

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

**CORE MANAGEMENT PLAN
INCLUDING CONSERVATION OBJECTIVES**

FOR

**Cwm Clydach Site of Special Scientific Interest (SSSI),
Incorporating Cwm Clydach Woodlands Special Area of
Conservation (SAC)**

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**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.**



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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 web site and may be revised in response to changing circumstances or new information. This is a technical document that supplements summary information on the web site.

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 site. It brings together and summarises the Conservation Objectives (part 4) into a single, integrated statement about the site.

Around two thirds of the site is covered by predominantly beech woodland (including temporary canopy gaps and glades), with mature sessile and hybrid oaks common in the canopy in the west of the site. The beech woodland has trees of all age classes with a scattering of standing and fallen deadwood. Regeneration of trees is sufficient to maintain the woodland cover in the long term. Whitebeam and yew trees are locally prominent. Ash and birch trees may also be present, but rarely dominate the canopy.

The shrub layer and ground flora can be quite sparse in the beech woodland, but where present consist of locally native plants such as hazel and hawthorn, bramble, dog's mercury, enchanter's-nightshade, lords-and-ladies, woodruff, male fern, sanicle, wood melick, ivy, false brome, violets, herb robert, wood avens, and tufted hair-grass. On more acidic soils where oak is prominent, the ground flora is often more heathy with bilberry and wavy hair-grass and in places mosses such as greater fork moss and swan's-neck thyme-moss are abundant. Scarcer plants, such as soft-leaved sedge and bird's-nest orchid are locally frequent and, more rarely, yellow bird's-nest orchid and oak fern can be found.

Rare whitebeam trees grow on steeper slopes and on limestone outcrops within and outside the woodland and on old railway cuttings. Their populations are stable or increasing.

A wide range of fungi is present, with rose spindles, rosy pinkgill, olive earthtongue and waxcaps in the grassland habitats, which includes the unsurfaced parts of the disused railway trackbed, and giant club, powdercap strangler and coral fungi in the woodland.

The important geological rock exposures need to be kept in a condition, which will enable researchers to re-examine the evidence available to previous workers and use them as a teaching resource.

2. SITE DESCRIPTION

2.1 Area and Designations Covered by this Plan

Grid reference: SO 218 125 (SSSI)
SO 207 123 (SAC)

Unitary authorities: Monmouthshire
Blaenau Gwent
Brecon Beacons National Park

Area (hectares): 45 (SSSI)
28.8 (SAC)

Designations covered: The SAC is underpinned by Cwm Clydach Site of Special Scientific Interest (SSSI). The area covered by the SSSI is larger than that of the SAC. The SSSI is notified for a range of biological and geological features. It is the beech woodland that forms the SAC interest. Part of the site and most of the beech-dominated woodland is a National Nature Reserve.

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 site is situated on the southern side of the River Clydach valley, approximately 2km east, north east of Brynmawr. The underlying geology varies across the site, consisting of sedimentary rocks that range from Old Red Sandstone through Carboniferous Limestone into shales and sandstones of the Millstone Grit and Coal Measures. Soils mainly consist of typical brown earths and humo-ferric podsols. Altitude ranges from 170m by the River Clydach to 350m in Cwm Llamrarch.

Cwm Clydach is of special interest for its stands of broadleaved woodland dominated by beech, intergrading with more open habitats, which together support a number of rare and scarce vascular plants including whitebeams *Sorbus* spp. and soft-leaved sedge *Carex montana*. There are important woodland and grassland fungi assemblages with rare species such as *Squamanita paradoxa*. The site also includes two localities of national geological importance.

2.3 Outline of Past and Current Management

The woodland occupies land that is potentially open to grazing by stock from adjoining land throughout the year. However, these areas are not intensively stocked and the level of grazing within the site is generally considered to be appropriate in order to maintain the beech woodland (sheep graze other tree species preferentially). Recent changes in management within the locality, a general reduction of sheep numbers and the construction of cycle route through the site may have the potential to adversely effect the grassland areas and the fungi in particular.

Management of the woodland is generally minimum intervention (excepting safety considerations). A small area of larch plantation is gradually being removed from the eastern edge of the reserve

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 on tenure.

