LAND USE COMPATIBILITY ASSESSMENT
900 KING STREET
LONDON, ON

FEASIBILITY ASSESSMENT
RWDI # 1803970
July 12, 2018

SUBMITTED TO
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1 INTRODUCTION

Western Fair Association (WFA) retained RWDI to undertake assessments of land use compatibility respecting the proposed Gateway Casino development on WFA lands at 900 King Street in London, Ontario. Figure 1 shows the subject lands hatched in red and Figure 2 shows the proposed final site condition. The proposed development includes the following components: casino; back of house; hotel; food and beverage; grandstand; and loading area. The hotel component represents a use that has the potential to be incompatible with existing industrial uses in the area that generate odours, dust, noise and/or vibration. Industrial uses also include railway operations to the north and south of the subject lands. To investigate this potential, the following tasks were undertaken:

- Site visit to identify types and nature of existing land uses in the area;
- Review of the proposed development on the subject land;
- Review of zoning by-law information;
- Review of the Ministry of the Environment, Conservation and Parks’ (MOECP) Guideline D-6;
- Review of MOECP’s Environmental Compliance Approvals (ECA) for existing industries within 1 km of the subject lands;
- Review of Environment and Climate Change Canada’s National Pollutant Release Inventory (NPRI) data for industries within 1 km of the subject lands;
- Review of meteorological data;
- Interpretation of the above information based on our experience with air quality, dust, odour, noise and vibration effects.

The study investigated the compatibility of the proposed mixed-use development with existing industrial land uses and railway operations up to 1000 m from the WFA subject lands.

The subject lands are zoned Regional Facility (RF) and do not permit a hotel establishment. The land to which the additional permitted use is being sought for is shown hatched in red in Figure 1. The lands are approximately 16.18 ha (40 acres) of the total 19.28 hectares comprising 900 King Street, excluding Queen's Park and the lands immediately surrounding the Confederation Building and Arts Building. The current zoning does allow other sensitive land uses such as educational facilities, day care centres, and ancillary residential and/or hotels and accommodations.
Figure 1: Subject Property
2 BACKGROUND

2.1 Regulatory Framework with Respect to Air Quality and Noise in Ontario

Industrial air and noise emissions in Ontario are governed by the Environmental Protection Act (EPA) and its regulations. Table 1 summarizes key sections of the EPA and the relevant MOECP regulations.
### Table 2: Summary of Ontario Regulations

<table>
<thead>
<tr>
<th>Ontario Statute</th>
<th>Section</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EPA</strong></td>
<td>9</td>
<td>Prohibits the use, operation, construction, alteration, expansion or replacement of anything that may discharge a contaminant into the atmosphere, unless in accordance with an Environmental Compliance Approval (ECA), issued by MOECP. There are exceptions to this requirement for certain minor types of emission sources.</td>
</tr>
<tr>
<td><strong>Reg. 419/05</strong></td>
<td>Various Sections</td>
<td>Sets out requirements for air quality modelling and reporting that must be completed when applying for an ECA.</td>
</tr>
<tr>
<td><strong>EPA</strong></td>
<td>14</td>
<td>Prohibits anyone from discharging a contaminant (including noise and odour) into the environment if it causes or may cause an adverse effect.</td>
</tr>
<tr>
<td><strong>419/05</strong></td>
<td>45</td>
<td>Adverse effect: impairment of the quality of the natural environment for any use; 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; rendering any property or plant or animal life unfit for human use; loss of enjoyment of normal use of property; and/or interference with the normal conduct of business.</td>
</tr>
<tr>
<td><strong>419/05</strong></td>
<td>46</td>
<td>Prohibits anyone from causing or permitting the emission of any air contaminant to a degree that may cause discomfort to persons, loss of enjoyment of normal use of property, interference with normal conduct of business or damage to property.</td>
</tr>
<tr>
<td><strong>419/05</strong></td>
<td>Schedules 2 and 3</td>
<td>Sets out standards for air contaminant concentrations.</td>
</tr>
<tr>
<td><strong>419/05</strong></td>
<td>19 and 20</td>
<td>Prohibits anyone from causing or permitting the standards to be exceeded at points of impingement.</td>
</tr>
</tbody>
</table>

The MOECP guideline NPC-300 sets out requirements for noise and vibration modelling, monitoring, and reporting that must be completed when applying for an ECA. The guideline also supports land use applications made under the Planning Act.

Another important piece of legislation is the Ontario Environmental Bill of Rights (EBR). Section 22 of the EBR requires the MOECP to give public notice of certain classes of proposals, including a proposal to issue an ECA. Section 38 of the EBR grants any resident of Ontario the right to seek leave to appeal an MOECP decision to issue and ECA.
2.2 Air Quality, Noise and Land Use Planning

In addition to the regulations cited in the preceding section, land use considerations are another means to reduce the risk of adverse air quality and noise effects from industrial facilities. For example, this can be achieved by creating a land use buffer between industry and a sensitive land use, such as residences, schools, seniors' facilities, daycares, hospitals, churches and campgrounds. The MOECP has a guideline (D-6: Compatibility between Industrial Facilities) to assist planners in establishing adequate buffers.

