

Vancouver is situated on the unceded traditional homelands of x<sup>w</sup>məθk<sup>w</sup>əýəm (Musqueam), Skwxwú7mesh (Squamish), and səlilwətał (Tsleil-Waututh).

The area currently known as False Creek is of significant meaning to the Host Nations who stewarded the land since time immemorial.

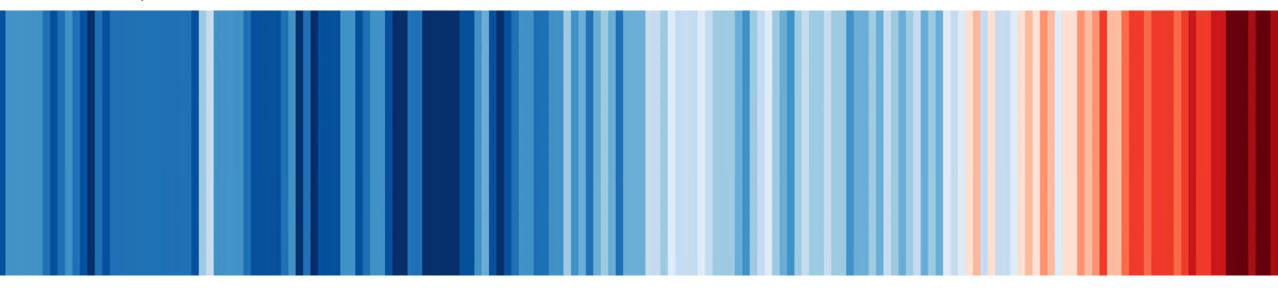


# What's the Challenge?

Sea Level Rise and Coastal Flooding



#### Global temperatures



#### Global sea levels





## False Creek Coastal Flooding



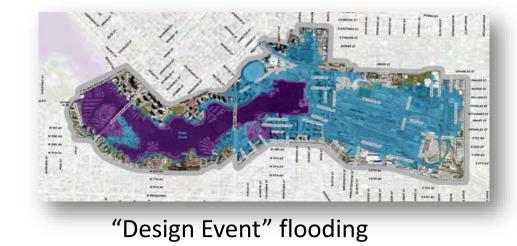
