

Project summary

The global climate is normally associated with water problems. Amsterdam is one of the world's most famous water cities. Its appearance and urban development have been shaped by the struggle against water and by the chances provided by the presence of water. Currently the city is preparing for a new challenge: water from heaven. Already now the sewer system is unable to deal adequately with the rainwater. Overflowing sewers pollute Amsterdam's famous canals. The city government is developing plans for 60 underground water storage facilities. Increasing rainfall will make this problem more pressing in the near future.

The project Water Moss Rocks focuses on the chances of increasing rainfall. By using the qualities of the Mr. Visserplein, it makes the most of the possibilities for sustainable rainwater reuse in Amsterdam. After realization of this project each year 72 million liters of rainwater will flow from three nearby squares and six large roofs located within 300 meter distance to the Mr. Visserplein. This project's design combines a new rainwater circulation system with the currently present underground network of spaces for clean rainwater storage. Moreover, it creates a new eye catching tourist attraction for water city Amsterdam: the Hortus Moss Rock in a spectacular waterscape. The Hortus Moss Rock is as high as the synagogue and rises up from the sunken water world. Water pumped up to the top creates a giant waterfall. The other sides of the humid rock exhibit Amsterdam's unique vegetation of (canal) wall flora: rare ferns and mosses. The tall rock with its exceptional vegetation will encourage tourists and inhabitants to visit the Hortus Botanicus located around the corner. The square in front of the synagogue will be an inspiring new spot in the city with flowing water, waterfalls and impressive fountains. It openly shows the clean water storage function and invites various forms of use without programming these in advance.

Space and use

Water circulation is necessary for the quality of the stored rainwater. Superfountains as high as the neighboring buildings serve this purpose and at the same time create an impressive waterscape on the square. The height of this water space is equal to the surrounding buildings. The water space opens at the size of the silent Portuguese synagogue. For the first time in its existence this monument will get the surrounding it deserves. The domain of pedestrians and cyclists will be organized in a new and improved way. The routing between the various public attractions and surrounding neighborhoods will as much as possible lead these people over the water square. The sunken water world is experienced best by going down the grass slope in front of the synagogue. This offers the public a chance to escape the noisy cars, hurried cyclists and shopping crowds.

Why a rainwater storage at the Mr. Visserplein?

Rainfall patterns change as a result of the changing climate. To avoid canal water pollution the city of Amsterdam is currently planning 60 underground sewer water storage facilities. In these plans clean rainwater will be mixed with sewer water and becomes polluted water. This waste of clean rainwater is avoided in the

Water Moss Rocks proposal in which fresh rainwater is collected for sustainable reuse. The underground network of the Mr. Visserplein is large enough to contribute significantly to the collection of relatively clean water. The car tunnel under the Mr. Visserplein is a potential underground rainwater canal. The importance of sustainable rainwater management is acknowledged by more and more institutions with a sense of responsibility. Currently the Hortus behind the Mr. Visserplein is already reusing rainwater. However, on its own it is not able to collect enough rainwater for its needs (upto 5000 litres a day). The Hortus is potentially the first customer for the rainwater collected under the Mr. Visserplein. Artis is also planning to start reusing rainwater.

The Mr. Visserplein is strategically located for rainwater collection. Water from six large public buildings and three squares with a total hard surface of 5.3 hectare will be directed to the 4 entrances of the largely underground water storage network (see panel 72-a for details of the water circulation system). In the year 2100, the amount of rainfall is expected to have increased by 6%. On average once every 100 year there is expected to be a period of extremely heavy rainfall that will fill up the whole sunken space (20 million liter) up to ground level.

Designing for rainwater reuse offers chances for a new type of public space in this centuries old water city. Water Moss Rocks makes sustainable water management visible.