



City of Richmond

Report to Committee

To: Public Works and Transportation Committee **Date:** May 19, 2023
From: Lloyd Bie, P.Eng.
 Director, Transportation **File:** 10-6450-09-01/2023-Vol 01
Re: **Kittiwake Drive - Traffic Calming Pilot Project Update**

Staff Recommendation

That Option 3 to implement a pilot project for the temporary installation of two asphalt speed cushions on Kittiwake Drive for a trial period of six months, as described in the staff report titled "Kittiwake Drive - Traffic Calming Pilot Project Update" dated May 19, 2023 from the Director, Transportation, be endorsed.

Lloyd Bie, P.Eng.
 Director, Transportation
 (604-276-4131)

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF ACTING GENERAL MANAGER
Engineering	<input checked="" type="checkbox"/>	
Fire Rescue	<input checked="" type="checkbox"/>	
RCMP	<input checked="" type="checkbox"/>	
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO

Staff Report

Origin

At its regular meeting of September 26, 2022, Council endorsed the following:

That Option 3 to implement a pilot project for the temporary installation of two speed cushions on Kittiwake Drive for a trial period of six months, as described in the staff report titled “Kittiwake Drive – Traffic Calming Update”, dated September 26, 2022, from the Director, Transportation, be endorsed.

This report provides the results of the temporary traffic calming installation.

This report supports Council’s Strategic Plan 2022-2026 Focus Area #3 A Safe and Prepared Community:

Community safety and preparedness through effective planning, strategic partnerships and proactive programs.

This report supports Council’s Strategic Plan 2022-2026 Focus Area #6 A Vibrant, Resilient and Active Community:

Vibrant, resilient and active communities supported by a wide variety of opportunities to get involved, build relationships and access resources.

Analysis

Background of Traffic Calming Request

Kittiwake Drive is a local street within a neighbourhood subdivision located south of Steveston Highway that connects No. 2 Road to Kingfisher Drive. There is a 50 km/h speed limit and parking is permitted on both sides of the street. Westwind Elementary School is located west of Kittiwake Drive across Kingfisher Drive.

In June 2021, staff received a petition from residents of Kittiwake Drive requesting speed cushions to address concerns of speeding motorists. Further to the request, staff conducted a traffic study and consulted with residents to develop traffic calming options. As a result of this process, temporary speed cushions were recommended at two locations on Kittiwake Drive, one at Pintail Drive and the other at Pelican Court/Plover Drive (Figure 1).

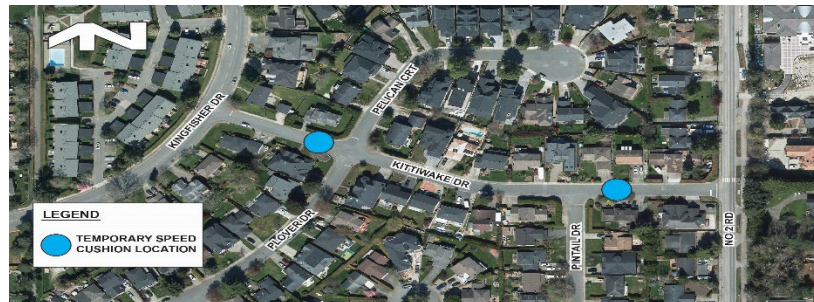


Figure 1: Kittiwake Drive Temporary Speed Cushion Locations

Speed cushions include cut-outs for passage by emergency vehicles. The raised portion of the device reduces passenger car speeds while going over the hump, while the longitudinal gaps allow fire trucks to avoid the raised cushion.

As these speed cushions were the first to be introduced on a local roadway in Richmond, temporary pre-fabricated speed cushions were installed on a trial basis for six months as approved by Council. Installation occurred on October 27, 2022 (Figure 2) and the six month pilot project is now complete.



Figure 2: Kittiwake Drive Temporary Speed Cushion

Outcome of Traffic Calming Trial

During the trial period, staff conducted a speed study to assess the effectiveness of this measure and obtained comments from residents.