High Tide Events



Storm Surge and Waves

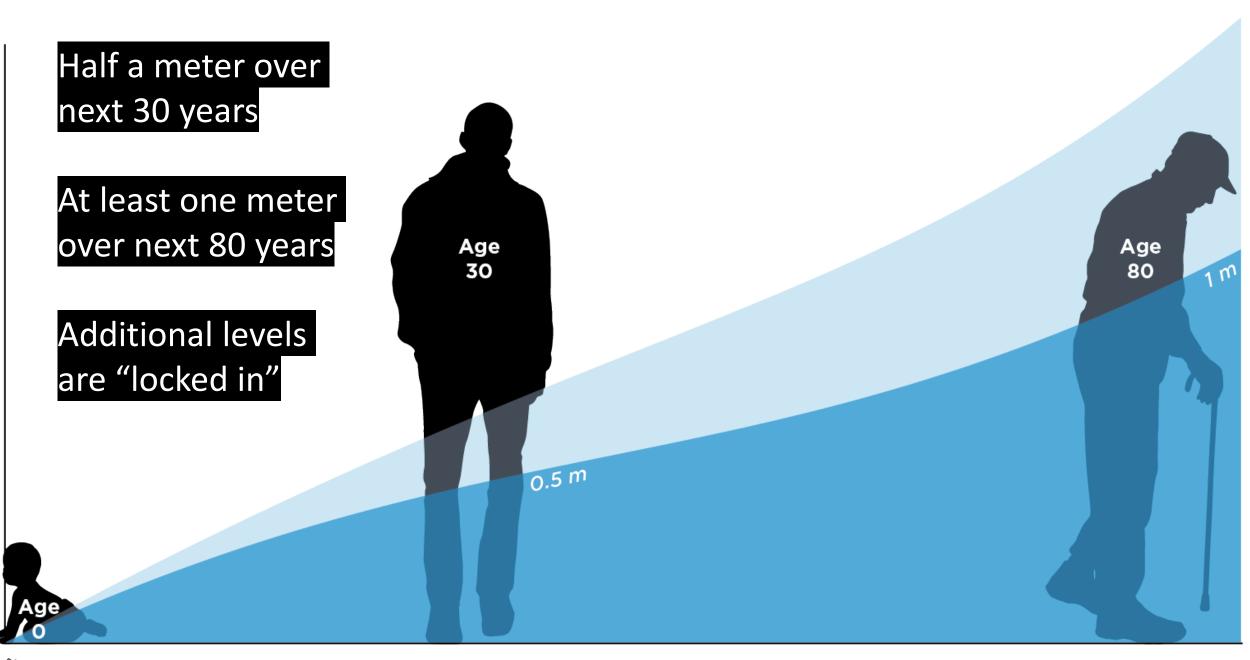


Sea Level Rise



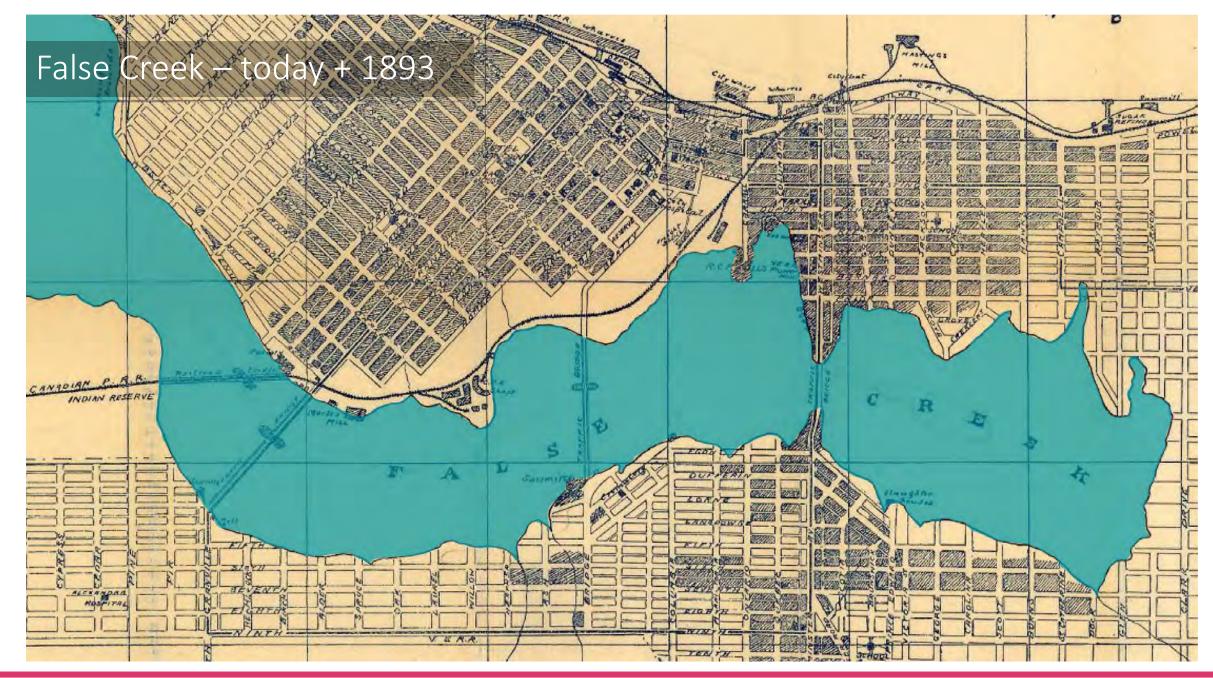








CITY OF COASTAL ADAPTATION



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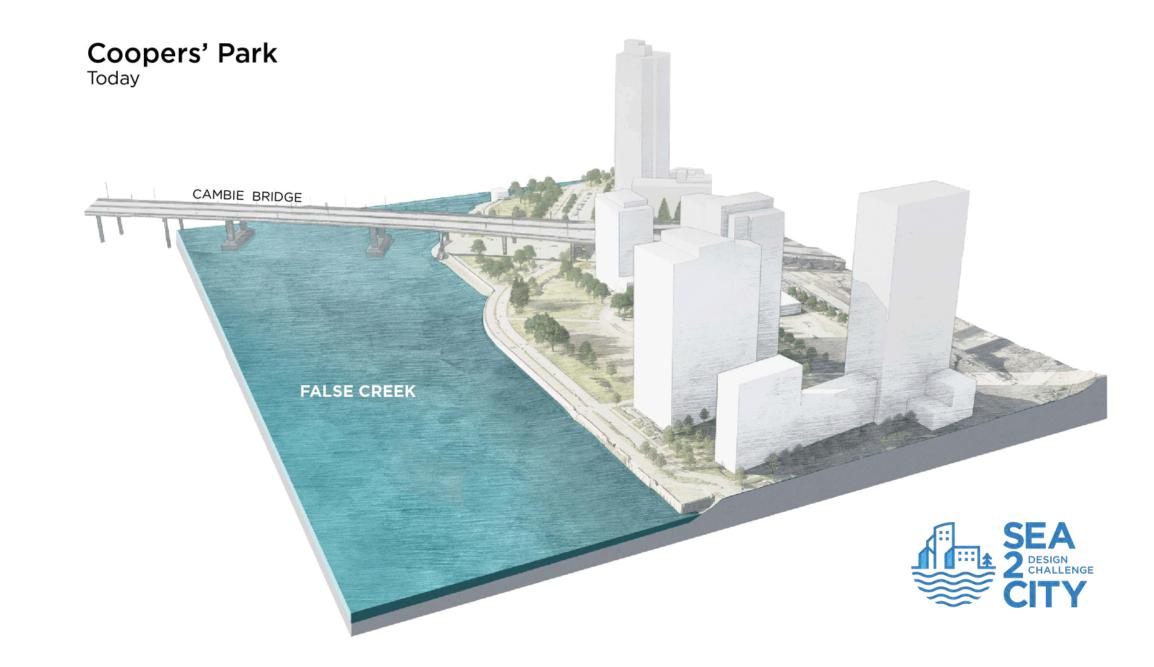
#### False Creek – 1m SLR, 1:500 storm



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CITY OF COASTAL VANCOUVER ADAPTATION





