

**CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES**

**CORE MANAGEMENT PLAN
INCLUDING CONSERVATION OBJECTIVES**

FOR

**NORTH PEMBROKESHIRE WOODLANDS SPECIAL AREA
OF CONSERVATION (SAC)**

Version: 3

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Approved by: Charlotte Gjerlov

**More detailed maps of management units can be provided on request.
A Welsh version of all or part of this document can be made available on request.**



CONTENTS

- 1 Vision for the Site**
- 2 Site Description**
 - 2.1 Area and Designations Covered by this Plan**
 - 2.2 Outline Description**
 - 2.3 Outline of Past and Current Management**
 - 2.4 Management Units**
- 3 The Special Features**
 - 3.1 Confirmation of Special Features**
 - 3.2 Special Features and Management Units**
- 4 Conservation Objectives**
 - 4.1 Conservation Objective for Old Sessile Oak Woods**
 - 4.2 Conservation Objective for Alluvial Forests**
 - 4.3 Conservation Objective for Barbastelle Bat**
- 5 Assessment of Conservation Status and Management Requirements**
 - 5.1 Management Requirements for Old Sessile Oak Woods**
 - 5.2 Management Requirements for Alluvial Forests**
 - 5.3 Management Requirements for Barbastelle Bat**
- 6 Action Plan: Summary**
- 7 Glossary**

PREFACE

This document provides the main elements of CCW's management plan for the sites named. It sets out what needs to be achieved on the sites, the results of monitoring, and advice on the action required. This document is made available through CCW's website and may be revised in response to changing circumstances or new information. This is a technical document that supplements summary information on the website.

One of the key functions of this document is to provide CCW's statement of the Conservation Objectives for the relevant Natura 2000 sites. This is required to implement the Conservation (Natural Habitats, &c.) Regulations 1994, as amended (Section 4). As a matter of Welsh Assembly Government Policy, the provisions of those regulations are also to be applied to Ramsar sites in Wales.

1. VISION FOR THE SITE

This is a descriptive overview of what needs to be achieved for conservation on the sites. It brings together and summarises the Conservation Objectives (part 4) into a single, integrated statement about the site.

The following is a description of how we would like to see the features at this site.

The site will be covered by sustainable woodland consisting of locally native, broadleaved species, with oak prominent in the canopy. In the long term, the canopy will be comprised of trees with a wide range of age structures and consist mainly of the following species: oak, ash, rowan and willow, with some areas of alder. The area of woodland will be stable or increasing. Veteran trees (i.e. old trees that are starting to decay) of particular importance for species, including lichens, fungi and invertebrate animals, will be retained where possible. Both standing and fallen deadwood will be retained for the same reason, wherever safety allows.

At any given time around 15% of the total woodland area will consist of gaps in the canopy which will allow trees to regenerate and enable the more light-demanding woodland plants to grow. These gaps will open up as older trees are blown over by the wind, to be gradually become filled by young trees and shrubs. Shrub species will include hazel, holly, hawthorn and rowan and canopy species. The woodland floor will be carpeted with a variety of woodland plants including bluebell, sweet woodruff, moschatel, sanicle and common cow-wheat; the grasses wood melick and wood millet; hard fern, lady fern and scaly male-fern. Canopy species will also be present as seedlings.

The rare barbastelle bat will continue to thrive at Pengelli, roosting in cavities in dozens of mature trees throughout the woodland, protected from the weather by lush holly and ivy growth. The shrub layer here will include fruiting hazel, holly, hawthorn and rowan for dormice to feed on, along with regenerating canopy species.

Dyffryn Gwaun will support species-rich marshy grassland as well as alluvial woodland, with species such as the marsh fritillary butterfly. At Cwm Bach, Sychpant, there will be a mosaic of acid grassland and woodland with a wide assemblage of butterflies.

All of the woodlands except Pengelli have an unusually rich variety of lichens. Many of these species are only found in ancient woodlands, in areas with exceptionally clean air. The variety and abundance of lichens will be maintained or increase in the long-term. Lichens often need fairly light conditions to grow, so there will be some gaps in the canopy where these lichens are already common. The shrub layer will not be too dense, to enable light to reach lichens growing on tree trunks. Older trees, especially oak and ash, are particularly suitable for lichens to grow on, so these will be present throughout the site. There will be enough regeneration in the woodland to ensure that there will be plenty of trees suitable for lichens in the long-term.

2. SITE DESCRIPTION

2.1 Area and Designations Covered by this Plan

Unitary authorities: Pembrokeshire Coast National Park Authority
 Pembrokeshire County Council

Area: 314.48 ha

The SAC comprises the following underpinning SSSIs:

- Allt Pontfaen – Coed Gelli-fawr
- Coed Ty-canol (also NNR)
- Cwm Bach, Sychpant
- Dyffryn Gwaun
- Gallt Llanerch – Coed Gelli-deg
- Garn Wood, Kilkiffeth Wood and Dan-deri – Cwm Felin-ban
- Pengelli Forest and Pant-teg Wood (also NNR)

Detailed maps of the designated sites are available through CCW's web site:

<http://www.ccw.gov.uk/interactive-maps/protected-areas-map.aspx>

For a summary map showing the coverage of this document see attached Unit Map.

2.2 Outline Description

The SAC has been chosen as a prime example of sessile oak woodland, alluvial woodland and as the only known breeding site for barbastelle bats in West Wales.

This type of oak woodland is typically dominated by sessile oak *Quercus petraea*, with holly *Ilex aquifolium* in the shrub layer and hard fern *Blechnum spicant* in the field layer. Other characteristic species include hazel *Corylus avellana*, ash *Fraxinus excelsior*, rowan *Sorbus aucuparia*, bluebell *Hyacinthoides non-scripta*, honeysuckle *Lonicera periclymenum* and various fern species. In the North Pembrokeshire Woodlands SAC, this woodland type tends to be on steeply sloping land with thin soils, which is why it has survived to this day. One exception is Pengelli Forest and Pant-teg Wood, which occurs on richer soils.

The alluvial woodland is characterised by alder *Alnus glutinosa* and ash *Fraxinus excelsior*, and tends to occur with willow *Salix* species. The woodland is found on flood plains that are relatively nutrient-rich and subject to periodic flooding. The field layer tends to consist of species such as tussock-sedge *Carex paniculata*, meadowsweet *Filipendula ulmaria*, water dropwort *Oenanthe crocata* and opposite-leaved golden-saxifrage *Chrysosplenium oppositifolium*.

The population of barbastelle bats at Pengelli Forest uses a large number of different roosting sites, both inside and outside the SSSI boundaries. Most of the roosts are in cracks or behind the flaking bark of trees, often associated with large ivy stems. A dense understorey that includes holly is considered important for maintaining a favourable micro-climate in the roosts.

In addition to these SAC features, there are also a number of SSSI features within the SAC, which are listed in section 3.2.

2.3 Outline of Past and Current Management

A variety of different management techniques have been applied throughout the candidate Special Area of Conservation. These are as follows:-

Coppice: part of Kilkiffeth Wood and Allt Pontfaen were managed as oak coppice for centuries. Llanerch Alder Carr (Dyffryn Gwaun SSSI) was historically managed as alder coppice. The areas coppiced in the past tend to be even-aged with few veteran trees.

High forest: most of the SAC was historically managed as high forest. It is likely that the high proportion of oak in the canopy is a reflection of this past management. Extensive areas were last felled during the Second World War, creating even-aged stands with no veteran trees.

Fields, meadows and pasture: many parts of the component SSSI, including Kilkiffeth Wood, Cwm Bach Sychpant and Dyffryn Gwaun were historically managed as open field systems (probably with scattered boundary trees). There is evidence for this from tithe maps (1842), old ridge and furrow features and the presence of mature trees only along former boundary banks.

Non-native species are present in the canopy, including conifers, beech and sycamore, which were planted in the past for timber. Japanese knotweed and rhododendron have also been introduced to parts of the SAC.

