

# Future Cities

urban networks to face climate change

## Making city regions fit to cope with the predicted impacts of climate change



### CHALLENGES OF CLIMATE CHANGE IN RIVER CATCHMENTS

One major challenge of climate change is the uncertainty: An exact forecast of the local impacts due to climate change is not possible. Waiting and doing nothing cannot be the answer. Therefore, the Lippeverband is taking on its responsibility for its region, the Lippe catchment with 3,280 km<sup>2</sup> and 1.4 Mio. inhabitants. In planning strategies and concrete measures, the Lippeverband reviews where adaptation to climate change is necessary and where mitigation of greenhouse gas emissions is possible.

### NO-REGRET MEASURES IN THE LIPPE CATCHMENT

Because future rainfall and temperature are not exactly known, measures must be developed which are cost-effective, flexible in the long-run and also serve other objectives in sustainable urban development – the so called ‘no-regret measures’.



disconnection of paved areas



decentralized retaining and infiltration of rainwater



rain water re-use



adapted land use in agriculture and forestry



adapted urban and regional planning

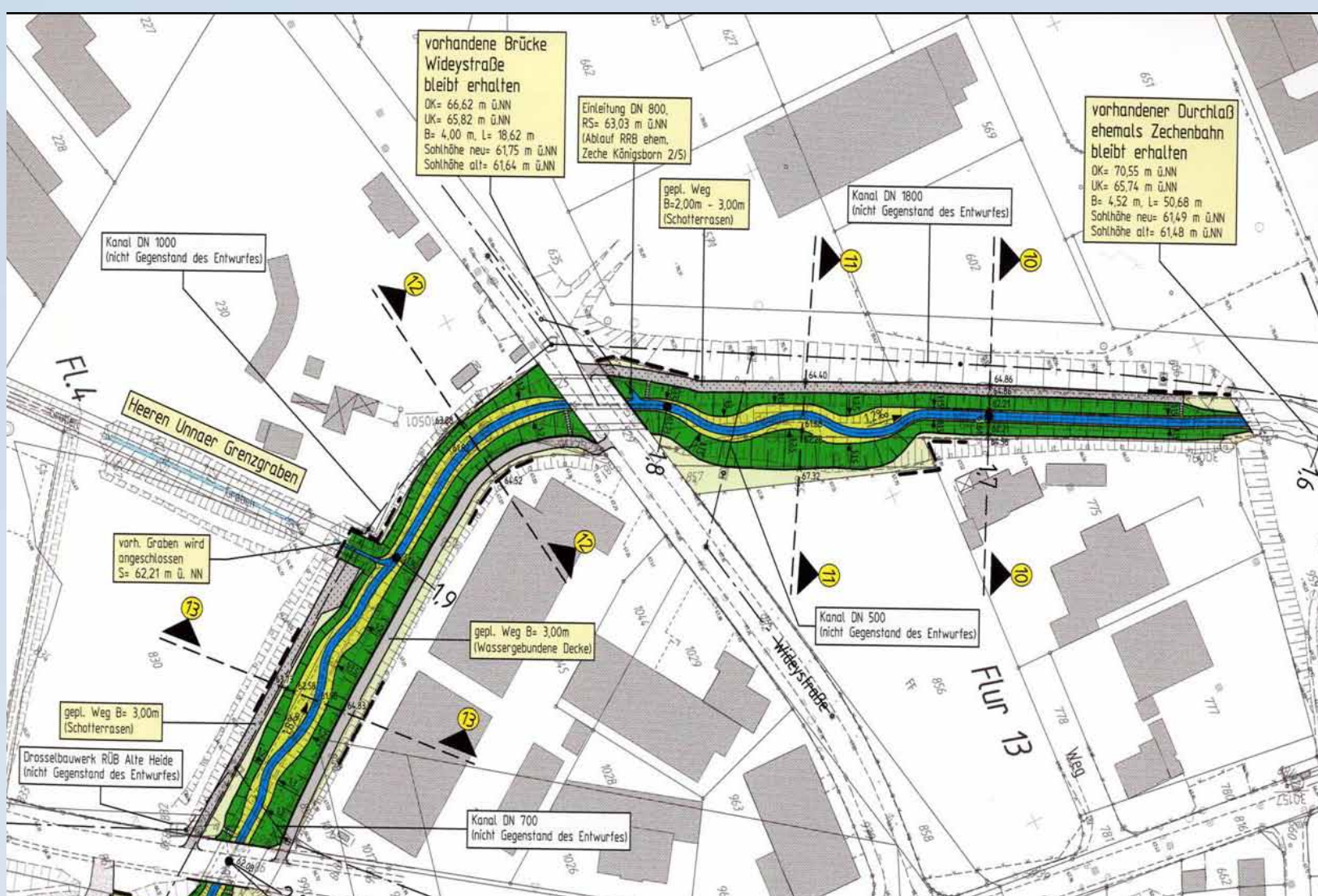
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The ecological transformation of the River Lippe and its tributaries is combined with the disconnection of storm water. This creates a green-blue corridor with positive impacts on the local city climate:

- In case of heavy rainfalls, floods of the River Lippe and its tributaries can be reduced.
- With rising temperature in summer, the water bodies tend to dry out more. The use of rain water for the open water body contributes towards a sound water cycle. Evaporation creates a better micro-climate.
- The ecological functions of the water system are strengthened. Combining water management measures with green corridors in inner cities, the climate in the urban surroundings is enhanced.

### GREEN-BLUE-CLIMATE-CORRIDOR ALONG THE HEERENER MÜHLBACH, KAMEN

The Lippeverband realises a green-blue corridor in Kamen to improve the city micro climate. Connected to the ecological enhancement of the Heerener Mühlbach will be the disconnection of storm water. The disconnection reduces potential sewer overflow in case of heavy rainfall. In addition the tendency of the water body to dry out in summer is also reduced: With the use of rain water for the open water body the water cycle will remain sound even in dry periods and evaporation creates a better micro climate.



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The activities are starting with the information of the inhabitants living next to the Heerener Mühlbach. The property owners will be contacted in order to identify the potential for disconnection. In cooperation with the Lippeverband and the city of Kamen the inhabitants can realise the disconnection on their grounds, before the storm water is drained into the water body.



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With this project the people get an idea about individual possibilities to contribute to a better ‘city climate’. These activities will be followed by the planning and the construction work for the ecological enhancement in 2011 and 2012 to complete the green-blue climate corridor.

### PROJECT PARTNERS

