Section 1 Introduction to Entry Level Stewardship

1.1 Introduction and general overview

1.1.1 What is Entry Level Stewardship?

Entry Level Stewardship (ELS) is an agri-environment scheme that provides funding to farmers and other land managers in England in return for delivering environmental management on their land.

ELS is one of three elements of Environmental Stewardship (ES). The other two elements are Organic Entry Level Stewardship (OELS) and Higher Level Stewardship (HLS). Detailed information about OELS and HLS is provided in the separate OELS and HLS Handbooks.

Farmers and land managers can select from a range of environmental management options to create an agreement which fits with their farming practices and meets the environmental priorities for their farm. Our booklet *Look after your land with Environmental Stewardship* is available to download from the Natural England website at www.naturalengland.org.uk and provides examples of how farmers are using the scheme to benefit their farms.

There are options suited to all farm types, including a range of options specifically for upland farms. The Uplands ELS options offer a higher level of payment in return for environmental management of land within the Severely Disadvantaged Areas (SDAs).

1.1.2 Benefits of ELS and Uplands ELS for farmers and land managers

ELS rewards farmers and land managers for the adoption of environmental land management practices on their land. The scheme makes two payments for each year of the agreement. It can complement your existing farm practices and help you to meet other requirements such as cross compliance.

You can make awkward corners, small fields and wet areas of your farm work better for you by entering them into ELS options. The least productive areas of a farm are often, with the correct management, the best for birds, wildlife and natural resource protection. You can protect the historic features on your farm, and help maintain the landscape character of your area.

ELS agreements can be beneficial to your wider farming practices. ELS can help you to protect vital assets such as soil and water, and provide habitats for beneficial wildlife that can help to control crop pests, through options such as the creation of beetle banks.

1.1.3 ELS aims and objectives

The aims and objectives of ELS are to:

- conserve wildlife including farmland birds (biodiversity);
- maintain and enhance landscape quality and character by helping to maintain important features such as traditional field boundaries;
- protect the **historic environment**, including archaeological features and traditional farm buildings;
- protect natural resources by improving water quality and reducing soil erosion and surface run-off;
- respond to climate change by protecting existing soil carbon levels, increasing carbon sequestration and supporting the adaptation of the natural environment to climate change.

1.1.4 Priority options and priority areas

The combination of the options you choose and the areas on your farm where you choose to locate them will have a big influence on what you deliver through your ELS agreement.

Section 2, entitled **Environmental objectives**, contains a selection of themed pages covering farmland birds, wildlife, landscape, the historic environment, resource protection and climate change. These pages explain why your farm is important for each objective and the priority areas that can be used. They also list

the best options to maximise the environmental benefits and describe how you can have a positive impact by implementing these options. Not all of the packages will be appropriate for your farm – the ELS Priority Area maps and your own knowledge of the features and wildlife in your locality will help you identify which objectives and options are most relevant in your area.

More detailed regional maps are available on the Natural England website at www.naturalengland.org.uk/ourwork/farming/funding/es/default.aspx.

1.1.5 What the scheme has delivered to date

The 39,550 current ELS agreements (including combined ELS-HLS agreements) are delivering over 185,000 km of environmentally friendly hedgerow management (nearly 115,000 miles), more than 5,000 hectares of bird seed mix and protecting more than 180,000 in-field trees. Monitoring shows that this management is achieving real benefits for wildlife.

1.1.6 Further help: free farm visits and events

Natural England can provide a free ELS farm visit from a farming and environmental specialist. Whether you are applying for ELS for the first time, renewing an existing agri-environment agreement, or looking for guidance on how to manage your existing agreement more effectively, the support provided can include:

- a discussion on the options most suited to your farm to benefit farmland birds, wildlife, water, soil, the historic environment, landscape and climate change;
- practical suggestions on option location and management, such as tips on establishing wild bird and nectar flower mixes, guidance on buffer strip weed control and how to get a good sward structure;
- information on new and updated options;
- an explanation of the financial benefits and how ELS options can complement your existing farming practices; and
- information and support on applying for ELS by paper or online.

Natural England also runs a programme of farm events to deal with the above topics from a local perspective. To arrange a FREE farm visit or to book a place on a farm event please contact our events team on **0300 060 1695** or visit the Farm Events and Visits page on the Natural England website at www.naturalengland.org.uk/.

1.2 Key information

This section answers some basic questions about the operation of the scheme. The full **Terms and Conditions** are set out in Section 5. You should read these carefully before you apply.

1.2.1 Who can apply?

ELS is open to all farmers and land managers who are freehold owners, tenants, contractual licensees or common land rights holders. You must have management control of the land for the entire five years of your agreement. If not, you will need to make a countersigned application with your landlord, who undertakes to carry on your agreement if your management control of the land ceases (see Section 5.3 for details). If another farmer claims for another scheme – for example, the Rural Payment Agency's (RPA's) Single Payment Scheme (SPS) – on all or part of your land, you will need to keep a record of how you manage the land between the parties (see Section 5.4.14 for details).

1.2.2 How do you apply?

Applications can be made online or by post. Details of how to apply online are available from els.online@naturalengland.org.uk. Full details of how to apply by post are given in Section 4, How to apply for ELS and Uplands ELS.

1.2.3 What land is eligible?

Land to be entered into the scheme must be registered on the RPA's Rural Land Register (RLR), and must be part of the farmed environment. The 'farmed environment' includes both your farmed land, all of which must be entered, and other non-farmed land, which you can choose to enter if you wish (see Section 5.4 for details).

1.2.4 What are you agreeing to do?

In signing your application form, you are agreeing to:

- **retain your Farm Environment Record (FER) features** for the duration of the agreement;
- choose sufficient options so that together with your compulsory requirements (ie the FER and Upland ELS options UX1 UX3) you meet your points target for your agreement land;
- manage the land parcels shown on your ELS options map(s), in accordance with your choice of management options, as set out in the ELS/Uplands ELS option descriptions, for the duration of the agreement;
- (Uplands ELS only) carry out the Uplands ELS compulsory requirements on your SDA land as set out
 in the Uplands ELS compulsory requirements descriptions; and
- follow the scheme Terms and Conditions contained in this handbook, including meeting cross compliance rules across all of your land, and complying with the other additional requirements listed (see Section 5 for details).

1.2.5 What environmental management must you undertake and how much will you be paid?

Acceptance into ELS is determined by a simple 'points per hectares' calculation across your eligible land that sets your 'points target'. In order to join the scheme, you need to choose sufficient options to meet, or exceed, your points target. The number of points per hectare you need varies, depending on the type of land you are entering into the scheme, as shown in Table 1. You will then be paid at the rate shown in the table.

