

MECP PROPOSED LAND USE COMPATIBILITY GUIDELINES (Replacing D-series)

Comments to MECP

June 29, 2021

1.0 INTRODUCTION

In our practice as consulting acoustical engineers providing acoustical engineering services in land use planning, our clients fall into two main categories:

- (i) Major facilities/industries/infrastructure;
- (ii) Developers of sensitive uses (e.g., mainly residential).

We thus deal with land use compatibility issues on a daily basis. For our purposes, a planning/land use compatibility guideline addressing environmental acoustics in a balanced, fair, and equitable manner, with no vested interest to one category of land use versus another, is useful and important.

2.0 COMMENTS

1. An update to Guidelines D-1 and D-6 are welcomed, to be more consistent with Provincial policies such as the PPS's and Places to Grow.
2. The new MECP LUC guideline should make it clear that land use approval decisions can put a Major Facility/industry out of compliance with its environmental approvals, with no changes at all at the industry. This is a serious circumstance that can threaten the long-term viability of the Major Facility/industry by requiring expensive mitigation or curtailing/changing operations to come back into compliance. These effects are viewed as adverse effects or impacts of a sensitive use on a Major Facility/industry and are contrary to PPS 2020.

It may be a stretch, but item h) in the definition of Adverse Effects, "interference with normal conduct of business" may be considered the adverse effect of a new, altered, or expanded sensitive use on a Major Facility/industry, in terms of putting the Major Facility/industry out of compliance.

3. MECP should undertake an educational program, beyond this guideline, to educate municipal planners on the relationship between land use planning decisions under the Planning Act and environmental approvals under the EPA. An explanatory brochure of 2-4 pages, complimentary to the new LUC guideline, focusing on this aspect and referencing specific parts of the PPS would be appropriate.
4. The expansion of the classifying of Major Facilities into five (5) categories is a useful improvement. The current categorization of all major facilities/industries into one of only three classes is often very problematic. There has been a tendency to classify industries into the highest class where any one characteristic is noted. Occasionally, this has resulted in ridiculous classifications.

5. Table 3 as presented, implies that the boundaries between classes are not “hard”. This is appropriate because even with five classes, the characteristics of an industry may straddle two or more classes and some judgement must be objectively applied to class a facility/industry. This should be explained further in the guideline.
6. PPS 2020 addresses Land Use Compatibility in Section 1.2.6. This talks of Major Facilities and sensitive land uses being “planned and developed to avoid any potential adverse effects from odour, noise and other contaminants,...and to ensure the long-term operational and economic viability of major facilities...”. Where avoidance is not possible potential adverse effects are to be minimized or mitigated. How adverse effects are to be avoided is not detailed in the PPS and the PPS does not indicate that separation distance is the only means of avoidance.

The proposed guideline makes it very clear that the preferred approach to establishing land use compatibility is avoidance of potential adverse effects (impacts) by adequate separation distance as opposed to using (noise) mitigation. With respect to environmental noise this is not at all efficient or desirable. This is because distance as a sound (noise) reduction method is very inefficient because of the non-linear (logarithmic) relationship between sound level and distance. Considering only geometric spreading, one has to keep doubling the distance for the same amount of sound level reduction (diminishing returns). For a point source this effect is a 6 decibel reduction for every doubling of distance. For example, **each** doubling of distance results in the same 6 decibel reduction: 10 to 20 m, 20 to 40, 40 to 80;.....200 to 400 m; 400 to 800 m; 800 to 1600 m; etc. That is, at relatively close distances, increasing the distance can result in significant sound reductions. However, once at a reasonably large setback distance, the increase in distance required for the same effect becomes very large and often impractical.

As another example, suppose a fan is producing an unacceptable sound level at 50 m and a reduction of 15 decibels is required. One common approach is to add a silencer with this much attenuation. If one were to try and use distance, based on geometric spreading effect alone, it would require a distance of 281 m to achieve a 15-decibel reduction – not practicable in most cases.

The bottom line is that for environmental noise, most often either mitigation at source or at receptor is more efficient and preferred over distance separation as a solution.

For other disciplines, such as odour, distance may indeed be better, but not always if an effective mitigation as part of the process is available.

