Vancouver Board of Parks and Recreation

Consulting Services for Alder Bay Replacement Dock Design

Summary Report

11 December 2019

307071-01243 – 00-MA-REP-0001

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Project No. 307071-01243-00-MA-REP-0001 - Consulting Services for Alder Bay Replacement Dock Design: Summary Report

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Executive Summary

Vancouver Board of Parks and Recreation staff are working together to develop strategies and actions to enhance public use and access to non-motorized watercraft opportunities, including priority projects such as the Alder Bay replacement dock in False Creek.

Alder Bay is a relatively small and secluded body of calm water located on the south-side of False Creek, tucked between the south-east shore of Granville Island, Sutcliffe Park, and the Seaside Greenway. Built over 35 years ago by Canada Mortgage and Housing Corporation (CMHC) as part of the development of Granville Island, the dock is leased to the Vancouver Board of Parks and Recreation. Given its age, condition, and the demands of decades of increased use, the public wooden dock is approaching the end of its service life. CMHC has indicated they will not be replacing the facility and agrees that the Vancouver Board of Parks and Recreation (VBPR) will be the owner going forward.

Working in partnership with the False Creek Community Association (FCCA) and CMHC, Park Development hired a marine engineering consultant team to engage with stakeholders and develop a conceptual design for a durable new dock to support safe, comfortable access to and from the water for all. After coordinating a series of focused engagement and design review opportunities with the FCCA, CMHC, internal stakeholders, and users groups, Park Development presented a well-received conceptual design for the replacement dock to residents at an open house style information meeting in July 2018.

To maximize its long-term benefits the recommended replacement dock is 55% larger, universally accessible, constructed of concrete, and designed to safely accommodate a wide-range of programs, non-motorized boat types, and user groups - ensuring skill development opportunities for paddlers of all ages and abilities including para and able-bodied, beginners, recreation enthusiasts, and long-term athletes. Broad-based support for the new dock design allows the VBPR to move forward with hiring a marine structural engineer to prepare tender-ready documents meeting industry best management practices and marine safety standards.

The estimated cost to replace the dock is currently between $2 and $3 million. During the detail design stage the cost estimate will be refined and possible funding sources considered, including the 2019 Capital Plan and the FCCA's capital improvement budget. Prior to tendering, needed funding will be allocated, project specific permitting requirements will be defined, provincial and federal approvals for works within the marine environment will be secured, and CMHC Granville Island Landlord Consent application will be approved.

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1. Introduction

1.1 Project Background

Owing to the City's extensive waterfront and mild climate, non-motorized boating is an important facet of Vancouver life. A wide range of paddling and rowing sports are regularly practiced in several areas of the city, including in False Creek which offers a sheltered body of water in the center of the city. Located on the south-side of False Creek, Alder Bay is relatively small and secluded, tucked between the south-east shore of Granville Island, Sutcliffe Park, and the Seaside Greenway.

The Alder Bay dock is a public non-motorized boat launch, operated by the Vancouver Board of Parks and Recreation (VBPR) and maintained by the VBPR and the City of Vancouver Real Estate and Facilities Management (REFM) operations departments. The dock is an integral part of False Creek's recreational facilities and the neighbouring False Creek Community Centre offers a variety of programs for boating enthusiasts, competitors, and beginners of all ages and abilities.

Built over 35 years ago by Canada Mortgage and Housing Corporation (CMHC) as part of the development of Granville Island, the Alder Bay dock is leased to the VBPR. Given its age, condition, and the demands of decades of increased use, the wooden dock is approaching the end of its service life. In partnership with the False Creek Community Association (FCCA), staff with VBPR Operations, Recreation and REFM identified a new dock is needed in Alder Bay to safely and effectively support the current program requirements. CMHC has indicated they will not be replacing the facility and agrees that the VBPR will be the owner going forward. It is anticipated that the False Creek Community Centre will continue to oversee equipment storage and house the administrative, changing, washroom, meeting, and socializing requirements of the boating programs.

1.2 Project Objectives

The VBPR would like to develop a conceptual design to replace the aging infrastructure with a durable new dock to support safe, comfortable access to and from the water for all. A primary objective of the project is to ensure the dock design captures the views of current users, stakeholders, project partners, and staff with the VBPR Operations and Recreation, and REFM.

To support the VBPR in the design and engagement process, an experienced multi disciplinary consultant team comprised of engineers, scientists, landscape architects, and recreational planners was hired. Continuous engagement was maintained throughout the conceptual design development phase to ensure the replacement dock design meets current and future recreational and operational needs while blending with the visual character of its unique and picturesque setting.

A detailed summary of the engagement process and the recommended conceptual design for the replacement dock is presented in the following sections of this summary report.

