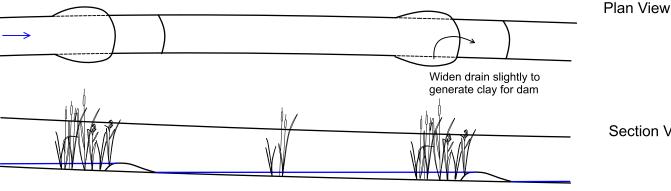
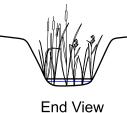
In-Channel Filter Buffers for silt settlement in farm drains (Planted Drains)



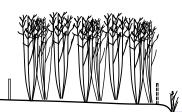


Silt Trap using Earth Bunding in Drains to form an In-Channel Wetland Filter (Build low earthen dams at intervals to create a continuous length of shallow standing water. Widen for better filtration.)

Leaky Log Dams may be used where flows are prone to excessive volumes and/or velocities.

Brash Dams or Straw Bale Dams may be used to balance the flows from larger catchments while also providing filtration during lower flows.

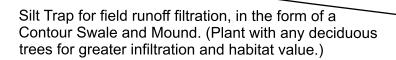
Silt Traps for field runoff

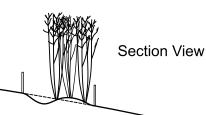


Section View

Section View

Silt Trap for field runoff in the form of a Conventional Riparian Buffer Strip. (Essentially a wider fenced area bordering the river. May be left to develop naturally as long grasses and wildflowers or planted with wetland plants to filter the surface runoff; or plant with willows or other native deciduous trees for subsurface flow filtration. The wider the strip the greater the uptake of silt, N and P.)

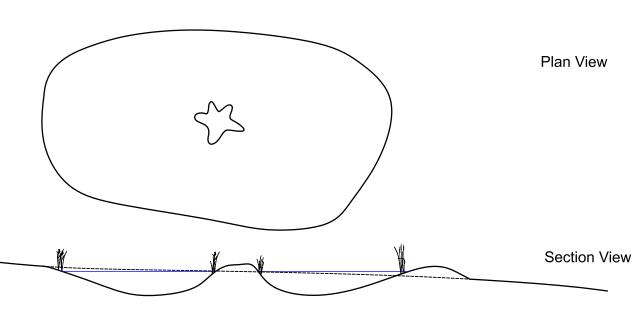




Other methods for reducing field runoff

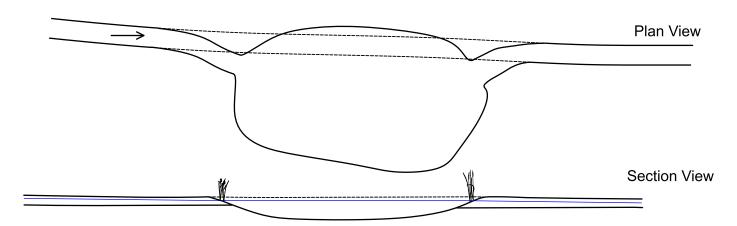
Note that these are just two methods for reducing runoff of silt and nutrients from fields. Other methods include, for example, contour hedgerows, establishment of woodlands in sloping ground, silvopasture, agroforestry, holistic planned grazing, maintaining a continuous cover of plants on the soil, permanent pasture, soil building through applications of humus rich compost, limiting artificial nutrient and chemical additions to maintain and support soil health, encouragement of mycorrhizal fungi within the soil and a suite of other methods for optimising soil health, and thus both free drainage and moisture retention.

Farm Ponds



Farm Pond with island for habitat on farms with heavy clay soils or high groundwater. (Use to take clean roof runoff. Note shaped edges of island as shelter for birds. Keep edge slopes shallow for greater habitat value and safety.)

Even small farm ponds can offer a lot of habitat benefits and can help balance the flow patterns in the wider catchment; slowing the flow of rainwater into nearby streams.



In-Chanel Farm Ponds can be used in farm drains for habitat enhancement or for additional silt trap function and/or nutrient capture.

(Suitable for farms with poor draining soils. The larger the pond the greater the uptake of silt, N and P. Plant with wetland plants for greater filtration. Make edges not stepper than 1:3 for habitat value and safety.)

For using farm ponds as a source of irrigation water; remember the 3 Cs of rainwater harvesting:

- 1 Catchment (source of water, be that a clean roof or fields),
- 2 Conveyance (good gutters or planted drains that deliver the water),
- 3 Container (storage, in this case the pond itself).

The cleaner and more robust these are, the more useful and reliable will be your water supply from rain harvested water.

