# Qualicum Beach Waterfront

Beach protection and enhancement concept


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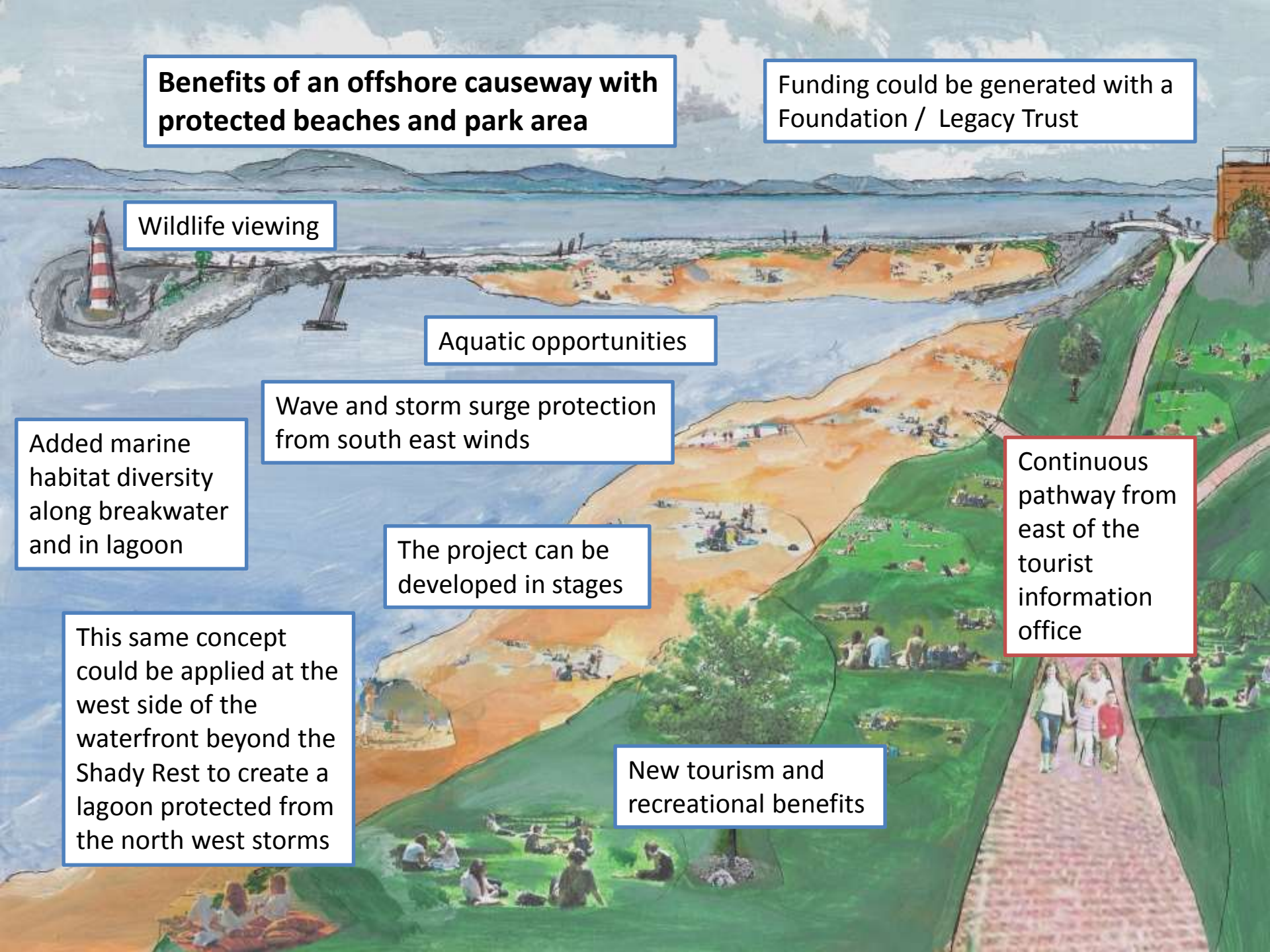