#### Olympic Village Today





# What are we doing about it?



## A Decade of Coastal Adaptation Planning



#### 2012+

- Mapping and flood modeling \_
- Coastal Adaptation Plan Fraser River Foreshore

#### **Public Engagement**



In SO years you might be standing in researched your shappyyurstyred/searched

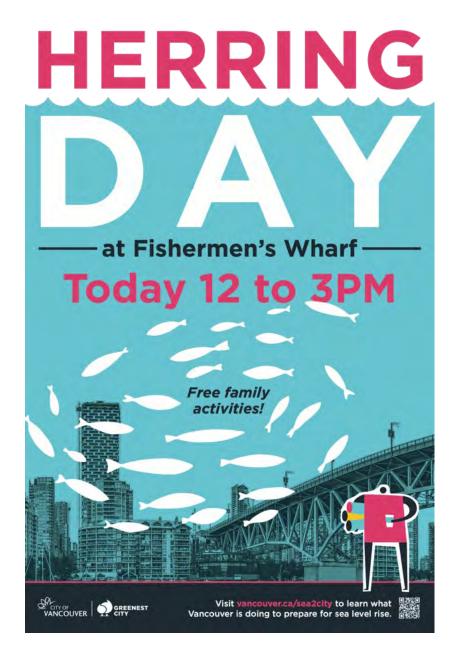
#### 2020

 Coastal Adaptation Plan – False Creek









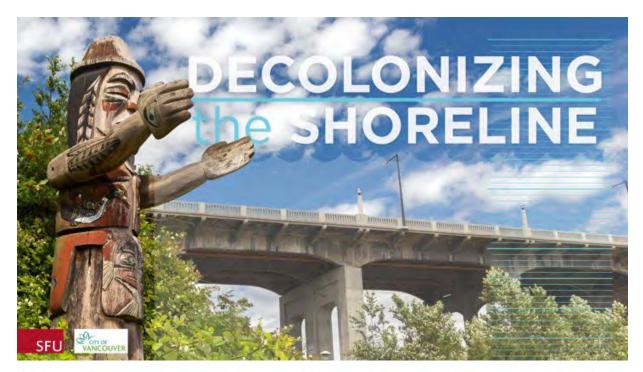








#### SFU Centre for Dialogue



Chief Dr. Frank Brown Christine Smith-Martin

Cory Douglas

Joanne Nelson









**Ginger Gosnell-Myers** 





#### Youth Adaptation Lab







## Community Advisory Group







#### Granville Island







#### Design Charette

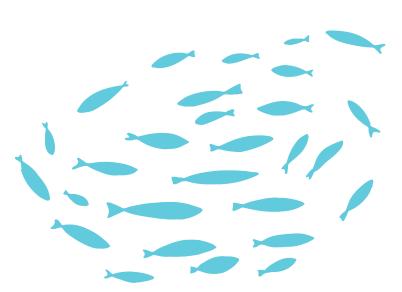














#### Intergenerational Photos





"We don't feel that enough people grapp the urgency of the climate crisis. With this project, we wanted to criste an image that would make people stop and contendate what their future might bole like. Much of our time is speet in transit, and with the current rate of rising sea levels, we hope this photo makes people realize we all need to hurry up and work together on solutions to the solution. Cheryl Jordan and Rebecca Zanni





JULIA DODGE / Grandparent Sea2City MINSU DODGE / Grandchild In Section 2.1 - International Annual Product Systems and an entry and the section of the Segles (model 1/2 million / total SCOTTARLACINEM STREAM

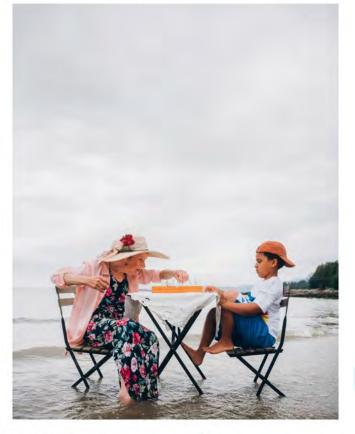


Sea2City :::::... 

And the Design of the Design o ----

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#### AYDEN TUYISENGE PEAT / Grandchild

#### **CHRISTINE PILGRIM / Grandparent**

"With this photo, we attempted to combine our favourite gain and reality, it was my more and i was so movined that i hadn't noticed the tole rising hyber and closer than it used fac. My grandloo will out me in check-mate in three moves if I don't a my with about me?" - Christine Pilgrim



THEATREREPLACEMENT

HARA SHARPE / Devotor @Sea2Citymm... PETER SHARPE / Father







DAVID WALKER / Grandbare HY POLLOCK / Grandchill



#### Future Vision & Renewed Approach



The Salish Sea has risen, and False Creek has transformed. The area remains a vibrant and much-loved place. The naturalized shoreline is a healthy and safe place for people to connect with the water.



Resilient habitat areas provide homes for many species. Host Nations are active partners in the transformation and are visible and celebrated as the stewards of the lands and waters. Indigenous knowledge and guidance continue to breathe life into the place.



Our shorelines can accommodate higher waters and occasional flooding. Our buildings have transformed and are safe during the occasional flooding that is part of life along our shoreline.

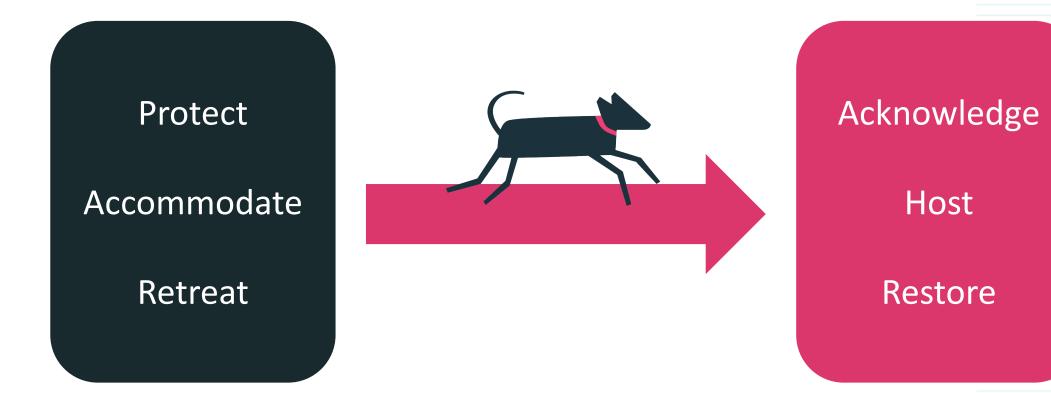


We have now practiced coastal adaptation for generations. As Vancouver continues to learn and prepare for the future, the city celebrates the ever-changing nature of its shorelines and the communities that call them home.