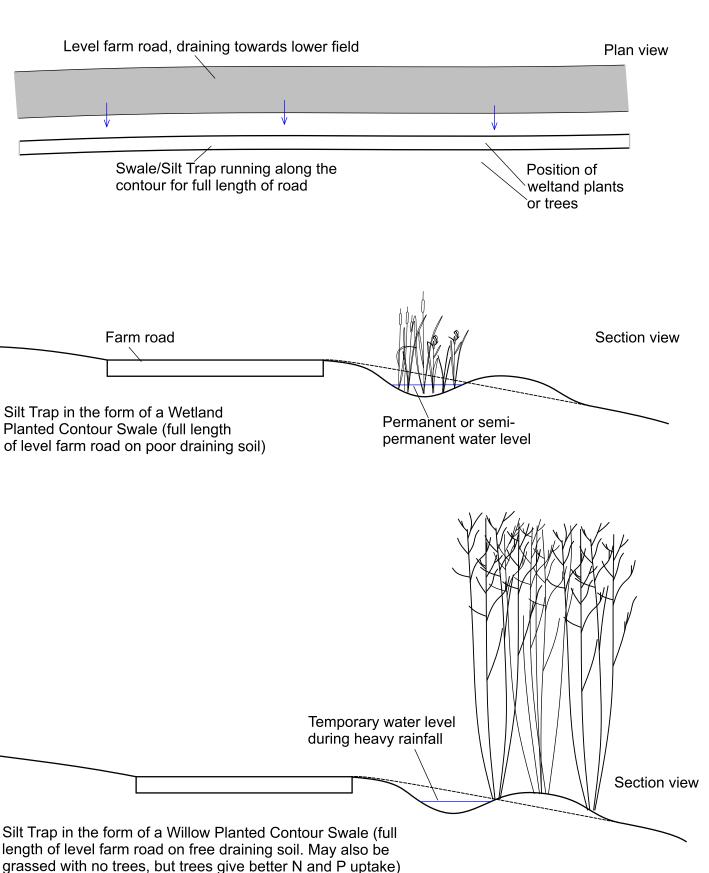
Even without using water on the farm, ponds are excellent for habitat value and for nutrient capture from farm runoff.



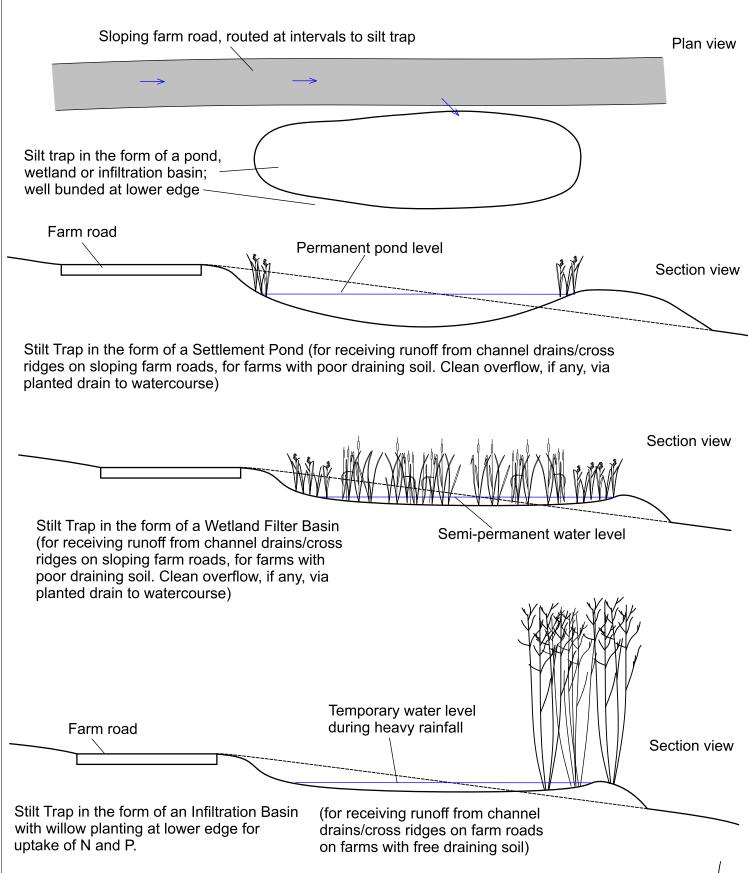
FH Wetland Systems Ltd.

Knocknaskeagh, Lahinch, Co. Clare www.wetlandsvstems.ie Tel. 065-7075631 e-mail: reeds@wetlandsystems.ie

Silt Trap in the form of Contour Swales for runoff from level roads



Silt Trap in the form of Settlement Basins/Ponds for runoff from Cross Ridges / Channel Drains from sloping roads



FH Wetland Systems Ltd.

Knocknaskeagh, Lahinch, Co. Clare
www.wetlandsystems.ie
Tel. 065-7075631
e-mail: reeds@wetlandsystems.ie