CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES

CORE MANAGEMENT PLAN
INCLUDING CONSERVATION OBJECTIVES

FOR

Coedydd Aber SAC

Version: **1- Julie Creer**

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Approved by: NR Thomas 31st March 2008

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.

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

NATURA 2000

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PREFACE

This document provides the main elements of CCW's management plan for the site named. It sets out what needs to be achieved on the site, 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 site. 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.

Coedydd Aber should consist of a matrix of alder, sessile oak and ash woodland. The current extent of alder-dominated woodland with its present mosaic of grazed, coppiced and un-grazed areas, with sufficient regeneration to perpetuate the wood for centuries to come, should be maintained.

The existing upland sessile oak woodland with a naturally varying under-storey and age structure and a sufficient amount of natural seedling regeneration should be maintained at the current extent. Wherever possible, the oak woodland edge should be allowed to form a natural gradation to alder or ash wood, open heath, grassland and mountain vegetation. Opportunities to extend this woodland type, following the removal of the conifer plantation, should be explored.

Similarly, the extent of upland ash woodland, with a naturally varying under-storey and age structure and a sufficient amount of natural seedling regeneration, should be sustained. The ash woodland edge should be allowed to form a natural gradation to the alder or oak wood, open heath, grassland and mountain vegetation.

The current assemblage of notable lichen species will be maintained in a stable state, neither contracting in terms of individual species population numbers nor in the number of total species present. We may also wish to propagate endangered populations in order to increase their numbers.

The woodland breeding bird assemblage should not contract in terms of numbers of breeding species present or the average population size of each breeding species present.

2. SITE DESCRIPTION

2.1 Area and Designations Covered by this Plan

Grid reference: SH 664 713

Unitary authority: Gwynedd

Area (hectares): 346.2

Designations covered: Coedydd Aber (SAC) is notified as one SSSI – Coedydd Aber SSSI.

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

2.2 Outline Description

Coedydd Aber extends 4 km along the steep-sides valleys of the Afon Rhaeadr Fawr and Afon Anafon, which are situated immediately south of Abergwyngregyn village.

The SAC comprises 346.2 hectares and is concurrent with the area of SSSI (with the exception of unit 7 which is SSSI only). Coedydd Aber NNR comprises some 169 hectare of the SAC area. The

site lies between 50 metres (at Bont Newydd) and 540 metres (at Marian Rhaeadr Fawr) above sea level.

Coedydd Aber is of special interest for its botanical, ornithological and entomological interest. The site supports a mosaic of native broadleaved woodland types of international importance including alluvial forests with alder and ash, and old sessile oak woods, which form a natural elevation – dependent habitat transition from coast to open mountain. The transition zones include stands of mixed oak, ash, alder and birch woodland, some of which can be classed as ancient, open hawthorn scrub, sub-montane heath, cliffs and acidic grassland. The tree dwelling or epiphytic lichen communities that the woodland communities support are also of national importance. The transition from woodland to mountain vegetation is also reflected in the diverse array of bird species assemblages from woodland, through torrent river, woodland edge, ffridd and heath to open species assemblages. The woodland, montane heath and grassland breeding bird assemblages qualify the site. The Afon Rhaeadr Fawr is one of the most precipitous rivers in Britain outside Scotland and is of national importance as a representative of this river type.

2.3 Outline of Past and Current Management

The majority of the SAC is also NNR, owned partly by Bangor University (UWB) and partly by CCW. Before declaration as a NNR the land was used as a mixed land croft or *tyddyn* farm. Under the influence of the Penrhyn estate various activities were carried out i.e. livestock husbandry, tree-felling, and provision of refreshments for visitors. There is no history of nature conservation management.

The areas of woodland lying outside the NNR are under various private ownerships. They are not actively managed at present. In the vicinity of Rhaeadr Fawr, there is parcel of open mountain land (acidic grassland / scree / river) owned by the National Trust and part of Aber Common. This is grazed by sheep and ponies.

Within the NNR there has been a consistent programme of habitat management since the 1970's

Dutch Elm Disease
Dutch elm disease was first noted here in 1979 and some trees suffering from the disease have been felled.

