

RIVER AND FLOODPLAIN RESTORATION

River and floodplain restoration aims to improve the ability of a river to manage floodwater by restoring a more natural hydrological regime and improving connectivity. Floodplain restoration is appropriate where a floodplain is connected to the watercourse, where there is potential for re-connection, and in areas where land cover is suitable for wetland.

River re-meandering

This is the reinstatement of natural meanders to river channels which have previously been modified and/or straightened. Re-meandering increases the length of a river channel and decreases flow conveyance and speed, allowing more water to be stored in-channel and helping to decrease flood risk downstream. Having a more natural river channel condition can also help with biodiversity.

River bank stabilisation

Stabilising excessively eroding river banks reduces the deposition of sediment downstream. This can be achieved through better riparian management practices such as using stock fencing to prevent livestock destabilising the bank, and allowing the bank to re-vegetate and re-stabilise naturally, or through direct re-vegetation.

Floodplain reconnection

A river can be connected to its floodplain through the removal of embankments or by changing the rivers shape to allow water to spill out. This restores and encourages the natural hydrological connectivity of the channel to its floodplain and increases floodwater storage to decrease the flood peak and reduce the flood depth downstream.

Benefits

- Reduces downstream flood risk by increasing water storage and slowing the flow of water in channel.
- Reduces levels of bank erosion and sediment loss.
- Improves habitat diversity and increases biodiversity both in channel and on land.

