This advisory provides additional interpretation to the MIACC criteria pertaining to retail centres, restaurants, entertainment centres, and sporting complexes.

**Acceptable Levels of Public Location Risk for Land Use Around Hazardous Facilities (Current)**

<table>
<thead>
<tr>
<th>Annual Location Risk (chance of fatality per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 in a million ((10^{-6}))</td>
</tr>
</tbody>
</table>

- **Risk source**
  - No other land use
  - Manufacturing, warehouses, open space (parkland, golf courses, etc.)
  - Low-density residential ("up to 10 units with ground level access, per net hectare") and commercial (including offices, retail centers, restaurants, entertainment centers, *sporting complexes*)
  - High-density residential and commercial, including places of continuous occupancy such as hotels and tourist resorts
  - Sensitive institutions (e.g., hospitals, child and aged care facilities, schools)

Proposed in 2007 by the CSChE PSM Division. Modified from the 1994 MIACC (Major Industrial Accidents Council of Canada) Guidelines. *Further discussion required*

TSSA will use the United Kingdom (UK)’s Planning Advice for Development of Hazardous Installation (PADHI) guidelines for the purposes of identifying the acceptable development on the basis of individual risk where it pertains to Low-density residential land use.

The PADHI guidelines are based on the following:
- the location (Zone) of the proposed development
- the Sensitivity Level of the proposed development based on Development Types
- the use of the decision matrix based on the zone and the sensitivity level

For obtaining the location (Zone) The PADHI guidelines uses risk contours similar to the MIACC criteria and classifies them as Zones as indicated below:
- **Inner zone:** 100 in a million-10 in a million (not applicable for this interpretation)
- **Middle zone:** 10 in a million-1 in a million
- **Outer zone:** 1 in a million-0.3 in a million
There are 4 sensitivity levels:

Level 1 – Based on normal working population
Level 2 – Based on the general public – at home and involved in normal activities
Level 3 – Based on vulnerable members of the public (children, those with mobility difficulties or those unable to recognize physical danger)
Level 4 – Large examples of Level 3 and large outdoor examples of Level 2.

According the PADHI guidelines the sensitivity levels for retail centres, restaurants, entertainment centres, sporting complexes, etc. are:

- Level 1 for developments where the total floor space for use by the general public is less than 250 m$^2$
- Level 2 for developments where the total floor space for use by the general public is from 250 m$^2$ to 5000 m$^2$
- Level 3 for developments where the total floor space for use by the general public is more than 5000 m$^2$

Having determined which zone the development falls into and also the Sensitivity Level of the development, PADHI guidelines use the following matrix to decide if the land use is acceptable for locating the facility.

<table>
<thead>
<tr>
<th>Level of Sensitivity</th>
<th>Development in Middle Zone</th>
<th>Development in Outer Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DAA</td>
<td>DAA</td>
</tr>
<tr>
<td>2</td>
<td>DAA</td>
<td>DAA</td>
</tr>
<tr>
<td>3</td>
<td>AA</td>
<td>DAA</td>
</tr>
<tr>
<td>4</td>
<td>AA</td>
<td>AA</td>
</tr>
</tbody>
</table>

DAA = Don’t Advise Against development
AA = Advise Against development

If the land use for a propane facility falls under AA, the risk shall be mitigated to $0.3 \times 10^{-6}$ or less.

If the land use for a propane facility falls under DAA, the risk shall be mitigated to $10 \times 10^{-6}$ to $1 \times 10^{-6}$.