Enclosures
Since acquisition, land owned by CCW has been fenced along the eastern boundary (bordering FE owned land) while the western part has a natural physical boundary in the river. The CCW-owned wooded Meuryn section (compartment 4) have been enclosed by a stock proof fence. Wern Goch was fenced in 1976, one year after the NNR declaration to exclude stock and to encourage natural regeneration. A number of small areas within CCW owned land has been fenced off and planted with ash to perpetuate that species in the pastoral area where many of the trees are now moribund. An area adjacent to Wern Goch was fenced off in 1987 to exclude grazing in order to encourage the spread of alder. This was unsuccessful as grazing has proved not to be the only factor preventing alder regeneration.

Tree planting

The western flank of the valley under S16 Nature Reserve Agreement is unenclosed apart from five small enclosures negotiated with the UWB in the beginning of the 1980s to establish woodland. These have been planted, mostly with alder, or have been left to regenerate naturally. All fences on this western flank are internal and for UWB stock management purposes which gives CCW no control of grazing. There are no formal records of grazing levels to hand.

i) Further areas were enclosed in the fields above Nant cottage in c. 1988 with the objective of establishing links and corridors for wildlife to colonise between existing stands, and establishing new singleton ashes in an area where existing trees are moribund without the

opportunity to regenerate, These would allow colonisation and transplantation of important lichen species. None of these plantings was of stock of known provenance.

Bracken control

The elimination of bracken (*Pteridium aquilinum)* in 1980 and 1990 from large areas of Y Waun (compartment 6) and from compartment 3 by UWB was permitted by CCW (then NCC). This at the time was not considered to be detrimental to the conservation interest but it did give rise to extensive beds of foxglove, which were succeeded by the domination of palatable grasses. In the future similar applications must be considered individually.

It is axiomatic that bracken has increased generally in the area during this century due to a combination of:

- climatic amelioration,
- woodland clearance,
- a decline in the number of cattle present in the uplands and an increase in the number of sheep, resulting in less trampling of bracken

More recently, in 2006 and 2007, areas of bracken have been controlled by a combination of rolling, and herbicide application on the fields adjacent to the main access track to Rhaeadr Fawr. The aim of this work has been to develop a herb rich meadow on the fields. Care has been essential in this work due to the fact that there are known populations of *Procas granulicollis* (a medium sized weevil) found in woodland situations, often in clearings and always in association with bracken and *Ceratpcapnos claviculata* (climbing corydalis), the latter is the sole recorded adult food plant of *Procas granulicollis* (Fowles, 1992), and is present at Coedydd Aber.

Grazing

CCW have not managed any of the stock grazing directly but in the past 25 years all compartments except 4 (Meuryn) and 5 (Wern Goch) have been grazed either under UWB tenancy or S16 agreement. Grazing has been by Welsh Mountain Sheep, a pedigree herd of Welsh Mountain Ponies and until 1986 by Welsh Black Cattle.

Grazing, and in particular intensive grazing by sheep, is normally regarded as undesirable for woodland conservation management. However, as Coedydd Aber is extensively used by the public, other factors are taken into consideration. The presence of grazing animals is appreciated by the public as it adds to the interest of the site and some form of pastoralism has probably been practised continuously on the site since Bronze Age times.

The pony herd is owned by UWB and has been bred since 1914 for certain characteristics, e.g. their white coats, which is a registered pedigree strain. This herd is considered by CCW as an asset to the site, for the following reasons:

- as a management tool for grazing selected areas and trampling bracken
- as a popular amenity
- for its historic interest

The possible acquisition of the herd in the event of an abdication by Bangor University needs to be kept under review though the maintenance costs have in the past proved difficult to justify. The ponies present a minor public safety hazard.

Mowing

Mowing is an option in the currently enclosed area adjacent to Wern Goch where the spreading of alder is encouraged. This is under consideration but is not carried out at present.

