

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

**CORE MANAGEMENT PLAN  
INCLUDING CONSERVATION OBJECTIVES**

**FOR**

**CORSYDD LLYN**

**Corsydd Môn a Llyn/ Anglesey and Llyn Fens Ramsar site ( Llyn sites only)**

**SSSIs:**

**Cors Hirdre SSSI**

**Cors Geirch SSSI/NNR/part Ramsar site**

**Rhyllech Uchaf SSSI**

**Abergeirch SSSI**

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**A Welsh version of all or part of this document can be made available on request.**



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## **PREFACE**

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

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

## 1. VISION FOR THE SITE

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

Corsydd Llyn SAC, which comprises four component SSSIs should support a range of wetland habitats including alkaline and calcareous fen, fen meadow, marshy grassland, mature wet woodland and swamp habitats. As far as possible, ponies or cattle should preferably graze these habitats.

These habitats should be of good quality, supporting a number of scarce, rare and endangered plant species. The component sites should also provide habitat for a wide range of birds, insects and reptiles. However, between them, they should also support three features of international importance namely alkaline fen, calcareous fen, Geyer's whorl snail and Desmoulin's whorl snail.

The SAC should support significant areas of alkaline fed by unpolluted base rich spring water. This alkaline habitat should be characterised by tussocks of black bog-rush, blunt-flowered rush and tall sedges such as brown sedge and lesser tussock sedge and a range of brown mosses. In summer, the white tufts of the rare slender cotton grass should be seen together with scattered pink spikes of narrow-leaved marsh orchid and marsh helleborine.

Parts of the SAC are located on deep peat whilst other parts support spring fed and flushed vegetation. The hydrological integrity of all component sites within the SAC is key to the maintenance of the wetland communities.

In addition to the geyer's whorl snail and desmoulin's whorl snail, the SAC should also support some rare invertebrate species, including hornet robber fly, marsh fritillary, narrow-bordered bee-hawk moth, scarce blue-tailed damselfly, small red damselfly, and the beetle *Chlaenius tristis*. The range of these invertebrate species should be maintained and extended wherever possible.

The SAC should also support a range of rare and interesting plants including; slender cottongrass, broad-leaved cottongrass, intermediate bladderwort marsh hawk's-beard marsh helleborine, marsh fern, narrow-leaved marsh orchid, Grass-of-Parnassus and slender sedge. The populations of these plant species at the site should be maintained and encouraged to extend their range within the site.

Cors Geirch SSSI is the largest component site and consists of a valley mire system extending from Rhyd y Clafdy in the south to Nefyn in the north. In addition to alkaline fen habitat, the site should continue to support a wide range of nationally important fen communities including tufted sedge *Carex elata* swamp and great fen-sedge *Cladium mariscus* swamp. Parts of Cors Geirch support areas of modified mire on deep peat and these areas offer enormous potential for habitat restoration.

Cors Hirdre SSSI should areas of alkaline fen together with areas of swamp with common reed and small stands of lesser pond sedge together with areas of marshy grassland with species such as sharp-flowered and jointed rush, lady's smock, lesser spearwort, ragged robin, marsh thistle and meadowsweet. This particular site should support no more than 2ha of willow scrub.

Aber Geirch SSSI lies in the steep, rocky-sided river valley where the river meets the sea. Wetter ground and flushes surround a patchwork of drier areas including grassland, bracken and gorse. Small areas of alkaline spring fed wetland should occur within the vicinity of springs and seepage areas along the valley sides and include tussocks of black bog-rush and purple moor-grass with cross-leaved heath in the wettest areas. Blunt flowered rush, flea sedge, tawny sedge, bog pimpernel and common butterwort should grow between the tussocks. Abergeirch SSSI should include extensive areas of marshy grassland with plants such as sharp flowered rush, marsh bedstraw, marsh thistle, glaucous sedge, greater bird's-foot-trefoil and lesser spearwort. Scattered clumps of yellow flag iris and occasionally quaking grass also appear. In places, the marshy grassland becomes slightly alkaline creating fen meadow characterised by the blunt flowered rush together with plants such as pennywort, bogbean, water mint, square stemmed St. Johns wort, carnation sedge and long stalked yellow sedge. Notable plants in these marshy grassland and fen meadow areas should include Grass-of-Parnassus, marsh helleborine, whorl grass, narrow-leaved marsh orchid and slender sedge

Rhyllech Uchaf SSSI consists of five fields and should support areas of spring fed alkaline fen together areas of fen meadow and rush pasture. The areas of alkaline fen should support black bog-rush *Schoenus nigricans*, blunt-flowered rush, bottle sedge *Carex rostrata* and the brown moss *Calliergon cuspidatum*. The fen meadow and rush pasture should be characterised by blunt-flowered rush *Juncus subnodulosus*, marsh thistle *Cirsium palustre*, sharp-flowered rush *Juncus acutifolus* and common marsh bedstraw *Galium palustre*.

All open areas of fen should contain as little scrub as possible whilst retaining areas of mature wet woodland.

## 2. SITE DESCRIPTION

### 2.1 Area and Designations Covered by this Plan

**Grid reference:** SH302376

**Unitary authority:** Cyngor Gwynedd

**Area (hectares):** 283.68

**Designations covered:** Corsydd Llyn SAC includes the following 4 component sites:

Cors Hirdre SSSI

Cors Geirch SSSI/NNR/part Ramsar site

Rhyllech Uchaf SSSI

Abergeirch SSSI

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

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

### 2.2 Outline Description

Corsydd Llyn SAC consists of a chain of four rich-fen sites running across the centre of the Llyn Peninsula, north-west Wales. Cors Geirch is the largest component site; the remaining three component sites of Cors Hirdre, Rhyllech Uchaf and Aber Geirch occupy separate hydrotopographical units.

Due to the underlying geology, the springs and seepage areas are rich in base elements. Such base-rich fens and flushes are very rare in Wales and the UK. The particularly characteristic habitat found under these conditions is alkaline fen which manifests as soligenous communities referable to NVC type M13 *Schoenus nigricans* – *Juncus subnodulosus* mire, together with M9 *Carex rostrata* – *Calliargon cuspidatum/giganteum* mire in dominantly topogenous settings – stands with elements of both communities are also present. Much of the alkaline fen interest at this site occurs within a matrix of human modified peatland vegetation in which bog myrtle *Myrica gale*, purple moor-grass *Molinia caerulea*, blunt-flowered rush *Juncus subnodulosus* and common reed *Phragmites australis* occur as prominent components; great fen-sedge *Cladium mariscus* is also locally dominant. Outstanding floristic features of the alkaline fen at Corsydd Llyn include the nationally rare slender cottongrass *Eriophorum gracile* at its sole north Wales station, together with significant populations of narrow-leaved marsh orchid *Dactylorhiza traunsteineri*, Grass of Parnassus *Parnassia palustris* and lesser-tussock sedge *Carex diandra*.

