

Ramsar – Management Planning Guidelines - fit for purpose?

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1. Introduction

In 1993 the *Ramsar Convention on Wetlands* published; **Guidelines on Management Planning for Ramsar Sites and Other Wetlands**, (first adopted as an annex to Resolution 5.7, 5th Meeting of the Conference of the Contracting Parties, Kushiro, Japan, June 1993). Some years later these guidelines were superseded by the '**New Guidelines for Management planning for Ramsar sites and other wetlands. (2002)**' (adopted by resolution VIII.14 at the 8th Meeting of the Conference of the Contracting Parties Valencia, Spain, 18-26 November 2002). **New Guidelines for management planning for Ramsar sites and other wetlands**

One of the foremost guidelines in the latter was:

"Wetlands are dynamic areas, open to influence from natural and human factors. In order to maintain their biological diversity and productivity (i.e., their 'ecological character' as defined by the Convention, and to permit the wise use of their resources by people, an overall agreement is essential between the various managers, owners, occupiers and other stakeholders. The management planning process provides the mechanism to achieve this agreement."

In addition to the Ramsar guidelines various organisations and individuals have also published guides to management planning, these include, for example;

'*Management Planning for Nature Conservation*'. Alexander (2008)
'*The CMS Guide to Management Planning*'. Alexander (2005).
'*Toolkit for management planning*'. Eurosite (1999).
'*Measures of Success: Designing, managing, and monitoring Conservation and development Projects*'. Margoluis and Salafsky. (1998).
'*Guidelines for Management Planning of Protected Areas*'. IUCN'. Thomas & Middleton (2003).

In 2008 the Conservation Management Consortium (CMSC) recognised a need to review the variety of current management planning protocols and identify core management planning principles that should be applied to any conservation management plan. The CMSC organised a workshop 'Establishing and Confirming Management Planning Principles on Natura 2000 and Other Conservation Sites'. This was held from 30 September to 2 October 2008 at Plas Tan Y Bwlch, the Snowdonia National Park Study Centre in North Wales, UK.

The following statement outlines the core principles identified during the workshop that should be applied when preparing a management plan for nature conservation, and in particular European Natura 2000 and Ramsar, sites. The statement was prepared and endorsed by the following participants who attended the final drafting session of the workshop:

List of participants:

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|------------------|---|----------------|
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| Jim Kelly | National Parks and Wildlife Service | Ireland |
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2. Core Management Planning Principles

2.1. *General principles*

- Ideally, there should be one comprehensive plan for multi designation sites.
- In addition to planning the management of nature conservation features, plans should also consider stakeholder interests, cultural aspects (including historical, archaeological, religious and spiritual interests), visitor management / tourism, education and interpretation, and social and economic aspects.
- The precautionary principle is important in the context of conservation management and planning. It should guide the planning process and influence the way in which we manage sites, habitats and species.
- Planners should recognise the need to integrate conservation site planning with wider sectorial and land use plans
- The planning approach should be as uncomplicated as possible (the simpler the better).
- A management plan should be as large as the site requires and no larger.
- Corporate support for the planning process is essential, and this should include a formal approval process.
- Management plans should be easily understood by everyone who has an interest in the site. This will include people who do not have a scientific or technical background. The language used in the plan should, whenever possible, be plain and accessible to all.
- Plans, and in particular plans for large, complex sites, should include a summary. These can be presented as text, but the addition of annotated maps and illustrations will help to explain issues
- Individuals involved in managing a site should, whenever possible, have an involvement in the planning process and, in all cases, ownership of the plan

2.2 *Stakeholder involvement*

Conservation managers must recognise the need to adopt an inclusive approach which takes account of the interests of all stakeholders and, as far as possible, encourages their involvement in all appropriate

aspects of management planning and site management. One of the key issues when building and maintaining successful relationships is to have a shared appreciation of what can and cannot be negotiated. For example, on European (Natura 2000) sites there will be legal obligations in respect of the wildlife features. Managers will have no choice but to ensure that the features are managed to obtain and maintain Favourable Conservation Status. The current Ramsar guidelines recommend that features on Ramsar sites should also be maintained at Favourable Conservation Status.

2.3 Management planning should be a continuous cyclical, iterative and developmental process (adaptive or adaptable)

'A process in which management activities are implemented in spite of uncertainties about their effects, the effects of management are measured and evaluated, and the results are applied to future decisions'. Elzinga et al. (2001)

- Monitoring must be recognised as an integral and essential component of any planning process. (*Monitoring: Surveillance undertaken to ensure that formulated standards are being maintained*)
- It is good practice to record all actions undertaken in accordance with a plan.
- Factors must be identified and integrated in the planning process.

(A factor is anything that has the potential to influence or change a feature, or to affect the way in which a feature is managed. These influences may exist, or have existed, at any time in the past, present or future. Factors can be natural or related to human activity in origin, and they can be internal (on-site) or external (off-site).)

- Plans and management actions should incorporate current best practice and be open to new and innovative ideas.
- Management should be reviewed continually within a time scale that is appropriate to the features. (Fragile and vulnerable habitats or populations will require more frequent attention than robust and secure features.)
- Internal management reviews should be supplemented with formal reviews at predetermined agreed dates. It may, in some cases, be appropriate to hold external reviews.

2.4 Information

Plans require a descriptive section which contains, or provides reference to, the information that will be **needed** to help decide what is important and to undertake the planning process. This is a collation exercise and is generally not dependent on the generation of new information. Further information requirements should be identified during the planning process.

2.5 Features should provide the focus for management planning

Management by defining conservation outcomes for features is a reflection of the legal requirement to protect specified features on statutory, and other, sites. This is of particular relevance to Ramsar sites. The desired status for each feature is defined, and these are the **management objectives**.

2.6 Objectives

Objectives should lie at the very heart of a management plan. They are the outcomes of management and the single most important component of any plan. An objective is the description of something that we want to achieve. Wildlife outcomes are habitats, communities or populations (features) at Favourable Conservation Status.

SMART objectives, as generally applied to business, can, with modifications, be applied to wildlife objectives:

- S** Objectives for conservation features must **S**pecifically address the feature.
- M** Objectives for conservation features must be quantified and **M**easurable.
- A** Objectives can be **A**chievable or **A**spirational.
- R** Objectives must be **R**elevant to, and written in compliance with, the strategies, policies and legal obligations that govern the organisation responsible for managing the site or feature.

T Objectives for nature conservation management can be Time-based. However, we may also recognise that our commitment to nature should be endless and not time-based. Conservation management is concerned with obtaining the status that we require and thereafter maintaining that status. Objectives will always have a start date but we may not believe that it is always appropriate to specify a completion date.

Objectives should, when appropriate, take account of natural and other processes.

For all Ramsar, Natura 2000, and most other, sites, conservation objectives should take account of the need to obtain **Favourable Conservation Status** (FCS) for the wildlife features. It is the management objective that provides the site specific definition of FCS for each feature.

2.7 The action plan

All plans should contain a costed action plan which identifies all the resource requirements. The action plan should:

- Identify and cost all the activities required to obtain and maintain features at Favourable Conservation Status. Objectives for conservation features must not be diminished to accommodate a shortfall of resources. An objective should be an expression of the legal and moral obligations towards features on sites.
- Identify priorities for all management activities.
- Identify all individuals or organisations who will be responsible for implementing the activities.
- Identify realistic, achievable and effective management actions.

2.8 Finally

- A record should be kept of all the individuals engaged, at any level, in preparing the plan.
- All consultees and advisors, individual and corporate, should be acknowledged in the plan.