1.3 Scope of Work

The scope of work for the project is as summarized below:

- Organize a project start-up meeting with the project partners (CMHC Granville Island and FCCA) to understand priorities, discuss an engagement strategy, and confirm project schedule and work plan.
- Undertake a site walkover to assess the existing conditions of the facility.
- Perform a site inventory/analysis.
- Coordinate with the VBPR to develop an engagement strategy for the project.
- Conduct a focused workshop and mapping exercise with facility users, stakeholders, project partners and VBPR staff to identify functional requirements for the proposed new facility.
- Engage with project partners, stakeholders, VBPR and REFM staff, individually and collectively, to collect input and feedback and develop and revise concept plan options.
- Review and analysis all available documents, materials, feedback, and input received from all sources including the mapping workshop, meetings, site reviews, etc., to develop concept plan options for the dock replacement. Each option will be presented in a general arrangement drawing.
- Refine concept plan options based on feedback received and present one conceptual design at a public open house style information event.
- Plan and deliver a public open house style information event. Prepare key consultation materials, including: conceptual design and rendered plan and perspective view drawings.
- Develop a questionnaire to gauge public support for the conceptual design. VBPR to host an online survey for two weeks following the public information event.
- Review and summarize questionnaire responses. Present results and recommended conceptual design to project partners and stakeholders.
- Prepare a summary report outlining the engagement process and recommendations for next steps.

1.4 Reference Material

The following reference material was made available by the VBPR:

- Lease agreement between Canada Mortgage and Housing Corporation and City of Vancouver dated January 1, 1980.
- Granville Island False Creek Shore CMHC Schedule B Map including Crown Grant Line Boundary
- Correspondence from 1979 between the Canada Mortgage and Housing Corporation and the City of Vancouver (COV) related to the Alder Bay dock.
- VBPR meeting notes dated November 24, 2016 for the Alder Bay Dock Study conducted in 2016 and 2017.
- VBPR meeting notes dated February 9, 2017 for the Alder Bay Dock Study conducted in 2016 and 2017.

- Memorandum dated May 1, 2017 issued by the VBPR for the Alder Bay Dock Replacement project.
- Memorandum dated November 28, 2018 issued by the VBPR for the Alder Bay Replacement Dock Design.
- Anchoring boundaries map for boaters at False Creek.
- Archeological assessment of Sutcliffe Park-Granville Island dated March 13, 2017, prepared by archeologist from VBPR.
- Letter from Canada Mortgage and Housing Corporation dated March 29, 2017 explaining the approvals and reviews process.
- Summary table dated March 2018 provided by the False Creek Racing Canoe Club for the number of individuals using the dock, categorized by type and event.
- Granville Island False Creek South Shore map with Crown Grant Line Boundary, provided by CMHC.

2. Site Conditions and Analysis

2.1 Description of Existing Facility

The Alder Bay dock is located on Granville Island, Vancouver, BC to the south of the False Creek Community Centre.

Vancouver, BC is in a temperate climate with times of heavy rain and limited snow in the winter, and hot, dry summers typically. Alder Bay itself, is on the ocean (saltwater), with water quality typical of a developed cities waterfront. The shoreline is a sloped profile, of contoured, and armoured geometry, with areas of "natural" profile as well.

The dock is primarily of timber construction. At the shore end of the dock an upper timber fixed-platform (11 m long by 4 m wide) slopes in an approximately north-south orientation (nominal slope). Four timber floats of varying sizes, and freeboards, (one 10 m by 7 m float, two 6.4 m by 2.4 m floats, and one 12 m by 2.4 m float) allow for launching of small non-motorized watercrafts at the facility. A sloping timber ramp located at the northeast end of the 10 m by 7 m float is used to launch the coach boat and paddle boards.

The upper fixed-platform and the floats are connected by a 14.5 m long by 2 m wide aluminum gangway. Due to the tidal range in False Creek (see below),