#### A RENEWED APPROACH







## Design Concepts



#### Between Bridges

Coopers' Park

Olympic

Village

#### Stamps Landing

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# Adaptation Approach

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## Stamps Landing—





# 1 - Habitat Bench Pilot Project

\_ Habitat Bench Pilot Project

HEATHER CIVIC MARINA

FALSE CREEK



EXISTING SEAWALL



-Habitat Bench

HEATHER CIVIC MARINA

FALSE CREEK





## 3 - Blue-Green Corridor + Upland Development

Host Corridor Development

Connect Upland Blue-Green Systems –

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Floodproof At-Risk Buildings -

HEATHER CIVIC MARINA

1st Ave Blue Green Corridor -

1st Ave Redevelopment -Upland Open Space Connections -

FALSE CREEK

N ~













# **Olympic Village**—





2100+ Vision

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10P

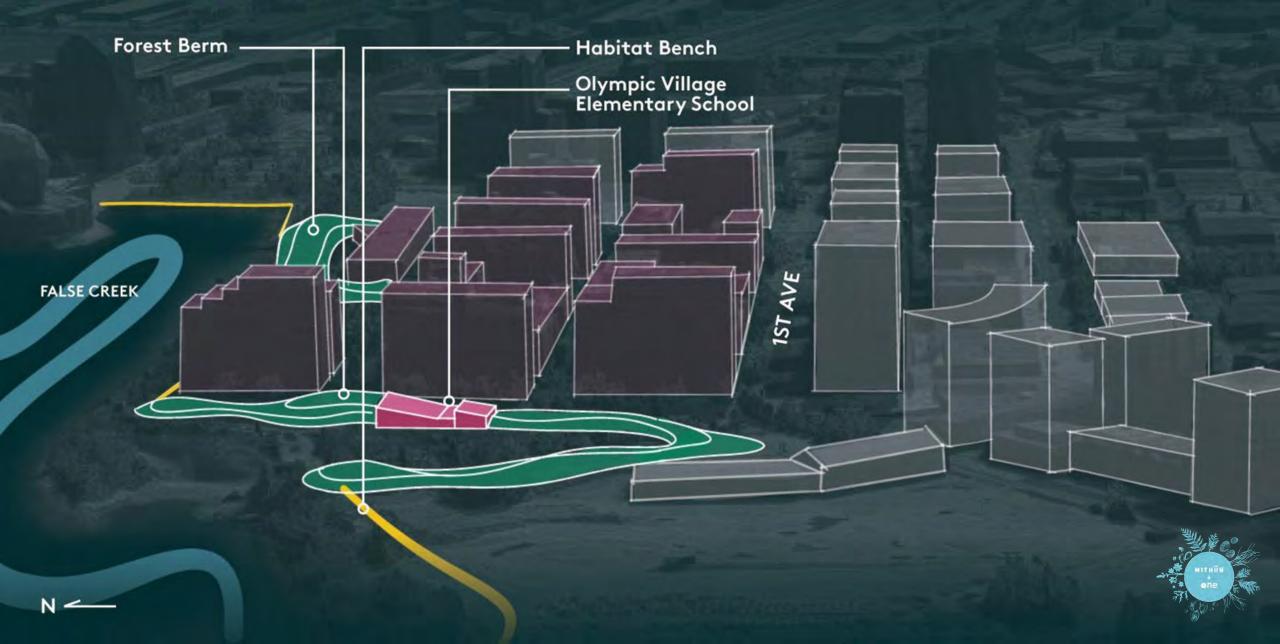
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# 1 - Forest Berm Pilot Project



# 2 - Forest Berms + Habitat Bench



# 3 - Blue-Green Corridor + Upland Development Host Corridor Development -Ist Ave Blue Green Corridor -1st Ave Redevelopment -FALSE CREEK О Connect Upland Blue Green Systems Floodproof At-Risk Buildings N ~

# 4 - Incremental Retreat + Upland Development



## 5 - Retreat + Ecosystem Repair





2100+ Vision

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# First Step Pilot Projects—

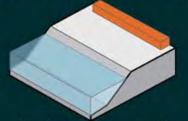
Habitat Bench

Forest Berm



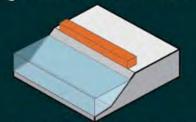
# Habitat Bench-

#### Upland Habitat Bench



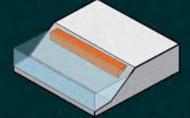
How do people interact with this interim flood protection strategy?

#### King Tide Habitat Bench

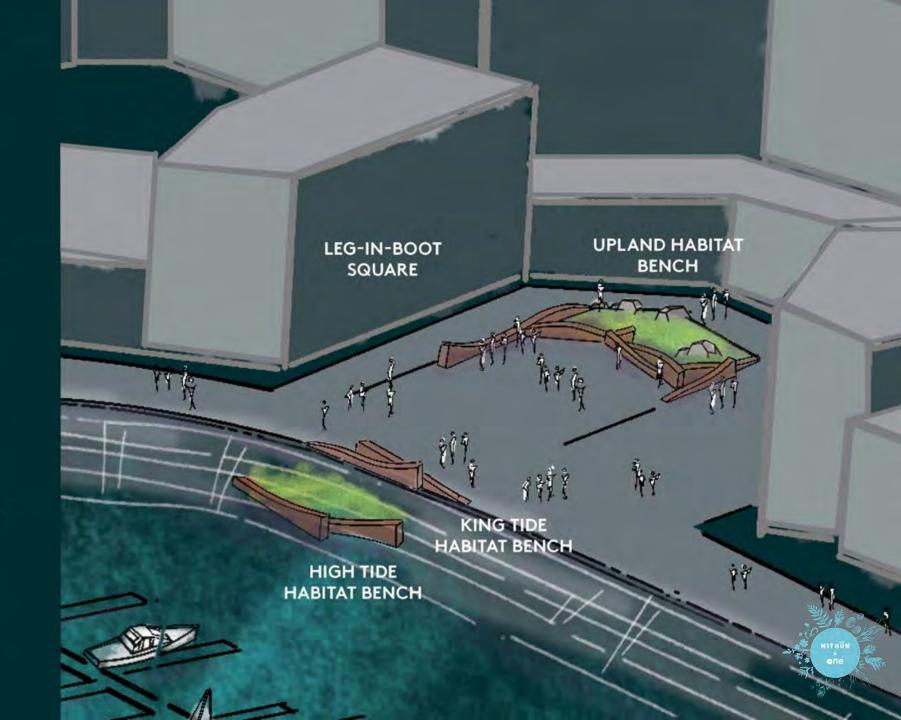


How tall does the Habitat Bench need to be to provide protection for various storm events?