2.4 Management Units

The plan area has been divided into management units to enable practical communication about features, objectives and management. This will also allow us to differentiate between the different designations where necessary. In this plan the management units have been based primarily on tenure, with reference to features and land management requirements. Each unit is in both a SSSI and the North Pembrokeshire Woodlands SAC; some are also in one of two National Nature Reserves.

A map showing the management units referred to in this plan is attached separately. The management units are as follows: -

SSSI name / Unit No.	SAC	SSSI	Other
<i>Garn Wood, Kilkiffeth Wood and Dan-deri- Cwm Felin-ban</i>			
Units 1-10	✓	✓	
<i>Allt Pontfaen – Coed Gelli-fawr</i>			
Units 1-9	✓	✓	
<i>Cwm Bach Sychpant</i>			
Unit 1	✓	✓	
<i>Dyffryn Gwaun</i>			
Units 1-4	✓	✓	
Unit 5	✓	✓	WTSWW
<i>Gallt Llanerch – Coed Gelli-deg</i>			
Units 1-6	✓	✓	
<i>Pengelli Forest and Pant-teg Wood</i>			
Unit 1	✓	✓	NNR
<i>Coed Ty-canol</i>			
Units 1-2	✓	✓	NNR
Units 3-4	✓	✓	

3. THE SPECIAL FEATURES

3.1 Confirmation of Special Features

Designated feature	Relationships, nomenclature etc	Conservation Objective no. in part 4
SAC features: Annex I habitats and Annex II species that are primary reasons for selection		
1. Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles EU habitat code: 91 AO	NVC types W10, W11, W16, W17	1
2. Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> EU habitat code: 91 EO	<i>Alno-padion</i> , <i>Alnion incanae</i> , <i>Salicion alvae</i> NVC types W5, W7	2
3. Barbastelle bat EU species code: 1308	<i>Barbastella barbastellus</i>	3
SSSI features		
4. Lichens: New Index of Ecological Continuity (NIEC) species		
5. Marshy grassland		
6. Mosaic of native woodland, acid grassland and scrub		
7. Dormouse	<i>Muscardinus avellanarius</i>	
8. Pearl-bordered fritillary butterfly	<i>Boloria euphrosyne</i>	
9. High Brown fritillary butterfly	<i>Argynnis adippe</i>	
10. Hutchins hollywort (liverwort)	<i>Jubula hutchinsiae</i>	
11. Scarce turf-moss	<i>Rhytidiadelphus subpinnatus</i>	
12. Natural inland rock exposure		

3.2 Special Features and Management Units

This section sets out the relationship between the special features and each management unit. This is intended to provide a clear statement about what each unit should be managed for, taking into account the varied needs of the different special features. All special features are allocated to one of seven classes in each management unit. These classes are:

Key Features

KH - a 'Key Habitat' in the management unit, i.e. the habitat that is the main focus of management and monitoring effort, perhaps because of the dependence of a key species (see KS below). There will rarely be more than one Key Habitat in a unit.

KS – a 'Key Species' in the management unit, often driving both the selection and management of a Key Habitat.

Geo – an earth science feature that is the main driver of management and focus of monitoring effort in a unit.

Other Features

Sym - habitats, species and earth science features that are of importance in a unit but are not the main focus of management or monitoring. These features will benefit from management for the key feature(s) identified in the unit. These may be classed as ‘Sym’ features because:

- a) they are present in the unit but are of less conservation importance than the key feature; and/or
- b) they are present in the unit but in small areas/numbers, with the bulk of the feature in other units of the site; and/or
- c) their requirements are broader than and compatible with the management needs of the key feature(s) e.g. a mobile species that uses large parts of the site and surrounding areas.

Nm - an infrequently used category where features are at risk of decline within a unit as a result of meeting the management needs of the key feature(s), i.e. under Negative Management. These cases will usually be compensated for by management elsewhere in the plan, and can be used where minor occurrences of a feature would otherwise lead to apparent conflict with another key feature in a unit.

Mn - Management units with no special feature present but which are of importance for management of features elsewhere on a site e.g. livestock over-wintering area included within designation boundaries, buffer zones around water bodies, etc.

x – Features not present in the management unit.

The tables below sets out the relationship between the special features and management units identified in this plan:

Garn Wood, Kilkiffeth Wood and Dan-deri – Cwm Felin-ban SSSI consists of three discrete woodland units. Garn Wood is oak woodland, managed by the Pembrokeshire Coast National Park Authority (PCNPA). Kilkiffeth Wood is partly owned by the PCNPA and has both oak and alluvial woodland. Dan-deri – Cwm felin-ban is privately owned and consists of oak woodland. Alluvial woodland has been chosen as the key habitat for much of Kilkiffeth Wood, even though it occupies less than half the area, because managing the site for alluvial woodland is not likely to adversely affect the oak woodland, whereas managing purely for oak woodland could have an adverse effect on alluvial woodland.

Garn Wood, Kilkiffeth Wood and Dan Deri – Cwm Felin-ban	Management Unit									
	1	2	3	4	5	6	7	8	9	10
SAC features										
Old sessile oak woods	KH	KH	KH	KH	KH	KH	KH	Sym	Sym	Sym
Alluvial forests with <i>Alnus</i> and <i>Fraxinus</i>	X	X	X	X	X	X	X	KH	KH	KH
SSSI features	1	2	3	4	5	6	7	8	9	10
Lichens	KS	KS	KS	KS	KS	KS	KS	KS	KS	KS

Allt Pontfaen – Coed Gelli-fawr SSSI is the longest section of woodland in the SAC and is mostly oak woodland, with some small areas of alluvial woodland and some open areas, which are particularly important for lichens.

Allt Pontfaen – Coed Gelli-fawr	Management Unit								
	1	2	3	4	5	6	7	8	9
SAC features									
Old sessile oak woods	KH	X	X	KH	KH	KH	KH	KH	Sym
Alluvial forests with <i>Alnus</i> and <i>Fraxinus</i>	Sym	X	KH	X	X	X	X	X	KH
SSSI features	1	2	3	4	5	6	7	8	9

Lichens	KS	KS	KS	KS	KS	KS	KS	KS	KS
Hutchins hollywort	Sym								
Scarce turf-moss	Sym								

Cwm Bach, Sychpant SSSI is a mosaic of acid grassland, woodland and scrub, with parkland trees important for lichens, and an important assemblage of butterfly species. It managed by the PCNPA and grazed by ponies.

Cwm Bach, Sychpant	Management Unit
SAC features	
Old sessile oak woods	KH
SSSI features	
Lichens	Sym
Mosaic of woodland, acid grassland and scrub	Sym
High brown fritillary	Sym
Pearl-bordered fritillary	KS

Dyffryn Gwaun SSSI is a mixture of alluvial woodland and marshy grassland. The woodland trees are also important for the lichens they support. Part of the site is privately owned and grazed by ponies; the other part is owned and managed as a nature reserve by the Wildlife Trust of South and West Wales (WTSWW).

Dyffryn Gwaun	Management Unit				
SAC features	1	2	3	4	5
Alluvial forests with <i>Alnus</i> and <i>Fraxinus</i>	X	KH	KH	KH	KH
SSSI features	1	2	3	4	5
Lichens	X	KS	KS	KS	KS
Marshy grassland	KH	X	Sym	Sym	X

Gallt Llanerch – Coed Gelli-deg SSSI consists mainly of oak woodland with a small area of alder wood. It is also important for lichens.

Gallt Llanerch – Coed Gelli-deg	Management Unit					
SAC features	1	2	3	4	5	6
Old sessile oak woods	KH	KH	KH	KH	KH	Sym
Alluvial forests with <i>Alnus</i> and <i>Fraxinus</i>	X	X	X	X	X	KH
SSSI features	1	2	3	4	5	6
Lichens	KS	KS	KS	KS	KS	KS

Pengelli Forest and Pant-teg Wood SSSI and NNR is mostly managed by the Wildlife Trust of South and West Wales (WTSWW). It consists of oak woodland with a small area of alder woodland, and supports an additional SAC feature, the barbastelle bat.

