The water system in Berlin's Potsdamer Platz

Canal

Rainwater management

Rainwater collection

Urban waterbody

Cistern

Overflow

Retention

Water use

Cistern

Cistern

Water storage in cisterns

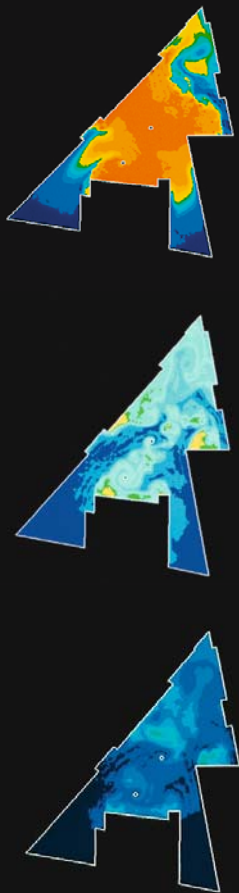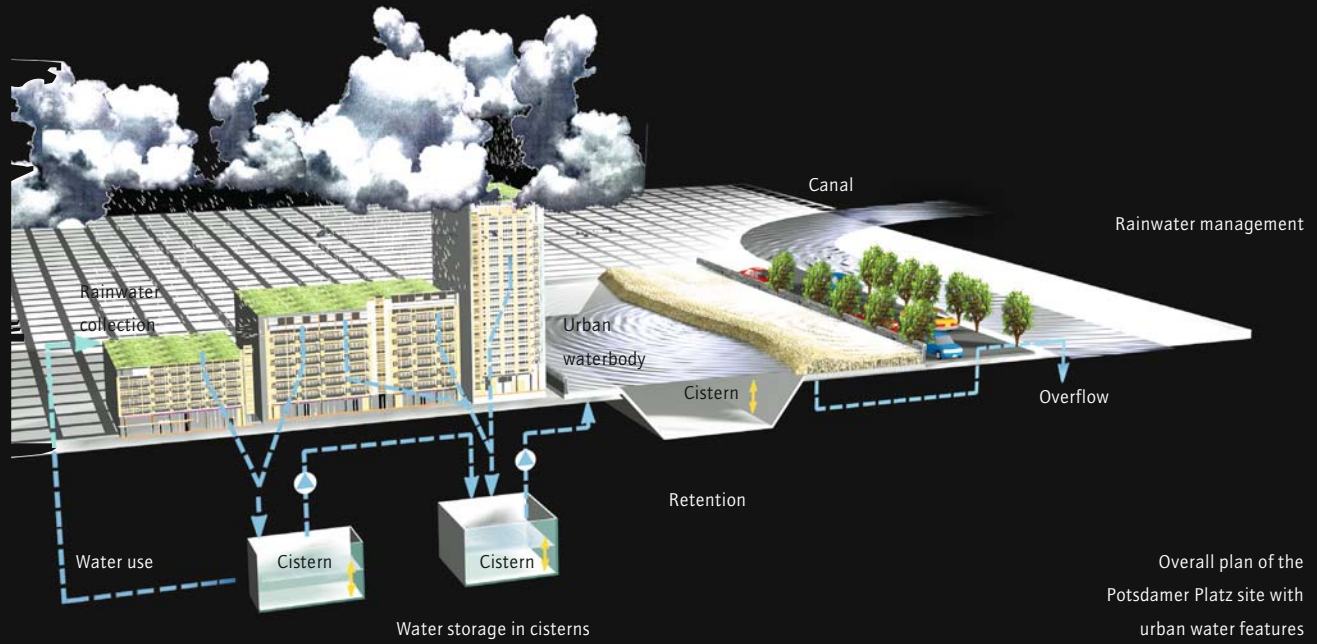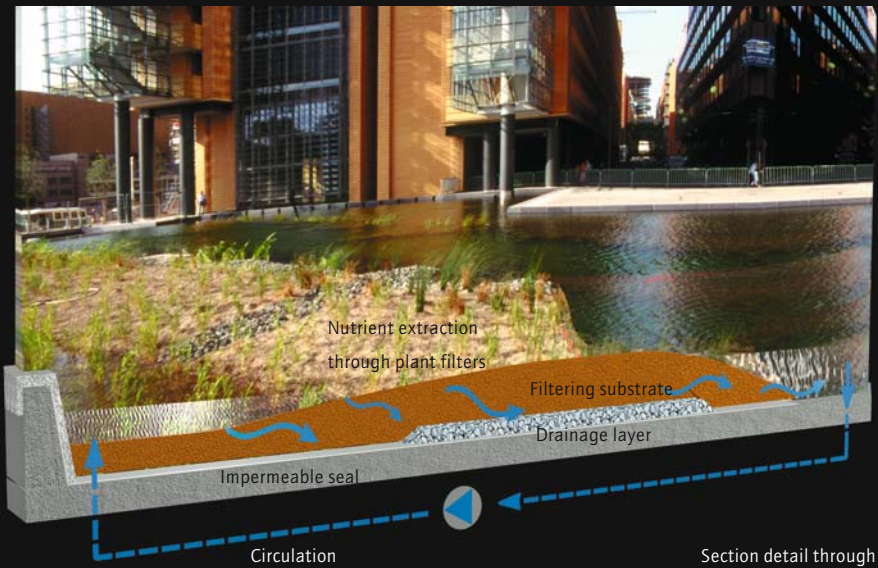Overall plan of the Potsdamer Platz site with urban water features

Flow simulation analysing how the water acts within the geometry of the pool. This made it possible to optimise the most effect locations for the inlet and outlet points.

system that would include a narrow pool on the northern side, one in the piazza, the large main area of water and the southern area of water. Additionally, this offered the opportunity not to lower the groundwater during the building phase and to make an intermediate collection of all the rainwater that fell on the buildings and slowly feed it into the Landwehrkanal. A complex computer simulation was used to predict that the Land- wehrkanal would only be compel- led to absorb heavily increased amounts of precipitation three times in ten years; this is based on the approximate drain- age figures for an unsealed plot.

To guarantee this, the system must carry sufficient buffer capacity. This is provided in the first place by five under- ground tanks with a total volume of 2,600 cubic metres, of which 900 cubic metres are left free in their turn for cases of heavy precipitation. In addition to this, the main area of water can still offer a reserve of 15 centimetres be- tween the normal and the maximum water level, which provides a storage buffer of 1,300 cubic metres. A key fea- ture was the water resources that were discovered above the turbidity level of the main area of water. Solids can start to settle in the underground tanks be- fore the water flows out of source ves- sels on the banks of the south and main areas of water, through planted purifi-

Nutrient extraction through plant filters

Filtering substrate

Drainage layer

Impermeable seal

Circulation

Section detail through cleansing biotope