

Ministry of the Environment, Conservation and Parks

Land Use Compatibility Guideline (update to D-Series)

Municipal session

June 2, June 9, June 16

Presentation Overview

- Strengthening Environmental Compliance
- Background: Land Use Compatibility
- Proposed Land Use Compatibility Guideline
- Next Steps and Questions

Strengthening Environmental Compliance

Strengthening Environmental Compliance

- Ensuring the protection of human health and the natural environment is the top priority for the Ministry of the Environment, Conservation and Parks (MECP) and a key commitment in our Made-in-Ontario Environment Plan.
- On May 4, 2021, Ontario moved forward on several initiatives to strengthen compliance tools that hold polluters accountable and create consistent guidelines to prevent and address noise and odour issues (Information Bulletin, ERO #019-3268), including:
 - **Compliance policy:** updating the ministry's environmental compliance policy to prioritize high-risk incidents and better hold polluters accountable (Proposal, ERO # 019-2972).
 - **Administrative monetary penalties:** expanding administrative monetary penalties to cover approximately 150,000 regulated entities, including individuals, small businesses and large corporations as well as public entities like municipalities and crown corporations.
 - **Land use compatibility guideline (D-Series):** providing better tools and creating clear and consistent guidelines for municipalities that they may use to make land-use planning decisions that will reduce noise and odour impacts from industry (Proposal, ERO # 019-2785).
 - **Odour guideline:** proposing guidance on how industrial facilities, development proponents and other members of the regulated community can anticipate, prevent, and address odour issues (Proposal, ERO # 019-2768).
- In addition to its linkages to compliance, the proposed land use compatibility guideline was developed based on broader provincial direction related to help municipalities avoid the impacts of conflicting land uses. It focuses on supporting good planning decisions.
- In addition to the draft Odour guideline, the proposed land use compatibility was informed by, and seeks to support implementation of, the ministry's Environmental Noise Guideline - Stationary and Transportation Sources - Approval and Planning (NPC-300).

Background: Land Use Compatibility

Background: Land Use Compatibility

- Land use compatibility means that certain land uses can co-exist and thrive for the long-term within a community.
- Incompatible land uses can cause:
 - Adverse effects on sensitive land uses from noise, dust, odour and vibration from nearby major facilities.
 - Added costs for major facilities to address complaints from nearby sensitive land uses (e.g., changing operations or installing end-of-pipe controls to address adverse effects).
- The ministry receives thousands of complaints each year from sensitive land uses related to noise, dust and odour from major facilities.
- Land use planning plays a critical role in land use compatibility:
 - Planning authorities, typically municipalities, are responsible for land use planning decisions, in accordance with provincial policies.
 - Provincial Policy Statement, 2020 (PPS) is focused on ensuring that major facilities and sensitive land uses are planned and developed to avoid, or if avoidance is not possible, minimize and mitigate adverse effects.
 - D-Series Guidelines provides guidance on land use compatibility for when a change in land use is proposed. The Guidelines were developed in the 1990s and are out-of-date with the current PPS, technical approaches and the province's' role in land use planning approvals.
 - Decisions under the *Planning Act*, e.g., official plan and zoning by-law amendments and site plan approvals, can proactively address compatibility issues prior to new land uses being established.

Sensitive land uses: buildings, amenity areas, or outdoor spaces where routine or normal activities occurring at reasonably expected times would experience one or more adverse effects from contaminant discharges generated by a nearby major facility. Sensitive land uses may be a part of the natural or built environment. Examples may include, but are not limited to: residences, day care centres, and educational and health facilities (PPS, 2020)

Major facilities: facilities which may require separation from sensitive land uses, including but not limited to airports, manufacturing uses, transportation infrastructure and corridors, rail facilities, marine facilities, sewage treatment facilities, waste management systems, oil and gas pipelines, industries, energy generation facilities and transmission systems, and resource extraction activities (PPS, 2020)

Proposed Land Use Compatibility Guideline

Land Use Compatibility Guideline - *What?*

- The proposed Guideline informs land use planning decisions by providing guidance to planning authorities and proponents on how to assess and address land use compatibility concerns.
- Updates and replaces the current D-series guidelines related to land use compatibility.*
- It applies to *Planning Act* decisions that may affect land use compatibility, including:
 - Updates to official plans and zoning by-laws.
 - Proponent-driven applications, such as official plan amendments, zoning amendments, site plans and subdivision approvals for:
 - A new or expanding sensitive land use (e.g., a residential subdivision or condominium) proposed near an existing or planned major facility.
 - A new or expanding major facility proposed near an existing or planned sensitive land use.