Pengelli Forest and Pant-teg Wood	Management Unit
SAC features	
Old sessile oak woods	KH
Alluvial forests with <i>Alnus</i> and <i>Fraxinus</i>	Sym
Barbastelle bat	KS
SSSI features	
Dormouse	Sym

Coed Ty-canol NNR is owned by Pembrokeshire Coast National Park and managed by the Countryside Council for Wales. Parts of the SSSI (outside the NNR) are privately owned. The site consists of oak woodland and boulder-strewn heathland, with some areas of willow and alder. The site has an exceptional diversity of lichens, both on trees and also on rocks and boulders. The entire site is grazed by sheep, cattle and ponies.

<i>Coed Ty-canol</i>	Management Unit			
SAC features	1	2	3	4
Old sessile oak woods	KH	KH	KH	KH
SSSI features	1	2	3	4
Lichens	KS	KS	KS	KS
Natural inland rock exposures	Sym	Sym	Sym	Sym

4. CONSERVATION OBJECTIVES

Background to Conservation Objectives

a. Outline of the legal context and purpose of conservation objectives.

Conservation objectives are required by the 1992 'Habitats' Directive (92/43/EEC). The aim of the Habitats Directives is the maintenance, or where appropriate the restoration of the 'favourable conservation status' of habitats and species features for which SACs and SPAs are designated (see Box 1).

In the broadest terms, 'favourable conservation status' means a feature is in satisfactory condition and all the things needed to keep it that way are in place for the foreseeable future. CCW considers that the concept of favourable conservation status provides a practical and legally robust basis for conservation objectives for Natura 2000 and Ramsar sites.

Box 1

Favourable conservation status as defined in Articles 1(e) and 1(i) of the Habitats Directive

“The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

- Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable.

The conservation status of a species is the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' when:

- population dynamics data on the species indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.”

Achieving these objectives requires appropriate management and the control of factors that may cause deterioration of habitats or significant disturbance to species.

As well as the overall function of communication, conservation objectives have a number of specific roles:

- Conservation planning and management.

The conservation objectives guide management of sites, to maintain or restore the habitats and species in favourable condition.

- Assessing plans and projects.

Article 6(3) of the ‘Habitats’ Directive requires appropriate assessment of proposed plans and projects against a site's conservation objectives. Subject to certain exceptions, plans or projects may not proceed unless it is established that they will not adversely affect the integrity of sites. This role for testing plans and projects also applies to the review of existing decisions and consents.

- Monitoring and reporting.

The conservation objectives provide the basis for assessing the condition of a feature and the status of factors that affect it. CCW uses ‘performance indicators’ within the conservation objectives, as the basis for monitoring and reporting. Performance indicators are selected to provide useful information about the condition of a feature and the factors that affect it.

The conservation objectives in this document reflect CCW’s current information and understanding of the site and its features and their importance in an international context. The conservation objectives are subject to review by CCW in light of new knowledge.

b. Format of the conservation objectives

There is one conservation objective for each feature listed in part 3. Each conservation objective is a composite statement representing a site-specific description of what is considered to be the favourable conservation status of the feature. These statements apply to a whole feature as it occurs within the whole plan area, although section 3.2 sets out their relevance to individual management units.

Each conservation objective consists of the following two elements:

1. Vision for the feature
2. Performance indicators

As a result of the general practice developed and agreed within the UK Conservation Agencies, conservation objectives include performance indicators, the selection of which should be informed by JNCC guidance on Common Standards Monitoring¹.

There is a critical need for clarity over the role of performance indicators within the conservation objectives. **A conservation objective, because it includes the vision for the feature, has meaning and substance independently of the performance indicators, and is more than the sum of the performance indicators.** The performance indicators are simply what make the conservation objectives measurable, and are thus part of, not a substitute for, the conservation objectives. Any feature attribute identified in the performance indicators should be represented in the vision for the feature, but not all elements of the vision for the feature will necessarily have corresponding performance indicators.

As well as describing the aspirations for the condition of the feature, the Vision section of each conservation objective contains a statement that the factors necessary to maintain those desired conditions are under control. Subject to technical, practical and resource constraints, factors which have an important influence on the condition of the feature are identified in the performance indicators.

¹ Available through www.jncc.gov.uk and follow links to Protected Sites and Common Standards Monitoring.

4.1 Conservation Objective for Feature 1: Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles

Vision for Feature 1

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- The majority of the SAC will be covered by oak woodland.
- There will be no measurable, permanent loss of semi-natural woodland.
- The trees will be locally native, with a dominance of oak in the canopy, and include ash and rowan.
- No more than 5% of the canopy forming trees will consist of non-native species.
- Each woodland will include trees of a wide range of age classes, including veteran trees.
- Between 10-25% of the woodland area will comprise a dynamic, shifting pattern of gaps: in the long-term, most of these will be created by natural processes.
- There will be sufficient natural regeneration to replace the canopy in these gaps over time.
- There will be abundant dead and dying trees with holes and hollows, rot columns, torn off limbs and rotten branches. Dead wood, both standing and fallen, will be retained to provide habitats for other species, and will represent at least 10% (by volume) of the total timber.
- Veteran trees will be favoured during any silvicultural management because they support a wide variety of species, including lichens.
- Old forest lichen species will be found throughout the site, especially on well-lit trees around woodland edges and glades.
- Invasive alien species, such as rhododendron, laurel and Japanese knotweed, will eventually be eradicated from the site, or restricted to very low cover.
- There will be a well-developed shrub layer throughout the SAC, including hazel and holly.
- The field layer will be diverse and include broad-buckler fern, greater wood-rush, bluebell, honeysuckle, wood-sorrel, dog's-mercury, opposite-leaved golden-saxifrage, bilberry, bracken, bramble and violets.
- The woodlands will support populations of butterflies, birds and mammals.
- All factors affecting the achievement of the foregoing conditions will be under control.

Performance indicators for Feature 1

The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators.

In the future, monitoring will aim to cover at least 50% of the management units each time, but will look at a different set of management units with each monitoring cycle, in order to cover the SAC more thoroughly over time.

<i>Performance indicators for feature condition</i>	
<i>Attribute</i>	<i>Specified limits</i>
1. Area	<ul style="list-style-type: none"> • Oak woodland should make up the majority of the SAC, forming at least 50% of the canopy cover in 50% of the plots. • There should be no measurable, permanent decline in the area of semi-natural woodland. <i>NB If a natural event such as windthrow or disease affects the canopy, this is not considered to be loss of woodland as long as the field and shrub layers remain typical of the woodland community.</i>
2. Natural processes and structural development	<ul style="list-style-type: none"> • Tree canopy cover should be 75-90% within the SAC. • Shrub canopy cover should be 15-25% within the SAC. • Veteran trees should occur in at least 20% plots (50x50m) in each component SSSI. <i>'Veteran' is defined as having a circumference at chest height greater than 2m (ie you can't get your arms around it!)</i> • Deadwood should occur in each component SSSI and represent at least 10% of the timber by volume. <i>This should consist of fallen trees, broken branches, dead branches on live trees and standing dead trees.</i>
3. Regeneration potential	<ul style="list-style-type: none"> • There should be at least 1 viable native sapling (ie. over 1.5m tall) per 100m² of gap (ie.10x10m) within 10 to 15 years of gap being formed. <i>A gap is defined as being at least 1.5x the crown width of the nearest adjacent tree. Permanent glades are excluded from this target.</i>
4. Composition (trees and shrubs)	<ul style="list-style-type: none"> • Locally native species should be dominant in each plot. Invasive non-native species should be absent e.g. rhododendron. • Non-native trees, such as sycamore and beech, should cover less than 5% of the canopy cover in any plot.
5. Quality indicators	<ul style="list-style-type: none"> • The field layers will include a mixture of the following species: <i>Dryopteris dilatata, Hyacinthoides non-scripta, Lonicera periclymenum, Oxalis acetosella, Pteridium aquilinum, Rubus fruticosus, Viola spp., Chrysosplenium oppositifolium, Luzula sylvatica, Mercurialis perennis, Vaccinium myrtillus.</i> • Non-native species should cover less than 5% (e.g. Montbretia) of any plot, and invasive non-native species should be absent e.g. Japanese knotweed, Himalayan balsam.

