

If you are unsure about anything within these notes then please contact the Flood Risk Management (FRM) team using the details at the end of this document.

The impact of flooding on agricultural land



Flooded agricultural farmland

Flooding of agricultural land can result in damages, such as:

- Reducing the quality and quantity of produce by over saturation;
- Restricting good farming practice; and
- Flooding of livestock sheds and or holding areas.

Standing water on agricultural land may also contradict the requirements for land designated under a **Environmental Stewardship Scheme**¹ which has been agreed pre 2015.

Flood water flow from agricultural fields can also exacerbate local flooding issues for downstream communities. This is a particular problem where a community is already at a high risk or suffering from drainage concerns. The way in which land is farmed can help to mitigate this flooding problem.

Agricultural land management

Many aspects of agricultural land management can impact upon local flood risk. Often achieving good environmental practice in farming can also lead to benefits for local and catchment flood risk management.

Farmland is an important resource which, if managed correctly, can assist in reducing flood risk for the wider community downstream as well as boosting productivity for farmers' livelihood.



Flood sensitive ploughing in South Derbyshire

¹ www.gov.uk/environmental-stewardship



Good practice of contour ploughing
Source: Environment Agency

Soil Management

Fertile and healthy soil is an arable farmer's greatest asset as their livelihoods depend on the productivity of the soils. Best practice environmental farming is key to achieving soils that promote good drainage and infiltration of water into the ground and soils that are resistant to erosion. Consequently, surface water runoff from agricultural land as well as the leaching of sediment and pollutants into local watercourses can be reduced. There

is also clear evidence that good environmental practice in farming can help to cut costs and increase farm revenue². The following farming techniques can help to achieve flood risk and environmental benefits:

- Taking care to plough fields in a cross-slope direction that doesn't promote rapid runoff and soil erosion;
- Minimising exposure of soil through appropriate land management (such as less intensive grazing and crop rotations);
- Preventing cattle from poaching watercourse banks by utilising drinking bays;
- Managing land to minimise soil compaction and promote infiltration; and
- Maintaining buffer strips adjacent to watercourses and optimising nutrient usage to reduce wastage via runoff.



Restricting livestock access to watercourses

Ditch Management

Key to the drainage of much of Britain's agricultural land is local ditches and watercourses. As well as benefiting the drainage and hence quality of agricultural land, well maintained ditches and watercourses have proven in many cases to be of great importance to local flood risk, particularly for communities living downstream. Farming practices that limit soil erosion are cost effective to local landowners, reducing excessive sediment build up in

² Defra publication "Protecting our Water, Soil and Air"
 (www.gov.uk/government/publications/protecting-our-water-soil-and-air)

local watercourses. These accumulations of soils and silts are required to be removed in order for the watercourse to function correctly such as via dredging which can be costly. The responsibility for maintaining ditches and watercourses on agricultural land rests with the relevant landowner(s) making watercourse maintenance a key part of rural land management.

For further information regarding riparian rights and responsibilities please refer to the [Riparian Responsibilities Guidance Notes](#) and the Environment Agency publication 'living on the edge'³.

Catchment land management

Elsewhere in the County and the wider East Midlands area, organisations and partnerships are working with landowners to promote the naturalisation of catchments in an attempt to boost environmental quality as well as reduce flood risk. For example, the National Forest has set up a nationally recognised environmental project which aims to create up to 200 square miles of forested land in South Derbyshire and neighbouring Local Authority areas. Similarly, the Clough Woodland Project by the Moors for the Future Partnership aims to support landowners to create native woodland in the upper Derwent catchment.



Developing upland forest in the Upper Derwent Valley planted in 1990
Source: Moors for the Future



Recent clough woodland planting in the Upper Derwent Valley
Source: Moors for the Future

The Moors for the Future Partnership are also working with partners and landowners to restore the blanket bog landscape of the Dark Peak area of the Peak District. Two hundred years of human intervention has resulted in a degraded landscape with very little of the ecological quality and water retention potential remaining.

³ www.gov.uk/government/publications/riverside-ownership-rights-and-responsibilities

Key organisations and grants

The **National Farmers Union**⁴ works to make continued improvements in land management amongst its members and a number of organisations are providing practical and financial assistance to farmers to help them improve their land management. Supported actions include reducing compaction, promoting soil and silt management and reducing poaching of watercourses by cattle. These initiatives are delivered through schemes such as Environmental or Countryside Stewardship and the Catchment Sensitive Farming initiative.

The **Campaign for the Farmed Environment (CFE)**⁵ helps farming businesses, by signposting to best practice in soil management, crop nutrition and pesticide use. CFE helps farmers support the natural environment, whilst farming productively. CFE gives farmers the opportunity to demonstrate their 'green credentials' to the rest of the industry and the general public. For further information please visit their website.

Countryside Stewardship⁶ has now replaced Environmental Stewardship in providing incentives for land managers to adapt to more effective environmental practices. Countryside Stewardship aims to protect and enhance the natural environment by improving flood management, landscape character, the historic environment and conservation. The scheme is run by Natural England and the Forestry Commission on behalf of the Department for Environment Food and Rural Affairs (DEFRA) and is funded by the European Agricultural Fund for Rural Development: Europe investing in rural areas. Woodland Capital Grants and Water Capital Grants are available to farmers and land managers as part of the Countryside Stewardship. These grants are aimed at the woodland creation and diffuse pollution. For more information about the wide range of grants available please visit the website.

Key contacts for further information

Environment Agency	(08708) 506506
DEFRA – Department for Environment Food & Rural Affairs	(08459) 335577
Natural England	(08456) 003078
National Farmers Union	(02476) 858500
The Soil Association	(01173) 145000
Pesticides Safety Directorate	(01904) 455775
LEAF – Linking Environment and Farming	(02476) 413911

⁴ www.nfuonline.com/

⁵ www.cfeonline.org.uk/

⁶ www.gov.uk/countryside-stewardship-grants

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