

Use waste water, the Water Framework Directive & NVZ's to your advantage

With environmental awareness and pressures on agriculture at an all time high, turn the handling and disposal of your existing waste water run off into an attractive landscape and environmental feature. Help meet environmental discharge targets by natural means. Minimise groundwater contamination. With simple planning, and minimal work and cost, the following important issues and problem areas, all arising from normal farming and rural operations, can be positively resolved by establishing a natural 'Working Wetland'.

Address the following critical areas

- **Diffuse pollution**, the progressive seepage of fertiliser and agricultural residues to drains, often over wide areas – water commonly containing nitrates, phosphates and traces of chemicals.
- **Farm steading run off**, after heavy rain and storms, high volumes rush straight off roofs and concrete yards, down drains and ditches, straight into water courses – water including traces of fuels, oils, fertilisers, slurry, soil and silt.
- **Septic overflows and drainage wastes**, contaminating drains, watercourses and sometimes bathing waters - water containing faecal organisms, traces of heavy metals, household detergents, cleaners and food wastes. A positive part of SUDS schemes on new developments.
- **Process waste and overflows**, regularly produced, often initially running briefly into settling tanks, but then down drains and into watercourses - water containing dairy / livestock washings, chemicals, pack-house washings, and sediments.

Deal with these naturally

- by simply intercepting the outfalls and constructing a series of attractively designed ponds and reedbeds, the flow will be slowed down and enable settling of solids, establishing natural vegetation will draw nutrients from the water. A controlled discharge of acceptably 'clean' water to local watercourses will be created.
- by natural oxygenation, breakdown and absorption of nitrates, phosphates and metals, the water quality will be significantly improved. Aggressive contaminants and liquids of high biological oxygen demand (BOD) will be contained and treated, before reaching the watercourse in acceptable condition.

And benefit from a natural, functional, working wetland

- working 24/7 to produce a clean, 'no worry' outflow. Its size, shape and sympathetic design will be engineered according to flow requirement and landscape features. Planting a combination of reeds, marginal plants and wetland shrubs and trees in and around the ponds, will greatly accelerate the water treatment. This will form an environmentally sustainable, low maintenance, settling and purification area. Exclusion from livestock and machinery will maintain a natural haven for wildlife, and will allow an all year round habitat for birds, small mammals and insects to develop.

At a practical level, what is required?

Consult your local FWAG, SEPA/EA offices, they will be supportive and assist. Assess the volumes, flows and nature of any contaminants. Intercept and harness drains and overflows. Direct these to an appropriate final location. Construct the series of settling and treatment ponds. Allow adequate area to hold flash floods and allow sediments and solids to settle. Arrange progressive overflows, as required, to allow sequential treatment and cleaning by grasses, reeds and wetland plants. Allow overflows to move to further ponds for final cleaning. Create a controlled level final outlet to local watercourse. Exclude livestock and machinery. Monitor the outflow. Occasional dredging of sediment from first pond and replacement of reeds.

'A Working Wetland is a valuable addition to conservation and the environment.'

On farm labour and machinery can often deal with the practical construction and planting of Wetlands. Such work can be undertaken at quiet times of the year, to fit in with labour profiles - therefore costs are minimised. Cheviot Trees offer the full range of reeds, marginal plants and wetland shrubs, along with any planting accessories required for Wetland establishment.

'Working Wetlands' – The Waste Water Solution

Common species suitable for wetland planting:-

Pond & Riverbank Plants

- Water Plantain
- Marsh Marigold
- Lesser Pond Sedge
- Meadow Sweet
- Yellow Flag Iris
- Soft Rush
- Purple Loosestrife
- Water Forget-me-not
- Reed Canary
- Common Reed
- Common Reed Mace
- Brook Lime

Water Tolerant Trees & Shrubs

- Alder varieties
- Poplar varieties
- Willow varieties
- Dogwood
- Elder
- Sitka Spruce
- Cypress
- Downy Birch
- Aspen
- Rowan
- Blackthorn
- Guelder Rose



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**for Wetland and Reedbed planting,
Stewardship Schemes, Riverbank planting**

- Water treatment & Reedbeds
 - Develop wetlands & river margins
 - Create shelterbelts & screening
 - Reduce river bank erosion
 - Improve returns from marginal land
 - Establish hedgerows & wildlife habitats
- ✓ *Plant supply*
✓ *Grant Application*
✓ *Planting*
- ✓ *Weed control*
✓ *Aftercare & maintenance*
✓ *Treeselters & Stakes*



Contact us to discuss your requirements.

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Focus on *Working Wetlands*



with



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