

## QUICK FACTS

### Construction period:

2021 -2023

### Budget:

80.5 mio. DKK

- 49.5 mio. DKK from water tariffs
- 25 mio. DKK from tax funding
- 6 mio. DKK from Area Renewal project Sydhavnen

### Advisers:

Schönherr Landscape Architects, WSP, Vida Local and Ebbe Dalsgaard A/S.

### Developer:

City of Copenhagen and HOFOR

### Total project area:

36.471,16 m<sup>2</sup>

### Capacity:

Total storage capacity of 51.000 m<sup>3</sup>

### Total catchment area:

119,1 HA (100 year event)

### Water management:

Retention of rainwater

Infiltration and filtering

Pumping stations

Discharge to Kalveboderne

## CITY OF COPENHAGEN

The Technical and Environmental Administration

Department of Mobility, Climate Action and City Structures

**Climate Adaptation and Urban Renewal**

*Layout TMF MKB*

*Photo Carsten Ingemann*

*Illustrations SLA and WSP*

2024

# Karens Minde Aksen



## PROJECT VISION

The cloudburst and urban space project Karens Minde Aksen in the Copenhagen area of Sydhavn combines retention of up to 15.000 m<sup>3</sup> of rainwater with the development of parks, urban spaces, and nature. The project aims to improve the physical framework of the unique grassroots spirit in Sydhavn. In the future a large part of the area's culture life, social activities, and everyday life will unfold in Karens Minde Aksen.



The project combines water management solutions with urban nature and cultural life.

## WATER MANAGEMENT

The special feature of Karens Minde Aksen is that the project will manage both ordinary everyday rain and cloudbursts. The project area is set low in the terrain with a large catchment area to the north from where water comes during major rain events. A so-called

runoff structure is built into the facility. This consists of a combination of pump lines and a reservoir on Sjælør Lawn to the north. The water is transported in the open on yellow tiles through Karens Minde Aksen itself.

From here water is led to the rainwater basin which has additional capacity, before it is pumped further south under the train tracks and out at Kalveboderne. Along the way, water is filtered in the Trickle Meadow and in a preceding basin.



The rain water basin south of the axis adds additional capacity during heavy rain

The overall runoff structure forms a complex hydraulic system that ensures that rainwater can be managed in the elongated system. During cloudburst situations the water is transported in a 600-meter-long course from Ellebjergvej to the north, along the Karens Minde Culture House, and at last the water is collected in the rainwater basin in the south of the axis. The park space is surrounded by a low wall at seating height and in case of extreme cloudbursts this will function as a retention pool.



Water is transported in the open on the tiles through part of the axis.

## RECREATIONAL VALUE

Before the project began the project area had around 15.300 m<sup>2</sup> of impermeable surface and no nearby places where the local residents could meet or go for a walk. Now there is only 5600 m<sup>2</sup> of that impermeable surface left and the rest of the area has been transformed into green space where locals can stroll around and enjoy the relaxing sound of birds.

## PUBLIC PARTICIPATION

The project began in 2016 when the Area Renewal Sydhavn initiated a dialogue with the residents and stakeholders about the development. Through a series of meetings and workshops local enthusiasts have influenced the design, activities, and choice of materials in the project.



Local enthusiasts have been included in the design process.

