

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

**CORE MANAGEMENT PLAN  
INCLUDING CONSERVATION OBJECTIVES**

**FOR**

**GWEUNYDD BLAENCLEDDAU SAC (SPECIAL AREA OF  
CONSERVATION)**

**Version: 14**

**Date: 4 July 2011 (Minor map edit, February 2013)**

**Approved by: Charlotte Gjerlov**

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



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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.

The headwaters of the eastern Cleddau will remain surrounded by wetland in the years to come. Changes in climate and changes in the way people use the land are perhaps inevitable, and the patterns of vegetation that we see in the valley today will also shift over time. Our vision, however, is for the more open mixtures of grassland, heath, fen and swamp to persist. This means that development of scrub and woodland must be kept in check where it is sustainable to do this. If this mixture of wetland habitats can be conserved, then the marsh fritillary, southern damselfly and other characteristic species currently found here should continue to flourish.

## **2. SITE DESCRIPTION**

### **2.1 Area and Designations Covered by this Plan**

Grid reference: SN 156 316

Unitary authority: Preseli Pembrokeshire

Area (hectares): 151 ha

Designations covered: Gweunydd Blaencleddau SSSI / Gweunydd Blaencleddau SAC.

Detailed maps of the designated sites are available through CCW's web site:  
<http://www.ccw.gov.uk/interactive-maps/protected-areas-map.aspx>

A summary map showing the coverage of this document is available on the web site.

## **2.2 Outline Description**

A large wetland complex in a shallow south-west trending valley around the headwaters of the Eastern Cleddau.

## **2.3 Outline of Past and Current Management**

### Common land

The commons are presumed to have had a long history of traditional pastoral practices. Older residents of the valley recall that they were grazed tightly with horses and cattle - including dairy cows in summer - until around 1945. Sheep were not grazed. Cattle were once brought all the way down from Cardigan in a bad drought year (1921) as the commons provided constant streams as a water source. Small-scale peat cutting for domestic use reportedly continued on the common until the early 1960's. The two commons were formerly linked, through a narrow neck of land now illegally annexed by Blaenwaun.

The separation of the commons into discrete management units subsequently led to marked contrasts in their grazing management. The proximity of the newly planted conifers alongside Waun Cleddau meant that the occasional burning of *Molinia* ceased here in the 1970s; subsequent neglect (perhaps combined with the abandonment of regular river maintenance) meant that the common became perceived as too rough and wet for grazing animals. Despite this, one or two graziers persisted with small herds of Welsh Black or a couple of horses, a grazing pattern which continues to the present day. Waun Lwyd in contrast has been more regularly and intensively grazed by cattle and ponies, and is currently utilised by two main graziers.

### Private land

Less information is available about the privately owned enclosures. Regular maintenance of the river and associated drainage systems presumably kept the land drier. Most of the farms carried milking animals until recent decades, and sheep were used on some of the drier enclosures. Peat extraction took place on Dolaumaen until the early 1900s; shallow pits are still visible on the blanket mire here. Enclosures within the SSSI at Parc-y-da were ploughed around 1980 and cropped with kale for a couple of years.

Most of the privately owned land is now under one or more management agreement with CCW, Rural Payment Agency or Pembrokeshire Coast National Park Authority. The management agreements all prescribe livestock grazing in various forms. Summer grazing with beef cattle and/or ponies is currently practised across most of the site. Recovery management, in the form of flail mowing, has been undertaken on a number of neglected sites. Despite this the site generally remains under-managed, livestock being absent and/or grazing levels are too low.

## **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 and enclosure pattern.

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

<b>Unit number</b>	<b>SAC</b>	<b>SSSI</b>	<b>Name</b>	<b>Common Land</b>
1	✓	✓	Ysguborwen	
2	✓	✓	Caermeini isaf	
3	✓	✓	Parc y Da	
4	✓	✓	Dolau isaf	
5	✓	✓	Dolau newydd	
6	✓	✓	Dolau maen	
7	✓	✓	Comin Waun Lwyd	✓
8	✓	✓	Caermeini - Glanrhyd	
9	✓	✓	Waun Lwyd	
10	✓	✓	Llethr isaf	
11	✓	✓	Blaen waun	
12	✓	✓	Blaencleddau 17 acres / meadows	
13	✓	✓	Comin Waun Cleddau	✓
14	✓	✓	Llethr ganol	
15	✓	✓	Blaencleddau Eastern pastures	
16	✓	✓	Llethr uchaf	

### 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 present as a qualifying feature but not a primary reason for site selection</i> <b>1. <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) (EU Habitat Code: 6410)</b>	Generally referred to as ' <i>Molinia</i> meadows' throughout this document.  Part of Marshy grassland SSSI feature	1
<b>2. North Atlantic wet heaths with <i>Erica tetralix</i></b>	Equivalent to Wet heath SSSI feature	
<b>3. Blanket bog</b>	Equivalent to Blanket mire SSSI feature	
<b>4. Transition mires and quaking bogs</b>	Part of Fen SSSI feature	
<b>5. Alkaline fens</b>	Partly within Fen SSSI feature, partly within Flush SSSI feature	
<i>Annex II species that are a primary reason for site selection</i> <b>6. Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i>, <i>Hypodryas</i>) <i>aurinia</i> (EU Species Code: 1065)</b>		2
<i>Annex II species present as a qualifying feature, but not a primary reason for site selection</i> <b>7. Southern damselfly <i>Coenagrion mercuriale</i></b>		
<i>SSSI features</i>		
<i>Primary Features</i>		
Marshy grassland	NVC: M23, M24, M25	
Flush	NVC: M6, M10, M29	
Fen	NVC: M4, M5, M9, S27	
Wet heath	NVC: M15, M16	
Blanket bog	NVC: M17	
Marsh fritillary		
Southern damselfly		
<i>Secondary Features</i>		
Neutral grassland	NVC: MG5	
Acid grassland	NVC: U4	
Dry heath	NVC: H8	
Swamp		

<i>Designated feature (cont.d)</i>	<i>Relationships, nomenclature etc</i>	<i>Conservation Objective in part 4</i>
<b>SSSI features (cont.d)</b>		
Lepidoptera: Small pearl-bordered fritillary <i>Boloria selene</i> (BAP long list species) Scarce burnished brass <i>Diachrysia chryson</i> (Notable b) Scarlet tiger moth <i>Callimorpha dominula</i> (Notable b) <i>Prochoreutis sehedetsiana</i> (Notable b)		

### 3.2 Special Features and Management Units

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

#### Key Features

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

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

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

#### Other Features

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

- they are present in the unit but are of less conservation importance than the key feature; and/or
- 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
- their requirements are broader than and compatible with the management needs of the key feature(s).