Paths and boardwalks

Footpaths can contribute to the conservation effort by controlling patterns of visitor use. Considerable improvement and maintenance to the main footpath have been carried out over the years. In recent years this has focused on improving access to wheel chair users. Minor wooden tracks made from the coppiced timber have been installed to allow access for monitoring purposes. A minor diversionary path was constructed in 1994 to allow public access through the neighbouring FE plantation, compartment 12, to the historic feature known as Nant Caderat. This project was not a success, and the maintenance of the path was discontinued due to the wet nature of the ground, and problems of conifer 'windblows' onto the path. Leading walkers from the dense conifer plantation, to the edge of the plantation, where there was a view of the main path to the falls, led to instances of walkers crossing the boundary fence, resulting in damage to the boundary.

Coppicing

Coedydd Aber contains some 10 ha of alder woodland known as Wern Goch and Wern Fudr that used to be coppiced by itinerant clog makers. The coppicing is estimated to have come to an end in the 1920s (Aubroeck 1995). Since alders rarely live beyond eighty years (McVean 1953) it was assumed that if no management was introduced the almost pure alder woodland would eventually turn into a drier ash-birch-rowan woodland or disappear completely if it were heavily and continuously grazed.

Coppicing was re-introduced for three reasons in Wern Fudr (3.78 ha) in the winter of 1994-95:

- Primarily to perpetuate the near-pure alder stands which are considered to be of high conservation value in Wales and have declined in extent
- To favour light loving plants and species (particularly invertebrates) which depend on coppice management, some of which are known to have occurred here in the past
- To continue the traditional practice of coppicing and. The area has been divided into ten areas of each 0.4 ha each and coppicing is carried out on a ten year rotation. The coppicing is carried out by local craftsmen and the wood is used to produce high grade charcoal for forging and resold as barbecue charcoal. Some wood is used for wood-turning. Extraction of the timber and burning of brushwood disturbs the ground with both beneficial and detrimental effects.

Around half of Wern Goch was fenced in 1976, and has since developed a rank ground vegetation with abundant regeneration of predominately ash with birch, rowan and some oak but virtually no alder, the unfenced grazing areas have essentially no regeneration. Wern Goch (4.8 ha) is used as a control plot, providing useful information on the effects of non-intervention management of alder for comparison with the grazed and coppiced Wern Fudr.

Charcoal burning

This is one of the means by which the coppice management is achieved. Charcoal burning operations disturb the ground with both beneficial and detrimental effects, Smoke is sulphur free and is not a cause for concern (Sanderson pers. comm.). In an editorial note from the Quarterly Journal of Forestry (1966) the evaluation was that a single burn of a two-tier steel kiln produced 400kg of barbecue charcoal from 3.24 t. of green timber. This was deemed to be only marginally profitable. A total of 30 hours was required to prepare the charge, carry out the burn, and unload and bag the charcoal. Income was, 0.31 to, 5.41/hour depending on the assumptions made. No equivalent figures are available as yet from the Aber operation since these is no formal accounting contract between the operators and CCW.

It is not essential that charcoal is the product of coppicing, but in comparison with firewood, the production of charcoal from appears to be a more profitable use of alder.

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 land ownership details.

Table 1 confirms the relationships between the management units and the designations covered:

Table 1. Management unit number and designations covered within each management unit.

Coedydd Aber SSSI				
Unit number	**SAC**	**SSSI**	**CCW owned**	**NNR**
1	✓	✓	✓ (part)	✓ (part)
2	✓	✓	×	✓
3	✓	✓	✓	✓
4	✓	✓	✓	✓
5	✓	✓	✓	✓
6	✓	✓	×	✓
7	×	✓	×	×
8	✓	✓	×	✓
9	✓	✓	×	✓
10	✓	✓	✓	×
11	✓	✓	✓	✓
12	✓	✓	×	×
13	✓	✓	×	×
14	✓	✓	×	✓
15	✓	✓	×	×
16	✓	✓	×	×
17	✓	✓	×	✓ (part)
18	✓	✓	×	×
19	✓	✓	×	×
20	✓	✓	×	×
21	✓	✓	×	×
22	✓	✓	×	×

