

PROJECT TELTOW-MÜHLENDORF

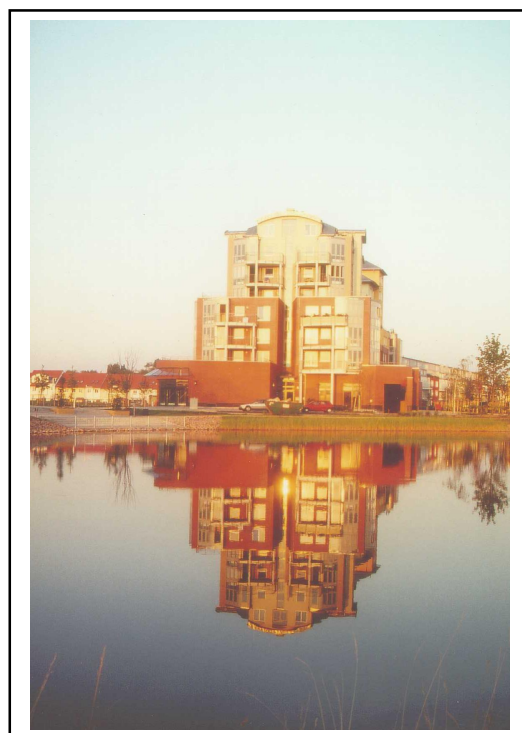
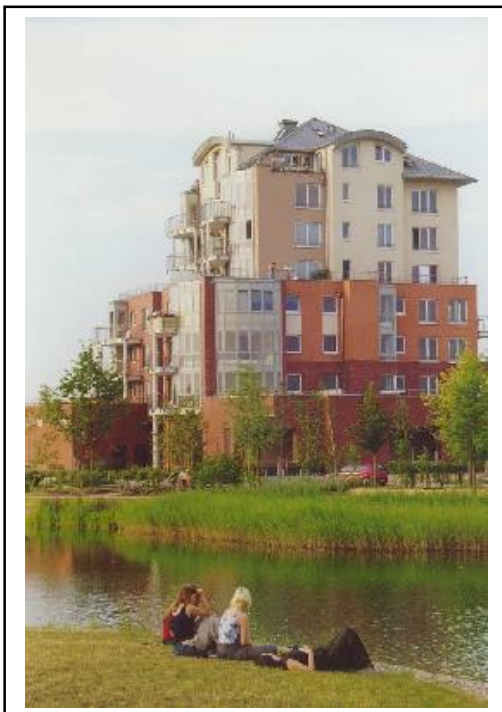
Storm Water Harvesting and Reuse Project

Terrain Modelling

This newly developed concept assumes that all of the storm water and the necessary excavation is to stay on the project site. Using the displaced earth (250 000 m³), the terrain has been modelled so that the surface water can be diverted to a centrally located pond, resulting in a rise of about 1 m in the ground level in the centre of the project. A considerable environmental stress has been prevented by not hauling away the excavated earth, which would have required approx. 25.000 truck loads.

Storm Water Disposals for Traffic Ways

The major goal of this design is to minimise the interference of the natural water regime within the project area. In spite of the high percentage of paved and otherwise sealed areas, the precipitation remains within the boundaries of the project. The storm water runoff from sidewalks, bicycle paths, parking lanes, pedestrian walkways, green areas and playgrounds is conveyed to the subsoil through local infiltration. The runoff from the streets is intercepted in lateral gutters and conveyed to three storm water purification facilities and, after being extensively biologically treated, fed to a central storm water pond. Surplus storm water is infiltrated when complete filling of the pond forces water over the edge into infiltration trenches located in the banks. The overflow is also biologically treated prior to the infiltration in vegetated filters.



Storm Water Disposal and Residential Lots

The precipitation from all rooftops is stored in cisterns and from there made available to the residents to be used as non-potable water substitution. The surplus water is to be led to infiltration trenches. The pond water will be circulated through four natural-looking channels (flowing brooks), which run through the residential areas.

The resulting cooling effect on the immediate surroundings, as well as the enhancement of the living conditions through simultaneous aeration of the lake, are the primary goals of the design concept. This project requires no storm water drains, no storm water leaves the development area (zero runoff).

Present status: operation I. phase since 1999, change of master plan proposed

Summary of Technical Data

Catchment Area	A [in ha]	Precipitation* [in m³/yr.]	Project Data	Quantity Unit
Size of Project Area (approx.):	27,9	163.634	Inhabitants:	3.000
Area covered by streets	5,8	33.841	Living units	1.850
Including:			Infiltration trench length (not including bank of pond)	9.000 m
bicycle paths and sidewalks	1,9	10.909	public	6.000 m
street greenery	0,7	3.812	private	3.000 m
public streets	3,8	22.404	Cistern volume	4.500 m³
private streets	2,0	11.437	Non-potable water capacity	290 m³/h
Roof area	4,5	26.393	Volume of lake	23.000 m³
Open areas (public parks)	1,6	9.091	Surface area of lake	8.600 m²
Open areas (private)	16,1	94.309	Surface of rootz. treat. facilit.	1500 m²

*...average year