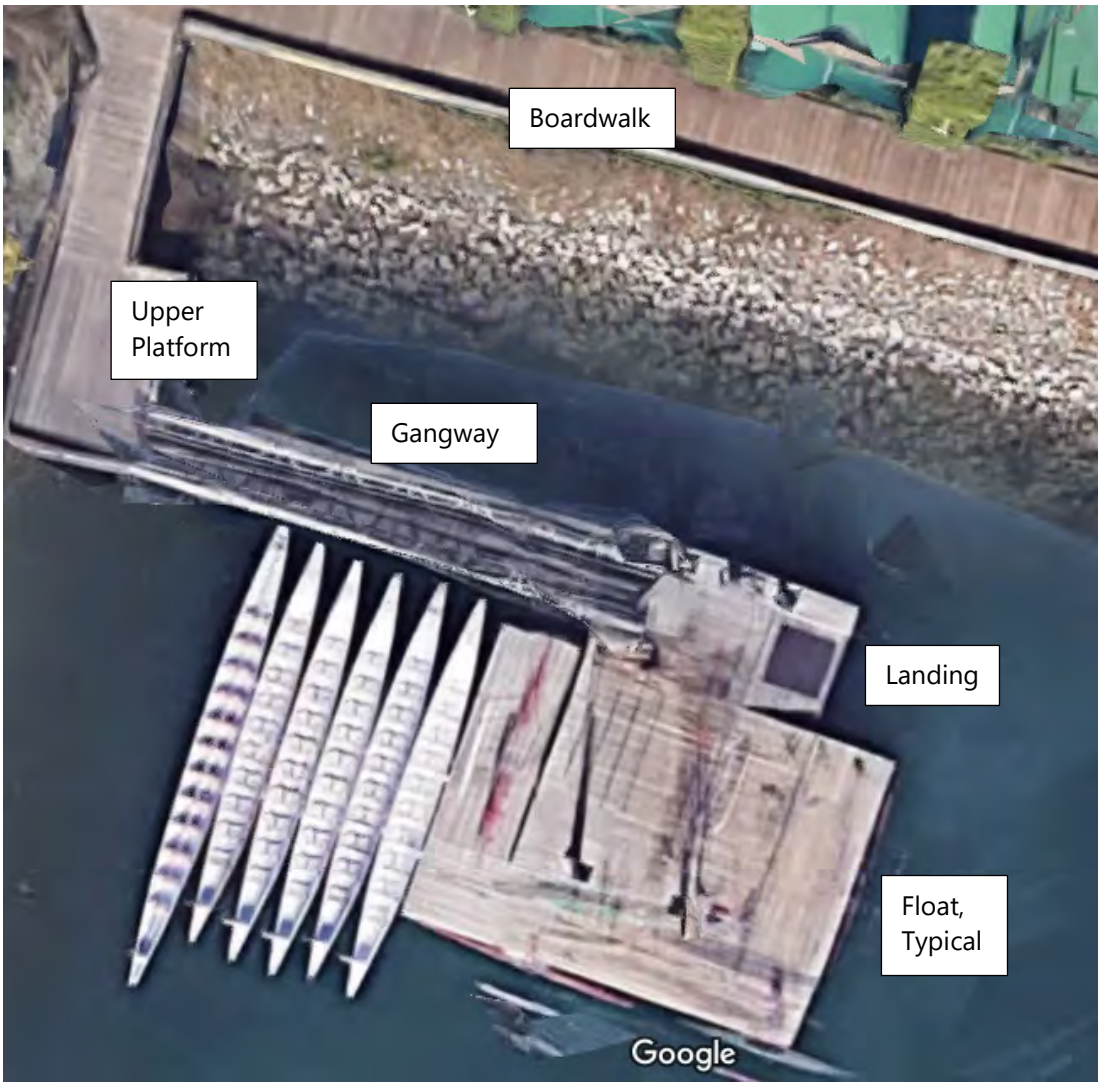
- Higher High Water Level (HHWL) = +5.2 m
- Lower Low Water Level (LLWL) = -0.1 m

As measured to Hydrographic Tide and Chart Datum (CD),

the aluminum gangway exceeds wheelchair access gradient limits more than 75% of the time and is the only land access to and from the water. Also of note is that there is no potable water on the dock, with the nearest being at the community centre.

REFM currently maintains the timber floats and wooden planks on the gangway, VBPR maintains the metal components of the gangway, and CMHC maintains the upper timber fixed-platform and the adjacent Granville Island boardwalk. A general arrangement of the Alder Bay dock is presented in Figure A and in Photo 1 of Appendix 2.

Figure A General Arrangement of the Alder Bay Dock



2.2 Condition of Existing Dock

2.2.1 Scope of Work

A high level visual condition assessment of the exiting dock was conducted by Advisian on the following days:

- September 26, 2017: Following the project kick-off meeting with key stakeholders and project partners.
- December 7, 2017: During the user requirements mapping workshop.
- September 17, 2018: While replacement of deck timbers was being carried out by the REFM's maintenance team.

The scope of work for the condition assessment was as follows:

- A visual above water inspection of the Alder Bay dock accessible by foot to identify the extent of obvious mechanical damage and/or deterioration. This included the topside elements (deck planking and guardrails), the superstructure elements (pile caps), the supporting substructure elements (piles), the gangway, and the timber floats.
- The preparation of a report presenting the inspection findings and recommendations for repairs.

2.2.2 Basis of Inspection

In reviewing the inspection findings, please note the following:

- As the inspection is based on visual observations only, there is a possibility that hidden or latent defects have not been detected during the inspection. Users of the facility should always report any unusual conditions so that they can be evaluated.
- The term "serviceable condition" is used to describe an element which still functions in the way it was originally intended, i.e., elements so described are considered safe to use as intended within normal operational parameters.
- The term "monitor" is used to describe an element with damage and/or deterioration which does not require immediate remedial action, although it is anticipated that repairs will be required in the future. Such elements should be monitored in future inspections so that the future condition can be compared to the condition stated herein. The comparison will establish the rate of deterioration which will assist future inspectors to make better determination of the need for, and the extent of, future repairs.