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

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

**x** – Features not present in the management unit.

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



Gweunydd Blaencleddau	Management unit																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
SAC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
SSSI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<b>SAC features</b>																	
1. <i>Molinia</i> meadows	x	x	sym	sym	x	sym	sym	x	sym	sym	x	sym	sym	KH	x	x	
2. North Atlantic wet heath	x	x	sym	sym	KH	sym	Nm	x	sym	x	sym	sym	sym	sym	x	sym	
3. Blanket bog	x	KH	x	x	sym	KH	Nm	x	sym	x	x	KH	x	sym	x	x	
4. Transition mire and quaking bog	x	sym	x	x	x	sym	KH	x	KH	KH	KH	sym	KH	sym	x	x	
5. Alkaline fens	x	x	KH	KH	KH	x	KH	sym	x	sym	sym	x	x	x	KH	x	
6. Marsh fritillary butterfly	x	KS	KS	Nm	Nm	KS	Nm	x	KS	KS	KS	KS	KS	KS	KS	x	x
7. Southern damselfly	x	x	sym	KS	KS	x	KS	x	x	x	x	sym	x	x	KS	x	
<b>SSSI features</b>																	
8. Non SAC marshy grassland	KH	sym	sym	sym	sym	sym	sym	KH	sym	sym	sym	sym	sym	sym	sym	sym	KH
9. Non SAC flush	x	sym	sym	sym	sym	sym	sym	sym	sym	sym	sym	sym	sym	sym	sym	sym	sym
10. Dry neutral grassland	x	x	x	x	x	sym	x	sym	x	x	x	KH	x	x	sym	x	
11. Acid grassland	x	sym	x	sym	sym	x	x	x	x	x	x	x	sym	sym	x	x	
12. Dry heath	x	x	x	x	x	x	x	x	x	x	x	x	sym	sym	x	x	
13. Swamp	x	sym	x	x	x	x	sym	x	sym	x	sym	x	sym	x	x	sym	

Note The marsh fritillary is widely distributed across the site, in a range of habitats that support devil's bit scabious. In contrast, the southern damselfly is limited by its requirement for areas of alkaline fen. Despite its lower grading, the damselfly has been prioritised over the marsh fritillary in the three management units where it has strong populations. The relatively heavy grazing pressure required to produce the short open alkaline fen best suited to the damselfly may result in over-grazing of the associated marsh fritillary habitats, so the 'negative management code' has been used. In practice, current management in these units is aiming for sufficient stocking densities for the damselfly but falling short and benefiting the fritillary instead. If stocking densities were aimed at the fritillary but fell short, neither species would benefit.

## **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.”

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<sup>1</sup>.

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.

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<sup>1</sup> Available through [www.jncc.gov.uk](http://www.jncc.gov.uk) and follow links to Protected Sites and Common Standards Monitoring.

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#### 4.1 Conservation Objective for Feature 1:

***Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) (EU Habitat Code: 6410)**

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##### Vision for *Molinia* meadows

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

- *Molinia* meadows will occur as small patches around the site.
- The following plants will be common: purple moor-grass *Molinia caerulea*; small sedges including *Carex pulicaris* and *hostiana*, and devil's bit scabious *Succisa pratensis*.
- Soft rush *Juncus effusus* and species indicative of agricultural modification, such as perennial rye grass *Lolium perenne* and white clover *Trifolium repens* will be virtually absent.
- Scrub species such as willow *Salix* and birch *Betula* will also be largely absent.
- All factors affecting the achievement of these conditions will be under control.

##### Performance indicators for *Molinia* meadows

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>
<b>A1.</b> Extent of <i>Molinia</i> meadows	Lower limit is based on current extent	<i>Upper limit:</i> As limited by other habitats. <i>Lower limit:</i> 0.4ha
<b>A2.</b> Condition of <i>Molinia</i> meadows	Based on the Standard CSM attribute for this feature. Modified according to site-specific requirements.	<i>Upper limit:</i> Not required <i>Lower limit:</i> 70% of the <i>Molinia</i> meadows is in good condition, characterised by: <ul style="list-style-type: none"><li>• At least three of the following positive indicator species are present (<i>Succisa pratensis</i>, <i>Anagallis tenella</i>, <i>Calluna</i>, <i>Carum</i>, <i>Erica tetralix</i>, <i>Lathyrus montanus</i>, <i>Orchidacea sp.</i>, <i>Pedicularis sylvatica</i>, <i>Potentilla erecta</i>, <i>Serratula tinctoria</i>, <i>Genista anglica</i>, <i>Viola palustris</i>)</li><li>• <i>Molinia</i> between 25 and 80% cover</li><li>• Litter &lt;25%</li></ul>

<b>Performance indicators for feature condition (cont.d)</b>		
<b>Attribute</b>	<b>Attribute rationale and other comments</b>	<b>Specified limits</b>
<b>A2.</b> Condition of <i>Molinia</i> meadows (cont.d)	Based on the Standard CSM attribute for this feature. Modified according to site-specific requirements	<p><i>Lower limit (cont.d):</i> 70% of the <i>Molinia</i> meadows is in good condition, characterised by:</p> <ul style="list-style-type: none"> <li>• Agricultural weeds absent and, agriculturally favoured species such as <i>Holcus lanatus</i> and <i>Trifolium repens</i> jointly comprising no more than 5% cover of the sward;</li> <li>• Bracken absent, and no more than 1 sapling or bush (over 20cm) is present.</li> </ul>
<b>Performance indicators for factors affecting the feature</b>		
<b>Factor</b>	<b>Factor rationale and other comments</b>	<b>Operational Limits</b>
<b>F1.</b> Livestock grazing	The <i>Molinia meadows</i> has been maintained through traditional farming practices. Without an appropriate grazing regime, the grassland would become rank and eventually turn to scrub and woodland. Light grazing by cattle or ponies between April and November each year is essential for maintaining the marshy grassland communities.	<p><i>Upper limit:</i> Refer to management agreement</p> <p><i>Lower limit:</i> The <i>Molinia</i> meadows will be subject to light summer grazing by cattle and/or ponies at least 4 in every 5 years.</p> <p>Light summer grazing is defined as: cattle and/or ponies at a rate of 0.4 LSU/ha/year for the period April to October.</p>
<b>F2.</b> Scrub cutting	A key attribute, as grazing levels required to keep sward structure suitable for marsh fritillaries may be too low to prevent scrub encroachment. Bracken currently absent from the feature. Generic standard is for woody species and bracken to form no more than 5% cover. Translated into structured recording – requirement for no more than one sapling, and no bracken frond in each sample.	<p><i>Upper limit:</i> 15% scrub cover across whole site.</p> <p><i>Lower limit:</i> 5% scrub cover across whole site</p>
<b>F3.</b> Burning	Burning can damage the bryophyte layer and encourage a vigorous re-growth of purple moor-grass and other fire-resistant species.	<p><i>Upper limit:</i> none set</p> <p><i>Lower limit:</i> no burning</p>

## 4.2 Conservation Objective for Feature 2: North Atlantic Wet Heath with *Erica tetralix*

### Vision for wet heath

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

- Wet heath will occupy at least 6% of the total site area.
- The following plants will be common in the wet heath: heather *Calluna vulgaris*; cross-leaved heath *Erica tetralix*; purple moor-grass *Molinia caerulea*; bog asphodel *Narthecium ossifragum*; short sedges *Carex* species; mosses including bog moss *Sphagnum* species; devil's bit scabious *Succisa pratensis*.
- Competitive species indicative of under-grazing, particularly purple moor-grass *Molinia caerulea* and western gorse *Ulex gallii* will be kept in check.
- Bracken, and scrub species such as willow *Salix* and birch *Betula* will also be largely absent from the wet heath.