- The plan should contain a glossary of terms.
- Plans must be implemented

3. Do the current Ramsar guidelines on management planning meet the planning principles and are the guidelines still fit for purpose?

The simple answer is yes, the Ramsar guidelines although published in 2002 are fully compliant with the planning principles identified in this paper. Some of the principles are quite explicit whilst the remainder are clearly implicit.

Perhaps the single most important principle identified in both the Ramsar guidelines and confirmed in the CMSC workshop the need to apply a continuous cyclical, iterative and developmental planning process.

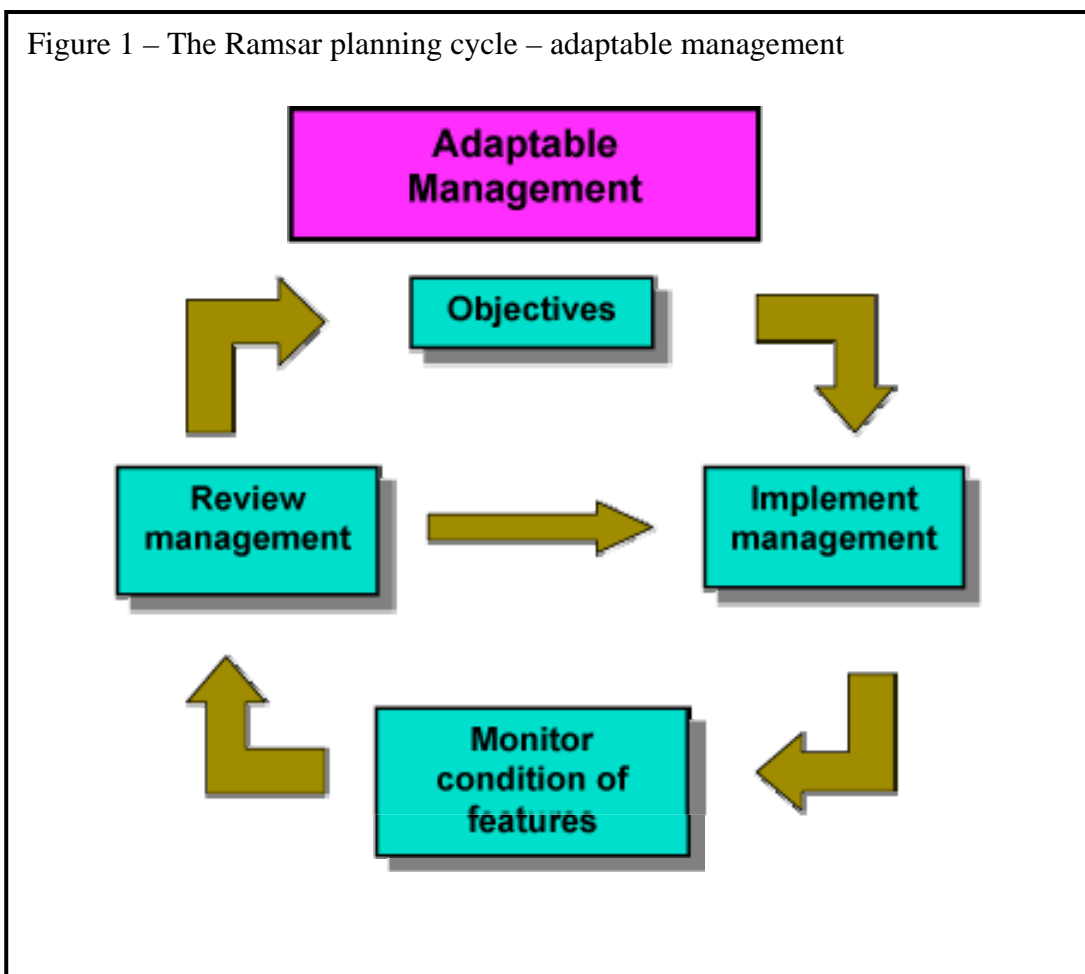


Figure 1 was included, with the following explanation in the Ramsar guidelines:

“In order to safeguard sites and their features, managers must adopt a flexible approach that will allow them to respond to the legitimate interests of others, adapt to the ever-changing political climate, accommodate uncertain and variable resources, and survive the vagaries of the natural world.

The adaptable management process as incorporated in the Ramsar planning approach is as follows (see Figure 1):

- *A decision is made about what should be achieved (i.e., quantified management objectives are prepared for the important features).*
- *Appropriate management, based on the best available information, is implemented to achieve the objectives.*
- *The features are monitored in order to determine the extent to which they meet the objectives.*
- *If objectives are not being met, management is modified.*
- *Monitoring is continued to determine if the modified management is meeting the objectives, and step iv) is repeated for any further adjustments, as necessary.*

In exceptional circumstances, it may be necessary to modify the objectives.”

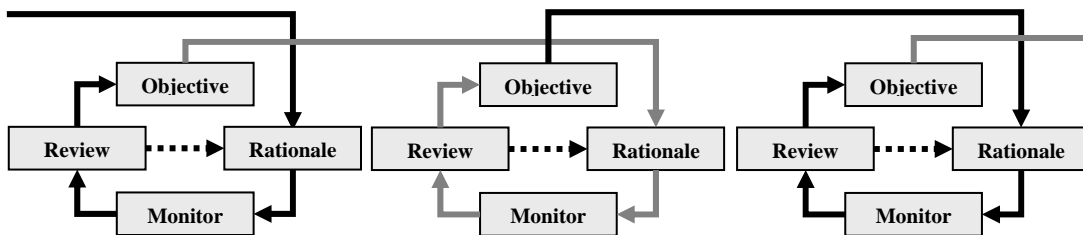
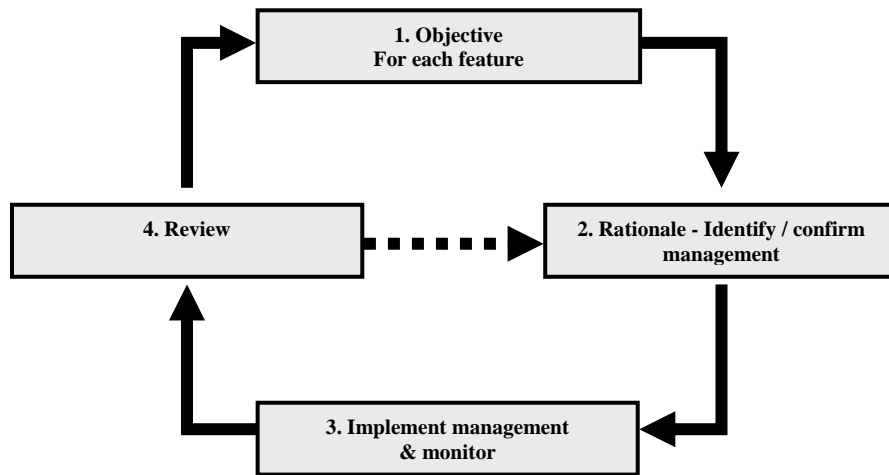
During the early stages in the production of the guidelines the initial intention had been to use the term ‘adaptive’ and not ‘adaptable’. However, the Ramsar Scientific and Technical Panel was concerned that ‘adaptive management’ had become the subject of some controversy and that, since there are so many (occasionally contradictory) definitions, the meaning of ‘adaptive’ had become obscured. A year earlier, Elzinga et al. (2001) made a similar statement; they claimed that because ‘adaptive management’ had been adopted as a buzzword its definition and meaning had become muddled by widespread use.

The Ramsar panel saw three main reasons for making the decision to use ‘adaptable’ in place of ‘adaptive’.