2.2.3 Inspection Findings

The general condition of the major facility elements is described below. Photographs during the inspection are presented in Appendix 2. All photos were taken September 26, 2018, with the exception of photo 8, taken September 17, 2019.

Fixed-Platform

- The timber deck planks are generally in a serviceable condition with typically minor deterioration due to weathering and/or abrasion (see Photo 2).
- The west guardrail on the fixed-platform has minor to moderate deterioration due to weathering and splitting of timber (see Photo 3). Although repairs are not considered necessary at this time, continued monitoring is recommended.
- The timber pile caps and piles appear to be in a serviceable condition with minor deterioration due to weathering (see Photo 4).

Gangway

- The aluminum gangway is generally in a serviceable condition (see Photo 5). However, the gangway has a length of only 14.5 m. This length of gangway results in gradients of up to 38% during low water large tides resulting in difficult access conditions for all facility users.

Timber Floats

- The timber floats are in a serviceable condition with minor to moderate deterioration of the deck planks due to weathering and/or abrasion (see Photo 6).
- There is an elevation difference of approximately 250 mm between the top of deck of the 10 m by 7 m float and the other floats.
- Freeboards (height of float above the water) measured during the inspection are as follows:
  - 10 m by 7 m Float: 475 mm (18.5 in.)
  - Other Floats: 225 mm (9 in.)
- Multiple dragon boats were moored at the west end of the floats during each of the inspections (see Photo 7).

On September 17, 2018, while representatives from the REFM's maintenance team were replacing timber deck planks at the northeast end of the float, Advisian was requested to visit the site and review the underlying structural timbers at this location. The following observations were made during the site visit:

- In general, there was minor to moderate marine growth and debris on the exposed portion of the floating dock (Photo 8).
- Approximate dimensions of the underlying structural timber and rubber tires (for floatation) are as noted below:
  - Diagonal Timbers: 69 mm by 144 mm
  - Horizontal Timbers: 69 mm by 194 mm
  - Rubber Tires: 610 mm diameter
- All exposed horizontal timbers were in a serviceable condition. One exposed diagonal timber had 95% CSL and had fractured.

2.2.4 Recommendations for Repairs

The facility is in a serviceable condition. We currently only recommend review and replacement of deck planks as needed, as well as maintaining and inspection and repair program going forward. This will lengthen the service life of the structures.

3. Stakeholders Engagement

3.1 Engagement Strategy

The primary objective of the engagement strategy was to understand user requirements and collect feedback from a diverse and focused group of stakeholders, ensuring the needs of all users are considered during the design of the new facility.

A public engagement strategy was developed for the Alder Bay replacement dock design project and is presented in Appendix 3. A timeline for the engagement process was also developed and is presented in Appendix 4.

3.2 Stakeholders and Project Partners

Park Development and Recreation staff met with the FCCA Executive to develop a project scope of work, identify stakeholders, and review the terms of reference for procuring the noted engagement and marine engineering consulting services. The consultant team, FCCA Executive, and VBPR staff met at key stages in the design process with CMHC to discuss the Granville Island 2040 Plan and the development application process for replacing the Alder Bay dock.

VBPR staff coordinated multiple engagement opportunities with stakeholders including the False Creek Racing Canoe Club, False Creek Rowing Club, MS Off-Balance Dragon Boat Team, Youth Flatwater Team, and other user groups with an interest in the replacement dock design. During the workshops, the users provided a summary of challenges they face when using the existing dock, developed a vision, and provided input into preliminary design options for the dock.

A broader public engagement component was undertaken to gauge support for the conceptual design, including a well-attended open house style information meeting held outside the False Creek Community Centre. Over 60 members of the public attended the summer event and 332 online questionnaires were completed. Over three-quarters of the questionnaire respondents indicated support for the proposed dock design, with 30% noting they plan to use the dock more often once it is updated.

The list of stakeholder groups who participated in the engagement process is presented in Table A below.

Table A Stakeholders and Project Partners

Stakeholder Group	Role	Level of Engagement
Vancouver Board of Parks and Recreation (VBPR) Park Development, Planning, Recreation, and Operations staff. City of Vancouver, Real Estate and Facilities Management (REFM) staff.	Project Lead Facility programming, operation and maintenance	Consult, Collaborate, Design Review

Stakeholder Group	Role	Level of Engagement
Canada Mortgage and Housing Corporation, Granville Island (CMHC)	Project Partner, Landlord	Consult, Collaborate, Design Review and Approval
False Creek Community Centre Association (FCCA)	Project Partner, Facility programming	Consult, Collaborate, Design Review
False Creek Racing Canoe and Kayak Club (FCRCC)	Facility User	Consult, Collaborate
False Creek Rowing Club	Facility User	Consult, Collaborate
Off Balance Dragon Boat Team, MS Society	Facility User	Consult, Collaborate
Ecomarine Paddlesports Centres	Facility User	Consult, Collaborate
Youth Flat Water Team	Facility User	Consult, Collaborate
City of Vancouver Residents	Public, Possible User	Inform

3.3 Requirements Mapping Workshop

3.3.1 Workshop

A World Café style workshop with the key user and stakeholder groups was held on December 7, 2017. The goals of the workshop were to confirm and complete existing site assessment studies, to engage the group in detailed discussions, to summarize the opportunities and constraints associated with the existing Alder Bay dock, and to start developing a vision for the new dock.

