

Space for Wildlife

Leicester, Leicestershire and Rutland Biodiversity Action Plan 2010 - 2015

Guidelines for habitat creation projects in Leicestershire and Rutland

These guidelines have been produced to aid anyone wishing to create habitat for wildlife in Leicestershire and Rutland, whether on an existing site or a new site, either to improve the wildlife value of their own land or as part of a new development. Set out below are some general principals and considerations to help inform your decision as to which habitat might be most appropriate for your situation.

Before starting

- What is there already? Does something new need to be created or is there existing habitat which just needs to be maintained?
- Allowing a site to develop naturally rather than actively creating a new habitat by planting and other operations may often be better for wildlife (and cheaper to achieve). Abandoned ex industrial 'brown field' sites can be better for wildlife (particularly for butterflies and other invertebrates) than artificially created new habitat
- How big is the area? Some habitats have minimum size requirements. For instance a reedbed should be at least 20 ha in extent to support breeding bitterns
- Large sites support more wildlife than small sites and are usually easier to maintain
- Don't forget that most habitats require some kind of on-going management and that arrangements need to be put in place for this. For instance grasslands require mowing or grazing, reedbeds require cutting, new woodlands, at least in the first few years, require removal of competing vegetation to aid establishment, wetlands may require willow scrub removal etc. If you are unable to commit to long term management consider creating habitats which require little regular management – examples include wet woodland, large areas of open water, scrub, rough grassland
- Is the proposed habitat appropriate for the location? Certain habitats have specific environmental requirements – heathland is restricted to acid soils, calcareous grassland to free draining soils over limestone. High nutrient levels as found in ex-arable farm land are incompatible with some habitats which depend on low soil fertility (heathland, most types of species rich grassland)
- Do you require planning permission (for instance ponds to benefit wildlife created in the open countryside) or appropriate consents (for instance Environment Agency consent for some types of habitat creation in river floodplains; Forestry Commission or Local Planning Authority Consent for tree work/felling)
- Budget. Some habitats have expensive site preparation and establishment costs. It is often more cost effective to work with what is present on the site already rather than to create something from scratch
- Will there be public access. Disturbance may be a problem and will determine what wildlife will benefit from the site. Dogs in particular are detrimental to breeding birds

Choosing the appropriate habitat

Many people wish to create a specific BAP habitat (see below) but in many instances it might be more appropriate to think in more general terms and create habitat belong to one of three broad categories, all of which will benefit wildlife locally:

- Wetland (open water and/or land which has impeded drainage and retains water for part or all of the year or which floods regularly)
- Woodland (land covered with trees or scrub – either planted or naturally regenerating)
- Open land (land with no or low intensity management with little of no agricultural inputs. Includes unmown rough grassland, regenerating natural vegetation and sown or planted vegetation)

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Depending on the nature of the site it may be possible to create habitat falling within these categories with much less outlay or commitment to long term management than with some of the BAP habitats. In particular using existing features of the site and allowing a site to develop naturally requires less site preparation, avoids difficulties with sourcing appropriate seed mixes and is often less expensive. Sites which develop naturally can be slower to establish but the wildlife value is often higher than an artificially created habitat - as long as you are prepared to accept what 'nature' brings along (something which is not always predictable!)

If you wish to create one of the local or national BAP (Biodiversity Action Plan) habitats then further information on UK BAP habitats can be found at www.ukbap.org.uk and detailed descriptions can be obtained at www.ukbap.org.uk/library/UKBAPPriorityHabitatDescriptionsfinalAllhabitats20081022.pdf.

Please be aware that a number of the habitats in the UK list do not occur in Leicestershire and Rutland; also that the local BAP habitats may differ from the national ones reflecting local variations and priorities.

This document is not intended to provide detailed guidance on creating new habit and it is recommended that you obtain expert advice before proceeding with any such project.

Additional information on creating specific habitats in Leicestershire and Rutland is given below.

Floodplain Wetland (UK BAP Coastal and Floodplain Grazing Marsh)

- Must be in the floodplain with the water table at or near the surface for much of the year
- A good choice of habitat for restoring sites used for sand and gravel extraction. Likely to be much cheaper than restoration to return the land to its former state (usually farmland)
- The ideal locations are in the Soar and Wreake Valleys where new sites can link into an increasing network of similar sites
- A varied habitat structure is important here with areas of open water. Be prepared to accept areas dominated by tall weedy species – they are very good food sources for many animals
- On-going management includes grazing unless the site is to be allowed to develop as wet woodland when no long term management is required
- Does not require planting – wetland species soon colonise such sites particularly if subject to occasional flooding from an adjacent river
- Beneficial for birds and invertebrates
- Minimum size about 1 ha. Where the site is to be managed by grazing a larger area is preferable

Eutrophic Standing Water

- Ponds and lakes – no minimum size but larger support more wildlife
- No need to plant except perhaps for very small isolated ponds– aquatic and marginal species can colonise new sites rapidly particularly if adjacent to existing water bodies
- Occasional management might be required to maintain open water
- Appropriate throughout Leicestershire and Rutland

