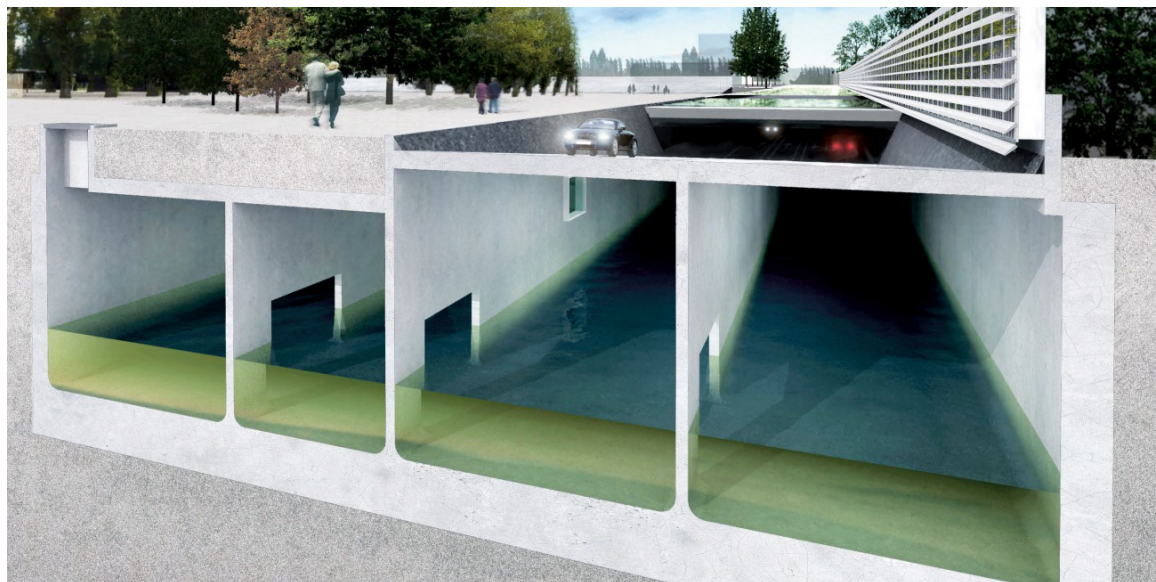


URBAN GREEN-BLUE GRIDS

for sustainable and resilient cities

Measures › Water › Buffering and infiltration › Rainwater storage below buildings, such as parking garages

Rainwater storage below buildings, such as parking garages



Garage Museumplein, Rotterdam, The Netherlands © Gemeente Rotterdam

Data

Dimensioning: Depends on the space available

Advantage: Use of residual space and relatively large volumes of storage are possible

Disadvantage: Additional costs and dependence on the planning of the parking space

Advantage:

Water ●●

Multifunctional space usage ●

Construction costs ●●●

Maintenance/management ●●

In 'Waterplan 2 Rotterdam', the Rotterdam municipal authorities set out the general outline of their plan for dealing with the city's water mission. Various scenarios were studied for the city centre, for realising additional storage capacity. Realising an underground storage facility linked to the new parking garage beneath Museumplein square emerged as the best of those scenarios. The underground water storage ('OWB', for ondergrondse waterberging) has a

volume of 10,000 m³ and has been incorporated into the design of the parking garage. It is a separate reservoir, part of which utilises residual spaces beneath the parking garage, such as the space below the entrances and exits. With the realisation of this reservoir, Rotterdam created 12% of the water storage capacity needed for the city centre. The costs of the facility were 7.2 million euros. [Nooijer, 2011]

Literature

- Nooijer R. de, Vasthouden van regenwater in de openbare ruimte van Rotterdam, presentatie, 2011

Source: <http://www.urbangreenbluegrids.com/measures/rainwater-storage-below-buildings-such-as-parking-garages/>

atelier **GROENBLAUW**

Green-blue urban grids make cities sustainable, resilient and climate-proof. This website and the design tool will help to find fitting measures and inspires with attractive examples.