- Traffic Speed Study

Before Speed Cushion Installation: A traffic speed survey was conducted prior to the installation of the speed cushions confirming a speeding issue on Kittiwake Drive. The 85th percentile speed for westbound motorists was 67 km/h while that of eastbound motorists was 55 km/h. The 85th percentile speed indicates the highest speed that 85 per cent of the vehicles are travelling at or below. This measurement is an industry standard for determining speed limits and assessing the level of action required to address speeding issues.

After Speed Cushion Installation: Counts taken during the trial period indicate an 85th percentile speed for westbound motorists as 38 km/h and that of eastbound motorists of 37 km/h. The results of the traffic speed study confirm the speed cushions have been effective at slowing drivers down on Kittiwake Drive. Vehicle speeds have reduced by 29 km/h in the westbound direction and 18 km/h in the eastbound direction.

- Resident Feedback

Within the six month trial, feedback was received from three out of the 21 residents on Kittiwake Drive. One correspondence was related to the location of the speed cushions and a preference for the eastern location to be installed closer to No. 2 Road. Two residents near Pintail Drive indicated they were not in support of the speed cushions due to perceived vibration and noise when traversed by larger vehicles.

Next Steps

The results of the traffic calming pilot project on Kittiwake Drive confirmed vehicles speed reduction through the implementation of temporary speed cushions. However, concerns have been expressed by adjacent residents regarding vibration and noise.

Based on these combined factors, staff have identified three possible traffic calming options for consideration.

Option 1: Status Quo (Not Recommended)

With the majority of the residents on Kittiwake Drive requesting traffic calming measures, as well as the results of the before and after vehicle speeds recorded on Kittiwake Drive, staff do not recommend a do nothing option.

Option 2: Traffic Circles (Not Recommended)

This option would install traffic circles on Kittiwake Drive, one at Pintail Drive and the other at Pelican Court/Plover Drive. While traffic circles are a proven device in reducing vehicle speeds, it was not supported by the majority of the residents along Kittiwake Drive during past consultation. Therefore, staff do not recommend this option at this time.

Option 3: Trial Installation of Speed Cushions (Recommended)

Staff recommend a trial installation of asphalt speed cushions that will be constructed with a lower profile than the temporary measures to address the noise and vibration concerns. The prefabricated temporary speed cushions have a height of 9 cm and the proposed profile for the asphalt speed cushions will be similar to the other asphalt speed cushions installed in the Hamilton area. The Hamilton speed cushions have been re-profiled with a reduced height of 7 cm and have been successful at addressing vibration and noise emission yet still help to discourage speeding.

Staff will monitor the vehicle speeds in response to the installation of the lower height asphalt speed cushions and will consult with residents through ongoing communication during the six month trial period. Staff will bring forward further recommendations regarding traffic calming measures on Kittiwake Drive for Council consideration after completion of the trial period.

Construction of the asphalt speed cushions are planned for summer 2023. Installation is anticipated to be substantially completed before the start of school in September.

To discourage speeding, the temporary devices will remain until construction of the asphalt version commences. Once replaced, the temporary speed cushions will be stored and staff will review opportunities to reuse this application elsewhere in the City.

Financial Impact

The cost to implement the permanent speed cushions is \$25,000, which can be funded by the approved 2023 Traffic Calming Program.

Conclusion

A pilot project to install two speed cushions on Kittiwake Drive at Pintail Drive and Pelican Court/Plover Drive, for a period six months has completed. Staff assessed the effectiveness of the traffic calming device in reducing vehicle speeds.

The result of a post installation speed study indicates a decrease in operating speed as a result of the safety intervention of 18km/h eastbound and 29 km/h westbound. Staff recommend reduced height installing asphalt speed cushions on Kittiwake Drive on a trial basis to discourage speeding. Staff will monitor the improvements to traffic safety and receive feedback regarding neighbourhood impacts during the pilot.

Upon completion a six month trial, staff will report back to Council.

Sonali Hingorani

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