CASE STUDY

Restoration of Ritobäcken Brook

The restoration of Ritobäcken Brook was carried out to address flooding and to reduce the need to maintain the river channel. This was achieved by cutting a new channel, which allowed the river channel to carry more water. The risk of flooding has been reduced and there have been improvements in wildlife and water quality.

Project summary

Location: Municipality of Sipoo, Southern Finland

Length: 800m

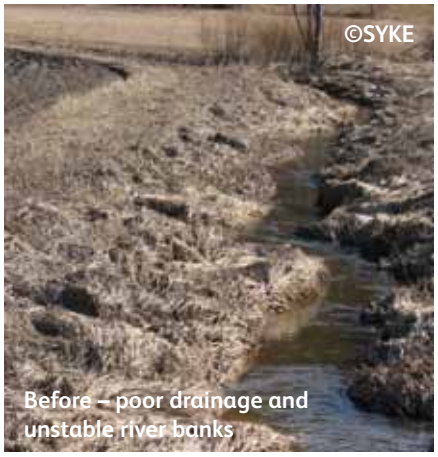
Cost: €15,000, planning €2,500

Dates: 2010

Delivery

Delivered through: Regional environmental authority, Uusimaa ELY-centre.

Partners: Aalto University School of Engineering, Jami Aho Ltd.



Before – poor drainage and unstable river banks

A flood terrace was built on the left hand river bank. The right hand river bank was left untouched. Soil dug for the flood terrace was used on nearby fields.

After – low flow water in the river all year round

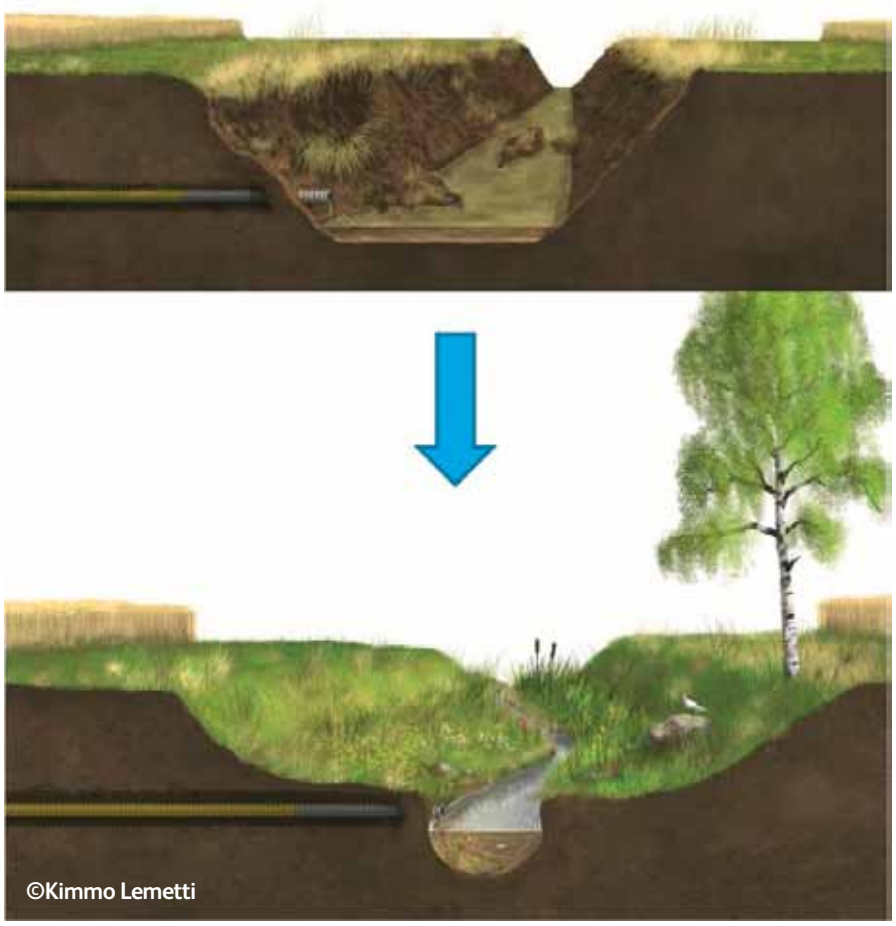
Background and issues

- Poor drainage
- Regular maintenance (such as dredging) necessary
- Unstable banks causing erosion and sediment build up in the river channel
- Agricultural areas frequently flooded.
- Artificial channel due to dredging and straightening in the past.
- Poor habitat for fish caused by river banks being eroded.

CASE STUDY

Step-by-step

1. A digger was used to excavate the flood terrace above the existing river channel, to allow it to carry more water.
2. The excavated soil (2,500 m³) was transported to nearby arable land to fill in the lowest areas.



Benefits

- Reduced risk of flooding to nearby arable land.
- Less maintenance required
- Cost of maintenance is lower as dredging and managing vegetation is no longer needed.
- 2 stage channel with flood terrace improves plant and wildlife in agricultural areas.
- Quality of water has improved.
- Vegetation has stabilised the bank, reducing erosion
- Wet channel year round better for aquatic life

Lessons learned

- Low cost project delivered a sustainable approach to drainage.
- Excellent demonstration of a successful local project involving a number of partners.
- Interested groups were willing to test new ideas, which was extremely helpful for the project.

Project Contact: Finnish Environment Institute (SYKE)