The SAC also supports rare invertebrate species, including the whorl snails, hornet robber fly and a remnant population of marsh fritillary. The population of Desmoulin's whorl snail *Vertigo moulinsiana* on Cors Geirch NNR occurs in stands of great-fen sedge *Cladium mariscus* in calcareous fen and is the only locality known for the species in Wales.

### 2.3 Outline of Past and Current Management

Abergeirch SSSI is all in private ownership and is currently being grazed, by a tenant of the owner, with sheep and cattle. There is no other positive management being used on the site. At present the grazing regime appears to be suitable for maintaining the features in their present state.

Cors Hirdre SSSI is all in private ownership and is currently managed with a Section 15 agreement with the owner which involves grazing of the fen by local graziers. Licences are granted by the owner

for periods not exceeding 11 months at stocking levels to be agreed and defined between CCW and the owner. These licences may be amended by consultation between CCW and the owner. CCW also have the right to carry out nature conservation management on the land including controlled burning and blocking of ditches (by agreement with the owner) although to date, this has not occurred. The current grazing management should be in accordance with the levels agreed between CCW and the owner in 1991.

Rhyllech Uchaf SSSI is all in private ownership. In the past, this site was managed under an ESA agreement. Although the site is not currently subject to any form of Management agreement, grazing with cattle and sheep does occur. There is no other positive management being used on the site.

Cors Geirch SSSI (the largest component site) is mostly in private ownership. However, CCW own significant areas of land and these are primarily managed by a combination of pony grazing and scrub removal. CCW also undertake restoration works such as peat stripping, blocking ditches and diverting ditches in order to recreate fen habitat.

## 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.

A map showing the management units referred to in this plan is shown in Annex 1.

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

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

Corsydd Llyn SSSI/SAC				
Unit number	SAC	SSSI	CCW owned	Other
1	✓	✓	✗	
2	✓	✓	✗	
3a/3b	✓	✓	✗	
4a/4b	✓	✓	✗	
5	✓	✓	✗	
6a/6b	✓	✓	✗	
7	✓	✓	✗	
8	✓	✓	✗	
9	✓	✓	✗	
10	✓	✓	✗	
11a/11b	✓	✓	✗	
12	✓	✓	✗	
13	✓	✓	✗	
14	✓	✓	✓	NNR
15	✓	✓	✗	
16	✓	✓	✗	
17	✓	✓	✗	
18	✓	✓	✓	NNR

19	✓	✓	✗	
20	✓	✓	✗	
21	✓	✓	✗	
22	✓	✓	✗	
23	✓	✓	✗	
24	✓	✓	✗	
25	✓	✓	✗	
26	✓	✓	✗	
27	✓	✓	✗	
28	✓	✓	✗	
29	✓	✓	✗	
30	✓	✓	✗	
31	✓	✓	✗	
32	✓	✓	✗	



### 3. THE SPECIAL FEATURES

#### 3.1 Confirmation of Special Features

Designated feature	Relationships, nomenclature etc	Conservation Objective in part 4
<i>SAC features</i>		
<u>Annex I habitats that are a primary reason for selection of this site:</u>  Alkaline fen (EU Habitat Code = 7230)	This habitat is encompassed within the soligenous fen SSSI feature - see below.	1
<u>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:</u>  Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davalliana</i> (EU Habitat Code = 7210)		2
<u>Annex II species that are a primary reason for selection of this site:</u>  Desmoulin's whorl snail <i>Vertigo moulinsiana</i> (EU Species Code 1016)	This species is also an SSSI feature (see below).	3
<u>Annex II species present as a qualifying feature, but not a primary reason for site selection:</u>  Geyer's whorl snail <i>Vertigo geyeri</i> (EU Species Code 101)	This species is also an SSSI feature (see below).	4
<i>SPA features</i>		
Not applicable		
<i>Ramsar features</i>		
Base-rich, calcareous fens	This habitat is encompassed by the alkaline and calcareous habitat of the SAC.	1,2
<i>SSSI features</i>		
Soligenous fen	This habitat is part encompassed by the alkaline fen SAC feature.	1
Topogenous fen (inc swamp)		
Marshy grassland		
Neutral grassland		
Slender cotton grass		

Narrow-leaved Marsh-orchid		
Marsh fern		
Invertebrate assemblage	Also part of SAC feature	3, 4

## 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 (*one for each SSSI*) below sets out the relationship between the special features and management units identified in this plan:

**Table 3a.** Special features and management units at Corsydd Llyn SAC – Abergeirch SSSI

Corsydd Llyn SAC	Management unit	
	1	2
SAC	✓	✓
SSSI	✓	✓
NNR/CCW owned	✗	✗
<b>SAC features</b>		
1. Alkaline fen	KH	✗
2. Calcareous fens	✗	✗
3. Desmoulin's whorl snail	✗	✗
4. Geyer's whorl snail	✗	✗
<b>SSSI features</b>		
Soligenous fen	Sym	✗
Marshy grassland	Sym	✗

**Table 3b.** Special features and management units at Corsydd Llyn SAC – Cors Geirch SSSI

Corsydd Llyn SAC	Management unit									
	3a	4a	5	6a	7	8	9	10	11a	12
SAC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SSSI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NNR/CCW owned	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
<b>SAC features</b>										
1. Alkaline fen	KH	KH	✗	KH	KH	✗	KH	✗	✗	✗
2. Calcareous fens	KH	✗	✗	KH	✗	✗	✗	✗	✗	✗
3. Desmoulin's whorl snail	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
4. Geyer's whorl snail	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
<b>SSSI features</b>										
Soligenous fen	Sym	Sym	✗	Sym	Sym	✗	Sym	✗	✗	✗
Topogenous fen (inc swamp)	Sym	Sym	KH	Sym	Sym	KH	Sym	✗	✗	KH
Marshy grassland	Sym	Sym	Sym	Sym	Sym	Sym	Sym	✗	✗	sym
Slender cotton grass	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Peatland Invertebrate assemblage	KS	✗	✗	✗	✗	✗	✗	✗	KS	✗
Narrow-leaved Marsh-orchid	KS	✗	✗	KS	✗	✗	✗	✗	✗	KS
Marsh fern	✗	✗	✗	KS	✗	✗	✗	✗	✗	✗

