

Region of Waterloo
Transportation Services
Transportation

To: Regional Council
Meeting Date: June 19, 2024
Report Title: Highland Road Live Noise Testing Inquiry

1. Recommendation

For Information

2. Purpose / Issue:

At the June 4th 2024, Planning and Works Committee meeting Council directed staff to provide information about completing in-field noise measurements on a recently completed road improvement project located on Highland Road in Kitchener. Staff were asked to investigate cost and feasibility, including looking into borrowing portable noise measuring equipment from Waterloo Regional Airport.

3. Strategic Plan:

Homes for All, Climate Aligned Growth, Equitable Services and Opportunities, Resilient and Future Ready Organization Regular review of the Region's Noise Policy supports each one of the 4 strategic objectives through staff's assessment of current industry best practices, policy impacts related to growth and being responsive to Regional Council and the community's policy-related questions.

4. Report Highlights:

- Regional Noise Policy was reviewed and adopted by Regional Council in April of 2023 with no substantive changes recommended.
- For new road construction projects and for road widening projects such as Highland Road, Part B of the Region's Noise Policy is applied. This part of the policy is enacted when the Region is the proponent of the planned road improvement works. The approved noise policy under Part B considers modelled traffic noise levels prior to construction and ten years after construction. These noise levels are calculated at the residents' outdoor living area (3 metres from the home's foundation and 1.5 metres above ground level).
- Use of modelling software such as Stamson is endorsed by the Ministry of the

Environment as best practice for predicting road noise. This methodology allows for a consistent, predictable and fair methodology for determining road noise at the outdoor living area.

The Stamson software is the accepted model in Ontario for preparing noise assessments, both for development applications and for municipal road projects. The theory and methodology is based on the ORNAMENT method (Ontario Road Noise Analysis Method for Environment and Transportation). This program, which considers current and future traffic data, vehicle types, vehicle speed, terrain has been validated historically with field data. Additionally, this method allows for the prediction of future noise levels based on traffic count increases over time as well as changes to any road geometry. The Highland corridor would be a 'typical' urban environment that should be assessed using Stamson.

- The consultant's updated noise assessment indicates that calculated future noise levels 10 years after construction will not reach warrant levels for mitigation.
- Staff have determined that borrowing Waterloo Regional Airport's one portable noise monitor is not feasible. This single monitor was designed for the aviation industry, is currently being calibrated and will not suffice for the Highland Road needs as 4-6 monitors would be required for the proposed on-site review.
- Staff engaged the local consultant responsible for the current assessment for a cost estimate to monitor Highland Road traffic noise. This would include 4-6 noise monitors to adequately cover the project area in question at a cost of \$60,000 for 1 week of data collection and analysis.
- Both internal staff and consultant staff recommend that this approach not be implemented as it cannot accurately measure road noise under these conditions with the presence of other adjacent intermittent property noise significantly influencing the results.

5. Background:

The Region of Waterloo completed a Municipal Class Environmental Assessment (EA) in 2018 for Highland Road West (Regional Road 6), from Fischer-Hallman Road to Ira Needles Boulevard, in the City of Kitchener. As part of the EA, a Noise Assessment was undertaken to assess traffic noise levels for existing and future conditions of Highland Road West and recommend any mitigation measures required to meet Region of Waterloo Noise Policy Implementation Guidelines. The 2018 Noise Assessment concluded that no noise mitigation was required along Highland Road West from Fischer Hallman Road to Ira Needles Boulevard.

On February 7, 2018 Council approved the Highland Road West EA under Report TES-DCS-18-02 and directed staff to undertake a review of the need for noise mitigation, in accordance with the Regional Implementation Guideline for Noise Policies, one year

after completion of construction of road improvements on Highland Road from Fischer-Hallman Road to Needles Boulevard.

Construction of this section of Highland Road West commenced in 2020 and was completed in 2023.

In 2021, at the request of local residents, Region staff provided an update to portions of the EA Noise Assessment, focusing on additional property locations using more recent traffic volume forecasts for the existing condition and updated future volume forecasts for future conditions.

At the November 9, 2021 and May 10, 2022 Planning and Works Committee meetings, residents of the Highland Road area attended as delegates to express their concerns regarding traffic noise on Highland Road and to present questions about the Noise Assessment that was completed during the EA, the updates they had received, and about the Regional Noise Policy itself. At the May 10, 2022 meeting, the Planning and Works Committee directed staff to complete an updated Noise Assessment for Highland Road West, to meet with the residents and return to Committee with the results of the updated study.

At the June 4, 2024 Planning and Works Committee meeting, Report EES-DCS-24-004 summarized an updated Noise Assessment indicating that, in accordance with the Regional Noise Policy, noise mitigation is not required along Highland Road West.

6. Communication and Engagement with Area Municipalities and the Public

Area Municipalities: N/A

Public:

Communications have been ongoing with local residents regarding noise concerns on Highland Road since the completion of the EA process.

In 2021, at the request of local residents, Region staff provided an update to portions of the EA Noise Assessment, focusing on additional property locations using more recent traffic volume forecasts for the existing condition and updated future volume forecasts for future conditions.

Region staff met with residents on May 30, 2022 to address questions raised at the May 10, 2022 Planning and Works Committee meeting about the Noise Assessment that was completed during the EA, the updates they had received, and about the Regional Noise Policy itself.

On April 29, 2024, letters were sent to all residents within the affected area advising of the updated Noise Assessment with an offer to meet with anyone who would like to discuss the study. The letter also advised that staff would be taking a report to the

Planning & Works Committee on June 4, 2024 and that residents may register as a delegate if they wish to speak on the matter.

A meeting with one of the residents took place on May 31, 2024 to review the updated Noise Assessment.

Two residents appeared at the June 4, 2024 Planning & Works meeting as delegations.

7. Financial Implications:

The approved 2024 Transportation Capital Plan does not currently include a provision of \$60,000 for this work.

8. Conclusion / Next Steps:

The Region's Noise Policy has been reviewed twice in the past 4 years. These reviews have included: noise threshold levels, noise calculation methodology, comparison to other similar municipalities' practices, review of provincial best practices and review of present and future planning strategies.

Staff believes that the current Noise Policy continues to represent best practice for noise mitigation in an urban environment. The current Noise Policy also strikes a balance between the need to mitigate traffic-related noise and the need for fiscal responsibility and avoidance of evolving into a "walled community".

As research continues to progress related to noise impacts in urban environments, staff plan to continue its evaluation of those impacts to the community. Monitoring long term planning strategies geared toward reducing carbon emissions by 80% by 2050 and reducing road traffic will help greatly to inform both the next steps and the impacts as the community continues to grow.

Staff will also continue to monitor any changes and/or updates from the Ministry of Environment Conservation and Parks regarding its guidelines and best practices for managing traffic noise in urban environments. When changes to the MOECP guidelines do occur, staff will conduct a review of the Region's Noise Policy in light of those MOECP changes to ensure the Region's Noise Policy continues to align with best practices.

9. Attachments: N/A

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