



Sidney
by the sea

Town Talk

Beacon Wharf Special Edition

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Beacon Wharf has been a prominent feature of Sidney's waterfront for over 100 years. While the waterfront has been gradually improved over the years – transitioning from its former industrial uses to the inviting community space it is today – the wharf itself has remained largely unchanged since the last major renovation around 60 years ago.

Beacon Wharf was built and originally owned by the federal government. The Town of Sidney took ownership in 2006, as we had an interest in developing and enhancing our waterfront. The wharf came “as is”; we knew that its lifespan was limited, and that we would have to plan for its eventual replacement, at our own expense.

This special edition of Town Talk is dedicated entirely to the Beacon Wharf Replacement project. We've done some work over the last few years on analyzing replacement options, and Council appointed a Select Committee to narrow down our options before we presented them to the public. This special edition provides important background on the project, and identifies ways to provide your input to Council.

A brief survey is included at the end of this newsletter. Please take the time to review the materials, then please send us your thoughts.

Why are we looking at replacing Beacon Wharf?

The wharf is over 100 years old, and needs a major refurbishment within the next seven to eight years. Since the Town took it over in 2006, there have been two condition assessments, and two rounds of repairs. It is at the point where a major investment will be required to extend its life beyond 2028.

The significant work necessary to make the wharf viable for the longer term would require removal of the existing structures (the fish market and the restaurant). Any structure on a rebuilt wharf would have to be constructed to current building code regulations. Consequently, a major investment from the Town would be required just to maintain the status quo. As discussed further on, rebuilding is not considered a viable option because of the need to incorporate the effects of sea level rise. If the Town were to undertake a major investment in the wharf, it would be more justifiable if we could increase the amount of public space available, as well as the potential for short term (visitor) moorage and access to the water.

An engineering condition assessment of the wharf in 2010 recommended approximately \$300,000 of repairs, which were

completed in 2012. These repairs were expected to make the wharf safe for an additional “five to eight years.” After that round of repairs, vehicle access was prohibited from the wharf, and large vessels have not been allowed to dock because such uses are no longer safe.

A second condition assessment, undertaken in 2018, resulted in an additional round of repairs to the wharf; these more recent repairs are expected to further extend the life of most elements of the wharf for what is estimated to be seven to eight more years. These condition assessments have always been seen as an interim measure, allowing the Town to keep the existing structure operational until a longer-term option for the waterfront is selected.

If the wharf were maintained for a few more years, a new condition assessment would be required, and this would result in yet another round of repairs. It is estimated that only one more set of smaller repairs would be possible, before a much more significant rebuild is required. Each of these “small” repairs has cost \$100,000 to \$300,000; a more significant rehabilitation would likely be in the millions.

THE PROCESS TO DATE

The Town commissioned an engineering study of Beacon Wharf in 2019 to look at various options for replacement of the wharf, potentially incorporating some of the ideas identified in the Sidney Downtown Waterfront Vision. The studies, completed by SNC Lavalin (SNCL), an international engineering consulting firm, incorporated anticipated sea level rise and increased wave action over the next 50 years (factors that were not considered in the Waterfront Vision), and determined that the required flood construction elevation of a future wharf would be much higher than the existing wharf. A report was presented to Council on these results in January 2020.

To build on the report findings, and further narrow down the options to be considered, Council established the Beacon Wharf Select Committee. The Committee was comprised of three members of Council – Councillors Duncan, Rintoul and Wainwright – and two community volunteers who are professional engineers with knowledge and experience in coastal engineering: Rob Milne (Committee Chair) and Scott Dallimore. In addition, the Committee was supported by four members of senior Town staff.

The Committee was tasked with reviewing options for replacing – or removing and not replacing – Beacon Wharf, including replacement with a rubble mounded structure, a piled structure or a floating structure. In addition, the Committee was to review many of the peripheral options associated with wharf replacement, including the presence of buildings, vehicle and boat access, and determining any additional information that may be required in order to complete the analysis, such as differences in environmental impacts between the various options. The Committee was also tasked with developing a plan for community engagement on a short-list of options. The Committee has now completed its analysis, and we are asking the community to review and comment on the options.