4.2 Conservation Objective for Feature 2: Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-padion, Alnion incanae, Salicion alvae)

Vision for Feature 2

The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

- At least 2% of the SAC will be covered by alluvial woodland.
- The canopy will consist of locally native trees, with an overall dominance of alder. At least 90% of the canopy trees will be wet woodland species. There will be no non-native trees present in the canopy.
- In the long-term, each woodland will include trees of a broad range of age classes, including saplings and veteran trees.
- At any given time, around 30% of the woodland area will consist of a dynamic, shifting pattern of canopy gaps, maintained by natural processes.
- There will be sufficient natural regeneration in the gaps (from seed or vegetative) to replace the canopy, 90% of which will be alder or willow.
- There will be abundant dead and dying trees with holes and hollows, rot columns, torn off limbs and rotten branches. Dead wood, both standing and fallen, will be retained to provide habitats for other species, and will represent at least 10% (by volume) of the total timber.
- There will be no evidence of alder disease.
- Veteran trees will be favoured during any silvicultural management because they support a wide variety of species, including lichens. Old forest lichen species will be found throughout the sites, especially on well-lit trees around woodland edges and glades.
- Invasive alien species, such as rhododendron, laurel and Japanese knotweed, will be eradicated from the site, or subject to a control programme of eradication.
- The field layer will be diverse and dominated by alluvial species. Indicators of drying out (bramble) and over-grazing (creeping buttercup) will be scarce.
- All factors affecting the achievement of the foregoing conditions will be under control.

Performance indicators for Feature 2

The performance indicators are part of the conservation objective, not a substitute for it. Assessment of plans and projects must be based on the entire conservation objective, not just the performance indicators.

The monitoring of this site is based on just one SSSI, where most of the alluvial woodland is found.

Performance indicators for feature condition	
Attribute	Specified limits
1. Area	<p><i>Upper Limit:</i></p> <ul style="list-style-type: none"> • None set (although limited by area of woodland seasonally inundated) <p><i>Lower Limit:</i></p> <ul style="list-style-type: none"> • No loss of alluvial woodland except through natural processes
2. Quality	<p><i>Upper Limit:</i></p> <ul style="list-style-type: none"> • None set <p><i>Lower Limit:</i></p> <ul style="list-style-type: none"> • 80% alluvial woodlands is referable to ‘good condition’ semi-natural alluvial woodland.
Site-Specific Habitat Definitions	
Alluvial woodlands	Woodland dominated by alder <i>Alnus glutinosa</i> and willow <i>Salix</i> spp. on flood plains (in this particular SAC).
‘Good condition’ Alluvial semi-natural woodland	<p>Woodland where within a 25 x 30m area:</p> <ul style="list-style-type: none"> • At least 90% of the canopy forming trees are species of wet woodland and native to the site • At least one example of each age component present (sapling if plot includes a gap or woodland edge, mature, over-mature, dead wood) • Re-generation occurring and 90% alder or willow • Field-layer dominated by alluvial ground-flora with at least two species present. • Indicators of drying out, poaching /over-grazing: <i>Ranunculus repens</i> (no more than 5% in Areas A and B; no more than 20% in Area C) or <i>Rubus fruticosus</i> (<10%); non-natives absent (<i>Fallopia japonica</i>, conifer or sycamore seedlings/saplings). • In areas B and C: Mature trees all with some fruticose lichens present within 2 metres of ground level. • There is no evidence of alder disease.
Native species	Any species native to the area.
Mature tree	Canopy forming tree with a girth at chest height, or coppice stool, of >150cm
Viable sapling	Sapling >1.5m of native species
Ground flora species	Field-layer dominated by alluvial ground-flora with at least two of the following: <i>Chrysosplenium oppositifolium</i> , <i>Oenanthe crocata</i> , <i>Carex paniculata</i> , <i>Filipendula ulmaria</i> , <i>Iris pseudacorus</i> .
Evidence of alder disease	Crown of tree dead /dying; trunk unhealthy (cracking or seeping)
Dead wood	Fallen trees, fallen branches, dead branches on living trees or standing dead trees (all > 20cm in diameter)

4.3 Conservation Objective for Feature 3: Barbastelle bat (*Barbastella barbastellus*)

Vision for Feature 3

The vision for this feature is for it to be in favourable conservation status, where all of the following conditions are satisfied:

(N.B. The barbastelle is only a feature of Pengelli Forest and Pant-teg Wood SSSI, so the following conditions only apply to that part of the SAC.)

- There will be no loss of ancient semi-natural woodland at the site.
- Canopy gaps will be present throughout the site, with two or more young trees growing in each.
- Canopy cover will be 50-90% throughout the site (except in Hawthorn fields).
- A well-developed shrub layer with holly will be present throughout the woodland, to provide a favourable micro-climate for roosting barbastelles.
- A minimum of 4 trees per hectare will be allowed to die standing, will not be removed or cut down. These will be distributed across the site and will include trees with splits, fallen, leaning trees and hollow trees.
- Ivy will be allowed to grow on trees throughout the site, to provide roosting opportunities.
- There will be no overall loss of open water.
- There will be no increase in disturbance (eg paths or rides) near any of the roosting sites.
- No roosting sites will be lost as a result of human intervention.
- Barbastelle bat passes will be detected on at least 4 out of 6 transects between 25 July and 7 September.
- There will be contiguous suitable foraging habitat within a 16km radius around Pengelli Forest, including wooded stream valleys, low and overgrown hedgerows, scrub, overgrown pastures, bracken stands and woodland (which can include conifer plantations).
- Roosts outside the SSSI boundary will be left undisturbed, with no woodland management within 50m of a barbastelle roost, and no clearance of the shrub layer. Over-mature trees in any of the woodlands within 2km of Pengelli should be left undisturbed except where they pose a risk to public safety, in which case minimal trees surgery can be permitted.
- All factors affecting the achievement of the foregoing conditions will be under control.

Performance Indicators for the maintenance of suitable roosts and feeding areas at Pengelli Forest and Pant-teg Wood SSSI are defined as follows:

<i>Performance indicators for feature condition</i>	
<i>Attribute</i>	<i>Specified limits</i>
1. Area	<ul style="list-style-type: none"> No loss of ancient semi-natural stands to eg. built developments or surfaced tracks. Some loss of trees through natural events or management is seen as important in the maintenance of the woodland, but anything that permanently destroyed the woodland community would be unacceptable.
2. Natural processes and structural development	<ul style="list-style-type: none"> At least the current level of structural diversity, including canopy gaps and understorey. Canopy gaps should be present at 8 out of 10 stopping points to ensure that young trees can grow and reach the canopy, so there will always be sufficient mature trees for barbastelles to roost in. A gap should be large enough to stimulate a growth response in young trees beneath. Canopy cover should be present over 50-90% of area (except in Hawthorn fields). Shrub layer: a dense understorey around trees with crevices may be essential in some climatic regimes but less so in others: the precautionary principle should be followed until specific requirements at Pengelli are known. A well-developed shrub layer including some holly should be present at each stopping point (except in Hawthorn fields). Dead wood: a minimum of 4 trees per ha should be allowed to die standing and not removed or cut down. These should be distributed throughout the site, so as a rough average there should be one at each stopping point.
3. Regeneration potential	<ul style="list-style-type: none"> Signs of seedlings growing through at sufficient density to maintain required canopy cover over a 10-year period. 2, or more, young trees (over 1.5m) should be present in at least 8 out of 10 monitoring plots.
4. Open water	<ul style="list-style-type: none"> No overall loss of open water. There should be no loss of ponds or streams marked on the OS map.
5. Disturbance	<ul style="list-style-type: none"> No increase since previous visit. There should be no new rights of way, paths or rides close to the roosting areas. Use OS and site maps to note position of existing paths and rides. Acceptable limits will depend on what the bats have traditionally tolerated.
6. Roosting sites	<ul style="list-style-type: none"> No loss of known roosting sites through human activity. Known roosting trees should be tagged and checked for threat, damage or loss of roosting sites.
7. Bat activity	<ul style="list-style-type: none"> Barbastelle bat passes will be detected on at least 4 out of 6 transects between 25 July and 7 September.