You earn points for environmental management options you agree to provide over the course of the agreement – the points value of each of the options is set out in Table 3 at the start of Section 3, **Option directory for ELS and Uplands ELS**.

In Uplands ELS, your single points target covers your SDA land plus any non-SDA land included in your application. In Uplands ELS, there are compulsory requirements that you must comply with on your SDA land. These compulsory requirements will earn you points towards your points target. To earn the rest of your points, you can use any combination of ELS and Uplands ELS options, provided you can meet the option eligibility conditions.

For Uplands ELS agreements, the Moorland commons and shared grazing (UX1) requirements must be located on all common land and shared grazing above the Moorland Line where there are two or more active graziers. This attracts an additional payment of £5/ha.

Subject to changes in European Union (EU) rules, these payment rates will remain the same for the five years of your agreement, even if the rates are reviewed during that time. New rates will apply only to new agreements.

For all the land you enter into ELS, you will receive the following rates of payment (£/ha/annum):

Table 1 Rates of payment for ELS and Uplands ELS

	ELS	
Land Parcel	ELS	Uplands ELS (SDA only)
Parcels below the Moorland Line	30	62
Parcels above the Moorland Line less than 15 ha	30	62
Parcels above the Moorland Line 15 ha or more	8	23

(Uplands ELS only) In addition, the UX1 (Moorland commons and shared grazing) requirements must be located on all common land and shared grazing above the Moorland Line where there are two or more active graziers. This attracts an additional payment of \pounds_5 /ha.

1.2.6 When will your agreement start and how long will it last?

Agreements last for five years and they can start on the first day of any month. Our target is to provide you with an agreement within three months of receipt of a valid application. Your agreement will start on the first day of the next month after the application is processed, unless you tell us on the application form that you want a later start date. For example, if the RPA's Uplands Transitional Payment (UTP) is claimed on your land, you may wish to start your Uplands ELS agreement on the following 1 January to avoid the need to pay back part of your UTP for the current calendar year. You should note that your choice of start date will affect the timing of your payments, so choose a date carefully with that in mind. Agreement start dates cannot be backdated.

1.2.7 When will you be paid?

You will receive two payments for each year of your agreement, with each payment representing half of your total annual payment for that year. These payments will be made automatically and you will not have to complete a claim form. However, if there are any changes to your agreement then you must let us know, for instance, if you have amended your field boundaries.

We are required to operate a fixed annual cycle for payments:

- if your agreement starts up to and including 1 June in any calendar year, you should receive your first payment in that calendar year; or
- if your agreement has a start date of 1 July or later in the year, you will receive your first payment in the following calendar year.
- we will assume that on 15 May each year, you make a deemed claim for payments. If there are any reasons why you are no longer eligible to claim, or changes have occurred to your agreement land which we are unaware of, for instance, if you have amended your field boundaries, you must inform us immediately.

Further details including a tool to help you work out the timings of your payments are available at: www.naturalengland.org.uk/ourwork/farming/funding/developments.aspx. If you are overpaid in error, you may be asked to refund the overpayment.

1.2.8 Can an agent act on your behalf?

Yes. You can authorise an agent to submit an application and to act on your behalf on all matters relating to the maintenance of your agreement. Your payments can also be made to an agent.

You will need to complete, sign and return the agent authorisation form (NE-auth) with your application. You can obtain one from us or download one from our website at:

www.naturalengland.org.uk/ourwork/farming/funding/es/forms/default.aspx. Please note that any payment you make to an agent to help with your application will not be reimbursed by us.

An agent is anyone who is acting on your behalf, so if anyone other than you is to sign an application or claim or act on your behalf in respect of your ELS agreement, they will need to be authorised by you.

1.2.9 How will your information be stored and used?

Your information will be stored and processed in accordance with the Data Protection Act 1998. This Act gives you, as an individual, the right to know what data we hold on you, how we use it, with whom we share it and to ensure it is accurate.

We will respect personal privacy, whilst complying with access to information requests to the extent necessary to enable Natural England to comply with its statutory obligations under the Environmental Information Regulations 2004, and the Freedom of Information Act 2000 (see Section 5.2.6, for details).

1.2.10 Can you make changes to your agreement?

Continuity is important during your agreement if we are to achieve the environmental benefits sought. We will therefore only agree to changes that are absolutely necessary. Should the situation arise where you need to change the choice or location of your management options, for example, to include more priority options to increase the environmental benefits delivered then, subject to approval, we can amend your agreement. If you need to make a minor or temporary change to your management prescriptions, you can apply for a derogation. You must not make changes without our prior approval (see Section 5.6 for details).



Section 2 **Environmental objectives**



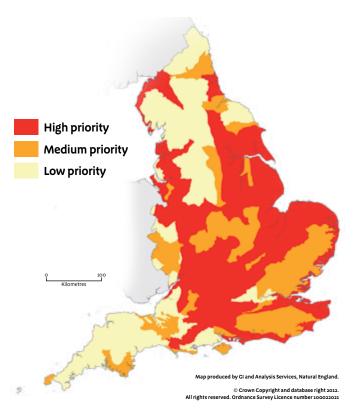
2.1 Managing arable habitats for farmland birds

Why your farm is important

Farmers across England are taking action to help turn round the fortunes of farmland birds by providing critical nesting and foraging habitats on their land. The birds on your farm are a good indicator of the overall health of biodiversity, as they sit high up the food chain. If bird populations are doing well then it indicates that the plants and insects on which they depend for food are thriving too.

Since the mid-1970s, there has been a steep decline in the country's farmland bird populations, with many species declining by over 50 per cent. Studies have shown that these declines have been caused by the loss of breeding and year-round foraging habitats, meaning that our farmland birds have fewer places to nest, raise fewer young and are less able to survive the winter.

ELS can be used to put in place simple management measures that will make a huge difference to farmland birds. Research and past experience of agri-environment schemes shows that farmland bird populations can respond positively and quickly when certain habitats are provided. These measures can work alongside existing farm practices and fit with the needs of your farming business.



Priority areas for farmland birds

This map shows the priority areas within England for farmland birds. It is intended to help you establish whether the Farmland Bird Package (explained on the next page) is suitable for your farm.

If your farm is located in a high-priority or mediumpriority area, by incorporating the Farmland Bird Package, you will be taking positive steps to help farmland birds thrive on your farm.

More detailed regional maps are available on the Natural England website at: www.naturalengland.org.uk/es.

