

# Rethink urban water





# A fresh look at rainwater in the city

The healthy city of tomorrow needs not only good infrastructure for people but also for water. For less urban flooding, cleaner water, more greenery, and a better quality of life. ROCKWOOL Rainwater Systems' infiltration buffers provide a solution that occupies no space above ground and creates ample space underground for water buffering. A modern solution for the modern city.



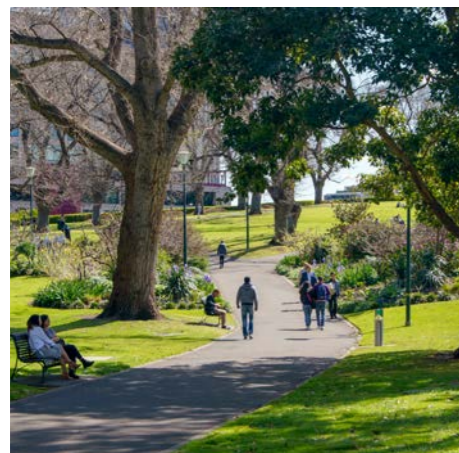
## 1. No urban floodings

Rockflow contributes to keeping your feet dry during a downpour. Less urban floodings, no sewer water on the streets, and available again within 24 hours.



## 2. Clean water

Rockflow stone wool effectively removes a significant amount of pollution from runoff water. This helps to keep our groundwater and surface water cleaner, contributing to a healthy living environment for plants, animals, and people in the city.



## 3. Sufficient water, cooling and comfort

Keep the water where it belongs: where it falls. Natural water infiltration protects the soil, buildings and vegetation against drought. Because a city with healthy greenery also stays cooler more easily in the summer.



**Rockflow: Smart water buffers made from fully circular stone wool**



# 1. Rainwater capture

Making room for rain in urban areas

It's becoming an increasingly common picture: a cloudburst occurs, and the streets are flooded. The sewer system simply can't cope. Eventually, the water is drained via the sewer, but by then, damage, nuisance, and water pollution may have already occurred. With solutions from ROCKWOOL Rainwater Systems, this image becomes a thing of the past. Even in densely built cities, you can cleverly create space for rain underground.

## Always space

Maximum design freedom and easy installation ensure a system that fits perfectly in the available space.

## Super strong

Rockflow can be installed under roads, parking spaces, and parks. With a minimum coverage of just 40 cm.

## Like a sponge

Rockflow consists of up to 95% hollow space and therefore quickly stores a lot of water.



# 2. Filtering runoff rainwater

For cleaner surface and groundwater

Clean groundwater and surface water contribute to healthy nature and more living comfort in cities. A Rockflow system cleans runoff rainwater before it is returned to nature.



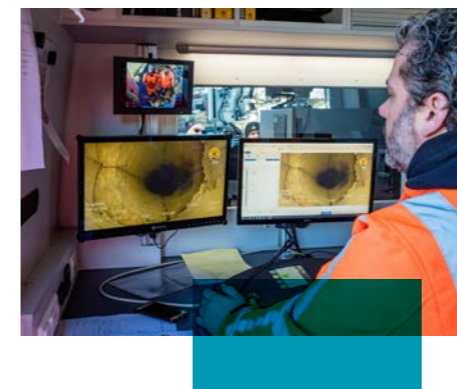
## Runoff rainwater is not clean

Rainwater that falls is relatively clean. But once it ends up in the gutter, undesirable and harmful substances from roofs, cars, and streets are washed away with the water. In a scientific study by Boogaard et al (2014), the concentrations of polluting substances in Dutch runoff rainwater were measured. The measured concentrations of many substances, including nutrients, copper and zinc, exceeded the Dutch standard for maximum allowable concentrations (MAC) for receiving waters. Microplastics are also becoming an increasing source of concern.



## Stone wool captures pollution - with the power of stone

Stone wool is made from rock. The mineral fibres of stone are microscopically small. These fine fibres form a dense network with a large surface area, effectively binding pollution. Therefore, a Rockflow buffer not only captures water but also cleans it: The fibre structure effectively holds back suspended particles and common dissolved pollutants in urban stormwater.



## A Rockflow system is easy to maintain

Due to the filtering action of the stone wool, pollution accumulates over time. The polluting particles remain in the water channels of the Rockflow system. These channels can be easily cleaned. With regular maintenance, the system will continue to function well throughout its 50-year lifespan.



# 3. Rainwater infiltration

For vital, green cities

Also in urban areas, a natural water cycle is essential to combat desiccation. However, urban paving prevents water from being absorbed into the soil. Instead, it flows away via the stormwater sewer to prevent waterlogging during heavy rainfall.

