

DOCKSIDE GREEN

Victoria, B.C., Canada



21st CENTURY DEVELOPMENT

Case Studies



Size: 23 acres, 282 residential units

Dates: 2009- ongoing

Team: Architect: Michael Tavel Architects, Landscape Architect: David Kahn Studio

Description: The Geos Neighborhood is a mixed use community revitalization project built on former industrial land.

Intent: Utilize sustainable neighborhood practices to create a people oriented community that enhances the environment and deters sprawl.



SITE + PLACE

GOALS: (Food) ;(Habitat+Biodiversity) ;(Transportation)

STRATEGIES: (Food) Urban agriculture, food truck locations; (Habitat+Biodiversity) Indigenous planting in constructed wetlands, roof garden, green roofs; (Transportation) Emphasis on public transportation for access to services, bike infrastructure, car share co-op, preferred parking+charging stations for electric vehicles, access to public transport



WATER

GOALS:

STRATEGIES: Waste water treatment plant; consumption meters in each unit; 65% reduction in consumption compared to similar conventional projects; constructed wetlands for waste water; grey water recycled for non-potable use.



ENERGY

GOALS: Net energy producer, residential units 50% more efficient than code.

STRATEGIES:LEED Platinum; LEED for Neighbourhood Development; 50% higher efficiency than CMNEC; biomass plant; cogeneration; individual metering; heat recovery ventilation' natural gas backup; carbon footprint monitors; resident education



EQUITY

Percentage of affordable units: 10

GOALS:

STRATEGIES: Biophilic design; access to waterfront; mixed use development creating close access to services



MATERIALS + WASTE

GOALS: (Materials) ;(Waste)

STRATEGIES: (Materials) Reduce construction waste, use recycled material with low embodied energy, LCAs for materials, 40% flyash concrete; (Waste) Sewage treatment plant for 100% site sewage, recycling, reuse of construction materials

SUSTAINABILITY MATRIX

		STANDARD	GOOD	BETTER	LIVING COMMUNITY	REGENERATIVE
S Site+Place	Limits to growth			Built on greyfield/ brownfield, developed for density, conserves habitat land		
	Urban Ag		Some community garden space			
	Habitat Exchange		Landscaping includes parks, some emphasis on storm water management.			
	Human Powered Living		Promotes walkable streets, bicycle infrastructure, access to some services			
W Water	Net Positive Water			Greywater purification+re-use, on-site treatment of some blackwater, constructed wetlands, storm water prevention through green-roofs+impermeable surfaces		
E Energy	Net Positive Energy			2030 standards of efficiency, advanced construction techniques, ongoing goals monitoring, net positive energy goals, carbon neutral goals, 100% renewable energy		
H Health+ Happiness	Civilized environment		Community has some groups to promote social connections			
	Healthy Neighborhood design			Access to walking and bike trails connecting amenities, parks, recreation areas		
	Biophilic Environment				Innovative landscape encourages human/nature connection, aesthetic design	
	Resilient Community Connections	Nothing considered/ not reported				
M Materials	Living Material Plan		Some material selection standards, passive house standards			
	Embodied Carbon Footprint			Material selection requirements, proxy standards for reducing CO2 in material selection+construction on-going energy monitoring		
	Net Positive Waste			Reduction in construction waste, material selection for recycled/recyclable materials, innovative waste collection facilities, waste to energy		
	Human Scale and Humane Places		Project contains some elements of human-scaled design			
E Equity	Universal Access to Nature and Place			Access to parks, innovative landscaping, promotes sense of place, community agriculture, daylighting		
	Universal Access to Community Services		Some services+community centers in development accessible by bike/walking			
	Equitable Investment	No contribution to charity				
B Beauty	Beauty and Spirit					
	Inspiration and Education			Unit metering, education on sustainable practices, opportunities for community engagement		

SOURCES:

- <http://www.docksidegreen.com/>
- <http://www.terrain.org/unsprawl/25/>
- <http://perkinswill.com/work/dockside-green.html>
- <http://docksidegreenenergy.com/>
- <http://rjc.ca/dockside-green>