What you can do for farmland birds: the Farmland **Bird Package**

By adopting the Farmland Bird Package, you will provide the three main things needed by farmland birds to survive and thrive: (1) overwinter seed food, (2) nesting habitat and (3) food for chicks.

The 10 most wanted farmland birds: There are 10 species of birds associated with arable farmland which have declined greatly in recent decades and will benefit the most from these measures. These are:



Grey partridge Lapwing







Skylark

Yellow wagtail

To achieve results, for every 100 ha of arable farmland, you should aim to do at least one of the following things from each of the categories below. The stubble options may be beneficial for both food and nesting.

In-field nesting habitat: Some birds, eg skylarks and lapwings, require in-field nesting habitat. Lapwings, in particular, will benefit greatly from fallow plots.

Choose either 20 skylark plots in winter cereals, 1 ha fallow plot or 1 ha of extended overwintered stubbles.

Code	Option description	Page
EF8	Skylark plots	76
EF13	Uncropped cultivated areas for ground-nesting birds on arable land	79
EF22	Extended overwintered stubble	81

Overwinter seed food: Seed food during winter and early spring can be supplied by a wild bird seed mixture or weedy overwintered stubbles or ryegrass seed-set. Stubbles should not receive a pre-harvest desiccant or post-harvest herbicide.

Include either 2 ha of wild bird seed mixture, 5–10 ha of weedy overwintered stubble/ryegrass seed-set, or a combination of the two (eg 1 ha of wild bird seed mix and 2.5 ha of stubble).

Note: EF23 can only be selected when an agreement contains either EF2 (minimum 2 ha per 100 ha) or EF22 (minimum 5 ha per 100 ha). A minimum of 1 tonne supplementary feed mixture should be used per 1 ha wild bird seed mix or 5 ha stubbles in the agreement.

Code	Option description	Page
EF2	Wild bird seed mixture	72
EF6	Overwintered stubble	74
EF23	Supplementary feeding in winter for farmland birds	82
EG4	Cereals for whole-crop silage followed by overwintered stubble	83
EK20	Ryegrass seed-set as winter/spring food for birds	93

Insect-rich foraging habitats: Most farmland birds feed their young on insects and other invertebrates so require insect-rich foraging habitats for successful breeding. As most are territorial during the breeding season, it is vital to maintain a network of these insect-rich habitats across the farm.

Aim for 1 ha of one or more of the options below.

Code	Option description	Page
EF4	Nectar flower mixture	73
EF9	Cereal headlands for birds	77
EF10	Unharvested cereal headlands for birds and rare arable plants	78
EF11	Uncropped cultivated margins for rare plants	78
EF15	Reduced-herbicide cereal crops followed by overwintered stubble	80
EG1	Undersown spring cereals	83
EK21	Legume- and herb-rich swards	93



Tree sparrow



Linnet







Yellowhammer Re

Reed bunting Corn bunting



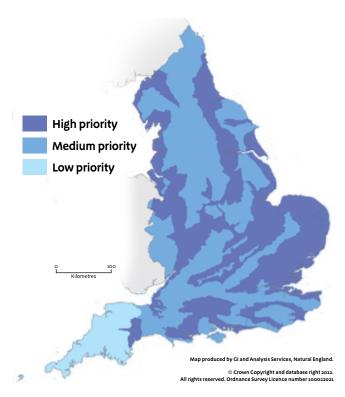
2.2 Managing habitats for water voles, dragonflies, newts and toads

Why your farm is important

Water voles were widespread before World War II, but have declined incredibly rapidly in the last 30 years. Theirs has been one of the most serious declines of any British mammal during the 20th century (declining up to 94 per cent from areas where they had been recorded in the late 1990s). The spread of American mink has contributed to this rapid decline, although habitat loss, fragmentation and drainage schemes have also had an impact.

Dragonflies and other wetland invertebrates rely on ponds, rivers and ditches to complete their life cycles. Shallow ponds and ditches are important for many rare species which thrive on the muddy edges created as the water dries out in summer. Dragonflies and other invertebrates use pond edges, where the water is warm and shallow and there is plenty of vegetation. Water edges should not be completely shaded out by trees and scrub as these hamper the growth of vegetation and cool the water.

Loss of ponds has caused declines in native frog, newt and toad species, and has resulted in once common species becoming scarcer and some species being lost from parts of England.



Priority areas for water voles, dragonflies, newts and toads

This map shows the priority areas for water voles, dragonflies, newts and toads. It is intended to help you establish whether the options below are suitable for your farm. More detailed regional maps are available on the Natural England website at: www.naturalengland.org.uk/es.

If your farm is located in a high-priority or mediumpriority area, by including the options into your agreement, you will be helping water voles, dragonflies, newts and toads to thrive on your farm.

What you can do for water voles, dragonflies, newts and toads

By buffering and protecting any water on your farm, you will help protect and provide the habitat for newts, water voles and other small mammals to flourish.

Options which restore and create riparian habitats such as ponds, fens, reedbeds and ditches and buffering water courses, to prevent bankside

poaching from livestock will provide food and cover for many species. Dragonflies and other invertebrates will benefit from clean, fluctuating water levels with plenty of vegetation.

For more information on management of frogs and toads, see the leaflet *Selecting Environmental Stewardship Options to Benefit Reptiles* produced by Amphibian and Reptile Conservation (www.arc-trust.org).

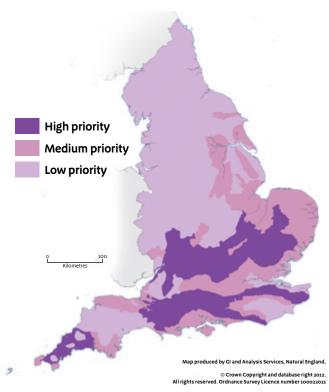
Code	Option description	Page
EB6	Ditch management	47
EB7	Half ditch management	48
EB10	Combined hedge and ditch management (incorporating EB3)	49
EE7	Buffering in-field ponds in improved permanent grassland	69
EE8	Buffering in-field ponds in arable land	69
EJ9	12 m buffer strips for watercourses on cultivated land	86
EJ11	Maintenance of watercourse fencing	88



2.3 Managing habitats for arable plants

Why your farm is important

The wild plants associated with arable habitats include many species that used to be widespread across large swathes of lowland England, eg corn buttercup, corn marigold and prickly poppy, have severely declined since the mid-20th century. Improved seed-cleaning, increased use of broad-spectrum herbicides and the switch from autumn- to spring-sown cereal crops are amongst the factors which have had a major impact on arable plants. Many once-familiar species, including shepherd's-needle and spreading hedge-parsley, are now listed as priority species under the UK Biodiversity Action Plan.