The workshop consisted of two parts:

- A site tour where an overview of key findings and directions from the analysis and assessment stage was presented. The user groups were also provided the opportunity to highlight their requirements and concerns associated with the existing facility.
- A working session where:
  - The various user and stakeholder groups, consultant team, and project partners were introduced.
  - The engagement process and timelines were presented.
  - A description of how input, feedback, technical requirements, and best practices would inform design considerations was provided.
  - Input and feedback on opportunities and constraints from the various groups was collected.
  - Emerging themes were identified.

- A vision statement for the project was developed.

A detailed summary of the user and stakeholder requirements mapping workshop is presented in Appendix 5.

3.3.2 Opportunities and Constraints

A complete list of the opportunities and constraints identified by the user groups is presented graphically in Appendix 5. A verbatim summary is presented below.

Fixed Platform

- Lack of space to turn boats on fixed platform.
- Lack of space on fixed-platform results in "Traffic Jam".
- Trip hazards on fixed platform.
- Create straight access way at fixed platform.

Gangway

- Too narrow and steep for coach boats.
- Too steep for wheelchairs at low tide.
- Hard to use for wheelchairs.
- Transition to and from gangway is a challenge.
- Railings on gangway too high requiring boats to be lifted up when using gangway.
- Have to queue to use at busy times.

Water Depths

- Water depths along north edge of float is inadequate during low tides.
- Water depths along west edge of float is inadequate during low tides.

Floats

- Add a second ramp on float for entry/exit.
- Add exit ramp.
- Dock Shape: T shape or two/three fingers.
- Varied freeboard for different users.
- Lighting for safety and security.
- Need more sides on float.
- Eliminate holes around piles.
- Need storage for personal items, shoes, coats, etc.

- Scooter and wheelchair storage area.
- Staging area for washing and waiting/queuing.
- Soft surface to rest boats.
- Need a water hose.
- Remove stepping on dock, use ramps instead.
- Pilings get in the way of ores.
- Dock surface is slippery and unsafe.
- Need a lift for disabled users.
- Need a ladder.
- Bullnose to protect boats from damage.
- Folding cleats.

3.3.3 Draft Vision Statement

All participants provided input in developing the following vision statement:

> ***"Alder Bay dock is a public gateway to***
> ***Canada's most accessible waterway, False Creek,***
> ***and is inclusive of users of all abilities, ages, and skills."***

4. Alder Bay Replacement Dock - Concept Design Options

4.1 Design Considerations

Based on the opportunities and constraints identified by the stakeholders during the requirements mapping workshop, the following components were identified as key considerations when designing the replacement dock options:

- **Fixed-Platform:** Most users considered the existing fixed-platform to be of inadequate size and felt that the orientation of the platform did not meet the functional needs of dock users. Accordingly, the concept designs considered either a larger fixed-platform or a fixed-platform oriented in accordance with user needs.
- **Gangway:** The existing gangway at the facility is 14.6 m long and exceeds wheelchair access gradient limits more than 75% of the time. Increasing the length of the gangway improves the situation markedly with a 24.4 m gangway exceeding wheelchair access gradient limits 45% of the time. Gangways with lengths 18.3 m and 22.9 m exceed wheelchair access gradient limits 64% and 50% of the time, respectively.

  Table B presents a comparison of different gangway lengths and the percentage of time they are within the wheelchair access maximum gradient limit of 8%. The tidal water elevation required for each gangway to be wheelchair accessible is also presented in the table below.

Table B Comparison of Gangway lengths

Description of Gangway	Length (m)	Ramp at maximum 8% Gradient	
		Water Elevation (m)	% of Time When Ramp is Accessible
Existing (48 ft.)	14.6	3.90	23%
Typical (60 ft.)	18.3	3.60	36%
Custom (75 ft.)	22.9	3.22	50%
Custom (80 ft.)	24.4	3.09	55%

Note: HHWL = +5.2 m CD; LLWL = -0.1 m CD

- **Water Depths:** Water depths along the north and west edge of the existing floats are limited particularly during low tides and several facility users highlighted this as a constraint at the existing facility. In developing the replacement dock design options, due consideration was given to moving the float to deeper water to address this user requirement.

