Phosphorus Reduction Scheme



Wetland features including creation or restoration of ponds, swales, in-field bunds, in-ditch features, sediment traps and constructed wetlands

Funding is available for establishing a single or series of flow-reducing feature/s including the creation and restoration of ponds, swales, in-field bunds, in-ditch features, sediment traps and constructed wetlands. These features will intercept surface runoff through the landscape and allow the settling out of P-laden sediment. Wetland features can be used to slow, break or re-direct the pathway of a surface runoff, providing some attenuation of flood flow and create new wildlife habitats. Wetland features can be used to tackle field or farm track runoff generated from normal agricultural activities that will help to reduce the risk of sediment and other pollutants from entering a nearby watercourse. Each intervention is specifically designed for a given location.

Length of agreement available

 10 years from the date of completion of the feature. This is the minimum period of time that the wetland feature should be kept and maintained in good working order. Maintenance of the wetland feature includes the periodical removal of any accumulated sediment in or behind the feature.

Where to use this measure

- In areas where overland flow occurs, and runoff pathways can be intercepted
- In areas where the features can be easily accessed for maintenance
- · Adjacent to farm tracks which are a conduit for surface runoff
- For the restoration of ghost ponds
- Creation of sediment ponds or constructed wetlands as a collection point for surface runoff or field drains
- In ditches that collect surface runoff from fields

Where this measure cannot be used

- On protected or archaeological features
- To treat slurry, silage liquor, heavily fouled water or concentrated pesticides spills and washings
- For existing or proposed sediment ponds or traps that will be funded by any other funding scheme (such as Countryside Stewardship)
- In-ditch features should not be constructed in streams, rivers or ditches which drain large areas, receive heavy stormflows, or are located in the floodplain
- Do not locate woody dams near meanders or tributaries

- Without relevant advice or consent from the Environment Agency, Internal Drainage Board, and/or the Local Planning Authority
- Within a drinking water protected area or source protection zone
- Where the wetland feature and/or its construction would likely not be able to avoid unacceptable impacts on SSSIs, National or Local Nature Reserves, protected species (e.g., water voles or great crested newts)

Requirements

Final construction designs and product specifications of each wetland feature must be approved in writing by a member of the project team. Construction and maintenance of the wetland feature(s) should be in accordance to the agreed plan and follow the maintenance as set out in the plan.

In-ditch features can involve widening and/or digging out the ditch, regrading the banks to create a series of shelves at different water levels and installing a solid or permeable barrier to hold water back to slow the flow of water and allow sediments to settle out. New ditches can be created to carry water to sediment ponds/traps or constructed wetlands. Wetland plants can be established on or around the features to contribute to the slowing of water and play a role in the uptake of nutrients, settlement of sediments and wider benefits for the effective functioning of the wetland such as shading and habitat and biodiversity value.

The most suitable sites for in-ditch features such as leaky dams are in the headwater streams or ditches on relatively unproductive sites that are naturally wet and can be temporarily flooded. Avoid sites near housing, bridges, and culverts.

For sediment traps, ponds, swales and constructed wetlands excavate to an agreed depth, creating gently sloping banks. Excavated soils can be used in a range of ways such as spread and used for top soil, for bunding (outside of the floodplain) but should be included in the design/plan. The spreading of spoil from larger constructed wetland features may not be allowed if it is in the floodplain as it may be classified as a waste. Do not place any spoil on any environmental, historic, or archaeological protected feature.

For the scope of this project, a constructed wetland is a gravity-fed, sometimes multi-cell, free surface flow wetland that captures flow from ditches and small watercourses which are fed from a watershed containing predominately agricultural land. Other types of constructed wetlands, such as subsurface flow and floating wetlands are currently not included.

Livestock access should be restricted to reduce the risk of erosion or degradation of the wetland features. Manage the outfall by ensuring that the outflow water is of high enough quality before it is discharged into the local watercourse.

The wetland feature must be maintained for 10 years. Maintenance is defined as:

- Ensuring the feature functions (slows the flow)
- Sediment traps should be periodically desilted and ensure that the outlet pipe is clear from debris or blockages. Location of desilted sediment should be included in the plan and again not deposited in the floodplain.
- Ponds with passive outlets should be kept clear of leaves, twigs and debris to ensure that water can drain from the pond. During periods of dry weather the outlet may be closed to retain water. Ensure the pond is drained down by mid-October to receive winter runoff

- Check leaky woody dams periodically and/or after heavy rain to monitor the stability of the structure. Secure limbs or remove lose material
- The feature must be regularly checked to ensure that it is functioning effectively and is not causing any of the following issues:
 - blockages of nearby culverts and bridges
 - flooding of nearby highways or roads
 - erosion issues, for example undercutting any river banks