### Performance indicators for wet heath

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>
<b>A1.</b> Extent of wet heath vegetation	Lower limit based on extent at notification (defined by 2000 NVC survey)	<i>Upper limit:</i> As limited by other habitats. <i>Lower limit:</i> 10ha
<b>A2.</b> Condition of wet heath vegetation	Based on the standard CSM attribute for this feature. Modified according to site-specific requirements.	<i>Upper limit:</i> Not required <i>Lower limit:</i> 70% of the wet heath vegetation is in good condition, characterised by the presence of: <ul style="list-style-type: none"> <li>• At least three of the following positive indicator species are present (<i>Eriophorum angustifolium</i>, <i>Trichophorum cespitosum</i>, <i>Narthecium ossifragum</i>, <i>Calluna vulgaris</i>, <i>Erica tetralix</i>, <i>Succisa pratensis</i>);</li> <li>• Sphagnum &gt; 20%</li> <li>• Short, open vegetation structure</li> <li>• No single species &gt; 60% cover</li> <li>• Dwarf shrub cover 25-90%, at least 2 species.</li> <li>• No bracken, scrub or saplings</li> <li>• <i>Polytrichum commune</i> &lt;5% cover</li> <li>• Bare ground 1-10% cover</li> </ul>

<b>Performance indicators for factors affecting the feature</b>		
<b>Factor</b>	<b>Factor rationale and other comments</b>	<b>Operational Limits</b>
<b>F1.</b> Livestock grazing	The wet heath vegetation has been maintained by traditional grazing practices. Without an appropriate grazing regime, the wet heath would become rank and eventually turn to gorse scrub and woodland. Light grazing by animals - ideally cattle from April – November and ponies throughout year - is essential for maintaining the wet heath.	<i>Upper limit:</i> The grazing pressure must not be so high as to break down the vegetation structure and cause significant bare areas to appear. <i>Lower limit:</i> The wet heath must be subject to sufficient grazing to prevent the growth of purple moor-grass tussocks and western gorse clumps from smothering the growth of small sedges, mosses and flowering plants.
<b>F2.</b> Burning	No burning has taken place for several decades. Burning can damage the bryophyte layer and encourages a vigorous re-growth of more competitive, fire-resistant species like purple moor-grass.	<i>Upper limit:</i> 10% of wet heath burnt in any six year period and no individual patch will be burnt more than once in fifteen years <i>Lower limit:</i> none set
<b>F3.</b> Water Quality	The wet heath is kept moist by precipitation and seepages. It is not subject to run-off from agricultural activities such as fertiliser application. It could still be affected by pesticides, for example following sheep-dip application, or airborne pollutants such as nitrous oxides from vehicle exhausts	<i>Upper limit:</i> levels of pollutants must not exceed critical thresholds for vegetation types according to JNCC guidance <i>Lower limit:</i> none set
<b>F4.</b> Water Quantity	Abstractions for private water supply could reduce the quantity of water available to vegetation here with a groundwater influence.	<i>Upper limit:</i> volume and number of private abstractions not to increase above current levels <i>Lower limit:</i> none set

### 4.3 Conservation Objective for Feature 3: Blanket Bog

#### Vision for blanket bog

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

- Blanket bog will occupy at least 4% of the total site area.
- The following plants will be common in the blanket bog: hare's-tail cotton grass *Eriophorum vaginatum*; heather *Calluna vulgaris*; cross-leaved heath *Erica tetralix* and bog moss *Sphagnum* species.
- Competitive species indicative of under-grazing, particularly purple moor-grass *Molinia caerulea* will be kept in check.
- Bracken, and scrub species such as willow *Salix* and birch *Betula* will also be largely absent from the blanket bog.

#### Performance indicators for blanket bog

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>
<b>A1.</b> Extent of blanket bog vegetation	Lower limit based on extent at notification (defined by 2000 NVC survey)	<i>Upper limit:</i> As limited by other habitats. <i>Lower limit:</i> 4ha
<b>A2.</b> Condition of blanket bog vegetation	Based on the standard CSM attribute for this feature. Modified according to site-specific requirements.	<i>Upper limit:</i> Not required <i>Lower limit:</i> 70% of the blanket bog vegetation is described as <b>good condition blanket bog</b> .
<i>Site-specific definitions</i>		
<b>Blanket bog</b>	Vegetation where <i>Eriophorum vaginatum</i> is present, together with <i>Sphagna</i> and/or ericoids, within a 1m radius area of search.	
<b>good condition Blanket bog</b>	Vegetation where the following criteria are all met for a given sample point. Within a 50cm radius: <ul style="list-style-type: none"> <li>• Sphagnum &gt; 20%</li> <li>• At least three of the following positive indicator species are present (<i>Eriophorum vaginatum</i>, <i>E. angustifolium</i>, <i>Trichophorum cespitosum</i>, <i>Calluna vulgaris</i> and <i>Erica tetralix</i>.);</li> <li>• No single species &gt; 50% cover</li> </ul> and within a 1m radius of the sample point: <ul style="list-style-type: none"> <li>• Indicators of negative change are absent (bracken, trees, scrub and saplings (over 20cm tall), <i>Deschampsia cespitosa</i>, <i>Phalaris arundinacea</i>, <i>Des flex</i>, <i>Vaccinium myrtillus</i> etc</li> <li>• <i>Juncus effusus</i>, <i>Polytrichum commune</i> &lt;5% cover</li> </ul> Bare ground <5% cover	
<b>Trees, scrub &amp; saplings</b>	Including <i>Rubus fruticosus</i> , <i>Rubus ideaus</i> and <i>Ulex</i> spp.	



<b>Performance indicators for factors affecting the feature</b>		
<b>Factor</b>	<b>Factor rationale and other comments</b>	<b>Operational Limits</b>
<b>F1. Livestock grazing</b>	The blanket bog vegetation has been maintained by traditional grazing practices. Without an appropriate grazing regime, it would become rank and eventually dry out and turn into willow scrub. Light grazing by animals - ideally cattle or ponies from May – October - is essential for maintaining the bog.	<i>Upper limit:</i> The grazing pressure must not be so high as to break down the vegetation structure and cause significant bare areas to appear. <i>Lower limit:</i> The blanket bog must be subject to sufficient grazing to prevent the growth of purple moor-grass tussocks from smothering the growth of smaller plants.
<b>F2. Burning</b>	No burning has taken place, at least for several decades. Burning would be damaging to the peat and would encourage a vigorous re-growth of competitive, fire-resistant species like purple moor-grass.	<i>Upper limit:</i> no burning to take place on the blanket bog <i>Lower limit:</i> none set
<b>F3. Water Quality</b>	The blanket bog is kept moist by precipitation. It is not subject to run-off from agricultural activities such as fertiliser application. It could still be affected by airborne pollutants such as nitrous oxides from vehicle exhausts	<i>Upper limit:</i> levels of pollutants must not exceed critical thresholds for vegetation types according to JNCC guidance <i>Lower limit:</i> none set

#### 4.4 Conservation Objective for Feature 4: Transition Mire and Quaking Bog

##### Vision for transition mire and quaking bog

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

- Transition mire and quaking bog will occupy at least 2% of the total site area.
- Bottle sedge should be abundant over carpets of bog mosses, ‘brown’ mosses or swamp species such as marsh cinquefoil
- Competitive species indicative of under-grazing, particularly soft rush *Juncus effusus* and purple moor-grass *Molinia caerulea* will be kept in check.
- Scrub species such as willow *Salix* and birch *Betula* will also be largely absent.