Guideline D-6 provides a classification scheme for industries, based their potential for fugitive emissions that could cause adverse effects. For each class, the guideline provides an estimate of potential influence area and a recommended minimum separation distance between each class of industry and sensitive land uses (see Table 2).

Table 2: Summary of Guideline D-6

<table>
<thead>
<tr>
<th>Industry Class</th>
<th>Definition</th>
<th>Potential Influence Area</th>
<th>Recommended Minimum Separation Distance (property line to property line)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Small scale, self-contained, daytime only, infrequent heavy vehicle movements, no outside storage.</td>
<td>70m</td>
<td>20m</td>
</tr>
<tr>
<td>II</td>
<td>Medium scale, outdoor storage of wastes or materials, shift operations and frequent heavy equipment movement during the daytime.</td>
<td>300m</td>
<td>70m</td>
</tr>
<tr>
<td>III</td>
<td>Large scale, outdoor storage of raw and finished products, large production volume, continuous movement of products and employees during daily shift operations.</td>
<td>1000m</td>
<td>300m</td>
</tr>
</tbody>
</table>

Often an industry will fall between two Classes and judgment is required to apply the most appropriate classification given the balance of the criteria. Guideline D-6 states that no incompatible development should occur within the recommended minimum separation distance as noted in Table 2. Section 4.10 of D-6 however identifies exceptional circumstances with respect to redevelopment, infill and mixed use areas. In these cases, it suggests that separation distances less than the recommended minimum values may be acceptable if a justifying impact assessment is provided.
2.3  Guidelines for New Development in Proximity to Railway Operations

The Federation of Canadian Municipalities and the Railway Association of Canada – “Guidelines for New Development in Proximity to Railway Operations” guideline was developed in part to assist municipalities and developers in establishing a consistent approach in assessing new residential developments that are near rail corridors. In the absence of specific zoning by-law requirements, the document provides specific guidelines and setback distances for safety, noise, and vibration. Although this document is not directly applicable for hotels, it has nonetheless been used as a reference for this assessment. Tables 3 provides the suggested guidelines.

Table 3: Summary of Rail Corridor Guidelines

<table>
<thead>
<tr>
<th>Type</th>
<th>Potential Influence Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight Rail Yards</td>
<td>1000m</td>
</tr>
<tr>
<td>Principal Main Line</td>
<td>300m</td>
</tr>
<tr>
<td>Secondary Main Line</td>
<td>250m</td>
</tr>
<tr>
<td>Principal Branch Line</td>
<td>150m</td>
</tr>
<tr>
<td>Secondary Branch Line</td>
<td>75m</td>
</tr>
<tr>
<td>Spur Lines</td>
<td>75m</td>
</tr>
</tbody>
</table>

The guideline also provides for a recommended minimum vibration influence area of 75 metres from a railway corridor or rail freight yard.

3  POTENTIAL FOR INCOMPATIBILITY

3.1  Potential for Industrial Air and Noise Emissions

3.1.1  Industrial Classification

A site visit by RWDI personnel was completed on June 8, 2018 to review the industrial areas within a 1000 m zone around the subject lands. This distance is consistent with the Guideline D-6 zone of influence of a Class III facility.

Prior to the site visit a search for existing ECA and NPRI information for industries within 1000 m of the subject lands was completed. This helped identify any industries that may have a potential to impact air quality and or noise at the subject lands. Using the gathered information, industries were classified based on their potential to influence the proposed development, as per the D-6 classifications (Class I, II or III). An investigation into the complaint history of existing industries within 1000 m of the subject site is also normally completed before a site visit through discussions with the MOECP. However, based on the lack of industries surrounding WFA that would normally cause an environmental complaint, this task was deemed not necessary.
The zoning within 1000 m of the WFA subject lands was consulted, to consider not only lands where Class I, II or III industries currently exist, but also lands where such industries are permitted as future uses under the current zoning. The zoning within 1000m includes residential, commercial, office, light industrial, general industrial, community facility, open space, and neighbourhood facility. Of interest are any zones having a permitted use or function that could be within the potential influence area as provided in Table 2.

Zones Having Potential Class I Facility

Zones that permit Class I industries that are within a potential influence area of 70 m of the area hatched in red in Figure 1 are indicated in Figure 3. Permitted Class I uses that are within the potential influence area include auto parts supply and repair garages, and household service and repair shops. The existing uses within the zones highlighted in Figure 3 are commercial and retail establishments and are not typical of a Class I facility as defined in Table 2.

**Figure 3**: Class I Type Zones with Influence Area Impacting WFA Subject Lands
A permitted Class I business could be located within the highlighted zones of Figure 3 however considering that there are existing residential uses surrounding most of these zones, no unique compatibility issues with the WFA subject lands are expected.

**Zones Having Potential Class II Facility**

Zones that permit Class II industries that are within a potential influence area of 300 m of the area hatched in red in Figure 1 are indicated in Figure 4. Permitted Class II uses that are within the potential influence area include manufacturing and assembly, bakery, dry cleaning plants, transport terminals, and processed goods industries.

