

Check Dams

Check dams placed strategically in ditches will have the following water quality related benefits:

- These dams are designed to further interrupt and inhibit the water flow, slowing it down, reducing its force and flow.
- Reduces scouring of banks or ditches and hence less mobilisation of sediment.
- Provides capacity for silt to settle out before water moves downstream.

Other benefits include:

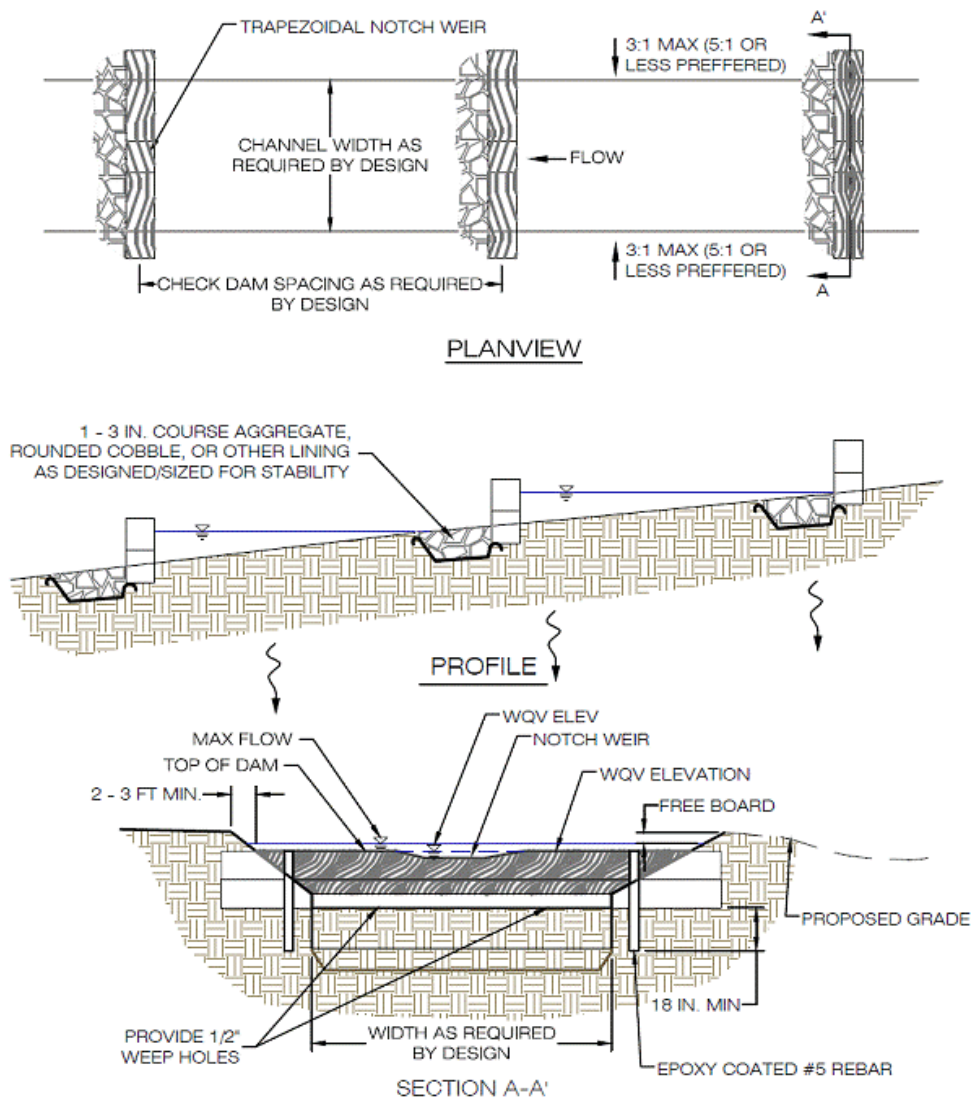
- Allows the normal flow of the water course to progress unhindered.



Installing Check Dams

	Guidance
Where	<ul style="list-style-type: none"> • Chose a ditch which will accommodate several check dams • Drainage ditches play an important role in the lowlands, effectively removing water from agricultural land • Installing natural flood management options such as a check dam in your ditch network can create multiple benefits whilst also fulfilling your duties as a riparian owner • Check dam ditches can help slow the flow of water into main rivers and streams by temporarily holding water during rainfall events. With rainfall patterns predicted to change in the future holding water in ditches and encouraging infiltration could help to mitigate against drought • The ditches can be designed in a cascade pattern down the ditch connected to small ponds and water storage lagoons, providing corridors for wildlife to pass along (ditches are important habitats for wildlife especially where their management is designed to take biodiversity into account) • On large ditches creating a staged or stepped check dam system will also help to protect the bank sides and creates offline water storage also
What	<ul style="list-style-type: none"> • An engineered structure to restrict the flow of water down stream and allow the water behind to settle out • Should be anchored securely in place to the banks • Design incorporates a notch cut into the top to allow normal flow to slowly trickle over • A gravel base below the notch helps reduce the erosion potential at the base of the dam
How	<ul style="list-style-type: none"> • Arrange your dam so it stretches across the water course • Make a series of dams down the water course (see design example below)
When	<ul style="list-style-type: none"> • Install check dams in the summer when flows are low and safer • Ensure any drainage ditches have been cleaned out prior to installation

Design example of check dam / baffle ditch system.



NOTE: CHECK DAM CONSTRUCTED OF RAILROAD TIES, PRESSURE TREATED LOGS OR TIMBERS, OR CONCRETE.

Management for Water Quality and your farm business

Water builds up behind the dam allowing sediment to drop out. Any excess water behind the dam then flows out through a V shape notch, cut in the top section of the dam, further aiding in controlling water volumes. Check dams can become an integral part of your land management regime reducing the flood risk to fields downstream. This may mean fields become slightly more productive and remain drier over the course of the winter. From a social perspective, it demonstrates you are taking steps to mitigate flood risk and mild pollution to downstream neighbours.

Consents and Licences

It may be necessary to consult with the local Flood Risk Officer within the County Council for a Land Drainage Consent (LDC) and the Environment Agency /Natural England whenever conducting works that directly affect a water course.

Visit wrt.org.uk for more information

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