

What is connecting floodplains and how does it work?

In many situations, watercourses have become disconnected from their floodplain. Most commonly, this happens where silt is dredged from the watercourse and placed on the banks or where the river bed is deeply incised, which means that floodwater cannot reach the floodplain.

The aim of connecting floodplains is to:

- improve connectivity between the river and land adjacent to it, making use of the floodplain more frequently, and / or
- Temporarily hold flood water back on the floodplain and allow it to slowly drain back

Benefits:

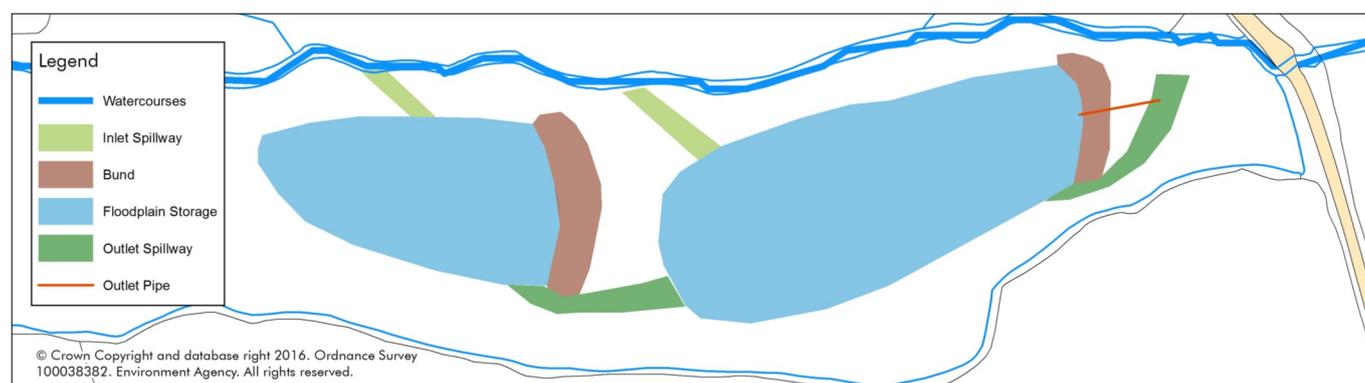
- Temporarily store / hold back floodwater
- Work with natural features and processes, and enhancing them to increase water storage
- Creating wetland habitats and roughen up the floodplain

Site Selection

- Adjacent to watercourses
- Areas of regularly wet ground and low productivity (not replacing valuable habitat)
- Areas with easy access for maintenance, where compaction can be avoided
- Flat or gently sloping ground with natural low spots

Design and Construction

- Make sure baseflow always remains in the channel
- Consider how frequently the area should lie wet and use inlet and outlet features to allow this (see overleaf for options)
- If you create a bund or dig down on the floodplain, side slopes should be as shallow as possible, no steeper than 1:3. *See H2L Information Sheet on In-field Bunds.*
- Establish grass on any areas where earth has been moved (choose mixes suitable for wet and dry conditions)
- Consider using biodegradable geotextiles (e.g. coir matting) around inlet / outlet channels to protect against erosion and scour especially in the first few years after construction.
- Plant trees to roughen up the floodplain. *See H2L Info Sheet on Strategic Planting*



*Floodplain scheme designed to take peak flow from watercourse via **inlet spillways**. Water drains from the area via **outlet spillways and a pipe**.*

There are a number of different options for the inflow and outflow methods. It is particularly important to avoid the risk of fish entrapment on the floodplain when flood water drains back into the stream. Our advisers can provide more information on these details and what to use to meet your requirements as well as site requirements.

Connecting Floodplains and Storage design options		
Inlet method	Increase storage	Outlet method
<ul style="list-style-type: none"> • Pipe in the riverbank set at floodwater level • Spillway / swale from watercourse set at floodwater level • Lowering ground level along the watercourse 	<ul style="list-style-type: none"> • Bund to hold back water • Depressions / ground lowering 	<ul style="list-style-type: none"> • Spillway / swale (design spillway / swale so that water level is high enough to allow fish to swim back to the watercourse) • 3-4" pipe with non-return valve through the bund back to the watercourse

Management

- Check that the inlet and outlet areas are clear and will allow movement of water when needed.
- If there is a mechanism to control water levels, ensure that it is closed during winter / prior to flood conditions and empty when appropriate.

Connecting floodplains and your farm business

Finding ways that floodplain storage can fit in with your farm business is important when siting and designing these features. Most connected floodplains are still suitable for grazing for all but the wettest periods. If the area has not changed in terms of how it can be farmed, it should be eligible for BPS as usual.



*Floodplain wetland with a bund and inlet and outlet **spillways**.*

Consents and Licences

Planning Permission or Prior Notification (Agricultural Exemption) may be needed for floodplain storage schemes, depending on the design. Land Drainage Consent or EA Flood Risk Activities Permit may also be needed. You may need consent from Natural England if the land is designated as a SSSI or in an agri-environment agreement. FWAG SW can give site specific advice on this.