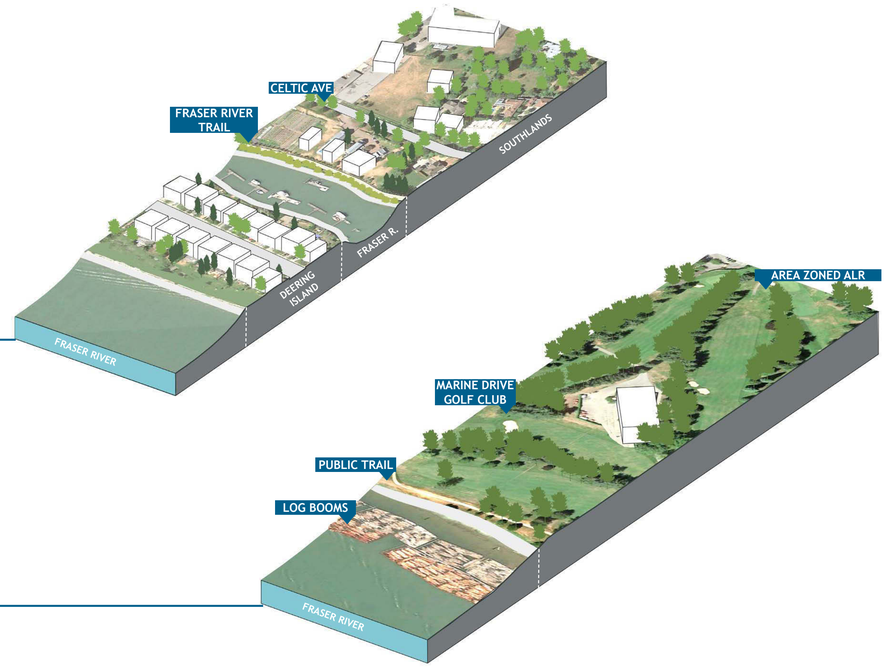
FRASER RIVER WEST
CURRENT CONDITIONS

Existing land uses include residential areas, three golf courses, parks, trails, and a number of equestrian facilities. Musqueam Indian Band's principal reserve is located in the area as well. A large portion of the area is located in the provincial Agricultural Land Reserve.



View west of rock revetment south of Celtic Ave. (G. Farstad, March 2014)

Marine Drive Golf Club course (G. Farstad, March 2014)