7. From an engineering point of view, adverse effects can often be avoided by proper site plan and/or building design. For example, noisy, truck loading docks can be placed on the side of an industrial building opposite to the side where a sensitive use is located. By this means there may be the potential to avoid adverse noise effects without mitigation. As a result of inherent sound screening, avoidance of adverse noise effects can be achieved without large distance separation. There are other engineering methods that can be used by design, to avoid adverse noise effects. If one cannot hear a source of sound there cannot be negative impact or an adverse effect, regardless of distance separation. The proposed MECF guideline appears to take the position that the only means to achieve avoidance of adverse effects is distance separation. For noise this is not true.

It is also worth noting that the PPS definition of Major Facility “means facilities which MAY require separation from sensitive uses...” (emphasis added), indicating that separation distance is recognized not to be universally required. Similarly, PPS Section 1.6.9.1 b) talks

of “airports, rail facilities and marine facilities being appropriately designed, buffered and/or separated...”, again recognizing that separation distance may be appropriate but is not mandatory in all cases.

8. The concept of an Area of Influence (AOI) is useful and desirable. The AOI's can be used as an effective screening tool to trigger compatibility studies. The newly proposed AOI's are greater in size than those in the current D-6, making the proposed guideline much more conservative and potentially requiring many more studies than under the current D-6.
9. The concept of a Minimum Separation Distance (MSD) regardless of all else, based primarily on class of Major Facility/Industry is extremely problematic. The current reality in Southern and Eastern Ontario is that there are few greenfield sites left. Most of the projects we have worked on in the last 10-20 years are brownfield sites, redevelopments, or infill. Thus, there is little choice in establishing separation distances between different land uses. The situation is exacerbated by modern Ontario policies encouraging intensification in many areas. From the point of view of environmental noise, what is most important is compliance with NPC-300 and designing developments (sources or receptors) to be compatible with nearby land uses and avoiding adverse noise effects/impacts by design of appropriate noise mitigation; not by use of arbitrary separation distances.
10. NPC-300, released by MECP in 2013, introduced a new receptor class, Class 4, in recognition of item 9 above and the need to address land use compatibility issues with reduced distances between different land uses.
11. Many situations that we currently deal with involve revitalization of areas in mature municipalities where lands which were once industrial/employment are being converted to sensitive residential use. In many cases, at least one significant, successful and viable industry will remain for the medium and long term. This raises the issue of compatibility which must be addressed, with no opportunity to implement MSD's of the order proposed in the new guideline, or any MSD at all.
12. There are examples of recent, successful developments (built and occupied) where proper design and noise mitigation have allowed separation distances of zero to be used between Major Facilities/Industry and residential land uses.
13. In many cases, Official Plan designations (and zoning) have historically permitted fundamentally incompatible land use in proximity to each other in existing situations. For example, this can occur when a residential subdivision is on one side of a main street and an industrial park is on the other side of the street. Adverse effects can be minimal because of the form of the sensitive use; for example, either low density residential or low-rise medium density even with separation distance much less than the proposed MSD's. Redevelopment and intensification come along, changing the residential to high density, high rise form and the compatibility circumstances change. The basic sensitive use has always been present. However, the form of sensitive use will change, and the matter of MSD is irrelevant. Land use compatibility studies are necessary, and the solution will be in the design and noise mitigation in the new sensitive development. Trying to apply an MSD will not be appropriate or helpful in such circumstances.
14. The question of need, as expressed in the proposed guideline is extremely problematic. Basic land uses throughout a municipality are established in an Official Plan (OP) which is required to be reviewed regularly. In a review, a municipality may decide that the land use (designations) in a particular area is/are obsolete, for a variety of reasons; for example, all or most employment uses have left, and that redevelopment to residential is desirable. Or a

landowner may apply for an OPA and rezoning for similar reasons, for example, there no longer is a market for an industrial building. Under these circumstances it may be difficult to prove a need for the new use, even though the current use is not viable. A landowner is not typically going to be in a position to or be willing to study alternative sites for the use as usually the landowner would not own other sites in the area (and if he/she did, would probably want similar uses for all).

