

# Habitat Creation and Management Guidance



**Cambridgeshire has a great diversity of habitats and species, but has less wildlife per hectare than most counties in the UK. It is therefore important that existing habitat valuable for wildlife is conserved and enhanced, and new areas are created.**

# Wildlife needs



**Food**



**Water**



**Shelter**

**and places  
to breed**

You can provide some if not all of these things and bring your site to life. This booklet provides some help and advice to help you to make a difference for wildlife, whatever the size of the plot or what sort of vegetation you already have on your site.

If you have a query or can't find what you are looking for please contact the Biodiversity Officer at Cambridgeshire County Council using the contact details at the rear of this document.

## Developing the potential of grounds for wildlife

When thinking about creating or managing a habitat consider

- What is already there – Survey
- Build on what you have – Retain existing
- What can be improved – Enhance existing
- What else can be provided – Create new areas for wildlife
- How to enhance the wildlife value – Manage appropriately

By planning what you want to do; phasing the work, perhaps over a couple of years, and involving other people the task will seem more manageable.

## When planning and undertaking work consider

- The choice of species. Include those that are locally distinctive. Avoid aggressive and invasive species.
- Any Health and safety issues e.g. poisonous plants.
- Seasonal restrictions for planting or management and differences e.g. shade cast or leaf fall.
- The presence of under ground services and overhead lines.
- Requirements of wildlife legislation e.g. breeding birds
- The practicalities of management and associated costs.

A summary management calendar is included at the rear of this document as a guide.

There are many things you could do to increase the wildlife value of a site. Choice will depend on the characteristics of the site. Existing habitat for example can be enhanced through additional planting to link it to other habitats and ongoing management. The following pages contain information on the most common topics people seek further advice on.

## Meadows and grassland

A wildflower meadow is approximately 20% wildflowers to 80% grasses. The soil should not be too high in nutrients to avoid the grass out competing the flowers.

It is important to choose a mixture that is suitable for the soils and includes species that are found in the area. You can check this by looking at the Postcode plants database

<http://www.nhm.ac.uk/nature-online/life/plants-fungi/postcode-plants/>

A good place to buy seed from is Emorsgate Seeds <http://www.wildseed.co.uk/>

Wildflower areas can be established either by sowing seed on prepared ground or by introducing plugs into existing swards. Wildflower plugs can be bought from <http://www.wildflowers.co.uk/>

Allow longer grass to grow along the margins of playing fields or lawns, hedgerows and streams to provide links between different types of habitat between 1m and 5m in width depending on the space available.

The table below gives some guidance on managing grassland once established.



### **Spring Meadows**

Cut twice a year – once in late summer (early August) and again in mid-September.

Allow cuttings to dry and remove to reduce nutrients and smothering of the sward.

Compost or dispose of the cuttings.

If growth is excessive cut once in early March.

### **Summer Meadows**

Start cutting late March/early April and cut until May.

Leave the grass to grow then cut once in mid-Sept/early Oct. Allow cuttings to dry and remove to reduce nutrients and smothering of the sward.

Compost the cuttings.

### **Daisy lawn**

Cut throughout the growing season keeping the grass around 50-100 cm long.

### **Woodland glade or clearing**

Cut once early in the spring (March/April) and then again in autumn (Sept/Oct).

## Long grass areas

Cut twice a year - once in the spring before the growing season and then again in the autumn. Place signs by the area to explain why this management is being undertaken.

## Cornfield

To grow the soil needs to have medium to high fertility. Mix arable weeds with cereals wheat, rye and oats.

Annual disturbance will be required to encourage the germination of new seeds.

## Trees, shrubs and hedgerows

**Plant your trees and shrubs** between November and March. It is important not to plant in very cold or windy weather and not into soil that is waterlogged or frozen. Plant trees 2-3m apart and shrubs 1-1.5m apart. Make sure you don't plant them too close to buildings or where underground services run. Choose species that are locally distinctive to the area. Further guidance on species choice can be found in Cambridgeshire Landscape Guidelines available to download from [www.cambridgeshire.gov.uk](http://www.cambridgeshire.gov.uk).



