



## Managing for bespoke species/assemblages within Countryside Stewardship – guidance template

Species/assemblage name	Conservation status
Wood White ( <i>Leptidea synapis</i> )	<i>Section 41</i>
	
<b>Wood White/Dave Green</b>	<b>Breeding habitat Haugh Wood</b>

### Introduction

The Wood White breeds in tall grassland or light scrub in partially shaded or edge habitats. In Britain, most colonies breed in woodland rides and clearings, though a few large colonies occur on coastal undercliffs. A few smaller colonies occur on disused railway lines and around rough, overgrown field edges (for example in north Devon).

There is one main generation per year through most of the Wood White's range, with adults flying from the end of May to the end of July. There is also a partial second brood in late July and August across much of England and in recent years a large second brood in the south-east. Eggs are laid singly on upper parts of the foodplant in lightly shaded and sheltered situations (levels of 20 - 50% shade). In south east England the first generation appear to lay eggs on shorter vegetation often in open, cleared spaces with bare ground. The larvae are green and well camouflaged and tend to feed on younger more nutritious growth at the top of foodplants. They move away from the foodplant to pupate in surrounding tall grassland or scrub. The butterfly overwinters as a pupa.

The butterfly forms discrete colonies at most sites, but these vary considerably in their size and density. In some cases, high densities occur in very discrete areas, whilst in others the breeding habitat is more scattered and adults occur at low densities over wide areas. There may be considerable movement around the wider countryside if a suitable network of appropriate habitat is available. Various legumes are used as larval foodplant, commonly Meadow Vetchling (*Lathyrus pratensis*), Bitter-vetch (*L. linifolius*), Tufted Vetch (*Vicia cracca*), Common Bird's-foot-trefoil (*Lotus corniculatus*) and Greater Bird's-foot-trefoil (*L. pedunculatus*). (Note that some vetches are not used, notably Bush Vetch, *V. sepium*, and Common Vetch, *V. sativa*).

The butterfly has a localised distribution in England and Wales. Wood White has declined rapidly in the past few decades with a 65% decline since the 1970s (Fox et al., 2006) and was added to the UK BAP list when it was revised in 2007. Along with a decline in distribution, population abundance has also decreased by a staggering 84% at monitored sites, although over the short-term the ten-year trend is less steep with a 59% decline

(Botham et al., 2013). The species has a localised distribution in England and Wales and two-thirds of remaining colonies are in FCE woods.

### **Why a bespoke species/assemblage?**

Wood white requires a continuity of open sunny woodland rides and glades with grassy scrub. This later successional grassland combined with sensitive woodland management means that the species cannot be managed under generic good management.

### **When and where to apply this guidance**

At all sites where the species is present, on historical sites where restoration is undertaken to encourage recolonization or potential new sites.

### **Developing a Countryside Stewardship agreement**

#### **Relevant CS options**

WD2 Woodland improvement

WD7 Management of successional areas and scrub

WD8 Creation of successional areas and scrub

WD9 Livestock exclusion supplement- scrub and successional areas

BE3 Management of hedgerows

GS6 Management of species-rich grassland

GS7 Restoration towards species-rich grassland

#### **Woodland rides, scrub and successional areas:**

#### **Prescription guidance for WD2**

**A woodland management plan (PA3) would be required for the site following the ideal management described below:** Aim to maintain a continuity of open sunny woodland rides, with grass or scrub margins that are lightly shaded by surrounding trees and have abundant vetches. Rotational cutting of clearings and rides is most beneficial as it adds variety to vegetation structure. The length of rotation will depend on the individual site and colony size, but can be anything from 2 - 6 years. In all but the largest colonies annual cutting removes too high a proportion of potential breeding habitat. Cutting in autumn and winter months is preferable with ride sides managed alternately. In double brooded colonies, shorter vegetation with patches of bare ground is needed during May and June. This can be created by mowing, tree felling or scarification of ride edges. Periodic removal of scrub margins is beneficial to keep rides as sunny as possible and to provide suitable conditions for the growth of larval foodplants and nectar sources. Connectivity between existing breeding habitat can be improved by widening overgrown, shaded rides. Scallops and box junctions can also be created to make the breeding habitat more open as these can act as refuge areas when wood is being actively managed by creating more habitat away from the vulnerable ride edges (but only if they are managed). Management should be planned in

sections to avoid disrupting large areas at any time.

Suitable conditions can be provided by ensuring a sequence of felling and replanting to create an uneven-aged forest, combined with the maintenance of a network of sunny rides and glades. Re-introduction of coppicing can also improve woodland structure and provide suitable semi-shaded habitat. A wide ride network is also needed in coppiced woodland.

### **Prescription guidance for WD7/WD8**

P42 - [Control/Manage] [scrub margins] [in XXXX] [by cutting on a 4-8 year rotation] so that [by year [NUMBER]] cover [of the [LOCATION]] is no more than [NUMBER]%. [Remove all cut material.]

P365 – Only cut to maintain the scrub and grass mosaic and for the control of injurious weeds and invasive non-native species.

P366 - Cut no more than a third of the shrubby growth in any one calendar year. Do not cut during the bird breeding season (1 March to 31 August).