Consents and permits

- A flood risk assessment, planning permission or Prior Notification (Agricultural Exemption) may be needed for ponds creation and restoration and constructed wetlands
- Land drainage consent from the council and/or the Internal Drainage Board may be required for in-ditch features and if a sediment trap or constructed wetland is connected to a watercourse
- A Discharge Licence may be required from the Environment Agency when discharging straight into a watercourse
- A waste exemption (U10) from the Environment Agency may be required when spreading any soil
- You may need consent from Natural England if the land is designated as a SSSI or in an agri-environment scheme or protected species.
- An RLE1 form should also be completed as the pond may count as a permanently ineligible feature for Basic Payments
- If a pond is used for irrigation, an abstraction licence may be needed. An abstraction licence may be required if diverting some flows from a watercourse to the wetland
- Where a wetland systems is proposed on a Public Right of Way you must consult the local Highways Authority to seek advice or consent
- Flood defence consent and environmental permit may be required for work on or within 10 m of a main watercourse

Record keeping and payments terms

Agreement holders will need to keep the following records and supply them with the payment claim each year. Payment will only be made upon satisfactory receipt of all of the following records:

- Photographs of site before and after construction of the wetland feature
- Copies of any consents or permissions connected with the work (e.g., planning permission, prior notification, land drainage consent)
- Copies of any quotes connected with the work
- Farm and field information needed to run a phosphorus loss tool for the farm and calculate the reduction in phosphorus loss to water arising from this work. This will include farm data relating to livestock numbers, cropping areas and fertiliser / manure inputs.
- Self-declaration that the terms of the project agreement have been adhered to (key terms are listed above).

- Successful applicants are required to sign a declaration confirming that:
 - reasonable precautions are taken to prevent nutrients and soil from the relevant field entering watercourses or from being leached to groundwater - to an extent that could cause pollution.
 - the relevant fields have not been (i) the source of a recorded pollution incident which
 could have been prevented by the farmer taking reasonable precautions to prevent
 that pollution and/or (ii) the subject of a warning, fine, prosecution or BPS deduction
 issued to the farmer by the Environment Agency or RPA for a breach of NVZ rules or
 Farming Rules for Water in the past 5 years.
- It is expected that to support and inform the above declaration, successful applicants will complete the Environment Agency's Agricultural Compliance Tool (ACT) by 31st December in each year of the agreement and submit it when completed to Wessex Water (who will hold it in confidence) and address any actions identified by the ACT. For agreements involving annual payments of more than 5 years duration and/or with a value in excess of £5,000 of annual payments, this is a requirement.

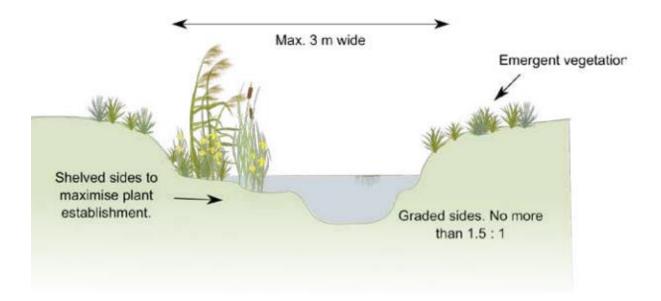
Additional information

Read the constructed wetland user guide produced by the Wildfowl and Wetland Trust for further advice in carrying out this option -

1429707026_WWTConstructedFarmWetlands150422.pdf

FWAG South West have further advice for delivering wetland feature measures - <u>Advice and Capital Grants | Farming and Wildlife Advisory Group South West Limited (fwagsw.org.uk)</u>

Catchment Sensitive Farming (CSF) operates in parts of the country where there are water quality issues linked to farming. The scheme provides farmers with free advice and training. See guidance for further information on CSF.



Cross section through an in-ditch wetland. *Photo credit: Wildfowl and Wetland Trust* 1429707026_WWTConstructedFarmWetlands150422.pdf





Sediment traps. *Photo credit: FWAG South West*https://www.fwagsw.org.uk/Handlers/Download.ashx?IDMF=966d20d3-9224-466d-9fc5-77f1c43f417b



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Leaky barrier. *Photo credit: FWAG South West*https://www.fwagsw.org.uk/Handlers/Download.ashx?IDMF=0ebe02c3-22a2-4815-bd74-78daaccac990



Swale. Photo credit: FWAG South West https://www.fwagsw.org.uk/Handlers/Download.ashx?IDMF=ffa7b833-942f-4e2b-9913-041f2b3205dc



Sediment pond. *Photo credit: FWAG South West*https://www.fwagsw.org.uk/Handlers/Download.ashx?IDMF=ee225b3a-8db3-4675-96c4-ab220cec3967



Coir-roll filter dam. *Photo credit: FWAG South West*https://www.fwagsw.org.uk/Handlers/Download.ashx?IDMF=d4bdf5c1-f842-4769-938e-ad7491b1a431