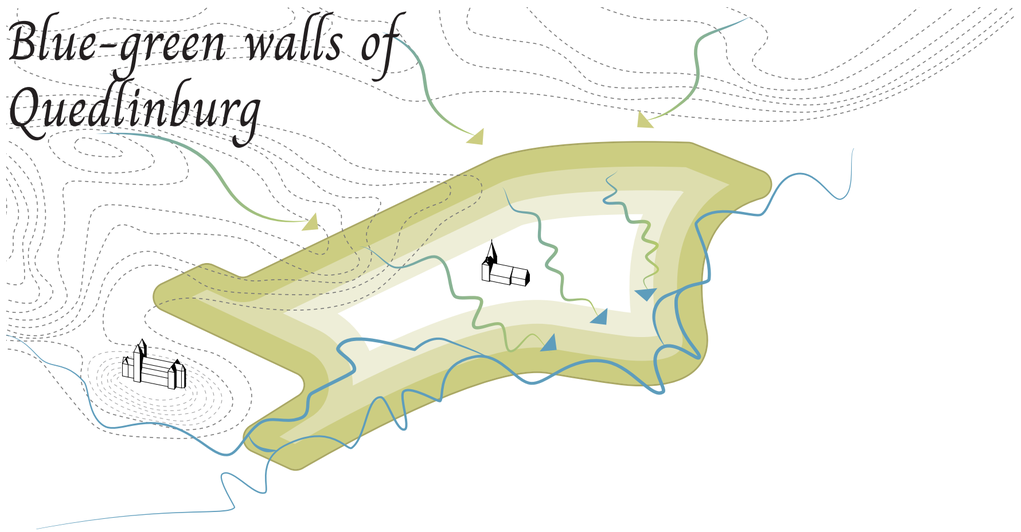
Blue-green walls of Quedlinburg



UNESCO world heritage city of
Quedlinburg – blue-green sponge city
Master´s thesis

PROPOSAL DESCRIPTION

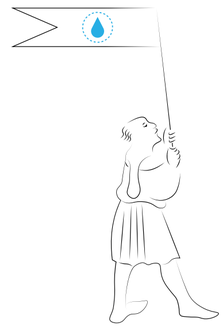
Quedlinburg is a German town with an early medieval plan and many preserved individual half-timbered buildings. The old town of Quedlinburg is on the UNESCO World Heritage List.

The old town has very dense development, so there is almost no vegetation in the open spaces of the historic core. Also on some streets there are large paved areas. The task was to develop ideas on how principles of the sponge city can be implemented in a stone medieval urban structure such as Quedlinburg in order to improve the urban climate.

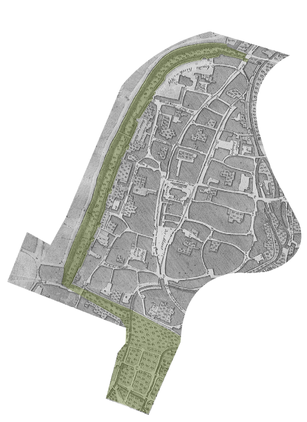
The „Blue-green walls of Quedlinburg" is a complex of soft engineering solutions for stormwater management by means of the vegetated treatment network. This network will strengthen the biodiversity and green infrastructure of Quedlinburg through creating new functional green areas, retention, filtration, infiltration, and treatment of stormwater. This complex of soft engineering solutions will have a great impact on the urban climate and water circulation. This proposal with stormwater harvesting underground tanks to be created in areas most vulnerable to flooding, will make much easier the process of stormwater harvest by sewage.

The main focus has been pointed on Wallstraße (masterplan - 1) since this street is a potential barrier for harvesting of stormwater. When it rains heavily, stormwater flows from the upper streets through the Wallstraße to the historic core. Now Wallstraße has new green areas (bioswales, rain gardens) which will treat stormwater in a more natural way. This solution is also inspired by the history, because there was a green belt behind town walls. The blue-green ring is designed around the stone medieval urban core.

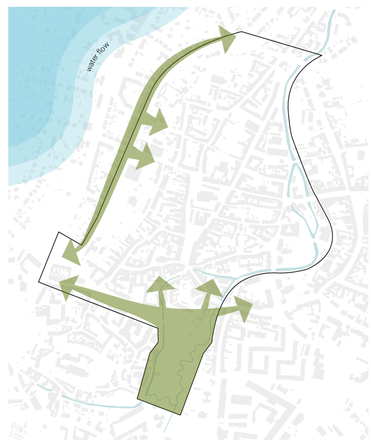
Multifunctional spaces were created throughout the area: a parking house (masterplan - 4) with a café and gardens for locals on the roof; a park with a meandering stream (masterplan - 5) to enhance biodiversity and create a natural meeting place for people (in winter the south part of the park can be used as an ice rink); rain gardens with seating next to the church (masterplan - 11) will absorb stormwater from the surfaces and from the roofs of the surrounding buildings. Wherever possible, green roofs have been proposed. The old town will be pedestrian-friendly, and there will be a bike path through the Wallstrasse.



