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Creating a Field Wetland

What is a Field Wetland?

Field wetlands are small constructed wetlands located in unproductive areas of agricultural land such as buffer strips and field corners, and within ditches and small streams. They are designed to trap sediment and nutrients from field surface runoff, field drains, and ditches, in order to reduce downstream water pollution.

A) Creating a shallow field wetland in a field corner.
B) Shallow single cell field wetland located in a small stream.
C) Deep and shallow paired cell field wetland fed by a field drain in an area of previously boggy land with a wildflower margin.
D) Shallow field wetland located in a ditch.

Why Create a Field Wetland?

- ***Help improve water quality:*** Field wetlands have been designed to trap sediment carried in runoff from fields and retain nutrients originating from farmland, which could otherwise pollute rivers and lakes downstream.
- ***Create a wildlife habitat:*** Field wetlands provide in-field areas for wild birds and pond life, and support many types of vegetation, including wetland macrophytes and wild-flowers along wetland margins.
- ***Reduce the impact of flooding:*** Field wetlands provide valuable space within fields where runoff can be held back, providing storage for floodwater.

Frequently Asked Questions:

- ***Is a field wetland right for my farm?***

Yes, if you want to trap muddy field runoff when it rains, or intercept drain, ditch or stream runoff and are keen to create small wetland areas on your land.

- ***Where should I put my field wetland?***

In a location which is naturally wet or unproductive, and where sediment and pollutants in runoff can be easily trapped, such as a field edge or corner or hillslope hollow.

- ***What size should my field wetland be?***

Field wetlands are designed to fit within the constraints of UK farm systems, and so can be as small as a few m^2 in area, or can be much larger if space allows.

- ***What should my field wetland look like?***

Field wetlands consist of one or two regular or irregularly shaped shallow (<0.5m) cells or one deep (<1.5m) and one shallow cell, separated by earth bunds. Making the wetland flow length up to five times longer than it is wide will help sediment and pollutants settle out. Length can be increased using baffles or barriers within the wetland if needed.

- ***What equipment will I need to create my field wetland?***

Field wetlands are easy to construct using a digger or mini-digger depending on wetland size, and do not need lining. Drain diversion equipment may be necessary in order to prevent drains from draining the wetland and taking trapped pollutants straight to the stream. Fencing may be needed to prevent poaching and faecal contamination by livestock.

- ***How much will my field wetland cost?***

Typical construction costs range between £300 and £3000 depending on wetland sizes and designs. Shallow wetlands which only receive surface runoff are cheapest and easiest to create, but may be dry for much of the year. Deep field wetland designs and those which receive drain, ditch or stream inputs may be more expensive, but may receive runoff and trap pollutants all year round. Construction costs may be higher for wetter sites. Some on-going maintenance may be required (e.g. dredging, vegetation harvesting) but this is un-likely to be needed every year. Grants and subsidies may be available, so contact your local farm or catchment advisor.

- ***Will I need any permissions?***

Many field wetlands do not require drainage or discharge consents, however, we recommend contacting your Local Authority and Environment Agency office.

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Further Information

Research into field wetlands is supported by the Department for Environment, Food and Rural Affairs under contract WQ0127.
For further advice on constructing a field wetland and to view our case study sites, or to find out more about the MOPS projects, please visit our website: mops2.diffusepollution.info.

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