Tree	Growth Rate	Height (m)	Soil	Water demand
Oak	Slow	30	Clay	Medium-high
Ash	Fast	21	Most	Medium
Field maple	Moderate	15	Most	Medium
Crab apple	Moderate	9	Most	-
Wild cherry	Fast	15	Most	-
Lime	Moderate	18	Most	Medium
Birch	Fast	18	Dry	Low
Rowan	Moderate	9	Most	-
Common alder	Moderate	18	Damp	-
White willow	Rapid	25	Damp	High
Hornbeam	Slow	21	Clay	Low

Once established the grass underneath the trees could be allowed to grow a little longer or some woodland wildflowers introduced into it to add variety and wildlife interest. Add some deadwood and perhaps a glade or small clearing if the woodland area is large enough.

### Suitable woodland plant species include

Celandine  
Chickweed  
Columbine  
Common speedwell  
Dead-nettles  
Dog violet  
Forget-me-not  
Red campion  
Stitchwort  
Wild strawberry  
Wood anemone

Weed around the bottom of newly planted trees and shrubs for a year after planting to reduce competition.

Take particular care not to damage the base of the trees when using machinery to cut the grass around them e.g. mowers and strimmers. Replace any plants that may have died in the following planting season.

After about 5 years you can selectively prune some of the side branches to encourage the tree to grow upwards.

A typical **hedge** is predominately hawthorn with field maple, blackthorn and shrub species such as dogwood, wild privet, dog rose, and guelder rose. Choose species that are locally distinctive to the

area. Further guidance on species choice can be found in Cambridgeshire Landscape Guidelines available to download from [www.cambridgeshire.gov.uk](http://www.cambridgeshire.gov.uk).

Plant the hedge between November and March. To create a thick hedge plant a double row of trees and shrubs approximately half a metre apart and aim for between 4 and 6 plants per meter. Some ground preparation may be required beforehand and protection from small mammals in the form of guards is recommended.

Weed around the bottom of the newly planted hedge for a year after planting to reduce competition.

Replace any plants that may have died in the following planting season.

Prune the hedge the following spring to encourage bushy growth.

In the longer term trim hedges once a year, in winter to create an 'A' shape. A hedge good for wildlife should be thicker at bottom than at top, be approx 1.4 m high and 1.2 m wide at the base. Ideally rotate management of the hedges around the site from year to year to retain fruit for small mammals and bird throughout the winter.

Suitable hedge plants	Growth rate
Hawthorn	Moderate
Blackthorn	Fast
Dogwood	Moderate
Dogrose	Moderate
Hazel	Slow
Guelder rose	Moderate
Wild privet	Fast
Shrub willows	Rapid
Ivy	Fast
Honeysuckle	Fast

## Ponds

Site a new pond in a sheltered, sunny location that is not too close to trees. Make sure it is accessible and if possible linked to other habitats.

Plant any trees or shrubs on the north or west sides of a pond to avoid excessive shading. If planted at a distance away from the pond it can reduce leaf litter in the autumn.

Creating a pond is relatively easy using a man-made liner. You can use the dug out sub soil to build another feature like a mound on one side.

Dig the pond with a variety of depths and gently sloping sides to enable animals such as hedgehogs to climb out

Fill with rainwater or if filling with tap water allow the water to stand for a few days to allow the chlorine to evaporate.

Select a range of plants including floating oxygenators, floating leaved plants, emergent and marginal plants for shallower water.

Make sure you buy your pond plants from a reputable company, such as <http://www.wildflowers.co.uk/>.

It is important not to buy or accept plants that you are not sure where they have come from. Avoid those that are known to be invasive and please don't 'dump' any unwanted plant material into the countryside. See

<http://www.plantlife.org.uk/uk/plantlife-campaigning-change-invasive-plants.html>

for further information.

There is often no need to introduce animals into the pond. They have an amazing ability of being able to find new ponds on their own.

Creating a boggy or marshy area adjacent to the pond can add wildlife value or is a good option if a pond isn't possible or desirable for any reason.