#### High Tide Habitat Bench



How do various species of wood decay when interacting with salt water and marine life?



Base Form - Timber Block

### **Undulating Form**











# Form + Function Studies

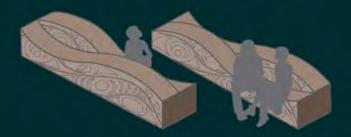
Habitat Texture



Bench + Play Forms



Musqueam, Squamish, and Tsleil-Waututh Carving & Painting







# Long-Term Adapted Habitat Functions





# Long-Term Adapted Habitat Functions











# Forest Berm-

CREEKSIDE COMMUNITY CENTRE

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REAL

> CANOE BRIDGE

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## Acknowledge

## Successional Forest Planting



#### Phase 1

The first stage of this successional forest planting is to plant a fast growing native deciduous forest of Alder and Willow species to add nutrients to the soil and create a canopy of shade for coniferous seedlings to establish.





#### Native Alder Forest Plant Guild

Red Alder, Alnus rubra Sitka Willow, Salix sitchensis Hooker Willow, Salix hookeriana Red Huckleberry, Vaccinium parvifolium Salmonberry, Rubus spectabilis Red Elderberry, Sambucus racemosa Saskatoon Serviceberry, Amelanchier alnifolia Red-tailed Hawk, Buteo jamaicensis Woody Debris



#### Acknowledge

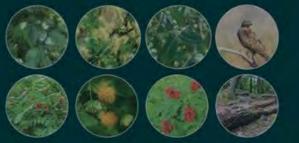


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#### Phase 2

Once the deciduous forest has established, the shady understory is a healthy ecosystem to plant native conifer seedlings within. These trees need shade, water, and nutrient-rich soil to establish a healthy grove. Seeds or saplings for these species may be sourced from southern latitudes in order to introduce a more resilient genetic strain, adapted to warmer and drier climates.





#### Native Forest Establishment Plant Guild

Western Red Cedar, Thuja plicata Yellow Cedar, Callitropsis nootkatensis Sitka Spruce, Picea sitchensis Western Hemlock, Tsuga heterophylla Grand Fir, Abies grandis Douglas Fir, Pseudotsuga menziesii Yellow Warbler, Setophaga petechia Nutrient-Rich Soil



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#### Phase 3

While the native conifer forest is growing, stewarding an understory is just as important as supporting the tree grove. This will create an important ecosystem where native plants and animals can flourish and people can learn and be immersed. Working with a local ethnobotanist throughout this entire process to observe and monitor the health of the Forest Berm is essential to the whole process and adapting to a changing climate.





#### Forest Understory Plant Guild

Western Swordfern, Polystichum munitum Low Oregon Grape, Mahonia nervosa Bracken Fern, Pteridium aquilinum Inside-Out Flower, Vancouveria heraiden Evergreen Huckleberry, Vaccinium Salal, Gaultheria shallon Hairy Woodpecker, Leuconotopic Mycellium Fungus Network