**Table 3c.** Special features and management units at Corsydd Llyn SAC – Cors Geirch SSSI (continued)

Corsydd Llyn SAC	Management unit									
	13	14	15	16	17	18	19	20	21	22
SAC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SSSI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NNR/CCW owned	✗	✓	✗	✗	✗	✓	✗	✗	✗	✗
<b>SAC features</b>										
1. Alkaline fen	KH	KH	✗	✗	✗	✗	✗	✗	KH	✗
2. Calcareous fens	KH	KH	✗	✗	✗	✗	✗	✗	✗	✗
3. Desmoulin`s whorl snail	✗	KS	✗	✗	✗	✗	✗	✗	✗	✗
4. Geyer`s whorl snail	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
<b>SSSI features</b>										
Soligenous fen	Sym	Sym	✗	✗	✗	✗	✗	✗	Sym	✗
Topogenous fen (inc swamp)	Sym	Sym	KH	✗	✗	✗	✗	✗	Sym	KH
Marshy grassland	Sym	Sym	✗	KH	✗	✗	KH	✗	Sym	Sym
Slender cotton grass	KS	KS	✗	✗	✗	✗	✗	✗	✗	✗
Peatland Invertebrate assemblage	✗	KS	✗	✗	✗	✗	✗	✗	✗	✗

**Table 3d.** Special features and management units at Corsydd Llyn SAC – Cors Geirch SSSI (continued)

Corsydd Llyn SAC	Management unit						
	23	24	25	3b	4b	6b	11b
SAC	✓	✓	✓	✓	✓	✓	✓
SSSI	✓	✓	✓	✓	✓	✓	✓
NNR/CCW owned	✗	✓	✗	✗	✗	✗	✗
<b>SAC features</b>							
2. Alkaline fen	KH	KH	✗	✗	✗	✗	✗
2. Calcareous fens	KH	✗	✗	✗	✗	✗	✗
3. Desmoulin`s whorl snail	KS	✗	✗	✗	✗	✗	✗
4. Geyer`s whorl snail	KS	✗	✗	✗	✗	✗	✗
<b>SSSI features</b>							
Soligenous fen	Sym	Sym	Sym	✗	✗	✗	✗
Topogenous fen (inc swamp)	Sym	✗	✗	✗	✗	KH	✗
Marshy grassland	Sym	✗	✗	KH	KH	✗	✗
Slender cotton grass	KS	✗	✗	✗	✗	✗	✗
Peatland Invertebrate assemblage	KS	✗	✗	✗	✗	✗	KS

**Table 3e.** Special features and management units at Corsydd Llyn SAC – Rhyllech Uchaf SSSI.

Corsydd Llyn SAC	Management unit	
	26	27
SAC	✓	✓
SSSI	✓	✓
NNR/CCW owned	✗	✗
<b>SAC features</b>		
1. Alkaline fen	KH	KH
2. Calcareous fens	✗	✗
3. Desmoulin's whorl snail	✗	✗
4. Geyer's whorl snail	✗	✗
<b>SSSI features</b>		
Soligenous fen	Sym	Sym
Marshy grassland	Sym	Sym
Neutral grassland	Sym	Sym

NOTE: The narrow-leaved marsh orchid *Dactylorhiza traunsteineri* and hornet robberfly *Asilus crabroniformis* are also recorded for this site.

**Table 3f.** Special features and management units at Corsydd Llyn SAC – Cors Hirdre SSSI.

Corsydd Llyn SAC	Management unit				
	28	29	30	31	32
SAC	✓	✓	✓	✓	✓
SSSI	✓	✓	✓	✓	✓
NNR/CCW owned	✗	✗	✗	✗	✗
<b>SAC features</b>					
1. Alkaline fen	✗	KH	KH	✗	✗
2. Calcareous fens	✗	✗	✗	✗	✗
3. Desmoulin's whorl snail	✗	✗	✗	✗	✗
4. Geyer's whorl snail	✗	✗	✗	✗	✗
<b>SSSI features</b>					
Topogenous fen (inc swamp)	Sym	Sym	KH	✗	✗
Marshy grassland	Sym	Sym	✗	✗	KH
Slender cotton grass	✗	KS	✗	✗	✗

NOTE: The narrow-leaved marsh orchid *Dactylorhiza traunsteineri* is also recorded for this site.

## 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<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.

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<sup>1</sup> Web link: <http://www.jncc.gov.uk/page-2199>



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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#### **4.1 Conservation Objective for Feature 1: Alkaline fen (EU Habitat Code 7230)**

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##### **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:

- Alkaline fen occupies at least 7.1% of the total SAC area (i.e. 20.14ha) and occupies areas which have potential to support this habitat.
- Alkaline fen is found on all 4 component sites.
- The following plants are common in the alkaline fen: *Schoenus nigricans*, yellow starry feather moss *Campyllum stellatum*, great fen sedge *Cladium mariscus* (up to 1m tall), blunt flowered rush *Juncus subnodulosus*, sweet gale *Myrica gale*, moss *Drepanocladus revolvens*, bladderwort *Utricularia minor*, butterwort *Pinguicula vulgaris*,
- Species indicative of drainage or agricultural modification, such as yorkshire fog *Holcus lanatus*, bramble *Rubus spp.*, nettle *Urtica dioica*, are largely absent from the alkaline fen.
- Purple moor grass *Molinia caerulea* does not exceed 25% of ground cover and is restricted to drier areas
- Bare ground should constitute no more than about 5% of the ground cover (perhaps 10% on the wettest soligenous examples of alkaline fen).
- Alkaline Fen exhibits a diverse age and height structure across the site (tussocks are undamaged and 20% short grazed, 50% mature – 30% in between including bare ground).
- Scrub species such as willow *Salix spp* and birch *Betula pubescens* are largely absent from the alkaline fen.
- Invasive, non-native species are absent
- Appropriate grazing is managed across 100% of the site
- Standing or running surface water is present between tussocks throughout the year, and visible over 30% of the tussock covered area
- All Hydrological (diffuse, surface and sub-surface) pathways (inputs and outputs) should be restored and/or intact (includes ditch infilling, blocking, diversion and re-engineering).
- Water quality is appropriate to the needs of the vegetation and species – namely base-rich but nutrient-poor.
- 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.