The following table confirms the relationships between the management units and the designations covered:

Unit number	SAC	SSSI	CCW owned
Cwm Clydach SSSI			
1	✓	✓	✓
2		✓	✓
3		✓	
4		✓	
5	✓	✓	

3. THE SPECIAL FEATURES

3.1 Confirmation of Special Features

<i>Designated feature</i>	<i>Relationships, nomenclature etc</i>	<i>Conservation Objective in part 4</i>
<i>SAC features</i>		
<i>Annex I habitats that are a primary reason for selection of this site:</i>		
1. Asperulo – Fagetum beech forests	EU Habitat code: 9130 Consists of semi-natural woodland, corresponding to National Vegetation Classification (NVC) type: W12, <i>Fagus sylvatica - Mercurialis perennis</i> woodland. Referred to in this plan as ‘calcareous beech woodland’	1
<i>Annex I habitats that are a primary reason for selection of this site:</i>		
2. Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrublayer (<i>Quercion robori-petraeae</i> or <i>Ilici-Fagenion</i>)	EU Habitat code: 9120 Consists of semi-natural woodland, corresponding to National Vegetation Classification (NVC) type: W15 <i>Fagus sylvatica - Deschampsia flexuosa</i> woodland. Referred to in this plan as ‘acid beech woodland’	2
<i>SPA features</i>		
Not applicable		
<i>Ramsar features</i>		
Not applicable		
<i>SSSI features</i>		
3. Assemblage of rare and scarce plants		Not written
4. A variety of large-leaved whitebeam <i>Sorbus porrigentiformis</i>	Nationally rare.	Not written
5. English whitebeam <i>Sorbus anglica</i>	Nationally rare.	Not written
6. Soft-leaved sedge <i>Carex montana</i>	Nationally scarce.	Not written
7. Woodland fungi assemblage		Not written
8. Powdercap strangler <i>Squamanita paradoxa</i>	Nationally rare.	Not written
9. Grassland fungi assemblage		Not written
10. Dinantian rocks (geological)	Llanelly Quarry.	Not written
11. Namurian rocks (geological)	Llan-march Dingle.	Not written

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 driver of management and focus of monitoring effort, perhaps because of the dependence of a key species (see KS below). There will usually only be one Key Habitat in a unit but there can be more, especially with large units.

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 drivers of management or focus of 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 may be 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 that are essential for the 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 known to be present in the management unit.

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

Cwm Clydach	Management unit				
	1	2	3	4	5
SAC	✓				✓
SSSI	✓	✓	✓	✓	✓
NNR/CCW owned	✓	✓			
SAC features					
1. Calcareous beech woodland	KH	x	x	x	KH
2. Acid beech woodland	KH	x	x	x	x
SSSI features					
Not yet confirmed					

Unit 1 is owned by CCW and comprises the bulk of the SAC beech woodland. Most of the acidophilous beech woodland is found towards the western part of Unit 1.

Unit 2 is owned by CCW but supports non-SAC habitats and geology.

Unit 3 is the old railway track, where the main interest on the track bed itself is the fungi assemblage. The trackbed habitats also support some vascular plant interest.

Unit 4 - the bulk is included within the SSSI for its geological interest and much is also common land. There is some biological interest, mainly grassland habitats supporting fungi, non-SAC broadleaved woodland and a variety of scarce and rare plants - the most notable being whitebeams and hawkweeds that mainly grow on the railway cuttings and low crags, which are also tend to be of geological note. There is therefore potential for some management conflict between the need to keep the geology exposed and a natural tendency for the areas to scrub over (sometimes with rare species), but exposures are generally extensive enough for management conflicts not to be a significant issue.

Unit 5 is other land within the SAC not owned by CCW.

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 Web link: <http://www.jncc.gov.uk/page-2199>

4.1 Conservation Objective for Feature 1:
Asperulo – Fagetum beech forests (EU Habitat code 9130)

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:

- At least 50% of the canopy-forming trees are beech.
- The canopy cover is at least 80% (excluding areas of crag) and composed of locally native trees.
- The woodland has trees of all age classes with a scattering of standing and fallen dead wood.
- Regeneration of trees is sufficient to maintain the woodland cover in the long term.
- The shrub layer and ground flora can be quite sparse, but where present consist of locally native plants such as yew, hawthorn, wych elm, ash, hazel, field maple and elder, bramble, dog's mercury, enchanter's-nightshade, lords-and-ladies, woodruff, male fern, sanicle, wood melick, ivy, false brome, violets, herb robert, wood avens, and tufted hair-grass.
- Scarcer plants, such as soft-leaved sedge and bird's-nest orchid are locally frequent and, more rarely, yellow bird's-nest orchid can be found.
- All factors affecting the achievement of the above conditions are 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.

