



## Catchment Sensitive Farming

Working together for a healthy environment

# Reducing ammonia and other pollutants at Hallsenna and Black Beck, Cumbria

This Catchment Sensitive Farming case study looks at how CSF helped tackle ammonia pollution and other pollutant pressures in and around Hallsenna Moor, Site of Special Scientific Interest (SSSI), Cumbria.

### Site Background

Lying within a mostly agricultural landscape, Hallsenna Moor was designated a SSSI and National Nature Reserve (NNR) in 1986. The site has never been cut for peat and supports a range of plants including those typical of woodlands, valley peatland, wet and dry heathland and fen. The Black Beck watercourse runs through the SSSI and suffers from various pollutant issues.



Hallsenna Moor field boundary

The SSSI is in “Unfavourable” condition due to a high level of nutrients. Ammonia already exceeds critical levels, likely putting the site’s bryophytes - a group of plants that include mosses, liverworts and hornworts - at risk. Poorly stored slurry has been the biggest contributor to high nitrogen levels, with 63% of emissions coming from local agricultural sources.

### Issues identified in the Hallsenna moor area

- High levels of nitrogen and ammonia reducing air quality
- Excess nutrient levels in the watercourse
- Low number of farmers in agri-environment schemes

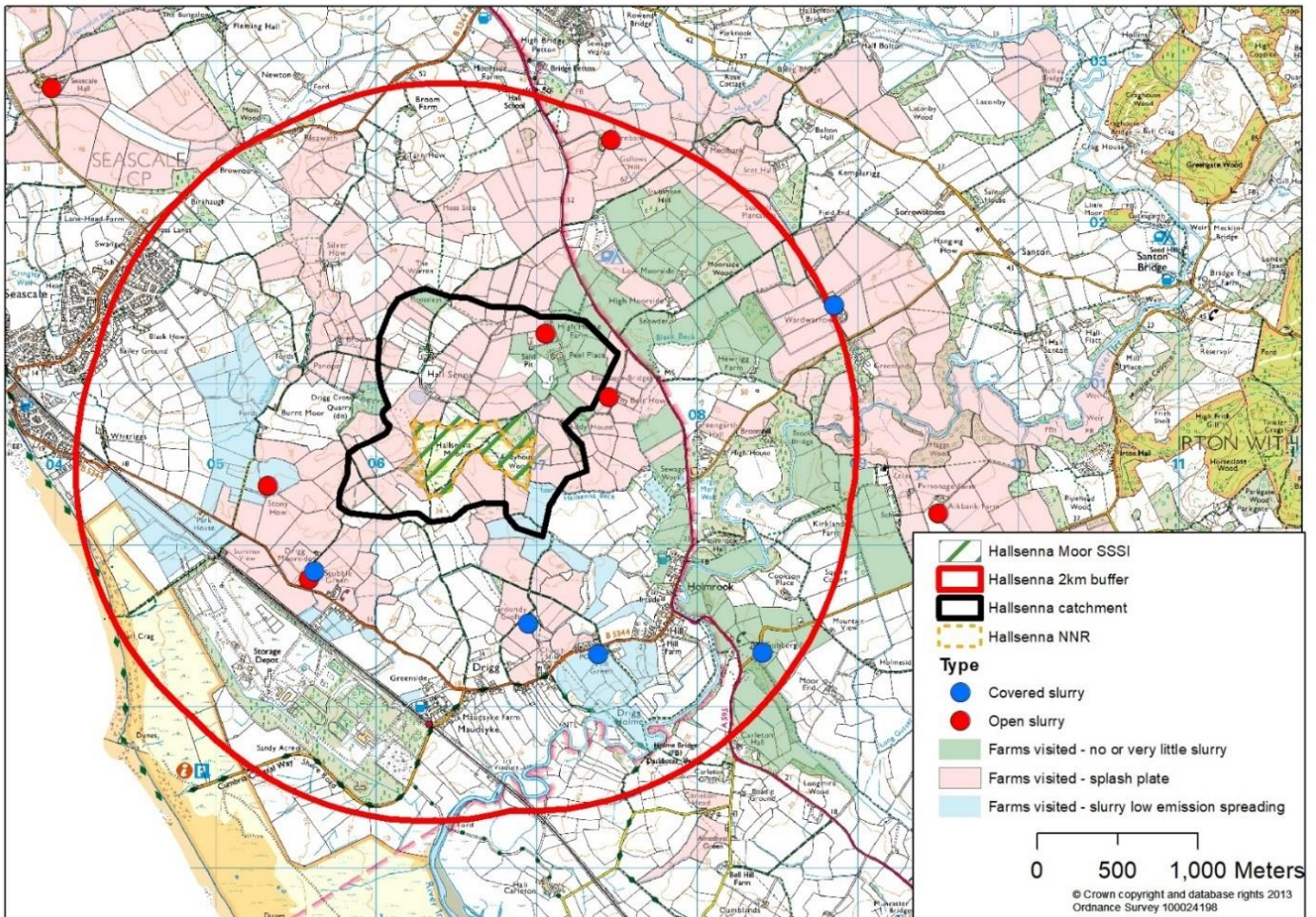
A walkover survey was carried out by a Catchment Sensitive Farming Officer around Hallsenna Moor, with soil, surface water and groundwater samples taken to identify issues and recommend actions.

### How CSF helped

The local Catchment Sensitive Farming Officer carried out water quality analysis; which highlighted hotspots of excess nutrients and helped local prioritisation of engagement and advice with farmers.

During September 2020 and March 2021 a team of CSFOs targeted and visited 16 livestock farms within 2 km of the SSSI to help reduce ammonia emissions. Additional phone calls were made to other farms within the site’s 445 acre catchment.

Catchment Sensitive Farming Officers discussed ammonia emissions, legislation, and other considerations for air and water quality with farmers, putting forward possible mitigation measures and signposting to additional advice. A low number of farms in the area were in agri-environment schemes, such as Countryside Stewardship (CS), so more were recommended to apply for funding.



Map showing farms visited (land highlighted with blue and red)

### CSF advice and funding options

CSF, with the use of CS, aims to encourage uptake of environmental measures such as low input land management options, especially those which reduce nutrient applications and stocking densities. Recommendations included use of CS Capital Grant schemes to:

1. Improve slurry storage facilities
2. Exclude livestock from ponds, wetlands and woodland
3. Restore hedgerows and track improvements.

Vital groundwork and analysis of pollutant pressures coupled with farmer engagement and signposting to funding schemes has provided a strong

foundation for future work and adoption of environmental measures to improve water and air quality around and in the protected site.

**For further information,** email [Csf.northwest@naturalengland.org.uk](mailto:Csf.northwest@naturalengland.org.uk) or [chris@westcumbriarivertrust.org](mailto:chris@westcumbriarivertrust.org) Or visit the CSF website - <https://www.gov.uk/catchment-sensitive-farming>

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Catchment Sensitive Farming (CSF) is led by Natural England, in partnership with Defra and the Environment Agency.



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