Willow Tit Habitat Guide

Distribution and status

Following severe population declines and contractions in breeding range, the Willow Tit has been on the Birds of Conservation Concern Red List since 2002.

The core range is now limited to mid-Wales, the Midlands, Northern England and South-West Scotland. Willow Tits are now considered locally extinct in South-East England and declining and scarce in the South-West.

Key habitat features

Willow Tits will occupy habitats such as wet woodlands or damp woodland margins, scrubby wetland margins, post-industrial sites with scrub and a high water table, and occasionally mixed damp scrub along conifer and young plantations.

They rely on stands of rotting deadwood to excavate nest holes. Pairs will use a new nest hole each year, but they can use the same stand of deadwood multiple times. Breeding pairs will establish territories from January, and excavation takes place between April-May.

Birds will spend most of their time foraging in a dense shrub layer. They feed mainly on insects during the breeding season, and wet features within the habitat (such as springs, ponds, or a high water table) will increase food abundance.

Populations are more stable where suitable patches of habitat are connected through scrubby corridors. Mature hedgerows and scrub-lined river corridors and disused or active railway lines can all provide connectivity.

Management issues associated with decline

The Willow Tit is the UK's most threatened resident bird. The main drivers of decline are not fully understood, but the following factors are widely considered to have contributed:

- Fragmentation of habitat
- Loss of habitat to natural succession
- Loss of habitat to development
- Increased predation from species e.g. Greater Spotted Woodpecker
- Increased competition with other species e.g. Great Tit, Blue Tit

In terms of habitat management for Willow Tits, aims should look to slow down or reverse maturation of young woodlands, maintaining a low canopy with a dense shrub layer; maintaining or increasing soil moisture, particularly around nest sites to encourage deadwood availability; exclusion or low-intensity grazing from livestock or wild browsing animals (such as deer); ensuring good connectivity between patches of habitat.

Willow Tit

Managing habitat structure and composition

Breeding Willow Tit pairs require at least 2 hectares of suitable habitat, and could need up to 7ha.

Suitable habitat comprise a mix of vegetation heights and structure, usually with a high component of scrub. Structural variety is important, as is species composition and wetness. Willow Tits are associated with early successional habitat, as competitive species and predators are usually only present at low densities.

Habitat works should look to maintain areas of early successional habitat through glade creation, thinning, clear felling and rotational coppice. Maintaining a dense shrub layer in important. Natural encroachment of bramble should be encouraged where possible. Planting key species as an understory can improve structural diversity. Key species for planting considerations include: elder, birch, hawthorn, blackthorn and hazel.

Glade creation, leaving nest stumps and brash piles

Enhancing wet features

Where wet features already exist, management should look to hold water within Willow Tit habitat. Simple constructions, such as leaky dams, can be installed to slow drainage away from the site but not block the flow completely. If there are no wet features present, creating artificial wallows (small depressions which fill with mud or shallow water) can attract invertebrates as a food source. On a larger scale, pond and scrape creation are ideal additions. Planting around ponds and scrapes with key species and ensuring availability of deadwood will make the feature more attractive to Willow Tits.

Leaky dams

Improving nesting opportunities

Willow Tits need soft rotting deadwood which they can excavate a nest hole in. Standing deadwood is preferable, but birds will also nest

in fallen deadwood or in decaying parts of living trees.

Stumps can be a product of other management (i.e. when thinning). Stumps are left at 1-2 metres from the ground. Rotting can be encouraged by adding some cross-cuts on the top of the stump to increase water penetration and rot from the inside.

Artificial nest sites can be created where logs are cut to a 1-2 metre length and tied to a living tree to mimic standing deadwood.

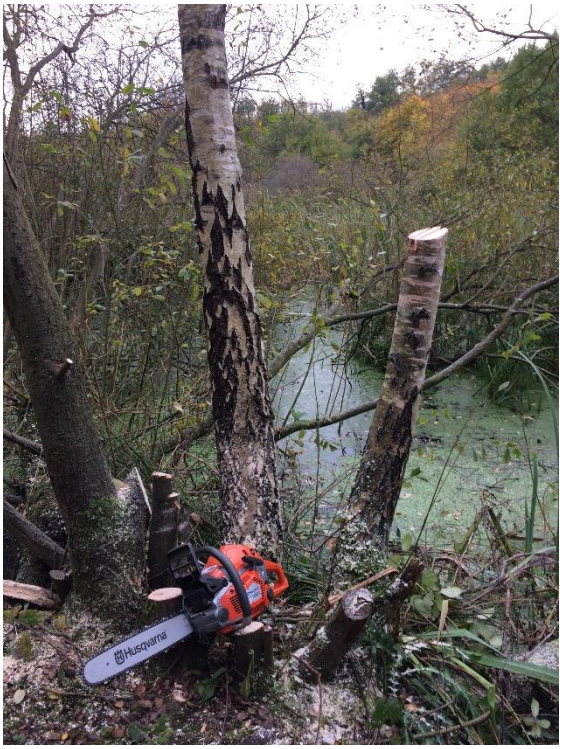
Veteranisation of trees can encourage rotting through methods such as ring barking.

Ring barking

Willow Tits are able to nest successfully in stumps as small as 5cm diameter. Optimum diameter is 8-20cm.

Species which are used for nest stumps should be soft woods. Ideal species are willows, birch, alder and pine.

Nest stumps are more likely to be used if they are surrounded by dense protective vegetation. Bramble is often favoured. Bramble can be encouraged to grow tall if brash is piled onto bramble patches, forcing the growth up and over the brash.



Creating nest stumps in birch

Nest boxes

There has been a fair amount of research on Willow Tits and nest boxes. Generally, due to the nature of their breeding habitats, Willow Tits will not use traditional nest boxes. There are some tailored designs which are being trialled, such as pre-excavated logs which are refilled with bark chippings; traditional nest boxes filled with deadwood, chippings or polystyrene, with the hole replaced with an opening to encourage Willow Tits to excavate the material themselves.

It is possible that increasing the number of artificial nest boxes does not necessarily aid Willow Tits. Instead, some of these designs have continued to attract tradition box-using birds and competitors (Blue Tit and Great Tit in particular). Increasing breeding density of competitive species is likely to have detrimental impact on Willow Tit populations.

Management preferences should focus on more natural nest sites by encouraging deadwood availability and rotting of standing logs. This does, however, take longer to reach the optimum stage for excavation. An immediate solution could be to install a number of rotting logs by attaching to living trees, and then developing natural nest sites over a longer term to ensure continuity of nest opportunities.

Nest box design – rotting wood within the box and birch front to give a natural impression

Rotting birch log cable tied to living birch with beginning of Willow Tit excavation