Priority areas for arable plants

This map shows the priority areas for arable plants. It is intended to help you establish whether the options below are suitable for your farm. More detailed regional maps are available on the Natural England website at: www.naturalengland.org.uk/es.

If your farm lies in a high-priority or mediumpriority area, it may already support one or more threatened species, or your fields might support a range of species that together comprise a particularly rich assemblage of arable plants.

Alternatively, other farms in your local area may hold important populations of arable plants, meaning that your own fields could have considerable potential, with suitable management, to support some or all of these species.

What you can do for arable plants

If you have light free-draining soils then you can benefit arable plants by creating cultivated margins

or leaving conservation headlands. If you choose ELS uncropped cultivated margins, evidence shows you can produce habitat for up to five times as many arable plants than a conventional cereal crop.

Code	Option description	Page
EF9	Cereal headlands for birds	77
EF10	Unharvested cereal headlands for birds and rare arable plants	78
EF11	Uncropped cultivated margins for rare plants	78
EF13	Uncropped cultivated areas for ground-nesting birds on arable land	79
EF15	Reduced herbicide cereal crops followed by overwintered stubble	80



2.4 Managing habitats for bats and dormice

Why your farm is important

There are 17 species of bat known to breed in England, the majority are adapted for feeding across a complex and diverse landscape mosaic comprised of woodland, waterbodies, grassland and heathland. Bats spend over half of their life roosting, using a variety of structures both man-made and natural. Since the mid-20th century, a number of bat species have suffered dramatic population declines. The main causes of declining bat populations are roost destruction and disturbance, and habitat loss, fragmentation and degradation. Hedgerows, woodland edges and streams are essential for providing commuting routes to and from roosts and feeding grounds.

Dormice are most frequently found in broad-leaved woodland with either a thick coppice structure or over-mature woodland with good ground cover. They can also be found in mixed conifer plantations, scrub and hedgerows. Dormice benefit from species-rich hedgerows with a plentiful supply of fruit and berries, sometimes linked to brambles. The dormouse has suffered historical decline in England and is now absent from a number of counties where it was recorded in the late 19th century. The decline is due to habitat fragmentation, degradation, loss or inappropriate management.

High priority Medium priority Low priority Map produced by Cl and Analysis Services, Natural England. © Crown Copyright and database right 2022. All rights reserved. Ordnance Survey Licence number 2000220221

Priority areas for bats and dormice

This map shows the priority areas for bats and dormice. It is intended to help you establish whether the options below are suitable for your farm. More detailed regional maps are available on the Natural England website at:

www.naturalengland.org.uk/es.

If your farm is located in a high-priority or mediumpriority area, then by including the options into your agreement, you will be helping bats and dormice to thrive on your farm.

What you can do for bats and dormice

Hedgerows and woodland edges are incredibly important for bats as they tend to navigate to their roosts and feeding grounds along them. Maintaining good-quality hedgerows, including trees providing shelter, feeding perches and roosting opportunities, will greatly benefit bat species. Bats will also benefit from options which increase insect populations, eg permanent pasture with low/very low inputs and the maintenance of ponds and ditches.



Brown long-eared bats



Dormouse

Dormice will benefit from options which promote range expansion, for example, the maintenance of rides, glades to allow light to reach the woodland floor and promote the growth of the ground cover and woodland connections to allow the dormice to move through their habitat; and options which promote a diversity of food sources throughout the dormouse active period.

Code	Option description	Page
EB3	Hedgerow management for landscape and wildlife	46
EB10	Combined hedge and ditch management (incorporating EB3)	49
EB14	Hedgerow restoration	52
EC3	Maintenance of woodland fences	55
EC4	Management of woodland edges	55
EC23	Establishment of hedgerow trees by tagging	57
EC24	Hedgerow tree buffer strips on cultivated land	58
EC25	Hedgerow tree buffer strips on grassland	59



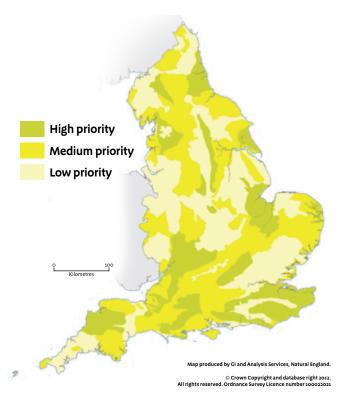
Planted up gaps in hedge



2.5 Managing habitats for butterflies, bees and vulnerable grassland

Why your farm is important

The provision of pollen and nectar sources for butterflies, moths, bees, hoverflies and other insects is now more important than ever. Many species in the countryside struggle to find enough of the right sorts of pollen and nectar to sustain their populations due to loss of flower-rich habitats, especially grasslands. This threatens them (and their position in the food chain) and their availability as pollinators and pest controllers. To benefit pollinators, swards should contain a range of native flowering plants (clovers and flat-topped species, eg hogweed and cow parsley, are useful). These must provide flowers over many months and ensure there is no 'hungry gap'. Whilst seed mixes often contain grasses, the best swards for bees and butterflies tend to be grass-poor. These vulnerable grasslands contain a wide range of plant species which support a variety of invertebrates. Where a range of native plants are not present, pollen and nectar flower mixture can be sown as an alternative to flowers.



Priority areas for butterflies, bees and vulnerable grassland

This map shows the priority areas for butterflies, bees and vulnerable grassland. It is intended to help you establish whether the options below are suitable for your farm. More detailed regional maps are available on the Natural England website at www.naturalengland.org.uk/es.

If your farm is located in a high-priority or mediumpriority area, then by including the options into your agreement, you will be helping butterflies, bees and vulnerable grassland to thrive on your farm.

What you can do for butterflies, bees and vulnerable grassland

You can benefit bees, butterflies and other pollinators by establishing a network of flower-rich habitats across the farm. Scientific evidence shows that farmers who plant ELS nectar mixes instead of grass margins can attract up to 14 times as many bumblebees. Locating flower-rich mixes in sunny sheltered positions will make them more

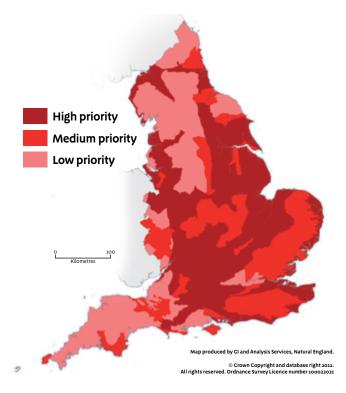
attractive to pollinators. If you have a range of swards, treat some like a hay crop and cut and remove the cuttings, but ensure the whole resource is not removed in any one season as some species will over-winter in the standing stems. Also, by not cutting all the flowers off, you will ensure part of the forage resource is available throughout the season (March–September).

