Jun 22nd, 2:15 PM - 2:30 PM

Session D2: Stream Restoration in an Urban Context

Peter Bønløkke Adamsen
Ramboll Environment & Health, Denmark

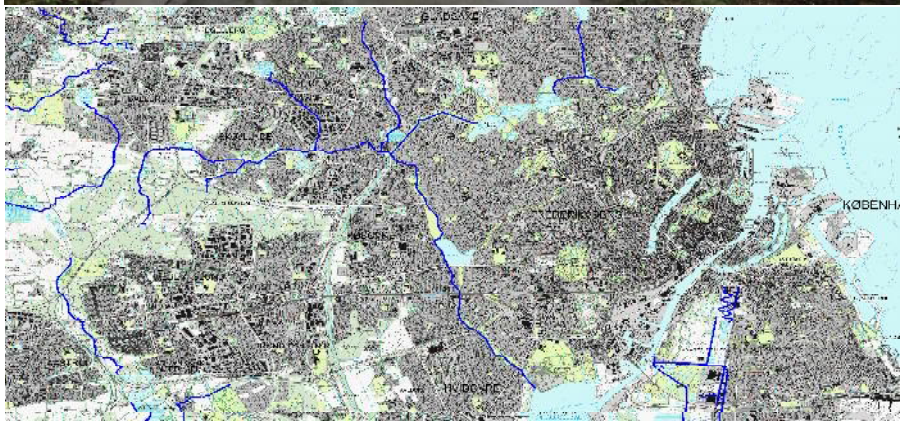
- Peter Bønløkke Adamsen, Ramboll Environment & Health
- Market Manager and Technical Expertise Leader, Nature Services
- Engineer
- 9 years with Ramboll
- Expertise: River restoration, fish and fauna passage, wetlands

STREAM RESTORATION IN AN URBAN CONTEXT

RAMBØLL

THE SITUATION TODAY HARRESTRUP STREAM

- 30 km watercourse from Harrestrup Bog northwest of Copenhagen to the outlet into the sea
- Runs through several municipalities
- Approx. 10 km through the City of Copenhagen
- Former derivation channel for the waste water
- It lies deep beneath the surrounding terrain
- Concrete tiles on the bottom and sides of the stream
- Shielded by fences, trees and bushes
- No correlation with the surrounding parks