In terms of pond management undertake any major works in the autumn when animal activity is low, but before wildlife dormancy occurs. Manage

## Emergent and marginal plants (for shallow water)

Arrowhead  
Bog arum  
Flowering rush  
Forget-me-not  
Lady's smock  
Marsh marigold  
Meadow sweet  
Purple loosestrife  
Ragged robin  
Rushes and sedges  
Skullcap  
Water mint  
Water plantain  
Water speedwell  
Water violet  
Watercress  
Yellow flag

## Floating plants (for deep water)

Amphibious bistort  
Fringed water lily  
Frogbit  
Water starwort  
White or Yellow water lily

## Submerged Plants

Bladderwort  
Hornwort  
Water crowfoot  
Water milfoil



the bank sides in rotation and remove dead leaves.

The pond should be approximately  $\frac{3}{4}$  full with plants, remove excessive growth when necessary each autumn. Leave any material next to pond for a week at least to allow wildlife to get back to water.

Keep a look out for nutrient problems that could be causing excessive algae growth and try to limit them. It is possible you will need to de-silt the pond.

## Homes for Wildlife

You can buy many different types of homes for wildlife off the shelf or make your own. For ideas visit <http://www.alanaecology.com/> or <http://www.ernest-charles.com/>

Various species can be attracted using different types of boxes. Bird boxes should be made out of untreated wood and be placed in shade or between north east to south east. Bird boxes for blue tits need to be placed a minimum of 2m above ground level. Open fronted boxes for birds like robins are placed in vegetation below 2m. Sparrow terraces need to be placed high under the eaves of a building just under the roof.

Bat boxes should be made from untreated wood and erected in a sheltered position as high as possible no less than 1.5m above ground and upwards to 5m. Two or three can be placed on a tree facing south east to south west. They should be placed close to vegetation especially hedgerows. On buildings boxes should be placed up by the eaves of the building just under the roof.

## Log piles and compost heaps

Construct log piles at the edge of meadow area or under trees/shrubs as a refuge for small animals, reptiles and amphibians.

Log cross-sections can be placed flat on the ground for insects and lifted periodically to see what might be under them.

Compost heaps can be constructed in undisturbed areas or close to ponds to benefit a wide range of wildlife including grass snakes.

## Rockeries

Rockeries are ideal for insects especially if there are on a slope or bank in full sun. They are also good for reptiles. You will need thin, well-drained soil and plants that generally prefer acidic conditions.



## Suitable plants for rockeries include

- Biting stonecrop
- Bloody cranesbill
- Common birds-foot trefoil
- Common rock rose
- Heathers
- Herb robert
- Mountain pansy
- Pasqueflower
- Rock cinquefoil
- Sea campion
- Sheep's bit scabious
- Wild thyme

## Formal Planting

Formal borders, herb gardens, 'dry' gardens using drought tolerant plants and sensory gardens can be aesthetically pleasing and excellent sources of pollen and nectar to a wide range of insects including bees, moths and butterflies. Erecting trellis on walls and planting climbing plants creates vertical habitats home to birds and insects.

Green roofs using sedum are also good for wildlife and can help reduce water runoff. For more information visit <http://www.livingroofs.org>.

And if you would like some plants for security that also have wildlife value then you could try berberis, common gorse, pyracantha, hawthorn and rose.



### Plants for caterpillars

Buckthorn	Brimstone
Bird's-foot trefoil	Common Blue
Cabbage family	White butterflies
Dock	Small Copper
Grasses	Small & Large Skipper, Meadow Brown, Gatekeeper
Honesty, Lady's smock	Orange Tip, Green veined white
Nasturtium	White butterflies
Nettles	Small Tortoiseshell, Red admiral, Peacock
Holly, Ivy	Holly blue
Thistles	Painted Lady

### Good nectar plants

Aubretia  
Birds-foot trefoil  
Blackthorn  
Buddleia  
Bugle  
Candy tuft  
Cornflower  
Dandelion  
Forget-me-not  
Hebe  
Heliotrope  
Honesty  
Ladies smock  
Lavender  
Marjoram  
Michaelmas daisy  
Phlox  
Primrose  
Ragwort  
Rockrose  
Scabious  
Sweet william  
Thistle  
Violets  
Wallflower

## Final thoughts and suggestions

Specify that contractors avoid using pesticides or biocides if at all possible and only use artificial fertilisers in accordance with instructions as specified by manufacturers. In many cases it is possible to manage 'weeds' through mechanical means so ask them to provide a quote, however you must be prepared to pay a little extra to be 'environmentally friendly'.

