

EVA LANXMEER | Culemborg, Netherlands



Size: 300 units

Dates: 1993-ongoing

Team: ECO Consult Foundation Architects: opMAAT, KWSA architects, Joachim Eble Architektur, Studio Orta, BNA architects, BJ van den Brink

Description: A unique residential community designed to incorporate new environmental technologies through extensive planning and innovative solutions. The development includes residential units, commercial, and community buildings.

Intent: Provide a community that showcases sustainable innovations and allows people to be involved in their environment.

S

Sit+Place

GOALS: (Food) ; (Habitat+Biodiversity) Enhance wildlife ; (Transport) Promote public transportation and bicycle use

STRATEGIES: (Food) Greenhouses, organic food produced by the onsite farm, food also grown in public and private gardens throughout community ; (Habitat+Biodiversity) Green roofs, green zone of preserved open spaces, parks, gardens, extensive landscaping, neighborhood orchard, wetlands.

(Built on water abstraction zone that no previous building had been allowed, received permission based on sustainability measure) ; (Transport) Walking paths, access to public transportation, vehicle access limited

W

Water

GOALS:

STRATEGIES: Permeable pavement, groundwater drinking water, living machine planned, separation of water types, efficient appliances, rainwater harvesting for greywater, 5 retention ponds, grey water filtered through wetlands and re-used, black water to be used for biogas plant and fertilizer (Currently black water is connected to public sewer), water allowed to recharge aquifer

E

Energy

GOALS: Net zero energy, 100% renewable energy

STRATEGIES: Biogas plant, solar PV, monitoring program, infrastructure in place for wind energy, solar hot water and heating, high efficiency boilers and heat pumps, passive solar, tight enclosures that prevent thermal bridging, minimize impervious surfaces

E

Equity

Percentage of affordable units: 30%

GOALS: Link together formerly isolated communities with a variety of public spaces for all ages, ensure everyone has access to riverbanks

STRATEGIES: 38% rental units, community designed around the pedestrian, daylighting in buildings, balconies, greenhouse space attached to housing, community meetings, gardening and education on farming, website and case study on development

M

Materials

GOALS: (Materials) ; (Waste)

STRATEGIES: (Materials) Buildings materials selected for low environmental impact, wood as primary building material, recycled PVC ; (Waste) Waste water to biogas and fertilizer

SUSTAINABILITY MATRIX

		STANDARD	GOOD	BETTER	LIVING COMMUNITY	REGENERATIVE
S Site+Place	Limits to growth		Developed for density/limits growth, contains open space			
	Urban Ag				Urban Ag contributes to communities food source, integrated opportunities for agriculture using Floor Area Ratio	
	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				100% community water needs met by captured precipitation or closed loop water system, all water discharged treated and managed at the community scale: reuse or infiltration	
	Net Positive Energy			2030 standards of efficiency, advanced construction techniques, ongoing monitoring to meet goals, net +ve energy, 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		Community has some groups to promote social connections			
	Resilient Community Connections	Nothing considered/ not reported				
M Materials	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		
E Equity	Universal Access to Nature and Place			Access to parks, landscaping is innovative, promotes sense of place, community agriculture, daylighting for buildings		
	Universal Access to Community Services		Some services & community centers in development accessible by bike or walking			
	Equitable Investment	No contribution to charity				
B Beauty	Beauty and Spirit					
	Inspiration and Education		Some education on the developments attributes, some opportunities for community events			

SOURCES:

- http://energy-cities.eu/IMG/pdf/Sustainable_Districts_ADEME1_EVA-Lanxmeer.pdf
- <http://www.eva-lanxmeer.nl/>
- <http://www.urbangreenbluegrids.com/projects/eva-lanxmeer-living-lab/>
- <http://www.urbangreenbluegrids.com/projects/eva-lanxmeer-living-lab/>
- http://www.energy-cities.eu/IMG/pdf/urban_decentralization_evalanxmeer.pdf



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