- 1) Adaptive management is recognised as an ecosystem approach, and, although the planning system described in the Ramsar guidelines can be applied to sites regardless of their size, it is mainly intended for sites where management is aimed at protecting specific natural features and for sites where species and habitats are managed through intervention.
- 2) Many authors define adaptive management as experimentation that enables changes to be linked to cause and management (Lee 1993 & 1999). Adaptable management is not experimentation. It is not dependent on replicating management actions or establishing control plots. It is a system for managing sites and features based on monitoring performance indicators. Johnson (1999) describes this simplified version as ‘monitor and modify’ and not as adaptive management. Elzinga et al. (2001) recognise that theirs is a simplified version of ‘adaptive’ based on observational monitoring. They make a clear distinction between monitoring and research. Monitoring does not provide information on cause and effect. In contrast, research does allow cause and effect to be statistically inferred. There can be no doubt that, in an ideal world, we would use ‘adaptive management’ in the experimental sense. Unfortunately, conservation managers rarely, if ever, have the resources to do this.

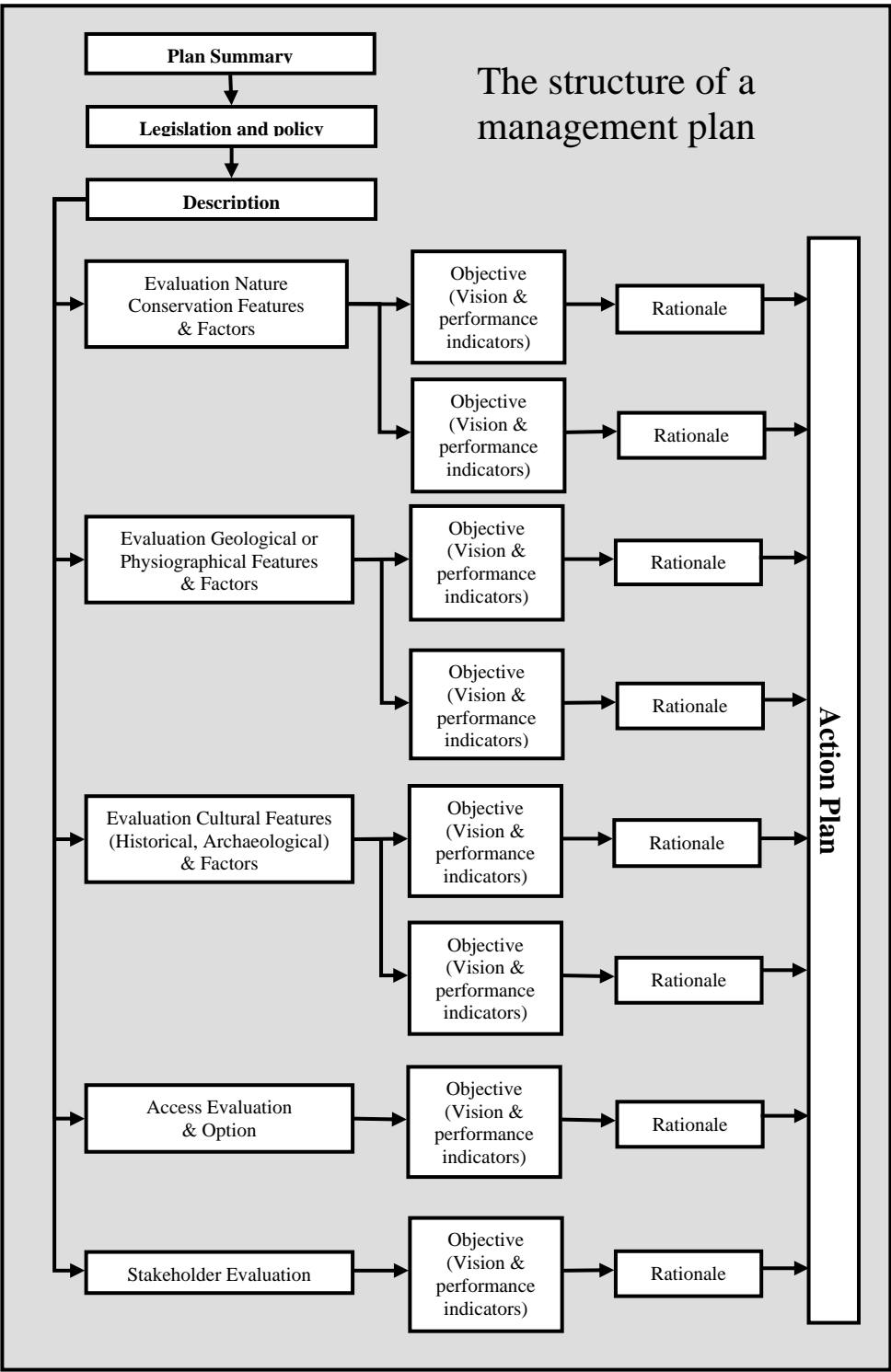
- 3) The use of the word 'adaptable' allows the definition of a new, clear and non-controversial management process.

An example of a continuous cyclical, iterative and developmental planning process, Alexander (2008) :



An example of a planning approach which has a structure and contents which are fully compliant with the core planning principles identified by the Ramsar guidelines and confirmed in the workshop.

| | | |
|-------------------------------|--------------------|--|
| Legislation and policy | Why are we here? | All management plans must contain a section on legislation and policy. Together, these provide the foundations that support the plan and act as a guide to the direction that the planning process should follow. |
| Description | What have we got? | Once we know why we are here, the next question is what have we got? Plans require a descriptive section which contains, or provides reference to, all the information that will be needed to help decide what is important and to complete all the following sections in the plan. |
| Evaluation | What is important? | Once we know what we have got we can move on to evaluation. This is the process used to identify the important features on a site. (When dealing with the access section, evaluation is concerned with identifying the level of access provisions that are appropriate for a site.) |
| Objectives | What do we want? | An objective is, or should be, the description of something that we want to achieve. |
| Action plan | What must we do? | The action plan is derived directly from the objectives. When we are clear about what we want to achieve we can decide what we need to do. The action plan will contain individual projects which describe and cost all the work required on a site. This information is used to create various work plans and programmes. |



4. Examples from a management plan for the Cors Caron Ramsar site in Wales UK

Note : The full plan is available [by clicking here](#). This site is managed by the Countryside Council for Wales (CCW) (www.ccw.gov.uk)

Cors Caron (862 hectares) is a Ramsar site, a Natura 2000 SAC, a National Nature Reserve and a UK Site of Special Scientific Interest.



Outline Description

A classic and extensive raised mire system, comprising three distinct mires. The system is bisected by the Afon Teifi which separates the largest and least disturbed mire from the other areas. The site supports an unusually diverse flora, and is important for invertebrates and its avifauna.