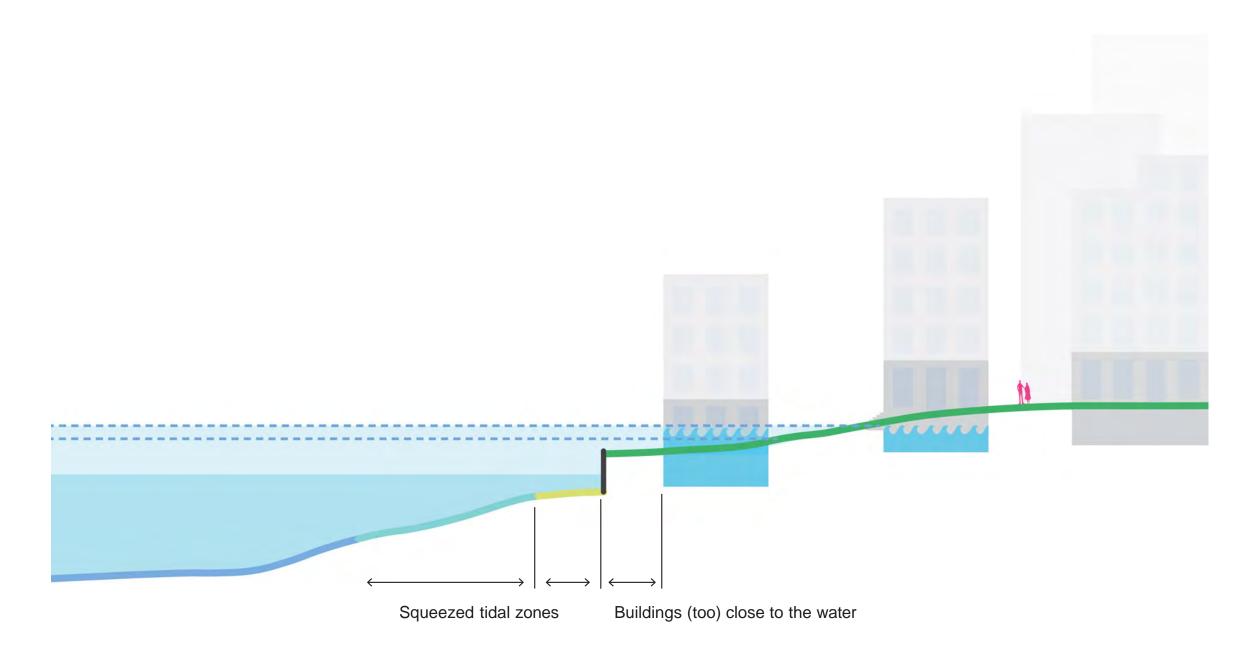




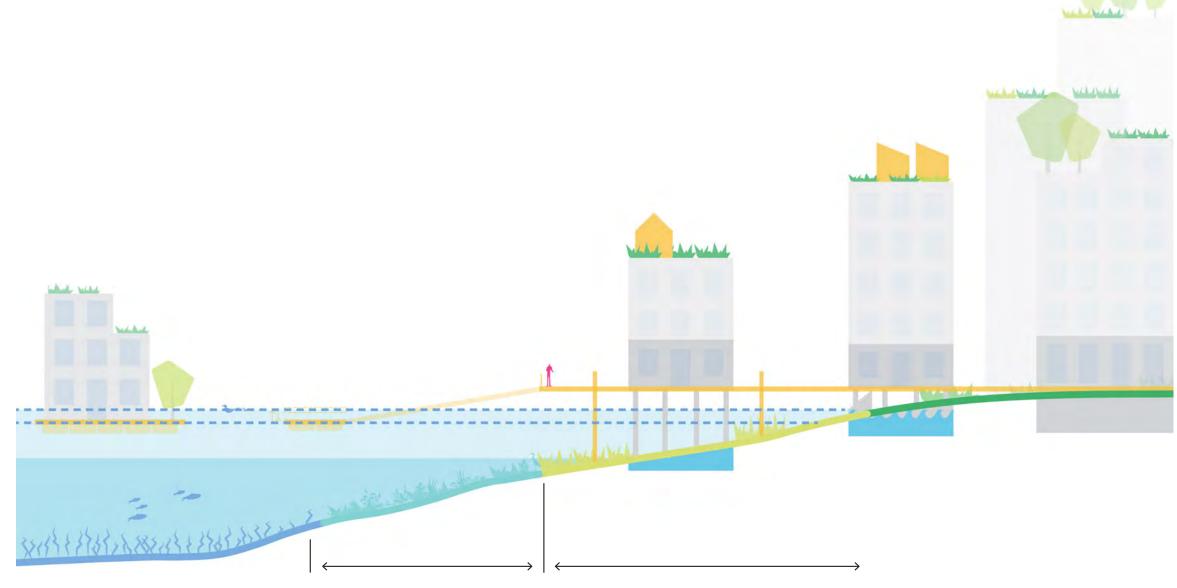


# **Rewilding False Creek** Our 2100 vision & site concepts

From **narrow**, **hard-scaped** waterfronts...



