URBAN SOLUTIONS
PLANNING & LAND DEVELOPMENT

May 15, 2023 349-20

Via Email

Alaina Baldassarra, B.E.S., R.P.P., MCIP
Planner I

City of Hamilton,
71 Main Street West, 5th Floor
Hamilton, ON L8P 4Y5

Dear Ms. Baldassarra,

RE: Request for Class 4 Area Noise Designation
338 & 338 ½ Cumberland Avenue, Hamilton – ZAC-22-049

UrbanSolutions Planning & Land Development Consultants Inc. (UrbanSolutions) is the authorized planning consultant acting on behalf of Sam's Scrap Metal Ltd. c/o Mr. Frank Bisignani, the registered owner of the lands municipally known as 338 & 338 ½ Cumberland Avenue in the City of Hamilton.

On September 7, 2022, the City issued a comprehensive set of comments on the subject Zoning By-law Amendment application. These included Noise comments prepared by Jennifer Allen stating that the proponent would be required to receive approval from Council to redesignate the subject site to a Class 4 Area – should both unmitigated and predicted noise levels continue to exceed MECP (Ministry of the Environment, Conservation and Parks) requirements for steady and impulsive stationary noise sources. As such, the purpose of this Letter is to request that the subject lands located at 338 & 338 ½ Cumberland Avenue be classified as a Class 4 Noise Area in accordance with the MECP's Environmental Noise Guideline: Stationary and Transportation Noise Sources (NPC-300).

Provincial Noise Guidelines

The Ministry of the Environment, Conservation and Parks (MECP) has established guidelines for addressing noise issues related to land use planning. In 2013, the MECP released "Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning (Publication NPC-300)" which replaced the previous guidelines.

NPC-300 is a Provincial Guideline that provides guidance for the appropriate control of source of noise emissions to the environment. The Class 4 Area classification was introduced by the Ministry of Environment in 2013 and is intended to allow for residential infill and redevelopment in proximity to existing stationary noise sources, while still protecting residences from undue noise. It should be noted that a Class 4 Noise Area is defined as "an area of a specific site that would otherwise be defined as Class 1 or Class 2 and which:

- Is an area intended for development with new noise sensitive land use(s) that are not yet built;
- Is in proximity to existing lawfully established stationary sources; and

- Has formal confirmation from the land use planning authority with the Class 4 Noise Area classification which is determined during the land use planning process."

The Class 4 Noise Area classification allows for higher daytime and nighttime sound level limits than would otherwise be permitted in relation to a noise sensitive land use such as residential dwellings and associated outdoor living areas. The impact of such higher levels are to be mitigated by specific on-site noise control measures, as will be discussed throughout the balance of this Letter.

Noise and Vibration Impact Study – Findings and Conclusions

The enclosed Noise and Vibration Impact Study (NVIS) was prepared by Thornton Tomasetti to assess the noise and vibration impact on the proposed development from surrounding sources. The CP Rail yard abutting the subject lands to the south is the subject stationary noise source and since calculated unmitigated noise levels exceed steady and impulsive noise limits for Class 1 and Class 4 Areas, the Study recommends that a noise barrier be constructed along the southern property line as a mitigation measure. Accordingly, the enclosed Concept Plan includes a 6.5 metre high noise barrier in accordance with RAC/FCM (Railway Association of Canada and Federation of Canadian Municipalities) guidelines, which recommend a barrier height of 5.5 metres above the railway tracks for Principal Main Line tracks. Since the CP Rail tracks located to the south of the subject lands are elevated approximately 1 metre above site grade, this is equivalent to a 6.5 metre high noise barrier.

As outlined in Section 5.4 of the Study, calculated sound levels continue to exceed both steady and impulsive stationary noise limits for a Class 1 Area with the proposed 6.5 metre barrier but meet Class 4 Area limits at all receptors. Based on this analysis, the Study concludes that the subject site meets the applicable NPC-300 criteria for Class 4 Areas and therefore, should be granted a Class 4 designation. Should our request be approved, NPC-300 guidelines would be applied to the sound levels measured on the interior wall of the proposed dwellings, thus allowing the proposed mitigation measures (such as above-average exterior wall assemblies) to be considered when determining the appropriateness of sound levels measured on site.

In keeping with correspondence received from City staff, this Letter will provide additional justification for the enclosed request by answering the following three questions:

1. What mitigation measures are required to meet NPC-300 limits for a Class 1 Area (Urban) designation?
2. Why can the above-noted mitigation measures to meet NPC-300 Class 1 Area designation not be implemented on site?
3. What mitigation measures are required to meet NPC-300 limits for a Class 4 Area (Special Cases) designation?