Cors Caron is a very extensive raised mire system developed over a late-glacial lake which once occupied the broad valley of the river Teifi. The raised mires lie at an altitude of about 160m (524ft), extend for 4km (2 miles) along the valley and reach 2km (1- mile) in width. Three distinct mires are separated either by the Teifi or by lagg streams which join the river. The largest single expanse, the West bog lies to the west of the river; while the North-East and South-East bogs, to the east are separated by the morainic knoll on which Maes-llyn farm is situated. This mire was the first true raised mire to be described in detail in Britain (Godwin and Conway, 1939) and is regarded as a classical site where the development sequence from aquatic conditions through flood plain mire to an ombrogenous mire surface is well demonstrated

in the stratigraphy. The vegetation of the mire expanse shows an unusually wide range of variation, including *Sphagnum*-rich vegetation (exhibiting a small-scale hummock-hollow topography), heather *Calluna vulgaris* dominated areas and areas in which both purple moor-grass *Molinia caerulea* and deer-grass *Trichophorum cespitosum* are major components. This variation is largely the effect of past burning and probably also drainage. Fortunately the regeneration of an active mire surface has been so successful that little clear evidence of fire now remains; only the mosaic of vegetation types and the somewhat lowered water table, with consequent loss of species richness, still provide evidence of past damage. The cover and composition of the bog-moss (*Sphagnum* flora) is diminished over significant areas of all three bogs, suggesting past large-scale disturbance of all the three mires. The West Bog in particular would be expected to bear an active mire plan flora, with more extensive areas of comparatively open *Sphagnum* rich vegetation. However, such features are comparatively confined in extent and appear to have succumbed to a locally high cover of graminoids and/or ericoids. Active restorative management should help reverse this trend, although atmospheric nitrogen deposition remains a key concern. River terraces, which are regularly flooded, show a zonation of plant communities parallel to the river. Reed canary-grass *Phalaris arundinacea* and tufted hair-grass *Deschampsia cespitosa* occur along the river edge and a broad zone of soft rush *Juncus effusus* with incipient carr formation occurs between this and a *Molinia*-rich lagg community. A wide rind is present which is mainly dominated by vascular plants with a discontinuous *Sphagnum* carpet. The bog, including the river and open water, is a valuable breeding and overwintering area for several species of wader and wildfowl - including redshank, curlew, mallard, teal and wigeon. It is also noted for its flock of whooper swans, the most southerly one of any size wintering regularly in Britain. About 70 species of bird breed on the reserve or in the immediate surroundings. There has been a large number species of invertebrate recorded and the reserve is one of the most southerly localities known in Britain for the large heath butterfly. It is also one of only two sites in the Britain where the rosy marsh moth has been recorded since its extinction from eastern England. The old railway track which forms part of the south-east boundary and then crosses part of the northern bog is raised and does not flood. It provides good access and, due to the relatively base-rich nature of the material, supports a flora and insect fauna found nowhere else on the reserve

Some of the Special Features

Ramsar criterion 2 Populations of *Coenonympha tullia* (large heath butterfly), *Coenophila subrosea*, otter, water vole.

Ramsar criterion 3 Active raised bog which supports a rich vegetation assemblage and possesses a surface pattern characteristic of this mire habitat type. *Sphagnum pulchrum*, *S. subsecundum*, *Atrichum tenellum* - nationally scarce *Riccia huebeneriana*, *Scapania paludicola* - nationally rare

Conservation Objectives

There is one conservation objective for each feature listed above. 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

Vision for Raised Bog

The active raised bog at Cors Caron will be at Favourable Conservation Status where all the following are met –

- The active raised bog at Cors Caron will show the typical features of a fully functional raised bog including central microform patterning, steep peripheral rand and marginal lagg fen. The peat domes should be waterlogged with the water table at the surface or within a few centimetres of the surface for most of the year.
- The surface of the mire expanse will show the typical microform hollow/hummock patterning. The vegetation will be dominated by species of bog moss in lawns and hummocks.
- Vascular plants such as cross-leaved heath, heather and hare's tail cotton grass form a lowgrowing patchy canopy. Other species such as bog rosemary, deer grass and round leaved sundew will be less frequent but still fairly abundant.
- Purple moor grass will be scarce; Cladonia lichens and hypnaceous mosses will be locally frequent on naturally drier mature hummocks.
- There will be wet hollows on the mire surface which will contain bog mosses such as *Sphagnum pulchrum*, *S. cuspidatum*, *S. auriculatum*, bog asphodel, many headed cotton grass and white beak sedge.
- The central area of the raised mires will be free from trees and large saplings. Invasive species such as *Rhododendron ponticum* will not be present.
- Plant communities dominated by bog mosses will extend down the sloping sides of the raised mire where there will be a series of transitions to other

plant communities. Typically this would be into a wet heath with purple moor grass, cross leaved heath, tormentil and deer grass. This in turn would grade into purple moor grass 'grassland' but still with abundant mire species.

- At the bottom of the lagg fen a poor-fen and wet woodland communities will be present. The poor-fen will be dominated by sedges such as star sedge, purple moor grass and rush species. The groundlayer will have abundant bryophytes.

- The *rhynchosporion* pool vegetation forms an intimate mix with the plant communities of the active raised mire. The hollows should be wet all year round except during very dry periods. The vegetation should be dominated by bog mosses that favour these very wet conditions. Plants such as many-headed cotton grass, bog asphodel and white beaked sedge should form a scattered canopy over the lawns of bog moss. These hollows should be frequently encountered on the tops of the raised mires.

- All factors affecting the feature will be under control

Performance indicators for Feature 1

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

Performance indicators for feature condition

Attribute 1: Extent of active raised bog

(There are three areas of active raised bog, the West Bog, North East Bog and South East Bog. There is no opportunity to increase the extent or alter the distribution of active raised bog except in areas of degraded raised which in time will be returned to active raised bog.)

Specified Limits:

West Bog

Lower limit : 140 hectares

Upper limit : not set

North East Bog

Lower limit : 30 hectares

Upper limit : not set

South East Bog

Lower limit : 16 hectares

Upper limit : not set

Attribute 2: Proportion of hummock / hollow vegetation

(The proportion of primary surface intact active raised bog communities referable to a hummock - wet hollow complex. The characteristic microtopography of raised bogs of Western Britain in favourable conservation status consists of a complex of vegetated hummocks of peat separated by wet hollows. The hummocks support mainly sphagna, ericaceous spp. and *Eriophorum vaginatum* and the wet hollows support floating rafts of aquatic sphagna spp. e.g. *Sphagnum cuspidatum*. The North-East bog represents the best example of intact active raised mire within the SAC; performance indicators for this attribute are therefore based on the North East bog. 0

Specified limits:

The proportion of the primary surface intact active raised bog communities referable to a hummock - wet hollow complex is:

Lower limit : 80% of the vegetation

Upper limit : none set

Attribute 3: The ratio of wet Sphagnum hollows to hummock and ridge microforms.

The main threat to this feature is drying out and/or a decline in the water table. Management objectives are geared toward maintaining/increasing the 'wetness' of the site, with the emphasis on subsequent monitoring being on the species/surface patterns indicative of these wetter conditions. If we have sufficient 'wet forms' i.e. hollows then we are confident that we will have adequate hummocks and ridges. The ratio of hollows is within the hollow/hummock complex is therefore significant. Species associated with wet hollows are *Sphagnum cuspidatum*, *Rhynchospora alba*, *Narthecium ossifragum* and *Sphagnum tenellum*. These are all species which are colonisers or associates of wet pool habitats. The following however are indicators of drier conditions: *Calluna vulgaris*, *Cladonia spp.*, *Molinia caerulea* and *Empetrum nigrum*. These species should be absent from hollow vegetation.

Specified limits:

Ratio of hummock - wet hollow –

Lower limit : a mosaic of 20% wet hollow vegetation within a 10 m radius of any point

Upper limit : a mosaic of 30% wet hollow vegetation within a 10 m radius of any point

And

where wet hollow vegetation in favourable status is recognised by/defined as – within 0.5 m of a given sampling point - *Sphagnum cuspidatum* with at least

1 plant of *Rhynchospora alba*, *Narthecium ossifragum* and/or *Sphagnum tenellum* with the following species absent: *Calluna vulgaris*, *Cladonia spp.*, *Molinia caerulea* and *Empetrum nigrum*

Attribute 4. Presence of *Rhynchosporion* pool vegetation

(The *Rhynchosporion* pool vegetation forms an intimate mix with the plant communities of the active raised mire. The hollows should be wet all year round except during very dry periods. The vegetation should be dominated by bog mosses that favour these very wet conditions. Plants such as many-headed

cotton grass, bog asphodel and white beaked sedge should form a scattered canopy over the lawns of bog moss. These hollows should be frequently encountered on the tops of the raised mires.

