

Wastewater treatment plant Leidsche Rijn >>>



# Wastewater treatment plant Leidsche Rijn

nomination Rietveldprize 2002

project

Wastewater treatment plant

location

Leidsche Rijn, Utrecht,  
the Netherlands

designers

Remco Rolvink  
René van der Velde  
Arjan Karssen  
Philipp Krebs  
Lucas Kukler  
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partners

A+D+P Architects  
DHVwater BV  
SmitsRinsma

client

Water Board Hoogheemraadschap  
De Stichtse Rijnlanden

size

6 ha

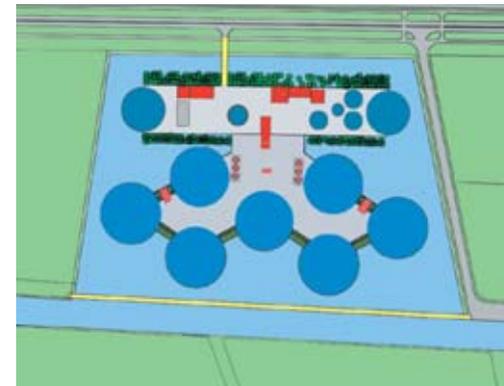
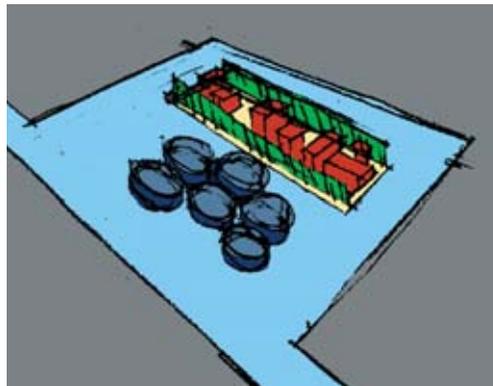
year of design

1996 - 2000

## Wastewater treatment plant visible in the landscape

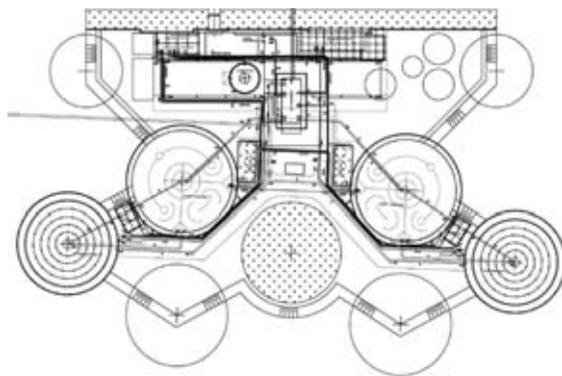
It's very clear where the water in a bathroom comes from, where it goes to, and what you need to do to adjust the temperature. However, this clarity is lacking in major structures in the Dutch landscape, such as gas extraction installations, waste incineration plants, drinking water plants and wastewater treatment plants. Although these installations are indispensable, they are often packed together on a plot of land and hidden behind vegetation as though the builder was ashamed. For the average member of the public industrial complexes are by definition bad, visually polluting and, consequently, undesirable.

However, it is also possible to approach these large complexes using the principle of the bathroom washbasin: it's very clear how a washbasin works, whilst the details of the parts are invisible. The design of the wastewater treatment plant near the Leidsche Rijn housing location is based on the visualisation of the components. The process carried out by the wastewater treatment plant determines the spatial composition of its components, and the principle of the installation is legible for all passersby, employees and residents.

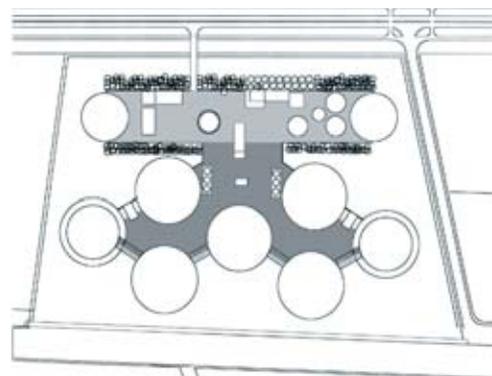




transition between production island and carousels



technical representation



division of the outside area into two parts

### Scale and arrangement are clear

An analysis of the wastewater treatment process reveals that the installation can be classified into passive components (settlement and storage) and active components (supply, filters, process control room building and offices, screens and sludge disposal, etc.). The main passive components are the large trickle filters. These components have a pronounced shape: with their identical dimensions they are ideally suited to a composition in a rhythmic pattern that enables the scale and arrangement to be experienced. The active component is comprised of a wide range of buildings and structures of different shapes and sizes: the diversity results in dynamism. The components are arranged and grouped according to the wastewater treatment process on a rectangular strip of land, the production island. The dynamism of the various shapes and dimensions is further emphasised by the architecture of the structures, which makes use of a variety of materials.



water behind the carousels

**Water forms a natural enclosure**

The entire composition is surrounded by water, which has a direct link to the canal immediately behind the wastewater treatment plant.

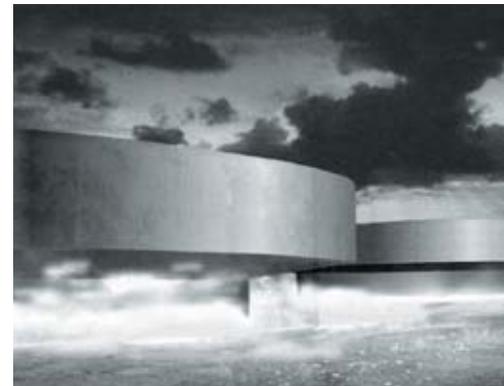
This water obviates the need to enclose the entire installation with a fence. The water at the front, next to the production island, is deep: the entrance is accessed via a specially designed 30-metre bridge. The water at the back of the installation is shallower, and reeds may grow around the trickle filters. The water around the trickle filters is enclosed by a low dike topped with a pedestrian path.

The plant has become legible now the ground around the complex has been excavated for the water and the trees are beginning to grow. The plant is integrated in its surroundings: it has become part of life in the Leidsche Rijn.





a study of carousels in water



bald cypresses in front of the production island