Analyzing the replacement options

Studies by SNC Lavalin narrowed down the viable options for replacement, and served as the starting point for additional analysis by the Committee. The Committee analyzed each of the remaining options, based on factors including cost, environmental impacts, and visual impacts. The options rejected by the Committee are summarized on pages 2 & 3, followed by the two options recommended for community consultation on pages 4 & 5.

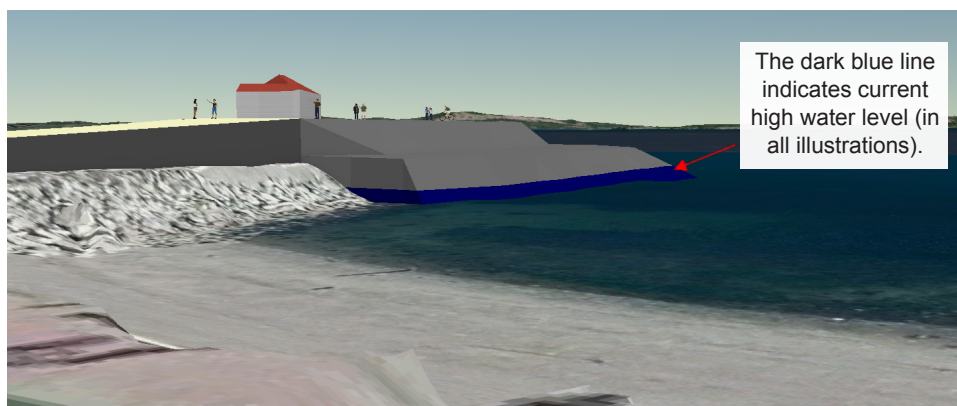
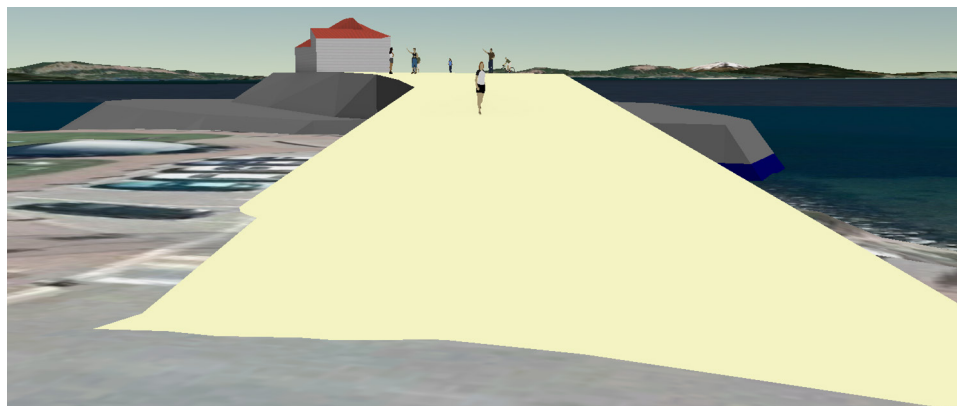
Replacement Options Rejected by Committee

STEPPED BERM - "OPTION 4" FROM SNCL REPORT

Option 4 - Reclamation @ +9.0m CD and a berm revetment @ +6.0m CD.



"Berm" revetment includes a horizontal bench and more armour rock. Preferable to traditional revetment as it dissipates more wave energy, facilitating lower crest levels. Cheaper to construct because, while armour is thicker, it can be steeper and uses smaller rock with a wider grading, allowing it to be dumped rather than placed. There is potential for phased construction.



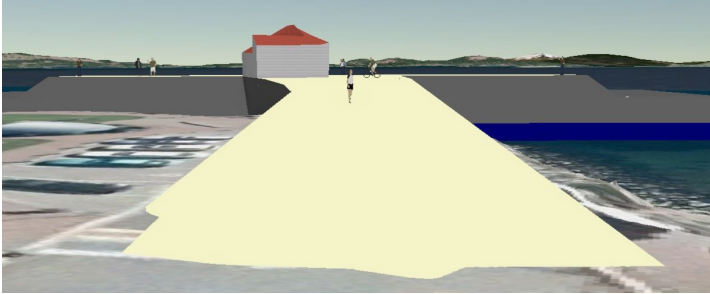
The dark blue line indicates current high water level (in all illustrations).