Hedgerows

- Easy to establish although some weed control may be necessary in the first few years
- Appropriate throughout Leicestershire and Rutland
- Some on- going management but hedges allowed to grow tall and thick are better for wildlife than those cut annually

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Calcareous Grassland (UKBAP -Lowland Calcareous Grassland)

- Only appropriate in parts of North-east Leicestershire and East Rutland where the soils are derived from the underlying Oolitic Limestone
- Best sites to create this habitat are usually on former Limestone workings where soils are thin and nutrient poor. Ex-arable land is often not suitable because of the high nutrient levels. Such sites require nutrient depletion and removal of competing weed species which make establishment costs high
- The total area of Limestone Grassland in Leicestershire and Rutland has been estimated as less than 30 ha. As a consequence sourcing green hay for seeding new limestone grassland is very difficult. Large areas will require expensive sourcing of non-local seed from specialist suppliers
- On-going management will require annual grazing therefore sites should be at least 1 ha unless adjacent to an existing Calcareous Grassland
- Former quarries are probably best left to develop and be managed as Open Mosaic Habitats on Previously Developed Land (another UKBAP Habitat) which are very good for a large range of wildlife including invertebrates, birds and plants

Heath Grassland (UKBAP Lowland Dry Acid grassland/ Lowland Heathland)

- True heathland dominated by ericaceous shrubs (eg heather) is (as it would seem to have been historically) very rare in Leicestershire and Rutland. Most local heath is a mosaic of acid grassland with scattered ericaceous shrubs as is recognised by the Heath Grassland plan in the local BAP
- Heath grassland is mainly confined to the Charnwood Forest and parts of Northwest Leicestershire
- For heath grassland creation it is essential that the soil is acidic
- The soil fertility should be low. Ex arable land is often not suitable because of the high nutrient levels. Nutrient depletion and removal of competing weed species result in high establishment costs
- On-going management (annual grazing) is necessary to maintain this habitat therefore sites should be at least 1 ha unless adjacent to existing Heath Grassland

Neutral Grassland (UKBAP - Lowland Meadows)

- The soil needs to have low fertility – high levels of nutrients can be detrimental to many meadow flower species and will favour tall rank plant species which will out compete slower growing and shorter species. Without significant nutrient depletion much ex arable land is unsuitable for creating a species rich meadow
- Much time and effort needs to be put into site preparation particularly where invasive weeds such as thistles and docks are present
- Follow up management to support establishment of a species rich sward (eg controlling unwanted weed species) needs to be carried out for several years after sowing
- Introducing flowering plants species into an existing closed grass sward is difficult and can be time consuming and expensive
- Take care with sourcing seed. Obtain from a reputable supplier and ensure all the included flower species are native to the UK and of UK provenance. Wildflower mixes can contain seeds of European origin which differ markedly from the equivalent UK species and these should not be introduced into the wild
- A number of wildflower seed mixes contain species such as Corn Flower, *Centaurea cyanus*, and Corncockle, *Agrostemma githago*, which are plants associated with arable crops and not grassland. As a consequence they are dependant on cultivation in order to continue appearing year after year and will rapidly disappear from a grassland
- Using 'green hay' to seed your grassland requires the identification of a suitable donor site, a large amount of hay and the ability to coordinate cutting and spreading as green hay must be

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used immediately. In most instances it is usually only the relatively common species present at the donor site which are propagated

- Flower rich meadows require long term on going management (hay cutting or grazing). Small sites less than 1 ha are difficult to manage unless adjacent to an existing meadow site
- Although in the short term a species rich sward may be produced experience suggests that in the long term it is only the relatively common meadow species such as Black Knapweed, *Centaurea nigra*, and Common Sorrel, *Rumex acetosa*, which persist

Broadleaved Woodland (UKBAP - Lowland Mixed Deciduous Woodland)

- Suitable for most soils and sites although some situations may require more ground preparation than others. Very fertile soils, such as ex-arable land, may cause establishment problems as the result of vigorous growth of competitive grass and herb species
- Do not plant woodland on sites with good existing wildlife value or where it might break up blocks of existing good habitat or cause isolate them in the landscape
- Although there is no minimum size small sites are more likely to be affected by adjacent land use and are best located near to existing woodland for the greatest benefit to wildlife
- Plant a mix of native broadleaf tree and shrub species of local or UK provenance – a reputable supplier should be able to source these for you
- Plan to have a network of paths and open areas to vary the future woodland structure and maximise the benefit to wildlife
- Site preparation is important and may be costly where competitive species are present. Where deer numbers are high, fencing will be necessary to protect the young trees from browsing
- Allow for at least five years of on-going management during the establishment phase of the woodland – mainly weed control and mowing
- Long term management includes thinning and path mowing
- Where sites already have naturally established tree and shrub seedlings allow these to remain – consider allowing the site to regenerate naturally rather than planting trees – this is a long term process but will eventually allow the development of a more varied ‘natural’ woodland

Urban Habitat (UKBAP - Open Mosaic Habitats on Previously Developed Land)