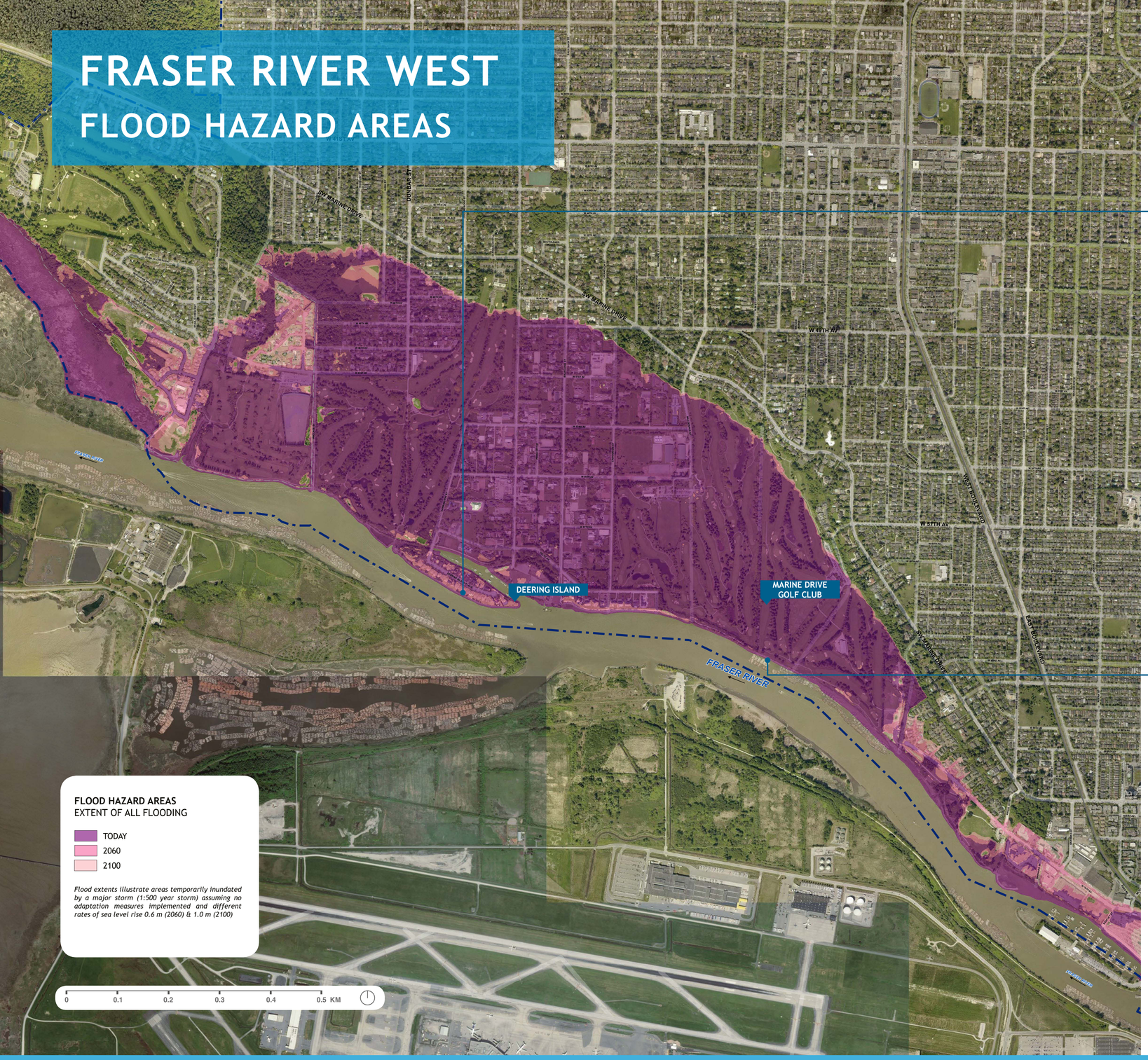
Recent housing constructed above grade along 53 Ave. (G. Farstad, March 2014

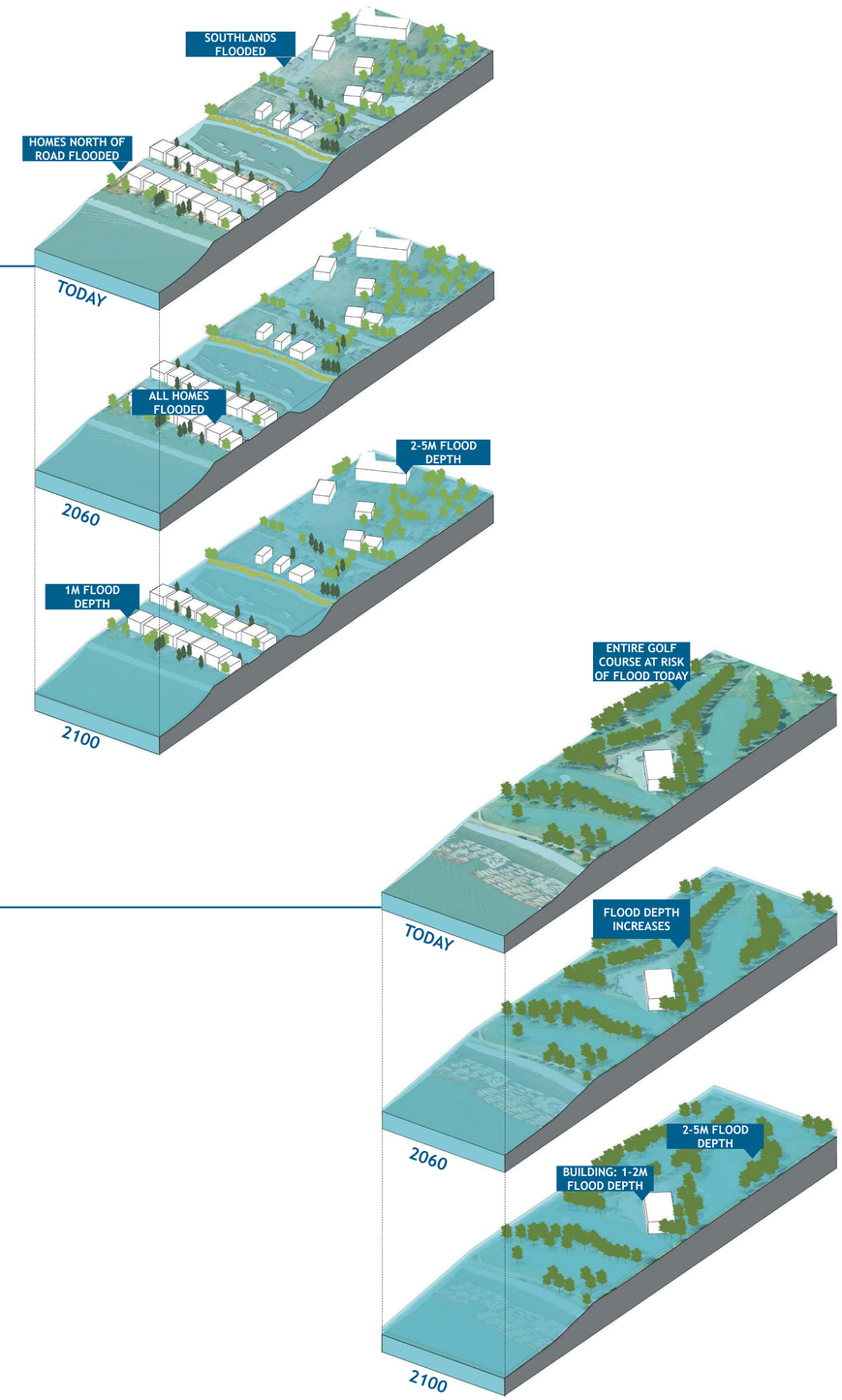
Deering Island from Carrington Street access at west end (G. Farstad, March 2014)