In response to the above-noted questions, we offer the following:

1. **What mitigation measures are required to meet NPC-300 limits for a Class 1 Area (Urban) designation?**

Within a Class 1 Noise Area, preferred mitigation measures are those applied at/to the stationary noise source (CP Railyard). However, since the CP Railyard is federally regulated, it is not subject to Part B of the NPC-300 guidelines meaning that compliance is not required with respect to demonstrating acceptable sound limits at neighbouring properties. As source mitigation measures are not possible for this project, the NVIS recommends that an 8 metre high noise barrier be constructed along the southern property line as an on-site mitigation measure to meet NPC-300 Class 1 Area noise limits.

2. **Why can the above-noted mitigation measures to meet NPC-300 Class 1 Area designation not be implemented on site?**

The construction of an 8 metre high noise barrier spanning the entirety of the subject site's southern lot line is not technically, economically, or administratively feasible and would not maintain the built form or character of the surrounding area. Further, and as previously noted, source mitigation measures are not possible as the CP Railway tracks are federally regulated and not subject to NPC-300 requirements for neighbouring properties.

Given that Class 1 Area properties require NPC-300 noise level limits to be met at the exterior façade, there are few alternative mitigation measures that can be implemented on-site aside the proposed noise barrier. Even with the construction of the proposed 6.5 metre high noise barrier, the Study notes that Class 1 Area limits for stationary noise sources will not be achieved when measured at the exterior façades.

Alternatively, Council could approve our request to redesignate the subject site to a Class 4 Area, which would allow for minor noise exceedances beyond the standard MOE requirements for stationary sources. This designation has been approved for many residential sites throughout the City, including proposed developments near Pier 6 and 7 due to their proximity to existing industrial uses. As this is a common scenario within the Downtown Secondary Plan Area, Council has passed a general resolution allowing the City's Chief Planner to approve a Class 4 Area designation request through the Site Plan Approval process.

3. **What mitigation measures are required to meet NPC-300 limits for a Class 4 Area (Special Cases) designation?**

There are several mitigation measures that can be implemented on-site to meet NPC-300 requirements for the Class 4 Area designation. As previously noted, the NVIS recommends the construction of a 6.5 metre high noise barrier along the subject site's southern property line as an on-site mitigation measure. While NVIS calculations demonstrate that the full extent of the 6.5 metre barrier is not necessary to achieve Class 4 Area requirements, such is being proposed in accordance with standard RAC/FCM guidelines for Principal Main Line Tracks.

Another mitigation measure includes the requirement for central air conditioning within all dwelling units, as outlined in Section 4.4.2 of the NVIS. This will allow the windows to remain closed, thereby ensuring that the indoor sound levels are within MECP sound level limits.

Additionally, the Study recommends that the south-facing *façades* of all dwelling units are designed to achieve the highest STC rating (STC 46), and that south facing *windows* are designed to achieve the highest STC rating for glazing (STC 42). The Study also recommends that the south, east, and west façades of the proposed dwellings are built to a minimum brick veneer or masonry equivalent in order to achieve the required indoor sound levels.

A combination of these measures can easily be implemented on site to ensure compliance with NPC-300 guideline limits for Class 4 Area designated properties. The construction of the proposed 6.5 metre high noise barrier will provide significant buffering for outdoor living areas, while upgraded façade and glazing materiality would allow each unit to achieve the required indoor noise levels without having to sacrifice access to natural light. It should also be noted that these specific mitigation measures will be evaluated through a more detailed review process at the future Building Permit stage, wherein specific window and material performance details will be confirmed in coordination with the project noise consultant and the City to ensure compliance with both municipal and MECP standards.

In addition to the above-noted structural mitigation measures, the following noise warning clauses can also be incorporated into future Purchase/Sale and Rental/Lease Agreements (as outlined in Section 4.4.4 of the NVIS):

> **Type B:** "Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing rail traffic may in occasion interfere with some activities of the dwelling occupants as the sound levels exceed the sound limits of the Municipality and the Ministry of the Environment, Conservation and Parks."
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> **Type D:** "This dwelling unit has been supplied with a central air conditioning system which will allow windows to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment, Conservation and Parks."

As the subject lands are located outside of the Downtown Secondary Plan area, we are looking for direction from Planning Committee to approve our Class 4 Area designation request, as such will recognize the existing noise conditions on-site resulting from the CP Rail tracks to the south.

Should you have any questions or require anything further, please do not hesitate to contact the undersigned.

Kind Regards,
UrbanSolutions

Matt Johnston, MCIP, RPP
Principal

Matthew LeBlanc, MPL, BA (Hons)
Planner

cc: Sam's Scrap Metal Ltd. c/o Mr. Frank Bisignani