##### Performance indicators for transition mire and quaking bog

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>
<b>A1.</b> Extent of transition mire and quaking bog vegetation	Lower limit based on extent at notification (defined by 2000 NVC survey)	<i>Upper limit:</i> As limited by other habitats. <i>Lower limit:</i> 3ha
<b>A2.</b> Condition of transition mire and quaking bog vegetation	Based on the standard CSM attribute for this feature. Modified according to site-specific requirements.	<i>Upper limit:</i> Not required <i>Lower limit:</i> 70% of the <b>transition mire and quaking bog vegetation</b> is described as <b>good condition transition mire and quaking bog</b>
<i>Site-specific definitions</i>		
<b>Transition mire and quaking bog</b>	Vegetation where at least two of the following: <i>Potentilla palustris</i> , <i>Carex rostrata</i> , <i>Menyanthes trifoliata</i> , <i>Hypericum elodes</i> and <i>Pedicularis palustris</i> are present within a 50cm radius area of search.	
<b>good condition transition mire and quaking bog</b>	<b>Transition mire and quaking bog</b> vegetation where the following criteria are all met for a given sample point within a 1m radius: <ul style="list-style-type: none"> <li>• Three or more typical species of <b>transition mire and quaking bog</b></li> <li>• <i>Holcus lanatus</i>, <i>Juncus effusus</i>, <i>Polytrichum commune</i> and <i>Glyceria</i> spp. are at &lt;5% cover;</li> <li>• Sphagnum &gt; 20%</li> <li>• Tussocks of <i>Molinia</i> and <i>Carex paniculata</i> are absent, as are plants of broad leaved sedges (&gt;1cm in width) namely <i>Carex acutiformis</i> and <i>Carex riparia</i></li> <li>• <i>Sphagna</i> or <i>Calliergon</i> species form at least 20% cover</li> <li>• <i>Typha</i>, <i>Oenanthe crocata</i>, <i>Apium nodiflorum</i>, <i>Scirpus tabernamontani</i>, trees and scrub are absent</li> <li>• No single species &gt; 50% cover</li> </ul> Bare ground <5% cover	
<b>Trees, scrub &amp; saplings</b>	Including <i>Rubus fruticosus</i> , <i>Rubus ideaus</i> and <i>Ulex</i> spp.	
<b><i>Carex paniculata</i></b>	Tussocks defined as over 15 x 15 cm across the base	

<b><i>Performance indicators for factors affecting the feature</i></b>		
<b><i>Factor</i></b>	<b><i>Factor rationale and other comments</i></b>	<b><i>Operational Limits</i></b>
<b>F1.</b> Livestock grazing	The blanket bog vegetation has been maintained by traditional grazing practices. Without an appropriate grazing regime, it would become rank and eventually dry out and turn into willow scrub. Light grazing by animals - ideally cattle or ponies from May – October - is essential for maintaining the bog.	<i>Upper limit:</i> The grazing pressure must not be so high as to break down the vegetation structure and cause significant bare areas to appear. <i>Lower limit:</i> The blanket bog must be subject to sufficient grazing to prevent the growth of purple moor-grass tussocks from smothering the growth of smaller plants.
<b>F2.</b> Burning	No burning has taken place, at least for several decades. Burning would be damaging to the peat and would encourage a vigorous re-growth of competitive, fire-resistant species like purple moor-grass.	<i>Upper limit:</i> no burning to take place on the blanket bog <i>Lower limit:</i> none set
<b>F3.</b> Water Quality	The blanket bog is kept moist by precipitation. It is not subject to run-off from agricultural activities such as fertiliser application. It could still be affected by airborne pollutants such as nitrous oxides from vehicle exhausts	<i>Upper limit:</i> levels of pollutants must not exceed critical thresholds for vegetation types according to JNCC guidance <i>Lower limit:</i> none set

#### 4.5 Conservation Objective for Features 5 and 9: Flushes including Alkaline Fen

##### Vision for Flushes

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

- Flushes will occupy at least 10% of the total site area.
- The majority of the flushes will naturally support carpets of bog moss below a canopy of tall rushes or sedges.
- A proportion (at least 15%) should support short, open vegetation rich in small mosses, sedges and wildflowers characteristic of less acidic conditions. This type of flush corresponds to the Alkaline Fen feature of European interest.
- Many of the flushes will have short, open vegetation to suit the requirements of the southern damselfly.
- Competitive species indicative of under-grazing, particularly soft rush *Juncus effusus* and purple moor-grass *Molinia caerulea* will be kept in check.
- Scrub species such as willow *Salix* and birch *Betula* will also be largely absent.

##### Performance Indicators for Flushes

<i>Performance indicators for flush condition</i>		
<i>Attribute</i>	<i>Attribute rationale and other comments</i>	<i>Specified limits</i>
<b>A1.</b> Extent of flush vegetation	Lower limit based on extent at notification (defined by 2000 NVC survey)	<i>Upper limit:</i> As limited by other habitats. <i>Lower limit:</i> 15ha
<b>A2.</b> Condition of flush vegetation	Based on the standard CSM attribute for this feature. Modified according to site-specific requirements.	<i>Upper limit:</i> Not required <i>Lower limit:</i> 70% of the flush vegetation is described as <b>good condition flush vegetation</b> .
<i>Site-specific definitions</i>		
<b>good condition flush vegetation.</b>	Vegetation where: <ul style="list-style-type: none"> <li>• Three or more indicator species are present (to be defined)</li> <li>• No single species &gt; 50% cover, and,</li> <li>• Indicators of negative change are absent (to be defined)</li> <li>• Open water or bare mud &gt; 5% cover</li> </ul>	
<i>Performance indicators for factors affecting the feature</i>		
<i>Factor</i>	<i>Factor rationale and other comments</i>	<i>Operational Limits</i>
<b>F1.</b> Livestock grazing	The flush vegetation has been maintained by traditional grazing practices. Without an appropriate grazing regime, it would close over with larger plants such as purple moor-grass and greater tussock sedge. Light grazing by animals - ideally cattle or ponies from May – October - is essential for maintaining the flushes.	<i>Upper limit:</i> The grazing pressure must not be so high as to break down the vegetation structure and cause significant bare areas to appear. <i>Lower limit:</i> The flushes must be subject to sufficient grazing to prevent the growth of purple moor-grass and sedge tussocks from smothering the growth of smaller plants.
<b>F2.</b> Water Quality	The flushes are groundwater dependent. Groundwater could be subject to pollution from agricultural activities such as fertiliser application. They could also be affected by airborne pollutants such as nitrous oxides from vehicle exhausts.	<i>Upper limit:</i> levels of pollutants must not exceed critical thresholds for vegetation types according to JNCC guidance <i>Lower limit:</i> none set