This option was rejected due to its high visual impact. Because it had to be built to a high elevation due to sea level rise and flood construction level guidelines to accommodate a building, it would have to be 3.5 metres higher than the existing wharf, and 2.5 metres higher than the end of Beacon Avenue. This would result in connectivity challenges to Beacon Park and the adjacent walkways, and would preclude temporary moorage. The significant impact on views is illustrated above.

Replacement Options Rejected by Committee

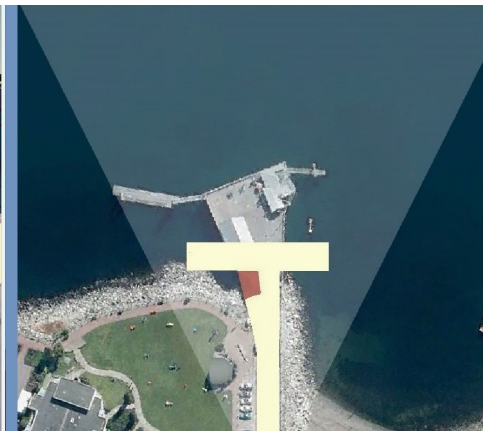
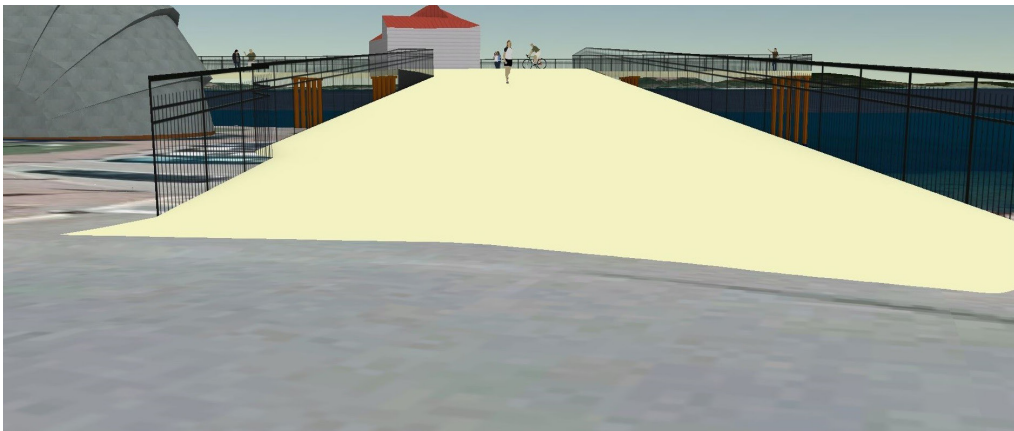
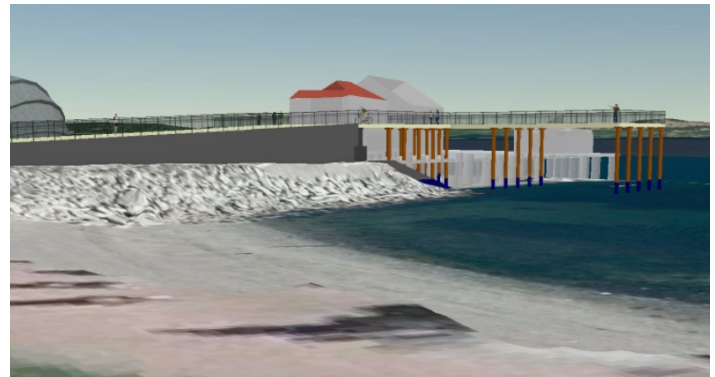
STEPPED BERM - "OPTION 6" FROM SNCL REPORT

A second stepped berm option, with a modified footprint, was also rejected for similar reasons as "Option 4" (see page 2).



PILED WHARF - "OPTION 5A" FROM SNCL REPORT

A piled structure would be similar to the existing wharf; however, SNCL's analysis determined that an alternate configuration, as well as a higher deck elevation, would be required to prevent future flooding. SNCL's concept design of this piled structure is three metres higher than the existing wharf. This option is more economical than a rubble mounded structure, with a similar life cycle cost to the floating option, and would allow the existing wharf to be maintained for as long as possible before replacing (though likely adding to the cost in future).