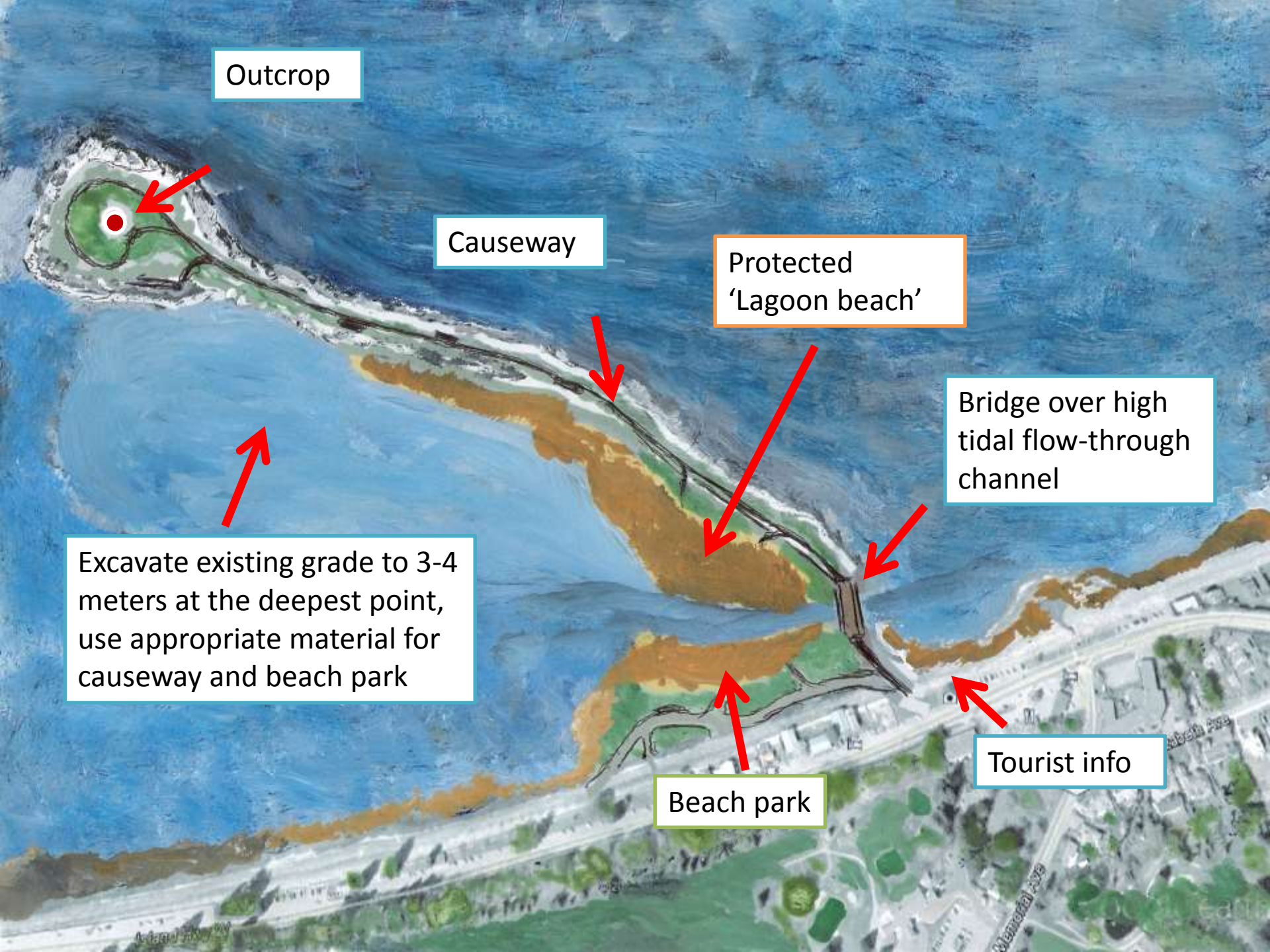
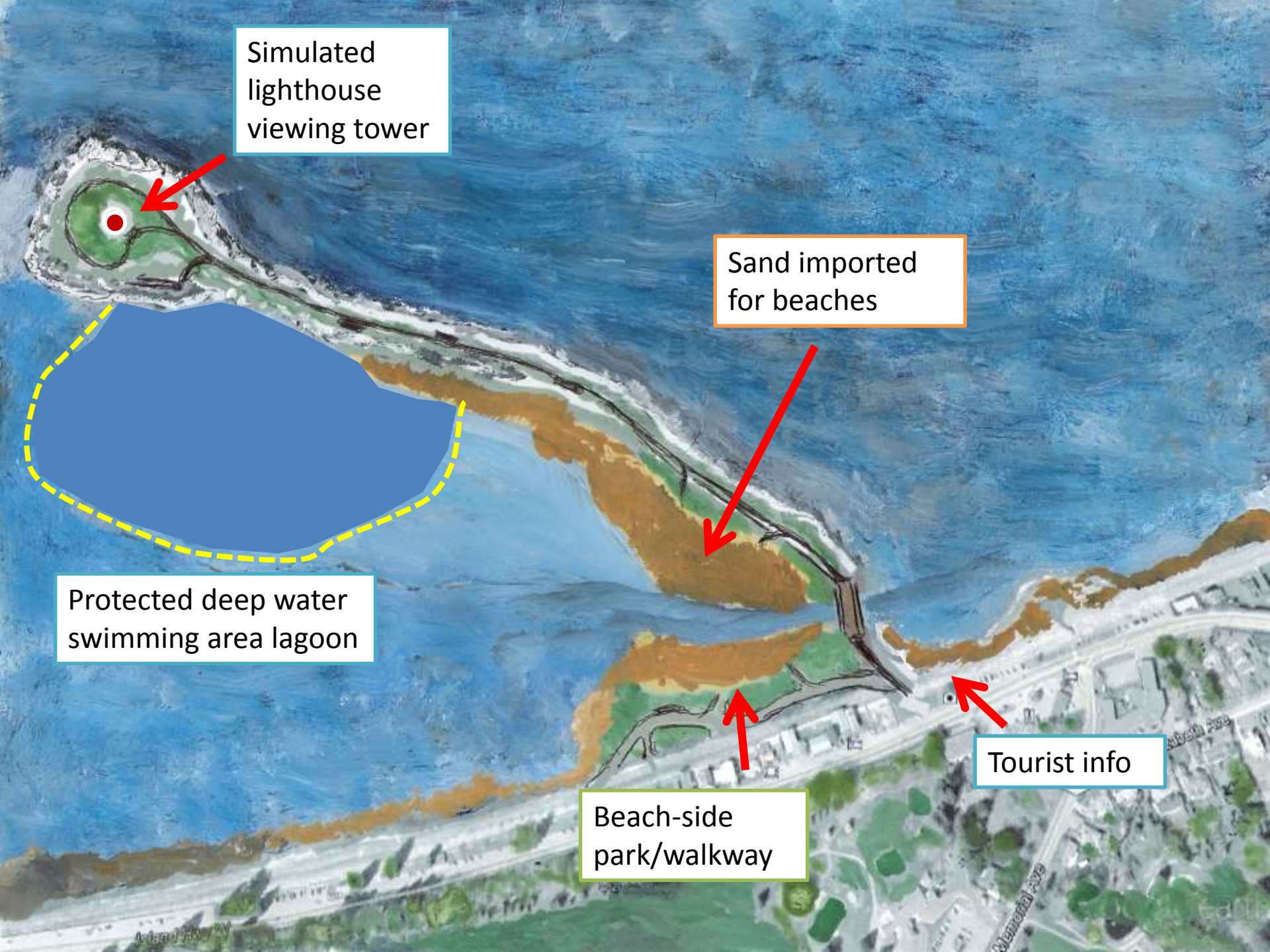