<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 alkaline fen habitat	There should be no reduction in the total combined extent of wetland in relation to the established baseline.	<p><i>Upper limit:</i> None set</p> <p><i>Lower limit:</i> Extent mapped (governed by site hydrology).  <b>(Target = A target figure of alkaline fen cannot be set at this stage since restoration of alkaline fen will depend on hydro-ecological conditions. Nevertheless, potential does exist to restore this fragmented habitat in order to make the existing resource more viable. Unless attempts are made to restore alkaline fen in potential areas (map showing potential areas to be created by CCW, as detailed in Actions database), then the site will be considered as being in unfavourable conservation status.)</b></p>
<b>A2.</b> Habitat quality		<p><i>Lower limit:</i>            In each compartment / plot with alkaline fen  <math>\geq 60\%</math> of the alkaline fen points are “good quality”.  <u>and</u>            All four SSSIs (Aber Geirch, Cors Geirch, Cors Hirdre and Rhyllech Uchaf) must each be in favourable condition on the SAC.  <b>Good quality alkaline fen</b> will have the following attributes;  <b>Within a 1m radius</b> of each sampling point.</p> <ol style="list-style-type: none"> <li>1. At least 1 patch (10cm x 10cm) of brown and green mosses present.</li> <li>2. Slender sedges and / or low sedges are present.</li> <li>3. At least 3 of the following are present; <i>Schoenus nigricans</i>, <i>Angelica sylvestris</i>, <i>Eupatorium cannabinum</i>, <i>Mentha</i> spp., <i>Menyanthes trifoliata</i>, <i>Pedicularis palustris</i>, <i>Serratula tinctoria</i>, <i>Succisa</i></li> </ol>

		<p><i>pratensis</i>.</p> <p>4. &lt; 10 live plants of <i>Phragmites australis</i> are present.</p> <p>5. &lt; 50% cover of <i>Juncus subnodulosus</i>.</p> <p>6. &lt; 50% cover of litter.</p> <p><b>Within a 2m radius</b> of each sampling point. Scrub and trees &gt; 20cm in height are absent.</p>
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**Performance indicators for factors affecting the feature**

<b>Factor</b>	<b>Factor rationale and other comments</b>	<b>Operational Limits</b>
<b>F1.</b> Management neglect /Livestock grazing	<p>Fen vegetation will inevitably succeed to scrub and woodland in the absence of management, particularly grazing. Grazing will prevent a shift from more species-rich vegetation to rank, impoverished swards. Without an appropriate grazing regime, the alkaline fen would become rank and eventually turn to scrub and woodland. Light grazing by cattle and ponies between April and November each year is essential.</p> <p>Light summer grazing is defined as - cattle and/or ponies at a rate of 0.4 SU/ha/year for the period April to October.</p> <p>NOTE: Cutting or carefully controlled small-patch burning can also be employed to stall the successional process and maintain the fen vegetation.</p>	<p><i>Upper limit:</i> none set</p> <p><i>Lower limit:</i> 100% of the alkaline fen will be subject to light summer grazing by cattle and/or ponies at least 4 in every 5 years.</p>
<b>F2.</b> Scrub	Scrub (e.g. willow, gorse) encroachment is an intrinsic consequence of successional change. Areas of willow scrub can develop into areas of mature wet woodland which	Upper limit: see habitat quality attribute above.
<b>F3.</b> Invasive, non-native species.	Invasive non-native species can have a detrimental impact on the natural ecological balance of the site.	No invasive non-native species should be present on the site.
<b>F.4</b> Point source pollution	Water quality is affected by Point source inputs of nutrient.	<p>Upper limit: none set</p> <p>Lower limit: No unmanaged point source pollution/nutrient inputs i.e. &lt;2.5mg/l N &lt;0.5 mg/l Total P</p>
<b>F.5</b> Diffuse pollution.	Water quality is affected by diffuse runoff from surrounding land and by	<2.5mg/l N <0.5 mg/l Total P

	atmospheric inputs.	
<b>F.6</b> Water levels & movement.	The alkaline fen has been maintained through permanently high water tables, perennial irrigation by groundwater and appropriate d water quality (base rich, but nutrient poor.	Surface water present between tussocks in winter. Groundwater level $\leq 15$ cm below surface  Surface water visible or expressable on footfall between <i>Schoenus</i> tussocks in 30% of the area.
<b>F.7</b> Atmospheric pollution	This habitat is sensitive to enrichment from atmospheric deposition. The atmospheric nitrogen deposition regime (15 kg N / ha / year) is already at the upper limit of the estimated critical load for this habitat of c. 10 kg N/ha/yr (Bobbink et al, 2002), and the vigorous <i>Molinia</i> growth observed across parts of the site may in part be a consequence of this. The ambient deposition needs to be reduced by (i) ensuring the policy level initiatives to reduce atmospheric N deposition continue, (ii) addressing any more localised sources of atmospheric N.	Upper limit: 14.1 kg N/ha/yr (current estimated deposition from <a href="http://www.apis.ac.uk">www.apis.ac.uk</a> .. Lower limit: None set

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#### 4.2 Conservation Objective for Feature 2: Calcareous fens with *Cladium mariscus* and species of the Caricion davallianae (EU Habitat Code 7210)

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##### Vision for feature 2

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

- Calcareous fen occupies at least 3.8% (10.78ha) of Cors Geirch.
- The following plants are common in the Calcareous fen: Great fen sedge *Cladium mariscus*, blunt flowered rush *Juncus subnodulosus*, and sweet gale *Myrica gale*; bog-bean *Menyanthes trifoliata* marsh cinquefoil *Potentilla palustris*, bladderwort *Utricularia vulgaris* and slender sedge *Carex lasiocarpa*, are locally prominent
- Species indicative of drainage or agricultural modification, such as yorkshire fog *Holcus lanatus*, bramble *Rubus spp.*, nettle *Urtica dioica* are largely absent from the calcareous fen.
- Purple moor grass *Molinia caerulea* does not exceed 25% of ground cover.
- Calcareous Fen exhibits a diverse age and height structure across the site (20% short sward ?) Pure (monospecific) stands of single age and structure *Cladium mariscus* do not exceed 50% of the feature area.
- Scrub species such as willow *Salix* and birch *Betula* are largely absent from the calcareous fen .
- Non native invasive species are absent.
- Standing surface water is present over most of the winter period.
- Groundwater is within 15cm of surface in mid summer.
- All Hydrological (diffuse, surface and sub-surface) pathways (inputs and outputs) are restored and/or intact (includes ditch infilling, blocking, diversion and re-engineering)
- Water quality is appropriate to the needs of the vegetation – namely base-rich but nutrient poor.
- 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.

