

Isar River, Munich

The 'Isar Plan' was developed to improve flood control, to improve plant, fish and animal habitats, and to increase opportunities for recreation. These issues were addressed by regrading river banks, setting back flood defences and creating public beaches. The results have been dramatic, particularly considering its urban location: the risk of flooding has been reduced, the local ecology enhanced and public access to the area improved.

Project summary

Location: Munich, Germany

Length: 8km

Cost: €35,000,000

Dates: 2000-2011

Delivery

Delivered through: State funding, with high public consultation.

Partners: State of Bavaria, City of Munich, Regional Office for Water Management, Isar-Alliance.

“The **urban river concept** combines the nature oriented design of an urban river with an urban lifestyle, it goes beyond simple cost benefit analysis and is of immeasurable value to the population”

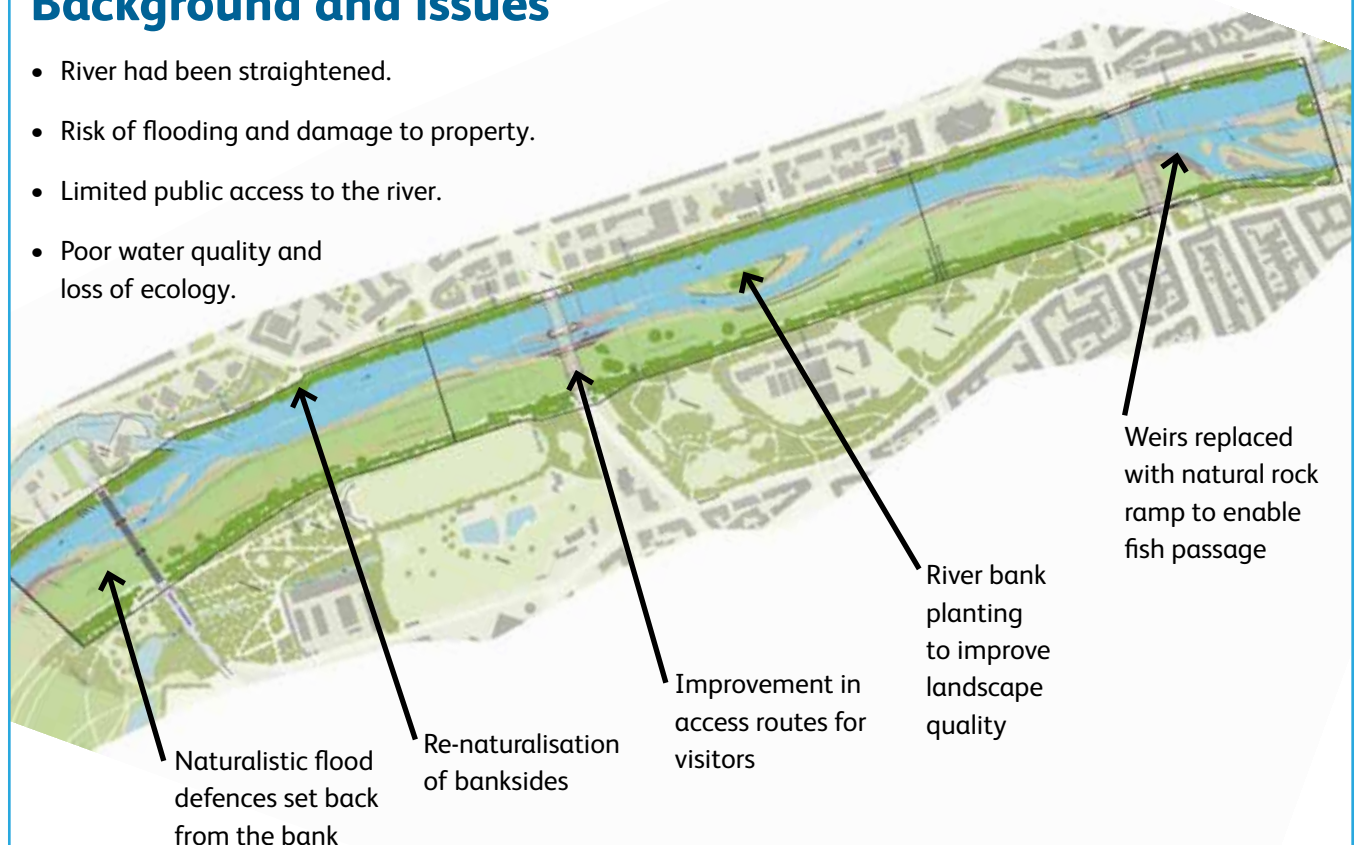
(Urban river restoration in Munich, Arzet and Joven)



Increased access for local people following restoration

Background and issues

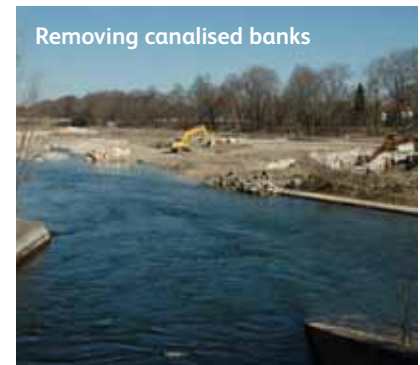
- River had been straightened.
- Risk of flooding and damage to property.
- Limited public access to the river.
- Poor water quality and loss of ecology.



Step-by-step

The scheme was delivered in two phases:

1. 1995-2000- Working group 'Isar-Alliance' set up. Public input into the design of the project through consultation period.
2. 2000-2011- Remediation works carried out in seven sections, approximately one completed every 12 months, including:
 - €7M remediation of contaminated sites and removal of debris from World War II.
 - €28M of works, including increasing flood protection, creating a public beach, bank re-grading, weir removal, river bank planting and installing water disinfection systems to improve water quality.



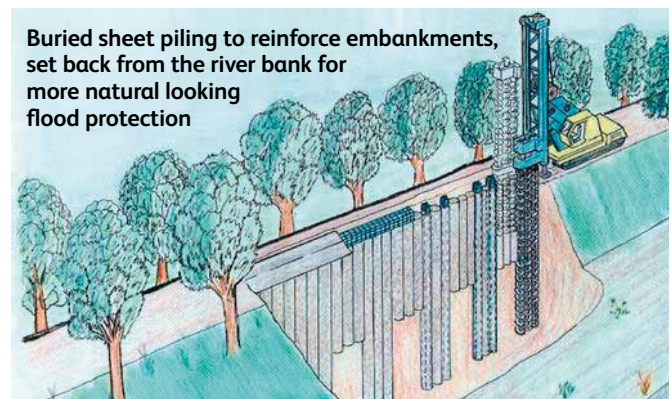
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Benefits

- Reduced risk of flooding.
- Community involvement in design meant design and changes were more readily accepted by the public.
- Increased public access.
- Aesthetic improvement.
- Improved water quality.
- Fish can pass more freely.

Two flood protection approaches were used to restore the alpine character of the river.

1. Sheet piling was used to reinforce embankments at both edges of the floodplain.
2. Stone was buried in trenches set back up to 25m to as a precaution in case the river moved more than expected.



Hidden stone barrier to limit migration of the river bed and further protect the embankments



Lessons Learnt

- Natural and attractive design that creates an appealing green space for people in the centre of Munich, without compromising the level of flood protection.
- The Isar-Alliance provided a platform for public consultation.

Project Contact: State Office for Water Management, Munich