Specified Limits:

Rhynchosporion pool vegetation will cover –

Lower limit : 15% of the primary raised bog surface

Upper limit : 70% of the primary raised bog surface

Where *Rhynchosporion* vegetation is defined as wet vegetation where, in any 1metre radius:

- *Sphagnum cuspidatum* and/or *S. pulchrum* form >20% cover
- at least two of *Rhynchospora alba*, *Andromeda polifolia* and *Narthecium ossifragum* are present
- *Molinia caerulea* is absent

Factors rationale and other comments with Operational Limits

Factor 1: Water levels

The quantity of water within a raised mire system is critical and originates entirely from rainfall – the system is ombrotrophic. All of the typical plant species require high water table conditions to thrive and the water table in an intact mire system with favourable status would normally be at or close to (within 10cms.) the mire surface throughout the year. The Cors Caron system is however not intact, the periphery of each dome having been cut away by historical peat cutting activity. This restricts the potential maximum water table height in the dome and operational limits must be set accordingly. The limits reflect conditions that may be achieved through management given current rainfall levels. External agricultural drainage operations may have an impact on the potential raise water levels on the domes. This impact cannot currently be quantified and research is required.

Operational Limit – Water level

Lower limit : Within 20cm of the surface for 6 months per year and within 30cm at all times.

Upper limit : None set.

Factor 2: Water quality

Water chemistry is also critical in relation to the key species e.g. sphagna associated with raised mires. In an ombrotrophic system fed entirely by rainfall this factor is normally irrelevant. However, conservation management of mire sites elsewhere has included the use of abstracted water to maintain high water levels and water quality must therefore be considered. External agricultural operations e.g. liming combined with drift may affect water quality on the mires. Natural systems with favourable status are known to have oligotrophic conditions with pH levels within the range 2.7 - 4.5. (pH).

Operational Limit – water pH

Upper limit: pH of surface water is 4.5

Lower limit: pH of 2.7

Polluted / minerotrophic / fertiliser loaded water will not be used to raise the water table

Factor 3: Scrub

In the UK, raised mires with favourable status have very low cover of any native scrub species e.g. willow, birch, rowan as the typical species are intolerant of high water levels. At Cors Caron lowered water tables through peat cutting have led to the establishment of significant scrub cover and conservation management must seek to reduce this to minimise the impacts of evapotranspiration and displacement of typical mire species. The following upper limit reflects cover of scrub where it will have insignificant impact on typical mire species and hydrology.

Rhododendron ponticum

This non-native species is present on-site and in the Tregaron area. It is highly invasive and if left unchecked would cover large areas of the mire surface.

Operational Limit - scrub

Lower limit : none set

Upper limit : No scrub present on the active mire plain. No greater than 5% cover of scrub in any given 1 ha area of the site

and

a maximum scrub block size 0.04 ha or >20m across

and

a maximum height of scrub of 3 metres [where scrub is defined as any

area of closed canopy scrub 5m x 5m across (~0.0025 ha)]

Operational Limit – Rhododendron

Lower limit: no *Rhododendron ponticum* on the mire expanse.

Upper limit: 2 *Rhododendron* plants (non-seed bearing) on each mire expanse and development to seed bearing maturity prevented.

Factor 4. Grazing / agricultural tenancies

Grazing by agricultural stock is undesirable, leading to modification of the mire communities through selective grazing, poaching, eutrophication etc. Some areas of the intact raised mires are subject to agricultural tenancies where agreements allow grazing by stock. Since inception of the tenancies, tenants have not exercised the right to graze on the mire domes. Because the tenancies do provide for a scenario where legal stock grazing could occur, CCW may need to consider options for preventing this activity through management agreements etc. Livestock grazing of other areas of the site under tenancies, e.g. the secondary non-intact mire surfaces and the river flood plain habitats does significantly influence CCW's ability to manage the primary intact domes - that is, operations which raise the water table such as pressure-bunding and ditch blocking may endanger livestock. There will be no livestock grazing on the primary intact domes.

Access or tourist section of the Cors Caron management plan

One of the key principles identified both by Ramsar and the workshop is that planning should be an integrated process. That is, in addition to planning the management of nature conservation features, plans should also consider stakeholder interests, cultural aspects (including historical, archaeological, religious and spiritual interests), visitor management / tourism, education and interpretation, and social and economic aspects. The following is an example of the access section of the full management plan for Cors Caron.

Access section of the management plan for Cors Caron NNR.

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6. Action plan

Access & recreation section

1. Access plan summary

It is the Countryside council for Wales' policy to encourage public access in so far as it does not threaten the nature conservation features of the site.

Facilities at Cors Caron will be upgraded to allow more people to enjoy the site, but access will be limited in terms of area and the overall numbers of visitors. Any activities should be quiet and unobtrusive, with access onto the fragile bog being restricted to the boardwalk.

Currently the site does not fulfil its potential to allow visitors to experience this relatively rare habitat. It is an isolated site, away from large centres of population, and the people that make an effort to visit are largely those with a specialist interest in bird watching. The bog itself is not very accessible, and most people simply view it at a distance from the main track and from viewing points on the fringes of the site. Visitors would have a much better opportunity to engage with and appreciate the site if access to the bog was improved. This could be achieved by the construction of a new boardwalk that is suitable for disabled access. A well-designed observation shelter that blends into the landscape, as part of the boardwalk loop, would make it easier for less-active visitors to enjoy the exposed and wild nature of the site. Upgrading the railway walk would make it more accessible to wheelchair users, cyclists and people with restricted mobility, and it would also make it possible for people to reach the site without travelling by car. The riverside walk should also be improved and the permit system removed.

The construction of a new car park would provide safer access and adequate parking for visitors at peak times. It should also include toilet facilities. On arrival, visitors should find clear and welcoming information that will help them to plan their visit. It may be possible to liaise with local bus companies to persuade them to stop on request at the car park.

With the prospect of increased visitor numbers, a separate interpretation plan will be necessary. It will also be important for stakeholders to be consulted and kept informed throughout any changes.

2. Legislation & Policy

2.1 Legislation

Site designation

National Nature Reserve (NNR)

Site of Special Scientific Interest (SSSI)

Special Area of Conservation (SAC)

Ramsar

Other relevant legislation

Management of the site will be in full compliance with:

Health and Safety at Work Act 1974

Occupiers' Liability Acts of 1957 and 1984

Disability Discrimination Act 1995

2.2 Policy statements - access

The Countryside Council for Wales' access policies for all National Nature Reserves:

- CCW will declare all land in CCW ownership and, whenever possible, land in CCW's control, as 'dedicated land' under the CRoW Act.

- In all cases, CCW will consult with local communities and other stakeholders before proceeding with dedication.
- For land under CCW control, for example, lease or agreements, CCW will consult with, and seek the full agreement of, all owners and occupiers before proceeding with dedication.
- Whenever necessary, access restrictions will be applied to sites, or parts of sites, where such restrictions are essential for the protection of the conservation features.

CCW will encourage the sustainable public use of National Nature Reserves in Wales in so far as such use:

- Is consistent with CCW's duty to maintain or restore the nature conservation and geological features to Favourable Conservation Status.
- Does not expose visitors or staff, including contractors, to any significant hazards.