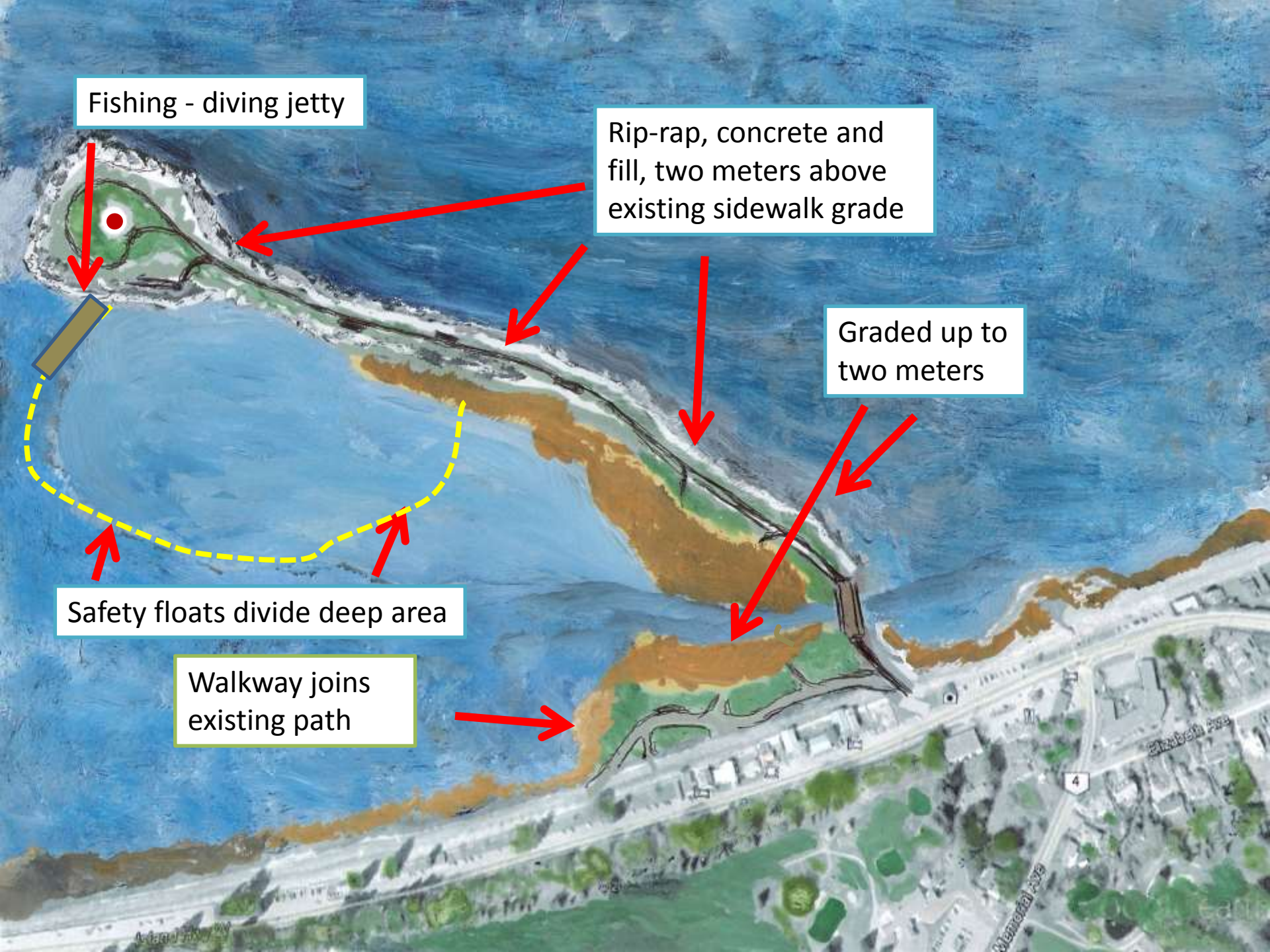
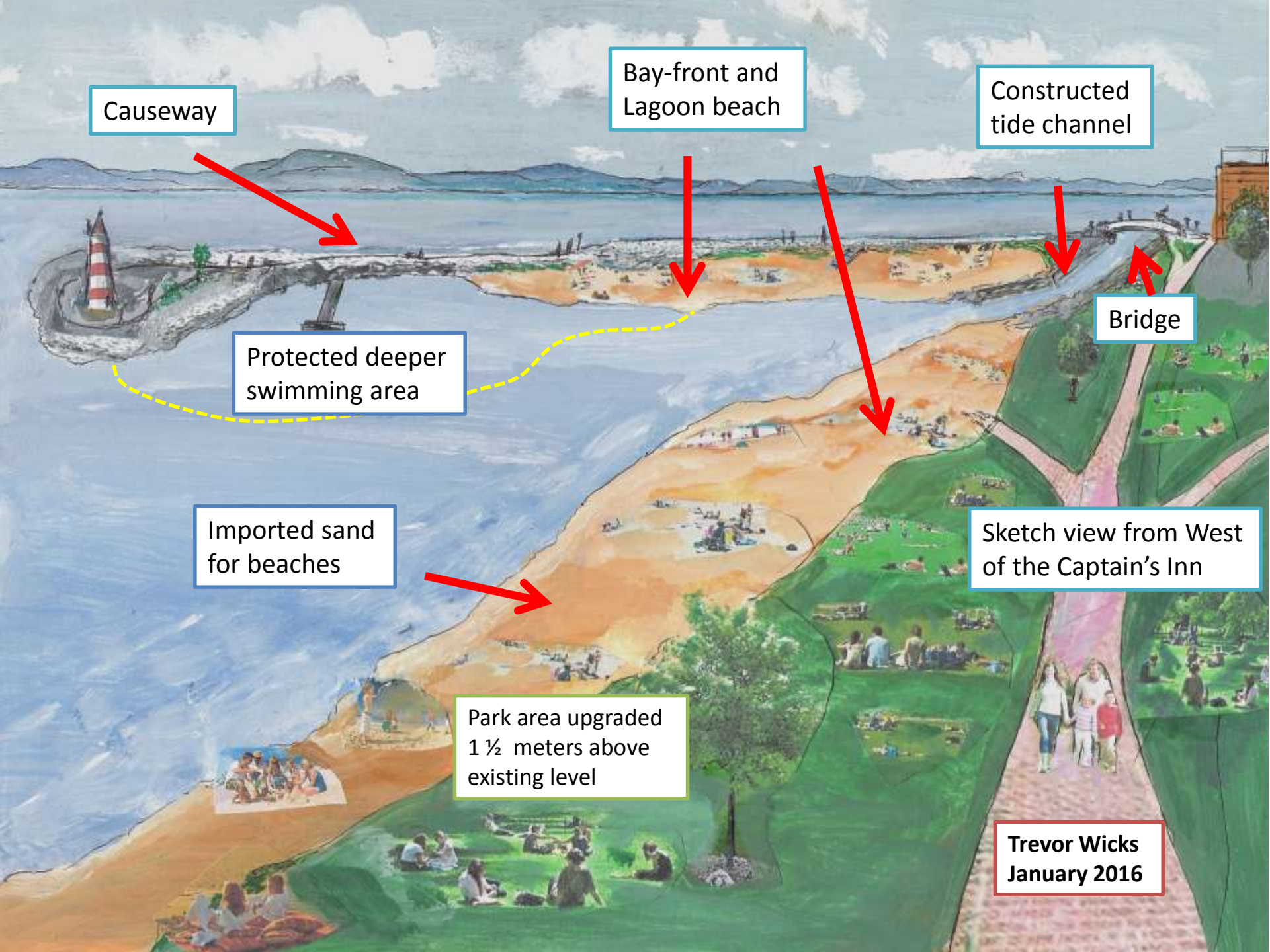
Trentec Innovative Solutions
November 2015
www.innovationbc.com