15. The need for a particular land use should be determined as part of preparing or updating an Official Plan or in considering an application for an Official Plan Amendment from the private sector. Such consideration is usually done as a collaboration between the land use approval authority (municipality) and the landowner(s), although often there is disagreement and the need for independent adjudication (e.g., by the LPAT).
16. When there is an application for a change of land use (OPA and rezoning) there is typically a requirement for a Planning Justification report. In effect, this is the equivalent of a needs study. The proposed guideline would set up a parallel planning process to what already exists. The guideline process would not be identical, would be redundant and thus would be inappropriate and undesirable.
17. The planning approvals processes for such land use designation changes are already established under the Planning Act. Further, environmental specialists dealing with such disciplines as noise, air quality and odour are not qualified to address the question of need because need is beyond their disciplines. The need for change in land use or particular land use on specific sites should be addressed by the likes of professional planners, land use economists, land use marketing specialists, real estate experts.

Notwithstanding that establishing need is a requirement in Section 1.2.6.2 a) of PPS 2020, it is not appropriate to require need for a particular land use/development to be part of a land use compatibility study addressing environmental factors such as noise, air quality or odour. The need study should be part of planning submissions.

18. In brownfield cases the site of an industry is often polluted and sometimes abandoned. The only way a clean up will occur is with redevelopment, usually to a sensitive use such as residential, which will provide the funds for clean up. Thus, while it may be difficult to prove a need for residential, it may be clear that the current use is not viable because there is no market for it. Without the change of land use there would be no clean up. It should be noted that PPS policy 1.7.1 f) encourages the redevelopment of brownfield sites.
19. Section 1.6.4 has the statement: "in limited cases where MMAH is not the planning authority, municipalities may engage with the Ministry directly through the Municipal Plan Review process if they require specific technical input relating to compatibility studies". The guideline should be specific as to what these "limited cases" are.
20. Section 2.7, item IV., indicates that details of the engagement with residents or major facilities within the study area, who and how contacted, input, etc. are to be included in the compatibility study or studies. These aspects are addressed in Planning Act procedures and there are statutory requirements for notification of nearby landowners and for public meetings. These aspects are not normally within the scope or expertise of environmental technical experts dealing with noise, air quality and odour and should not have to be addressed in the environmental land use compatibility studies. These aspects should be addressed by the professional planners in the land use planning justification report.

21. Section 3.3, at the end indicates that at-receptor mitigation is only recognized for noise in the ECA application process in a Class 4 area under NPC-300. The EASR process should also be included. Similar comments re inclusion of EASR apply to Section 3.7.
22. Section 3.7 deals with securing mitigation by agreements, referring to “a range of legal agreements... under the Planning Act...”. These agreements would be with the land use planning authority. However, it should be recognized that it is useful and common practice for there to be private agreements between Major Facilities (industries) and proponents of sensitive land uses, to secure noise (and other) mitigation at source, at receptor or both. These arise out of objections to new development (OPA’s and rezoning), referral to the LPAT for adjudication and settlement agreements between the parties. There are ample examples of such private agreements, now successfully in place, in various municipalities in Ontario. In fact, in some cases, such as the Toronto Waterfront, some of the agreements are three party agreements including the municipality as well as the industry and residential developer. These agreements are not under the Planning Act. The guideline should recognize the importance and benefits of this process and the resulting agreements that secure design features and environmental mitigation that result in land use compatibility.
23. In section 4.2.3 the third bullet is potentially problematic in implying that the worst case permitted by zoning should be used as an alternative. This should only apply if there is no existing use or no proposed future use. Otherwise, the first part of the sentence should apply. Wording should be added in this regard. The reason is that in adversarial situations often parties attempt to impose compatibility considerations based on the worst case allowed by zoning, regardless of existing or proposed use. It should also be noted that NPC-300 requires use of “predictable worst case” not “the” worst case. Consistency is important.
24. In section 4.2.3, the 8th bullet poses some practical/logistical challenges. The “cumulative effects of development” are to be considered. For the case of a new Major Facility to be introduced where there are others already present, ideally the cumulative effects should be considered. However, in practice, sufficient information on the emissions of other facilities, suitable for a detailed, reliable assessment of cumulative effects, is typically not available to the proponent of a new development. Notwithstanding that Acoustic Summary Tables from the Acoustic Assessment Reports (AAR) are publicly available from the ECA or EASR process for other Major Facilities, the AAR documents are not available and are generally considered confidential. Thus, proper cumulative studies are often not possible. Also, it is our understanding that in the air quality discipline, MECP does not require cumulative studies. It is very important that all MECP guidelines (and regulations) be consistent with each other.
25. The use of Holding By-laws as part of attempting to achieve land use compatibility as suggested in Table 4, is not desirable because:
 - The zoning is established; but implementation is merely delayed;
 - The municipality must pass a by-law removing the H but gives no notice of this and only the landowner subject to the H can appeal.