Masterplan

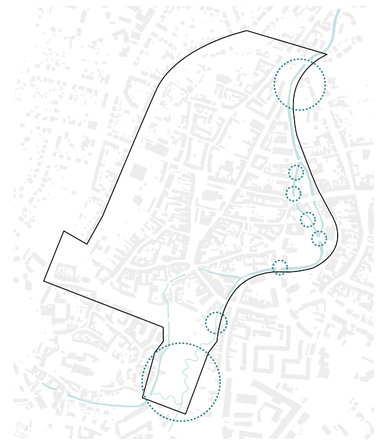


Inspiration by history of Quedlinburg

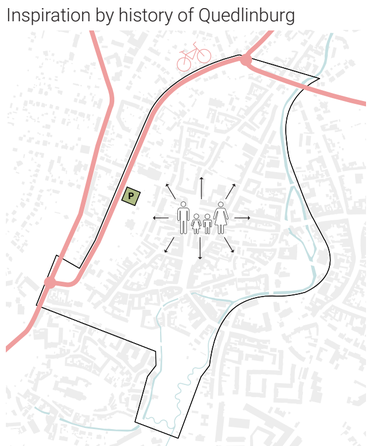


Green Wallstraße and Wordgarten

Soft water management



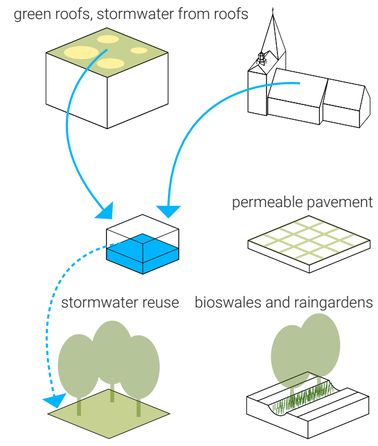
Water accesses



Human oriented traffic, bike path and parking house

Connection and development of urban ecology

New functions, activities and meeting points



Solutions for stormwater management

1 - Wallstraße
Bioswales and raingardens network.

2 - Weststraße park
More green connections to green spaces of Wallstraße. Playground with terrain modelations.

3 - Northern part of Wallstraße
Green area with more permeable surface. Biotope.

4 - Parking house
Approximately 300 parking lots for cars and bicycles. Open spaces in front of it whith lowered ground. Urban gardens, small park.

5 - Wordgarten
Revitalized and meandered Stiefelgraben. More natural part of the park with new biotope. Urban gardening, sport area and playgrund near water.

6 - Parking lots on Carl-Ritter-Straße
Green bioswales, new trees.

7 - Event House Kaiserhof and swimming pool
Connecting by wide bridge with the benches for rest, movie screenings, new trees, permeable surfaces.