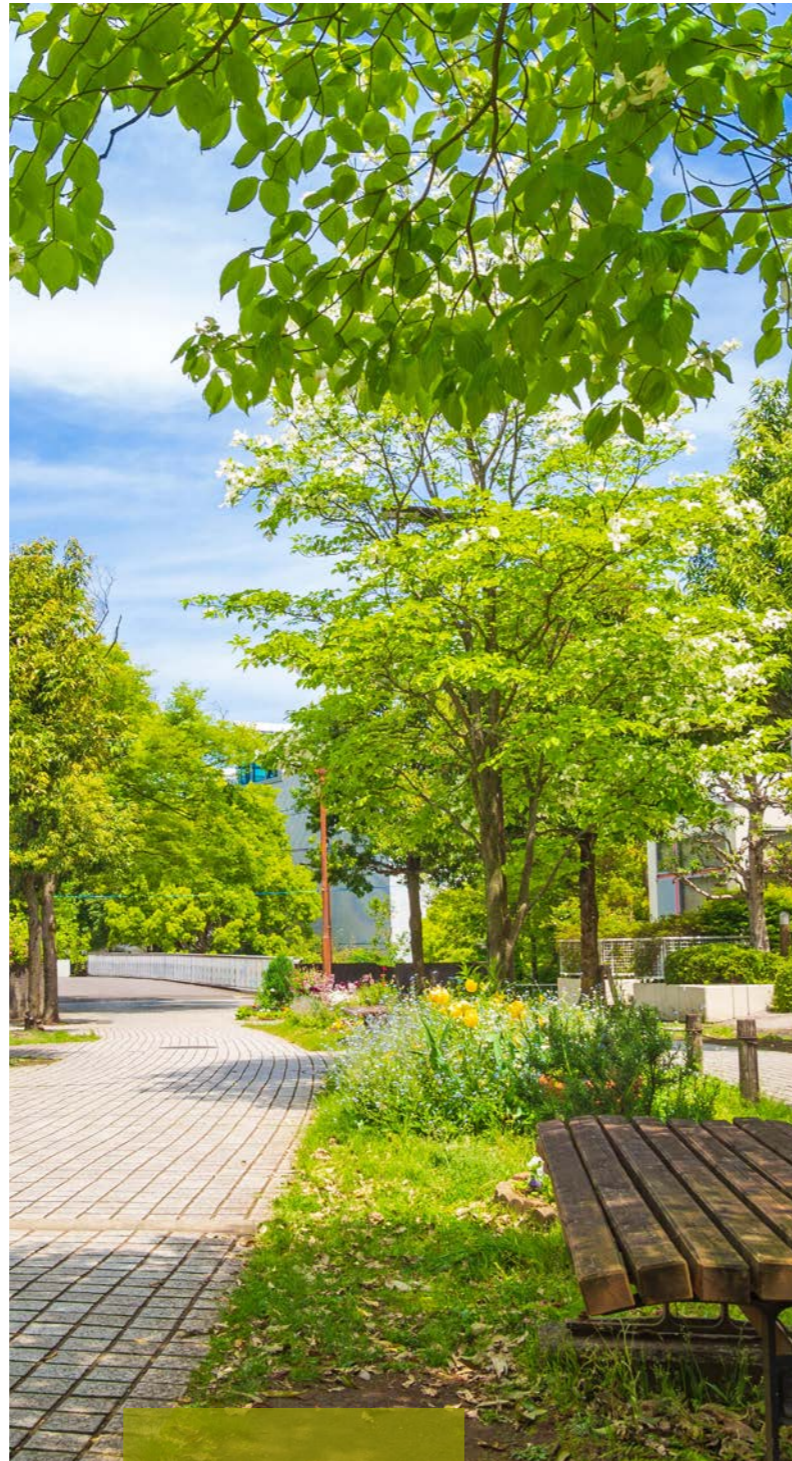
Creating more space for greenery, parks, and natural infiltration is not always possible in urban areas. The available space is sorely needed for other purposes. ROCKWOOL Rainwater Systems offers a solution that takes up no space above ground and creates sufficient space underground for water infiltration. For a vibrant, green city with a natural water cycle.

### Return water to nature

With solutions from ROCKWOOL Rainwater Systems, water is returned to the ground. Rainwater is not carried away but is quickly captured on-site in an underground buffer. Within 24 hours, the water gradually infiltrates the soil.

### Protecting the local water balance

If rain can infiltrate the ground in built-up areas, more water is available for trees and plants in the immediate vicinity. This promotes biodiversity, shade, and cooling, and keeps the city a pleasant, livable place in hot summers.



# Rockflow: an underground sponge for rain

Local stormwater solutions in the urban area.



You can find our Rockflow infiltration systems beneath cycle paths, roads, and even tram tracks or buildings. Or as blue-green swales and close to urban green spaces.

### Under squares and parks

With a central buffer under squares or parks, water from the surrounding area is led to a central location, collected and infiltrated or discharged into the sewer.

### Underneath the tram track or road

Often, the available underground space for stormwater storage in urban areas is very limited. Thanks to the high load-bearing capacity and flexibility of Rockflow, space for rain is also made under tram tracks, road or bicycle lanes.

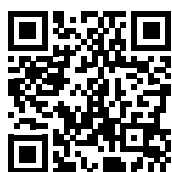
### Blue-green swales and near tree growth areas

A smart climate swale with stone wool can be installed shallower and therefore safer, retain water for planting, and buffer cloudbursts.

Natural infiltration of rain near urban green keeps the soil moist, which helps plants and trees flourish and reduces irrigation moments during dry periods.

For more information  
and inspiration, please  
take a look at our website:

[www.rain.rockwool.com](http://www.rain.rockwool.com)



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RAINWATER SYSTEMS