<b>Performance indicators for factors affecting the feature (cont.d)</b>		
<b>Factor</b>	<b>Factor rationale and other comments</b>	<b>Operational Limits</b>
<b>F3. Water Quantity</b>	As groundwater dependent systems, flushes could be affected by any changes to groundwater flows – for example due to abstraction from boreholes.	<i>Upper limit:</i> none set  <i>Lower limit:</i> groundwater flows must remain at current levels ( <i>how do we set these?</i> )

### Performance Indicators for Alkaline fen habitat

<b>Performance indicators for flush condition</b>		
<b>Attribute</b>	<b>Attribute rationale and other comments</b>	<b>Specified limits</b>
<b>A1. Extent of alkaline fen vegetation</b>	Lower limit based on extent at notification (defined by 2000 NVC survey)	<i>Upper limit:</i> None set <i>Lower limit:</i> Alkaline fen continues to be present in flush channels totalling at least 500m in the main areas on Dolau newydd and Dolau isaf.
<b>A2. Condition of alkaline fen vegetation</b>	Based on the standard CSM attribute for this feature. Modified according to site-specific requirements.	<i>Upper limit:</i> Not required <i>Lower limit:</i> Within 1m: <ul style="list-style-type: none"> <li>The combined cover of short sedges and brown mosses make up over 50% of the overall plant cover</li> </ul> <u>AND</u> <ul style="list-style-type: none"> <li>Brown mosses are present</li> </ul>
<b>Site Specific Habitat Definitions</b>		
<b>Short sedges</b>	<i>Carex panicea, C. flacca, C. pulicaris, C. dioica, C. demissa, C. hostiana and C. nigra</i>	
<b>Brown mosses</b>	<i>Drepanocladus revolvens, D. cossonii, Calliargon sarmentosum, Scopidium scorpioides and Campylium stellatum</i>	

## 4.6 Conservation Objective for Feature 6: Marsh fritillary

### Vision for Marsh fritillary

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

- Density of larval webs during sampling will be at least 200 per hectare of **Good Condition habitat**
- There are at least 50ha of **Suitable habitat** on the site or within a 2km radius around it.
- At least 10ha of the suitable habitat is **Good Condition habitat**
- **Good Condition habitat** comprises grassland, with *Molinia* abundant, where the vegetation height is within the range of 10 to 20 cm, and where, for at least 80% of sampling points, *Succisa pratensis* is present within a 1 m radius. Scrub (>1 metre tall) covers no more than 10% of area.
- Suitable marshy grassland comprises grassland where *Succisa pratensis* is present at lower frequencies but still widely distributed throughout the habitat patch and in which scrub (>1 metre tall) covers no more than 20% of area. Alternatively, *Succisa* may be present at high density in close-cropped swards.
- The factors influencing the breeding habitat are under control

Recovery target	To restore the Marsh fritillary meta-population to favourable condition where
Recovery target	In one year in 6 the total number of larval webs is estimated to be: 200 per hectare of Good Condition habitat  <u>AND</u> where
Habitat extent & quality	<i>Upper limit:</i> As limited by other feature habitats <ul style="list-style-type: none"> <li>• There are at least 50ha of <b>Suitable habitat</b> on the site or within a 2km radius around it.</li> </ul> <i>Lower limit:</i> <ul style="list-style-type: none"> <li>• At least 10ha of the suitable habitat is <b>Good Condition habitat</b></li> </ul>
Habitat distribution	<i>Upper limit</i> <ul style="list-style-type: none"> <li>• <i>None set</i></li> </ul> <i>Lower limit</i> <ul style="list-style-type: none"> <li>• (Suitable and/or good condition habitat must be present in management units 2, 3, 6, 9, 10, 11, 12, 13 &amp; 14)</li> </ul>

<b>Performance indicators for factors affecting the feature</b>		
<b>Factor</b>	<b>Factor rationale and other comments</b>	<b>Operational Limits</b>
<b>F1.</b> Livestock grazing	The marsh fritillary habitat has been maintained by traditional grazing practices. Without an appropriate grazing regime, the habitat would become rank and the larval foodplant would disappear. Light grazing by animals - ideally cattle from April – October and/or light grazing by ponies throughout year - is essential for maintaining the sward structure	<i>Upper limit:</i> The grazing pressure must not be so high as to break down the vegetation structure and cause significant bare areas to appear. <i>Lower limit:</i> The site must be subject to sufficient grazing to maintain <b>Suitable habitat</b> or <b>Good Condition habitat</b> as set out below.
<b>F2.</b> Burning	Marsh fritillary colonies are susceptible to damage by burning.	<i>Upper limit:</i> No burning within key Marsh fritillary areas <i>Lower limit:</i> None set
<b>Habitat Definitions</b>		
<b>Good Condition marsh fritillary breeding habitat</b>	Grassland, with <i>Molinia</i> abundant, where the vegetation height is within the range of 10 to 20 cm, and where, for at least 80% of sampling points, <i>Succisa pratensis</i> is present within a 1 m radius. Scrub (>1 metre tall) covers no more than 10% of area.	
<b>Suitable marshy grassland</b>	Stands of grassland where <i>Succisa pratensis</i> is present at lower frequencies but still widely distributed throughout the habitat patch and in which scrub (>1 metre tall) covers no more than 20% of area. Alternatively, <i>Succisa</i> may be present at high density in close-cropped swards.	

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#### 4.5 Conservation Objective for Feature 7: Southern damselfly

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##### Vision for southern damselfly

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

- Density of adult males during sampling is at least 1 male per 10 square metres of breeding habitat
- The extent of breeding habitat is at least 1500 square metres.
- Breeding habitat will be mapped where patches of oviposition plants are present as more than 20% cover over areas greater than 0.5 square metres and no more than 20% of the total cover consists of *Apium nodiflorum* greater than 15cm tall. Southern damselfly females lay their eggs into the tissue of emergent aquatic plants and in Wales the key species are *Menyanthes trifoliata* (bog-bean), *Hypericum elodes* (marsh St. John's wort), *Potamogeton polygonifolius* (bog pondweed) and *Apium nodiflorum* (fool's watercress).
- The factors influencing the flush habitat are under control

<i>Performance indicators for feature condition</i>		
<i>Attribute</i>	<i>Attribute rationale and other comments</i>	<i>Specified limits</i>
<b>A1.</b> Presence	Based on the monitoring in Boardman, 2005.	<i>Upper limit:</i> N/A <i>Lower limit:</i> Species present in areas mapped in Boardman 2005
<b>A2.</b> Population size - Density of adult males	Based on the CSM attribute for this feature	<i>Upper limit:</i> N/A <i>Lower limit:</i> 1 male per 10 square metres