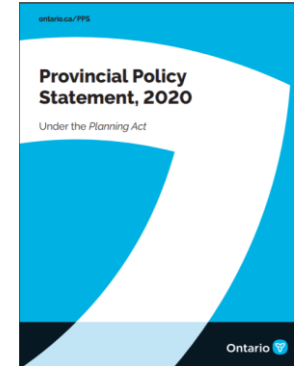
Guideline objectives are to:

- *Protect employment areas (including industrial employment areas) designated for future major facilities from incompatible uses and encroachment by sensitive land uses.*
- *Protect existing or planned major facilities from potential impacts from new sensitive land uses.*
- *Prevent adverse effects to existing or planned sensitive land uses from new and/or expanding major facilities.*

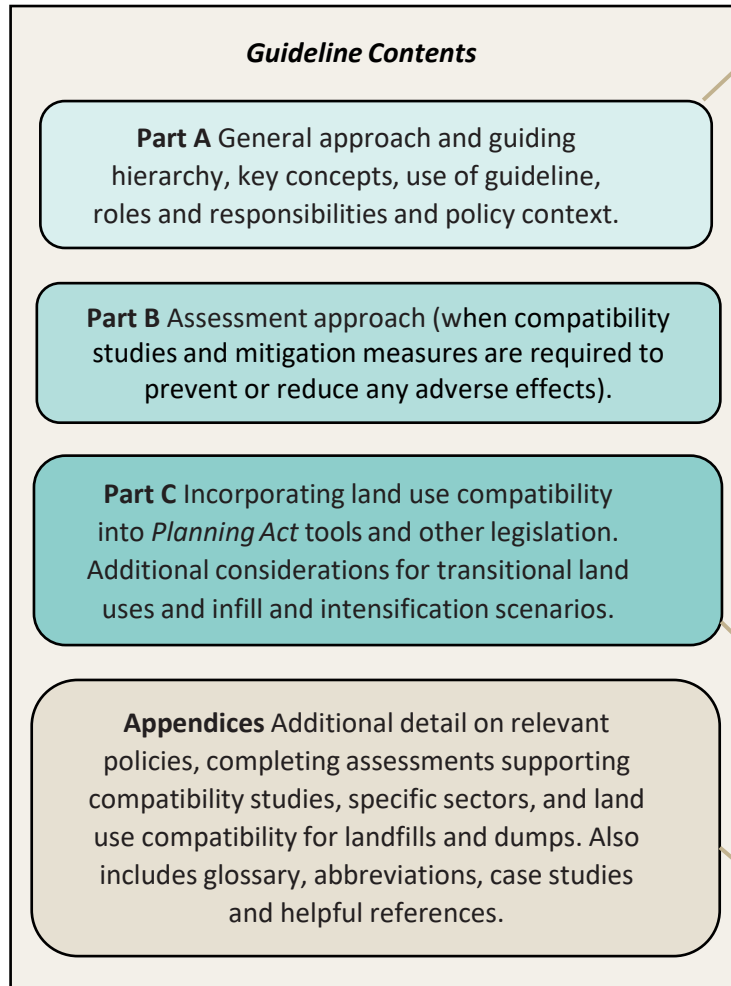


Land Use Compatibility Guideline – Why?

- Preventing the impacts of incompatible land uses and noise and odour issues is a key commitment in the Made-in-Ontario Environment Plan.
- Supports strengthened land use planning policies in the PPS and in A Place to Grow: A Growth Plan for the Greater Golden Horseshoe* requiring:
 - be made in accordance with ministry guidance. Planning for major facilities and sensitive uses to avoid or, if avoidance is not possible, to minimize and mitigate any adverse effects, in accordance with provincial guidelines, standards and procedures.
 - The need for a sensitive use to be demonstrated in a particular location if adverse effects cannot be avoided (i.e., without mitigation), in accordance with provincial guidelines, standards and procedures.
 - Land use compatibility decisions
- It also:
 - Responds to industry concerns regarding encroaching new sensitive uses that threaten their ability to operate.
 - Prevents impacts from noise, dust, odour and other potential sources of adverse effects on sensitive uses from major facilities.
 - Better reflects current technical data and approaches, and the province's role in land use planning approvals.