Benefits of an offshore causeway with protected beaches and park area
Funding could be generated with a Foundation / Legacy Trust
Wildlife viewing
Aquatic opportunities
Wave and storm surge protection from south east winds
Added marine habitat diversity along breakwater and in lagoon
The project can be developed in stages
Continuous pathway from east of the tourist information office
This same concept could be applied at the west side of the waterfront beyond the Shady Rest to create a lagoon protected from the north west storms
New tourism and recreational benefits


Outcrop
Causeway
Protected
'Lagoon beach'
Bridge over high
tidal flow-through
channel
Excavate existing grade to 3-4
meters at the deepest point,
use appropriate material for
causeway and beach park
Tourist info
Beach park


Simulated lighthouse viewing tower
Sand imported for beaches
Protected deep water swimming area lagoon
Tourist info
Beach-side park/walkway


Fishing - diving jetty
Rip-rap, concrete and fill, two meters above existing sidewalk grade
Graded up to two meters
Safety floats divide deep area
Walkway joins existing path

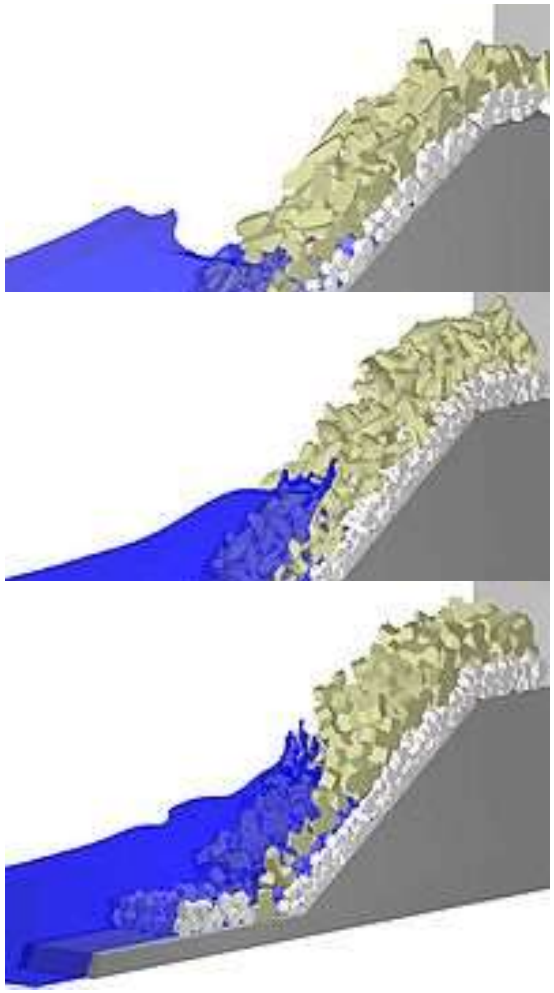

Causeway
Bay-front and Lagoon beach
Constructed tide channel
Bridge
Protected deeper swimming area
Imported sand for beaches
Sketch view from West of the Captain's Inn
Park area upgraded 1 ½ meters above existing level
Trevor Wicks
January 2016

Examples of offshore sea defences at locations around the South East coast of England


These types of installation have been built in many places around the world

Sea defences and breakwater structures can take many forms

Rubble mound breakwaters use structural voids to dissipate the wave energy. Rock or concrete armour units on the outside of the structure absorb most of the energy, while gravels or sands prevent the wave energy's continuing through the breakwater core.



The force of winter storms are dissipated by a breakwater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Wave attenuation and storm damage mitigation
Are used to protect and enhance waterfronts
around the world

Synthetic rubberised bladders filled with sand are used in the Caribbean to provide safe swimming areas.

Sea defence structures can vary considerably in design and function


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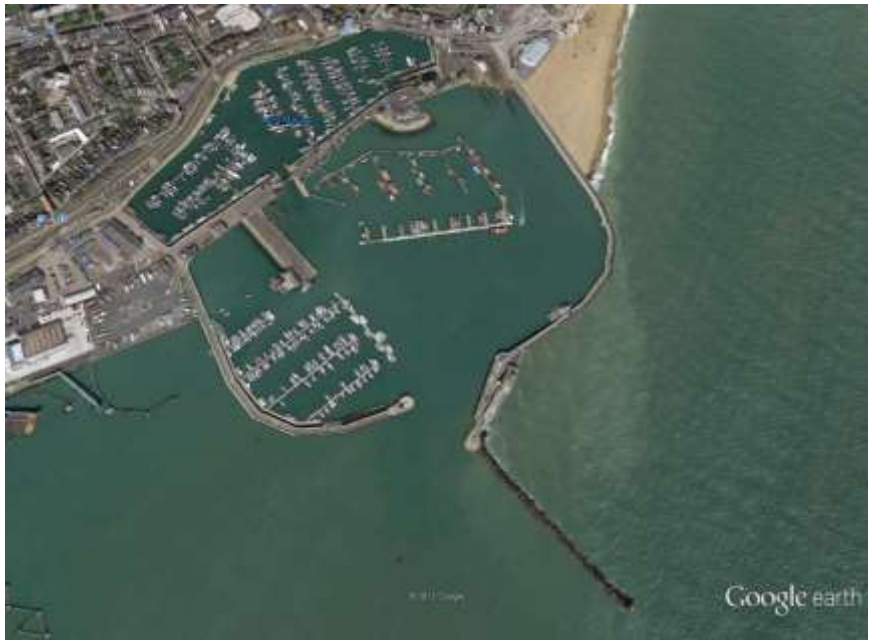


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