5. ASSESSMENT OF CONSERVATION STATUS AND MANAGEMENT REQUIREMENTS

This part of the document provides:

- A summary of the assessment of the conservation status of each feature.
- A summary of the management issues that need to be addressed to maintain or restore each feature.

5.1 Conservation Status and Management Requirements of Feature 1: Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles (EU Habitat Code: 91 AO)

Conservation Status of Feature 1

Allt Pontfaen – Coed Gelli-fawr SSSI was monitored in 2008 by CCW and overall was unfavourable but recovering. Garn Wood, Kilkiffeth Wood and Dan-deri – Cwm Felin-ban were monitored by CCW in 2008, when overall they were unfavourable but recovering. Cwm Bach, Sychpant SSSI was monitored by CCW in 2009, when the site was unfavourable but recovering. Pengelli Forest and Pant-teg Wood SSSI was monitored by PCNPA in 2008 and was found to be unfavourable but recovering. Most of Galt Llannerch – Coed Gelli-deg was monitored in 2010 and was unfavourable but recovering.

The areas managed by the PCNPA, under Tir Gofal or under management agreements with CCW are considered to be recovering, because they are receiving appropriate management. However, it will be many years before they can be considered to be favourable, especially for performance indicators such as veteran trees, dead wood, and diversity of canopy.

Lichens are a feature of all the component SSSIs, except Pengelli. Although they are not a SAC feature, they are considered to be an integral part of the oak woodland, so management should aim to keep the lichens in favourable condition. A lichen survey was undertaken during 2007-2008.

Garn Wood, Kilkiffeth Wood and Dan-deri – Cwm Felin-ban SSSI

These woods were surveyed by CCW in 2008 and overall were unfavourable but recovering for the following reasons:-

- There were not enough veteran trees;
- Shrub canopy cover was too low in places;
- Regeneration was insufficient;
- Sycamore and beech were too common in many of the woods;

Current assessments (2008) are as follows:

- MU1 Recovering
- MU2 Recovering
- MU3 Recovering
- MU4 Recovering
- MU5 Unfavourable
- MU6 Unfavourable
- MU7 Recovering

Allt Pontfaen – Coed Gelli-fawr SSSI

Allt Pontfaen was surveyed by CCW in 2008 and failed to achieve the following performance indicators:

- There was not enough dead wood;
- There were not enough veteran trees;
- Beech and sycamore were too common.

Current assessments (2008) are as follows:

- MU1 Recovering
- MU2 N/A
- MU3 N/A
- MU4 Favourable
- MU5 Unfavourable
- MU6 Recovering
- MU7 Recovering
- MU8 Favourable
- MU9 Recovering

Cwm Bach, Sychpant SSSI

This site was monitored by CCW in 2009. The site is recovering under sympathetic management, but has too many non-native trees to be considered favourable.

Current assessments (2009) are as follows:

- MU1 Recovering

Gallt Llanerch – Coed Gelli-deg SSSI

These woods were surveyed by CCW in 2010. This SSSI is all privately owned and different units are managed very differently, with some grazed quite heavily, some grazed intermittently and others not grazed at all. One section (MU 1) has been in Tir Gofal for 5 years but is coming out of the scheme; another (MU 3) has just joined Tir Gofal. MU 3 has one of the best age structures in the SAC, as it escaped felling during the two world wars. Veteran trees and dead wood are better represented here than almost any other site in the SAC. However, some parts of the site that have not been grazed have become too overgrown for lichens to flourish.

Current assessments (May 2010) are as follows:

- MU 1 Recovering
- MU 2 Favourable
- MU 3 Recovering
- MU 4 Unknown
- MU 5 Unfavourable
- MU 6 Unknown

Pengelli Forest and Pant-teg Wood SSSI

This site is receiving appropriate management, including thinning and coppicing, from the Wildlife Trust of South and West Wales. The woodland is still relatively even-aged, following widespread felling during the two World Wars, although there are some older trees around the boundaries of the site. Some beech and sycamore are present and should be prevented from spreading, although some sycamore can be retained in the dormouse areas as a useful food source.

The site was surveyed in 2008 by PCNPA. Current assessments (2008) are as follows:

- MU 1 Recovering

Coed Ty-canol SSSI

This site is receiving appropriate management, including thinning, coppicing and grazing, from the Countryside Council for Wales and private landowners. The trees are fairly even-aged coppice regrowth and maidens. Natural regeneration is occurring in areas where the grazing pressure is lighter, and some other areas are fenced off periodically to allow regeneration. Grazing is needed to maintain the open conditions for lichen growth; and cattle create a higher browse line, giving more opportunities for lichen growth on the trunks of trees. Parts of the site have a poorly-developed shrub layer at present.

Current assessments (4/12/07) are as follows:

- MU 1 Recovering
- MU 2 Recovering
- MU 3 Recovering
- MU 4 Recovering

Management Requirements of Feature 1

The current status of the feature overall is unfavourable. This is primarily due to historical factors: the woodlands are relatively even-aged, with a fairly closed canopy, as a result of felling during the two world wars. This in turn affects the diversity of the shrub and field layers, the abundance of shrubs and the amount of natural regeneration. Many of the management units are already recovering in these respects, but it could be decades before the performance indicators are satisfied.

Structure

Intervention might be needed in some parts of the SAC to aid the structural diversity of the woodlands, before allowing natural processes to take over in the long term. However, the age structure of all the woods will increase with time, even without additional management.

- For the woodlands to recover, small scale group **felling** should be carried out in the even-aged stands to create gaps and allow natural regeneration.

- The most important lichen-supporting trees should be left to become veterans, **thinning** around them if necessary.

Coppice

Areas that have been traditionally managed as coppice, and have been coppiced in recent years, should continue to be managed in this way. This is particularly important in areas with dormice populations, notably Pengelli, where coppicing is already undertaken regularly.

- Continue or re-introduce **coppicing** in areas where most recently practised. For dormice, hazel coupes of around 0.1ha, cut on an 18 year rotation, are most suitable.

Non-native species

Another historical factor is that non-native trees, notably sycamore and beech, have been planted in the past. In some areas these are the oldest trees, so it would not be desirable to selectively remove them.

- Regenerating **beech and sycamore** should be controlled.
- **Japanese knotweed and rhododendron** should be eradicated by appropriate herbicide application.

Grazing

Grazing levels are too high in some areas but too low in others. Light grazing to maintain canopy gaps and control bramble would be desirable throughout much of the SAC. This will also benefit the lichen and butterfly features of the SSSIs. These are woodland species, even though they depend on more open areas, and can be considered an integral part of the oak woodland SAC feature.

- Where grazing levels are too high for trees to regenerate, areas should be **fenced off**, or saplings protected with **tree guards**, or grazing pressure reduced for a period.
- Existing open areas within the SAC (old fields, meadows and wood pasture) should be kept open by **grazing**.

Pollution

Nutrient enrichment and fertiliser drift from adjacent farmland could be affecting lichens and woodland communities in parts of the site. Appropriate management of arable and pasture land can address the problem. This has already been achieved with success in some parts of the SAC, e.g. in Allt Pontfaen – Coed Gelli-deg (MU 2), where the lichen communities around Allt Hendy meadows were judged by lichenologist Pat Wolseley to be just as good in October 2007 as they had been 22 years earlier.

- **Buffer strips** should be left alongside the woodland edge, or fields **reverted** to semi-improved pasture in these areas.