### ...to wonderful, 're-wilded' urban waterfronts



More space for the water

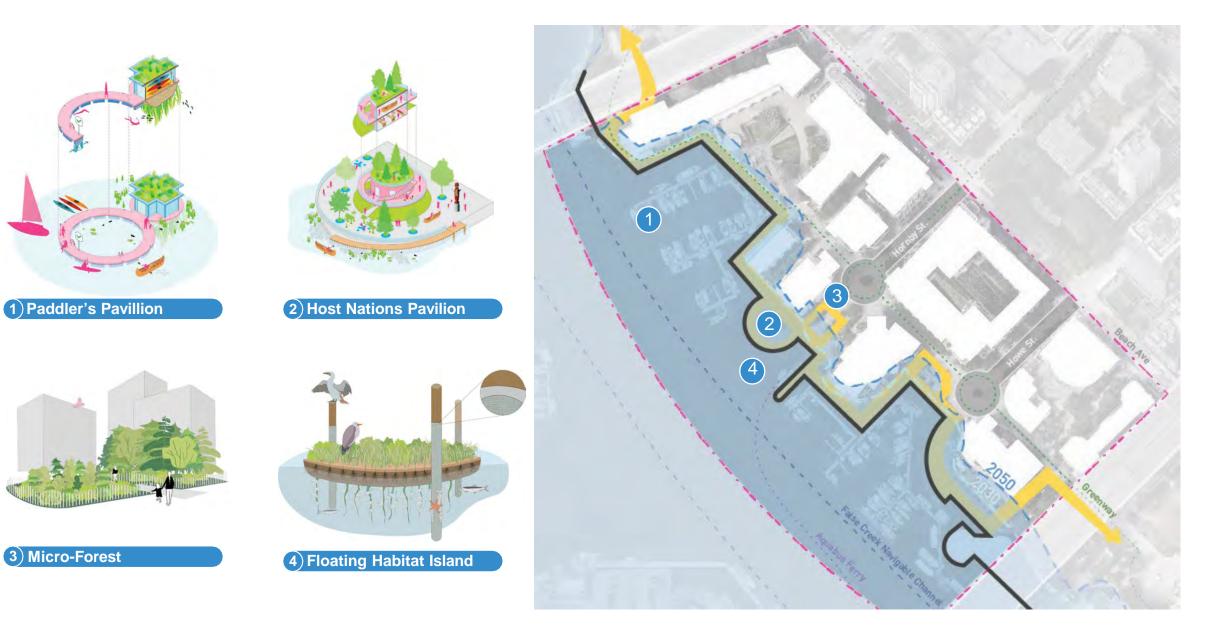
# Between Bridges

## Between Bridges today

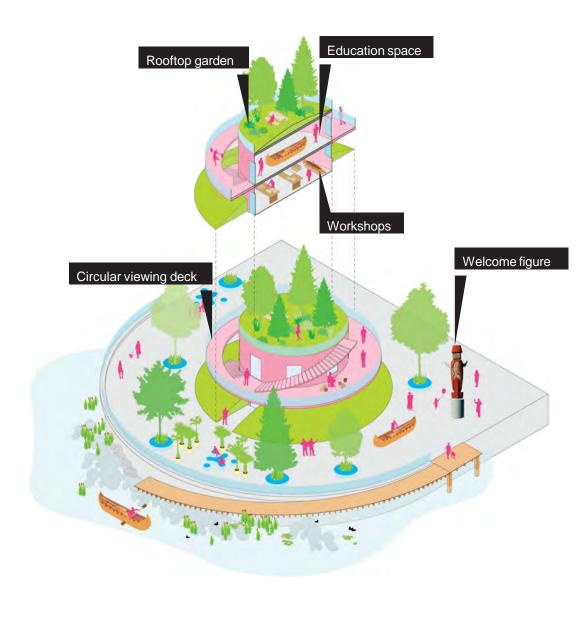
### Between Bridges tomorrow

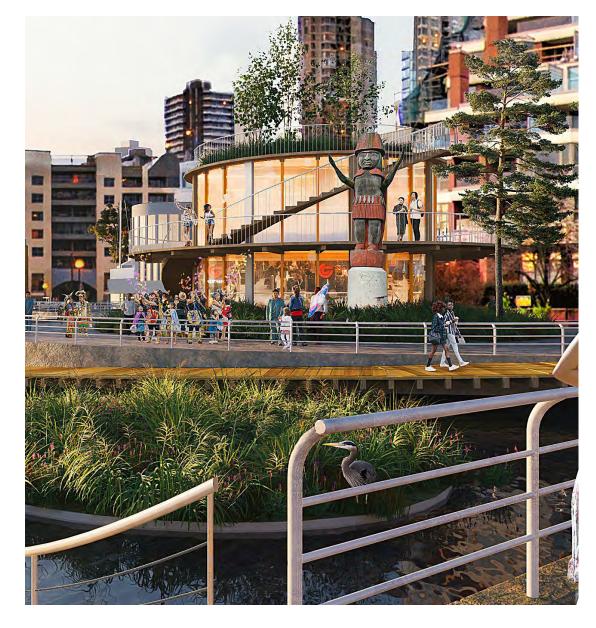
Between Bridges 2100: a Creative Community and Thriving Ecosystem

