

## WieseVital: Revitalization of the Wiese in Basel-Stadt

### Summary

TK CONSULT AG has completed a hydraulic assessment of the current planning status using numerical modelling as part of the WieseVital revitalisation project, which is currently being planned by HOLINGER AG. As part of this work, a numerical 2D runoff model was created that simulates the planned channel geometry and the potential flooding areas during flood events. The dimensioning is based on a minimum bank freeboard of 0.8 m for a 100-year flood (HQ100) and full conditions (no overtopping) for HQ300. The modelling was used to propose optimisations and provide proof of hydraulic functionality.

### Services

- Sensitivity analysis of bed roughness and comparison with physical model tests
- Sensitivity analyses for different types of embankment vegetation
- Freeboard analyses on banks and bridges
- Consideration of bridges by means of gauge-discharge relationships (including pressure flow conditions)
- Discharge calculations for the relevant flood scenarios HQ30, HQ100, HQ300, EHQ
- Optimisation of the channel geometry

### Client

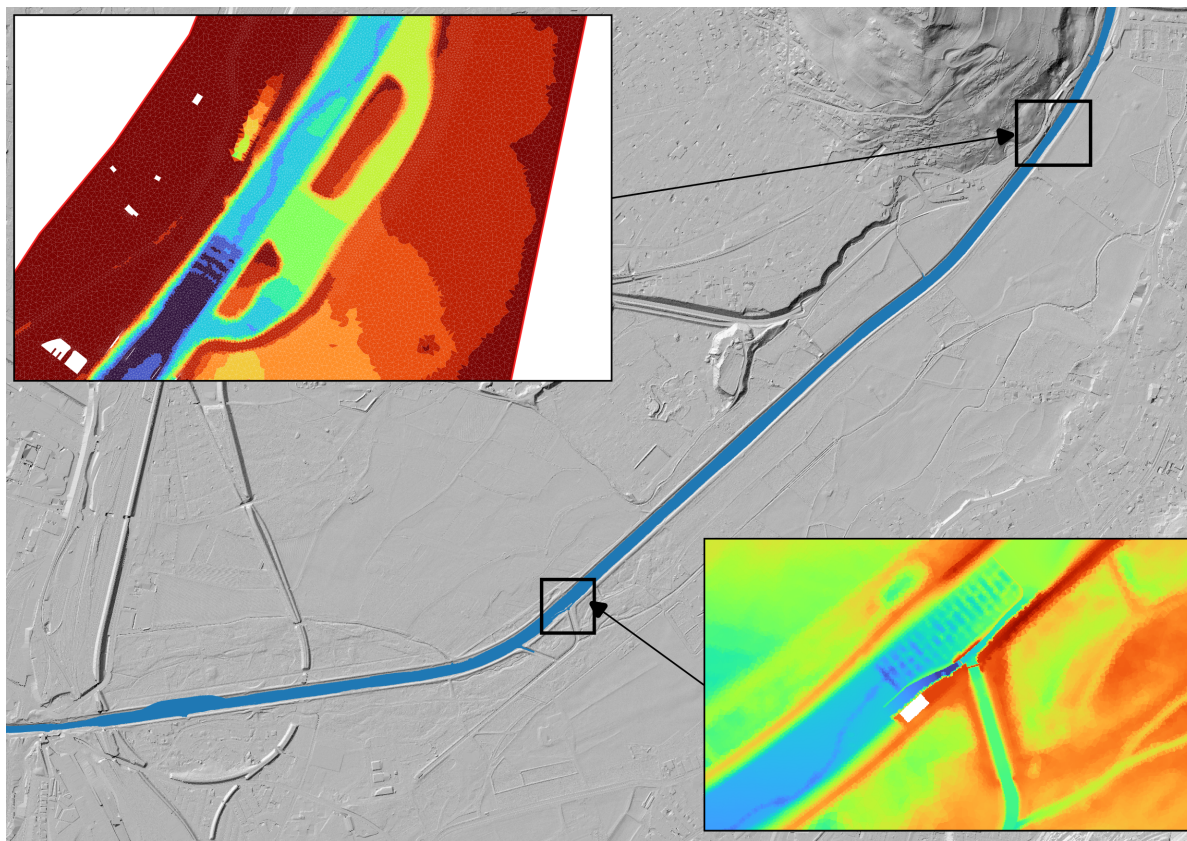
Tiefbauamt, Kanton Basel-Stadt

### Key data

- Modelled river length: 6.2 km
- Area: 10.1 km<sup>2</sup>, Number of elements: 1'836'000
- Number of Scenarios: 4
- Number of sensitivity analysis: 7
- Number of bridges in freeboard analysis: 28

### Duration

2023-2024



Overview of the model perimeter with cutouts of the 2D model.