- **Float:** Facility users identified several features they consider important functional requirements for the new replacement dock, these include:
  - Different freeboard heights on the floats to accommodate different boat types.
  - Longer perimeter for docking a greater number of boats.
  - Space for wheelchair and scooter storage.
  - Dedicated wash-down area.
  - Additional storage facilities for personal belongings.
  - Improved lighting.
  - Dock crane to move disabled users.
  - Provision for wash water.

Most requirements identified by facility users would be addressed by providing a larger float and as such all replacement dock design options proposed larger floats.

4.2 Preliminary Design Options

Based on input received from the user requirements mapping workshop, the project partners, REFM, and VBPR staff, the following three preliminary design options were developed, with a focus on longevity and eco-friendly. A brief description of the options is provided below. General arrangement drawings of the **three preliminary design options** are presented in Appendix 6.

- **Option 1** consists of an upper timber fixed-platform with an area over twice the size of the existing fixed- platform. A concrete float with approximately the same area but more useable perimeter (49%) than that of the existing timber floats, various freeboard heights, and increased water edge perimeter. Access to the float is provided by a 60 ft. (18.3 m) aluminum gangway on the west side and a wheelchair accessible scissor-gangway on the north side.
- **Option 2** consists of an upper timber fixed-platform that is of a similar size as the existing fixed-platform but with a reconfigured shape to allow easy access to the aluminum gangway. The existing larger (10 m by 7 m) timber float is refurbished and reused and a new concrete float is added to the west end of the timber float. This allows for access to deeper waters. Access to the float is provided by one 75 ft. gangway. No separate wheelchair accessible gangway is provided. This option results in approximately the same overall area of the existing timber floats but increases the useable perimeter by 35%.
- **Option 3** consists of an upper timber fixed-platform that is marginally larger than the existing fixed-platform but with a reconfigured shape to allow easy access to the gangways. Two aluminum gangways, one for pedestrian access and a mechanized gangway for wheelchairs provide access to a two-finger float. This option reduces the overall area by 20%, but provides a useable perimeter increase of 57%.

4.3 Evaluation of Preliminary Design Options

Three concept design options were evaluated based on the extent to which they addressed the user requirements identified during the mapping workshop. The evaluation matrix developed to compare the options is presented in Appendix 7.

- **Option 1** addressed the most number of user requirements, the most expensive of the three options.
- **Option 2** least expensive of the three options did not address several user requirements.
- **Option 3** a compromise between functionality and economy, the proposed the mechanized system for wheelchair access has recurring operations and maintenance costs.

4.4 Project Partner Input

The three preliminary design options and the options evaluation matrix were presented to the project partners (CMHC and FCCA) to seek their input. Key items noted by the project partners that resulted in modifications to the design options are listed below:

- The VBPR and FCCA preferred the scissor-gangway for wheelchair access, stating the alternative mechanized system for wheelchair access was not practical owing to its recurring maintenance and operational costs.
- The VBPR and FCCA suggested the use of twin gangways to allow separate entry and exit access to the floats to reduce congestion.
- CMHC stated that they had identified certain limitations with the existing retaining wall and shore protection on the north side of the Alder Bay. CMHC was working with their consultants to address the identified concerns and recommended that options with shore access at the location of the existing retaining wall be avoided.
- CMHC highlighted the requirement for filing a landlord consent application.

A detailed list of items discussed during the meeting is included in Appendix 8.

4.5 Revised Design Options

Based on input received from the project partners, design objectives were developed, and the preliminary design options were revised. A brief description of the design objectives is provided below:

- **Safe**: meets marine safety standards, incorporates non-slip surfaces, emergency ladder, signage, potable water, and lighting.
- **Accessible**: comfortable access to and from the water for all.
- **Functional**: sized for current and future programs and participation; layout reduces congestion and improves ease of entry and exit.
- **Durable**: constructed of long-lasting building materials to reduce maintenance requirements.

- **Expandable**: flexible design, potential to add a 3rd finger to the float in the future.
- **Environmentally-sensitive**: all works within the marine environment to follow Provincial, Federal, and Industry Best Management Practices.

General arrangement drawings of the **three revised options** are presented in Appendix 6.

- **Option 1** consists of an upper timber fixed-platform approximately twice the size of the existing fixed-platform. Access to the float is provided by two aluminum gangways as well as a wheelchair accessible scissor-gangway. To provide more room for launching, the float is designed with two fingers to increase the perimeter/edge.
- **Option 2** is similar to Option 1 in terms of the size of the upper timber fixed-platform and number of gangways (including a wheelchair accessible scissor-gangway) however, the float in Option 2 has only one finger to reduce the footprint over water.
- **Option 3** consists of an upper timber fixed-platform similar in size to the existing fixed-platform, but its shape has been reconfigured to allow easy access to the gangways. Two gangways provide access to a two-finger float. No separate wheelchair accessible gangway is provided.

To assist the VBPR with comparing the three options, an order-of-magnitude cost estimate for each of the options was prepared and is presented in Appendix 10.