COASTAL ADAPTATION PLAN
FRASER RIVER FORESHORE

CITY OF VANCOUVER

FRASER RIVER WEST
FLOOD HAZARD AREAS





COASTAL ADAPTATION PLAN
FRASER RIVER FORESHORE

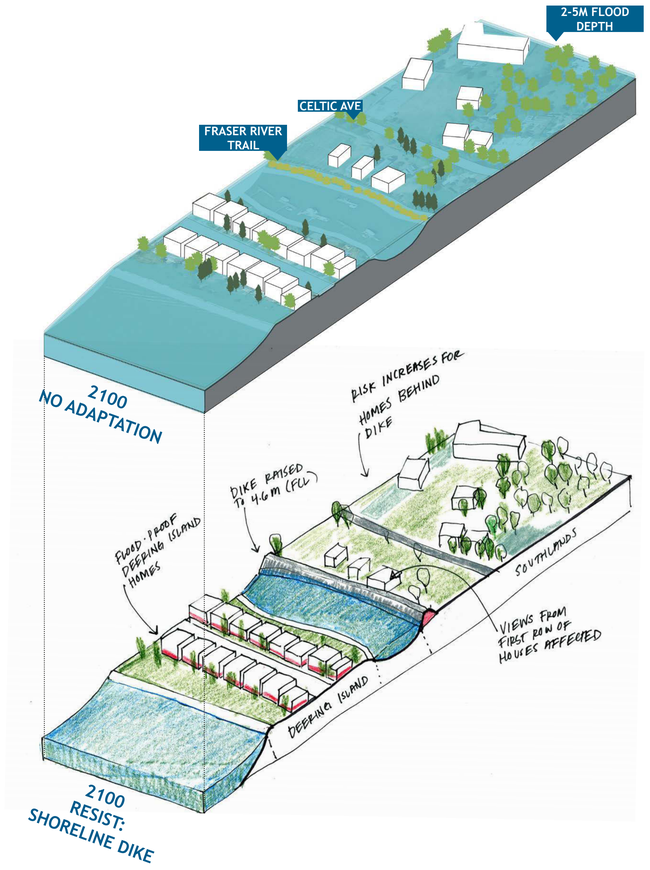
CITY OF VANCOUVER

FRASER RIVER WEST
ADAPTATION OPTIONS: RESIST

WHAT:
Raise the existing trail by 1.3 m to 3 m to meet flood construction level (4.6m). Alignment to be determined.

