



In the master plan, the individual quarters are already characterized by their different structures. The central element is the train station and the adjacent areas. As the heart of the new development, the new tower station not only plays a decisive role in the planning, but the adjacent buildings also benefit from the new connecting axis. Due to the existing railway lines, the planning area is almost automatically divided into several sub-areas, where the challenge was to link these areas with each other.

In the course of the planning process, the construction of the hill park, connecting the sub-areas, arose. The free space thus gained is open to everyone and offers various activity options. In general, the design is characterized by a great proportion of high-quality, green and open spaces. These are particularly effective in the house farming experimental field, where nature is combined with technology and new planting techniques are used. Another important aspect is the different type of roof usages. These range from simple, intensive to other roof uses. The inner courtyards also offer various types of private, semi-public and public open spaces. Commonly used garden areas play an important role, especially in the neighborhood. In the productive district, the number of floor areas is higher, but there are open spaces in the immediate vicinity.



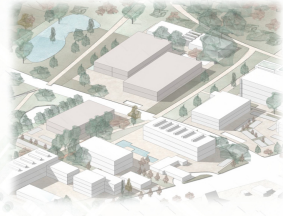
Retention area after a rainy day, a lovely place for a short break

houses made of sustainable materials from renewable raw materials

Retention areas for cooling and slowed seepage of evaporation

slim windows prevent heat loss in winter and protect against overheating in summer

Both visualizations show different insights of the district. The open spaces are diverse and have different characters. For example, depending on the weather the places change and thus also shape the use of space. The areas are based on the principles of a sponge city. Retention basins collect the rainwater and prevent from flood during heavy rainfalls. This helps to create a good urban climate and feed the vegetation in a slowly way. The rainwater can also be collected in underground cistern for a later usage. There is also a high proportion of green spaces there the water can seep away. This kind of structured rain water management is necessary for Berlin's future and the problems of climate change.



Main topics

blue infrastructure

flood prevention

alternative water resource

water retention, evaporation

slowed, targeted percolation

rain drainage in retention areas and hollows

Smaller and larger areas for the accumulation of rainwater can be found throughout the planings. The system of trenches and troughs serves to improve the micro-climate through slower evaporation and the release to the surrounding areas. Because of the different ground level heights the water flows in specific directions into the designed basins.

gutters and troughs help to store water for the plants (NTS)

water management (NTS)

- sponge boardwalk
- green water collecting surfaces and channels
- retention areas
- rainwater hollows

0.5m 5m 1.5m 5m

Parking lot with loose development, for high infiltration (NTS)

green infrastructure

additional noise reduction

particulate matter binding

CO₂ absorption

The targeted planting of tree species has various positive effects on the district. The fruit trees are convenient for everyone, the evergreen trees reduce noise from the railway line and the climate-adapted trees save groundwater and rainwater.

Fruit trees and shrubs

- True Plum - Prunus domestica
- Sour cherry - Prunus cerasus
- Real walnut - Juglans regia
- Cultivated apple - Malus domestica

Evergreen trees

- Larch- Larix
- Magnolia - Magnolia soulangeana
- Colorado Fir- Concolor
- Elbe - Taxus

Climate-Adapted Trees with little water requirement

- Field maple - Acer campestre
- Silver birch - Betula pendula
- Small-leaved lime - Tilia platyphyllos
- Hornbeam - Carpinus betulus

Tree structures and green roofs (NTS)

- various roof uses
- extensive, intensive roof greening
- Solar cells with green roof

green roof facade greening

bike garage with green facade and roof greening

overview of the experimental field

The greenhouses are integrated into the house structures and thus use the warmth of the houses for the cultivation of native and exotic plants. The rainwater is drained from the glass roofs into water reservoirs, stored and used for example for irrigation.

red infrastructure

emission reduction along the railway line

expansion of public transport

solar power

possible route of the autonomous bus (NTS)

The solar system roof covers the rails, produces electricity and especially solves the problem of this loud and noisy area, caused by the railways.

additional noise protection wall necessary

Option A: noise barriers

partial noise protection wall necessary on upper floors

Option B: open overbuilding

no need for additional noise barriers

Option C: closed overbuilding - best solution

With the construction of the new tower station there is going to be a good connections with public transportation. In addition, new bus connections are being built inside and outside the quarter.

The district itself is designed to have reduced car traffic. The three district parking garages, placed by the entrances of the quarter help to improve this aim.

If required an autonomous bus provides sufficient connections within the area. It can drive through the station using a ramp and thus also drive through the hill park.

Option A: noise barriers

Option B: open overbuilding

Option C: closed overbuilding - best solution