<p><b>A3.</b>Extent of breeding habitat</p>	<p>Based on the standard CSM attribute for this feature. Southern damselfly females lay their eggs into the tissue of emergent aquatic plants and in Wales the key species are <i>Menyanthes trifoliata</i> (bog-bean), <i>Hypericum elodes</i> (marsh St. John's wort), <i>Potamogeton polygonifolius</i> (bog pondweed) and <i>Apium nodiflorum</i> (fool's watercress). Breeding habitat will be mapped where patches of oviposition plants are present as more than 20% cover over areas greater than 0.5 square metres and no more than 20% of the total cover consists of <i>Apium nodiflorum</i> greater than 15cm tall.</p> <p>A total of 1796 square metres of suitable breeding habitat was identified by Boardman at this site. The target set during monitoring was for 500 square metres of suitable habitat to be present. However, the present amounts of suitable habitat should not be allowed to decline to such a low level and therefore the current limit for the amount of suitable habitat is set at at least 1500 square metres.</p>	<p><i>Upper limit:</i> N/A  <i>Lower limit:</i> approximately 1500 square metres of breeding habitat present as mapped by Boardman (2005).</p>
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<b>Performance indicators for factors affecting the feature</b>		
<b>Factor</b>	<b>Factor rationale and other comments</b>	<b>Operational Limits</b>
<b>F1. Livestock grazing</b>	The damselfly's flush/stream habitat has been maintained by traditional grazing practices. Shading of flushes and streams by tall plants reduces their suitability for the species. Successional processes in flushes reduce habitat availability. Trampling is often required to prevent small streams from disappearing below ground. Light grazing by animals - ideally sheep, cattle and ponies from April – November - is therefore essential for maintaining this feature	<i>Upper limit:</i> The grazing pressure must not be so high as to break down the vegetation structure and cause significant bare areas to appear. <i>Lower limit:</i> Flushes and streams should be kept open and some poaching at their margins encouraged
<b>F2. Burning</b>	Areas of the common have been burnt on an annual basis. These are usually carried out by the commoners to encourage fresh growth for stock, but occasionally may be accidental burns or arson attacks. Although focussed on the heath, burns have spread across the flushes. Burning can damage the bryophyte layer and encourages a vigorous re-growth of more competitive, fire-resistant species like purple moor-grass.	<i>Upper limit:</i> no areas of flush to be burnt. <i>Lower limit:</i> none set
<b>F3. Water Quality</b>	The flushes, springs and seepages, which arise on the site itself, are not subject to run-off from agricultural activities such as fertiliser application. They could still be affected by pesticides, for example following sheep-dip application or spraying of bracken, or airborne pollutants such as nitrous oxides from vehicle exhausts	<i>Upper limit:</i> levels of pollutants must not exceed critical thresholds for vegetation types according to JNCC guidance <i>Lower limit:</i> none set
<b>F4. Water Quantity</b>	Several springs arising on the site may be used for private water supplies by properties bordering it. Modifying the hydrology of these spring areas will impact on flush vegetation.	<i>Upper limit:</i> volume and number of private abstractions not to increase above current levels <i>Lower limit:</i> none set

## **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.

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### **5.1 Conservation Status and Management Requirements of Feature 1: *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) (EU Habitat Code: 6410)**

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#### **Conservation Status of *Molinia* meadows**

##### **2005: Unfavourable Declining**

This habitat is poorly represented on the site, occurring as scattered small patches across several management units. Monitoring work revealed that one of the larger of these patches had, in the five-year period since notification, succeeded to taller purple-moor grass pasture. Conversely, a second patch had been over-grazed.

#### **Management Requirements of *Molinia* meadows**

Tighter control on grazing would be required to recover the condition of the *Molinia* meadows. This feature is not a key habitat on any of the management units, but would be expected to benefit generally from an overall increase in stocking.

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### **5.2 Conservation Status and Management Requirements of Feature 2: Wet Heath**

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#### **Conservation Status of Wet Heath**

##### **2005: Unfavourable declining**

Wet heath occurs most extensively on the common land units. The smaller of these is grazed hard, and areas of wet heath show reduced ericoid cover and a high frequency of *Juncus squarrosus*. The larger of these, Waun Cleddau, has suffered neglect in recent years. A couple of years of cattle grazing temporarily kept *Molinia* in check and improved the structure of the habitat. Monitoring results concluded that most stands were still in unfavourable condition, primarily due to a paucity of *Sphagna*. Grazing has subsequently ceased, and the habitat is declining once again.

#### **Management Requirements of Wet Heath**

Burning should continue to be avoided. Tighter control on grazing would be required to recover the condition of the wet heath. The relatively light grazing required by wet heath will not always be compatible with the heavier grazing required by other features such as southern damselfly, so it may not prove possible to get the wet heath into favourable condition across all management units on the site. Good condition wet heath should be present in those units where it is the Key Habitat.

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### **5.2 Conservation Status and Management Requirements of Feature 3: Blanket Bog**

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#### **Conservation Status of Blanket Bog**

##### **2005: Unfavourable recovering**

Blanket bog occurs most extensively on management units at Dolau Maen and Blaencleddau. Monitoring work here demonstrated that excess *Molinia* growth was a key factor leading to unfavourable condition on the former area, whilst low cover of *sphagna* and presence of negative indicators *Juncus effusus* and *Polytrichum commune* were problems on the latter.

## **Management Requirements of Blanket Bog**

Burning should continue to be avoided. Grazing pressure on key areas have fluctuated in recent years, and a constant grazing effort needs to be maintained to recover the habitat. Some scrub clearance may be necessary if grazing pressure alone is not sufficient to halt succession. Near natural drainage patterns should be maintained or re-instated.

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## **5.2 Conservation Status and Management Requirements of Feature 4: Transition Mire and Quaking Bog**

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### **Conservation Status of Transition Mire and Quaking Bog**

**2005: Favourable maintained**

This habitat is scattered across several management units. No formal monitoring has been completed. Under-grazing of some patches has led to a reduced diversity as *Carex rostrata* and *Menyanthes* growth shades out the smaller species, whilst willow scrub and tussock growth of *Molinia* and *Carex paniculata* are impacting on the edges of some patches. Most areas are still relatively well characterised and open though.

### **Management Requirements of Transition Mire and Quaking Bog**

Summer grazing by cattle, ponies or water buffalo needs to be maintained or increased across all management units. Some scrub clearance may be necessary if grazing pressure alone is not sufficient to halt succession. Some patches of the habitat may have developed in areas formally cut-over for peat, and in some areas, consideration could be given to rejuvenating the hydro-sere. Near natural drainage patterns should be maintained or re-instated. Diffuse and point –source pollution should be addressed where it may be an issue – the feature may have been lost from part of Waun Cleddau following run-off of enriched water from cattle housing at Blaengors.

