




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

Species/assemblage name	Conservation status
<p>Grey Carpet (<i>Lithostege griseata</i>)</p>  <p>Grey Carpet (Keith Tailby)</p>  <p>Flixweed (the larval foodplant) (Mark Parsons/Butterfly Conservation)</p>	<p>Section 41, RDB</p>  <p>Grey Carpet habitat in field margin (Sharon Hearle/Butterfly Conservation)</p>

### Introduction

This moth is confined as a breeding species to the Brecks. It has an annual life cycle. The adult flies from late May to early July, flies by night, but can be disturbed from its resting place by day. Sometimes found in numbers. The larva feeds on the seedpods of flixweed, an arable weed, from late June to August. It overwinters as a pupa, in a cocoon in sandy soils. Found on free draining field margins, fallow fields and disturbed ground on breckland heaths and in conifer plantations, the foodplant requiring regular disturbance to persist.

Occasional examples are found away from the Brecks, these either wanderers or possibly scarce immigrants.

### Why a bespoke species/assemblage?

This is one of a suite of Breckland species that benefits from regular disturbance of the soil. In this case the moth is reliant on a plant which needs ground disturbance to persist. Recent disturbance plots, through rotovation, have shown that flixweed can be abundant in year one

following disturbance, but were reduced to a few plants by year two. This could be replicated with ploughing. Therefore, and as the species pupates in the soil, a rotation of annual disturbance will be needed. Disturbance plots next to arable margins, in particular those with a cultivated margin next to the crop, were especially successful for flixweed colonisation.

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

The guidance note for this species applies only to the Brecks of Norfolk and Suffolk. Ground disturbance, preferably through rotovation, should take place over winter, with existing vegetation removed. The aim should be for a mosaic of succession stages on any site, to include disturbed ground to undisturbed ground in any one year.

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

#### **Relevant CS options**

AB11	Cultivated areas for arable plants
GS6	Management of species rich grassland
GS13	Management of grassland for target species
SP9	Threatened species supplement
WD2	Woodland improvement

#### **Prescription guidance for AB11 (N.B. Flixweed has an IAPA score of 3)**

P15 – [Create [the fallow margins and/or plots on rotation, i.e. one margin managed in year one then rested, whilst 2<sup>nd</sup> margin is managed in year two, i.e. habitat available each year but margins are rested].] – *Higher Tier*

P16 – [Cultivate [in the spring between February and April]] and/or in the autumn between September and November]. Work the soil sufficiently to produce a [rough rotovated] surface across the whole area.] – *Higher Tier*

P18 – [Do not disturb cultivated areas before [31 September].] – *Higher Tier*

#### **Prescription guidance for GS6 if occurring on species rich grassland/ GS13 if on non priority grassland**

P400 - Only plough, cultivate or re-seed as part of an agreed sward enhancement programme.

P470 - [By year X], [at least 2 moderate/high value indicator species XXXX 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].

P464 - Maintain the extent of [habitats/features] of interest within the [grassland/scrub/successional area/mosaic /XXXX] as identified [XXXX].

P667 - [From [year NUMBER /establishment] onwards], manage by [grazing and/or cutting

[for hay or silage]] [to maintain VEGETATION CONDITIONS] [so that SWARD CONDITIONS].

### **Prescription guidance for SP9**

Rotovation/ploughing of field margins between November and March so that existing sward is removed and completely broken up. As above, would suggest that a rotational programme is put in place, i.e. not all field margins managed every year, but ensuring there is continuity from year to year and allowing two years between management for each margin. On unfarmed grassland sites, could encourage introduction of bare ground plots, say a minimum of 150x3m but could be larger depending on the size of the site (though not to cover more than 10% of any site in any one year- although this figure depends on other species interest at the site). These plots to be created by rotovation, with adjacent plots (or plots nearby) of a similar size to be created in years 2 and 3, these then managed on rotation over a three year cycle.

P697 - Carry out the management for [priority s41 species][so that by year [X] [VEGETATION CONDITIONS]] as set out in XXXX/Implementation Plan/Feasibility Study produced by [name, organisation] dated [date]].

### **IoS**

Presence of Foodplant and Species on site.

The threatened species supplement could be used to create a mosaic of ground disturbance plots based on different methods which provide suitable habitat in the following seasons. A summary of techniques can be found in (Ellis *et al.* 2012).

### **Prescription guidance for WD2**

This species requires tailored management of glades and rides within woodlands to achieve rotational disturbance for the foodplant to increase. A woodland management plan (PA3) is required to specify the management required at each site. The options available within WD2 in combination with AB11 and SP9 will deliver the required habitat within woodland involving extensive disturbance.

It is likely that this species and its foodplant require large areas of land. Early successional stages are required to promote the foodplant, and regular ground disturbance, such as through rotovation/ploughing, may encourage the foodplant and consequently populations of the moth. This should be designed to allow for a rotation of management, so that not every site is managed in any one year, but each site is managed once every two or three years.

**How to survey/monitor:** The best method is to search for the adult moth, which can be readily disturbed by day and, after dark, also comes to light. The larva can also be readily found on the foodplant .

### **Further information**

See Ellis, S, Bourn, N. & Bulman, C. 2012. *Landscape-scale conservation for butterflies and moths: lessons from the UK*. Butterfly Conservation, Wareham. This contains a chapter entitled *Specialist moths in Breckland: creating bare ground habitat on a landscape scale*

(includes the Grey Carpet), see <http://butterfly-conservation.org/files/landscape-scale-conservation-for-butterflies-and-moths-low-resolution.pdf>

See also Waring, P. & Townsend M. 2009. *Field Guide to the Moths of Great Britain and Ireland*. British Wildlife Publishing, Gillingham. (Second edition).

**Authorship/version control**

Mark Parsons (Butterfly Conservation), Katie Cruickshanks (BC), Tony Davis (BC) & Sharon Hearle (BC), April 2015 2nd draft