3. THE SPECIAL FEATURES

3.1 Confirmation of Special Features

Table 2. Confirmation of special features at Coedydd Aber SAC

Designated feature	***Relationships, nomenclature etc***	***Conservation Objective in part 4***
SAC features		
Annex I habitats present that are a primary reason for site selection 1. Old sessile oak woods with *Ilex* and *Blechnum*.		1
2. Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*.		2
SPA features		
Not applicable		
Ramsar features		
Not applicable		
SSSI features		
1. Semi-natural broadleaved woodland (including W7a, b & c, W9a, W11a, W17b & c).		1 and 2
2. Semi-natural deciduous woodland (including *Quercus petraea* dominated upland woodland, *Fraxinus excelsior* dominated upland woodland, *Betula pubescens* dominated upland woodland and *Alnus glutinosa* dominated wet woodland).		1 and 2
3. Lichen assemblage.		
4. Woodland breeding bird assemblage.		

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

Table 3a. Special features and management units at Coedydd Aber SAC

Coedydd Aber SAC	**Management unit**									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
SAC	✓	✓	✓	✓	✓	✓	×	✓	✓	✓
SSSI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAC features										
1. Old sessile oak woods	KH	KH	KH	KH	KH	KH	×	KH	×	KH
2. Alluvial forests	×	KH	KH	×	×	×	×	×	×	×
SSSI features										
3. Wet woodland	×	KH	KH	×	×	×	×	×	×	×
4. Upland oak woodland	KH	KH	KH	KH	KH	KH	×	KH	×	KH
5. Upland ash	×	×	KH	×	×	KH	×	KH	×	KH
6. Bark dwelling lichens	×	KS	KS	KS	×	×	×	?	×	?
7. Woodland breeding birds	Sym	Sym	Sym	Sym	Sym	Sym	Sym	Sym	×	Sym

Table 3b. Special features and management units at Coedydd Aber SAC.

Coedydd Aber SAC	**Management unit**									
	11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
SAC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SSSI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAC features										
1. Old sessile oak woods	KH	KH	KH	×	KH	KH	KH	KH	KH	×
2. Alluvial forests	×	×	×	×	×	×	×	?	×	×
SSSI features										
3. Wet woodland	KH	×	×	×	Sym	×	×	?	×	×
4. Upland oak woodland	KH	KH	KH	×	KH	KH	KH	KH	KH	×
5. Upland ash	×	×	×	×	×	Sym	×	Sym	Sym	×
6. Bark dwelling lichens	KS	?	?	×	×	?	×	?	×	×
7. Woodland breeding birds	Sym	Sym	Sym	?	Sym	Sym	Sym	Sym	Sym	×

Table 3c. Special features and management units at Coedydd Aber SAC.

Coedydd Aber SAC	**Management unit**	
	21	**22**
SAC	✓	✓
SSSI	✓	✓
SAC features		
1. Old sessile oak woods	×	×
2. Alluvial forests	×	×
SSSI features		
3. Wet woodland	×	×
4. Upland oak woodland	×	×
5. Upland ash	×	×
6. Bark dwelling lichens	×	×
7. Woodland breeding birds	×	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 Monitoring[1].

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: Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles (EU Habitat Code: 91A0)

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 woodland is maintained as far as possible by natural processes.
- The location of open glades or gaps varies over time.
- Trees and shrubs are locally native, and neither beech nor conifers are dominant anywhere in the canopy or understorey.
- Trees and shrubs of a wide range of ages and sizes are present.
- Tree seedlings are plentiful throughout the site and where occurring in open glades develop into viable saplings.
- Field and ground layers are a patchwork of various vegetation communities characteristic of local soil and humidity conditions.
- There are abundant dead and dying trees (with holes and hollows, rot columns, torn off limbs and rotten branches) with associated dead wood dependent species present.
- Humidity levels are high enough to favour the presence of ferns, mosses and liverworts.
- The woodland continues to support populations of birds and mammals.
- All factors affecting the achievement of these 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.

Table 4a. Performance indicators for feature condition of the oak woodland at Coedydd Aber SAC (2007).