### Between Bridges Pilot projects - site overview



## Between Bridges Pilot projects: the Host Nations Pavilion





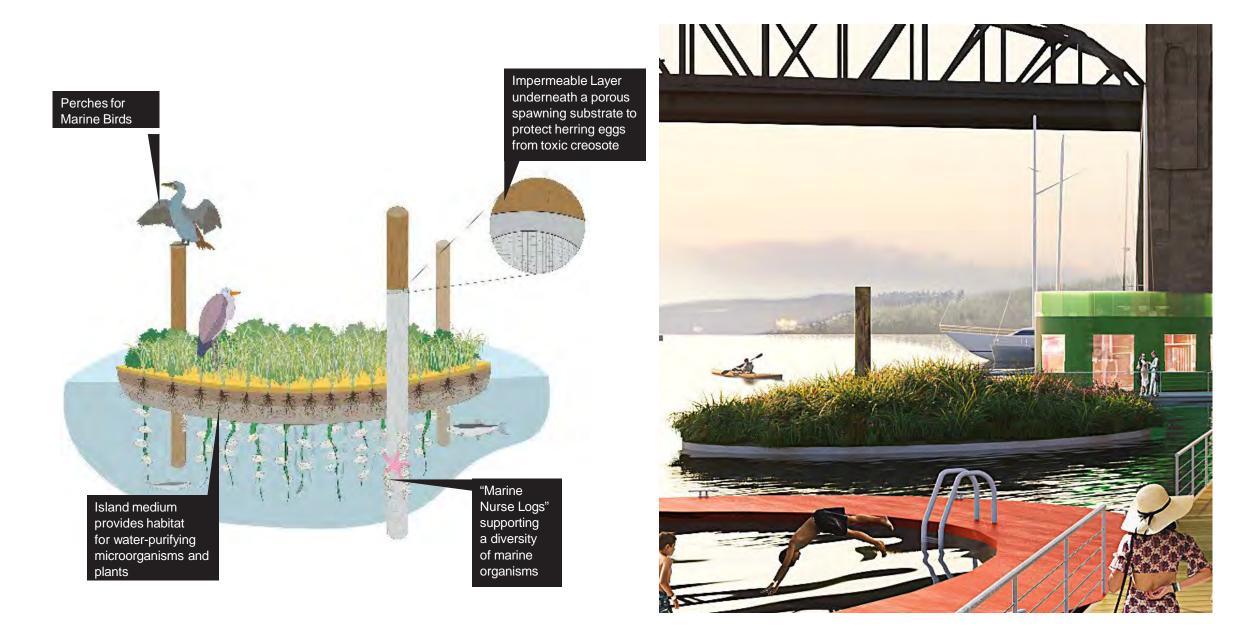






Basket weaving

### Between Bridges Pilot projects: the Floating Habitat Island





Vancouver's first fresh-water floating wetland at Trout Lake

A floating habitat island pilot project in Baltimor Harbour

Floating habitat under construction with volunteers in Chicago

Coopers Park



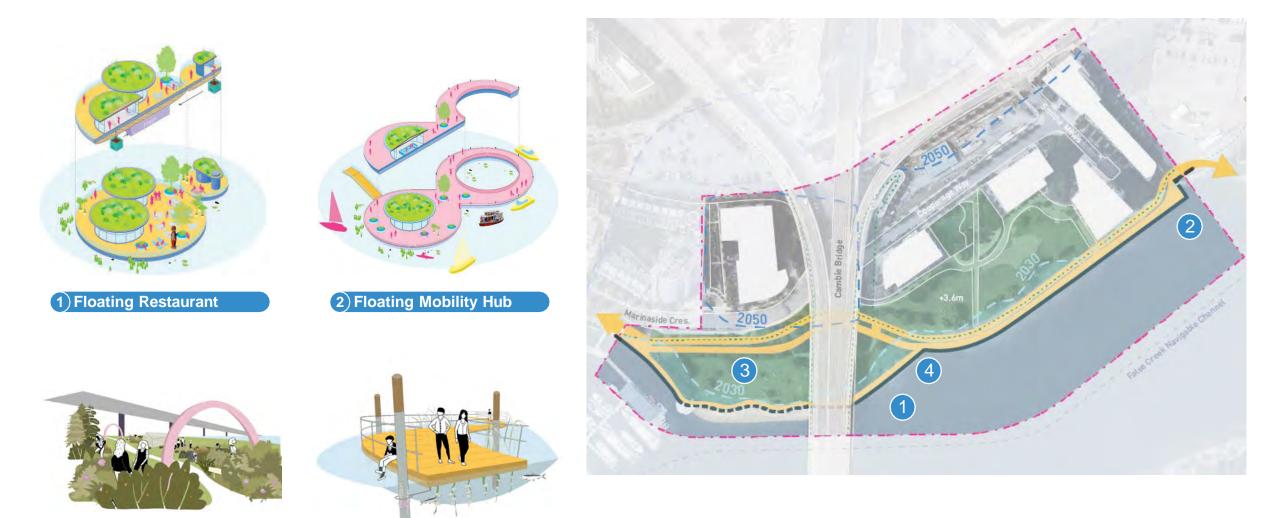
# Coopers Park tomorr

## Coopers Park 2100: the Tidal Community of False Creek

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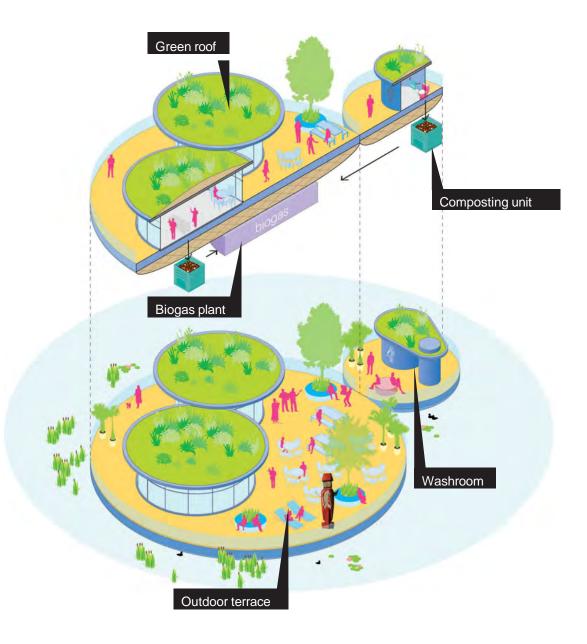
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### Coopers Park Pilot projects - site overview



4 Floating Walkway

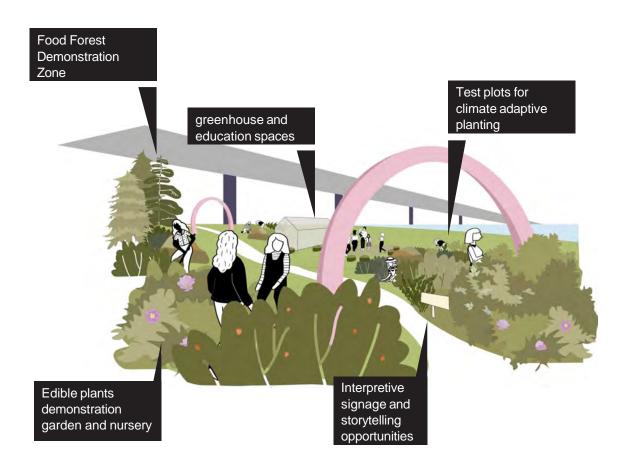
### Coopers Park Pilot projects: the First Nations Restaurant







## Coopers Park Pilot projects: Coast Salish Native Plant Nursery



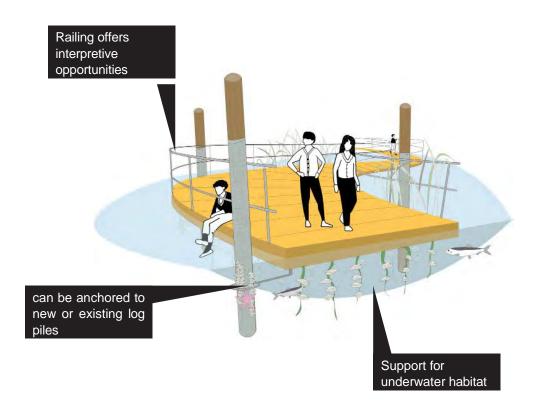


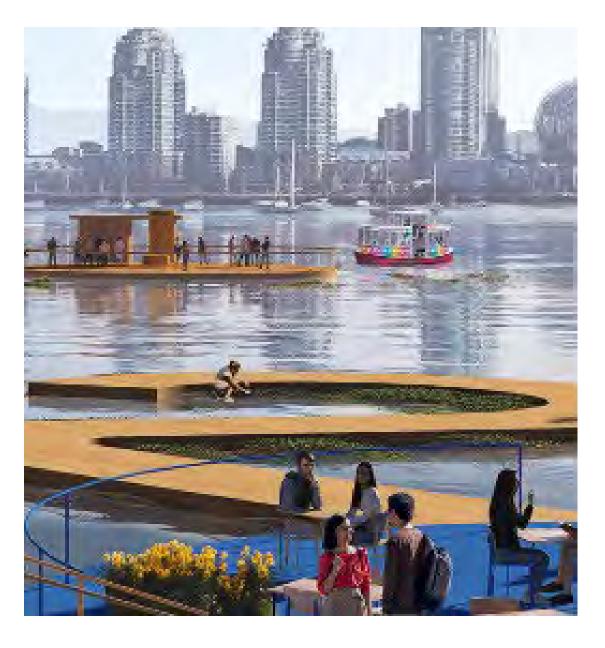


Indigenous Health Research and Education Garden (IHREG) at UBC Farm

Maplewood Flats Coast Salish Plants Nursery Free Spirit Nursery in Langely BC

### Coopers Park Pilot projects: the Floating Walkway







The Wild Mile Floating Park, Chicago

South Visitor Center Park, Fuxian Lake, China



# THANK YOU!