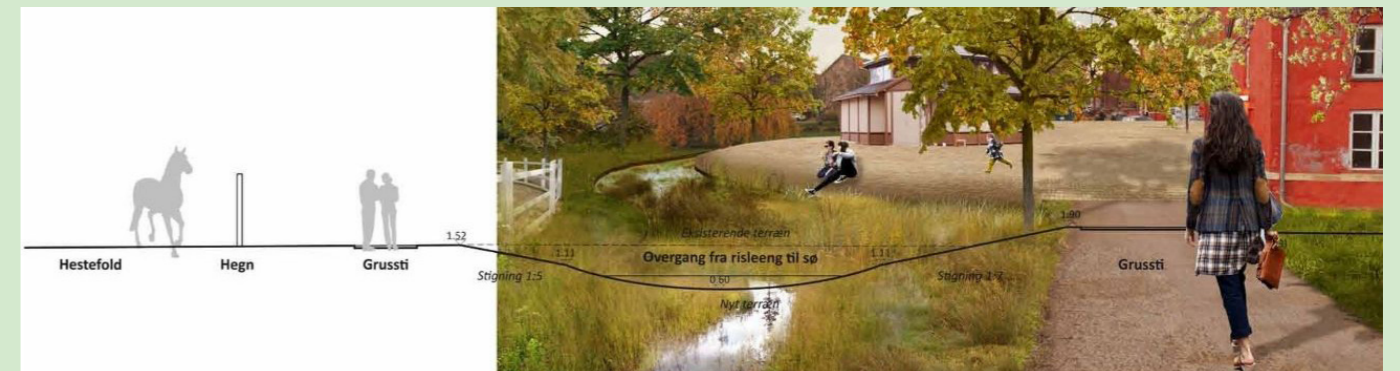
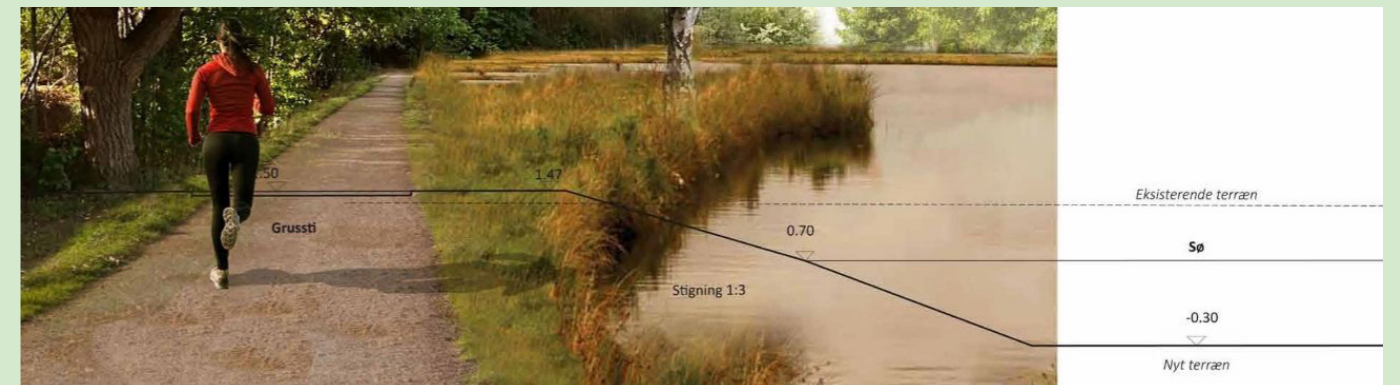
This process has introduced secondary functions such as an outdoor library garden, temporary park furniture, and light installations. In addition to managing rainwater the intentions of the project are to create better accessibility to Karens Minde Culture House, better outdoor settings for cultural and social activities, as well as better settings for the horses at the Children's Animal Pen.

## VEGETATION

One of the goals of the project is to contribute positively to biodiversity and increase the species richness in the area. The further south of the facility you move the more the natural content increases. It is a chosen principle not to have any benches or artificial lightning in the southmost part. The new 2.500 m<sup>3</sup> rainwater basin contributes positively to the biodiversity of the area and will significantly increase fauna species variation. This is by effect of the slopes planted with trees, shrubs, and grasses, and where boulders create shelter for small animals and insects. The trees felled during construction of Karens Minde Axis have been replaced by new trees and, in addition, more trees are planted. The trunks of the large, felled trees are laid out as dead wood for the benefit of insects and small animals. An existing pond with a population of toads has been preserved.



The rainwater basin contributes to the biodiversity with new habitats.



The visible management of rainwater strengthens the character and social life in the area.