PROS:
- Will protect people and land
- Opportunities for co-benefits

CONS:
- Requires significant drainage infrastructure
- Could be technically unviable due to soils and seismic concerns
- Views would be affected
- Port jurisdiction below high tide mark could pose challenge
- Riprap edge would have negative impacts on the environment and fish habitat
- Requires on-going maintenance and must be raised and upgraded over time as sea level rise continues



DRAFT!
FOR DISCUSSION PURPOSES ONLY

WHAT THIS COULD LOOK LIKE

Raised Dike in Front of Homes
Concept Rendering

Middle Arm Dike, Richmond
"A time with nature"

COASTAL ADAPTATION PLAN
FRASER RIVER FORESHORE

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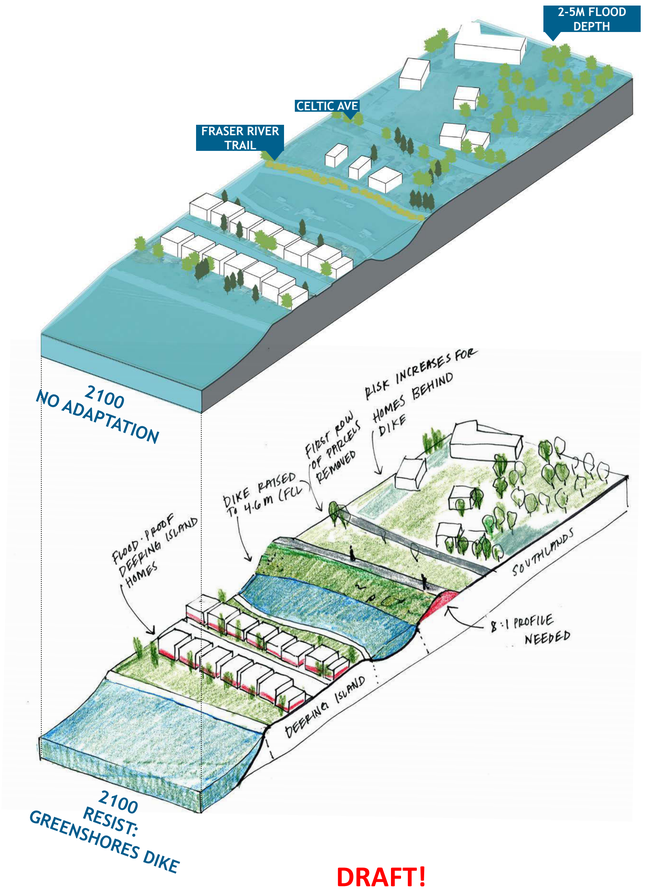
CITY OF VANCOUVER

FRASER RIVER WEST
ADAPTATION OPTIONS: RESIST

WHAT:
Raise the existing trail by 1.3 metres to 3 metres to meet flood construction level (4.6m). Use “green shores” techniques and gradually slope dike. Alignment to be determined.

PROS:
- Will protect people and land
- Opportunities for co-benefits
- Works with natural processes and reduces erosion
- Opportunity to enhance habitat

CONS:
- Requires significant drainage infrastructure
- Could be technically unviable due to soils and seismic concerns
- Views would be affected
- Port jurisdiction below high tide mark could pose challenge
- Some land loss



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FOR DISCUSSION PURPOSES ONLY