Existing and required management for oak woodland feature

SSSI name / unit no.	Felling / thinning	Coppicing	Invasives control	Appropriate grazing	Reduce fertilisers
Garn					
1	In place	N/A	In place	N/A	Unknown
2	N/A	N/A	Required	N/A	Unknown
3	N/A	N/A	N/A	N/A	Unknown
4	N/A	N/A	N/A	N/A	Unknown
5	N/A	N/A	N/A	N/A	Unknown
6	N/A	Required	N/A	N/A	Unknown
7	N/A	N/A	N/A	N/A	Unknown
Allt Pontfaen					
1	In place	In place	N/A	N/A	Unknown
2	N/A	N/A	N/A	N/A	In place
4	N/A	N/A	N/A	N/A	Unknown
5	In place	In place	In place	In place	Unknown
6	N/A	N/A	N/A	N/A	Unknown
7	N/A	N/A	N/A	N/A	Unknown
8	N/A	N/A	N/A	N/A	Unknown
Cwm Bach					
1	In place	N/A	In place	In place	In place
Gallt Llaner					
1	N/A	N/A	N/A	In place	In place
2	N/A	N/A	N/A	In place	Unknown
3	N/A	N/A	N/A	Unknown	Unknown
4	Unknown	Unknown	Unknown	Unknown	Unknown
5	N/A	N/A	N/A	N/A	Unknown
6	Unknown	Unknown	Unknown	Unknown	Unknown
Pengelli					
	In place	In place	In place	N/A	Unknown
Coed Ty-can					
1	N/A	N/A	In place	In place	In place
2	In place	In place	In place	In place	In place
3	N/A	N/A	In place	In place	Unknown
4	N/A	N/A	In place	In place	Unknown

5.2 Conservation Status and Management Requirements of Feature 2: Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (EU Habitat Code: 91EO)

Conservation Status of Feature 2

The alluvial woodland was monitored in 2005 by Ann Fells and Mary Chadwick (CCW). The assessment, based on 6 sample plots, was that the alluvial woodland is in favourable condition, because overall at least 80% of the feature was in good condition. However, some parts of the site were affected by drying out and some small areas were affected by over-grazing. Full details are given in Ann Fells' SAC Monitoring Report of 30/3/2005.

Black Bog Ant has recently been discovered just outside the SSSI (and SAC) boundary of Dyffryn Gwaun. Further information on its requirements is needed before any changes are made within the SSSI (eg to water levels) that could impact adjacent land.

Lichens are a feature of all the component SSSIs except Pengelli. Although they are not a SAC feature, they are considered to be an integral part of the alluvial woodland, so management should aim to keep the lichens in favourable condition. A lichen survey has been undertaken through the winter of 2007-2008, which can serve as a base-line for monitoring.

Current assessments for each unit (4/12/07) are as follows:

Garn Wood, Kilkiffeth Wood and Dan-deri – Cwm Felin-ban SSSI

- MU8 Recovering
- MU9 Unknown
- MU10 Unknown

Allt Pontfaen – Coed Gelli-fawr SSSI

- MU3 Unknown
- MU9 Unknown

Dyffryn Gwaun SSSI

There is evidence that the site is drying out in parts of Llanerch Alder Carr and the section to the south of the Afon Gwaun.

- MU2 Favourable
- MU3 Favourable
- MU4 Unfavourable
- MU5 Favourable overall, but drying out in some places

Gallt Llanerch – Coed Gelli-deg SSSI

- MU6 Unknown

Pengelli Forest and Pant-teg Wood SSSI

- MU1 Unknown

Management Requirements of Feature 2

Most of the alluvial woodland is in Dyffryn Gwaun SSSI, which is receiving appropriate grazing management. The site is in favourable condition but faces two main threats: drying out and invasive species.

Drying out

There is some localised poaching or over-grazing, but this is accepted as being the inevitable result of achieving the right level of grazing across a site that is very wet and awkward to manage. The main threat is of drying out in places, not from natural processes but from introduced drainage, where drains have been dug in the past allowing species of drier habitats (notably bramble and ash to take over. There is a risk of drier woodland communities taking over from the alluvial woodland in these areas. However, raising water levels could make grazing the site even more difficult, and could have an impact on the black bog ant on adjacent land, so this should only be undertaken (if at all) after a thorough feasibility study.

- Consideration should be given to blocking drains in areas where the ground is drying out.

Invasive species

Japanese knotweed is present in places along the Afon Gwaun and occasionally spreads as pieces of the plant get washed along the river.

- Invasive species should be controlled using appropriate herbicides.

Grazing

Llanerch Alder Carr (MU5) is the only section of Dyffryn Gwaun that is not grazed. It is not known whether grazing would be beneficial in the management units that are currently ungrazed.

Regeneration

Alder requires high light levels to regenerate from seed and will not, therefore, regenerate under a canopy. However, it readily self-coppices from the base as trunks fall. This 'coppice' re-growth is counted as regeneration in the performance indicators. At present, natural processes of trees falling and re-growing appear to be maintaining the required structural diversity across most of the site, but some coppicing might be required in areas where trees have not been falling down.

Existing and required management for alluvial woodland feature

SSSI \ MU	Water levels	Invasive control	Grazing	Coppicing
Garn				
8	Unknown	Unknown	Unknown	Unknown
9	Unknown	Unknown	Unknown	Unknown
10	Unknown	Unknown	Unknown	Unknown
Allt Pontfaen				
3	Unknown	Unknown	Unknown	Unknown
9	Unknown	Unknown	Unknown	Unknown
Dyffryn Gwaun				
2	N/A	Required	In place	N/A
3	Required	Unknown	In place	N/A
4	Required	Unknown	In place	N/A
5	Required	N/A	Unknown	N/A
Gallt Llanerch				
6	Unknown	Unknown	Unknown	Unknown
Pengelli				
1	Unknown	In place	Unknown	Unknown

5.2 Conservation Status and Management Requirements of Feature 3: Barbastelle Bat (*Barbastella barbastellus*)

Conservation Status of Feature 3

The condition of the woodland for barbastelles was monitored in March 2006 by Mary Chadwick, and the woodland was found to be in favourable condition. The bats themselves were monitored by Margaret Clarke in July, August and September 2005 and were found to be in favourable condition. The current assessment (11/12/07) of the conservation status of this feature is that it is favourable.

Pengelli Forest and Pant-teg Wood SSSI, where the barbastelles are found, is managed appropriately by the Wildlife Trust for South and West Wales. There is enough felling and natural tree-fall to ensure that there are adequate canopy gaps for a well-developed shrub layer (especially holly) and regenerating trees to ensure that there will be a supply of suitable roost sites into the future.

One threat to the barbastelle feature is that around half of the roosting sites and the majority of the foraging areas lie outside the SSSI and SAC boundaries, as the boundaries were drawn up before the bats were discovered. These areas are not currently protected by any management agreements. There is at present a very real risk of inappropriate land management damaging roosts and foraging areas outside the SSSI.

Management requirements of Feature 3

The current status of the feature, based on the SSSI at Pengelli, is favourable. However, CCW currently has no influence over the management of the surrounding land where breeding roosts and foraging areas are found. If these areas were to fall into unsympathetic management, this could pose a threat to the barbastelle population as a whole and, therefore, the feature of the SAC and SSSI.

Woodland Structure

The areas of woodland where barbastelles roost generally have a good age structure with many over-mature, ivy-clad trees, enough younger trees to ensure a future supply of roosting sites, and a well-developed shrub layer with abundant holly. These areas should be disturbed as little as possible.

Within 2km of Pengelli Forest and Pant-teg Wood SSSI, the following management should be applied:

- There should be no management within 50m of a roost.
- All mature trees should be left as potential roosts
- Natural regeneration should be protected with tree guards if necessary
- There should be no shrub clearance except small-scale hazel coppicing for dormice.

Foraging Areas

Areas of scrub, wet woodland, bracken, marshy grassland and hedgerows are all important for foraging bats. The land within a 16 km radius of Pengelli should have contiguous areas of semi-natural habitat, including all of those mentioned above, with sheltered flyways connecting areas of woodland.

6. ACTION PLAN: SUMMARY

This section takes the management requirements outlined in Section 5 a stage further, assessing the specific management actions required on each management unit. This information is a summary of that held in CCW's Actions Database for sites, and the database will be used by CCW and partner organisations to plan future work to meet the Wales Environment Strategy targets for sites.