Code	Option description	Page
EB3	Hedgerow management for landscape and wildlife	46
EB10	Combined hedge and ditch management (incorporating EB3)	49
EC4	Management of woodland edges	55
EE12	Supplement to add wildflowers to field corners and buffer strips on cultivated land	70
EF1	Management of field corners	71
EF4	Nectar flower mixture	73
EK3	Permanent grassland with very low inputs	91
EK20	Ryegrass seed-set as winter/spring food for birds	93
EK21	Legume- and herb-rich swards	93

2.6 Managing habitats for brown hare

Why your farm is important

The brown hare was once very common and widespread across the country; however, the population has declined substantially in recent decades. The brown hare is now most common in the open arable landscapes of eastern Britain. Changes in farming practices, post World War II, such as larger fields, less stubble and a simpler crop rotation, have all reduced the amount of food available for hares and have contributed towards their decline.



Priority areas for brown hare

This map shows the priority areas for brown hare. It is intended to help you establish whether the options below are suitable for your farm. More detailed regional maps are available on the Natural England website at: www.naturalengland.org.uk/es.

If your farm is located in a high-priority or mediumpriority area, by including the options into your agreement, you will be helping brown hare thrive on your farm.

What you can do for the brown hare

Hares require quiet, undisturbed cover to raise young and to hide from predators. Wild bird seed and grass mixes provide cover and a good source of food. Stubbles and game crops can also provide good cover for hares. Hares require continuous grazing throughout the year, so options which improve all year round grazing are beneficial for hare populations.

Code	Option description	Page
EC4	Management of woodland edges	55
EF2	Wild bird seed mixture	72
EF6	Overwintered stubble	74
EF7	Beetle banks	75
EF9	Cereal headlands for birds	77
EF10	Unharvested cereal headlands for birds and rare arable plants	78
EF13	Uncropped cultivated areas for ground-nesting birds on arable land	79
EF15	Reduced-herbicide cereal crops followed by overwintered stubble	80
EF22	Extended overwintered stubble	81
EG1	Undersown spring cereals	83
EG4	Cereals for whole-crop silage followed by overwintered stubble	83
EJ13	Winter cover crops	88

3-6

2.7 Managing habitats for uplands wildlife

Why your farm is important

Many of England's most characteristic upland species have adapted to habitats maintained by agriculture and are dependent on continued farming. The farm management practices of generations have provided what these species need to thrive. Retaining this skill and knowledge is crucial to secure the future of our most cherished upland wildlife. Drumming snipe over rush pastures in spring, hay meadows rich in wild flowers, and purple moorland at the summer's end are all still familiar sights across the uplands of England.

However, studies over the last 60 years have shown that upland wildlife has declined. Reclamation, increased grazing and other moorland management resulted in the loss of 27 per cent of heather moorland between 1947 and 1980. Increased intensity of grassland management has led to the loss of 33 per cent of unimproved meadows in some areas since the 1980s. These factors have caused once common species to become scarcer and some species to be lost from parts of upland England.

Since the introduction of agri-environment schemes in 1987, these declines have slowed dramatically thanks to concerted action by upland farmers. Ensuring continuity and increasing the coverage of agri-environment management in the uplands is therefore crucial in reversing these long-term wildlife declines. Through ELS, simple management measures can be put in place that will make a huge difference to the wildlife across your farm.

Priority areas for uplands wildlife

The wildlife focus for ELS in the uplands is to maintain the extent of semi-natural habitat and the mosaic of habitats present in moorland and the upland fringe, which support a number of species. Some of these species, including breeding waders such as curlew and redshank and butterfly species such as small pearl bordered fritillary, have not always been 'upland' specific but have persisted in these areas due to the habitats and mosaics that remain (whilst similar habitats have been fragmented or lost in the lowlands as a result of more intensive agriculture).

What you can do to benefit wildlife in the uplands

The tables opposite show the four main habitat types in the uplands, with an explanation of their importance and the management practices and ELS options which can benefit wildlife.



Red Grouse, North Yorkshire

Moorland - Many species of upland bird use areas of heather moorland, tussocky grassland and wet flushes to breed throughout the summer.

- Protect habitats through minimising the impact of supplementary feeding and not undertaking any further drainage work, and by maintaining different ages and heights of heather.
- Follow the Heather and Grass Burning Code to minimise damage where conducted.
- Allow taller areas of vegetation to develop to provide insects and seeds and potential nesting habitat for wildlife.

Code	Option description	Page
EL6	Unenclosed moorland rough grazing	100
UL17	No supplementary feeding on moorland	113
UL18	Cattle grazing on upland grassland and moorland	113
UL22	Management of enclosed rough grazing for birds	115

Moorland edges - These areas are particularly important for breeding waders and black grouse (in the north), providing chick-rearing habitat through spring and summer months.

- Encourage a variety of sward heights for breeding waders and other wildlife.
- Allow taller areas of vegetation to develop to provide insects, seeds and potential nesting habitat for wildlife.
- Use stock to break up stands of bracken to provide open areas for fritillary butterflies.

Code	Option description	Page
EL6	Unenclosed moorland rough grazing	100
UL18	Cattle grazing on upland grassland and moorland	113
UL22	Management of enclosed rough grazing for birds	115

Hay meadows and other in-bye grassland – Hay meadows cut in late summer are often diverse in flowering plants. Tall uncut areas can provide useful habitat for butterflies and other invertebrates.

- Choose hay making to give plants a chance to flower and increase abundance of seeds for birds. Cut hay meadows in late summer, ideally follow with cattle grazing to increase diversity.
- Use no cutting strips to allow taller areas of vegetation to develop to provide insects, seeds and potential nesting habitat for wildlife.
- Reduce fertiliser inputs on meadows and pastures to increase numbers of flowers, bees and butterflies.

Code	Option description	Page
EL3	Permanent grassland with very low inputs in SDAs	97
UL20	Haymaking	114
UL21	No cutting strips within meadows	115
UL23	Management of upland grassland for birds	117

Small native woodlands and scrub - Areas of native gill woodland are important for spring flowers and woodland birds. Fritillary butterflies may often be found in open bracken glades.

- Increase numbers of woodland birds and flowers by fencing-off and excluding livestock in small native woodlands.
- Retain dead wood to enhance diversity.