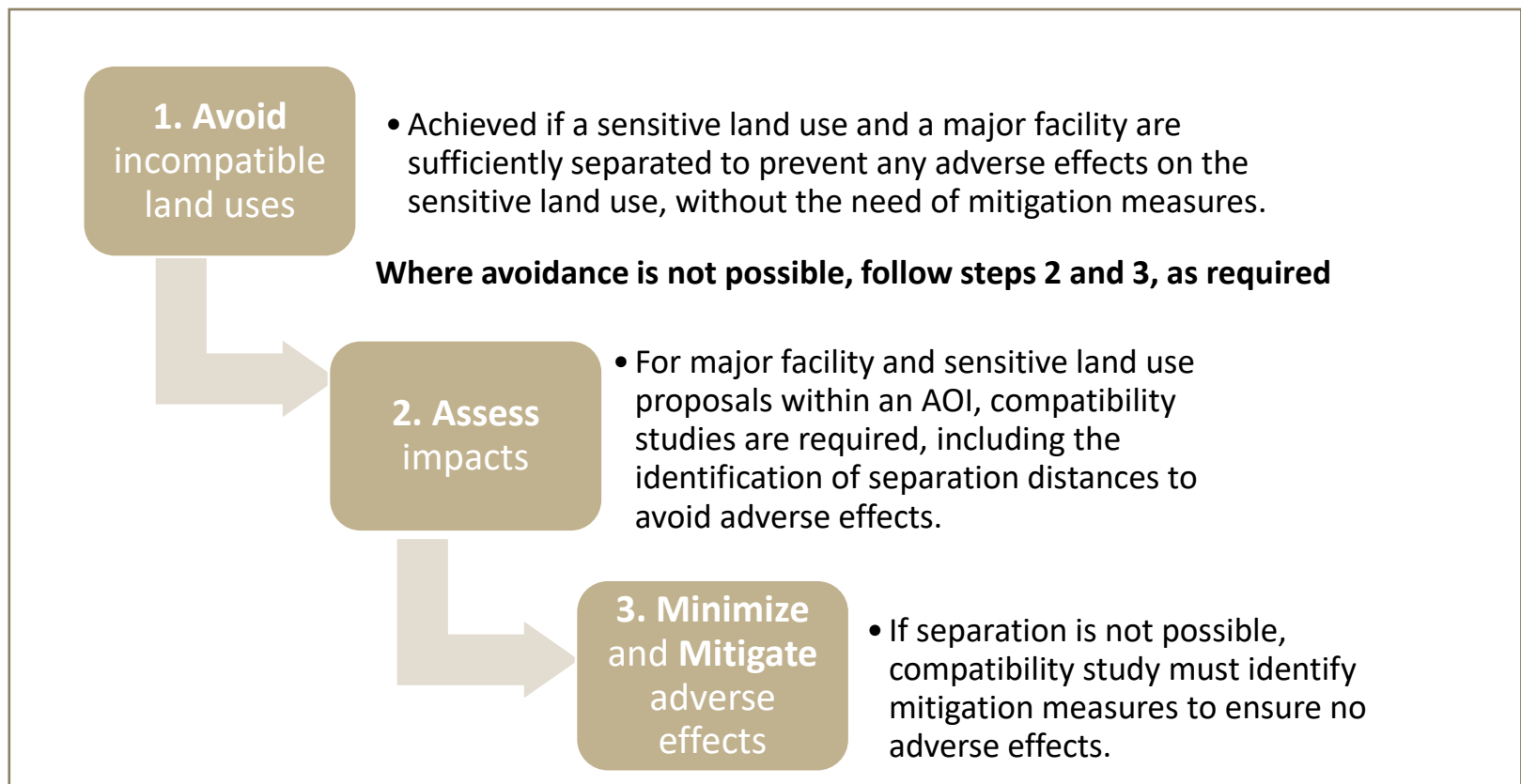
Land Use Compatibility Guideline – *How?*



1. **Guiding hierarchy** for land use compatibility.
2. **Areas of Influence (AOIs)** and **Minimum Separation Distances (MSDs)** for major facilities where adverse effects on sensitive land uses nearby are likely to occur.
3. Direction that a **compatibility study** is required if a development proposal is in an AOI, and direction on compatibility study contents.
4. Direction on when a **demonstration of need** is required and contents.
5. Examples of **minimization and mitigation measures** that may help to reduce adverse effects.
6. Guidance on how to incorporate land use compatibility into **planning and approval decisions**, and other **planning considerations**.
7. **Additional guidance and information** for land use compatibility.