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## **5.2 Conservation Status and Management Requirements of Feature 5: Alkaline Fen**

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### **Conservation Status of Alkaline Fen**

**2005: Favourable maintained**

No formal monitoring has been undertaken, but surveillance indicates that most key areas are in good condition. The stands in Dolau isaf, however, are closing over with taller vegetation as grazing pressures have reduced in recent years

### **Management Requirements of Alkaline Fen**

Summer grazing, preferably by cattle or ponies, needs to be maintained or increased across all management units. Near natural drainage patterns should be maintained or re-instated. Pollution should be addressed if it becomes an issue.

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## **5.2 Conservation Status and Management Requirements of Feature 6: Marsh Fritillary**

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### **Conservation Status of Marsh Fritillary**

#### **2005: Unfavourable**

Partial surveillance of this feature has been ongoing since 2000. Counts prior to notification in 1999 indicated only that ‘hundreds’ of adults were present in two enclosures in the northern part of the site. Web counts were carried out on an ad hoc basis between 2000 and 2005, but no attempts at comprehensive coverage were made during this period as observations on adult numbers were generally in single figures.

2006 appeared to be a better year for adults, with a count of over 25 on one of the key sections, and small numbers appearing in enclosures where they had not previously been seen. Web counts were subsequently made in September in eight of the management units. An area of approximately 20ha was surveyed. This produced a total count of 137 webs.

There is a considerable hectareage of suitable habitat on the SAC, This was mapped using the protocols given by Fowles (2005) during 2009. Totalling the areas of “good condition”, “suitable undergrazed”, “suitable over grazed” and “suitable sparse” habitats produces a total area of 58.9 ha of suitable habitat. This figure also includes 8.7ha of good condition habitat. These figures indicate that, whilst the SAC may not contain the suggested minimum of 10 ha of Good Condition habitat, there is considerably more than the suggested minimum of 50 ha of suitable habitat that is needed to support a viable population into the long-term. However, the presence of further habitat within a 3km radius of the SAC (including the Waun Isaf section of Preseli SAC) may make this one of Wales’ few potentially viable populations.

The results suggest a larval web density in the region of 5-10 per hectare of suitable habitat, a long way short of the 200 per hectare required by the conservation objective.

#### **Management Requirement of Marsh Fritillary**

Grazing, preferably by cattle or ponies, needs to be maintained or increased across all management units. This will be crucial in helping to expand the area of good condition habitat and to ensure that sufficient suitable habitat is maintained. Sward structures need to be around ankle height with some tussocky taller areas. Nectar sources must be available during the adult flight period.

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## **5.2 Conservation Status and Management Requirements of Feature 7: Southern Damselfly**

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### **Conservation Status of Southern Damselfly**

#### **2005: Favourable**

Partial surveillance of this feature has been ongoing since 2000, and locations and numbers have seemed relatively stable. 460 males were recorded on 1796 square metres of suitable habitat during monitoring work in July 2004 (Boardman, 2004). This figure easily attains favourable conservation status.

#### **Management Requirement of Southern Damselfly**

Although the three key management units for the damselfly are currently grazed, stock numbers have been reduced on all of these in recent years. Maintaining grazing regimes, ideally with cattle or ponies, will be key to the long term viability of this population.

## **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.

<b>Unit Number</b>	<b>CCW Database Number</b>	<b>Unit Name</b>	<b>Summary of Conservation Management Issues</b>	<b>Action needed?</b>
1	000114	Ysguborwen	A small unit with marshy grassland but no SAC features - ownership recently transferred and no contact yet with new owners. Previously lightly grazed by one or two horses.	No
2	000115	Caermeini isaf	SSSI features covered by SAC plan. Under ESA agreement with S15 Agreement top-up. Neglected in recent years, but recovery management now underway. CCW have financed fencing, water supply, flail mowing and scrub clearance. Tenants graze with Welsh black, although - as this block of land is separate from their main holding - issues such as movement restrictions and TB tests have interfered with delivery of the idealised grazing regime	No
3	000116	Parc y Da	Previously managed under an ESA agreement, with S15 agreement as top-up. Fencing and flail mowing carried out to support cattle grazing regime. Management now (2007) delivered through CCW S15 agreement alone. Grazing has generally been with a herd of 20-30 continental cross cattle in late summer. These have not been locked on to the SAC, but have had access to adjoining improved land as well. Grazing pressure has been variable as a result, with the animals grazing the SAC more in dry summers. Agreement now specifies new fencing and gates to allow animals to be locked-on to wetland if required.	No
4	000117	Dolau isaf	Previously managed under an ESA agreement, with S15 agreement as top-up. Management now delivered through CCW S15 agreement alone. Grazing was previously with a flock of 200 tack sheep in late summer, and a small number of Welsh black cattle. The owners now graze with their own small sheep flock and Angora goat herd in late summer, together with 3 ponies for most of the year. Grazing pressure is focussed on the drier habitats, and the condition of the alkaline fen has become unfavourable as a result. Solutions involving sourcing cattle or water buffalo are being considered. Work to expand the area of habitat for southern damselfly has also been undertaken through manipulation of drainage ditches. This has proved successful but now requires heavier grazing to prevent Juncus dominance.	No

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
5	000118	Dolau newydd	Management assistance delivered through CCW S15 agreement. Grazing with small herd of cattle and welsh mountain ponies for much of the year. Blanket bog and heath habitats were overgrazed until around 2005, when stock numbers were cut. Marsh fritillaries have subsequently colonised the heath and flushes. Condition of the alkaline fen and southern damselfly population was good under heavy grazing regime but may now decline - stock numbers must not be allowed to drop further. Work to expand the area of habitat for southern damselfly could be carried out, through manipulation of drainage ditches as at Dolau isaf.	No
6	000119	Dolaumaen	ESA agreement ended. The land belongs to the Property known as Llwyn-eithin. A new owner purchased the land and house in March 2011. The new owner is keen to enter into a management agreement with CCW. This site has the largest area of Blanket Bog in Pembrokeshire and requires careful management. An agreement would be the most appropriate course of action.	Yes
7	000120	Comin Waun Lwyd	Visit to forestry operation and common in 2010 indicates that silt trap has been only partially successful. Sediment wash-out appears to have promoted coarse rush growth in the top part of the flush, which contrasts strongly with the pristine flush areas lower down. Forestry owner's agent has installed further silt traps to the east, but has determined that additional measures on the original silt-trap would not be of significant benefit. A move to continuous cover forestry would be desirable here. In the short term it will be necessary to re-route the run-off water that enters the common back into the boundary ditch alongside the common to ensure that any enriched/polluted water does not affect the flush feature.	Yes
8	000121	Caermeini - Glanrhyd	New owners in 2008. CCW advice given and management assistance provided through PCNPA S39 agreement.	No
9	000122	Waun Lwyd	Management assistance delivered through CCW management agreement. The owners have retired from farming, and are reliant on sourcing grazing animals from neighbours. A neighbour grazed 4 ponies for a couple of summers. However, the enclosure is wet, and not a particularly attractive proposition to potential graziers. The cost of moving the animals on to site (#60) was enough to dissuade the grazier. CCW have assisted with fencing, and the most treacherous wet spot has been fenced out. There is a gate through to the adjoining common, but the two units cannot be run together, as one of the graziers here was reportedly unhappy when one of his cattle had problems calving after it got in here.	No
10	000123	Llethr isaf	This unit is cattle-grazed. An ESA agreement was in place, and CCW assisted by carrying out some work with a flail-mower on and alongside the site. The owner declined to enter a management agreement though.	No
11	000131	Blaen Waun	This unit is horse-grazed. It has been hard-grazed in parts, but the key section (a part annexed from the common) is in good condition. The owners were unhappy with the designation, and have not sought assistance through a management agreement.	No