<i>Performance indicators for feature condition</i>		
<i>Attribute</i>	<i>Attribute rationale and other comments</i>	<i>Specified limits</i>
A1. Extent and distribution	Extent is based on ground surveys and 2006 aerial photographs. Upper limit set to maintain areas of non-wooded habitat.	<i>Upper limit:</i> 25 ha <i>Lower limit:</i> 21 ha Located in units 1 & 5.
A2. Canopy cover	75% of the woodland should meet the criteria for canopy cover.	<i>Upper limit:</i> 90% <i>Lower limit:</i> 80%
Attributes A3–A6 below are based on the Standard Common Standards Monitoring guidance, modified according to site-specific requirements. They apply to the main calcareous beech woodland stands in units 1 & 5 (see maps in Annex 1).		
A3. Canopy composition	In some areas non-native trees, such as sycamore, will be tolerated, so long as they are not freely re-generating in the understorey. 75% of the woodland needs to comply with the limits set.	<i>Upper limit:</i> N/A <i>Lower limit:</i> 50% of the canopy forming trees are beech (except in those areas where whitebeam dominates) AND: 95% of tree cover is composed of locally native trees (see definition below).

A4. Regeneration	<p>To be met in at least 50% of significant gaps in canopy. Such gaps should be recorded at each monitoring visit.</p> <p>A gap is defined as an open area with a diameter of at least one average tree height.</p> <p>Beech will also regenerate under the canopy and some recording should also occur here.</p>	<p><i>Upper limit:</i> N/A <i>Lower limit:</i> Canopy forming trees, shrubs or coppice re-growth at least 1.5m high present (there should be enough present to maintain the canopy in the long term).</p>
A5. Ground flora	<p>The ground flora can be naturally quite sparse under the beech canopy, but a few typical calcareous beech woodland plants should be evident in all areas.</p> <p>Brambles and ivy can be locally quite abundant but other indicators of disturbance and nutrient enrichment should not be.</p> <p>Limits should be met for 75% of the woodland.</p>	<p><i>Upper limit:</i> The cover of nettles should not exceed 10%. <i>Lower limit:</i> Typical ground flora species (see list below) should be evident throughout the woodland.</p>
A6. Dead Wood	<p>It is difficult to set meaningful limits for dead wood but, in the short term. Much of the woodland is on steep ground and so removal of deadwood is unlikely. However, any fallen timber will tend to accumulate at the foot of the slopes.</p> <p>The limits given here should be met in at least 75% of existing woodland.</p>	<p><i>Upper limit:</i> None <i>Lower limit:</i> Presence of standing and/or fallen deadwood greater than 20 cm diameter.</p>
<p>Locally native Trees and shrubs: Beech; Ash; Oak; Birch; Rowan; Field maple; Yew; Hawthorn; Hazel; Elder and Holly.</p>		
<p>Typical plants of calcareous beech woodland: Dog's mercury; Bramble; Enchanter's-nightshade; Lords-and-Ladies; Woodruff; Male fern; Sanicle; Wood melick; Ivy; False brome; Violets; Rough-stalked feather moss <i>Brachythecium rutabulum</i>; Common feather-moss <i>Eurhynchium praelongum</i> and Herb Robert. List likely to be refined following further survey and monitoring.</p>		
<p>Performance indicators for factors affecting the feature</p>		
Factor	Factor rationale and other comments	Operational Limits
F1. Livestock grazing	<p>There is a long-history of the woodland being open to casual grazing by sheep. This has probably skewed the species make up of the wood towards beech because sheep preferentially graze other species.</p> <p>This is not thought to be a major issue,</p>	<p><i>Upper limit:</i> Sufficiently low to allow regeneration in the long term, as defined by the regeneration attribute above. <i>Lower limit:</i> None required.</p>

	but needs to be kept under review.	
F2. Non-native and invasive species	Along the river corridor there is Japanese knotweed, which may pose a threat to the woodland habitat.	<i>Upper limit:</i> No spread of Japanese knotweed into woodland. <i>Lower limit:</i> None required.

4.2 Conservation Objective for Feature 2:

Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion* (EU Habitat code 9120))

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 75% of the woodland vegetation meets the criteria for intact acid beech wood, where:

- At least 10% of the canopy forming trees are beech.
- The canopy cover is at least 80% and composed of locally native species.
- The woodland has trees of all age classes with a scattering of standing and fallen dead wood.
- Regeneration of trees is sufficient to maintain the woodland cover in the long term.
- The shrub layer and ground flora can be quite sparse, but where present consist of locally native plants.
- All factors affecting the achievement of the above conditions are 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.