P578 - Do not cut the grass sward between years [1 and 2]. (For ride edges mowing on a 2-4 year rotation is suitable)

**Hedgerows and grass/scrub mosaics:** Maintain open but sheltered habitat containing abundant vetches in and around scrub patches and along adjacent hedgerows. Heavy grazing by either sheep or cattle is generally unsuitable as this removes the tall grass/scrub margins to field edges. Extensive cattle grazing is probably the most suitable regime, but should be combined with periodic cutting of scrub/hedge margins or rotational scrub or hedge management. Periodic grass cutting on sites with no grazing can be beneficial, although this should be done on a long rotation without cutting all suitable areas in any one year. As with grazing, scrub/hedge margins should be cut periodically to create abundant young scrub where vetches and grass can grow through. Scrub and hedges can also be cut on rotation to provide similar suitable conditions.

Five additional grassland options have been listed (below) as options to enhance the grassland habitats within the landscape for Wood White. There are cases of Wood White populations establishing on marginal grassland habitat but only remaining for 1 to 2 years. In order to strengthen core woodland populations, appropriate grassland habitats within and connecting woodland populations would be beneficial. The prescriptions have not been defined here but the key aims for these grassland habitats will be to provide a medium length herb rich sward with plenty of Bird's-foot-trefoil. The site would ideally have some element of shelter and no summer grazing (avoiding April to August).

GS1 Take field corners out of management GS4 Legume and herb-rich swards

GS8 Creation of species-rich grassland

GS13 Management of grassland for target features

GS14 Creation of grassland for target species

On arable parcels the flower and nectar options could be used to enhance connecting habitats.

## **Prescription guidance for GS6/GS7**

P42 - [Control/Manage] [scrub/ SPECIES] [in XXXX] [by cutting on a 10-20 year rotation] so that [by year [NUMBER]] cover [of the [LOCATION]] is no more than [NUMBER] %. [Remove all cut material.]

P138 - Retain the full extent of well-established scrub [where cover is below 5%]. [Where the cover is 5% or greater, maintain scrub over at least 5% and a maximum of 10% of the parcel area.] It must be retained as discrete small patches, lines and occasional individual bushes scattered across the site. [Do not cut more than half of the scrub in any one year except on historic and archaeological features.]

P428 - [On sites with no grazing Cut and remove some [hay/haylage/silage] every year on a long rotation.][Do not cut/top before [30 June] and always leave at least 50% uncut. All cuttings must be removed.] ~~[Exclude livestock for a minimum of [7] weeks before cutting and/or by [15 May] at the latest.] [In years when hay is taken, graze the aftermath.]~~

P464 - Maintain the extent of [Wood White breeding habitat] of interest within the [grassland/scrub/successional area/mosaic /XXXX] as identified [XXXX].

P470 - [By year X], [at least 2 moderate/high value indicator species Meadow Vetchling (*Lathyrus pratensis*), Bitter-vetch (*L. linifolius*), Tufted Vetch (*Vicia cracca*), Common Bird's-foot-trefoil (*Lotus corniculatus*) and Greater Bird's-foot-trefoil (*L. pedunculatus*) for Priority habitat feature XXXX must be frequent/in flower during May and June and 2 high value indicator species XXXX for Priority habitat feature XXXX occasional (as defined in XXXX (currently the FEP Handbook)]. [By year X], cover of [species XXXX must be less than 10% / between 50% and 90%/frequent].

## **IoS for GS6/GS7**

[By year XX/ in all years], cover of wildflowers in the sward (excluding undesirable species but including rushes and sedges) should be between [20% and 90%]. At least [40%] of wild flowers should be flowering during [May-July].

[By year X/ in all years], the average sward height [between XX and XX/ in spring before closing for hay] should be at least/ between/ less than x cm

[By year X/ in all years], species [XXXX should be at least occasional/ (locally) frequent], and flowering during [May to July]

[By year X/ in all years], cover of [species XXXX should be less than 10% / between 50% and 90%]

[By year X/ in all years] [Wood White] [present] on the site

[By year x/ in all years] Cover of bare ground [, including dry crumbly soil, soft damp soil, bare rock, cobbles, gravel and encrusting lichens] must be between [x% and x%]. [By year XX, localised patches of bare ground around rabbit warrens must be smaller than 5m x 5m].

## **Prescriptions SP6/SP8 to be used for grazing**

Heavy grazing by either sheep or cattle is generally unsuitable as this removes the tall

grass/scrub margins to field edges. Extensive cattle grazing is probably the most suitable regime avoiding April to August.

### **Prescription guidance for BE3**

P73 (Higher tier) – Either:

[Cut [hedgerow X / hedgerows XXXX] no more than one year in three between [1 January] and [28 February] or [1 September] and [31 December]. Leave at least two thirds of hedges untrimmed each year.]

Or: [Cut hedgerows no more than one year in two between [1 January and 28 February]. Leave at least one half of hedges untrimmed each year.]

P74 – Cut [hedgerow X / hedgerows XXXX] [every year/two years] between [1 January] and [28 February] or [1 September] and [31 December] by siding up only.

P82 – [Do not cut/Cut] the herb layer within 2 m of the centre of [hedgerow X / hedgerows XXXX] [annually / 1 year in 2] after [31 August].

#### **Monitoring:**

Timed count/transect

#### **Further information**

<http://butterfly-conservation.org/files/wood-white-psf.pdf>

**Fox, R., Asher, J., Brereton, T., Roy, D & Warren, M.,** 2006. *The State of Butterflies in Britain and Ireland*. Pisces Publications, Berkshire.

**Botham, M.S., Brereton, T.M., Middlebrook, I., Randle, Z. & Roy, D.B.,** 2013. *United Kingdom Butterfly Monitoring Scheme report for 2012*. Centre for Ecology & Hydrology.

#### **Authorship/version control**

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