<b>Unit Number</b>	<b>CCW Database Number</b>	<b>Unit Name</b>	<b>Summary of Conservation Management Issues</b>	<b>Action needed?</b>
12	000132	Blaencleddau 17 acres / meadows	Management assistance is delivered through Tir Gofal. A CCW management agreement, to assist a cattle grazing regime on here and Comin Waun Cleddau, was offered but rejected. The 17 acre wet field here was brought back into favourable condition by a herd of 6 welsh black cattle following a period of neglect. The owners sold their cattle in 2006 and since then have grazed with a small number of connemara ponies, mostly in late summer. Current grazing pressure is not sufficient to keep the features in favourable condition, and the owners are looking at stocking options for next year. The adjoining hay meadows are well managed with a late cut and aftermath pony grazing.	No
13	000133	Comin Waun Cleddau	Opportunities may exist to extend heath and bog habitat over felled conifer plantation adjoining common. Re-stocking entirely - particularly with conifers - should be avoided.	Yes
14	000134	Llethr Ganol	Previous owners neglected one enclosure but mob-stocked the northern one for at least one year. CCW assisted with flail-mowing. New owners declined management agreement, and do not have hardy traditional stock suitable for wetland grazing. No active management taking place, but enforcement not considered a viable option for this small management unit.	No
15	000135	Blaencleddau Eastern Pastures	Management assistance provided through Tir Gofal. Fields are well managed through sheep and pony grazing regime	No
16	000136	Llethr uchaf	Management assistance for part of this unit provided by Tir Gofal. Pony grazing on land within this tenure; cattle grazing on other fields.	No



## **7. GLOSSARY**

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

- Action** A recognisable and individually described act, undertaking or **project** of any kind, specified in section 6 of a **Core Management Plan** or **Management Plan**, as being required for the **conservation management** of a site.
- Attribute** A quantifiable and monitorable characteristic of a **feature** that, in combination with other such attributes, describes its **condition**.
- Common Standards Monitoring** A set of principles developed jointly by the UK conservation agencies to help ensure a consistent approach to **monitoring** and reporting on the **features** of sites designated for nature conservation, supported by guidance on identification of **attributes** and monitoring methodologies.
- Condition** A description of the state of a feature in terms of qualities or **attributes** that are relevant in a nature conservation context. For example the condition of a habitat usually includes its extent and species composition and might also include aspects of its ecological functioning, spatial distribution and so on. The condition of a species population usually includes its total size and might also include its age structure, productivity, relationship to other populations and spatial distribution. Aspects of the habitat(s) on which a species population depends may also be considered as attributes of its condition.
- Condition assessment** The process of characterising the **condition** of a **feature** with particular reference to whether the aspirations for its condition, as expressed in its **conservation objective**, are being met.
- Condition categories** The **condition** of **feature** can be categorised, following **condition assessment** as one of the following<sup>2</sup>:
- Favourable: maintained;
  - Favourable: recovered;
  - Favourable: un-classified
  - Unfavourable: recovering;
  - Unfavourable: no change;
  - Unfavourable: declining;
  - Unfavourable: un-classified
  - Partially destroyed;
  - Destroyed.

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

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

- Favourable conservation status** See **conservation status** and **conservation status assessment**.<sup>3</sup>
- Feature** The species population, habitat type or other entity for which a site is designated. The ecological or geological interest which justifies the designation of a site and which is the focus of conservation management.
- Integrity** See **site integrity**
- Key Feature** The habitat or species population within a **management unit** that is the primary focus of **conservation management** and **monitoring** in that unit.
- Management Plan** The full expression of a designated site's legal status, **vision**, **features**, **conservation objectives**, **performance indicators** and management requirements. A complete management plan may not reside in a single document, but may be contained in a number of documents (including in particular **the Core Management Plan**) and sets of electronically stored information.
- Management Unit** An area within a site, defined according to one or more of a range of criteria, such as topography, location of **features**, tenure, patterns of land/sea use. The key characteristic of management units is to reflect the spatial scale at which **conservation management** and **monitoring** can be most effectively organised. They are used as the primary basis for differentiating priorities for conservation management and monitoring in different parts of a site, and for facilitating communication with those responsible for management of different parts of a site.
- Monitoring** An intermittent (regular or irregular) series of observations in time, carried out to show the extent of compliance with a formulated standard or degree of deviation from an expected norm. In **Common Standards Monitoring**, the formulated standard is the quantified expression of favourable **condition** based on **attributes**.
- Operational limits** The levels or values within which a **factor** is considered to be acceptable in terms of its influence on a **feature**. A factor may have both upper and lower operational limits, or only an upper limit or lower limit. For some factors an upper limit may be zero.
- Performance indicators** The **attributes** and their associated **specified limits**, together with **factors** and their associated **operational limits**, which provide the standard against which information from **monitoring** and other sources is used to determine the degree to which the **conservation objectives** for a **feature** are being met. Performance indicators are part of, not the same as, conservation objectives. See also **vision for the feature**.

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<sup>3</sup> A full definition of favourable conservation status is given in Section 4.

<b>Plan or project</b>	<p><b>Project:</b> Any form of construction work, installation, development or other intervention in the environment, the carrying out or continuance of which is subject to a decision by any public body or statutory undertaker.</p> <p><b>Plan:</b> a document prepared or adopted by a public body or statutory undertaker, intended to influence decisions on the carrying out of <b>projects</b>.</p> <p>Decisions on plans and projects which affect Natura 2000 and Ramsar sites are subject to specific legal and policy procedures.</p>
<b>Site integrity</b>	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.
<b>Site Management Statement (SMS)</b>	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.
<b>Special Feature</b>	See <b>feature</b> .
<b>Specified limit</b>	The levels or values for an <b>attribute</b> which define the degree to which the attribute can fluctuate without creating cause for concern about the <b>condition</b> of the <b>feature</b> . 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.
<b>Unit</b>	See <b>management unit</b> .
<b>Vision for the feature</b>	The expression, within a <b>conservation objective</b> , of the aspirations for the <b>feature</b> concerned. See also <b>performance indicators</b> .
<b>Vision Statement</b>	The statement conveying an impression of the whole site in the state that is intended to be the product of its <b>conservation management</b> . A 'pen portrait' outlining the <b>conditions</b> that should prevail when all the <b>conservation objectives</b> are met. A description of the site as it would be when all the <b>features</b> are in <b>favourable condition</b> .

## **8. REFERENCES**

Boardman, P. 2005. *Assessment of favourable condition for the southern damselfly *Coenagrion mercuriale* on candidate Special Areas of Conservation in Wales (part 2)*. Environmental Monitoring Report. **18**. Countryside Council for Wales.

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