WHAT THIS COULD LOOK LIKE

Jericho Beach

East Fraser Lands
City of Vancouver

COASTAL ADAPTATION PLAN
FRASER RIVER FORESHORE

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CITY OF VANCOUVER

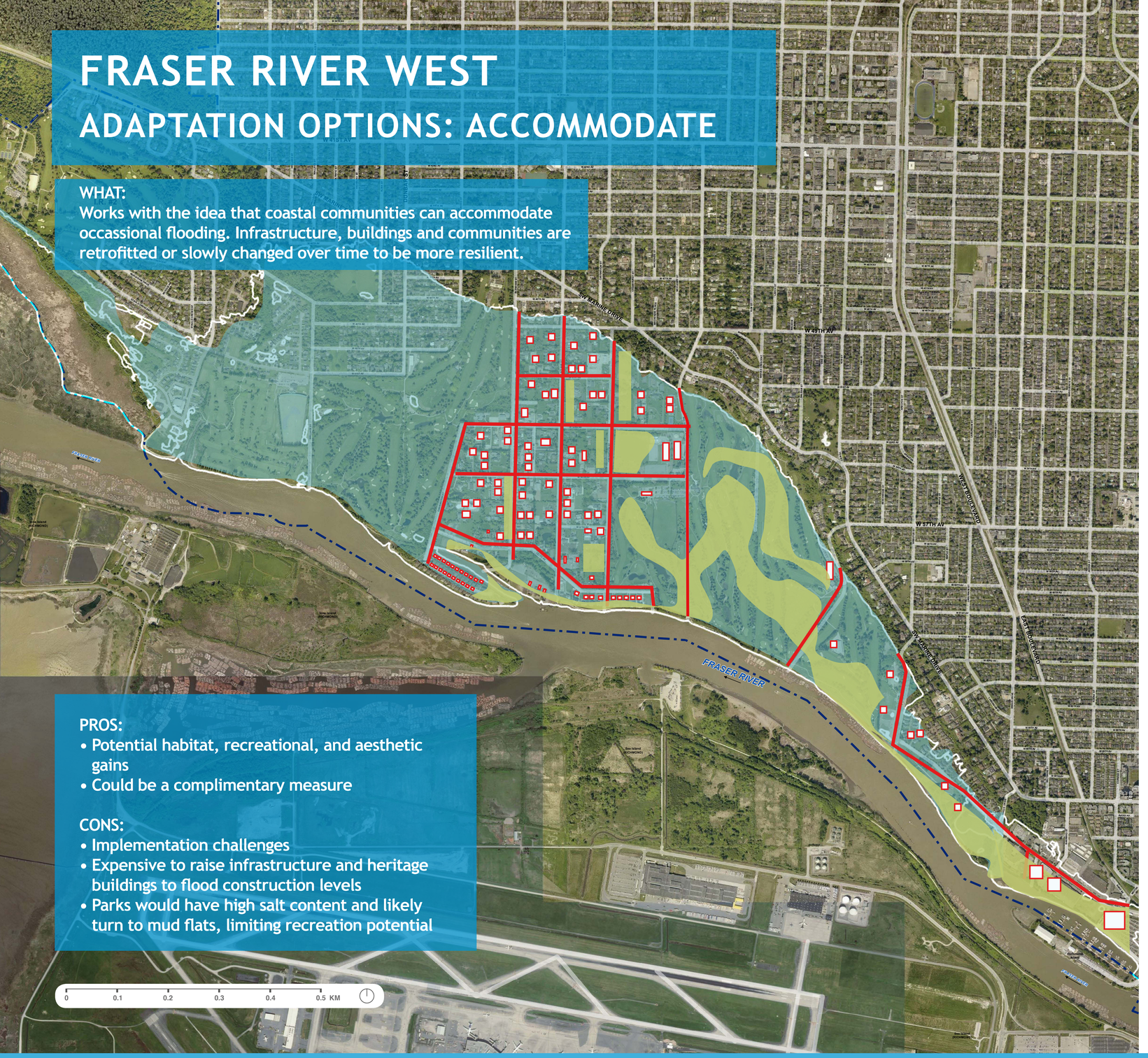
FRASER RIVER WEST

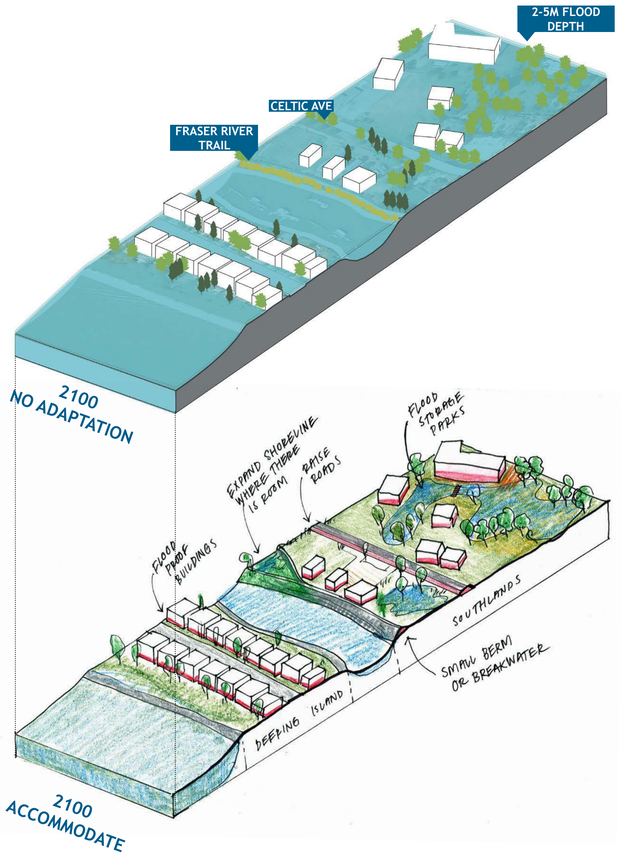
ADAPTATION OPTIONS: ACCOMMODATE

WHAT:
Works with the idea that coastal communities can accommodate occassional flooding. Infrastructure, buildings and communities are retrofitted or slowly changed over time to be more resilient.

PROS:
- Potential habitat, recreational, and aesthetic gains
- Could be a complimentary measure

CONS:
- Implementation challenges
- Expensive to raise infrastructure and heritage buildings to flood construction levels
- Parks would have high salt content and likely turn to mud flats, limiting recreation potential





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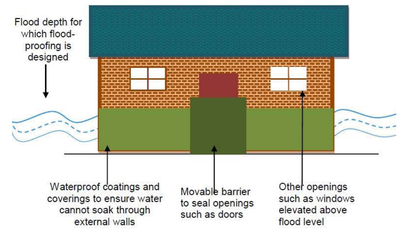
WHAT THIS COULD LOOK LIKE

Lower Don Lands Concept, Toronto