<i>Performance indicators for feature condition</i>		
<i>Attribute</i>	<i>Attribute rationale and other comments</i>	<i>Specified limits</i>
A1. Extent and distribution	Extent is based on ground surveys and 2006 aerial photographs. Upper limit set to maintain areas of non-wooded habitat.	<i>Upper limit:</i> 3.5 ha <i>Lower limit:</i> 4.3 ha Located mainly on the upper slopes at the western end of unit 1.
A2. Canopy cover	75% of the woodland should meet the criteria for canopy cover.	<i>Upper limit:</i> 90% <i>Lower limit:</i> 80%
Attributes A3–A6 below are based on the Standard Common Standards Monitoring guidance, modified according to site-specific requirements. They apply to the main acid beech woodland stands in unit 1 (see maps in Annex 1).		
A3. Canopy composition	In some areas non-native trees, such as sycamore, will be tolerated, so long as they are not freely re-generating in the understorey. 75% of the woodland needs to comply with the limits set.	<i>Upper limit:</i> N/A <i>Lower limit:</i> 10% of the canopy forming trees are beech AND: 95% of tree cover is composed of locally native trees (see definition below).

A4. Regeneration	To be met in at least 50% of significant gaps in canopy. Such gaps should be recorded at each monitoring visit. A gap is defined as an open area with a diameter of at least one average tree height.	<i>Upper limit:</i> N/A <i>Lower limit:</i> Canopy forming trees, shrubs or coppice re-growth at least 1.5m high present (should be enough present to maintain the canopy in the long term).
A5. Ground flora	The ground flora can be naturally quite sparse under the beech canopy, but a few typical acid beech woodland plants should be evident. Bracken can be locally quite abundant but should not dominate large areas of the woodland floor. Limits should be met for 75% of the woodland.	<i>Upper limit:</i> N/A <i>Lower limit:</i> Typical ground flora species (see list below) should be evident throughout the woodland.
A6. Dead Wood	It is difficult to set meaningful limits for dead wood but, in the short term. Much of the woodland is on steep ground and so removal of deadwood is unlikely. However, any fallen timber will tend to accumulate at the foot of the slopes. The limits given here should be met in at least 75% of existing woodland.	<i>Upper limit:</i> None <i>Lower limit:</i> Presence of standing and/or fallen deadwood greater than 20 cm diameter.
Locally native Trees and shrubs: Beech; Ash; Oak; Birch; Rowan; Yew; Hawthorn; Hazel and Holly.		
Typical plants of acid beech woodland: Bilberry; Heather; Wavy hair-grass; Common bent; Wood sorrel and moss carpets, of species such as swan's-neck thyme-moss <i>Mnium hornum</i> , bank hair-cap <i>Polytricum formosum</i> , large white-moss <i>Leucobryum glaucum</i> and common tamarisk-moss <i>Thuidium tamariscinum</i> .		
Performance indicators for factors affecting the feature		
Factor	Factor rationale and other comments	Operational Limits
F1. Livestock grazing	There is a long-history of the woodland being open to casual grazing by sheep. This has probably skewed the species make up of the wood towards beech because sheep preferentially graze other species. This is not thought to be a major issue, but needs to be kept under review.	<i>Upper limit:</i> Sufficiently low to allow regeneration in the long term, as defined by the regeneration attribute above. <i>Lower limit:</i> None required.
F2. Non-native and invasive species	There are localised problems with bracken on the upper slopes in the western part of the site, but this is mainly confined to more open areas at	<i>Upper limit:</i> No increase in the area of woodland floor that is dominated by invasive species. <i>Lower limit:</i> None required.

	the edges of the woodland. Once a canopy has established, shading usually limits the growth of bracken.	
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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: Asperulo – Fagetum beech forest (EU Habitat code 9130)

Conservation Status of Feature 1

The conservation status of this feature within the site is considered to be **Favourable** (2006).

Assessment carried out in August 2002 indicated that feature condition was: **Favourable, maintained**. All the factors affecting the features appear to be under control.