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
001	001456	Unit 1 - Allt Pontfaen	Grazing is almost certainly impractical at this site, as it is very narrow and steep, so livestock would congregate along the public footpath at the bottom. Tree-felling would be a better way to improve light levels here.	Yes
002	001458	Unit 2 - Allt Pontfaen	Current Section 15 Agreement working well to protect lichens	No
003	001459	Unit 3 - Allt Pontfaen	Survey required to determine management needs	No
004	001460	Unit 4 - Allt Pontfaen	Survey needed to determine management issues	No
005	001461	Unit 5 - Allt Pontfaen	Section 15 in place to facilitate appropriate woodland management	No
006	001462	Unit 6 - Allt Pontfaen	Survey needed to determine management requirements	No
007	001463	Unit 7 - Allt Pontfaen	Survey needed to assess management requirements	No
008	001464	Unit 8 - Allt Pontfaen	Survey needed to assess management requirements	No
009	001465	Unit 9 - Allt Pontfaen	Survey needed to determine management needs	No
010	001468	Unit 1 - Ty Canol (Pembrokeshire Coast National Park)	Favourable management in place	No
011	001469	Unit 2 - Ty Canol (Pembrokeshire Coast National Park)	Favourable management in place	No
012	001470	Unit 3 - Ty Canol (Ty Canol Farm)	Favourable management in place	No
013	001471	Unit 4 - Ty Canol (Eisteddfa Fawr, Brynberian)	Favourable management in place	No
014	001472	Unit 1 - Pengelli Forest & Pant-teg Wood	The breeding population of barbastes is very dependent on land outside the SSSI as roosts, foraging habitat and flight-lines. This makes the population extremely vulnerable.	Yes
015	001473	Unit 1 - Gallt Llanerch	Monitoring visit on 3/6/10 showed that current pattern of grazing (for a month or so after lambing has finished) is not adversely affecting the site, so no need for management agreement.	No
016	001474	Unit 2 - Gallt Llanerch	Survey required to determine management needs	No

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
017	001475	Unit 3 - Gallt Llanerch	Land has recently come into Tir Gofal. Prior to this, grazing had ceased for a year or two and the site had become too shaded for lichens to flourish. The new TG agreement is addressing this.	No
018	001476	Unit 4 - Gallt Llanerch	Survey needed to determine management requirements	No
019	001477	Unit 5 - Gallt Llanerch	Survey needed to determine management requirements	No
020	001478	Unit 6 - Gallt Llanerch	Survey needed to determine management requirements	No
021	001479	Unit 1 - Dyffryn Gwaun	A new S15 has been signed as of 2009 which should address the management issues here.	No
022	001480	Unit 2 - Dyffryn Gwaun	A new S15 has been signed as of 2009 which should address the management issues here. There are some areas of Japanese Knotweed present. These are to be tackled as part of a planned PCNPA/CCW project.	No
023	001481	Unit 3 - Dyffryn Gwaun	During previous monitoring the wet woodland failed due to supposed drying. It is not clear if this is the case or not. Plots were located at woodland edges and sometimes in places where wet woodland had only developed in the last 30-40 yrs. Any new monitoring should look at this carefully. In the meantime ditch blocking and conifer removal on Cors Llanerch immediately adjacent to Llanerch Alder Carr may help improve the habitat.	No
024	001482	Unit 4 - Dyffryn Gwaun	During previous monitoring the wet woodland failed due to supposed drying. It is not clear if this is the case or not. Plots were located at woodland edges and sometimes in places where wet woodland had only developed in the last 30-40 yrs. Any new monitoring should look at this carefully. In the meantime ditch blocking and conifer removal on Cors Llanerch immediately adjacent to Llanerch Alder Carr may help improve the habitat.	No
025	001483	Unit 5 - Dyffryn Gwaun	During previous monitoring the wet woodland failed due to supposed drying. It is not clear if this is the case or not. Plots were located at woodland edges and sometimes in places where wet woodland had only developed in the last 30-40 yrs. Any new monitoring should look at this carefully. In the meantime ditch blocking and conifer removal on Cors Llanerch immediately adjacent to Llanerch Alder Carr may help improve the habitat.	Yes
026	001487	Unit 1 - Cwm Bach	Appropriate management in place - managed by PCNP.	No
027	001488	Unit 1 - Garn Wood	Woodland receiving appropriate management from PCNP	No
028	001489	Unit 2 - Garn Wood	Survey needed to determine management requirements.	No

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
029	001490	Unit 3 - Garn Wood	Survey needed to determine management requirements	No
030	001491	Unit 4 - Garn Wood	Survey needed to determine management requirements	No
031	001492	Unit 5 - Garn Wood	Owner is considering joining Tir Gofal. If he does so, some very small scale felling / thinning would be beneficial, but there is no urgent need for this. Non-intervention would be justified if he does not join TG.	No
032	001493	Unit 6 - Garn Wood	Survey needed to determine management requirements	No
033	001495	Unit 7 - Garn Wood	Survey needed to determine management requirements	No
034	001496	Unit 8 - Garn Wood	Survey needed to determine status of alluvial woodland	No
035	001497	Unit 9 - Garn Wood	Survey needed to determine status of alluvial woodland	No
036	001498	Unit 10 - Garn Wood	Survey needed to determine status of alluvial woodland	No

7. GLOSSARY

This glossary defines some of the terms used in this **Core Management Plan**. Some of the definitions are based on definitions contained in other documents, including legislation and other publications of CCW and the UK nature conservation agencies. None of these definitions is legally definitive.

- Action** A recognisable and individually described act, undertaking or **project** of any kind, specified in section 6 of a **Core Management Plan** or **Management Plan**, as being required for the **conservation management** of a site.
- Attribute** A quantifiable and monitorable characteristic of a **feature** that, in combination with other such attributes, describes its **condition**.
- Common Standards Monitoring** A set of principles developed jointly by the UK conservation agencies to help ensure a consistent approach to **monitoring** and reporting on the **features** of sites designated for nature conservation, supported by guidance on identification of **attributes** and monitoring methodologies.
- Condition** A description of the state of a feature in terms of qualities or **attributes** that are relevant in a nature conservation context. For example the condition of a habitat usually includes its extent and species composition and might also include aspects of its ecological functioning, spatial distribution and so on. The condition of a species population usually includes its total size and might also include its age structure, productivity, relationship to other populations and spatial distribution. Aspects of the habitat(s) on which a species population depends may also be considered as attributes of its condition.
- Condition assessment** The process of characterising the **condition** of a **feature** with particular reference to whether the aspirations for its condition, as expressed in its **conservation objective**, are being met.
- Condition categories** The **condition** of **feature** can be categorised, following **condition assessment** as one of the following²:
- Favourable: maintained;
 - Favourable: recovered;
 - Favourable: un-classified
 - Unfavourable: recovering;
 - Unfavourable: no change;
 - Unfavourable: declining;
 - Unfavourable: un-classified
 - Partially destroyed;
 - Destroyed.

² See JNCC guidance on Common Standards Monitoring <http://www.jncc.gov.uk/page-2272>

- Conservation management** Acts or undertaking of all kinds, including but not necessarily limited to **actions**, taken with the aim of achieving the **conservation objectives** of a site. Conservation management includes the taking of statutory and non-statutory measures, it can include the acts of any party and it may take place outside site boundaries as well as within sites. Conservation management may also be embedded within other frameworks for land/sea management carried out for purposes other than achieving the conservation objectives.
- Conservation objective** The expression of the desired **conservation status** of a **feature**, expressed as a **vision for the feature** and a series of **performance indicators**. The conservation objective for a feature is thus a composite statement, and each feature has one conservation objective.
- Conservation status** A description of the state of a **feature** that comprises both its **condition** and the state of the **factors** affecting or likely to affect it. Conservation status is thus a characterisation of both the current state of a feature and its future prospects.
- Conservation status assessment** The process of characterising the **conservation status** of a **feature** with particular reference to whether the aspirations for it, as expressed in its **conservation objective**, are being met. The results of conservation status assessment can be summarised either as ‘favourable’ (i.e. conservation objectives are met) or unfavourable (i.e. conservation objectives are not met). However the value of conservation status assessment in terms of supporting decisions about **conservation management**, lies mainly in the details of the assessment of feature **condition**, **factors** and trend information derived from comparisons between current and previous conservation status assessments and condition assessments.
- Core Management Plan** A CCW document containing the conservation objectives for a site and a summary of other information contained in a full site **Management Plan**.
- Factor** Anything that has influenced, is influencing or may influence the **condition** of a **feature**. Factors can be natural processes, human activities or effects arising from natural process or human activities, They can be positive or negative in terms of their influence on features, and they can arise within a site or from outside the site. Physical, socio-economic or legal constraints on **conservation management** can also be considered as factors.
- Favourable condition** See **condition** and **condition assessment**

Favourable conservation status See **conservation status** and **conservation status assessment**.³

Feature **The species population, habitat type or other entity for which a site is designated. The ecological or geological interest which justifies the designation of a site and which is the focus of conservation management.**

Integrity See **site integrity**

Key Feature The habitat or species population within a **management unit** that is the primary focus of **conservation management** and **monitoring** in that unit.

