

This project included NFM measures to prevent issues with rapid runoff during heavy rainfall, leading to flash flooding and increased erosion downstream. This has placed pressure on farmland, local infrastructure, and river habitats.

To address these challenges, SP conservations was commissioned to design and install a leaky dam as part of a natural flood management (NFM) approach.

Objectives

- Slow the flow of water during peak rainfall events.
- Reduce downstream erosion by holding back water and sediment.
- Increase infiltration into soils and surrounding wetlands.
- Enhance habitat for aquatic and riparian species.



Methodology

- Site Survey: Baseline assessment of hydrology, erosion points, and flow patterns.
- Design: Positioning leaky dams at key pinch points to intercept high-energy water.
- Construction: Locally sourced timber and brush were installed in a permeable structure, fixed securely across the channel but designed to allow base flow and fish passage.
- Integration: Each dam was blended into the surrounding banks with natural materials to maintain a low visual impact.

Results

- Flow Reduction: Water flow was visibly slowed during storm events, with small pools forming behind the dams.
- Erosion Control: Sediment deposition has already begun upstream of the structures, reducing scouring further downstream.
- Habitat Creation: The dams provide refuge for invertebrates, fish, and amphibians, while also increasing moisture levels in adjacent wetland areas.
- Community Benefits: Local landowners report reduced flooding in fields immediately downstream after heavy rainfall.



Monitoring & Next Steps

The site will be monitored over the next [insert period, e.g. 12 months] to assess long-term performance. Potential future steps include:

- Expanding the network of leaky dams to cover more tributaries.
- Complementary measures such as riparian tree planting and wetland creation.
- Sharing lessons learned with other landowners across the catchment.

Conclusion

The installation of leaky dams has already demonstrated the value of working with natural processes to manage water. By slowing flow, reducing erosion, and providing ecological benefits, this project showcases how low-cost, nature-based solutions can deliver resilience for both people and wildlife.

