

# Assessing and addressing the impacts of ash dieback on UK woodlands and species of conservation importance

## Case study 8 : Roudsea Wood



### Case study key facts

Total area of woodland: **90 ha**

Proportion of ash in canopy overall: **5-10%**

Woodland structure: **coppice with standards and stored coppice**

NVC: **W8 and W9**

Number of vulnerable ash-associated species: **27**

Alternative trees and shrubs: **many present but privet should be introduced**

Management: **plant privet in fenced, recently felled, coppice coupes**

### Site and Location

<b>Name</b>	Roudsea Wood
<b>Country</b>	England
<b>Local Authority</b>	Cumbria
<b>National Character Area</b>	Morecambe Bay Limestones
<b>Landscape context</b>	Low lying woodland on a small ridge adjacent to mires and estuarine habitats.



*Unmanaged area of stand with ash, oak and small-leaved lime forming the overstorey with an understory of poor coppice (photo R. Harmer).*

## Site Characteristics

### Woodland area

Total c. 90 ha of which c. 35 ha is ash woodland within which there are patches of yew woodland

### Woodland type

Ash woodland includes NVC W8 and W9 communities.

### Soil type

Thin calcareous soils with many areas of exposed limestone.

### Lithology

Carboniferous limestone

### Stand structure

The stand is developing into coppice with standards with much of the woodland being coppiced since 1980's. The woodland comprises many small coupes of varying age mixed with patches of stored coppice awaiting a restoration cut. The standards retained are of mixed species and probably 80 – 100 years-old originating as coppice shoots which grew after the previous coppice cut. The overstorey throughout the woodland is generally dominated by oak and small-leaved lime; there are some areas where ash dominates but over a majority of the site percentage canopy cover of ash is 5 – 10%. Other trees present include birch and hawthorn (which are common), rowan, crab apple, wild service tree and scattered conifers: a small amount of sycamore is present in the overstorey at the southern end of the wood. The understorey is predominantly hazel but other species such as spindle, blackthorn, and purging buckthorn are present. Juvenile ash (< 30 cm tall) are abundant but saplings of any species, even within fenced exclosures, are largely absent. The adverse effects of deer were obvious including browsing damage to small trees, a browse line, and significantly less cover of bramble outside exclosures. The areas dominated by yew have been excluded from this description.

## Biodiversity interest

### Designations

This forms part of the Roudsea Wood and Mosses NNR / SSSI (c. 480 ha) which comprises a mixture of habitats – predominantly woodland and lowland raised mire. The woodland consists mainly of areas of either ash or oak which are delimited by the underlying geology at the site, with the ash woodland on soils developed over limestone. The site is also part of a SAC which identifies the woodland on the limestone as designated habitats, these are *Tilio – Acerion forests of slopes and ravines* (i.e. mixed woodland on base rich soils associated with rocky slopes) and *Taxus baccata woods of the British Isles* (i.e. yew woodland).

### Vulnerable species associated with ash

15 species were identified in the database but only 7, all of which are Lepidoptera, may be badly affected by loss of ash. A supplementary group of 15 bryophytes known to occur on ash at the site are unlikely to be affected as many alternative species are present.

### Other species of conservation interest

There are several European Protected Species including a significant population of hazel dormouse, which is at the limit of its range, in addition to several bat species.

# Management

## Historical

Simple coppice which ceased during 1930's

## Current

Coppice with standards introduced throughout the woods since 1980's – about 1 ha cut each year in 3 coupes with both the species mixture and density of retained standards varying. Coupes are fenced for 3-5 years to exclude deer.

## Long-term vision for site

A diverse woodland with the size / age-class structure of trees becoming more complex and the rich habitat created by coppicing allowing hazel dormice and other species to thrive.

## Factors limiting delivery of management currently planned

Poor or limited access to some areas of the site making extraction difficult. The need to fence to prevent deer browsing.

## Future methods of management

### Potential response of ash associated species to ash dieback

Alternative tree and shrub species for six of the threatened moths are rare or absent from the site: for five of these privet is an alternative species; for the sixth, *Agrochola circellaris*, possible alternative species include aspen and willow. A further species, *Atethmia centrago*, will disappear due to an obligate requirement for ash.

### Continuation of existing management with loss of ash occurring

Procedures for managing the woodland as coppice with standards are well-developed and are creating the habitat required for hazel dormouse. Loss of ash, which is a relatively minor component of the woodland, is unlikely to have a substantial effect on the overall structure of the coppice habitat created. The woodland includes a range of woody species and most of the species associated with ash can use several of these as alternative species. Privet has intermediate shade tolerance and should survive the coppice regime being used, however it has not been seen recently. If privet is present then it is much less common than ash and is unlikely to regenerate sufficiently well or quickly to provide habitat for those species which can use it as an alternative to ash. *Agrochola circellaris* can use several alternative species including aspen and wych elm but these are also uncommon and unlikely to spread rapidly. Whilst there may be alternative trees and shrubs present for most of the Lepidoptera likely to be affected by loss of ash, the alternatives are not common. The amount of the each alternative is unlikely to increase rapidly under the current management and consequently populations of the 6 Lepidoptera are likely to decline.

### Management allowing for loss of ash but maximising persistence of ash related biodiversity

Provision of habitat for hazel dormouse which is a European Protected Species has a significant effect on the choice of stand management. Continued use of coppice with standards with some minor changes to existing procedures is probably the most appropriate method of future management. Although alternative trees and shrubs for the 6 species of Lepidoptera are present on site they are not common. The absence of substantial natural regeneration of any species during the last 20-30 years of coppice management suggests that the spread of privet, wych elm and aspen is unlikely to take place by natural processes. The most reliable method to increase the amounts of these species is by planting small numbers of transplants at appropriate locations (e.g. suitable soil conditions for species, in gaps between coppice stools, not beneath standards) with the intention of establishing groups of plants of each species scattered across the site. Planting should take place within a coppiced area immediately after the fence has been erected and subsequent management should follow best practice to ensure establishment. The control of competitive vegetation within the fenced areas will be important and gates / stiles or similar will be needed to enter the enclosures. If growth of these plants is slow then it may be necessary to extend the lifetime of the enclosures.

### Factors likely to constrain delivery of future management to maximise persistence of ash

**associated species**

Deer browsing - protection will be needed by long-term reduction in deer numbers, fencing or individual plant protection. Poor access.

**Potential for use of generic methods to establish alternative species**

As establishment of privet is unlikely to occur by natural regeneration all options except felling and replanting (option 4) are likely to fail. However the small amounts of ash within the canopy across much of the site means that canopy gaps created during the felling operation will often be small and other species will need to be felled to create openings large enough to ensure growth of any transplants. As areas suitable for planting privet would be spread across the site, management will be more difficult due to the scattered distribution of new planting sites. This method would not remove the need to manage the site for hazel dormice.