Management Plan The full expression of a designated site's legal status, **vision, features, conservation objectives, performance indicators** and management requirements. A complete management plan may not reside in a single document, but may be contained in a number of documents (including in particular **the Core Management Plan**) and sets of electronically stored information.

Management Unit An area within a site, defined according to one or more of a range of criteria, such as topography, location of **features**, tenure, patterns of land/sea use. The key characteristic of management units is to reflect the spatial scale at which **conservation management** and **monitoring** can be most effectively organised. They are used as the primary basis for differentiating priorities for conservation management and monitoring in different parts of a site, and for facilitating communication with those responsible for management of different parts of a site.

Monitoring An intermittent (regular or irregular) series of observations in time, carried out to show the extent of compliance with a formulated standard or degree of deviation from an expected norm. In **Common Standards Monitoring**, the formulated standard is the quantified expression of favourable **condition** based on **attributes**.

Operational limits The levels or values within which a **factor** is considered to be acceptable in terms of its influence on a **feature**. A factor may have both upper and lower operational limits, or only an upper limit or lower limit. For some factors an upper limit may be zero.

Performance indicators The **attributes** and their associated **specified limits**, together with **factors** and their associated **operational limits**, which provide the standard against which information from **monitoring** and other sources is used to determine the degree to which the **conservation objectives** for a **feature** are being met. Performance indicators are part of, not the same as, conservation objectives. See also **vision for the feature**.

³ A full definition of favourable conservation status is given in Section 4.

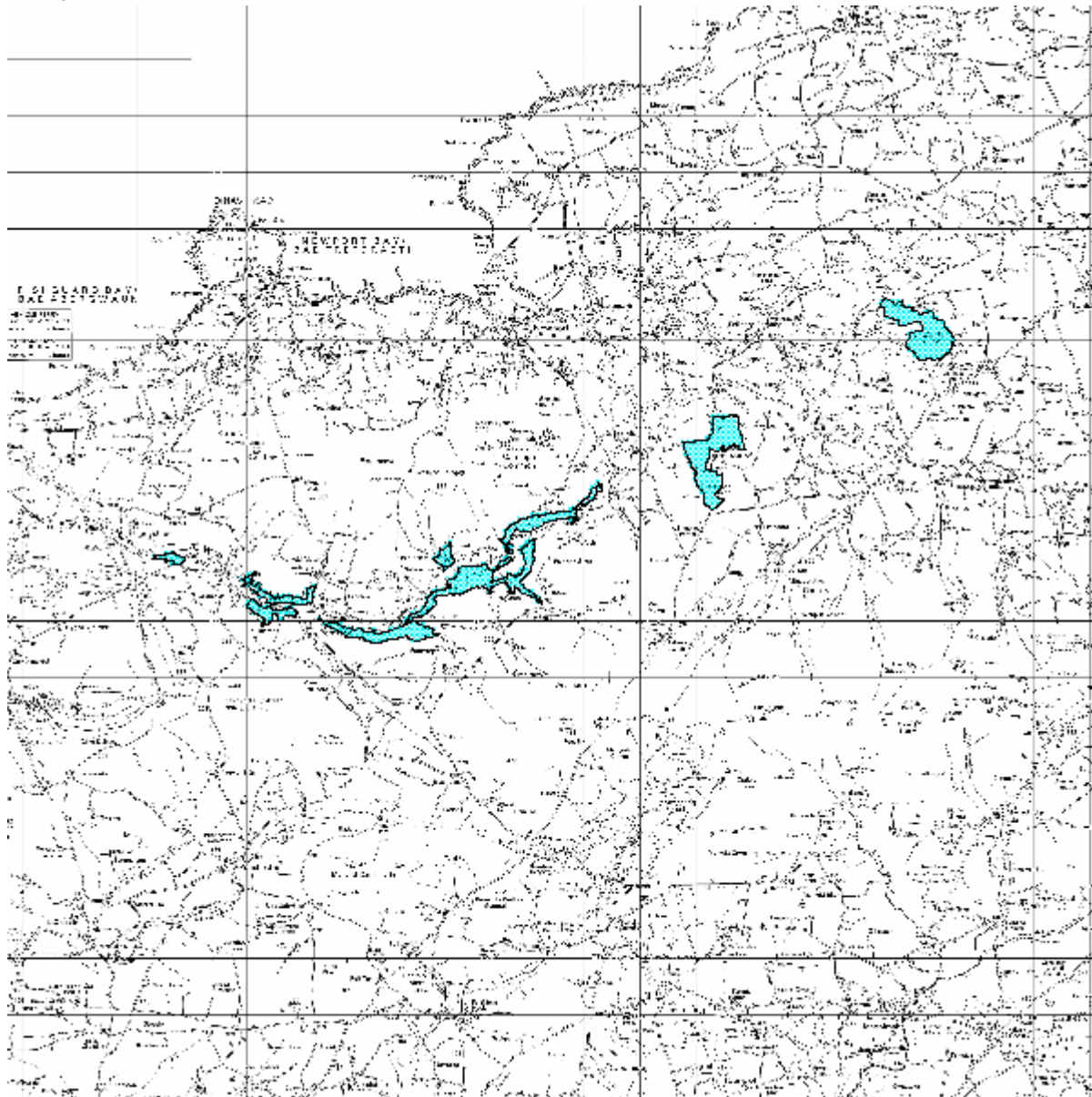
Plan or project	<p>Project: Any form of construction work, installation, development or other intervention in the environment, the carrying out or continuance of which is subject to a decision by any public body or statutory undertaker.</p> <p>Plan: a document prepared or adopted by a public body or statutory undertaker, intended to influence decisions on the carrying out of projects.</p> <p>Decisions on plans and projects which affect Natura 2000 and Ramsar sites are subject to specific legal and policy procedures.</p>
Site integrity	The coherence of a site's ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it is designated.
Site Management Statement (SMS)	The document containing CCW's views about the management of a site issued as part of the legal notification of an SSSI under section 28(4) of the Wildlife and Countryside Act 1981, as substituted.
Special Feature	See feature .
Specified limit	The levels or values for an attribute which define the degree to which the attribute can fluctuate without creating cause for concern about the condition of the feature . The range within the limits corresponds to favourable, the range outside the limits corresponds to unfavourable. Attributes may have lower specified limits, upper specified limits, or both.
Unit	See management unit .
Vision for the feature	The expression, within a conservation objective , of the aspirations for the feature concerned. See also performance indicators .
Vision Statement	The statement conveying an impression of the whole site in the state that is intended to be the product of its conservation management . A 'pen portrait' outlining the conditions that should prevail when all the conservation objectives are met. A description of the site as it would be when all the features are in favourable condition .

8. REFERENCES AND ANNEXES

Howe, Mike (2002). Pembrokeshire Coast National Park Authority Woodland Estate Condition Monitoring Report, September 2002.

Fells, Ann (30/03/05). North Pembrokeshire Woodlands SAC. Annex 1 Habitat (91EO). Alluvial woodlands with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*). CCW SAC Monitoring report (draft).

Annex 1



SAC boundary for North Pembrokeshire Woodlands SAC.

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