If pesticides or biocides are required they should be stored in a manner that prevents the possibility of pollution of soil, water or air.

Avoid the use of peat; this naturally occurring medium is taken from a rapidly declining natural habitat. Try to use other types of compost and organic fertilisers.

Make sure you comply with any requirements of wildlife legislation such as the **Wildlife and Countryside Act** to avoid disturbing nesting birds. The bird nesting season runs from early March to end of August. During this period you must avoid the trimming and pruning of vegetation including hedges. Other species protected by legislation include all **bats** and **great crested newts**. It is recommended that you seek advice if you plan to undertake any work that is likely to affect them. For further information on wildlife legislation visit <http://www.naturenet.net/law/>.

## For further information and advice

Contact the **Biodiversity Officer** at

Environment Policy and Projects,  
Box No. CC1312,  
Cambridgeshire County Council,  
Castle Court,  
Shire Hall,  
Castle Hill,  
Cambridge,  
CB3 0AP.

**Tel: (01223) 715688**

**Email: [epp@cambridgeshire.gov.uk](mailto:epp@cambridgeshire.gov.uk)**

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**Cambridgeshire Environmental Education Service (CEES)** has a school grounds development and consultancy service that aims to encourage the development of the whole school grounds in order to create a rich resource for learning and play. They can advise on using the grounds for learning across the curriculum. CEES' school grounds specialists are qualified teachers and are experienced in delivering environmental education and providing advice on school grounds developments. For more information Tel (01780) 782386 or visit [http://www.cees.org.uk/grounds\\_development.htm#](http://www.cees.org.uk/grounds_development.htm#)

**Groomfields Grounds Maintenance Service** is the in-house grounds maintenance provider for the County Council offering a comprehensive range of grounds services to schools and other public sector organisations. For more information Tel (01223) 717625.

## Web links

Bat Conservation Trust <http://www.bats.org.uk/>

Butterfly Conservation <http://www.butterfly-conservation.org/>

Flora locale (wildflower grasslands) <http://www.floralocale.org/>

Froglife <http://www.froglife.org/>

Mammals Trust <http://www.mtuk.org/>

RSPB A to Z of wildlife gardening <http://www.rspb.org.uk/wildlife/wildlifegarden/>

RSPB <http://www.rspb.org.uk/>

The Hedgerows Trust <http://www.hedgerows.co.uk/>

The Ponds Trust <http://www.pondstrust.org.uk/>

The Sensory Trust <http://www.sensorytrust.org.uk/>

The Tree Council <http://www.treecouncil.org.uk/>

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A pond – Paul Glendell/Natural England

Hawthorn – M Russell

Bat box – Cambridgeshire County Council

Daisy – M Russell



Annual management calendar

Habitat		September	October	November	December	January	February	March	April	May	June	July	August
Ponds & wetlands	Creation					Construct your pond							
	Management	Clear fallen leaves from pond			Remove excess plant growth from pond			Keep a patch of water ice free					
Trees, shrubs and hedges	Planting	Collect seeds and grow on in pots											
	Management	Plant bulbs under trees		Plant trees, shrubs and hedges in frost free conditions									
Meadows and wildflower grassland	Creation	Sow your meadow										Cultivate and prepare soil for meadow	
	Management	Cut spring meadow and remove cuttings								Cut summer meadow and remove cuttings		Cut meadow and remove cuttings	
Butterfly garden	Creation			Plant your butterfly garden								Cut nettle patches in rotation	
	Management	Prune buddleia after flowering											
Homes for wildlife	Creation	Make/buy and site bird, bat and hedgehog boxes											
	Management		Clean out bird nestboxes and remove old nests										