All legitimate and lawful activities will be permitted in so far as these activities:

- Are consistent with CCW's duty to maintain or restore the nature conservation and geological features to Favourable Conservation Status
- Do not expose visitors or staff, including contractors, to any significant hazards
- Do not diminish the enjoyment of other visitors to the site

3. Description

3.4 People – stakeholders, access, etc.

3.4.2. Access

The statistics on visitor numbers and characteristics are taken from a survey conducted in 1997 by the Welsh Institute of Rural Studies at the University of Wales, Aberystwyth (Scott et al. 1998, Christie et al. 1998).

3.4.2.1 Visitor numbers

The total number of visitors in 1997 was estimated at 20,000 per year (Christie et al. 1998). This will, of course, include a large number of repeat visits, so the total of individuals will be considerably less. Since 2004, electronic data loggers have been used to obtain more accurate figures.

These confirm previous estimates, suggesting that numbers have remained stable, or possibly risen slightly by perhaps 10%.

3.4.2.2 Visitor characteristics

Visitors are evenly divided between those that come from outside Wales (46%) and those coming from within Wales (47%). Of those that visit from within Wales about half are local (within ten miles). Only 6% are from outside the UK.

The majority of visitors (65%) are couples or families, with 20% visiting alone and 10% as part of a small group. No visits are from larger groups or as more formally arranged activities by clubs or educational establishments.

Most visitors (58%) are over 45, with just 4% under 18. 60% of visitors are male and 40% female.

The majority (70%) are either working or students, with 21% being retired. Only 2% are unemployed and none are unable to work as a result of disability or illness.

3.4.2.3 Visit characteristics

The vast majority of visitors (71%) come to watch nature or for other specialist interests, with the opportunity to see red kite being most specifically mentioned (31%). Just 7% come to enjoy the landscape qualities of the area and 16% are dog-walkers.

Of those that are on holiday, 42% describe the opportunity to visit the reserve as a major feature of their holiday, while just 18% stumbled across it by chance. Among local people, the majority (62%) visit at least several times a month.

Almost all visits (93%) last less than three hours, with over a quarter (28%) lasting less than half an hour.

3.4.2.4 Access to the site

The B4343 runs along the eastern side of the reserve and from this a small lay-by car park gives access to the reserve. Poor visibility makes this car park quite difficult to use, and at peak times it can be full (Scott et al. 1998). It is a remote area, situated in the agricultural heartland of Ceredigion: an area of low population, away from the main tourist routes, that is not well served by public transport. It is very difficult to reach the reserve other than by car, with the nearest bus stops being two miles away, at either Pontrhydfendigaid or Tregaron. The narrow, winding nature of the country roads linking the site to neighbouring villages means that it is not an easy journey to make on foot or by bike.

Most visitors travel to the site by car (93%), with just 1% travelling by bike and none on foot or by public transport (Scott et al. 1998).

There is informal parking at Pont Einon to the south of the reserve, off the A485. Parking at Ystrad Meurig station yard, to the north, is used by local people. Both these sites have excellent views over the bog, but they give no access onto the reserve.

3.4.2.5 Access within the site

The old railway track provides a well-maintained and well-surfaced route along the eastern edge of the reserve, allowing a walk of just under five kilometres. It is easily reached from the lay-by car park and is suitable for wheelchair users. Although it gives excellent views across the site, it does not allow any access out onto the bog itself.

A narrow boardwalk across the bog gives access to the riverside walk, which loops back to rejoin the railway track, covering a distance of about seven kilometres. Although it is well maintained, the boardwalk is very narrow, allowing only single file walking, and is not suitable for people with mobility problems. The boardwalk is open to permit-holders only, with about 100 permits being issued per year.

3.4.2.6 Visitor facilities and infrastructure

The small lay-by car park provides space for about eight cars but has no facilities. Of 22% of visitors wanting improvements to existing services this primarily related to the car park, while the 19% of visitors wanting new facilities mainly required toilets (Scott et al. 1998). A series of eight information panels runs north from the car park, beginning with a sign to welcome visitors and give them a sense of orientation. However, some visitors find this sign difficult to use and are unaware of the best route to take on leaving the car park (Scott et al. 1998). Other panels describe the railway line, the wildlife of the track, bog plants, vegetation in adjacent ditches and hydrological management. The monochrome panels are 1m x 1.5m in size. Perhaps because of the enclosed and linear nature of the trail, the information panels attract a great deal of attention and are used by 84% of visitors (Scott et al. 1998).

A booklet with coloured photographs and maps gives a good introduction to visitors. It describes how the bog was created and outlines its history and its importance. There are brief descriptions of the vegetation and wildlife as well as location maps and an outline of the access options within the reserve. There is also a bird list and a booklet giving much more detailed descriptions of the vegetation, which would be useful for visitors with specialist interests. Leaflets attract much less attention than the panels and are used by only 6% of visitors, although this is possibly as a result of the leaflet box being vandalised rather than reflecting a lack of interest by visitors (Scott et al. 1998). Of those that do use the leaflets, 100% rate them as excellent (Christie et al. 1998).

The riverside walk has numbered way points, and an accompanying booklet allows this to be used as a self-guiding trail. The way-marked walk is used by 18% of visitors. Some people have commented that they would like this part of the reserve to be more accessible (Christie et al. 1998).

There is an observation tower about one and a half kilometres to the north of the car park. This acts as a bird hide and also gives spectacular views across the bog, but it is due to be demolished for safety reasons. The hide is used by 35% of visitors, which is possibly a reflection of the high number of people with a specialist interest in birds (Scott et al. 1998).

Reserve staff give about twelve guided walks a year and approximately six slide shows.

3.4.2.7 The reasons why people visit the site

3.4.2.7.1 Wildlife attractions

Bird watching is the prime reason for people to visit the site and this has the potential to attract visitors throughout the year. In winter there are whooper swans, hen harriers and large numbers of wildfowl. Summer brings curlew, some breeding lapwing, redshank, snipe, reed bunting and sedge warblers. Most important of all are the red kite. Although these birds are now widely seen in mid-Wales this remains an area where people traditionally come to see them, with 31% of people specifically mentioning red kite as the reason for their visit (Scott et al. 1998).

Butterflies put on beautiful displays in summer, with common blue, small pearl-bordered fritillary and commas being frequently seen. Although the bog is spectacular, lack of good access means that people cannot easily appreciate the detail of the vegetation. Most people are unlikely to get good views of the individual plants such as bog asphodel and sundew.

3.4.2.7.2 Other features that attract people

The reserve is an area of outstanding landscape that dominates the valley north of Tregaron. Its spectacular golden-red colouring floods the area and it clearly stands out as being very different to the surrounding countryside. Surprisingly, this stunning landscape does not seem to play a major part in attracting visitors, with just 7% citing the landscape quality as a reason for visiting the site (Scott et al. 1998). However, 35% of visitors believe that 'quietness' is an important factor in their enjoyment, and this is, of course, very closely linked to the landscape in terms of the size and remoteness of the reserve.

3.4.2.7.3 Recreational activities

Activities on the site are limited to quiet enjoyment, which includes walking, cycling and bird watching.

3.4.2.8 Current and past concessions

There are no concessions on the site.

3.4.2.9 Stakeholder interests

There are a number of tenant farmers who farm parcels of land within the reserve. This is limited to rough grazing for sheep. The fishing rights, for salmon and trout, are privately owned. Shooting rights over the northern and central section of the reserve are retained by the former owner of the land.

3.4.2.10 The site in a wider context

This is a very isolated site, and there is nothing similar in the local area. Pony trekking was once important, but has declined for practical reasons associated with the individuals providing the service, and this does not indicate any lack of demand for the facility.