At the OP/OPA or zoning/rezoning stages, it is a public process, and third parties can appeal. This is a very powerful and effective process for incentivizing achieving land use compatibility. Our experience over the last 10 years or so is that many adversarial (incompatible) situations are being satisfactorily resolved as a result of settlement agreements in this public process, wherein design and mitigation features are secured and land use compatibility is achieved.

3.0 RECOMMENDATIONS

1. The guideline should elaborate that a Major Facility may have the characteristics of more than one class and that the classification of Major Facilities requires the application of reasonable judgement.
2. The guideline should elaborate on the adverse effects that a sensitive use can have on a Major Facility.
3. Efforts should be made beyond the guideline, to educate municipal planners on the environmental approvals process and the potential impacts land use decisions on other lands can have on Major Facilities.
4. At least with respect to noise, the guideline should not indicate that the best way to avoid adverse effects is separation distance. As discussed, other methods may be more efficient and effective in avoiding adverse effects of noise.
5. The concept of AOI should be retained. However, the concept of MSD, which is presented in the proposed guideline as independent of and regardless of specific circumstances, should be re-examined and preferably deleted or reworked, at least with respect to noise.
6. With respect to the question of need (for a particular land use proposed for a particular site), the guideline should indicate that need should be addressed in a planning justification report and not in a land use compatibility study dealing with environmental factors.
7. Section 3.7 should be expanded to include the use of private agreements to secure appropriate design and mitigation features.
8. The new guideline should not set up parallel land use approvals requirements (under the Planning Act) that are not 100% consistent with the Planning Act requirements.
9. The matter of cumulative impacts (Section 4.2.3) should be examined carefully and should be made entirely consistent with requirements in other MECP guidelines or regulations.
10. Other portions of the draft guideline should be edited/clarified as detailed in comments above.

4.0 ANSWERS TO MECP QUESTIONS

1. *Is the proposed Land Use Compatibility Guideline clear and easy to understand? If not, what do you find unclear?*

Generally clear, except for clarifications/expansions documented in comments above.

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?*

The AOI concept is useful to define with certainty when/where land use compatibility studies are required. The MSD concept is not seen as appropriate for environmental noise because usually there are better ways to avoid adverse noise effects than separation distance, as discussed above.

b) *Is having 5 classes of major facilities an improvement over the current 3 classes?*

Yes, having 5 classes of major facilities is an improvement over 3 classes; although many or most facilities will not fit easily and uniquely into only one class.

3. *What do you think of the compatibility study requirements?*

The compatibility study requirements are generally appropriate.

4. *What do you think of the demonstration of need requirements?*

The question of need should be addressed in planning studies re land use compatibility not in environmental studies related to land use compatibility, for the reasons explained in the above comments.

5. *Are there any additional at-source or at-receptor mitigation measures you feel should be mentioned in the proposed Land Use Compatibility Guideline?*

The guideline should not attempt to be fully prescriptive in defining mitigation and thereby limiting innovation. The proponent's design/planning team should be free to devise the best mitigation for any circumstance, even if it is something not currently contemplated – as long as it can be shown to be effective.

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?*

Generally, the guidance in Part C (with some exceptions) should be effective in achieving land use compatibility, *providing that* municipal planners understand the relationship between environmental approvals for facilities and land use planning decisions for sensitive cases.

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?*

It is expected that there will be increased costs because the conservative AOI and MSD distances suggested will require more studies. Not in a position to estimate costs. However, on an individual basis, no changes are anticipated to what is now done for land use compatibility studies for noise.

8. *Do you have further suggestions related to how to address land use compatibility in areas undergoing intensification?*

See comments provided.