Code	Option description	Page
EC3	Maintenance of woodland fences	55
EC4	Management of woodland edges	55
UC5	Sheep fencing around small woodlands	106
UC22	Woodland livestock exclusion	107



2.8 Managing your land to protect and enhance the landscape

Why your farm is important

Patterns of field, wood, open moor, common and parkland reflect the long and complex story of our ancestors. The landscape character gives localities their recognisable sense of place and identity, which connects people to the area linking both the natural aspects and our past and current land use. Maintaining this character is usually very important to both local communities and to others who know, visit and experience the area.

Field boundaries, woods and trees are fundamental to the character of the countryside. As agriculture has intensified and farm machinery become more powerful, traditional field boundaries, field patterns, and a more diverse pattern of land use has often become less relevant to modern farming operations. Many distinctive features have been lost or neglected. Recent surveys have shown our upland landscape is particularly threatened. Careful management of important features and vegetation to conserve these can be integrated within a modern farm system to help reduce these impacts.

Priority sites

All of England's landscapes are important and valued in some way by society. Some are nationally recognised and well known for their beauty and special qualities and are designated as National Parks and Areas of Outstanding Natural Beauty (AONBs), and others are equally special to the local communities living within or close to them.

To help decide how best to contribute to the stewardship of your area, consider how your farm fits into the surrounding countryside and identify the important landscape features on your farm. You may find it helpful to look at information on landscape character. National Character Areas descriptions are available at www.naturalengland.org.uk/ourwork/landscape/default.aspx. If your farm is within a National Park or AONB, you may find a Landscape Character Assessment (LCA) on their website which will describe the local landscape character more fully. Some local authorities also have LCAs for their area.

What you can do to protect and manage the landscape

By adopting the options appropriate to the local landscape character and features of your land you will be helping to protect our landscape heritage for the benefit and enjoyment of future generations. The tables below summarise some of the most significant actions you could take and the ELS options most suitable for those farming in the **lowlands** and those farming in the **uplands**. Other options for historic environment and habitat management, especially those for grassland, meadows and moorland, will also contribute significantly to enhancing and maintaining your landscape.



Reserve enhancement scheme, stone wall maintenance

Traditional boundaries and historic stock enclosures

- Maintain and restore boundaries and stock enclosures, using traditional materials and styles, ensuring their landscape and historic significance is retained. This also ensures that the boundaries and enclosures retain their usefulness for stock management and wildlife.
- Local forms of gate, stone gateposts and stiles are important features contributing to landscape character.

Code	Option description	Page
EB3	Hedgerow management for landscape and wildlife	46
EB6	Ditch management	47
EB7	Half ditch management	48
EB10	Combined hedge and ditch management (incorporating EB3)	49
EB11	Stone wall protection and maintenance	50
EB14	Hedgerow restoration	52
UB4	Stone-faced hedgebank management on both sides on or above the Moorland Line	101
UB5	Stone-faced hedgebank management on one side on or above the Moorland Line	101
UB11	Stone wall protection and maintenance on or above the Moorland Line	102
UB12	Earth bank management on both sides on or above the Moorland Line	102
UB13	Earth bank management on one side on or above the Moorland Line	102
UB15	Stone-faced hedgebank restoration	103
UB16	Earth bank restoration	104
UB17	Stone wall restoration	105

Woodland and trees

■ Safeguard and maintain the open and expansive nature of upland landscapes and the more intimate diverse patterns of lowland landscapes. This can be achieved through careful use of appropriate management options for trees and woodland, grassland and moorland.

Code	Option description	Page
EC2	Protection of in-field trees on grassland	54
EC3	Maintenance of woodland fences	55
EC4	Management of woodland edges	55
EC23	Establishment of hedgerow trees by tagging	57
EC24	Hedgerow tree buffer strips on cultivated land	58
EC25	Hedgerow tree buffer strips on grassland	59
UC5	Sheep fencing around small woodlands	106
UC22	Woodland livestock exclusion	107



2.9 Managing your land for the historic environment

Why your farm is important

Archaeological sites, traditional farm buildings and the landscape they sit in are the only evidence we have for much of human history. Historic features are fundamental to the diversity, fascination and attractiveness of the countryside. Archaeological sites, traditional buildings and other historic features are fragile and irreplaceable.

The uplands are particularly important sources of information about our past. Historic features in the uplands are often better preserved than their lowland counterparts as they have not suffered the same intensive activity, which is why the uplands contain almost one quarter of all Scheduled Monuments (SMs). Many traditional farm buildings are threatened by disuse and lack of maintenance. Building maintenance and careful vegetation and stock management can reduce these threats.

The intensification of agriculture and increased farm mechanisation has resulted in many historic sites and buildings being damaged over time. Many distinctive features have been lost or neglected. ELS provides the opportunity to maintain archaeological sites and traditional farm buildings and to conserve the character of your farm for future generations.

Identifying historic features for management

All historic environment features on your holding are important and will benefit from options to encourage their best possible long-term management.

Within your application pack, the Environmental Information Map shows some of the historic features that can be managed using ELS options. Using the reference numbers provided, you can look up full descriptions of many of these on the **Selected Heritage Inventory for Natural England (SHINE) website** (www.myshinedata.org.uk). You must also record any other historic features on your holding such as archaeological sites, ridge and furrow and traditional farm buildings, to complete your Farm Environment Record (FER).

You are particularly encouraged to manage archaeological sites at high risk of damage from arable cultivation, or where scrub is taking over. With English Heritage, we have produced lists of Scheduled Monuments at high risk due to arable or scrub, which can be viewed on the Natural England website at www.naturalengland.org.uk/es.

Note: The lists are based on the Heritage at Risk Register, which is updated and published annually by English Heritage, so may not reflect recent changes to land management practices on particular monuments.



Minimum tillage soil cultivation

What you can do for the historic environment and landscape

By adopting the options appropriate to the local landscape character and the historic features on your land you will be helping to protect our heritage for the benefit and enjoyment of future generations. The tables below summarise actions you could take and the ELS options available. The information has list options most suitable for those farming in the **lowlands** and those farming in the **uplands**.

Archaeology under cultivation

- Continued arable cultivation gradually causes increasing damage. The most beneficial management option for sites under the plough is to completely remove them from cultivation, usually by sowing a productive grass sward.
- Where removal from cultivation is not feasible, creation of a 'buffer strip' prevents further encroachment by the plough and provides protection for buried features. Wide margins provide the greatest protection as well as benefit to wildlife and easier field operations.
- Sites surviving under arable cultivation can also be protected by reducing cultivation depth.