<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 calcareous fen habitat	There should be no reduction in the total combined extent of calcareous fen in relation to the established baseline.	<i>Upper limit:</i> None set – as dictated by hydro-ecological potential (but any expansion in the extent of calcareous fen will not be at the expense of the alkaline fen). <i>Lower limit:</i> Extent mapped (N2K form figure).
<b>A2.</b> Habitat quality of open <i>Cladium</i> sward		<b>Lower limit:</b> In any 1m radius of Open <i>Cladium</i> sward there is: <ol style="list-style-type: none"> <li>1. <i>Cladium mariscus</i> is present at &lt;50% cover,</li> <li>2. At least two of the following are present: <i>Schoenus nigricans</i>, <i>Carex diandra</i>, <i>C. lasiocarpa</i>, <i>C. rostrata</i>, <i>Erica tetralix</i>, <i>Potentilla palustris</i>, <i>Cardamine pratensis</i>, <i>Menyanthes trifoliata</i>, <i>Pedicularis palustris</i>, <i>Galium uliginosum</i>, and <i>Eriophorum spp.</i></li> <li>3. At least one of the following species are present: <i>Carex panicea</i>, <i>C. lepidocarpa</i>, and <i>C. hostiana</i>,</li> <li>4. <i>Myrica gale</i> forms no more than 20% cover,</li> <li>5. <i>Molinia caerulea</i> and <i>Juncus subnodulosus</i> combined form no more than 50% cover,</li> <li>6. No more than 20% cover of dead vegetation litter</li> <li>7. No more than 30 stems of <i>Phragmites australis</i></li> </ol> <i>Salix</i> is absent from 90% of sample points
<b>A3.</b> Habitat quality of <i>Cladium</i> dominated vegetation		<i>Lower limit:</i> Stands of vegetation >20 x 20m where <i>Cladium mariscus</i> forms >50% cover

<i>Performance indicators for factors affecting the feature</i>		
<b>Factor</b>	<b>Factor rationale and other comments</b>	<b>Operational Limits</b>
<b>F1.</b> Management neglect /Livestock grazing	<p>Fen vegetation will inevitably succeed to scrub and woodland in the absence of management, particularly grazing. Grazing will prevent a shift from more species-rich vegetation to rank, impoverished swards. Without an appropriate grazing regime, the calcareous fen would become rank and eventually turn to scrub and woodland. Light grazing by cattle and ponies between April and November each year is essential in maintaining the marshy grassland communities.”</p> <p>Light summer grazing is defined as - cattle and/or ponies at a rate of 0.4 SU/ha/year for the period April to October.</p> <p>NOTE: Cutting and/or carefully managed small-patch burning can also be employed to stall the successional process and maintain the fen vegetation.</p>	<p><i>Upper limit:</i> none set <i>Lower limit:</i> 100% of the calcareous fen 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 that suitable to open up the sward and encourage species and structural diversity within the cladium stand, although dependant on other factors (eg weather, nutrient input) on average it will be in the region of - cattle and/or ponies at a rate of 0.4 LSU/ha for the period April to October)</p>
<b>F2.</b> Scrub	Scrub (e.g. willow, gorse) encroachment is an intrinsic consequence of successional change. Areas of willow scrub can develop into areas of mature wet woodland, with the resultant loss of calcareous fen.	<i>Upper limit:</i> see habitat quality attribute above.
<b>F3.</b> Invasive, non-native species.	There should be no invasive, non-native species present on the site.	<p><i>Upper limit:</i> not applicable</p> <p><i>Lower limit:</i> There should be no invasive, non-native species present on the site.</p>
<b>F4.</b> Point source pollution	Water quality is affected by Point source inputs of nutrient.	<p><i>Upper limit:</i> none set</p> <p><i>Lower limit:</i> No unmanaged point source pollution/nutrient inputs i.e. &lt;2.5mg/l N &lt;0.5 mg/l Total P</p>
<b>F5.</b> Diffuse pollution	Water quality is affected by diffuse runoff from surrounding land and by atmospheric inputs.	<2.5mg/l N <0.5 mg/l Total P
<b>F6.</b> Water levels & movement.	Calcareous fen is maintained by a relatively high water table and nutrient poor but base-rich water quality. A perennial supply of groundwater is critical.	Cladium swamp should have standing water in winter and at or no less than 15 cm below ground in summer. Cladio Molinietum is naturally drier – water should either be visible or expressable by footfall in winter, and no more than 40 cm down in summer.

<p><b>F7. Atmospheric pollution</b></p>	<p>This habitat is sensitive to enrichment from atmospheric deposition. The atmospheric nitrogen deposition regime (15 kg N / ha / year) is already at the upper limit of the estimated critical load for this habitat of c. 10 kg N/ha/yr (Bobbink et al, 2002), and the vigorous <i>Molinia</i> growth observed across parts of the site may in part be a consequence of this. The ambient deposition needs to be reduced by (i) ensuring the policy level initiatives to reduce atmospheric N deposition continue, (ii) addressing any more localised sources of atmospheric N.</p>	<p><i>Upper limit:</i> 14.1 kg N/ha/yr (current estimated deposition from <a href="http://www.apis.ac.uk">www.apis.ac.uk</a>).. <i>Lower limit:</i> None set</p>
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**4.2 Conservation Objective for Feature 3:** Desmoulin`s whorl snail *Vertigo moulinsiana* (EU Species Code 1016)

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**Vision for feature 3**

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

- *Vertigo moulinsiana* is frequent in suitable habitat at Cors Geirch SSSI.
- Average height of vegetation is not less than 70cm when measured in August.
- Greater and lesser pond sedges, tussock sedge and saw sedge, branched burr-reed and yellow flag indicate favourable conditions, as can sparse *Phragmites* and *Phalaris*.
- Ground moisture levels at between damp and very wet.
- Prevent any significant rise in water levels such that aquatic plants (e.g. watercress *Rorippa nasturtium-aquaticum*, and fool`s water cress *Apium nodiflorum*) become Dominant.
- Light or rotational grazing or no grazing
- No increase in scrub cover compared to the baseline.
- Avoid heavy grazing and poaching of banks.
- Prevent any decrease in water quality leading to eutrophication and changes in nutrient status.
- No increase in rank herbs (particularly nettle *Urtica dioica*, thistle *Cirsium* spp., meadowsweet *Filipendula ulmaria*, great willow-herb *Epilobium hirsutum* and butterbur *Petasites* spp.) with vegetation height increasing

**Performance indicators for Feature 3**

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>Vertigo moulinsiana</i>	Based on the Standard CSM attribute for this feature. Modified according to site specific requirements.	<i>Lower limit:</i> <i>Vertigo moulinsiana</i> is present in 25 samples on transects A & B and where 15 samples contain at least 10 adult snails.
<b>A2.</b> Extent of suitable habitat.	Based on the Standard CSM attribute for this feature. Modified according to site specific requirements.	<i>Lower limit:</i> 30 samples in transects A & B are dominated by suitable vegetation (see CCW Report no 9 by Killeen for detailed information on suitable vegetation).
<b>A3.</b> Soil moisture content	Based on the Standard CSM attribute for this feature. Modified according to site specific requirements.	<i>Lower limit:</i> 32 samples in transects A & B fall within soil moisture classes 3-5 (see CCW Report no 9 by Killeen for detailed information on classes).

