

## Farming in Protected Landscapes Programme Case Study: Indicknowle Farm

### An overview of the project

**A brief background to the farm:** the landowners farm ~275 sheep (North country mules, Texel mules & Suffolk cross mules) and ~60 beef cattle (Devon Red's) with 194 hectares of farmland including woodland/orchards and tenanted field parcels located close to their holding. The landowners also run a cider and farm shop, selling produce direct to the consumer.

**Background about the project:** Combe Martin is located in North Devon and struggles with bathing water quality issues and flooding within the village. From previous data collection and monitoring, it has been determined that one third of the water quality pollution originates from pigs, the second third from dog excrement and the final third from diffuse pollution from agriculture. It is this later third which the landowners and this FiPL project were looking to contribute towards rectifying through its delivery. Further, by increasing water storage capacity in the upper catchment, this would also contribute towards natural flood management and a reduction in flood risk to the local downstream communities which have experienced significant regular flood events in the past. This project is therefore in the interest of the local tourist sector and economy, which the village heavily relies upon. The farmers were aware of the recent projects in the catchment set up to improve water quality of the River UMBER. The landowner asked the Farming in Protected Landscapes Programme for some assistance in bettering their own water quality through upgrading of their yard systems and clean and dirty water separation. The farmers were interested in advice on farm infrastructure primarily, however after a visit to site, the North Devon AONB FiPL Officer also identified the opportunity to create biodiversity benefits and natural flood management through attenuation pond creation and leaky woody dams, which the North Devon AONB knew would also deliver flood risk mitigation to downstream communities currently at risk of surface water flooding, as mentioned above.

**Facts on funding the project:** The Farming in Protected Landscapes Grant awarded: £5,916.10 in year 2 (2022/23) out of a total project cost of £8,741.65, a 67% project grant. Other sources of funding: landowners own match for items of which their actual costs were above the awarded Countryside Stewardship rate amount, also towards those items which required quotations and were awarded a percentage funding contribution towards the works and, by the time of invoicing, an additional £1,773.05 towards the ram pump repair works.

### Objectives

The project fulfilled various objectives over the year of the project.

- Installation of an alternative water supply to remove sediment/soil mobilisation pressure from current location next to a well-used gateway.
- Ditch creation with sump, to collate and, once vegetated, allowed to slow waters from upslope field parcels, contain waters to reduce sediment mobilisation and provide a sump for sediment collection and 90degree turn in watercourse.
- Erect a short section of fencing with sheep netting to remove stock access to watercourse for FIO reduction and improvements to water quality.
- Installation of small leaky woody dams, to slow the watercourse in times of high flow, provide instream deadwood habitat and increase riverine complexity.
- Works surrounding pond management with leaky outlet pipework, to increase surface runoff storage capacity for natural flood management and waterbody for aquatic freshwater biodiversity value.
- Installation of a piped culvert within a ditch as crossing point for both machinery and livestock, to provide suitable crossing points for surface runoff beneath a heavily trafficked gateway and reducing sediment and soil mobilisation previously caused by poaching.

- Repairs undertaken to an existing ram pump drive pipe supply/system which would support a larger-scale existing water supply system to the whole farm, including water supply for stock, productive orchards, and buildings.

## Activities

The activities undertaken under this project and funded by FiPL were:

- Alternative water supply: trough x 1, pipework x 30m, hard base x 1
- Ditch creation x 45m with sump
- Fencing – sheep netting x 4m
- Small leaky woody dams x 3 – requiring a Land Drainage Consent from Devon County Council.
- Pond Management with leaky outlet pipework x 1
- Install piped culverts in ditch as crossing points x 1 – requiring a Land Drainage Consent from Devon County Council.
- Ram pump drive pipe supply and installation x 21m

**How the activities were delivered:** resulting from a one-to-one site visit with the FiPL Officer and in receipt of a detailed farm advisory report alongside follow up supporting conversations, the farmer was in the position to be able to either undertake the majority of the works themselves or with additional help where required. The farmer spent time working with the Protected Landscapes Officer to understand their habitats on their farm and how they may be enhanced for the themes Nature, Climate and Place.

It is important to note that with the support of FiPL, the landowner is in the process of collating information for a circa £30k Mid-tier Countryside Stewardship application to progress with the majority of the yard infrastructure works identified and to provide the majority of the water quality benefits, alongside an additional woodland management plan grant, bringing their woodlands back into management with biodiversity at the fore.

## Outcomes

The project will have a lasting positive impact in Combe Martin, as the village becomes more resilient to poor bathing water quality issues and flood risk.

The sustainable resilience of the farm is supported long term, through the water supply improvements which alongside the culvert installation have continued to block sediments, soil mobilisation from entering the watercourse. Fencing and ditch work also continue to provide improvements to water quality through FIO reduction.

The leaky log dams are active in times of medium to high flow events and are allowing for in channel water storage, providing its own wet habitat environment for biodiversity value. Wildlife is colonising the pond where previous management activities took place, as a refugia, and facilitating the temporary storage of stream flows in times of flood, mitigating the effects of flooding to the downstream communities.

With such improvements/repairs made to the ram pump, it is expected that the system will be able to last a further 40years, continuing to provide the farm, orchards and buildings with water resilience options in times of drought pressures and in the age of variable climatic changes.

## Learnings

Working in partnership with the local Environment Agency officer and consultants enabled the FiPL project to run smoothly alongside the landowners' other interests and conversations surrounding an application into Countryside Stewardship.

Fencing with sheep netting nearby to the watercourse is usually not supported by the Environment Agency, however in this instance as the channel is so incised, the floodwaters and

any possible woody debris which may otherwise be tangled were considered to not to be able to reach the height of the new fence line and therefore supported.

## Photos

Watercourse  
Fencing



Culvert /  
Crossing  
point



Ram Pump  
Repairs