Code	Option description	Page
ED2	Take out of cultivation archaeological features currently on cultivated land	62
ED3	Reduced-depth, non-inversion cultivation on archaeological features (minimum till)	63

Archaeological features under grass

- Maintain adequate grazing levels, which prevents scrub and vegetation growth from obscuring features. Over-grazing, poaching, inappropriately sited ring feeders, mineral licks or water troughs and rutted tracks can cause damage to features, so management requires a careful balance.
- Prevent damage by controlling activities such as feeding stock, harrowing and rolling, and the use of heavy vehicles.
- Keep archaeological features visible to help everyone to enjoy and understand them.

Code	Option description	Page
ED4	Management of scrub on archaeological features	64
ED5	Management of archaeological features on grassland	64
UD13	Maintaining visibility of archaeological features on moorland	110

Traditional farm buildings

- Ensure that buildings are well maintained if their historic importance and economic potential is to be safeguarded for the future.
- Buildings appropriate for management under ELS are those built before 1940 using traditional materials such as brick, stone, tile, slate and timber.
- Regular effort to keep buildings watertight can reduce expensive repairs at a later date.

Code	Option description	Page
ED1	Maintenance of weatherproof traditional farm buildings	60
UD12	Maintenance of weatherproof traditional farm buildings in remote locations	108



Barn with lichens



2.10 Managing your land for cleaner water and healthier soil

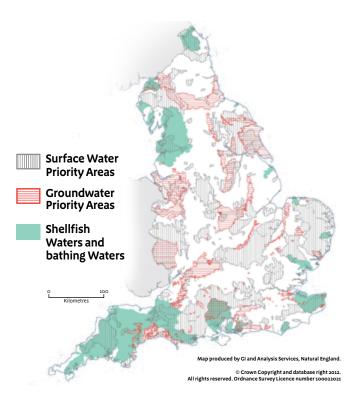
Why your farm is important

Soil is your farm's most valuable resource as the foundation for production. The most productive components of your soil lie in the top three to six inches of the profile – the layer most vulnerable to erosion. Erosion and run-off can result in valuable nutrients and environmentally damaging sediments, pesticides and disease organisms reaching water.

Water flowing over/through your farm can be almost as significant as the food you produce:

- Clean water is valuable for irrigation of your crops and drinking water for you and your livestock. Private water supplies can be particularly at risk from farming practices.
- Agricultural pollution can cause harm to aquatic life including fish, water plants and invertebrates.
- Clean water and good-quality wildlife habitats attract people for outdoor activities such as fishing, boating and walking which are important for people and the rural economy.
- Rural industries rely on clean water to ensure quality products and adherence to high standards.
- Localised flooding can cause damage to roads, houses and farmland.

Good agronomic practices are essential, but sometimes more is needed to avoid soil erosion and run-off which transport sediment and other pollutants into water.



Priority areas for soil and water protection

This Environment Agency map shows areas where the quality of water in watercourses, open water and coastal areas is most affected by pollution from agriculture. It is intended to help you establish whether the soil and water options (explained on the following pages) are a priority for your farm. Most of this priority land is covered by Catchment Sensitive Farming through which you can get free detailed advice and other grants to help you manage your farm to protect water quality. For more information see:

www.naturalengland.org.uk/csf.

If your farm is located in a priority area, then it is important to include appropriate options in your agreement to address soil erosion and run-off risks to help support cleaner water and healthier soil on and around your farm.

Note: This map is correct at the time of print; however, the Environment Agency regularly monitors water quality, which will result in changes to this map. More

detailed regional maps (which are kept up to date with the latest Environment Agency data) are available on the Natural England website at www.naturalengland.org.uk/es.

What you can do to ensure cleaner water and healthier soil

Soil type, landscape and weather cannot be changed. However, land use and management can be adjusted and can make a big impact on reducing the amount of soil erosion and run-off from your farm.

Your Cross Compliance Soil Protection Review is a good starting-point for identifying potential problems. Measures you adopt as a result of this may go some way to preventing erosion and run-off, but you may also need to consider other options. You should always try to **tackle the source** of any problems. Where this is not possible you should aim to **slow the pathway**, and finally consider how to **protect the water body**.

Actions and options in the lowlands

The tables below summarise actions you could take and the ELS options available. The information has been split into options most suitable for those farming in the **lowlands** and those farming in the **uplands**.

Tackle the source of soil erosion and run-off

- Manage maize crops to reduce soil erosion by reducing the likelihood of compaction and establishing a winter cover crop to protect soils that would otherwise be left bare.
- Sow a winter cover crop to capture excess nitrogen, improve soil structure and reduce run-off. Cover crops can reduce nitrate leaching by 50 per cent, enabling you to reduce fertiliser application, increase organic matter and potentially save money.

Code	Option description	Page
EG1	Undersown spring cereals	83
EJ2	Management of maize crops to reduce soil erosion	85
EJ10	Enhanced management of maize crops to reduce soil erosion and run-off	87
EJ13	Winter cover crops	88

Slow the pathways of soil erosion and run-off

- Grass field corners to slow down overland flow of water or where run-off collects and makes it difficult to farm.
- Grass natural drainage pathways (eg valley bottoms) to reduce the channelling of run-off water that can cause soil erosion and produce rills or gullies.

Code	Option description	Page
EB14	Hedgerow restoration	52
EF1	Management of field corners	71
EF7	Beetle banks	75
EJ5	In-field grass areas to prevent erosion and run-off	85
EK1	Take field corners out of management	89
EK2	Permanent grass with low inputs	90
EK3	Permanent grass with very low inputs	91
EK4	Management of rush pastures	92
EK21	Legume- and herb-rich swards	93

Protect the water body

- Fence watercourses to prevent livestock from contaminating and eroding river banks.
- Create buffer strips to slow, filter and trap pollutants before they enter ditches/watercourses.

Code	Option description	Page
EE9	6 m buffer strips on cultivated land next to a watercourse	67
EE10	6 m buffer strips on intensive grassland next to a watercourse	68
EJ9	12 m buffer strips for watercourses on cultivated land	86
EJ11	Maintenance of watercourse fencing	88

Actions and options in the uplands

Peat soils in the uplands, besides supporting agriculture, are valuable stores of water and carbon but they are particularly susceptible to erosion. This can lead to greenhouse gas emissions and water colouration. The latter is a problem that needs costly treatment to make the water suitable for public consumption.