The Committee's most significant concerns were around the impact on views of not only the structure itself, but the connecting infrastructure that would be required to provide access from the end of Beacon Avenue to the wharf.

For an investment this significant, we have to look at a horizon of at least 50 years. A wharf can be built at the existing height, but not if it is meant to support year-round structures (only seasonal ones would be possible at the existing height, due to winter storm wave risks to life and property). And if there are no buildings on it, the Select Committee needed to explicitly consider whether a wharf should be built at all. There is already a waterfront structure without buildings (Bevan Pier) 150 metres to the south.

While a piled wharf could be constructed at existing elevations for the short term, it is not feasible for a longer term. The option to build a lower wharf now, and raise it in the future, was considered by the Select Committee, and rejected due to the large technical and economic investments that would be required to lift and replace any buildings and utilities for each rise in height, much greater investments than would be required to build the wharf at full height from the start.

Options Recommended by Committee

With the piled and rubble mound options rejected, the only options remaining were a floating structure, or not replacing the wharf at all at the end of its life. These are discussed below and on page 5.

REPLACE WITH A FLOATING WHARF UNDER A PROPOSED PUBLIC PRIVATE PARTNERSHIP (P3)

The possibility of a floating wharf replacement was also examined by SNCL, and deemed to be viable. A floating wharf would rise and fall with the tide, and be minimally impacted by sea level rise. It can also accommodate buildings, with a lower overall height.

During the course of the Committee's work, the Town was approached by a local company with successful past history of working with the Town on major projects, Sidney Waterfront Partnership (SWP). Council decided to invite a proposal from SWP, as they own a pontoon which, with the proper refurbishment, could serve as a floating wharf. The proposal from SWP was deemed worthy of being advanced as one of the options. The decision-making process of the Committee progressed as follows: ruled out fixed structures; confirmed viability of a floating structure; consider P3 option.

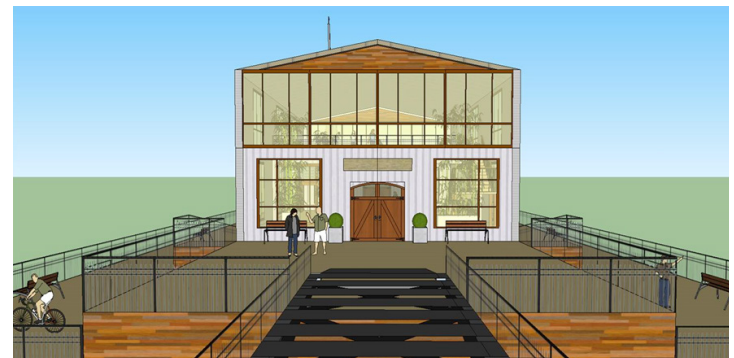
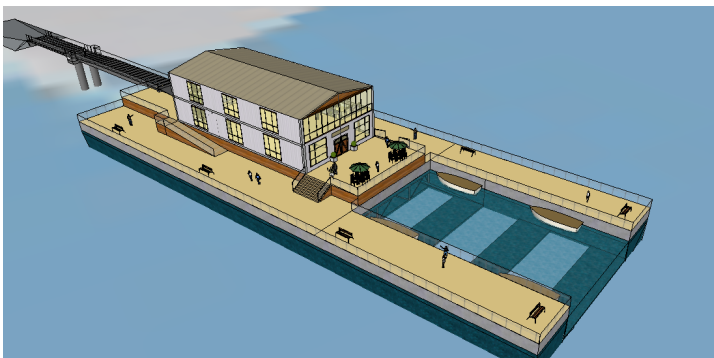
As part of their study, SNCL examined the pontoon being offered by SWP, and did not identify any issues with it. If the Town proceeds with this option, further investigation may be undertaken, including an out of water assessment. It is also important to note that it is the very large mass and strength of the structure that makes it viable as an option, and SNCL incorporated a thorough analysis of storm events as part of their assessment. Building something new of similar mass and strength that could handle a permanent structure would be far more expensive.

To get a full understanding of the details of the SWP proposal, we encourage you to view the presentation by SWP at the July 12th Committee of the Whole meeting. The recording may be accessed through the Project page on the Town's website: www.sidney.ca/wharf.