Management Requirements of Feature 1

Woodland management

Most of the woodland at the site is mature and appears to require little active management. Many of the beech trees, however, are old and of a rather even age and in recent years a significant number of these have fallen. In some areas there is good regeneration of beech, and in time, these should grow and fill gaps. Most management, apart from the removal of a small area of larch, would likely be aimed at aiding the spread and growth of beech, possibly by actively moving saplings into gaps where there is little or no natural regeneration and also by selectively thinning species such as ash or sycamore, which might become dominant and displace beech. Dead and fallen trees should in general be left in situ to provide habitat for species such as birds, insects and fungi.

Scrub management

Some areas with the woodland should be retained as permanent open glades to benefit butterflies and other invertebrates and scrub encroachment should be controlled in these areas. Tree branches overhanging parts of the railway track with important grassland habitat will need cutting back from time-to-time to enable more light to reach the ground.

Grazing

Past grazing has influenced the structure of the woodland, such as the dominance of beech in the canopy. It is therefore likely that occasional light grazing would be beneficial for the woodland habitat, although any increase in grazing pressure could prevent all tree and shrub regeneration and suppress the woodland ground flora. Some land within the site, mainly in the Llanelly quarry and Llam-march dingle areas, is common land. Small numbers of sheep graze the area and also graze adjoining open land along the old railway trackbed and adjacent vegetated spoil heaps.

Dumping

Due to roads passing through the site, parts are accessible to vehicles and the illegal dumping of domestic and commercial waste and abandoned vehicles can be a problem. Barriers put in place several years ago have been successful in preventing vehicles (some of which have been later burnt) being driven along the railway track. It is essential that these barriers be maintained to prevent any future occurrences. Landowners and occupiers should co-operate with the statutory authorities in relation to enforcement action and the removal of waste and abandoned vehicles and measures designed to minimise the impact of fly-tipping or the ingress of any pollutants into watercourses and caves.

Invasive alien plants

Japanese knotweed is also a problem in parts of the site, usually having been introduced by illegal dumping of waste material, and this species will be controlled as necessary.

5.2 Conservation Status and Management Requirements of Feature 2: Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion* (EU Habitat code 9120))

Conservation Status of Feature 2

The conservation status of this feature within the site is considered to be **Favourable** (2006).

Assessment carried out in August 2002 indicated that feature condition was: **Favourable, maintained**. All the factors affecting the features appear to be under control.

Management Requirements of Feature 2

Woodland management

Mostly minimum intervention (see 5.1 above). In the western part of the site, oak is common in the canopy and regeneration of this species should be accepted there. It might also be beneficial to encourage the spread of woodland into small areas of dense bracken on the edges of the main woodland blocks.

Bracken management

Bracken in canopy gaps or at the woodland edge may assist the establishment of new trees, providing that the bracken is not too dense and does not have deep litter. Cutting dense bracken and breaking up the litter can help with tree and woodland generation.

Grazing

See 5.1 above.

Dumping

See 5.1 above.

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?
1	000371	Unit 1	All is within the NNR and management issues are under control. Many of trees are old and senescent and in the near future it is possible that a large number of canopy gaps may open.	No
5	000376	Unit 5	Currently there do not appear to be any management issues	No

7. GLOSSARY

This glossary defines the 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	<p>The condition of feature can be categorised, following condition assessment as one of the following²:</p> <p style="padding-left: 40px;">Favourable: maintained; Favourable: recovered; Favourable: un-classified Unfavourable: recovering; Unfavourable: no change; Unfavourable: declining; Unfavourable: un-classified Partially destroyed; Destroyed.</p>
Conservation management	<p>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.</p>
Conservation objective	<p>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.</p>
Conservation status	<p>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.</p>
Conservation status assessment	<p>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.</p>
Core Management Plan	<p>A CCW document containing the conservation objectives for a site and a summary of other information contained in a full site Management Plan.</p>

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

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

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

part of, not the same as, conservation objectives. See also **vision for the feature**.

- Plan or project** **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.
Plan: a document prepared or adopted by a public body or statutory undertaker, intended to influence decisions on the carrying out of **projects**. Decisions on plans and projects which affect Natura 2000 and Ramsar sites are subject to specific legal and policy procedures.
- 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

References

Joint Nature Conservation Committee (JNCC). 2004c. Guidance on Common Standards Monitoring (CSM): Woodland, Version February 2004. JNCC Report, JNCC, Peterborough.

Available via website at: <http://www.jncc.gov.uk>

Rodwell, J. S., ed. 1991a. British Plant Communities, Volume 1, Woodlands and scrub. Cambridge Cambridge University Press.