4.6 Landlord Consent

CMHC was presented with the revised dock design options on May 17, 2018. Given VBPR's commitment to creating accessible recreational opportunities and CMHC's support of the wheelchair accessible scissor-gangway, the option which did not provide wheelchair access to the water was not progressed. Minutes of the May 17, 2018 meeting with CMHC is presented in Appendix 11

On May 28, 2018 VBPR submitted the Landlord Consent application to CMHC. The following day CMHC communicated via email full support of Options 1 and 2, "seeing no issues with either design from the point of view of Island operations, alignment with the Granville Island 2040 vision, or with the ongoing discussions on lease arrangements between CMHC and the FCCC".

The Landlord Consent application and dock designs, Option 1 and Option 2, are presented in Appendix 11.

It is anticipated that continued discussions with CMHC will be required throughout the permitting, design and implementation process.

4.7 User Feedback on Revised Options 1 and 2

The project partner supported options were presented to the user group representatives on June 7, 2018. The design of both options 1 and 2, reflected user requirements and stakeholder input and were favourably received by all user groups. Key feedback provided by the facility users is summarized below:

- Width of one of the gangways to be increased to suit the dimensions of the coach boat.

- Align the wider gangway with the tampered float finger to allow clear line of travel for launching coach boat.
- Position piles on float such that one edge of the float has an unobstructed space for lifting long boats out of the water.
- To cater to different boat types and user requirements, fingers are detailed separately providing difference freeboards.
- Provide more space between the north and south fingers of the float to allow sufficient room for boat/canoe outriggers.
- Provide area on float for parking of wheelchairs and scooters.

Feedback from the facility users was integrated and one conceptual design for the replacement dock was presented at the open house public information event.

4.8 Public Information Event and Questionnaire

A well-attended public open house style information event was outside the False Creek Community Centre near the Alder Bay dock on July 17, 2018 between 4:00 p.m. and 7:00 p.m. The conceptual design and other materials displayed during the open house are included in Appendix 13.

Over 60 members of the public attended the open house and representatives from the VBPR and the consultant team were available to answer questions during the entire event. The conceptual design was presented to the public, event attendees wrote responses on yellow stickies, feedback was collected, and queries from the public were responded to. A paper questionnaire was distributed during the open house and also made available online at vancouver.ca/alder-bay-dock for a period of two weeks following the open house. In analyzing the 332 responses to the questionnaire, it was evident that majority of respondents, 77% were in favour of the project. A detailed analysis of the survey responses is presented in Appendix 14.

5. Recommended Conceptual Design

5.1 Description

The recommended conceptual design for the Alder Bay replacement dock meets the needs of the project partners, recreation and operations staff, stakeholders, and the public for a safe, accessible, functional, durable, expandable and environmentally-sensitive new launch. The conceptual design includes the following key features:

- Upper timber fixed-platform with twice the area, to increase queuing room for users.
- Two aluminum gangways, to relieve congestion and accommodate the coach boat.
- A wheelchair accessible scissor-gangway, to improve access for facility users who use wheelchairs and scooters – would remain below the 8% threshold at all times.
- Two concrete float fingers with 55% more perimeter, to increase access to the water.
- Tapered float, to launch coach boat and adaptable stand-up paddle boards (SUP).
- Floats with different freeboard heights, to ease loading into a various boat types.
- Strategically located steel piles, to maximize float perimeter and increase loading room.
- Flexible float design with potential to add a third finger, to allow for future expansion.
- Constructed of durable building materials, to reduce maintenance and increase service life.
- Non-slip surfacing, ladder, potable water, and efficient lighting, to improve safety.
- Environmentally sensitive construction methodology, to ensure all works within the marine environment follow provincial, federal, and industry best management practices.

A general arrangement of the recommended conceptual design for the Alder Bay replacement dock is presented in Appendix 12.

5.2 Permitting Requirements

It is expected that the following permits will be required for construction of the new dock:

- **Province of BC:** The area in False Creek where the Alder Bay dock is located is outside the jurisdiction of the Vancouver Fraser Port Authority. The authority having jurisdiction in the area is the Province of BC. Should changes to the water lot boundary be necessary, an application to FrontCounter BC or Forests, Lands and Natural Resource Operations will be required.
- **Department of Fisheries and Oceans Canada:** All works near and within the water bodies, regardless of the time of construction, will require DFO review and approval.
- **Transport Canada:** An application to Transport Canada will likely be required and any extension to the dock outside its current footprint may affect navigation and will require review under the Navigation Protection Act.

- **CMHC Landlord Consent:** On-going discussions to determine implementation program.

6. Summary and Recommendations

6.1 Summary

The Alder Bay dock is an integral part of False Creek's recreational facilities and a popular destination for dragon boaters, canoers, and kayakers of all ages and ability levels. Given the dock's condition and increasing use, the FCCA and VBPR staff identified the need to develop a plan to replace the aged infrastructure. To ensure the design of the replacement dock captures the views and requirements of current users and stakeholders, the VBPR engaged with facility users, stakeholders, and project partners. To support the VBPR in the design and engagement process, an experienced multi-disciplinary consultant team comprised of engineers, scientists, landscape architects, and recreational planners was hired.