3.4.2.11 Educational use

The comprehensive visitor survey conducted during June to September 1997 recorded no educational use (Scott et al. 1998), although this clearly coincided with the holidays for most educational establishments. Reserve staff do, in fact, make an effort to provide for local schools and universities, giving about eight to ten guided walks a year for primary and high schools and one or two for universities. In addition, there may be one guided walk for a more distant university and two or three self-guiding school or college groups.

5. Access

5.1 Evaluation

Current demand is strongly biased towards people who already have an interest in natural history, and this is largely dominated by birdwatchers. Bogs are not generally perceived as attractive to the casual visitor and even the spectacular landscape has little appeal. They have an air of danger that is partly real, as a result of the difficult nature of the terrain, but people also have a false perception of bogs as barren, hazardous places more suited to the will-o'-the-wisp than to human visitors. If people were aware of the true nature of the bog they would be much more likely to want to visit it. If they could see the wonderful detail of the plant life, experience the openness and sense of peace or hear the variety of birdsong they would begin to understand why it is so special. However, there is little point in trying to use these assets to attract visitors because the inaccessibility of the site greatly limits the potential for people to enjoy these aspects.

5.1.1 Accessibility

Parking is possible for up to eight cars but, because the car park is basically a lay-by, carelessly parked cars can result in it quickly becoming full, making the site inaccessible during periods of peak demand.

5.1.2 Access within the site

The main part of the site is too dangerous and too fragile to be accessed by visitors without the provision of significant infrastructure. Access is mainly limited to the railway track running along the edge of the reserve and to viewing points at either end of the reserve. There is a boardwalk that gives some opportunity for visitors to get out onto the bog, but this is narrow and quite difficult to walk on, and does not take people to the areas that they would most like to see. Access to the boardwalk is for permit holders only, and this is likely to deter most visitors who believe (incorrectly) that it is necessary to have a specific reason in order to obtain a permit.

5.1.3 Site safety

The bog is a naturally forbidding place, and the difficulty of the terrain is immediately apparent. People are unlikely to be tempted to walk on it and it would certainly be unsafe to do so.

5.1.4 Implications of stakeholder interests

The potential for visitors causing problems for tenant farmers is very limited because there are currently so few visitors. However, any attempt to extend access to the site is likely to be perceived by them as a problem, and they would be concerned, for example, about the possibility of dogs worrying livestock. In reality, increased visitor numbers are very unlikely to have any impact on farming activities, but it is essential to negotiate with tenants before any changes take place to ensure that they feel included in the process. Although there were some conflicts of interest concerning shooting rights, these have been fully resolved.

Local residents with properties overlooking the bog may feel that increased access is detrimental to them, but they will also have some benefits from being able to make use of the improved facilities. Again, it is essential to liaise with neighbours to ensure that any negative impact is minimised.

If more people were attracted to the reserve, there would be improved opportunities for local farmers to diversify into tourism. This could be important in an area that generally has few visitors.

5.1.5 Carrying capacity of the features

The bog itself is extremely fragile and has no carrying capacity without the provision of a boardwalk. The largest raised mire, which is relatively intact, is a rare example of this type of habitat, and it should remain undisturbed in order to protect it and to retain its wilderness qualities. There is a risk that people will disturb ground-nesting birds in the immediate vicinity of where they are walking, and dogs are particularly likely to cause problems. Wintering flocks of wildfowl are also vulnerable to disturbance, and this will limit any potential to open up large areas of the bog. Public access to the bog should be restricted to a boardwalk.

5.1.6 Carrying capacity of the site

The site is extremely large, and a boardwalk would encroach only on a very small area, leaving the rest of the bog largely undisturbed. Given the remoteness of the area, away from large centres of population or tourist routes, any improvements to access would be unlikely to attract enough people to damage the wilderness qualities of the site. Any development of car parking facilities should be such that it did not allow for excessive numbers of people.

5.1.7 Summary of the evaluation

Currently, the site does not fulfil its potential to allow visitors to enjoy such a rare and fascinating habitat, but there would be little point in trying to attract more people because parking and access are not adequate. The existing

boardwalk is not easily accessible, and people do not feel encouraged to use it. Parking and access for walking, bird-watching and wheelchair use could be improved enormously without detriment to the site. The remote location and relatively large size of the site mean that excessive numbers of visitors are unlikely to be a problem.

5.2 Access option

Access is encouraged, but is limited in terms of the area of access and overall numbers. Activities should be quiet and unobtrusive, such as walking, bird watching and photography, with cycling and horse riding permitted on the railway track. Access to the bog should be restricted to the boardwalk.

5.3 Access objective

To encourage the sustainable and inclusive public use of Cors Caron in so far as such use is consistent with maintaining the nature conservation features at Favourable Conservation Status and provided that visitors are not exposed to any hazards.

5.3.1 Vision

Vision 1 – simple version – describes the facilities and infrastructure

There is a wide range of information available to attract people to the site, including leaflets and a web site. Signs at the car park and on local roads make it easy to find. The car park has disabled bays, toilet facilities, seating and shelter as well as picnic areas and secure spaces for bikes. The Ystwyth Trail, following the route of the old railway line, makes it possible for people to reach the site by bike or on foot from the nearby villages of Tregaron and Pontrhydfendigaid. Buses can stop at the reserve car park, allowing people to make use of local bus services. An information panel introduces visitors to the reserve and helps them to plan their visit. There are clear descriptions of the options available, where seating and shelter can be found, and, particularly for people using wheelchairs, an indication of the distance between turning and passing places.

From the car park, visitors can follow the old railway line, a broad, smooth track that runs the entire length of the reserve and gives good views out over the bog. Alternatively, they can use the boardwalk to gain access to the bog itself. This is a circular route of 1.5k which provides a good, level surface that is accessible to wheelchair users. There are seats and information panels at intervals along the route. An observation shelter, looking directly over pools which may be used by breeding and wintering birds, gives distant views out over the floodplain of the River Teifi. For visitors wishing to see more of the reserve, the riverside walk, which is not suitable for disabled visitors, can be accessed from the boardwalk. This covers a distance of about 7k and follows the banks of the river for part of its length before returning to the railway track.

Vision 2 – describes the facilities, infrastructure and the experience that visitors can expect to enjoy at the site.

There is a wide variety of information available to attract people to Cors Caron, including leaflets and a website. The car park at the reserve is clearly

signposted and easily accessible from the main road, and gives an immediate feeling of being welcoming and well cared for. There are disabled bays, toilet facilities, seating and shelter as well as picnic areas and secure spaces for bikes. As an alternative to travelling by car, the Ystwyth Trail, following the peaceful route of the old railway line, gives an ideal opportunity to reach the site by bike or on foot from the nearby villages of Tregaron and Pontrhydfendigaid. Buses can stop at the reserve car park, allowing people to make use of local bus services. Information panels provide a perfect introduction to people unfamiliar with the reserve and help them to plan their visit. People using wheelchairs and less-agile walkers will discover that the main routes are accessible to them, and that the boardwalk provides a good, secure surface with plenty of space to manoeuvre. There are clear descriptions of the options available, where seating and shelter can be found, and, particularly for people using wheelchairs, an indication of the distance between turning and passing places.