Performance indicators for feature condition (2007)			
Attribute	**Specified limits**		**Attribute rationale and other comments**
A1. Extent	Upper limit:	None set.	The starting point in conserving the site is to maintain the existing area (i.e. that at date of notification). Monitoring is likely to be a map-based exercise. The area of oak woodland will be mapped as a baseline extent and the total area measured. Repeat monitoring will either re-map the site or review the baseline map in the field.
	Lower limit:	115 ha of oak woodland (furthermore, where areas of conifers are clear felled, it is anticipated that those areas will be planted up or naturally colonised by oak woodland community species).	
A2. Distribution	Upper limit:	None set.	There is currently no oak woodland in unit 7, however, the unit is being clear felled of

Performance indicators for feature condition (2007)		
Attribute	**Specified limits**	**Attribute rationale and other comments**
	Lower limit: As a minimum oak woodland should be found in the following units; 1, 2, 3, 4, 5, 6, 8, 10, 11, 12, 13, 15, 16, 17, 18 and 19	conifers. It is anticipated that within the unit, the area will be planted up or naturally colonised by species typical of oak woodland communities.
A3. Structure and processes	Within each compartment: • 1 – 5 gaps present (on average). • Shrub layer present*****. • 2 or more over mature trees present at each monitoring stop (on average). • Standing and fallen deadwood > 10cm diameter and 2m long present in >50% of monitoring stops.	***** The target for shrub layer varies according to the management prescription within the unit, e.g. some units are grazed with lichen interest, and will therefore have no target for the shrub layer. See SAC monitoring report (Creer, 2008) for more details.
A4. Regeneration	Within each compartment: (grazed oak woodland) • Young trees (>1.5m high; <10cm dbh) present in >30% of gaps. (un-grazed oak woodland) • Young trees (25cm – 1m high) present in at least 50% of monitoring stops.	The regeneration target will vary depending on the management prescription within the unit.
A5. Composition	Within each compartment: • Non-native trees and shrubs make up no more that 5% of the canopy or shrub-layer cover at each monitoring stop.	

Table 4b. Performance indicators for factors affecting the oak woodland at Coedydd Aber SAC (2007).

Performance indicators for factors affecting the feature (2007)			
Factor	**Operational Limits**		**Factor rationale and other comments**
F1. Livestock grazing	Upper limit:	No grazing within units 1, 4, 5, 7, 10, 12, 13, 15, 16, 18, 19 and 22.	There is a conflict of interests at the site with regard to grazing. For the SAC feature to be considered in favourable condition, all of the woodland processes must be present, which includes regeneration and a healthy shrub layer, i.e. those processes, which are generally incompatible with grazing. However, at a number of the units, an assemblage of important lichen species occurs. Grazing is required within these units in order to preserve the conditions required by the lichens. If the status of the lichens changes in the future, the grazing regime should additionally be altered to take into account the changes to the lichen assemblage.
	Lower limit:	Grazing at appropriate levels within units 2, 3, 11 and 17.	
F2. Invasive species	Upper limit:	Non-native trees and shrubs make up no more that 5% of the canopy or shrub-layer cover at each monitoring stop.	Beech will not be tolerated within the woodland, but currently only occurs within unit 16, and a program of removal should be instigated. *Rhododendron ponticum* and *Prunus laurocerasus* cherry laurel are a problem only within units 15 and 22. Conifer seedlings can potentially occur anywhere across the site, but are most likely in units, which border coniferous plantations, or in areas where conifers have been clear felled.
	Lower limit:	None set.	

4.2 Conservation Objective for Feature 2: Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno – Padion, Alnion incanae, Salicion albae*) (EU Habitat Code 91E0)

Vision for feature 2

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

- The woodland is maintained as far as possible by natural processes.
- The trees and shrubs will be locally native broadleaved species with alder dominating the canopy.
- The sparse shrub layer will comprise a scattering of hazel, willow and rowan.
- Seedlings will be relatively sparse throughout the site with only a few native seedlings from non-self coppicing trees developing into saplings.
- The majority of regeneration will be from the base of the alders by means of self-coppicing.
- There will be abundant dead and dying trees with holes and hollows, rot columns, torn off limbs and rotten branches throughout the woodland. Dead wood, both standing and fallen, will be retained to provide habitats for other species.
- 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.
- All factors affecting the achievement of these 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.

