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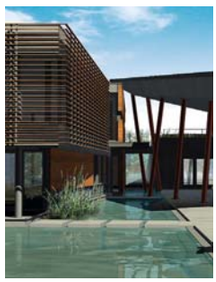
Art and rainwater object
Owingen
Client: Gemeinde Owingen
Water design:
Herbert Dreiseitl
Water planning:
Atelier Dreiseitl
Architect: Huber & Böhler
Metalworks:
Metallatelier Fuchs
Planning and design: 1998
Construction: 1998

Roof area: 1,200 m², with 40 % green roof
Annual rainfall: 780 mm
Rainfall intensity: $r_{15(1)}$ 142 l/s/ha)
Drainage method: Constructed infiltration swales
Soil permeability factor: ≤1 x 10^{-5} m/s
Infiltration and retention area: 50 m²
Stormwater event: 2 years



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Redesign Queens Botanical Garden, New York, USA
Client: City of New York and Queens Botanical Garden
Landscape design:
Atelier Dreiseitl, Conservation Design Forum
Architect: BKSK, New York
Planning and design:
2000–2004
Construction: 2004–2006

Site area: 15,800 m²
Green roof: 490 m²
Constructed wetland (Greywater system): 180 m²
Watercourse length: 200 m
Annual rainfall: 1,070 mm
Rainfall intensity:
6 min. rainfall;
160 mm/h = 10 year storm event
Drainage method:
Drainage swale and ditch, infiltration swale
Release rate: 960 l/s (total area)
Water treatment:
Cleansing biotope
105 m²
Soil permeability factor:
10^{-7} m/s
Infiltration and retention area: 3,720 m²
Stormwater event: 10 years

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Solar City Linz, Austria
Client: Stadt Linz
Water design:
Herbert Dreiseitl
Landscape design:
Atelier Dreiseitl
Architects: READ-Gruppe
Competition: 1997
Planning and design:
1998–2001
Construction: 1999–2005

Size: 60 ha
Settlement area: 32 ha
Residents: 4,500
Impermeable surface: 40 %
Water surface: Extension of Weikerlsee approx. 29,000 m²
Water playgrounds:
1,000 m²
Total water volume:
90,000 m³
Maximum water depth:
400 cm
Water treatment:
Purification biotope
200 m² surface area
Annual rainfall: 800 mm
Rainfall intensity: $r_{15(1)}$ 125 l/s/ha
Drainage method:
Drainage and infiltration (emergency overflow > 10 a into Aumühlbach and woodland area along the Traun)
Soil permeability factor:
Swales 10^{-4}, trenches 10^{-2}
Infiltration and retention area: 9,000 m²
Stormwater event: 10 years

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Bear enclosure at Zoo Zurich, Switzerland
Client: Zoo Zurich
Planning of water system:
Atelier Dreiseitl
Landscape design:
Büro Walter Vetsch
Planning and design:
1993–1995
Construction: 1995–1997

Size: 4,500 m²
Length: 45 m
Water surface: 200 m²
Total water volume: 300 m³
Flow rate: 2,000 l/min
Maximum turnover rate:
2.5 hrs.
Maximum water depth:
150 cm
Cistern volume: 15 m³
Water treatment:
Purification biotope
105 m² surface area
Pump power: 7 kW

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Open space and water design, Fornebu, Oslo, Norway
Client: National Construction Department (Staatsbygg)
Landscape design:
Bjørbekk & Lindheim
Water design:
Herbert Dreiseitl/Atelier Dreiseitl
Planning and design:
2004–2005
Construction: 2006–2007

Site area: 46.75 ha (= 467,500 m²)
Water surface:
Central Lake 6,000 m², Water channel 1,460 m²
Total water volume:
Central Lake 9,000 m²
Watercourse length: 460m
Annual rainfall: 711 mm
Rainfall intensity: $r_{15(1)}$ 85 l/s/ha
Drainage method:
Drainage swale and ditch, retention swale, retention with fluctuating lake water-level (20 cm), retention and infiltration in 'Frog Wetland', street run-off treatment with sand filter, overflow into natural wetland

Water technique for lake and channel:
Circulation rate: 50 l/s
Release rate: 120-150 l/s
Water treatment:
Cleansing biotope 1,000 m², skimmer (2 pieces), micro-screen (20 micrometres/6 m²) groundwater recharge (1 l/s)
Soil permeability factor:
10^{-5} m/s
Infiltration and retention area 'Frog Wetland': 3,600 m²
Stormwater event: 2 years