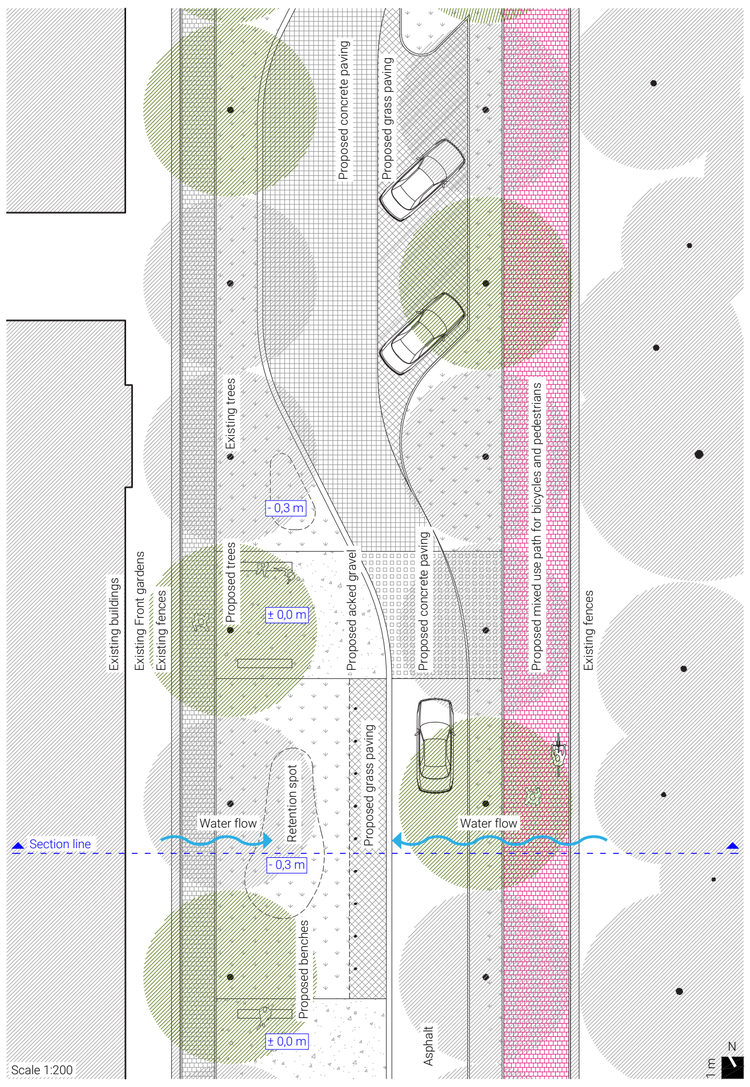
8 - Mühlengraben
Constructions with benches, coastal benches and stairs to the water. Trees whith retention area on the parking lots.

9 - Grabengasse
Urban gadening.

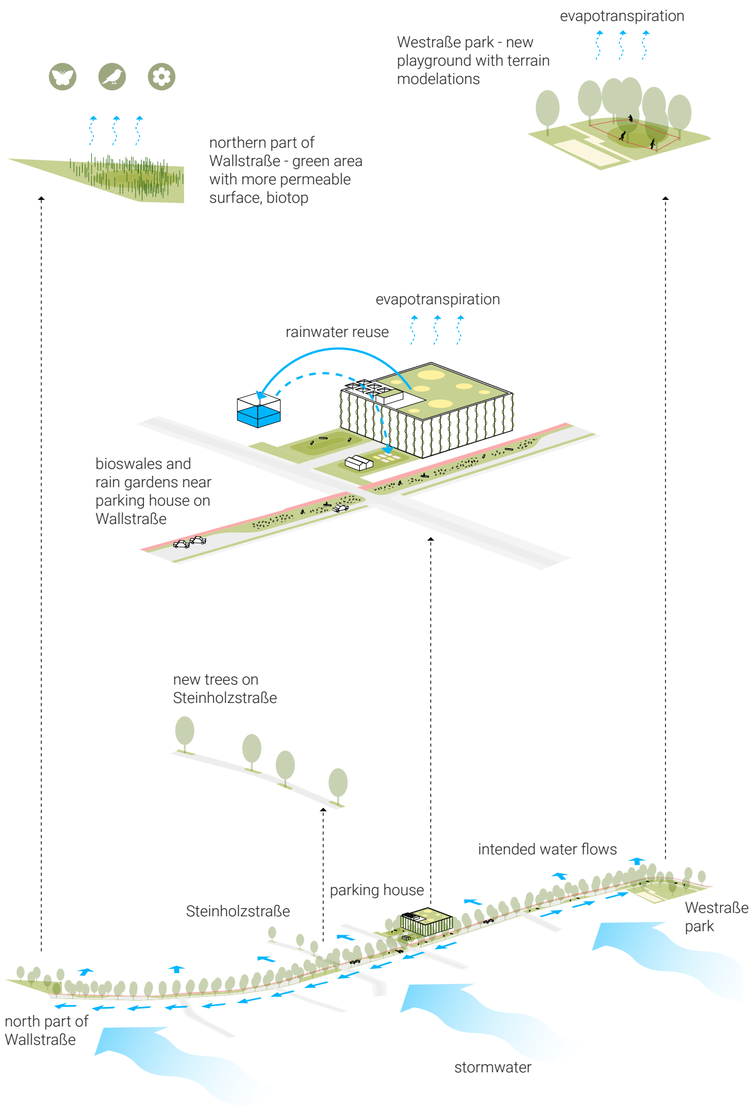
10 - Courtyards
More trees, permeable surfaces and green roofs for residental parking lots. Meeting place for residents.