Table 5a. Performance indicators for feature condition of the alluvial forests at Coedydd Aber SAC (2007)

Performance indicators for feature condition (2007)			
Attribute	**Specified limits**		**Attribute rationale and other comments**
A1. Extent	Upper limit:	None set.	The starting point in conserving the site is to maintain the existing area (i.e. that at date of notification) Monitoring is likely to be a map-based exercise. The area of alluvial woodland will be mapped as a baseline extent and the total area measured. Repeat monitoring will either re-map the site or review the baseline map in the field.
	Lower limit:	20.8 ha of alluvial woodland (i.e. that mapped at the time of SAC notification).	
A2. Distribution	Upper limit:	None set.	The distribution of the alluvial woodland is dictated by the local topography and to the degree of inundation by the river. It is anticipated that small pockets of alluvial woodland will come and go along the length of the river (unit 14) when and where conditions become suitable for the habitat.
	Lower limit:	Two localised areas within compartments 2 and 3 will be alluvial woodland. Furthermore, where the local topography is suitable, small pockets of alluvial woodland will be found along the whole length of the river (unit 14).	

Performance indicators for feature condition (2007)		
Attribute	**Specified limits**	**Attribute rationale and other comments**
A3. Structure and processes	Within each alluvial area within the compartment: • At least 1 gap present in each alluvial block, on average. • Shrub layer present in at least 50% of monitoring stops *****. • 2 or more over mature trees present at each monitoring stop (on average). • Standing and fallen deadwood > 10cm diameter and 2m long present in >50% of monitoring stops.	***** The target for shrub layer varies according to the management prescription within the unit, e.g. units 2 and 3 are grazed and have an additional lichen interest, and will therefore have no target for the amount of shrub layer present. See SAC monitoring report (Creer, 2008) for more details.
A4. Regeneration	Within each alluvial area within the compartment: (grazed alluvial woodland) • Young trees (>1.5m high; <10cm dbh) present in >30% of gaps. (un-grazed alluvial woodland) • At least 5 seedlings and 1 sapling are present in each alluvial block, on average. • Young trees (>1.5m high; <10cm dbh.) present in >30% of gaps.	The regeneration target will vary depending on the management prescription within the unit.
A5. Composition	Within each compartment: • Non-native trees and shrubs make up no more that 5% of the canopy or shrub-layer cover at each monitoring stop.	
A6. Quality indicators	Within each alluvial area within the compartment: (grazed alluvial woodland) • Ground vegetation impedes walking & obscures tree bases in no more that 20% of monitoring stops. (ungrazed alluvial woodland) • None specified.	

Table 5b. Performance indicators for factors affecting the alluvial forests at Coedydd Aber SAC (2007)

Performance indicators for factors affecting the feature (2007)			
Factor	**Operational Limits**		**Factor rationale and other comments**
F1. Livestock grazing	Upper limit:	None set (see oak woodland PI table (Table 4b) for details)	There is a conflict of interests at the site with regard to grazing. For the SAC feature to be considered in favourable condition, all of the woodland processes must be present, which includes regeneration and a healthy shrub layer, i.e. those processes, which are generally incompatible with grazing. However, at a number of the units, an assemblage of important lichen species occurs. Grazing is required within these units in order to preserve the conditions required by the lichens. If the status of the lichens changes in the future, the grazing regime should additionally be altered to take into account the changes to the lichen assemblage.
	Lower limit:	Grazing at appropriate levels within units 2 and 3.	
F2. Water quality	Upper limit:	None set.	Good quality water is required as groundwater and surface run-off could be subject to pollution from agricultural activities such as fertiliser application.
	Lower limit:	General Quality Assessment grade 'A'.	
F3. Water quantity	Upper limit:	None set.	The habitat is dependent on the maintenance of high water throughput.
	Lower limit:	High flows during and after periods of heavy rain.	