A project kick-off meeting was held in September 2017 with the project partners (CMHC Granville Island and FCCA) to introduce the consultant team and discuss project scope, process, roles, and expectations. In December 2017, a mapping workshop was conducted where facility users were invited to identify opportunities and constraints related to the existing and replacement dock. Three preliminary concept designs were subsequently developed based on the user requirements identified during the workshop. In April 2018 the preliminary concept designs were presented to the project partners, VBPR, and REFM staff for input and comment. Feedback was incorporated, and three revised design options and associated order-of-magnitude cost estimates were developed.

The revised design options were presented to the landlord (CHMC Granville Island) for discussion prior to submitting a Landlord Consent application. Taking into consideration CMHC's comments and the VBPR's commitment to providing recreational facilities accessible for all, two conceptual designs were put forward for Landlord Consent. Upon receipt of CMHC's support, the conceptual designs were presented to facility users at a workshop in June 2018. Facility users were generally amenable to both options and provided additional feedback to further improve the design.

With stakeholder input, best practices, maintenance, operational, and technical requirements fully considered, the Alder Bay replacement dock design was developed to support safe comfortable access to and from the water for all. The key conceptual design features, include:

- two times more room on the upper fixed-platform for queuing
- two gangways, relieving congestion at busy times
- fully accessible scissor-gangway, improving access for all – remains below 8% grade at all times.
- 55% more float space, increasing access to water
- two durable concrete floats with different freeboard heights, to ease loading into various boat types
- steel piles, strategically positioned to maximize loading room along the float perimeter
- tapered float, to launch coach boat and adaptable stand-up paddle boards
- non-slip surfacing, lighting, potable water, ladder, and signage, to improve safety
- flexible design, to allow for possible future expansion/addition of a 3rd finger.

The conceptual design was presented to the public at a well-attended open house style information event, held outside the False Creek Community Centre in July 2018. A paper questionnaire was distributed during the event and available online for a period of two weeks following the open house. Over 60 residents attended the event and 332 online questionnaires were completed. The Alder Bay replacement dock design was well-received, with 77% of survey respondents supporting the conceptual design, and 30% noting they plan to use the dock more often once it is replaced.

Support for a new accessible dock allows the VBPR to move forward with hiring a marine structural engineer to prepare tender-ready documents meeting industry best management practices and marine safety standards. This next phase will involve defining project specific permitting requirements, securing provincial and federal approvals for works within the marine environment, and submitting applications for a building permit and Landlord Consent to CMHC Granville Island.

Park Development will continue to engage with Operations, Recreation, REFM, FCCA, and CMHC Granville Island at key project milestones. Possible funding sources will be considered with all parties and needed funding will be secured along with all permits prior to tendering.

The replacement of the dock in Alder Bay will enhance public use and access to non-motorized watercraft opportunities in Vancouver.

A general arrangement of the recommended conceptual design for the Alder Bay replacement dock is presented in Appendix 12.

6.2 Recommendations

The Alder Bay dock is an aging infrastructure that has been in service for over 35 years. The dock, in its existing state, does not meet the requirements of the facility's diverse user groups. Given the increased use of the dock and the inability of the current facility to meet user needs, replacement should be considered. To make sure that the replacement dock suitably captures the requirements of facility users, the VBPR has carried out a detailed public engagement process. Responses to a questionnaire that was made available to the public indicate that the project is viewed favourably by members of the community and users of the facility.

To proceed with replacement of Alder Bay dock, it is expected that the following steps will have to be initiated:

- The recommended conceptual design to replace the Alder Bay dock is estimated to cost between $2 to $3 million dollars. During the engagement process FCCA and some facility user groups expressed an interest in assisting with funding the project. It is recommended that suitable funding sources for construction of the replacement dock be identified.
- General permitting requirements for projects of this nature have been identified as part of this study. More definition on project specific permitting requirements is recommended. This will require further refinement of design and engagement with regulatory authorities.
- Detailed design of the replacement dock, including preparation of engineered drawings and specifications and obtaining permits and approvals is recommended.
- Establishing a contracting strategy and tendering for construction of the replacement dock is essential. It is recommended that this be coordinated with the City of Vancouver procurement team.

- Subsequent to award of a construction contract, field review during construction and construction management will be required. It is recommended that field reviews be conducted by the design engineer of the replacement dock.
- To ensure construction of the replacement dock is carried out in compliance with the Fisheries window and to minimize disruption to recreational activities at the dock, it is recommended that early planning be undertaken and a schedule for the Alder Bay dock replacement project be developed in discussion with regulatory authorities, project partners, and stakeholders.