1. Guiding Hierarchy for Land Use Compatibility

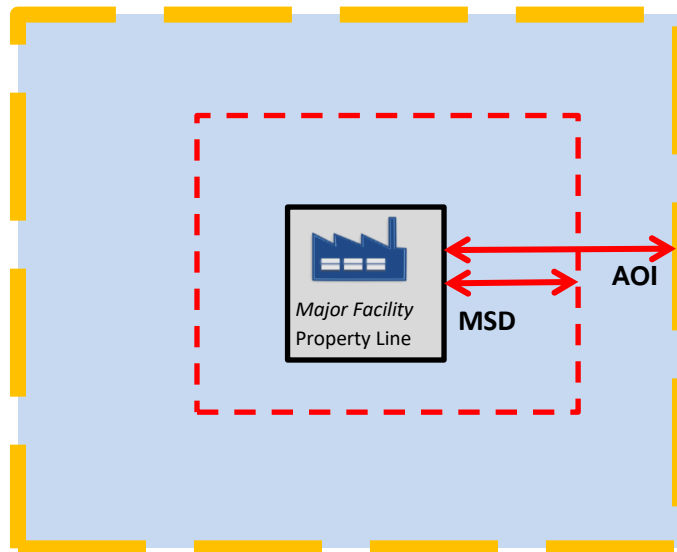
- The Guideline proposes a guiding hierarchy as a decision-making framework for planning authorities where avoidance of incompatible land uses through adequate separation should be achieved, or if avoidance is not possible, minimizing and mitigating adverse effects.



2. Areas of Influence and Minimum Separation Distances

The Guideline proposes:

- Updated AOIs and MSDs that are based on 10 years of incident (complaint) data for noise, dust and odour.
- AOIs and MSDs for certain sectors/types of major facilities (“facility-specific”)
 - Currently there are no facility-specific AOIs and MSDs, other than for landfills and sewage treatment plants.
 - Examples of major facilities with assigned facility-specific AOIs/MSDs are composting facilities, paper manufacturing, sewage lagoons.
- AOIs and MSDs for classes of major facilities (“class-related”)
 - Now 5 classes vs. previous 3 classes (see next slide).
- Where available, facility-specific AOI/MSD should be used. Where not available, class-related AOI/MSD should be used.
- An alternate AOI may be determined based on a technical and scientific process like a compatibility study.



Minimum Separation Distance (MSD): a recommended minimum distance within which adverse effects are very likely to occur and incompatible development should not normally take place.

Area of Influence (AOI): an area surrounding the property boundary of an existing or planned major facility where adverse effects on surrounding sensitive land uses have a moderate likelihood of occurring.

2. Areas of Influence and Minimum Separation Distances (con't)

AOIs and MSDs for classes of major facilities

Class	Description of Major Facility	AOI	Examples of Major Facility	MSD
Class 1	Operations with known smaller adverse effects.	500 m	Food Manufacturing; Sewage Lagoons; Various EASR activities	200 m
Class 2	Operations with moderate effects. May include some outdoor operations.	750 m	Manufacturing Metal and Glass Parts	300 m
Class 3	Operations with moderate to significant adverse effects that may be difficult to mitigate. May include larger outdoor operations	1,000 m	Aggregate Operations (in relation to sensitive land use proposals only)	500 m
Class 4	Operations with significant adverse effects that may be difficult to mitigate. May include larger outdoor operations.	1,500 m	Meat and meat product processes (slaughterhouses and rendering)	500 m
Class 5	Operations with the most significant adverse effects that may be difficult to mitigate. May include larger outdoor operations	2,000 m	Chemical product manufacturing	500 m

2. Areas of Influence and Minimum Separation Distances (con't)

- Generally, proposed AOIs and MSDs are larger than the current AOIs and MSDs in the D-Series*, as a result of the improved data and statistical analysis, clearer methodology, and technical expertise.
- Some proposed facility-specific AOIs are smaller than its comparative class-related AOIs, providing more flexibility.

