**Farm Woodland Forum – Field Visit 2024 Annual Meeting**

*Medbury Farm*

The first visit was to Medbury Farm, Elstow, Bedfordshire. We were welcomed by our hosts, Mark and Kier Hall, and we were joined by James Russell, Forest Director of Forest of Marston Vale.

Community Forests, of which this is the smallest, have been designated in areas of industrial degradation. In the case of Bedfordshire, that arose from the former predominance of brickworks. Community Forests are able to support multi-purpose woodland, small scale tree planting, very small scale tree planting, low density tree planting, hedgerows and natural colonisation. Marston Vale forest was launched in 2022. Medbury Farm has been a recipient of funding and support from them.

Medbury Farm is situated on medium clay loam over gravel, with reasonably water retentive properties. The farm policy is to grow crops that are as profitable as possible for the location, whilst striving towards achieving Carbon Net Zero by 2030. This is facilitated by a greenhouse gas calculation project supervised by Paul Burgess. There is also an aim to improve biodiversity, whilst minimising financial risks and improving the infrastructure (such as drainage).

The crops are mainly milling wheat, with a legume fallow and a spring break crop such as oats included in the five-year rotation, and for these crops achieving net zero would be particularly difficult because of the inputs of N fertilisers required. Although introducing livestock is not really an option because of the cost of fencing, Mark and Kier bring in compost to both add nutrients and to improve soil condition. This should also improve water retention. Crops have their N concentration assessed regularly during the season, and inorganic fertilisers are applied at variable rates with GPS guidance based on these assessments.

In order to make a transition towards net zero more achievable tree planting has been carried out on the farm despite it being held under a tenancy. Planting grants under the Trees for Climate initiative have been obtained from the Forest of Marston Vale, who supervised contractors to carry out the work. To date, 4 km of hedgerows have been planted.

Recently planted hawthorn hedge at Medbury Farm (photo: David Pilbeam)

Additionally, a 13 ha belt of trees has been planted to shelter the farm from developments the other side of the farm boundary, to sequester carbon and to give biodiversity benefits. These benefits would include providing a refuge for wildlife displaced by any new housing in the area. Here broadleaved species (pedunculate oak, silver birch, alder, field maple, wild cherry, hornbeam, white willow and small leaved lime) with some Scots Pine were planted into a flowering grass mix in plastic tree guards. Tree species also included the wild service tree, as the farmers requested this species.

James Russell discusses the planting of a broadleaved tree belt with delegates (photo: David Pilbeam)

*RSPB Hope Farm, Knapwell, Cambridgeshire (with Georgie Bray, Sophie Arnold and Rob Field)*

Hope Farm was acquired by the RSPB in 2000, with the aim of demonstrating that wildlife can thrive on a farm whilst the farm still makes a profit.

The farm is not organic, as the RSPB wishes to demonstrate to as many farmers as possible the relevance of its findings, but uses many techniques from organic farming. New regenerative farming methods have been trialled since 2016, and the use of insecticides has been discontinued. The farm covers 181 ha, on heavy clay soil, and employs crop rotations typical of the farms in the locality.

Delegates were shown the 11 ha silvoarable agroforestry plot. Here 13 varieties of apple on commercial rootstock have been planted in plastic net tree shelters

in rows of 6 m width with rows of 6 native broadleaf species (field maple, small leaved lime, hornbeam, wild cherry, hawthorn and alder) as windbreaks, and also cobnuts. The apples, a mixture of heritage varieties and commercial varieties suitable for Cambridgeshire, will be used for fruit juice production. The cobnuts comprise three varieties, and will be used for cobnut oil. The arable alleys are currently at a stage of the rotation where they are cropped with barley.

Monitoring of wildlife and environmental conditions occurs, with economic/yield comparisons made with a paired arable field. The plot is included in the breeding bird survey, the winter bird survey, a weekly butterfly survey, a pollinator survey, a foliar invertebrates survey, a foliar survey, bat surveys in summer, and monitoring of earthworms. Environmental measurements include $CO_2$ flux, soil organic matter and soil carbon. Across the farm as a whole, since its purchase in 2000 breeding bird populations have increased by 177% and butterflies have increased by 398%.

Delegates inspect one of the tree rows in the silvoarable agroforestry plot (photo: David Pilbeam)

The trees were originally planted into wildflower strips in 2022, and at the time of our visit the rows were well colonised by annual plant species. Those in flower included oxeye daisy, pink campion, lady's bedstraw, knapweed, birds foot trefoil and yellow rattle. The summer after planting was very dry, meaning that watering of the saplings was required. One of the lessons of the establishment period is that for new agroforestry plantings the environmental risk for large areas is that planting should take place across two or more seasons, and not all at the same time. Another lesson is that the tree shelters provide perches for corvids, as will the trees as they grow, so agroforestry should not be introduced near to populations of endangered ground nesting birds such as skylarks.

Following a cool, damp spring, which has depressed butterfly numbers across the UK, it was good to see meadow brown butterflies (*Maniola jurtina*) on the wing during the visit. It was highly appropriate, given that we were at an RSPB farm, that whilst we were in the agroforestry field we could hear calls from the UK red listed corn bunting (*Emberiza calandra*).

Delegates were shown work on the boundary hedge. This has hollowed out, becoming tall and thin. In one section the ditch has been dug out, and the hedge has been laid (with occasional standards left). This is a labour-intensive process, so in another area a 'wild life' hedge has been created. In this technique an operator goes along the hedge line with a pole saw, and the hedge is then pulled down with a digger. This is a quick method of producing a low, dense barrier, but it is mainly comprised of dead material. Monitoring is ongoing to assess the effect on wildlife as it matures.

David Pilbeam, June 2024