Tackle the source of soil erosion and run-off

- Place supplementary feeding away from vulnerable parts of moorland and rough grazing, such as steep slopes and areas near to watercourses, to avoid problems from soil erosion.
- Regularly move supplementary feeding sites to control poaching and compaction and to help reduce soil erosion.
- Fence livestock out of woodland on steep valley sides to allow the woodland to flourish. This helps to stabilise the soil and prevents erosion.

Code	Option description	Page
EL5	Enclosed rough grazing	99
EL6	Unenclosed moorland rough grazing	100
UC22	Woodland livestock exclusion	107
UL17	No supplementary feeding on moorland	113
UL22	Management of enclosed rough grazing for birds	115
UL23	Management of upland grassland for birds	117

Slow the pathways of soil erosion and run-off

- Field boundaries can be very effective in slowing down overland flow of water. Placing a buffer strip, a strip of uncut grass or taller vegetation, against the boundary will enhance its effect.
- Ensure there is a good continuous grass cover on natural drainage pathways, eg valley bottoms, to reduce the channelling of run-off water that can produce rills and gullies.

Code	Option description	Page
EB14	Hedgerow restoration	52
EE6	6 m buffer strips on intensive grassland	68
EF1	Management of field corners	71
EJ5	In-field grass areas to prevent erosion and run-off	85
EL1	Take field corners out of management in SDAs	96

Protect the water body

- Fence watercourses to prevent livestock from contaminating and eroding river banks.
- Create buffer strips to slow, filter and trap pollutants before they enter ditches/watercourses.
- Manage waterside land with very low inputs and remove stock in winter to reduce the amount of nutrients and sediment likely to get into watercourses.

Code	Option description	Page
EE9	6 m buffer strips on cultivated land next to a watercourse	67
EE10	6 m buffer strips on intensive grassland next to a watercourse	68
EJ11	Maintenance of watercourse fencing	88
EL3	Permanent grassland with very low inputs in SDAs	97
EL4	Management of rush pastures in SDAs	98
UJ3	Post and wire fencing along watercourses	111
UJ12	Winter livestock removal next to streams, rivers and lakes	112



2.11 Managing your land to focus on climate change

Why your farm is important

The climate is already changing: according to the Meteorological Office, temperatures in central England have increased by 1°C since the 1970s. The latest UK Climate Projections are for warmer, drier summers, wetter winters and more extreme weather events in the future. These changes are already affecting farming practices, for example, a greater risk of extreme events, such as drought and prolonged rainfall increases the need to protect soils and water from erosion.

Mitigation: Taking action to reduce the scale of climate change, by reducing Greenhouse Gas emissions and protecting carbon stored in soils and vegetation.

Adaptation: To enable the natural environment to adapt to climate change there must be space for wildlife: a variety of habitats will enable different species to find suitable conditions. Farmers are in an important position to help provide those conditions.

How ELS can help you prepare for climate change

ELS can promote adaptation to climate change by:

- supporting farmers in adapting their land management practices to changing conditions, for example, by using the resource protection options to counteract the increasing risk of soil erosion from heavier rainfall events;
- providing the space and conditions in which the natural environment can adapt, for example, by buffering watercourses.

ELS can help you to mitigate climate change in two ways:

- some options help to reduce emissions without impacting on agricultural production;
- protecting the carbon currently stored in soils and vegetation, and helping to sequester more, through improved soil management, habitat restoration and increasing tree cover.

Investigate and reduce your emissions

Use the CALM-ES Calculator (Carbon Accounting for Land Managers – Environmental Stewardship), to estimate the emissions from your farm and consider how to reduce them. CALM-ES is an entirely voluntary tool that does not earn you ELS points, but will help you make the right choices in tackling climate change. So far, more than 7,000 farmers have chosen it to assess their Greenhouse Gas emissions. (see www.calm.cla.org.uk).

Within ELS, options such as winter cover crops can help to reduce Greenhouse Gas emissions without removing land from production. Our Technical Information Note (TIN107) ES and climate change mitigation, which you can download from the Natural England website, details in Appendix 2, contains further information on how you can use ES options to help mitigate climate change.

Protect soil and water

Tackling soil erosion and increasing soil organic matter levels will protect soil and improve water quality. It will also protect soil carbon. Soils that are protected in this way will be more resilient to climate change. The Centre for Ecology and Hydrology estimates that over 95 percent of the UK land carbon stock is located in soils.

Within ELS, resource protection options and low input management on permanent grassland will be especially valuable.

Increase tree cover

During their growth phase, trees absorb carbon dioxide from the atmosphere. Mature trees store the carbon and provide additional shade and shelter for livestock in the anticipated warmer, drier summers.

Within ELS, options to protect trees, hedgerows and establish new hedgerow trees will make a contribution.

Protect wildlife

Buffering hedges, ponds and woodlands, creating habitat patches in field corners, all help to provide the space and variety of conditions that wildlife will need if it is to adapt to climate change.

See the Farm Wildlife pages 14 to 23 for further information.

Code	Option description	Page
EB3	Hedgerow management for landscape and wildlife	46
EB10	Combined hedge and ditch management (incorporating EB3)	49
EB14	Hedgerow restoration	52
EC4	Management of woodland edges	55
EC23	Establishment of hedgerow trees by tagging	57
EC24	Hedgerow tree buffer strips on cultivated land	58
EC25	Hedgerow tree buffer strips on grassland	59
ED2	Take out of cultivation archaeological features currently on cultivated land	62
ED3	Reduced-depth non-inversion cultivation on archaeological features (minimum till)	63
EE7	Buffering in-field ponds in improved permanent grassland	69
EE8	Buffering in-field ponds in arable land	69
EE9	6 m buffer strips on cultivated land next to a watercourse	67
EE10	6 m buffer strips on intensive grassland next to a watercourse	68
EF1	Management of field corners	71
EF4	Nectar flower mixture	73
EF7	Beetle banks	75
EG1	Undersown spring cereals	83
EJ2	Management of maize crops to reduce soil erosion	85
EJ5	In-field grass areas to prevent erosion and run-off	85
EJ9	12 m buffer strips for watercourses on cultivated land	86
EJ10	Enhanced management of maize crops to reduce soil erosion and run-off	87
EJ13	Winter cover crops	88
EK1	Take field corners out of management	89
EK3	Permanent grassland with very low inputs	91
EK4	Management of rush pastures	92
EK21	Legume- and herb-rich swards	93
EL1	Take field corners out of management in SDAs	96
EL3	Permanent grassland with very low inputs in SDAs	97
EL4	Management of rush pastures in SDAs	98
UC5	Sheep fencing around small woodlands	106