Michael Van Valkenberg



Flood Proof Homes and Buildings
Linham and Nicholls

COASTAL ADAPTATION PLAN
FRASER RIVER FORESHORE

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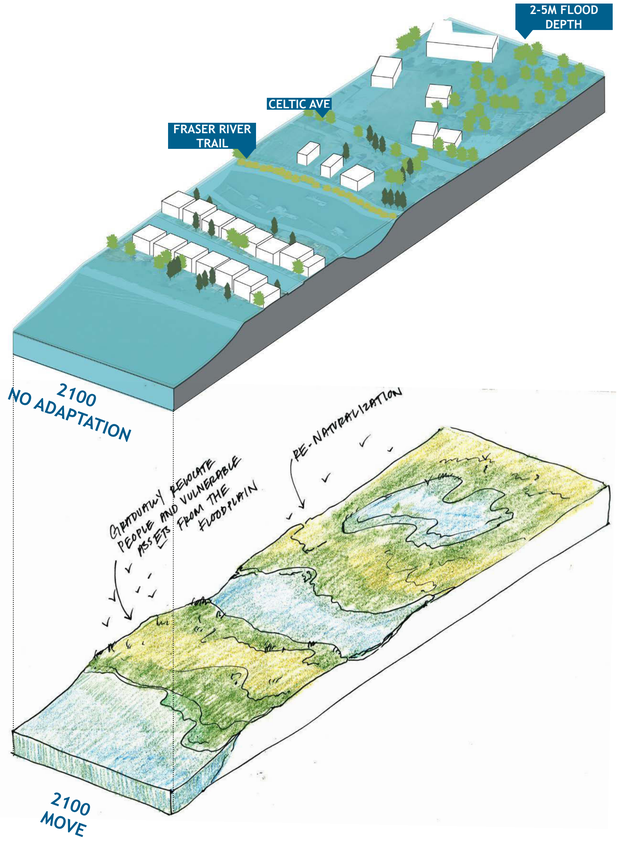
CITY OF VANCOUVER

FRASER RIVER WEST
ADAPTATION OPTIONS: MOVE

WHAT:
Slowly remove people and vulnerable assets from the floodplain over time followed by re-naturalization

PROS:
- Potential habitat, recreational, and aesthetic gains
- Would remove flood risk from seismic hazards
- Long term strategy that will work regardless of sea level rise rates

CONS:
- Implementation challenges
- Relatively expensive
- Would not be implemented immediately, so would require decades before it is effective



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FOR DISCUSSION PURPOSES ONLY

WHAT THIS COULD LOOK LIKE

Fraser River Marsh
Larry Pynn, Vancouver Sun

COASTAL ADAPTATION PLAN
FRASER RIVER FORESHORE

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CITY OF VANCOUVER