Facility Type	Facility AOI	Class AOI
Food Production (General)	500	500
Wastewater Facilities (small)	300	500
Paint Spray / Coating	400	500
Sewage Lagoons	500	500
Waste Transfer Sites	400	500
Recycling Facilities (general)	900	1000

3. Compatibility Studies

The Guideline proposes:

- That a compatibility study is required when:
 - a new or expanding sensitive land use is proposed within a major facility's AOI or MSD; or
 - a proposed or expanding major facility's AOI or MSD captures existing or planned sensitive land uses,
- A list of documentation required for a compatibility study.
- Requirements from existing noise, dust and odour guidelines and regulations that must be met while doing a compatibility study (Appendix B of the Guideline); assessments are not limited to noise, dust and odour impacts.
- In addition to the proposed odour guidance, the additional requirements for specific sectors like landfills, composting facilities, aggregates and cannabis production and processing facilities (Appendix D-F of the Guideline).

Compatibility Study: a study that assesses potential adverse effects and recommends separation distances and mitigation measures, if needed, to limit impacts to surrounding land uses.



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4. Demonstration of Need

The Guideline proposes:

- A demonstration of need is required for:
 - A sensitive land use proposed within a major facility's AOI and mitigation measures would be needed to ensure no adverse effects or potential impacts; or
 - A sensitive land use proposed within a major facility's MSD (regardless of whether mitigation measures are assessed to be needed or not).
- Contents of a demonstration of need, including an assessment of alternate locations considered outside of the AOI.
- That a planning authority must only permit the proposal if it is satisfied that there is an identified need and sound planning rationale for the proposed use in that location, and that alternative locations or areas for the proposed use have been evaluated and there are no reasonable alternative locations or areas.

Demonstration of Need:
a study that determines whether there is an identified need for the proposed use in the proposed location, and if alternative locations for the use have been evaluated and there are no reasonable alternative locations.

5. Minimize and Mitigation Measures

The Guideline proposes:

- That minimizing potential adverse effects on sensitive land uses and potential impacts to major facilities is achieved by maximizing the separation distance between land uses that are incompatible.
- That mitigation refers to the additional measures necessary to prevent an adverse effect or impact, after separation has been maximized.
- That legal requirements to implement and maintain mitigation measures, as necessary, should be in place.
- Examples of mitigation measures, including:
 - At-source
 - Operational
 - At-receptor
 - Buffers
 - Phasing



*At-source:
Process/Chemical changes
Enclosures for outdoor operations*

*Operational:
Wheel washing stations
Limit noisy operations to day-time
Use alternative truck routes*

*At-receptor:
Building orientation away from source
At property berm/acoustic barrier
Locate air intakes well above grade*

6. Planning and Approval Decisions and Considerations

The Guideline proposes:

- Information on how to incorporate land use compatibility policies and approaches into various existing tools and approvals under the *Planning Act* and other legislation, including through:
 - Official plan policies and designations.
 - Secondary plans.
 - Zoning by-laws.
 - Other planning approvals.
- How to plan for land use compatibility in significantly intensifying areas (e.g., major transit areas), such as:
 - Ensuring policies and by-laws are up-to date specifying appropriate direction for specific areas undergoing infill and intensification.
 - Including buffer areas around industrial zoned lands, serving as transitional land uses.
 - Considering the cumulative effects of new development.
 - Using holding by-laws and interim control by-laws to pause development until studies are completed.
- Information on other considerations such as complete planning application requirements, transitional land uses, municipal by-laws, warning clauses and inventories of major facilities.

7. Additional Guidance

The Guideline proposes:

- Guidance on consultation and engagement to support land use compatibility.
- Guidance specifically related to land use on or near landfills and dumps* and on assessing methane hazards from landfill sites.
- Information on other guidance that may apply in relation to specific types of facilities.