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: 91A0)

Conservation Status of Feature 1

The oak woodland feature was monitored by CCW's SAC monitoring team in 2003 (Lewis, 2003), and the feature was judged to be in **unfavourable** condition. The feature is currently being monitored (2007 – 2008), and preliminary findings suggest the feature is still in an **unfavourable** condition.

The oak woodland was failing for a number of reasons, but most significantly due to grazing in units, which ideally should not be grazed.

Management Requirements of Feature 1

- *Stock proof fencing*:
    - A number of the management units require new or maintenance to stock proof fencing (see Section 6 for details).

- *Grazing*:
    - The current sheep / pony grazing level of 0.4 units/ha on the western bulk of the site appears to allow a low level of regeneration with minimal scrub growth. By varying grazing an assorted woodland structure is created. In the future, it may be necessary to 'pulse' graze areas. This involves excluding areas from grazing for several years to allow regeneration, then grazing them at a high level for 1 year to thin and remove scrub.

- *Undesirable species removal*:
    - Management units 15, 16 and 22 all require some degree of undesirable species removal, including species such as beech, larch and *Rhododendron ponticum* (see Section 6 for details).

- *Non-intervention*:
    - In certain locations at Coedydd Aber it is hoped that the oak woodland will grade naturally into a soft woodland edge, encompassing elements of ffridd and heath eventually grading to open mountain habitat communities.

5.2 Conservation Status and Management Requirements of Feature 2: Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno – Padion, Alnion incanae, Salicion albae*) (EU Habitat Code 91E0)

Conservation status of Feature 2

The alluvial forests feature was monitored by CCW's monitoring team in 2003 (Lewis, 2003), and the feature was judged to be in an **unfavourable** condition. The feature is currently being monitored (2007 – 2008), and until the data is available from the monitoring the conservation status should still be assumed to be in an **unfavourable** condition.

The results from 2003 suggested that the alluvial forests were in an unfavourable condition due to the lack of native seedling and the undesirable proportions of young sycamore. It was concluded that the lack of native seedlings was likely to be a result of the grazing levels within the alluvial woodland stands (Lewis, 2003). However, since the monitoring in 2003, the performance indicators have been reviewed (see Tables 5a & b), to take into account the levels of grazing which are necessary to maintain the lichen interest in certain stands of the alluvial forests. Therefore, until the results are available from the 2007 – 2008 monitoring the above condition assessment should be viewed with some caution.

Management requirements of Feature 2

- *Grazing*:
    - The current sheep / pony grazing level of 0.4 units/ha on the western bulk of the site appears to allow a low level of regeneration with minimal scrub growth. By varying grazing an assorted woodland structure is created. In the future, it may be necessary to 'pulse' graze areas. This involves excluding areas from grazing for several years to allow regeneration, then grazing them at a high level for 1 year to thin and remove scrub.

- *Stock-proof fencing*:
    - Currently, stock proof fencing is not required around any of the stands of alluvial forests. However, should the lichen interest within these areas change, and grazing is deemed inappropriate, stock-proof fencing may be needed in the short term to safeguard the stands of alluvial forests.