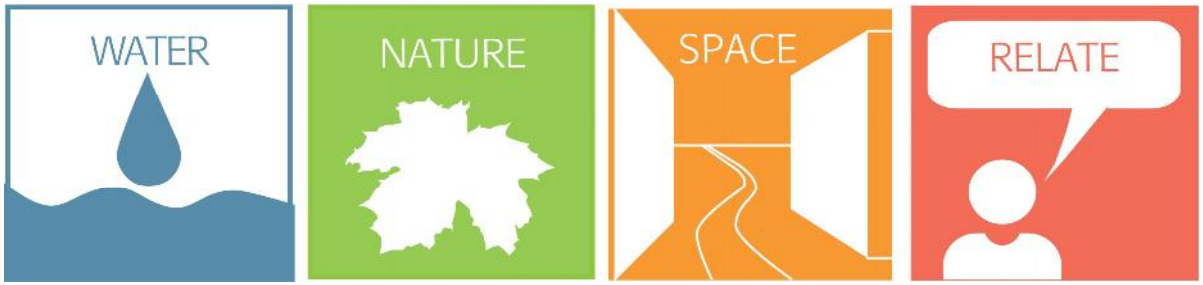
OVERALL OBJECTIVES FOR THE RESTORATION

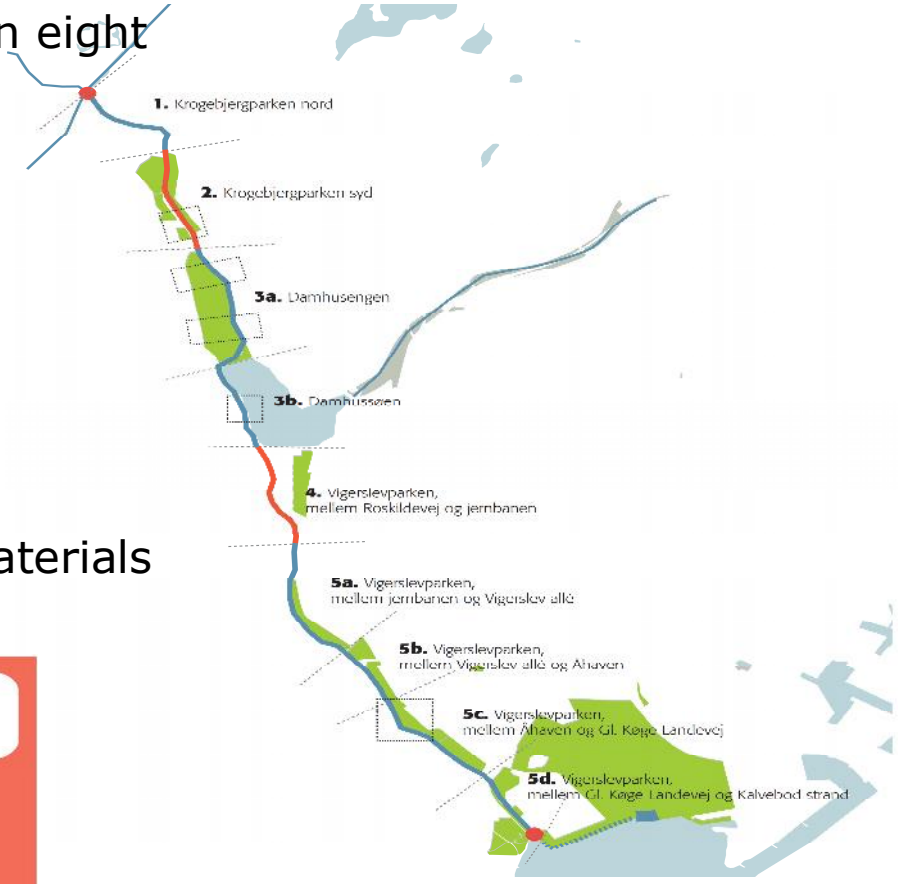
- The vision is to restore Harrestrup Stream as a natural, recreational and sustainable stream
- Improved aquatic environment – fulfilling Water Framework Directive EU
- Recreational park areas
- Climate adaptation
- Bathing water quality at the outlet into the sea and eventually construction of beach
- Construction works over the next eight years
- Together with Schonherr, Ramboll has prepared a master plan for restoration

RAMBØLL

THE MASTER PLAN'S DIVISION AND THEMES

- Divided into sections which will be implemented in eight stages towards 2021
- Common for sections:
  - Water Framework Directive EU
  - Waste water
  - Climate adaptation
  - Maintenance of watercourses
  - Aquatic vegetation
  - Natural bottom substrate, gravel and stone materials
- 4 themes:





CHALLENGES WHEN PREPARING A MASTER PLAN

- Everyone has their own views
- Laws and regulations
- Many stakeholder organizations
- Many departments in the municipality and a lot of different plans for the development
- Technical aspects
- Other construction works

EXAMPLE SECTION DAMHUS MEADOW

- The stream is moved to the lowest parts of the meadow
- The stream is provided its meandering course
- Most of year the stream will be about 2 meters wide
- The stream will be up to 40 meters wide after extreme rainfall
- The meadow is preserved as an open width
- New walkways across the stream
- The bottom of the stream is carried out with gravel and stones
- The number of football pitches is maintained

EXAMPLE SECTION VIGERSLEV PARK

- The stream is giving its meanderings through the park
- Utilization of low terrain
- "Nature" urban area with wet meadows, side-streams and small bird islands
- The number of football pitches are preserved
- Festival ground activities near the stream
- Resting opportunities on the slopes along the stream
- New connections (bridges and walkways) across the creek

THANK YOU FOR YOUR ATTENTION