<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> Successional change /Livestock grazing	<p>Suitable fen vegetation for <i>Vertigo moulinsiana</i> will inevitably succeed to scrub and woodland in the absence of management, particularly grazing.. Light grazing by ponies and/or cattle between April and November each year is essential in maintaining suitable habitat.</p> <p>Light summer grazing is defined as - cattle and/or ponies at a rate of XX SU/ha/year for the period April to October.</p> <p>NOTE: Management such as cutting or burning should not be used as an alternative to stall the successional process and maintain suitable fen vegetation.</p>	<p><i>Upper limit:</i> none set</p> <p><i>Lower limit:</i> All suitable fen habitat will be subject to light summer grazing by cattle and/or ponies at least 4 in every 5 years.</p>
<b>F2.</b> Scrub	<p>Scrub (e.g. willow, gorse) encroachment is an intrinsic consequence of successional change. Areas of willow scrub can eventually develop into areas of mature wet woodland.</p>	<p><i>Upper limit:</i> refer to extent of suitable habitat attribute above and habitat quality attribute for calcareous fen.</p>
<b>F3.</b> Invasive, non-native species.	<p>Invasive non-native species can have a detrimental impact on the natural ecological balance of the site.</p>	<p>No invasive non-native species should be present on the site.</p>
<b>F4</b> Point source pollution	<p>Water quality is affected by point source inputs of nutrient.</p>	<p><i>Upper limit:</i> none set</p> <p><i>Lower limit:</i> No unmanaged point source pollution/nutrient inputs i.e. &lt;2.5mg/l N &lt;0.5 mg/l Total P</p>
<b>F5</b> Diffuse pollution	<p>Water quality is affected by diffuse runoff from surrounding land and by atmospheric inputs.</p>	<p>&lt;2.5mg/l N &lt;0.5 mg/l Total P</p>
<b>F6</b> Water levels & movement.	<p>Suitable habitat for <i>Vertigo moulinsiana</i> maintained by a relatively high water table and high water quality.</p>	<p>Refer to soil moisture content attribute above.</p>

## 4.2 Conservation Objective for Feature 4: *Geyer`s whorl snail Vertigo geyeri* (EU Species Code 101)

### Vision for feature 4

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

- *Vertigo geyeri* is frequent in suitable habitat at Cors Geirch.
- There are abundant areas of flushed fen grassland (M13 / feature 2) with sedge/moss lawns 5-15cm tall, containing species such as *Carex viridula* subsp. *brachyrrhyncha*, mosses *Drepanocladus revolvens*, *Campylium stellatum*, *Pinguicula vulgaris*, *Briza media*, *Equisetum palustre*, *Juncus articulatus* together with scattered tussocks of *Schoenus nigricans* no greater than 80cm tall.
- The ground supporting suitable habitat is saturated and there is a spring flow with a network of dendritic trickles
- Light grazing of suitable habitat with ponies and/or cattle.

### Performance indicators for Feature 4

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>Vertigo geyeri</i>	Based on the Standard CSM attribute for this feature. Modified according to site-specific requirements.	<i>Lower limit:</i> Adult or sub-adult <i>V. geyeri</i> snails are present in two of the four identified areas (A-D) at Cors Geirch SSSI. <i>Upper limit:</i> Not specified
<b>A2.</b> Extent of suitable habitat.	Based on the Standard CSM attribute for this feature. Modified according to site specific requirements.	<i>Lower limit:</i> The following areas of available habitat should be present in each target area such that : Area A = >2,250 sqm. Area B = >1,300 sqm. Area C = >100 sqm. Area D = >700 sqm. * precise extent of optimal and sub-optimal habitat to be established following re-introduction of grazing. <i>Upper limit:</i> Not specified

A3. Habitat quality	Based on the Standard CSM attribute for this feature. Modified according to site-specific requirements.	<p><i>Lower limit:</i> Of the areas mapped A-D at Cors Geirch: Area A = 60% optimal, 40% sub-optimal Area B = 50% optimal, 50% sub-optimal Area C = 50% optimal, 50% sub-optimal Area D = 50% optimal, 50% sub-optimal * precise habitat quality indicators for this site to be established following re-introduction of grazing.</p>
<b>Performance indicators for factors affecting the feature</b>		
<b>Factor</b>	<b>Factor rationale and other comments</b>	<b>Operational Limits</b>
F1. Successional change /Livestock grazing	<p>Suitable fen vegetation for <i>Vertigo moulinsiana</i> will inevitably succeed to scrub and woodland in the absence of management, particularly grazing.. Light grazing by ponies and/or cattle between April and November each year is essential in maintaining suitable habitat. Light summer grazing is defined as - cattle and/or ponies at a rate of XX SU/ha/year for the period April to October.</p> <p>NOTE: Cutting or burning <u>should not</u> be used as an alternative to stall the successional process and maintain suitable fen vegetation.</p>	<p><i>Upper limit:</i> none set <i>Lower limit:</i> All suitable fen habitat will be subject to light summer grazing by cattle and/or ponies at least 4 in every 5 years.</p>
F2. Scrub	Scrub (e.g. willow, gorse) encroachment is an intrinsic consequence of successional change.	<i>Upper limit:</i> refer to extent of suitable habitat attribute above and habitat quality attribute for calcareous fen.
F3. Invasive, non-native species.	Invasive non-native species can have a detrimental impact on the natural ecological balance of the site.	No invasive non-native species should be present on the site.
F4. Point source pollution	Water quality is affected by point source inputs of nutrient.	<p><i>Upper limit:</i> none set <i>Lower limit:</i> No unmanaged point source pollution/nutrient inputs i.e. &lt;2.5mg/l N &lt;0.5 mg/l Total P</p>
F5. Diffuse pollution	Water quality is affected by diffuse runoff from surrounding land and by atmospheric inputs.	<p>&lt;2.5mg/l N &lt;0.5 mg/l Total P</p>
F6. Water levels & movement.	Suitable habitat for <i>Vertigo geyeri</i> maintained by a relatively high water table and high water quality.	Limits to be determined.