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	002344	CCW (a)	Sheep grazing/trespass is an issue and low levels of rhododendron. Removal of rhododendron required and there is a constant need to make sure boundary is stockproof (maintenance) by CCW direct management which also involves liaison with landowner.	Yes
2	002345	Bangor University	Agreement with landowner needs to be reviewed in order to establish clarity with regards sheep grazing levels.	Yes
3	002346	CCW (b)	No known actions at present. Constant, on-going need for CCW to evaluate & monitor current management.	No
4	002347	CCW (c)	CCW to investigate and determine appropriate grazing level for this unit (no grazing occurs in this unit at present). This is necessary in order to safeguard woodland cover and also bark dwelling lichens.	Yes
5	002348	CCW (d)	No known actions at present. Allow natural processes to take place. On-going vigilance for invasive species to be maintained by Warden.	No
6	002349	Bangor University (b)	Grazing regime needs to be reviewed with a high probability that grazing is too high overall across this unit. This is contrary to the management objectives for the SAC to manage and expand areas of sessile oak woodland and upland ash woodland and encourage a natural gradation of woodland to upland habitat.	Yes
8	002351	National Trust (a)	Localised overgrazing. Investigate possibility of amending current Agri-Envt scheme which applies to the Aber common to encourage shepherding of sheep back to the higher mountain.	Yes
9	002352	National trust (b)	No known actions at present.	No
10	002353	CCW (e)	No actions known at present.	No
11	002354	CCW (f)	Alder coppice management needs to be undertaken by CCW routinely to maintain woodland structure.	Yes
12	002355	Forest Enterprise (a)	Removal of conifers by FC to be a priority here for the benefit of broadleaved woodland SAC habitat together with selectively retaining some mature conifers for breeding bird assemblage. Also, FC to ensure boundaries are kept stockproof to ensure natural regeneration of native tree species. Due to sensitive landscape issues, clear felling may not be appropriate (phased removal should be considered).	Yes
13	002356	Yr Hen Felin (a)	CCW to look into the possibility that there is a need to work together with landowner to discuss positive woodland management through a reduction in sheep grazing to ensure adequate natural regeneration of the woodland. Fencing may be required in order to achieve appropriate grazing management for the site.	Yes
14	002357	Afon Rheadr Fawr	No actions known at present (invasive species are a constant threat to river systems - on-going survey & monitoring required).	No

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
15	002358	Coed Tan-yr-Allt / Gorddinog	Rhodododendron eradication is the main action for this unit. Snowdonia National park (SNP) may be able to assist through similar scheme to Rhaglen Tir Eryri. Other non-native trees also present and require removal. Again, SNP need to be consulted and may be able to assist. Sheep trespass needs to be addressed through constant maintenance of boundaries through positive management agreement with owner.	Yes
16	002359	Forest Enterprise (b)	Forestry and woodland management restoration project to include phased removal of conifer plantation. Existing native broadleaved species to be retained. Consideration to retention of selected coniferas depending on breeding bird assemblage interest.	Yes
17	002360	Bangor University (c)	No known new actions at present. Unit is managed under a Tir Gofal agreement which includes actions such as removal of conifers, fencing and allowing natural regeneration of broadleaved woodland. CCW will be consulted at 5 year review stage.	No
18	002361	Yr Hen Felin (b)	CCW need to investigate grazing management and its impact on the condition of the feature.	Yes
19	002362	Forest Enterprise (c)	As with other units owned by FC, there is a need for an overall restoration action plan which includes phased removal of conifers, retention of existing broadleaved trees and possibility of retaining mature conifers for some breeding birds.	Yes
20	002363	National Trust (c)	CCW to investigate grazing levels to see if they are compatible with our vision to encourage a natural gradation of woodland to open mountain heath.	Yes
21	002364	National Trust (d)	Continued localised overgrazing due to overgrazing on adjacent Llanllechid common and sheep trespass from the Llanllechid common onto this unit.	Yes
22	002365	Coed Gorddinog	No known actions at present.	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 — The **condition** of **feature** can be categorised, following **condition assessment** as one of the following[2]:

Favourable: maintained;
Favourable: recovered;
Favourable: un-classified
Unfavourable: recovering;
Unfavourable: no change;
Unfavourable: declining;
Unfavourable: un-classified
Partially destroyed;
Destroyed.

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

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

	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

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

	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**.
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

Aubroeck, B. (1995). Study and management for nature conservation of the neglected ancient coppice Alder woodlands in the Coedydd Aber National Nature Reserve, North Wales (GB). Unpublished M.Sc. Thesis. Katholieke Universiteit Leuven.

Creer, J. (2008). Coedydd Aber SAC Monitoring report. CCW internal report. In progress. CCW (Llys y Bont Office). Available on request.

Lewis, H. (2003). Coedydd Aber SAC Monitoring report. CCW internal report. CCW (Llys y Bont Office). Available on request.

McVean, D. N. (1953). Biological flora of the British Isles, *Alnus glutinosa* (L). *Journal of Ecology* Vol. 41, pp. 447-466.