

ROYAL SEAPORT | Stockholm, Sweden



Size: 586 acres, 10,000 new homes, 30,000 new jobs, prepare for increasing precipitation

Dates: 2009-2030

Team: City of Stockholm, Fortum energy company

Description: The Royal Seaport is an urban re-development and sustainable district that aspires to showcase state of the art environmental technologies

Intent: Support Swedish environmental technology, contribute to the development of new technologies, by 2020 CO2 emissions will be less than 1.5 tonnes per person, adapt to future climate change, by 2030 fossil fuel free

S
Sit+Place

GOALS: (Food) Not defined ; (Habitat+Biodiversity) Not defined ; (Transport) Not defined

STRATEGIES: (Food) 63 plots for urban gardening ; (Habitat+Biodiversity) Green space index tool for developers, green roofs, green facades, bee keeping, soil remediation, large parks to the north and south connected by pathways, beekeeping, soil re-mediated ; (Transport) Mobility index tool for developers, biogas bus, subway, boat bus, tram, bicycle infrastructure, 2.5 bike spaces per apartment, electric vehicle infrastructure, planned carpool vehicles, 2.5 mile nature trail

W
Water

GOALS: Not defined

STRATEGIES: Stormwater system organized under streets, Green Space Index for storm water planning

E
Energy

GOALS: Fossil fuel free by 2030, reduce; CO2 emissions below 1.5 tonnes or 25% per inhabitant, fossil fuel free by 2030.

Energy Demand: Estimated around 55 KWh/m²

STRATEGIES: Adapt to future climate models, monitoring target achievement, developers that worked on Hammarby Sjostad share knowledge, Plus-energy competition, smart grid to balance energy and heating needs, planned combined heat and power bio-fuelled plant will produce 10% electricity, 25% district heating needs, heat recovery ventilation, innovation competitions, solar PV, waste management system reduces energy use by about 30%

E
Equity

Percentage of affordable units: Not defined

GOALS: Not defined

STRATEGIES: Diversity of apartments options: tenant owned, rentals, student housing, Green Building tool Gold rating for indoor air quality must be achieved, education on the designated sustainable district and enabling sustainable choices, 1% of investments committed to art, community involvement, outdoor public space

M
Materials

GOALS: (Materials) Not defined ; (Waste) Not defined

STRATEGIES: (Materials) Extensive use of LCA analysis with the development of a calculation tool, working with industry professionals to develop innovative solutions, Life Cycle Costing for innovative strategies, material suppliers must declare toxicity of products, collaboration between services providers resulting in efficient and organized development ; (Waste) Not reported

SUSTAINABILITY MATRIX

		STANDARD	GOOD	BETTER	LIVING COMMUNITY	REGENERATIVE
S Site+Place	Limits to growth			Built on greyfield of brown-field, developed for density, conserves habitat land		
	Urban Ag			Opportunity for every resident to have access to community garden, green-house, local farm education		
	Habitat Exchange			Constructed wetlands, land set aside, native plantings, 25% + of developable space is undeveloped		
	Human Powered Living				Pedestrian oriented community, public transit linkage to services, public bike infrastructure	
W Water	Net Positive Water			Greywater purification & reuse, on-site treatment of some blackwater, constructed wetlands, stormwater prevention (green-roofs & impermeable surfaces)		
	Net Positive Energy			2030 standards of efficiency, advanced construction techniques, ongoing monitoring to meet goals, net +ve energy, carbon neutral goals, 100% renewable energy		
E Energy	Civilized Environment			Community has some organization & collaborates on 1-2 of the living community listed programs		
	Healthy Neighborhood Design			Access to walking and bike trails that connect to amenities, parks, recreation areas		
	Biophilic Environment				Innovative landscaping, designed to include elements that encourage human/nature connection, aesthetic design	
	Resilient Community Connections	Nothing considered/ not reported				
H Health+ Happiness	Living Material Plan			Rigorous material selection standards, material plan made available to public		
	Embodied Carbon Footprint			Material selection requirements, proxy standards for reducing CO2 in material selection and construction on-going energy monitoring		
	Net Positive Waste		Material selection for recycled/recyclable materials, waste collection facilities, reduction standards			
	Human Scale and Humane Places			Access to parks, innovative landscaping, promotes sense of place, community agriculture, daylighting in buildings		
M Materials	Universal Access to Nature and Place			Access to parks, innovative landscaping, promotes sense of place, community agriculture, daylighting in buildings		
	Universal Access to Community Services		Some services & community centers in development accessible by bike or walking			
	Equitable Investment	No contribution to charity				
E Equity	Beauty and Spirit Inspiration and Education				Educational website, brochures, education on buildings, landscaping & infrastructure, case study, metering, ongoing improvements	

SOURCES:

- http://www.c40.org/case_studies/stockholm-royal-seaport
- https://ecodistricts.org/wp-content/uploads/2013/05/Royal_Seaport.pdf
- <http://www.wsp-pb.com/en/What-we-do/Transport-and-Infrastructure/Projects/Stockholm-Royal-Seaport/>
- <http://www.stockholmsolarchallenge.com/competitions/stockholm-solar-challenge/pages/about-the-royal-seaport>
- <http://www.symbiocity.org/en/approach/Cases-undersidor/Stockholm-Royal-Seaport-eco-living-on-the-waterfront/>
- <http://www.stockholmroyalseaport.com/sv/>
- <http://ec.europa.eu/ourcoast/download.cfm?fileID=918>
- <http://international.stockholm.se/city-development/the-royal-seaport/>



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