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Next Steps

Next Steps

- Comments on the proposed Land Use Compatibility Guidelines can be provided through the Environmental Registry of Ontario by July 3, 2021.
 - ERO # 019-2785
 - <https://ero.ontario.ca/notice/019-2785>
- Questions can be directed to:
 - MECP Land Use Policy (MECP.landpolicy@ontario.ca)
 - Jessica Isaac
 - Sanjay Coelho
 - Emilee O’Leary

Questions for Consideration

1. Is the proposed Land Use Compatibility Guideline clear and easy to understand? If not, what do you find unclear?
2. What do you think of the class-specific and facility-specific approach to AOIs and MSDs?
 - a) Does the facility-specific approach provide greater certainty and clarity for those sectors?
 - b) Is having 5 classes of major facilities an improvement over the current 3 classes?
3. What do you think of the compatibility study requirements?
4. What do you think of the demonstration of need requirements?
5. Are there any additional at-source or at-receptor mitigation measures you feel should be mentioned in the proposed Land Use Compatibility Guideline?
6. Do you feel that the guidance provided in Part C (Incorporating Land Use Compatibility in Planning Tools) will be effective at avoiding, minimizing, and mitigating compatibility issues?
7. Do you feel that the proposed Land Use Compatibility Guideline will result in any increased costs or savings for major facilities or sensitive land uses planning approvals? What is the estimated costs or savings?
8. Do you have further suggestions related to how to address land use compatibility in areas undergoing intensification?

Appendix

Appendix A: D-Series Documents Replaced by the Guideline

- D-1 Land Use and Compatibility
 - D-1-1 Land Use Compatibility: Procedure for Implementation
 - D-1-2 Land Use Compatibility: Specific Applications
 - D-1-3 Land Use Compatibility: Definitions
- D-2 Compatibility between Sewage Treatment and Sensitive Land Use
- D-4 Land Use On or Near Landfills and Dumps
 - D-4-1 Assessing Methane Hazards from Landfill Sites
 - D-4-2 Environmental Warnings/Restrictions
 - D-4-3 Registration of Certificates and Provisional Certificates
- D-6 Compatibility between Industrial Facilities
 - D-6-1 Industrial Categorization Criteria
 - D-6-3 Separation Distances
 - D-6-4 MCCR Bulletin No. 91003
- 2009-04 Environmental Warnings and Restrictions

Note - The following D-Series documents are not replaced by the Guideline:

- D-3 Environmental Considerations for Gas or Oil Pipelines and Facilities
- D-5 Planning for Sewage and Water Services

Appendix B: PPS Policies - Land Use Compatibility

- 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.

Appendix B: PPS Policies – Employment Areas

- 1.3.2.2 At the time of the official plan review or update, planning authorities should assess *employment areas* identified in local official plans to ensure that this designation is appropriate to the planned function of the *employment area*.

Employment areas planned for industrial and manufacturing uses shall provide for separation or mitigation from *sensitive land uses* to maintain the long-term operational and economic viability of the planned uses and function of these areas.

- 1.3.2.3 Within *employment areas* planned for industrial or manufacturing uses, planning authorities shall prohibit residential and prohibit or limit other *sensitive land uses* that are not ancillary to the primary employment uses in order to maintain land use compatibility.

Employment areas planned for industrial and manufacturing uses, should include an appropriate transition to adjacent non-*employment areas*.

Appendix B: PPS Policies – Employment Areas

- 1.3.2.4 *Planning authorities* may permit conversion of lands within *employment areas* to non-employment uses through a comprehensive review, only where it has been demonstrated that the land is not required for employment purposes over the long term and that there is a need for the conversion.
- 1.3.2.5 Notwithstanding policy 1.3.2.4, and until the official plan review or update in policy 1.3.2.4 is undertaken and completed, lands within existing *employment areas* may be converted to a designation that permits non-employment uses provided the area has not been identified as provincially significant through a provincial plan exercise or as regionally significant by a regional economic development corporation working together with affected upper and single-tier municipalities and subject to the following:
- a) there is an identified need for the conversion and the land is not required for employment purposes over the long term;
 - b) the proposed uses would not adversely affect the overall viability of the *employment area*; and
 - c) existing or planned infrastructure and public service facilities are available to accommodate the proposed uses.

Appendix B: A Place to Grow: Growth Plan for the Greater Golden Horseshoe Policies – Employment

- 2.2.5.6 Upper- and single-tier municipalities, in consultation with lower-tier municipalities, will designate all employment areas in official plans and protect them for appropriate employment uses over the long-term. For greater certainty, employment area designations may be incorporated into upper- and single-tier official plans by amendment at any time in advance of the next municipal comprehensive review.
- 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.
- 2.2.5.8 The development of sensitive land uses, major retail uses or major office uses will, in accordance with provincial guidelines, avoid, or where avoidance is not possible, minimize and mitigate adverse impacts on industrial, manufacturing or other uses that are particularly vulnerable to encroachment.

