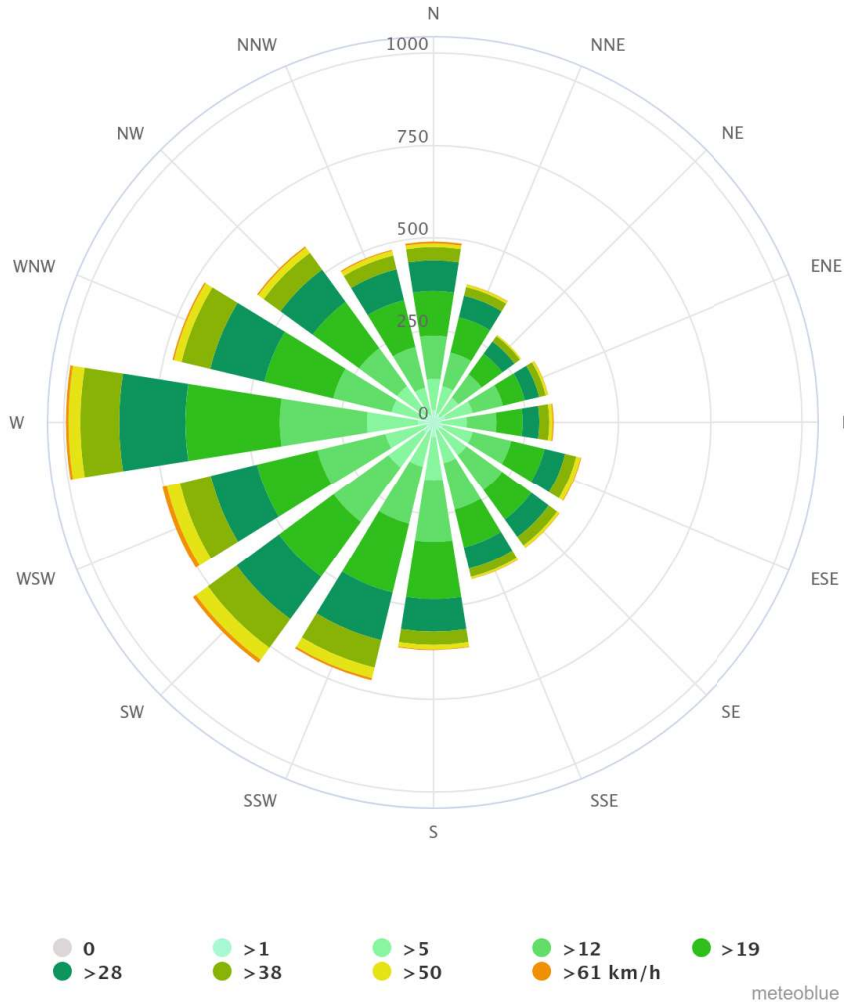


Figure 4: Annual wind rose for Owen Sound based on the past 30 years.