The key highlights of the proposal are as follows:

- SWP would contribute a used pontoon that would have to be refurbished and modified for use as a floating wharf.
- SWP would build a 2-level structure, consisting of a restaurant and two commercial spaces (one of which would be given to the Town) on the main floor, and 8 hotel units on the upper floor.
- The floating wharf surface outside the building footprint would be for public use, greatly enhancing the public space available above (and closer to) the water.
- There would be opportunities for visitor moorage and commercial boating services.
- In addition to paying 100% of the costs associated with the commercial building, SWP would contribute approximately 20% to the overall project cost outside the building's footprint.
- There would be a 50-year lease with SWP, and the existing lease for the Seaport lands would also be extended by 16 years to match the 50-year wharf lease.

Please note that the pictures below are only to illustrate the concept. This is not a final design.



Options Recommended by Committee

REPLACE WITH A FLOATING WHARF UNDER THE PROPOSED PUBLIC PRIVATE PARTNERSHIP (P3) (CONTINUED)

Key benefits of the floating wharf P3 option:

- A financially viable option that maintains a wharf
- Reduces cost and risk to the Town
- Achieves goal of commercial activity on the wharf
- Increase in commercial property tax revenue to help offset costs
- Allows for moorage and commercial boating operations
- Motivated project manager working on Town's behalf
- Town-owned space on ground floor (potentially for public washroom)
- Increase of public space on the wharf (more than doubling the space currently available)
- Minimal impact on views.

There are other options for a floating structure aside from the one proposed here; however, this P3 floating wharf option may not be available later, certainly not at this reduced cost. Estimates for building a floating wharf from scratch indicate a much higher overall cost. Furthermore, as previously noted, building a wharf without buildings on it greatly reduces its value, and it is unlikely that a Request for Proposals for a stand-alone commercial component would result in any submissions.

MAINTAIN THE WHARF UNTIL THE END OF ITS LIFE, AND THEN DO NOT REPLACE IT

The second option considered to be viable is to remove the existing wharf and not replace it. Waterfront infrastructure is extremely expensive to build and maintain, and the Town already has a significant length of waterfront walkway, as well as a second pier structure roughly 155 metres from the wharf. Removal of the wharf, which would only occur once the wharf has reached its end of life (estimated to be within the next 7-8 years), could be accompanied by the creation of better linkages to the ocean. An innovative design could turn the land leading up to the existing wharf into a community-centered space. This design would be prepared closer to the removal date of the wharf, incorporating the best available information on the impacts of sea level rise, and would be accompanied by community consultation. Sea level rise considerations that require the new wharf to be built at a much higher elevation than the surrounding area will also impact the future uses, as well as the required repairs, maintenance and refurbishments of the rest of the waterfront.

Examples of what a reimagined waterfront may look like are shown below:

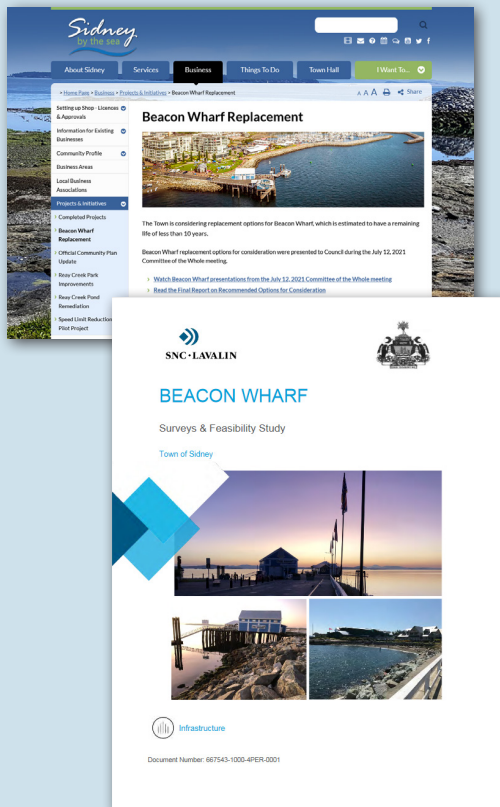


WHERE CAN I FIND MORE INFORMATION ON THE PROJECT?

There is a Project page on the Town's website that has a lot of great background information. For those wishing a more complete understanding of the issues, options and the work done by the Committee, please refer to this page. Highly recommended content would be the recordings of the presentations to Council by the Select Committee, as well as Sidney Waterfront Partnership.

