



Victoria File: 26250-20/9835  
SITE ID: 9835

December 17, 2019

[Via email only: bobphilipchalk@icloud.com](mailto:bobphilipchalk@icloud.com)

Harbour City Ventures Corp.  
2189 Keating Cross Road  
Victoria, BC V8M 2A5

**Re: Water Use Determination  
2526 Bevan Avenue, Sidney BC  
MOE Site ID 9835**

The Ministry of Environment and Climate Change Strategy (ENV) has reviewed the following technical reports prepared by Islander Engineering Ltd. in support of your Contaminated Sites Services application dated October 16, 2019 for a Director's decision of no drinking water use on 2526 Bevan Avenue, Sidney, BC and a portion of Bevan Avenue and First Street roadway, Sidney, BC (the Site):

- *Water Use Determination, 2526 Bevan Avenue, Sidney BC, MOE Site ID 9835* dated October 17, 2019.
- *ADDENDUM Water Use Determination, 2526 Bevan Avenue, Sidney BC, MOE Site ID 9835* dated October 17, 2019.

The legal description of the Site to which this water use decision applies is as follows:

Civic Address	PID	Legal Description	Parcel Owner
2526 Bevan Avenue	004-451-121	Lot A Section 10 Block 14 Range 4E North Saanich District Plan VIP 381	Harbour City Ventures
Sidney roadways adjacent to 2526 Bevan Avenue (Bevan Avenue and First Street)	N/A	N/A – metes and bounds described below	Town of Sidney

The metes and bounds description for the portion of Bevan Avenue and First Street roadway, Sidney BC portion is as follows:

Starting at the northeast corner of Lot A, Block 14, Section 10, Range 4 East, North Saanich District, Plan 381;

- Thence southerly along of said Lot A on a grid bearing of 180°00'00.0" a distance of 9.08 metres to the first point of commencement.
- Thence on a grid bearing of 124°04'22.8" a distance of 14.47 metres;
- Thence on a grid bearing of 173°23'44.0" a distance of 5.87 metres;
- Thence on a grid bearing of 181°33'38.4" a distance of 5.01 metres;
- Thence on a grid bearing of 166°38'04.9" a distance of 6.03 metres;
- Thence on a grid bearing of 154°20'56.1" a distance of 7.54 metres;
- Thence on a grid bearing of 225°26'37.9" a distance of 3.05 metres;
- Thence on a grid bearing of 258°16'30.5" a distance of 7.17 metres;
- Thence on a grid bearing of 250°12'32.9" a distance of 11.23 metres;
- Thence on a grid bearing of 272°19'39.9" a distance of 11.53 metres;
- Thence on a grid bearing of 335°25'08.0" a distance of 16.55 metres;
- Thence on a grid bearing of 030°31'40.4" a distance of 2.63 metres;
- Thence on a grid bearing of 090°18'45.7" following in the southern boundary of said Lot A a distance of 19.55 metres;
- Thence on a grid bearing of 000°15'27.3" following in the eastern boundary of said Lot A a distance of 21.33 metres more or less to the point of commencement and containing by admeasurement 742.04 m<sup>2</sup> more or less;

The Site is depicted in attached Figure 1 for reference.

Section 12(5) of the Contaminated Sites Regulation (CSR) specifies the water uses that may apply at sites in BC, including aquatic life, drinking, irrigation and livestock watering water uses, as well as the factors a Director must consider in determining current and reasonable potential future water uses at a site. Protocol 21 provides criteria for determining current and reasonable potential future water uses at specific sites.

Where drinking water use has been determined to apply at a site under Protocol 21 and site circumstances indicate that it is unlikely or unreasonable to anticipate that water would be used for drinking, a site-specific water use decision may be sought from the Director. Protocol 21, Appendix 1 "*Director's Decision Framework for Site-Specific Decisions of Water Use*" outlines a multiple-lines-of-evidence approach for seeking a Director's decision of no drinking water use at a specific site.

The letter request provided by Islander Engineering Ltd. provides the following rationale to support their assertion that drinking water use should not apply to the Site:

- *A search of water wells on the BC Water Resource Atlas revealed two water wells within 500m of the Site. .... As the wells identified are approximately 350m upgradient from the Site, these wells are considered outside the outer extent of the contamination source.... Additionally, the water is hard providing evidence of DW unsuitability.*
- *The bulk hydraulic conductivity in the overburden and for bedrock were calculated at  $2.79 \times 10^{-7}$  m/sec and  $1.03 \times 10^{-7}$  m/sec respectively. Future drinking water does not apply to saturated unconsolidated geological units with hydraulic conductivities  $< 1 \times 10^{-6}$ .*
- *Although the bedrock yield was 1.3L/min, the groundwater is unsuitable for DW purposes due to elevated parameters including Sodium, Chloride, Uranium, Cobalt, Lithium, Sulphate.*
- *Based on common indicator analysis for saltwater intrusion, it appears that the elevated parameters may be partly due to saltwater intrusion.*
- *It is expected that due to the location of the Site immediately beside a marine water body, any groundwater pumping of the bedrock water or any overburden groundwater would result in marine water intrusion in the local groundwater. This would preclude its potential use as a drinking water source.*

On the basis of the arguments and supporting information provided by Islander Engineering Ltd., I concur with the conclusion that potential future use of groundwater for drinking water is unlikely on the Site for the following reasons:

- There is no current use of groundwater for drinking water use within 500 m of the Site.
- The Site is located approximately 150 metres of the Strait of Georgia. The underlying bedrock aquifer (North-Central Saanich Aquifer) shows poor natural water quality due to sea water intrusion. Evidence is based on sodium concentrations above the drinking water standard and chloride concentrations near the drinking water standard. Further evidence is based on multiple indicators of likely sea water intrusion (elevated TDS, Na/Cl ratio, Cl/Br ratio, Cl/Mg ratio and chloride versus conductivity) in the bedrock aquifer.
- The native clay unit has a bulk hydraulic conductivity less than  $1 \times 10^{-6}$  m/s and does not qualify as an aquifer under Protocol 21.
- The fill unit has a saturated thickness less than 2 m and does not qualify as an aquifer under Protocol 21.
- A municipal water supply is in place.
- The Site is not located in an area with known limited water resources.

Therefore, I hereby determine that drinking water use does not apply at the Site. I also confirm that aquatic life water use does apply.

This decision is based on the most recent information available to the ministry regarding the above referenced Site. The ministry, however, makes no representation or warranty as to the accuracy or completeness of this information.

Please contact Annette Mortensen at (778) 698-4869 if you require clarification regarding this letter.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Brooke".

J. Brooke  
For Director, *Environmental Management Act*

Attachment: Figure 1

cc: Jenn Clary, Town of Sidney, [jclary@sidney.ca](mailto:jclary@sidney.ca)  
Buce DeMaere, Town of Sidney, [bdemaere@sidney.ca](mailto:bdemaere@sidney.ca)  
Rahim Gaidhar, Islander Engineering Ltd, [rgaidhar@islanderengineering.com](mailto:rgaidhar@islanderengineering.com)  
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Figure 1. Location of the Site, 2526 Bevan Avenue, Sidney BC and Town of Sidney Roadway.