## **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: Alkaline fen (EU Habitat Code 7230)**

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#### **Conservation Status of Feature 1**

Creer (2007) states that the alkaline fen at Corsydd Llŷn SAC is in **unfavourable condition** due to a lack of positive indicator species, over-abundance of *P. australis* and presence of scrub species. These problems were observed in all areas of the site that were mapped. In all areas, the habitat quality had declined since it was last monitored in 2003.

The presence of *P. australis* and lack of positive indicator species within the alkaline fen could suggest that alkaline fen is being enriched and conditions are changing making the edaphic and hydrological conditions less favourable for the species indicative of alkaline fen. The occurrence of scrub at a large proportion of the monitoring points suggest that the grazing regime may not be appropriate for maintaining the feature at favourable condition. Further monitoring of the alkaline fen should be undertaken on a biennial basis (at the very least), and depending on what the results of the monitoring are, the current and future management adjusted accordingly.

Given that the condition of the habitat is in unfavourable condition and that the factors affecting the feature are not under control, it is concluded that the feature is in **unfavourable conservation status**.

#### **Management Requirements of Feature 1**

Land owned by CCW at one of the component sites (Cors Geirch) is subject to grazing management with ponies together with scrub clearance. However, most of the SAC and surrounding area is in private ownership and on these areas there is a need for similar management together with efforts to reduce or eliminate diffuse and point source pollution. In some units management such as vegetation cutting or burning can also be employed to stall the successional process and maintain the fen vegetation. However, such management should not take place in areas where invertebrates and/or *Vertigo* species are a key species. In places, water level management (e.g. blocking and/or opening ditches) is required to in order to ensure appropriate water levels for the feature. For specific actions for each unit, please refer to Section 6.

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### **5.2 Conservation Status and Management Requirements of Feature 2: Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* (EU Habitat Code 7210)**

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#### **Conservation Status of Feature 2**

At the time of writing this SAC Management Plan, draft monitoring performance indicators have been formulated but the condition of this feature has not yet been assessed. Despite this, factors affecting the feature are not under control and as such, the feature should therefore be regarded as being in **unfavourable conservation status**.

## Management Requirements of Feature 2

Land owned by CCW at one of the component sites (Cors Geirch) is subject to grazing management with ponies together with scrub clearance. However, most of the SAC and surrounding area is in private ownership and these areas require similar management together with efforts to reduce or eliminate diffuse and point source pollution. Burning of this habitat should not be used if there is no history of this practice occurring since such management may have an impact on *Vertigo moulinsiana* (feature 3). However, cutting/mowing of this habitat could be used in order to encourage grazing and improve habitat quality. In places, water level management (e.g. blocking and/or opening ditches) is required in order to ensure appropriate water levels for the feature. For specific actions for each unit, please refer to Section 6.

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### 5.2 Conservation Status and Management Requirements of Feature 3: Desmoulin's whorl snail *Vertigo moulinsiana* (EU Species Code 1016)

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#### Conservation Status of Feature 3

According to Kileen (CCW Report no 9), the population of *V. moulinsiana* is in favourable condition. The snail is present in good numbers and the habitat has appropriate moisture levels and dominant vegetation. Whilst there is some scrub encroachment at the east of the suitable snail habitat, there is no encroachment into the best of the habitat to the west. However, given that the factors affecting the feature are not under control, the feature should be regarded as being in **unfavourable conservation status**.

#### Management Requirements of Feature 3

Feature 2 is most frequent along the line of 2 ditches at the southern end of Cors Geirch SSSI. Land owned by CCW at the component site supporting *V. moulinsiana* is subject to grazing management with ponies together with scrub clearance. However, most of the SAC and surrounding area is in private ownership and these areas require similar management together with efforts to reduce or eliminate diffuse and point source pollution. Burning of this habitat should not be used if there is no history of this practice occurring since such management may have an impact on *Vertigo moulinsiana* (feature 3). However, cutting/mowing of this habitat could be used in order to encourage grazing and improve habitat quality. In places, water level management (e.g. blocking and/or opening ditches) is required in order to ensure appropriate water levels for the feature. For specific actions for each unit, please refer to Section 6.

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### 5.2 Conservation Status and Management Requirements of Feature 4: Geyer's whorl snail *Vertigo geyeri* (EU Species Code 101)

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#### Conservation Status of Feature 4

A CCW Report concluded that condition of the population of *V. geyeri* at Corsydd Llyn SAC is in unfavourable condition. *Vertigo geyeri* was found in one sample area only. As the target areas were not found to support optimal habitat due to under grazing, then the habitat is not achieved and the feature as a whole is considered unfavourable. In addition, given that the factors affecting the feature are not under control, the feature should be regarded as being in **unfavourable conservation status**.

#### Management Requirements of Feature 4

Feature 2 is most frequent along the line of 2 ditches at the southern end of Cors Geirch SSSI. Land owned by CCW at the component site supporting *V. moulinsiana* is subject to grazing management

with ponies together with scrub clearance. However, most of the SAC and surrounding area is in private ownership and these areas require similar management together with efforts to reduce or eliminate diffuse and point source pollution. Management such as vegetation cutting or burning should not be used if there is no history of these practices occurring since such management may have an impact on *Vertigo moulinsiana* (feature 3). In places, water level management (e.g. blocking and/or opening ditches) is required in order to ensure appropriate water levels for the feature. For specific actions for each unit, please refer to Section 6