**Figure 4:** Class II Type Zones with Influence Area Impacting WFA Subject Lands
Most of the existing uses within the zones highlighted in Figure 4 are not considered a Class II industry. The existing industries are noted below:

1. Zone at north-east corner of Burbrook Place and Dundas Street: This zone is approximately 290 m from the WFA subject lands. Light industry is currently present at this location. Existing and permitted uses are not a concern in terms of compatibility with the proposed hotel. These lands are beyond the recommended minimum separation distance for Class II industries (100m), and there are already sensitive uses (residential areas) in much closer proximity to these lands.

2. Zone at 100 Kellog Lane. This zone is approximately 240 m from the WFA subject lands. Current uses at the site include an indoor adventure park and a craft brewery. It is our understanding that there are plans to convert remaining space at 100 Kellog Lane into office, warehouse, light industrial and retail. This zone lies beyond minimum separation distance for Class II industries, and has adjacent residential uses that are closer than the WFA subject lands.

3. Zones located to the east and south-east of the WFA subject lands (east of Egerton St). Current uses within 300 m of the WFA subject lands include warehousing. This zone is located beyond the recommended minimum setback for Class II industries in Guideline D-6 and has adjacent residential uses that are closer than the WFA subject lands. Also, wind directions that would cause impacts from this industrial area on the WFA subject lands are not very frequent and would likely not introduce a new limitation for an industry located here.

4. Zones located to the south of the WFA subject lands (between Egerton St and Rector St). Current uses within 300 m of the WFA subject lands include a rail corridor and a small rail freight yard. Some permitted uses could pose compatibility issues however they would need to obtain an ECA to demonstrate compliance with applicable MOECP air quality and noise guidelines. The rail freight yard and rail corridor will be discussed in Section 3.1.2.

5. Zones located to the south-west of the WFA subject lands (west of Rectory St). Current uses within 300 m of the WFA subject lands include an arena and warehouse facility. This zone has adjacent residential uses that are closer than the WFA subject lands. Also, some permitted uses could pose compatibility issues however they would need to obtain an ECA to demonstrate compliance with applicable MOECP air quality and noise guidelines. Existing and permitted uses are not a concern from a compatibility perspective.

Zones Having Potential Class III Facility

There are no zones that would permit a Class III industrial facility within 1000 m of the WFA subject lands.

3.1.2 Rail Corridor and Freight Yards

3.1.2.1 Rail Line

A CN rail corridor is south of the WFA subject lands. This rail corridor is most likely a Principal Main line with a suggested 300 m setback for new residential developments. The proposed location of the hotel is more than 300 m from the rail corridor and will not be greatly affected by air quality or noise from the rail corridor. The WFA subject lands are however within 300 m of the rail corridor and any sensitive land use within this influence area could experience adverse impacts due to noise.
Developments within 75 m of a rail corridor could experience vibrations due to rail traffic. The WFA subject lands are greater than 75 m from the rail corridor therefore vibrations from rail traffic are not a concern.

3.1.2.2  Freight/Maintenance Rail Yards

There are three freight rail yards within 1000 m of the WFA subject lands as shown in Figure 5. Noise from freight rail yards are of longer duration than passing trains and could include noise from shunting cars and idling locomotives. The entire WFA subject lands are within 1000 m of the three freight rail yards. The are residential uses between the CP freight yard and the subject lands therefore this freight yard is likely not a concern from a noise perspective.

Developments within 75 m of a rail freight yard could experience vibrations due to rail traffic. The WFA subject lands are greater than 75 m from the rail freight yards therefore vibrations from rail traffic are not a concern.

**Figure 5:** Rail Freight Yards within 1000 of WFA Subject Lands
4 RESULTS DISCUSSION

Noise will likely be the primary issue from an environmental impact perspective due to the proximity of the subject lands to the rail corridor and rail freight yards. On examination of the existing industrial uses in the area, we did not identify any that we anticipate having noise, dust or odour impacts on the proposed development on the WFA grounds. However, as noted in Section 3.1.1, potential compatibility issues with certain types of industries could occur should they be developed in the future on the highlighted zones in Figures 3 and 4. However, any future industry would need to obtain an ECA or register themselves with the MOECP to show compliance with MOECP guidelines.

Detailed studies are used to determine the impact of all environmental sources affecting the development proposal and to determine the appropriate layout, design and required control measures. Detailed studies could include noise, dust and odour impacts from surrounding sources, including the rail corridor and freight yards, as part of any sensitive use development application on the subject lands.

5 CONCLUSIONS

RWDI completed a feasibility study for the proposed hotel development located at 900 King Street in London, Ontario to assess the potential impacts from air quality, dust, odour and noise/vibration from nearby industries and rail traffic.

Based on our preliminary review of the existing and permitted surrounding land uses, the proposed zoning amendment to include hotel as a permitted use on the subject lands identified with hatching in Figure 1 is feasible. However, detailed environmental impact studies for any future hotel development will need to be completed to assess the appropriate layout, design and required control measures.

Noise from rail traffic on the corridor and freight rail yards will be the predominant environmental source of concern for any future sensitive land use development on the WFA subject lands.