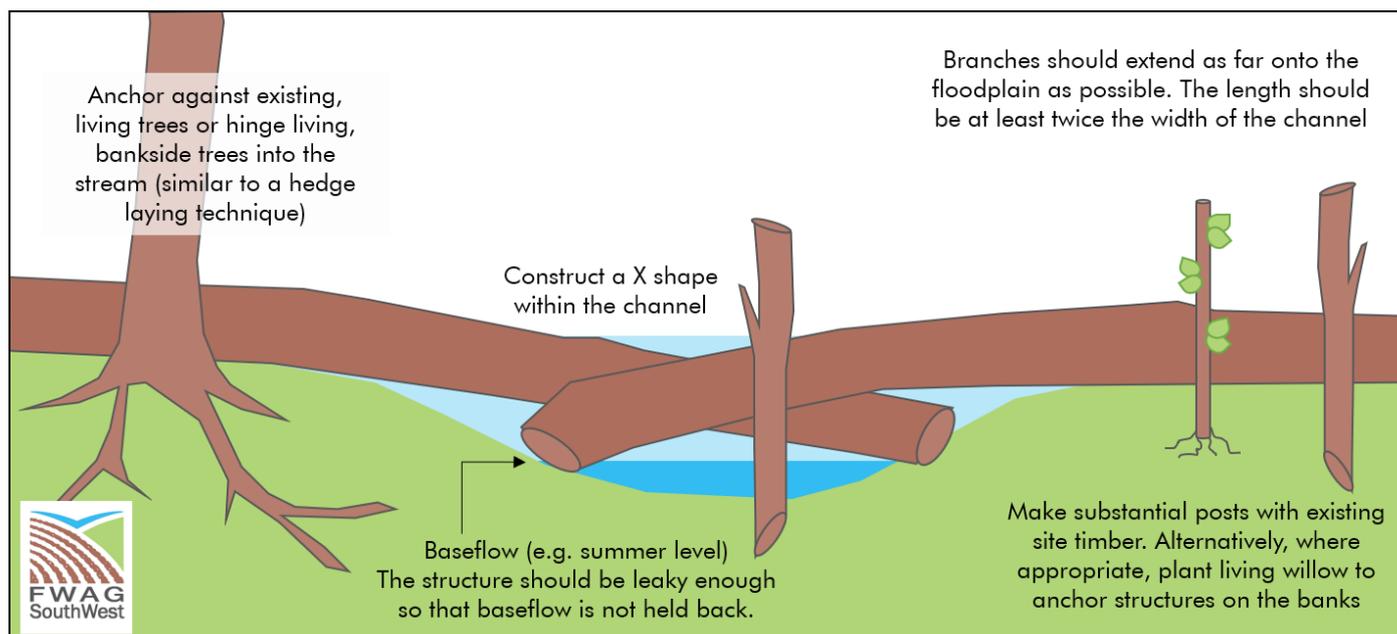


### What are leaky woody dams?

- Woody dams are a green engineering option for natural flood management. They are leaky structures made from logs and branches, which mimic naturally fallen trees
- How they work:
  - ‘Slowing the flow’ by holding back and spreading water onto the floodplain when the stream level is high in flood conditions, but not affecting normal flow conditions.
  - They trap and build up small woody debris and leaf litter over time, while allowing fish and gravel to move along the stream.
  - Introduce variability in flow speed and depth within streams
  - Provide variable habitats and food sources.
- Every dam acts differently in how it delays the movement of flood water through a catchment. Please note that wrongly constructed leaky woody dams may pose a barrier to fish movement and gravel transport, depending on the morphological characteristics of a stream.

### Structure configuration and Securing options



*This diagram can be used to understand the principles to apply to your site.*

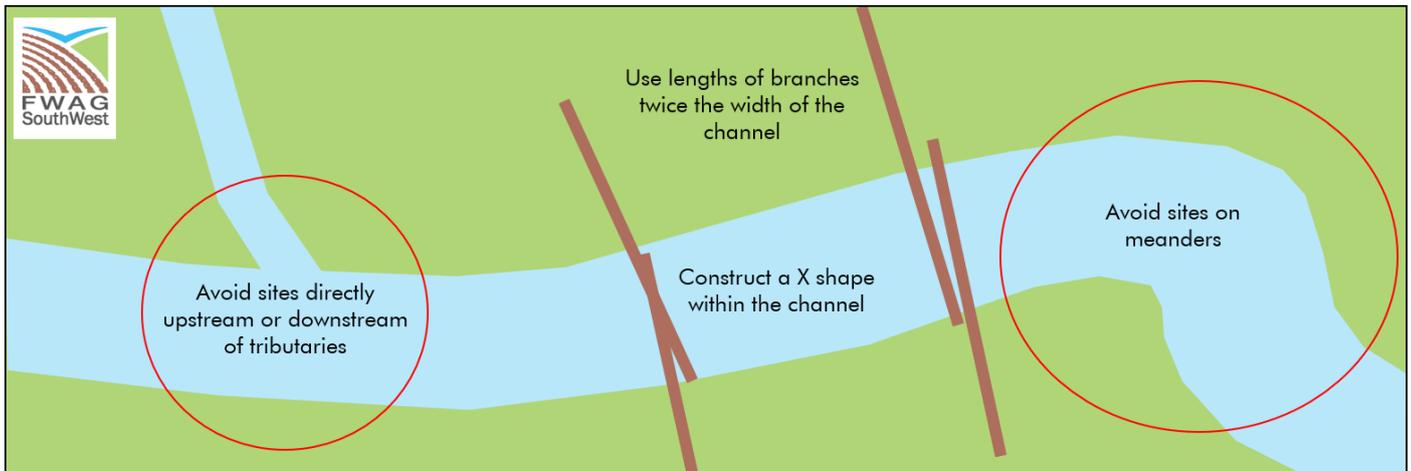
- Fell suitable trees and consider where the tree will fall when felled. Choose:
  - trees that have low habitat, historic, landscape or economic value.
  - branches that are more than 20 cm in diameter.
- Remember: do not fell between 1<sup>st</sup> March and 1<sup>st</sup> September (GAEC 7A & 7C)
- Use securing techniques as shown in the diagram above, and ensure they will withstand much force; floodwater can be powerful.

### Site Selection

- Most suitable sites are headwater streams, preferably with a stretch long enough for multiple woody dams. If possible, choose relatively unproductive sites that are naturally wet and can be temporarily flooded.

### Site selection continued:

- Avoid sites near housing, bridges and culverts.
- Avoid deep channels or streams with steep banks and do not place woody dams near meanders or tributaries.



### Managing leaky woody dams

Long-term management will be required:

- Check the stability and function of the woody dams regularly: Woody dams should naturally allow the process of trapping leaf litter and woody debris and releasing it in different flow conditions. However, debris and silt build up should be monitored and reviewed to maintain the efficacy of the structure.
- If the leaky dam is blocked, unblock it until its leaky function is restored and to avoid the creation of stagnant pools.

### Leaky woody dams and your farm business

Leaky woody dams should not impact on your day-to-day farm management or impact high valuable agricultural land as long as you choose the right location.



### Consents and Licences

County Council Land Drainage Consent or EA Flood Risk Activities Permit is required. A felling licence is only required if one landowner is felling more than 5 m<sup>3</sup> in any calendar quarter. Consent from Natural England may be required if the land is a SSSI or in an agri-environment agreement. Your FWAG SW adviser can help with these.

