

Summary

Ditch blocking and fracturing of land drains was carried out on 15ha of upland pasture adjacent to a nature reserve, restoring a more natural hydrology to this area of catchment headwaters. The work will also improve habitats by increasing diversity and wetness of previously improved grasslands, enhancing connections between good existing habitats above on the Stiperstones and lower in the Habberley Valley.

Site context

The Brook Vessons area holds important wetlands and upland wood pasture, but the landscape has been changed over many years. Small streams have been excavated into ditches, and land drains laid to improve grazing. The upper slopes of Brook Vessons Farm lost local Wildlife Site status following drainage and became a noticeable gap between core habitat areas above on the Brook Vessons Shropshire Wildlife Trust Nature Reserve (part of the Stiperstones NNR/SSSI/SAC) and Ancient Semi-Natural Woodland in the valley below. A sharp ecological and hydrological boundary developed between the farm and the reserve. The landowner was changing land management and was happy to work with partners to help restore headwaters on the farm.

The site has locally significant archaeology, lying on the edge of The Paddock, a deserted village linked to the local mining industry, where people took on smallholdings to supplement their income. When the industry declined in the early 20th Century the site was abandoned, but remnants of field, ditch and cottage walls remain.

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and Shropshire Wildlife Trust

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Brook Vessons Headwater Restoration Project



What was done?

Preparation and consents:

Understanding existing wildlife and archaeological interests was important as a key aspect of the work was to reduce the impact of a historic boundary ditch/bank on headwater hydrology. We worked with the Historic Environment Team at Shropshire Council to resolve how we could hold back more water without damaging the ditch/bank feature.

The ditch is a mapped watercourse forming the boundary between the farm and the nature reserve. With nearby great crested newt colonies and some botanical interest, surveys were undertaken to ensure any important features were not damaged. The work required Ordinary Watercourse Consent and SSSI consent.

Ditch Blocking:

With consents in place, local contractors were engaged and the ditch was blocked with a series of bunds using locally sourced timber, soil and coir matting. The water outfall from the ditch was immediately reduced as lateral flows of water from the ditch onto adjacent land were established. The bunds revegetated rapidly.



Land Drains:

Downslope of the ditch/bank there was an extensive network of land drains. We had accurate maps of all drains, which amounted to several km, so total removal was not possible within the project budget and possibly not desirable due to the amount of soil disturbance that would be required. Due to abrupt vegetation changes visible it was possible to locate land drains on the ground and break them at strategic points to disrupt the flows.



The outflows from the drains are now much reduced or down to zero and the areas of formerly improved grassland are rapidly re-wetting. Over time we expect the vegetation types to adapt to the wetter conditions and reflect more closely the semi-natural vegetation community on the reserve.

Ponds and Scrapes:

The project created several small wildlife ponds and scrapes, adding to the other open water habitats nearby. Pond creation had a double purpose, allowing the project to source close to hand the soil and turf materials necessary to create the in-ditch plugs.



Outputs/Outcomes

Hydrological restoration/re-wetting an area of 15.6ha of grassland/rush pasture. Within this area 2 ponds and 2 scrapes were created, 646m of ditch blocked and an estimated 3,500m of land drainage disrupted.

However the project is likely to have wider benefits, as more water will be retained on the nature reserve improving the habitat there also. The overall zone of influence for the works carried out (including the 15.6ha project area above) is estimated at c28 ha.

The main project works were carried out in the winter of 2020-21. Since then the landowner has deculverted a watercourse further down the hill and removed more land drains. The farm is now in Countryside Stewardship Higher Tier agreement including upland wood pasture creation on rewetted areas. This will be contiguous with the SSSI wood pastures on the nature reserve.



Learning

The support of the landowner and his willingness to reverse decades of agricultural improvement was key. The project could not have been achieved without funding from the Environment Agency and the support of an AONB team member to manage the project. The project also benefited from local contractors with experience of protected sites.



Further Information

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