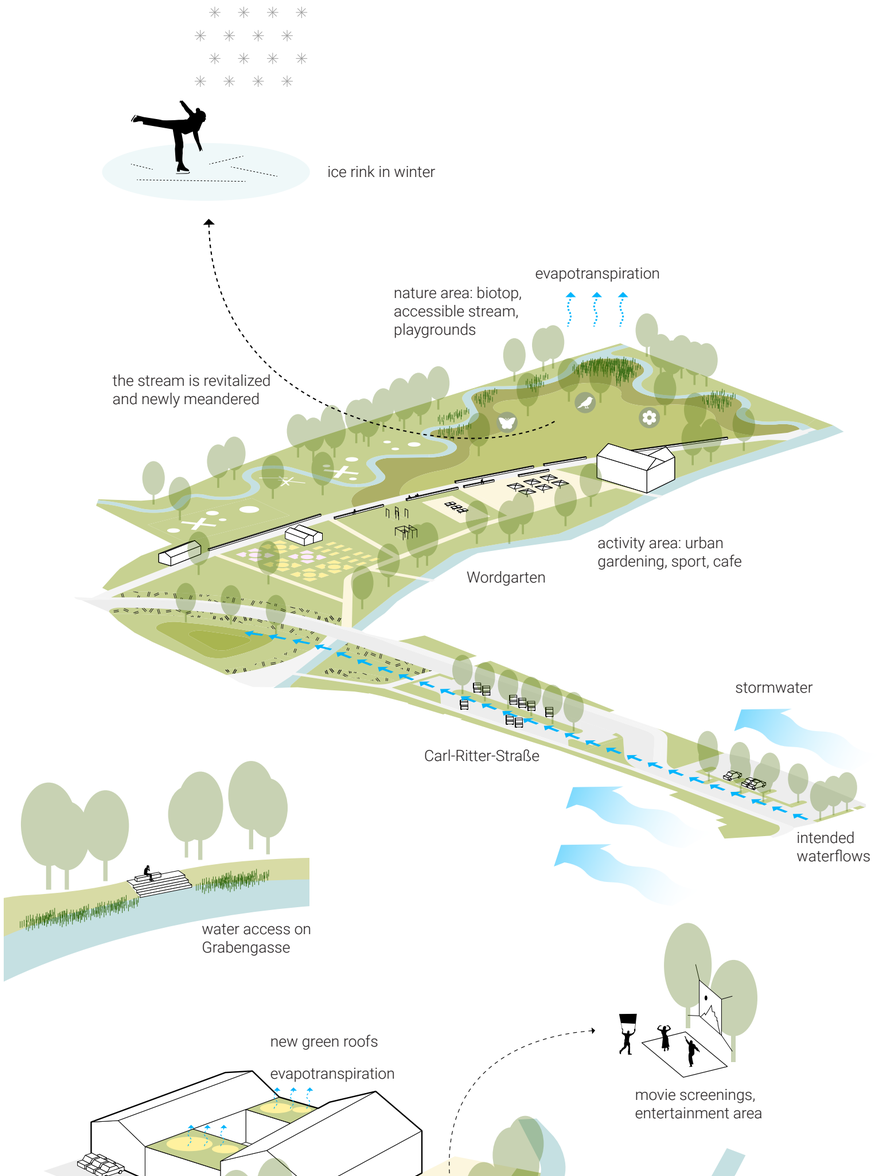
11 - Marktkirchhof
Rain gardens, benches, resting places.

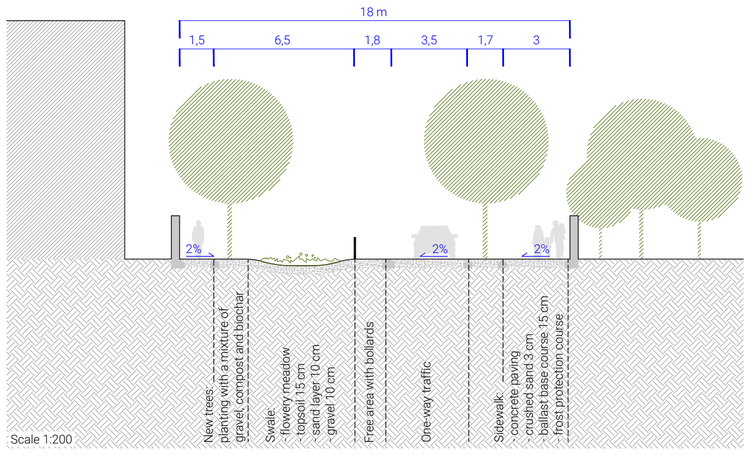
CATALOGUE OF MEASURES



Wallstraße plan 1:200







Wallstraße section 1:200