

ARKADIEN | Stuttgart, Germany



Size: 5 acres, 120 units

Dates: 2002

Team: Architects: Eble Architects, Strenger, Landscape Architect: Atelier Dreiseitl

Description: Arkadien is a brownfield reclamation and new development of high density housing.

Intent: Target all ages by providing different housing types, develop innovative stormwater planning strategies that are aesthetic, promote a walkable community.

S

Sit+Place

GOALS: (Habitat+Biodiversity) Landscaping to help deter flooding ; (Transport) Promote walkable community with easy access to the greater city.

STRATEGIES: (Food) Not reported; (Habitat+Biodiversity) Landscaping designed to manage 200 year storm events, native plantings to promote diversity, filtration of water through pond into wetlands and meadow, green roofs; (Transportation) Underground car parking, limited access to vehicles, limited street parking, walking paths and pedestrian centric planning, access to train station

W

Water

GOALS: Reduction of impermeable surfaces by 65%

STRATEGIES: Permeable pavement for infiltration, rainwater collected from roofs, fourteen cisterns for storage, water reused for non-potable uses, stormwater ponds and streams incorporated into development, subtle storm water design throughout the built environment: channels in pathways, sloping, arrangement of buildings.

E

Energy

GOALS: Energy consumption goals.

STRATEGIES: Energy efficiency greater than code, advanced energy efficiency (arch 2030, passive house) on site renewable energy, passive ventilation/ heating, renewable energy off site.

E

Equity

Percentage of affordable units:

GOALS:

STRATEGIES: Public access to streets, human scale design, garden or balcony for each unit, views of green-space for all residents, walking distance to schools and services, community centers..

M

Materials

GOALS:

STRATEGIES: (Materials) Non-toxic materials, recycled and recyclable materials, preference for local materials, recycled construction waste into renovation of the site ; (Waste) Compost, on-site recycling services, residual waste facilities

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	no garden space required				
	Habitat Exchange		Landscaping includes parks, landscaping, 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 & reuse, on-site treatment of some blackwater, constructed wetlands, storm water prevention (green-roofs & impermeable surfaces)		
E Energy	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 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 using native plants, rain gardens, constructed wetlands, access to parks, waterfront, community gardening		
	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		Some proxy standards for reducing CO2 in material selection and construction			
	Net Positive Waste		Material selection for recycled/recyclable materials, waste collection facilities, reduction standards			
	Human Scale and Humane Places					
E Equity	Universal Access to Nature and Place			Access to parks, innovative landscaping, promotes sense of place, community agriculture, daylighting for buildings		
	Universal Access to Community Services		Some services and 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://inhabitat.com/arkadien-winnenden-is-a-family-earth-friendly-eco-village-near-stuttgart-germany/>
<http://www.treehugger.com/urban-design/award-winning-german-development-aims-worlds-most-sustainable-neighborhood.html>
<http://www.green-dot-awards.com/winners/zoom2.php?eid=3-460-11&uid=2226291&code=Build>



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