

HAMMARBY SJÖSTAD | Stockholm, Sweden



Size: 495 acres, 9000 units

Dates: 1995-2015

Team: Eskil Sundahl and Arthur von Schmalensee

Description: Hammarby aspires to develop an innovative sustainable urban greyfield development with closed-loop resource systems and a pedestrian friendly design

Intent: Unify energy, water and waste infrastructure, reduce vehicle use, develop efficient infrastructure

S

Sit+Place

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

STRATEGIES: (Food) Not reported ; (Habitat+Biodiversity) Green roofs and roof top gardens for storm water retention, tree plantings, lake with wetland habitat ; (Transport) Tram line, biogas fueled public transportation, ferries, carpooling, pedestrian path ways, bicycle infrastructure

W

Water

GOALS: 53 gal/person/day, hazardous substances in water reduced by 50%, 95% of phosphorus separated and returned to agriculture

STRATEGIES: Water to biogas, storm water runoff cleaned locally, rain water collection in a landscaped canal purified through constructed wetlands and is delivered to Lake Hammarby Sjö, test wastewater facility for innovative technologies

E

Energy

GOALS: 50% reduction in energy consumption

STRATEGIES: Solar PV and battery storage, solar hot water heating, hydro-power, bio-gas for transportation, district heating, co-generation for heat and electricity, metering

E

Equity

Percentage of affordable units: Not obligated to provide affordable housing
GOALS: 50% rental, 50% owner-occupied, promote a sense of community

STRATEGIES: Social sustainability principles: balanced public and private mixed use community, walkable, accessible services, public art, environmental education, cultural activities

M

Materials

GOALS: (Materials) Selection of sustainable materials ; (Waste) 20% waste reduction

STRATEGIES: (Materials) Double glazed facades, low energy appliances, products need to prove that they can be recycled at the end of their life, contractors required to follow material specifications, select non-toxic materials ; (Waste) Solid waste sorting through underground vacuum system, fertilizer from bio-gas digestion, waste water from co-generation plant circulates city in cooling network

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		Some community garden space			
	Habitat Exchange			Constructed wetlands, land set aside, native plantings, 25% + of developable space is undeveloped		
	Human Powered Living			Walkable streets, bicycle infrastructure, public transit links, car sharing, EV charging stations, easy access to services		
W Water	Net Positive Water		Some stormwater reuse or infiltration, grey water recycling, conservation goals			
	Net Positive Energy		2030 standards goal of efficiency, some reduction goals for energy & carbon, some renewable energy, solar PV ready			
E Energy	Civilized Environment			Community has some organization and collaborates on 1-2 of the living community listed programs		
	Healthy Neighborhood Design			Access to walking and bike trails connecting 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			Project is designed to create human-scaled places, promotes culture & interaction		
M Materials	Universal Access to Nature and Place			Diversity of services available in community easily accessible by different modes of transportation		
	Universal Access to Community Services			Diversity of services available in community easily accessible by different modes of transportation,		
	Equitable Investment	No contribution to charity				
	Beauty and Spirit				Public art is incorporated into the community	
E Equity	Inspiration and Education			Unit metering, education on sustainable practices, opportunities for community engagement		
B Beauty						

SOURCES:

- <http://www.thenatureofcities.com/2014/02/12/hammarby-sjostad-a-new-generation-of-sustainable-urban-eco-districts/>
- <http://www.aeg7.com/assets/publications/hammarby%20sjostad.pdf>
- <http://www.futurecommunities.net/case-studies/hammarby-sjostad-stockholm-sweden-1995-2015>
- <http://ourworld.unu.edu/en/hammarby-swedens-gold-medal-winning-eco-town>
- <http://bygg.stockholm.se/Alla-projekt/hammarby-sjostad/>
- <http://www.symbiocity.org/en/approach/Cases-undersidor/Hammarby-Sjostad-three-in-one/>



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