



Farming in the uplands for cleaner water and healthier soil

Make the most of Environmental Stewardship in the uplands

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Farmers, land managers and farm advisers all have a part to play in maintaining a healthy farmed environment.

Environmental Stewardship is an agri-environment scheme that provides funding to farmers and land managers in England for delivering environmental benefits. This leaflet focuses on the options available to upland farmers for Entry Level Stewardship (ELS), Organic Entry Level Stewardship (OELS), Uplands Entry Level Stewardship (Uplands ELS) and Uplands Organic Entry Level Stewardship (Uplands OELS)¹.

Your farm has environmental value

Your farm has landscape and historic features, natural resources and wildlife that need your protection and management.

You make a difference

By adopting the options in this leaflet you can improve the quality of water and soil on your farm by tackling soil erosion and runoff at source, slowing the flow of water along the pathways it follows and protecting watercourses and other receptors.

Right options, right location, right management

This leaflet helps you to choose the right options and put them in the best places to achieve the greatest benefits. For Uplands ELS, there are also a number of compulsory land management requirements: please see the *ELS* or *OELS handbook* or the booklet *Look after your uplands with Environmental Stewardship* for more information. If you need additional help locating or managing the options or compulsory requirements then please contact Natural England.



River Wharfe at Yockenthwaite

Why is clean water and healthy soil important on your farm?

Soil, as the foundation for production, is your farm's most valuable resource. The most productive components of your soil lie in the top three to six inches of the profile – the layer most vulnerable to erosion. Erosion and runoff can result in valuable nutrients, environmentally damaging sediments, pesticides and disease organisms reaching water.

Peat soils in the uplands, besides supporting agriculture, are valuable stores of water and carbon but they are particularly susceptible to erosion. When this occurs it can lead to greenhouse gas emissions and water colouration. The latter is a problem that needs costly treatment to make the water suitable for public consumption.

The water flowing over and through your farm is a valuable resource.

- Clean water has value as drinking water for you, your livestock and the public. Private sources of water can be particularly at risk from farming practices.
- Agricultural pollution can cause harm to aquatic life including fish, water plants and invertebrates.
- Clean water and good quality wildlife habitats attract many people for outdoor activities, such as fishing and walking, which are important for people and the rural economy.
- Other rural industries rely on clean water to ensure quality products and adherence to high standards.
- Upland streams are important spawning and nursery areas for salmon and trout.

Reducing soil erosion and runoff doesn't just have benefits for water quality, it also helps to reduce localised flooding which can cause damage to roads, houses and farmland.

Good farming practices, such as appropriate stocking levels to reduce poaching and compaction, are essential, but sometimes other measures are needed to avoid soil erosion and runoff of sediment and other pollutants into water.

¹ References to ELS and Uplands ELS throughout this leaflet also include OELS and Uplands OELS

What can you do to ensure clean water and healthy soil?

Your Soil Protection Review is a good starting point for identifying potential problems. The measures you adopt as a result of this may go some way to preventing erosion and runoff but you may also need to consider other measures such as those outlined below.

Tackle the source of soil erosion and runoff

- Placing of supplementary feeding away from vulnerable parts of moorland and rough grazing, such as steep slopes and areas near to watercourses, can help to avoid problems from soil erosion.
- Regularly move supplementary feeding sites to ensure that poaching and compaction are controlled and to help to reduce soil erosion.
- Fence livestock out of woodland on steep valley sides to allow the woodland to flourish. This helps to stabilise the soil and prevents erosion.

Slow the pathways of soil erosion and runoff

- Field boundaries can be very effective in slowing down overland flow of water. Placing a buffer strip, a strip of uncut grass or taller vegetation, against the boundary will enhance its effect.
- Ensure there is a good continuous grass cover on natural drainage pathways, eg valley bottoms, to reduce the channelling of runoff water that can produce rills and gullies.

Protect the receptor

- Fence watercourses to prevent livestock from causing direct contamination of water and erosion of river banks.
- Establish buffer strips to slow, filter and trap pollutants before they enter ditches or watercourses.
- Manage waterside land with very low inputs and remove stock in winter to reduce the amount of nutrients and sediment likely to get into watercourses.

Use the farm illustration overleaf to help you choose the best locations and options to improve the quality of the water and soil on your farm.

What are the benefits for you?

Regular farm income

Payments are available through ELS and Uplands ELS to provide a six-monthly income for land management that supports healthy soil and water.

Improve the wildlife value of watercourses

The least productive areas are likely to be where water runs off or land lies wet. Using ELS and Uplands ELS options in these areas can not only help protect watercourses but can also benefit the wildlife that depends on them.

Adapt your farm to a changing climate

Possible increases in heavy rainfall and extreme weather events make it more important than ever to protect soils. Well managed soils will help the uplands adapt to the predicted hotter, drier summers and warmer, wetter winters. Peat soils are particularly significant and must be in good condition if they are to retain their existing levels of soil carbon whilst supporting valuable habitat. Buffer strips will also become increasingly important to protect water courses during wetter winters.

Need further help and information?

For details of farm events in your region and to arrange one-to-one farm visits, or for further information, please contact:

Natural England

Tel: 0300 060 1695

Email: farmevents@naturalengland.org.uk

Website: www.naturalengland.org.uk/farmevents

Environment Agency

Tel: 08708 506 506

Website: www.environment-agency.gov.uk

The publication *thinksoils: Soil assessment to avoid erosion and runoff* is available from the Environment Agency.

England Catchment Sensitive Farming Delivery Initiative

Website: www.defra.gov.uk/foodfarm/landmanage/water/csf/delivery-initiative.htm

If you are in an England Catchment Sensitive Farming Delivery Initiative priority catchment, you may also be eligible for free advice or capital grants.

Front cover: River Swale and Upper Swaledale © Richard Dimon.

Page 2: River Wharfe at Yockenthwaite © Robert Goodison.

Fold out page (top, from left to right):

Tackle the source © Natural England;

Slow the pathway © David Rees;

Protect the receptor © John Shillcock.

Fold out page (bottom, from left to right):

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Brown trout © Dave Key;

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