- Post-industrial land and other ‘wasteland’ can have considerable value for wildlife. Before carrying out any habitat creation scheme on such sites undertake a wildlife survey to identify which species are present and what their habitat requirements might be
- Try to avoid the temptation to ‘tidy up’ post-industrial sites as this can result in a reduction in its value for wildlife
- Bare ground is itself important for a number of species – particularly invertebrates - and some should be left in any habitat restoration scheme for these sites. The best option is a mosaic of open and vegetated ground with a mix of low growing herbs and taller scrub species
- Where fertility is low on-going management to control vegetation will be minimal. Where growth is more vigorous scrub control may be necessary to maintain vegetation structure

Reedbeds

- Reedbeds themselves are home to a relatively few species, although some of these are quite rare. The UKBAP Reedbed Habitat Action Plan was conceived to benefit breeding bittern – the minimum size for a reedbed to support breeding bittern is 20 ha. There are no reedbeds of this size in Leicestershire and Rutland
- Smaller reedbeds can benefit wildlife where they form part of a mosaic of wetland habitats
- Reedbeds are suitable for nutrient enriched sites. They can be established in and around areas of shallow open water which do not dry out

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- Establishment costs can be high particularly where water control structures are planned to aid future management. Machinery and planting costs can be high when preparing and setting out a site. Establishment is quickest when transplanting large clumps of reed from an existing reedbed using an excavator bucket but cost may be high particularly where transport is required to get the reed to its new site. Planting out plugs of reed grown in a nursery is labour intensive and the young plants will require protection from grazing.
- Small reedbeds can be left to develop naturally but may become colonised by trees and end up as wet woodland. Once established larger reedbeds will require a cycle of annual rotational cutting and removal of litter in addition to removing any invading willow scrub in order to maintain them

Wet Woodland

- Wet woodland was probably the dominant vegetation throughout the floodplains of all water courses in Leicestershire and Rutland. However most was cleared for agriculture long ago and it is now rare locally
- Wet woodland is dominated by trees such as willow and alder and is particularly valuable for birds and invertebrates
- Wet woodland is suitable for any area of permanently or seasonally waterlogged ground but should not be established on existing good wetland habitat
- Willows and alder are easy to establish from cuttings provided conditions remain wet. Where nearby trees provide a good seed source natural regeneration will result in the rapid development of wet woodland on water-logged sites provided grazing animals are excluded and the site is not mown
- Wet woodland requires little or no on-going management. Old trees should be left to fall over and decay in situ. Willow in particular will layer itself from fallen trunks and branches creating a thicket of new trees. Dead wood should not be tidied up

Lowland Wood Pasture and Parkland

- Parkland in which large open grown trees are grown in a matrix of grazed grassland is a suitable habitat for most parts of Leicestershire and Rutland.
- The site should be assessed beforehand. Species rich grassland should be avoided since the plants may not tolerate shading and the presence of trees might interfere with the management of the site including hay cutting
- For the greatest long term benefits to wildlife planting new parkland adjacent to existing parkland is best
- Where there is existing parkland assess whether there are sufficient young trees to maintain the habitat in the future
- Provided the site is already grassland the establishment costs are relatively low. The trees need to be protected from browsing and suppression of competing weeds is essential in the first few years. Long term management of the trees is minimal but annual management of the grassland matrix by grazing or mowing is necessary

Field Margins

- Field margins act as a buffer zone between an agricultural crop and adjacent land. They can function to protect adjacent good habitat from the effects of agricultural chemical applications such as fertilisers and pesticides and can act as wildlife habitat themselves
- Field margins managed for wildlife can be established wherever agricultural crops are grown and may form part of an Environmental Stewardship Scheme
- Wider margins with no inputs of chemicals are better for wildlife
- Physical management may be similar to that of the adjacent crop (cultivated margins) or be different (grass margins / arable fields)

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Information on habitat creation can be found on the following websites:

- **Wetland creation**

www.pondconservation.org.uk

www.herpconstrust.org.uk

www.lrdg.org.uk

- **Woodland creation**

www.nationalforest.org/woodlandcreation/

www.forestry.gov.uk/england-farmwoods

www.woodlandtrust.org.uk/en/plant-your-own-wood/Pages/on-your-own-land.aspx

- **Woodland management**

www.woodlandtrust.org.uk/SiteCollectionDocuments/pdf/policy-and-campaigns/woodland-restoration/paws-guide-09.pdf

www.countrysideinfo.co.uk/woodland_manage/wood_manage.htm

- **Open land for wildlife**

www.grazinganimalsproject.org.uk

www.rspb.org.uk/ourwork/farming/advice/details.asp?id=204231

- **Managing farmland for wildlife**

www.fwag.org.uk/technical.htm

www.naturalengland.org.uk/information_for/farmers_and_land_managers

www.rspb.org.uk/ourwork/farming/advice/

www.plantlife.org.uk/uk/assets/saving-species/saving-species-publications/New%20Priorities%20for%20Arable%20Plant%20Conservation.pdf www.farmwildlife.info

- **Hedge planting**

<http://www.hedgelinek.org.uk/hedgelinek/files/NE%20HEDGEROW%20PLANTING.pdf>