



Willow tits are the most rapidly declining resident bird in the UK and a Red List species of conservation concern. The British population forms a distinct subspecies that is not found elsewhere, but the population here fell by 91% between 1967 and 2010. The species distribution now shows large gaps in the south east of England. Research on reasons for this is ongoing, but woodland and scrub management can be targeted to benefit the species.

What do willow tits need?

Willow tits prefer damp scrub, and damp woodlands with a dense scrub layer. They typically use vegetation of a height of 2–4 metres, especially containing willow, hawthorn and elder. They require rotten standing deadwood such as willow, elder, birch or alder stumps, in which they excavate their own nest holes. Willow tits have large territories and their young do not move easily through open landscapes to find new areas, so having enough connected habitat is important. Connecting habitat includes mature hedges and patches of scrub.

Suitable habitat can include scrubby edges to broadleaf woods and conifer plantations, thickets in wet landscapes, scrub on the edges of reservoirs or flooded sand or gravel pits, other industrial sites, golf courses, wet heathland, and even in more urban areas where scrub is part of Sustainable Urban Drainage Systems. Establishing scrubby woodland in floodplains as part of catchment management could provide important habitat.

What you can do

Create new woodland and successional scrub

New woodland on damp soils can be very beneficial for willow tits, especially in areas where populations are known to persist. Target permanently damp areas, or where appropriate slow / reverse land drainage – be sure to avoid adverse effects on neighbouring land, and where necessary inform relevant regulatory bodies. Where feasible, establish new woodlands over several years so different ages of scrub develop. Pockets of open space can be included in the planting design, where species such as hawthorn, elder and blackthorn can infill over time. Locating new woodland between existing woods should help willow tits to move through the landscape.

Encourage natural colonisation by scrub and some trees, by removing grazing and carrying out ground scarification. Alternatively plant a dense mix of suitable species including native willows, birch, alder, elder and hawthorn, which support abundant invertebrates and provide early natural nest sites. **Avoid creating woodland or scrub on areas of existing high biodiversity value e.g. unimproved wet grassland habitats.**

Manage or restore existing woodland

Scrubby edges to native woodland or conifer plantations can be enhanced by thinning edge trees along rides, tracks or plot edges, to provide more light so scrub can develop. Glades and rides in suitably damp woodland benefit from '3-zone' management, described below:

- Zone 1: Central grassy area cut annually
- Zone 2: Longer vegetation at ride edges cut every 2–3 years
- Zone 3: Scrubby edges cut on various length rotations, grading into the woodland stand

Appropriate scrub height can be achieved by cutting different sections of vegetation on a long rotation – around every 15 years, depending on site conditions. Where practical, vegetation can be managed on different length rotations on each side of a ride to provide a varied structure. Scalping by cutting further indentations into the woodland stand provides more opportunities for tall scrub to develop.

Within woodland stands, suitable 2–4 metre understory can be provided by thinning canopy trees to create a minimum 40% canopy gap, to increase light levels and encourage regeneration. Meanwhile coppice cut on a rotation of around 15–25 years can provide appropriate structure. Soil moisture should be conserved. Flows in drainage channels can be slowed to increase local wetness and allow occasional inundation. Small dams of woody debris can work well. Creating shallow scrapes within woodland to hold water may sometimes be beneficial, but take care not to drain water from other parts of the wood.

Retain standing deadwood. Leave old willow and birch, which provide good nesting sites, and create new opportunities by leaving some stumps of around 1.5 m height during thinning operations. Creating a partial downward cut with a chainsaw into a stump or trunk can accelerate deadwood development.

Manage scrub

Areas of established scrub should be managed on an appropriate rotation to maintain a good proportion of suitable structure i.e. cut different areas in different years to ensure continued presence of vegetation at 2–4 m height. The length of rotation may depend on local conditions. Retain standing deadwood and some mature birch trees as future nest sites. Nestboxes can be considered if suitable nesting habitat is lacking, although encouraging natural nest sites through enhancing standing deadwood is preferable. Where large areas of scrub are removed to restore important grassland habitats, maintain a scrub fringe e.g. along old field boundaries, and look for opportunities nearby to encourage new scrub development.

Retain and enhance hedgerows

Willow tits can use mature hedgerows to move between habitat patches. Maintain and enhance mature well-grown hedgerows that connect existing woodland patches. Where possible, these should form part of a mosaic with other habitats such as rough grassland and scrub. Reduce trimming of low hedges to allow them to mature.

Deer

Deer browsing reduces regeneration in most scrub and tree species, so can alter habitat structure making it less suitable for willow tit. Deer management should be only undertaken with professional advice given in the context of local circumstances.

Nest boxes

These are not normally required as deadwood is usually present even in young wet woodland and scrub. They are usually only effective if located in the core of a willow tit's territory. This can be determined by observing territorial behaviour, but this is a skilled and labour-intensive process. If deemed necessary, specifically designed boxes can be used – an example is available here:

http://www.bto.org/sites/default/files/u15/downloads/publications/nest_record_news/no-26-april-2010.pdf

Funding

Establishing and managing scrub, woodland and hedgerows is fundable under agri-environment or similar schemes. Consult your local land management advisers or relevant websites/handbooks for more information.

Priority Action

- Manage woodland to provide scrub edges and dense understory, especially at around 2–4 m height
- Conserve soil moisture in woodland and scrub, and increase wetness where possible
- Ensure availability of standing deadwood eg birch stumps and willow, as nesting habitat
- Create new native wet woodland and successional scrub
- Manage and maintain scrub as part of a habitat mosaic
- Allow hedgerows to mature and maintain these as part of a habitat mosaic
- Contact your local land management adviser for information about the grants available to help

See also RSPB advisory sheets on:

- Developing woodland rides to benefit wildlife
- Enhancing dead and decaying wood
- Improving the woodland edge for wildlife
- Managing wet scrub
- Restoring coppice
- Thinning in established woods
- Wet woodland