## **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>
01	001691	Unit 1 - Parthdinllaen Farm	Alkaline fen condition unfavourable due to insufficient grazing of selected parts of site. Current grazing levels need to be established and assessed. Mowing may encourage adequate grazing (see next action). Localised overgrazing possibly a problem in part of site resulting in poached ground.	Yes
02	001692	Unit 2 - Cefn Amlwch	No actions at moment	No
03a	001693	Unit 3 - Tyn Llan	Peat stripping to raise water levels. Bunds, ditch diversion & scrub removal. Diffuse pollution investigation required.	Yes
04a	001694	Unit 4 - Plas yngngheidio		Yes
05	001695	Unit 5 - Ty Hwnt I'r Ffrwd	No actions until CCW have visited this unit.	No
06a	001696	Unit 6 - Bronallt	Agreement required to graze fen better, scarpes, mowing and address diffuse pollution. Draft agreement has been produced.	Yes
07	001697	Unit 7 - Bodtach o Ddu	Agreement required to graze fen better, scarpes, mowing and address diffuse pollution.	Yes
08	001698	Unit 8 - Penhuddgan	Investigate grazing levels and timing. (horses graze the area at present). Tree planting request by owners was refused by ccw.	Yes
09	001699	Unit 9 - Rosymedre	Peat scrapes, ditch blocking and appropriate grazing required.	Yes
10	001700	Unit 10 - next to rhosymedre	This unit is considered to be under appropriate conservation management.	No
11a	001705	Unit 11 - Nyffryn Bellaf	In current S.15 - management for robber flies.	No
12	001706	Unit 12 - Mathan Uchaf	Peat scrapes. Ditch diversion, water pollution measures and appropriate grazing are required.	Yes
13	001708	Unit 13 - Doly Moch Farm	Peat scrapes. Ditch diversion, scrub removal and appropriate grazing are required.	Yes
14	001709	Unit 14 - CCW	CCW land - constant need to undertake scrub removal and continue with CCW pony grazing (amend levels occasionally). Also a need to undertake localised scrapes, reduce diffuse pollution.	Yes
15	001710	Unit 15 - Gwynedd Council	Old tip - need to get results of water quality monitoring carried out by local authority.	Yes



<b>Unit Number</b>	<b>CCW Database Number</b>	<b>Unit Name</b>	<b>Summary of Conservation Management Issues</b>	<b>Action needed?</b>
16	001712	Unit 16 - 1 Bell Vue	This unit is considered to be under appropriate conservation management.	No
17	001715	Unit 17 - Mochras Uchaf	This unit is considered to be under appropriate conservation management.	No
18	001717	Unit 18 - Berth Aur	This unit is considered to be under appropriate conservation management.	No
19	001718	Unit 19 - Bryn Bodfal	Prevent fertiliser use. Also new agreement to raise water levels (by peat stripping) and appropriate grazing required.	Yes
20	001719	Unit 20 - Bogadle	This unit is considered to be under appropriate conservation management.	No
21	001720	Unit 21 - Mathan Isaf	Peat stripping	Yes
22	001723	Unit 22 - Pencefn Fawr	M.Agreement needs to be renewed	Yes
23	001725	Unit 23 - Gallt-y-Beren	New Management agreement required to remove scrub, introduce appropriate grazing, mowing, block ditches to raise water levels, prevent diffuse and point source pollution.	Yes
24	001726	Unit 24 - Llain Goetre	Need to divert ditch water to attempt to recreate alkaline fen	Yes
25	001727	Unit 25 - Ty'r Efail	Need to divert ditch water to attempt to recreate alkaline fen	Yes
26	001731	Unit 26 - Rhyllech Uchaf	Grazing levels need to be assessed. Also need to check whether a Management agreement exists here. Otherwise no known actions at present	Yes
27	001733	Unit 27 - Rhy Llech	Grazing levels need to be assessed. Also need to check whether a Management agreement exists here. Otherwise no known actions at present	Yes
28	001735	Unit 28 - Hirdre Ganol	This unit is considered to be under appropriate conservation management.	No
29	001737	Unit 29 - Hirdre Uchaf (within SSSI)		Yes
30	001739	Unit 30 - Hirdre Isaf		Yes
31	001740	Unit 31 - Hirdre Uchaf (outside SSS)	Need to build bund to prevent polluted water seeping towards this unit	Yes
32	001741	Unit 32 - Brynrhydd	This unit is considered to be under appropriate conservation management.	No
03b	003006	Unit 3b - Tyn Llan	This unit is considered to be under appropriate conservation management.	No
04b	003007	Unit 4b - Plas yngngheidio	This unit is considered to be under appropriate conservation management.	No
06b	003008	Unit 6b - Bronallt	This unit is considered to be under appropriate conservation management.	No
11b	003009	Unit 11b - Nyffryn Bellaf	This unit is considered to be under appropriate conservation management.	No

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
33	003010	Unit 33 - Next to Cae-Newydd	This unit is considered to be under appropriate conservation management.	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<sup>2</sup>:

Favourable: maintained;  
Favourable: recovered;

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

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 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**.

<b>Factor</b>	Anything that has influenced, is influencing or may influence the <b>condition</b> of a <b>feature</b> . 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 <b>conservation management</b> can also be considered as factors.
<b>Favourable condition</b>	See <b>condition</b> and <b>condition assessment</b>
<b>Favourable conservation status</b>	See <b>conservation status</b> and <b>conservation status assessment</b> . <sup>3</sup>
<b>Feature</b>	<b>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.</b>
<b>Integrity</b>	See <b>site integrity</b>
<b>Key Feature</b>	The habitat or species population within a <b>management unit</b> that is the primary focus of <b>conservation management</b> and <b>monitoring</b> in that unit.
<b>Management Plan</b>	The full expression of a designated site's legal status, <b>vision, features, conservation objectives, performance indicators</b> 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 <b>the Core Management Plan</b> ) and sets of electronically stored information.
<b>Management Unit</b>	An area within a site, defined according to one or more of a range of criteria, such as topography, location of <b>features</b> , tenure, patterns of land/sea use. The key characteristic of management units is to reflect the spatial scale at which <b>conservation management</b> and <b>monitoring</b> 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.
<b>Monitoring</b>	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 <b>Common Standards Monitoring</b> , the formulated standard is the quantified expression of favourable <b>condition</b> based on <b>attributes</b> .
<b>Operational limits</b>	The levels or values within which a <b>factor</b> is considered to be acceptable in terms of its influence on a <b>feature</b> . 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.

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

<b>Performance indicators</b>	The <b>attributes</b> and their associated <b>specified limits</b> , together with <b>factors</b> and their associated <b>operational limits</b> , which provide the standard against which information from <b>monitoring</b> and other sources is used to determine the degree to which the <b>conservation objectives</b> for a <b>feature</b> are being met. Performance indicators are part of, not the same as, conservation objectives. See also <b>vision for the feature</b> .
<b>Plan or project</b>	<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. <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> . Decisions on plans and projects which affect Natura 2000 and Ramsar sites are subject to specific legal and policy procedures.
<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> .