The project page also includes the detailed studies completed by SNCL, the final report to Council by the Committee, and several reports to and by the Committee to better outline the process followed and wide range of issues considered.

Access the project page at: www.sidney.ca/wharf



Project Costs

To compare the cost of the various options being considered by the Committee, SNCL was asked to estimate the lifecycle costs of the various options. Lifecycle cost means the cost of construction, plus the cost of maintenance over the 50-year lifespan of the wharf. The following table summarizes those costs, according to total cost in today's dollars.

Options	50-Year Costs (Present Value)
Fixed Wharf (#4)	\$17,397,725
Fixed Wharf (#5A)	\$10,932,278
Fixed Wharf (#6)	\$17,348,381
Floating	\$10,612,867

Please note that the numbers above do not include the cost of any buildings, nor the road modifications required for access to the wharf. Also of note, the Floating option listed above was the estimate **before** the P3 proposal was received from SWP. The P3 proposal is expected to reduce the above estimated cost for the floating option.

The estimated cost of removing the wharf is \$713,000, in today's dollars.

Regardless of the option chosen, the costs of building and maintaining a waterfront structure are very high. The Town does not have funds set aside for replacing the wharf. Our share of the costs will have to be paid through borrowing. For an anticipated borrowing amount of \$5M, the estimated cost per household would be within the range of \$30-\$38 per year over a 25-year span. This cost would be partially offset through increased commercial property tax revenues generated from the commercial operations on the wharf.

While the Town would certainly pursue grant opportunities, there is no guarantee of the right grant program coming along at the right time, nor of our success in obtaining a grant. All grant programs are extremely competitive, and receive far more funding requests than the amount of available funding. As a worst case, we have to be prepared to pay for the Town portion of costs through borrowing.

Please note that the Town will not undertake long-term borrowing without community approval. While there is a question related to borrowing in the attached survey, this is strictly informal. An official process would follow if we had to borrow.





Public Engagement Opportunities

We are hosting two public engagement sessions at Beacon Park in September. This will be an opportunity to find out more about the various options and to meet with and ask questions of Sidney Council, committee members, and Town staff.

Tuesday, September 21, 2021*
Beacon Park
3:00 pm - 5:30 pm

Wednesday, September 29, 2021*
Beacon Park
11:00 am - 2:00 pm

**Engagement schedule is dependent on public health guidelines and the weather. If public health guidelines or the weather make it impossible to hold these sessions, we will have to consider other options.*

Next Steps

The final recommendations for the Beacon Wharf replacement project are now ready for public engagement. The community is being asked to review the information – including the project page on the Town’s website – consider attending an engagement opportunity, and send your comments to Council.

A short survey is included on the last page of this newsletter. Please take time to review the resource materials, then fill out the survey and return it to the Town Hall. This can be done using the attached form, or electronically through the Project page on our website. We would appreciate responses through our website, as that would help in compiling the results more quickly and efficiently. Of course, additional written comments may also be sent to Council’s attention, either by mail or dropped off at Sidney Town Hall (2440 Sidney Ave, Sidney BC, V8L 1Y7), or by email to: admin@sidney.ca.

Council will then consider all of the community input, and make a decision on the future of the wharf.

TAKE THE SURVEY!

We need to hear from you!
Determining the future of Beacon Wharf is an important decision that requires significant feedback from the community.

[Click here to access and complete the online survey](#), or print and fill out the paper version on page 8 and return it to Town Hall by October 15, 2021.

www.sidney.ca/wharf

Beacon Wharf Replacement Survey

SUBMIT BY: OCTOBER 15, 2021

[Click here to access the online version of this survey](#)

Or print and fill out this survey page and return it to Sidney Town Hall (2440 Sidney Avenue).

1. Which option do you prefer for the replacement of Beacon Wharf?

Replace with a floating wharf under the proposed Public Private Partnership.



Illustration only - not a final design.

Maintain the wharf until the end of its life, and then do not replace it.



Illustration only - not a final design.

Other (please specify another viable idea that you'd like the Town to consider)

2. Would you support the Town borrowing up to \$5M to fund the public portion of this project, at an estimated annual cost of about \$30 to \$38 to the average household?

Yes

No