Appendix B: A Place to Grow: Growth Plan for the Greater Golden Horseshoe Policies – Employment

- 2.2.5.9 The conversion of lands within employment areas to non-employment uses may be permitted only through a municipal comprehensive review where it is demonstrated that:
- a) there is a need for the conversion;
 - b) the lands are not required over the horizon of this Plan for the employment purposes for which they are designated;
 - c) the municipality will maintain sufficient employment lands to accommodate forecasted employment growth to the horizon of this Plan;
 - d) the proposed uses would not adversely affect the overall viability of the employment area or the achievement of the minimum intensification and density targets in this Plan, as well as the other policies of this Plan; and
 - e) there are existing or planned infrastructure and public service facilities to accommodate the proposed uses.
- 2.2.5.10 Notwithstanding policy 2.2.5.9, until the next municipal comprehensive review, lands within existing employment areas may be converted to a designation that permits non-employment uses, provided the conversion would:
- a) satisfy the requirements of policy 2.2.5.9 a), d) and e);
 - b) maintain a significant number of jobs on those lands through the establishment of development criteria; and
 - c) not include any part of an employment area identified as a provincially significant employment zone unless the part of the employment area is located within a major transit station area as delineated in accordance with the policies in subsection 2.2.4 (Amendment 1, 2020).

Appendix C: Guiding Hierarchy for Land Use Compatibility

1. AVOID incompatible land uses

- Locate a *sensitive land use* outside of the AOI of a *major facility*, and locate a *major facility* to an area where *sensitive land uses* are not captured within its AOI.
- Avoidance does not include mitigation measures, only separation between uses.
- Designate appropriate transition areas between *major facilities* and *sensitive land uses* (such as an area where heavy industrial is buffered by lighter industrial, and subsequently may be buffered by commercial or office uses).

Where avoidance by locating outside the AOI is not possible, follow steps 2 and 3 as required:

2. ASSESS impacts in terms of types of impact and magnitude

- For proposals within the AOI, *compatibility studies* are required.
- Proponents should pre-consult with *planning authorities* to understand requirements.
- A compatibility study will determine a specific separation distance for that proposal that would avoid adverse effects. That separation distance should be used if possible.

3. MINIMIZE and MITIGATE impacts

- If the separation distance is not possible, the compatibility study must identify mitigation measures to ensure no adverse effects will remain post-mitigation.
- Even with proposed mitigation, the separation distance should be maximized to minimize impacts, and should not be less than the MSD.
- Once implemented, monitor and maintain required mitigation measures over time to avoid future compatibility issues.

Where avoidance and minimization/mitigation of impacts is not possible, do not permit the proposed incompatible land use.

Appendix D: Comparison of AOIs and MSDs

- The following provides a comparison of existing AOIs and MSDs in D-6 vs. proposed AOIs and MSDs in the Guideline.

Class	Existing AOIs	New AOIs	Existing MSDs	New MSDs
1	70m	500m	20m	200m
2	300m	750m	70m	300m
3	1000m	1000m	300m	500m
4		1500m		500m
5		2000m		500m

Appendix E: Update on Guidance for Landfills and Dumps

- D-4: Land Use on or Near Landfills and Dumps (last updated 1994) provides guidelines for all proposals for land use on or near any landfill or dump which contains municipal solid waste, industrial solid waste and/or sewage sludges.
- An update to D-4 is included in the Guideline. Some key elements:
 - All proposed land uses near landfills and dumps are to consider this section, which also applies when looking for locations to establish a landfill.
 - Compatibility studies are required if development is proposed in the AOI; a demonstration of need would be required if within the MSD.
 - Landfill gas assessment and hydrogeological assessment for surface and groundwater risks (leachate in particular) are key elements of assessment.
 - 500 metres is the MSD; the AOI is determined on a case-by-case basis.
 - In D-4, 500 m is a recommended study area that may be reduced, whereas the Guideline proposes 500 m as the MSD.
- Guidance on methane gas testing and monitoring is also included (replacing D-4-1 Assessing Methane Hazards from Landfill Sites).
- Information on warning clauses has been incorporated into Part C of the Guideline (replacing D-4-3).