

# Wildlife in the farming environment environmental sciences essay



**ASSIGN  
BUSTER**

The Test Valley farm is located in Hampshire, South East England and its wildlife value consists of several components. The river Test flows through the area and due to the presence of chalk downland the river gets its water from chalk springs with the water being clear, high in oxygen and nutrients and having a steady temperature of around ten degrees. This habitat is home to many species and of special interest in this farm is otters, which is a species listed in the Biodiversity Action Plan. The water in the river has a constant flow and due to that, peat has accumulated and given rise to fens and vegetation dominated by purple moor grass. The fens provide habitat for water voles which is a species that has rapidly declined and is listed as a BAP species (JNCC 2013a). Another important area is the woodland found in the region which provides habitat for the BAP species hazel dormouse and barbastelle bat which also benefits from the meadows in the area (JNCC 2013a). Chalk grassland is also found in the farm which is a habitat that is declining in the UK and listed as a key habitat under the Biodiversity Action Plan (JNCC 2007). This area provides habitat for species of butterflies listed under BAP like the small blue and the dingy skipper as well as bee orchids and ground pine, a species listed under BAP, which is a species also found in field margins (JNCC 2013b; JNCC 2013c). The arable farmland is important for many bird species listed under BAP including corn bunting, grey partridge, European turtle dove, common linnet, Northern lapwing and Eurasian tree sparrow as well as being important for the brown hare which is also a BAP species (JNCC 2013a; JNCC 2013d). The flora found in the arable area is also important and includes rare species like the red hemp nettle which is another one included in the Biodiversity Action Plan (JNCC 2013c). The farm consists of 200 ha of land, with the largest proportion being arable farmland <https://assignbuster.com/wildlife-in-the-farming-environment-environmental-sciences-essay/>

which is divided into several fields. The arable farmland borders with woodland as well as fens and purple moor grass which makes up the rest of the farm with the addition of chalk grassland, grazing marsh, meadows and the river Test that flows through the area, all together making up the patchy grassland area of the farm. In addition to arable farmland, the woodland, meadows and the fens make up the largest area of the farm. The habitats particularly important are the river since chalk rivers and the fen surrounding it are seen as internationally important habitats and are listed as priority habitats under BAP (JNCC 2007). Unimproved neutral grassland which includes meadows has undergone large declines since the 1900's due to changes in agriculture, making the meadows in this area a priority habitat (JNCC 2008a). The system surrounding the river as well as the river itself is important for biodiversity overall including flora and invertebrates and supports rare species like the barbastelle bat which is one of the rarest mammals in the UK and provides habitat for otters and water voles (Bat Conservation Trust 2013). Many of the habitats surrounding the river are also listed under BAP, including the meadows, the grazing marsh, the fens and the purple moor grass with purple moor grass being another example of a habitat that has declined since the 1900's due to changes in agriculture (JNCC 2007; JNCC 2008b). Many of the bird species associated with arable farming has declined due to the intensification to agriculture. Many of these species are still present in this area and these populations are important to preserve since many of these birds are now red-listed, including the European turtle dove, grey partridge and corn bunting (RSPB 2012). The arable flora is especially rich in the downs of Hampshire, making the arable farmland even more important for the biodiversity in the area. Especially the <https://assignbuster.com/wildlife-in-the-farming-environment-environmental-sciences-essay/>

arable field margins are important for biodiversity and this habitat is also listed under BAP (JNCC 2007). The value of the woodland concerning biodiversity depends on whether it is ancient woodland or secondary woodland, with a more impoverished flora in the latter one. The woodlands found in Test Valley seem to be of secondary origin but considering the fact that the barbastelle bat and the hazel dormouse which is in decline and considered to be extremely vulnerable in the UK are found in the area the habitat can still be considered very valuable for biodiversity (Hampshire and Isle of Wight Wildlife Trust 2006). The most important directive is to join Entry Level Environmental Stewardship (ELS) which takes place for 5 years at a time and possibly join Higher Level Environmental Stewardship (HLS) a suitable period after joining ELS which takes place for 10 years at a time. The most important actions to focus on in our farm for ELS are to maintain the floodplain grazing areas in good shape, to ensure that the farmland birds and arable flora are protected and to keep the river and woodland managed adequately. For HLS, additional efforts to protect farmland birds and arable flora can be undertaken as well as maintenance of additional habitats like the fens or chalk downland can be undertaken. For arable birds which are a priority in this area due to the presence of prioritised species like the grey partridge, linnet and tree sparrow, there is a need to ensure that there is both overwinter seed food and food for their young as well as nesting habitat available. This is the reason for choosing three ELS options for the arable farmland: EF22 which is extended overwinter stubble and provides nesting habitat, EF2 which is wild bird seed mixture and provides overwinter seed food and EF10 which is unharvested cereal headlands for birds and rare arable plants and provides food for chicks. EF22 would cover 3 ha, EF2 2. 1 <https://assignbuster.com/wildlife-in-the-farming-environment-environmental-sciences-essay/>

ha and EF10 1.3 ha. All of these have the additional benefit of providing habitat for the brown hare and EF10 can also benefit the rare arable plants in the area. EF2 and EF10 would be placed next to each other and in the farm be placed between the arable farmland and the woodland and grassland edges to serve as a buffer strip for these areas as an additional bonus as well as being placed at the other edge of the arable farmland to spread the resources for the birds. EF22 could be placed in any field as long as the area covers a minimum of 2 ha since the option is rotational. To buffer the woodland from any effects of the grassland, a hedgerow tree buffer strip on grassland (EC25) can be placed adjacent to the woodland edge bordering with the grassland area and would cover 2.2 ha. A 6 m buffer strip on intensive grassland next to a watercourse (EE10) can be put in place to protect the river from any effects of the grassland, covering 3.4 ha. In the grassland area, mixed stocking can be used (EK5) to create a more diverse sward structure for promoting plant and invertebrate diversity and would cover 44 ha. Management of rush pasture (EK4) would also be beneficial for both plants and invertebrates and the lapwing found in the area and it would cover 4.2 ha. When thinking about the points, EF22 would contribute 1230 points, EF10 409 points, EF2 950 points, EC25 880 points, EE10 1360 points, EK5 396 points and EK4 630 points and with the addition of the points from the farm environment record (200 points), the points would total at 6055 points. Considering the HLS options available, the maintenance of fens, woodland and meadows are options worth considering as well as putting in extra resources for the farmland birds. The maintenance of traditional water meadows (HD10) can cover up to 26.5 ha and generate 9275 £ in HLS payments annually and the maintenance of fens (HQ6) can cover up to 12.1

<https://assignbuster.com/wildlife-in-the-farming-environment-environmental-sciences-essay/>

ha and generate 726 £ and the maintenance of woodland (HC7) can cover up to 16.2 ha and generate 1620 £ annually. A viable option for arable farmland is low-input spring cereal to retain or recreate an arable mosaic (HG7) which would be beneficial not only for farmland birds but also for brown hare and rare arable plants and for example, a 10 ha plot would generate 2500 £, with the payments totalling in 14 121 £ if all options in these sizes were chosen.