

# Improving the practice & quality of nature conservation

Best practice example: Agriculture & Biodiversity

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*This best practice example is part of a series produced by Eurosite covering 'real life' nature conservation challenges. Drawing on the practical experiences of Eurosite members and colleagues, the examples provide valuable insights, useful for site managers and other protected areas staff across a range of topics - for example, to develop innovative approaches to climate change and awareness raising, undertake effective management of invasive alien species, or seek better-integrated approaches for management of biodiversity and protection of Europe's valuable natural resources. We aim to highlight and share information useful to support the effective implementation of Natura 2000, in particular, and to enable nature conservation professionals and others to learn from these examples, using them as a basis to inspire new ideas to inform their work.*

## Adaptive management of grazing marshes for breeding birds

This case study presents an example of best practice in using the English agri-environment scheme Higher Level Stewardship to enable adaptive management focused on achieving specific environmental outcomes, particularly on the management of grazing marshes and their use as habitat for breeding birds.

Elmley Marshes is a large area of grazing marsh, part of the North Kent Marshes in South East England, which has been retained as summer grazed permanent pasture. It is managed under an agri-environment (Higher Level Stewardship (HLS)) agreement to conserve the grazing marsh habitat and to provide suitable conditions for breeding waders.



### Natural England (United Kingdom)

"Under its Farming and Land Stewardship programme, Natural England targets its funded schemes, knowledge and advice to farmers and land managers throughout the country, whilst giving guidance and leadership to partners, farming community and government. Natural England provides free advice to help farmers and other land managers to improve their land management for the benefit of wildlife, landscape, public access and other environmental purposes."

### Description of the programme: the English approach to agri-environment measures

Agri-environment schemes were first introduced to England in 1985. The current scheme, Environmental Stewardship, was introduced in 2005 and is managed by Natural England on behalf of the Department for Environment Food and Rural Affairs (Defra). It is gradually taking over from the previous schemes as their agreements expire.

Environmental Stewardship is a tiered scheme, which takes the cross-compliance standards as its baseline and pays farmers for active management that goes beyond this baseline. The lower level, Entry Level Stewardship (ELS), is open to all farmers who can meet the scheme conditions. Coverage is currently over 60% of Utilisable Agricultural Area (UAA). There are specific sub-strands of ELS for organic farmers and those located in upland areas.

The upper level element, Higher Level Stewardship (HLS), is a discretionary, targeted scheme that offers a wider range of management options, assistance with associated capital items and payment rates that reflect the nature and scale of the management on a particular holding. Agreements are individually negotiated with applicants. HLS is a flexible scheme in which management can be tailored to the conditions on an individual site. It contains a number of features designed to help agreement holders and their advisers focus on achieving specific environmental outcomes, and on adapting the management as required to achieve the defined outcome.

More information on the schemes can be found on the Natural England website: <http://www.naturalengland.org.uk/ourwork/farming/funding/es/default.aspx>

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## Description of the area

Elmley Marshes are very important for biodiversity, birds in particular. Elmley Marshes are part of a Special Protection Area for Birds (SPA), and therefore part of the Natura 2000 network. The breeding wader populations contribute to its European Importance. Interestingly it is also a farmer owned and managed National Nature Reserve.

Management through the Higher Level Stewardship agreement now focuses on:

- The maintenance, restoration and creation of grazing marshes, reed beds and salt marshes;
- The provision of nesting habitat, summer and winter food for range restricted birds characteristic of arable farmland;
- The provision of nesting habitat and summer food for birds of wet grassland, including lapwing, redshank, snipe and yellow wagtail.

The nature of farming in this area changed dramatically during the decades after the Second World War, with areas of extensive grazing giving way to intensive, mainly arable farming. Higher Level Stewardship has a vital role in maintaining important semi-natural habitats in areas with the capacity to support highly productive agriculture.

The area is close to London and located in the crowded south east of England. There is very large scale new development on the fringes of the area, mainly associated with the 'Thames Gateway'. The planning system has however so far protected substantial areas of open countryside, so different parts of this area have a very different character.

## Linking farming and biodiversity

At Elmley Marshes, Higher Level Stewardship is used to maintain large-scale, extensive grazing on permanent pasture. The site is grazed by a herd of suckler cattle which have the right characteristics to graze within the breeding bird populations, minimising disturbance to the birds whilst being key to maintaining the right sward conditions on site. The cattle are grazed and managed on the national nature reserve as part of a productive economic beef suckler herd. The economic viability of the herd is crucial for the success of the grazing on site. The management practices used at this site have been refined for over 20 years. The site is currently subject to a 10 year HLS agreement and there is a longer term commitment to manage the site as a National Nature Reserve.

The maintenance and restoration of breeding wader populations at this site depends on careful management of the grazing system to provide suitable habitat conditions at the right time of year, along with equally careful water level manipulation and the ditch maintenance needed to facilitate this.

Specific management practices associated with the HLS-funded management of this site include seasonal, extensive grazing, water level management control and ditch maintenance. Five key management principles have been identified to create crucially viable chick productivity of the breeding waders:

- sward height (grazing);
- water control in breeding season to provide large numbers of invertebrates; the sole food source for the wader chick;
- Surface water flooding in winter and spring to create suitable conditions for invertebrates and reduce early grass vigour;
- micro- topography in field;
- reduce predation impact.

These are all managed on site alongside the normal farming system of a grazing marsh.

## Monitoring

This case study demonstrates the value of monitoring by the agreement holder of breeding wader success, specifically including the production of fledged young. A yearly breeding wader monitoring programme compliant to the RSPB breeding wader monitoring, has been put in place on the site. This entails field by field surveys over the season identifying numbers of breeding pairs and species. In particular for lapwing it also monitors successful nest numbers and eventual fledgling successes. This is carried out by experienced

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independent researchers and regional bird expert. Alongside this survey work there have been other student research programmes on site looking at the habitat and its management over the years. The agreement holder himself has visited all the major breeding sites in the UK to look at how they are managed for breeding birds alongside extensive trips to sites in the Netherlands. He also attends most of the UK discussion forums on breeding birds and their successes. All this has aided in developing a focussed and refined management of the site to obtain better results in terms of breeding success.

## Conclusions

Since active conservation management began, the breeding success of the wader populations using this site has increased dramatically. This is backed up with very detailed breeding bird surveys each year which show the successful breeding and fledging of key indicator species such as Lapwing and Redshank.

The main factor behind this success has been the active involvement of the agreement holder, who has monitored the wader populations on the site, visited other sites in Europe and used the understanding gained to adapt the management to focus on breeding bird successes. HLS, the top level of the current English agri-environment scheme was designed to encourage this kind of adaptive management, and Elmley provides a very good case study of the scheme being used to its full potential.

## Useful references

For further information about this example and other materials, please check:

- <http://www.naturalengland.org.uk/ourwork/farming/funding/es/default.aspx>

We are grateful to Mick Oliver of Natural England for his inputs, insights, comments and feedback.

**You can find this case study and others on the Eurosité website:**

<http://www.eurosité.org/en-UK/content/practical-case-studies-share-experience-and-learn-others>



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