The old railway line provides a broad, level track that runs the entire length of the reserve. It is a partially tree-lined trail that gives superb views over the reserve, but perhaps the true highlight of any visit is to follow the boardwalk out onto the bog itself. The reserve is spectacular at any time of the year, but its appeal is unsurpassable in early summer. As visitors leave the car park on a smooth pathway the sound of birdsong drifting from the trees draws them immediately into their new surroundings. The sun sifts through the translucent green of the new leaves, while butterflies flit through the dappled light. After a short distance, the boardwalk peels away from the track and, as the shelter of the trees is left behind, the view opens up to reveal the full sweep and grandeur of the site. The bog lies in a vast bowl rimmed with hills, and the landscape stretching out appears untamed and exciting compared to the gentle greenness of the surrounding trees and fields.

A pool butts up against the side of the path, and the sunlight catches the iridescence of dragonflies' wings as they dart and meander above the water, occasionally resting on the boardwalk at the feet of passers-by. Overhead, birds soar through a sky that appears endless above such an open landscape. Occasionally, it may be possible to glimpse the spectacular sight of a hobby plunging down to snatch a dragonfly. Staring skyward may also bring the reward of seeing the magnificent, fork-tailed silhouette of a red kite. Though they may be seen frequently now in mid-Wales these once-endangered birds remain a powerful emblem of these special places that were their only stronghold. With so much to see it would be easy to miss the subtler sights and sounds: the piping of redshank or the softly melodic, bubbling call of the curlew.

As visitors travel further out onto the bog, the tussocky landscape is scattered with small pools: sharp and glinting fragments of reflected sky. By this point people will have realised that they have found their way into the sort of terrain that would normally be inaccessible. This is a rare experience for anyone, but for someone with restricted mobility, who may feel excluded from truly wild places, it offers an almost unimaginable freedom. Ahead is the observation shelter, a building of such soft, natural colours and flowing curves that it

appears to have grown from the landscape. This, together with the regular seating along the boardwalk, gives confidence to anyone who may be wary of embarking on a walk into a nature reserve. Along the route, beautifully carved information panels highlight some of the details of the surrounding landscape and its wildlife. Inside the shelter, a wall of windows looks out across a pool and then on over the flood plain of the Afon Teifi. The stunningly open outlook contrasts with the feeling of protected seclusion inside the building.

As they follow the boardwalk beyond the shelter visitors begin to get a sense of the extraordinary structure of a raised bog as they see the land ahead of them rising up in a smooth dome. Here the hummocky lawns of sphagnum mosses spread like a densely textured tapestry. The colours threaded through it range from vibrant green to jewel-bright, ruby red. Spikes of bog asphodel splash it with yellow while the bog rosemary brings a subtler wash of pink. Silky puffballs of cotton grass appear to float above the surface making striking white highlights. In this peaceful atmosphere visitors are more aware of the snatches of bird song scattered all around. Perhaps the most uplifting of all is the soaring song of the skylark as it trickles back down to earth with a ringing purity.

After one and a half kilometres the curve of the boardwalk brings people almost back to their starting point, and for a moment it may seem strange to have returned so easily to the 'real world' after a journey that has taken them into such a different place. The more adventurous may want to extend their visit to take in the riverside walk. This leads off the main boardwalk down to the Afon Teifi and covers a distance of about seven kilometres, allowing people to experience a little more of the sense of remoteness. They can follow the meandering river banks accompanied by birds, such as sedge warblers, grasshopper warblers and reed bunting, while across the river the faintly rippling reeds slice the sunlight into sparkling ribbons.

In winter the reserve presents a different face. With the rest of the countryside dull and drained of colour, it fills the dish between the hills like a pool of red spilled across the landscape. While many places have been churned to mud by winter rains, the boardwalk continues to provide a secure surface for anyone who wants to venture out. Visitors may hear the quiet whistling of teal from the scattered pools or see a hen harrier gliding overhead. Herons, with broad, blunt wings, imprint their distinctive silhouettes onto the sky. Occasional flocks of birds, perhaps lapwing or fieldfare, twist and wallow, sketching stippled patterns in the air. For those with the patience to wait, there is a fleeting moment of brilliance just before dusk. In the light of the setting sun the bog flames golden-red before the sudden cold of winter twilight sends visitors heading back to the car park.

5.3.2 Performance indicators & monitoring

Any improvements to the parking and access facilities are likely to change the number of visitors. In this instance, limits could not be set immediately but would be determined from the results of surveillance conducted over the first five years of the new regime.

- 4) The total annual number of visitors, or a representative sample, for the whole, or part, of the site. (This can be used to measure trends.) Until the implications of any possible changes are established by surveillance, a lower limit should be set at the annual number of visitors indicated in the last survey. The upper limit would be the level at which the quality of visitors' experience is diminished by overcrowding. This could be measured by questionnaires.
- 5) The number of educational groups. A lower limit should be set at the current level.
- 6) Level of satisfaction measured formally by, for example, structured questionnaires or visitor surveys.
- 7) The number of complaints or compliments.

5.4 Status & Rationale

5.4.1 Status

Although visitors are provided with good opportunities to view the site, access onto the bog itself is very limited and the status of access provisions could therefore be considered as unfavourable. The bog can be reached by means of a very narrow boardwalk that is suitable only for reasonably fit people. It allows no access for people with any sort of mobility problems. The boardwalk is accessible to permit holders only, which actively deters people from visiting and gives the impression that members of the public are not generally welcome. There is no seating or shelter on the bog, which can discourage people from setting out.

The car park is not easy to see or access from the road and it can be full at peak times, preventing potential visitors from gaining access to the reserve. The lack of information in the car park makes it difficult for visitors to plan their visit. There is very little opportunity for people to visit the reserve other than by car.

5.4.2 Rationale

5.4.2.1 Legislation

When considering possible changes to the reserve it is necessary to comply with all Health and Safety, Public Liability and Disability Discrimination legislation. This means that any new boardwalk must be suitable for disabled people. Planning permission must be obtained for any changes to the parking and toilet facilities.

5.4.2.2 Access to the site

The construction of a new car park would provide safer access and adequate parking for visitors at peak times. It should include disabled bays and secure spaces for bikes. Level pathways should provide easy access from the car park to the reserve. It may be possible to liaise with local bus companies to persuade them to stop on request at the car park. The completion of the

Ystwyth Trail will extend and upgrade the old railway track, greatly improving access by bike and on foot from nearby villages.

5.4.2.3 Access within the site

The most pressing need is to provide better access to the bog. This would be achieved by the construction of a new boardwalk, preferably a loop that would give visitors a chance to see the different vegetation communities on the bog. The boardwalk must be suitable for disabled access, with frequent turning and passing places for wheelchairs. It should also provide seating for people who are not able to undertake a long walk without stopping to rest.

The riverside walk should be improved and the permit system should be removed, making it open access for all visitors, with just occasional closures for management requirements.

5.4.2.4 Seasonal constraints

The site has attractions for visitors at all times of the year and the new boardwalk would make it accessible in all weathers.

5.4.2.5 Public awareness

Improvements in access would increase the appeal of the site to a wider range of visitors. It is important that more people are aware of what the site has to offer. Publicity could be improved by providing good information for internet users and by ensuring that leaflets are available in some of the more mainstream places likely to be visited by tourists. This may help to attract visitors with more general interests as well as the high proportion of specialists that currently use the site.

5.4.2.6 Excessive demand

In such a remote site, excessive demand is not envisaged, but the size of the car park should be such that it does not allow for over-use of the site.

5.4.2.7 Visitor infrastructure

Many visitors would welcome better facilities at the car park, and the provision of toilets, some limited shelter and a picnic area would greatly improve people's experience of the reserve. A well-designed observation shelter that blends into the landscape, as part of the boardwalk loop out onto the bog, would make it easier for less-active visitors to enjoy the exposed and wild nature of the site.

The tower hide must be demolished for safety reasons. This should be replaced by another hide in the same location. The new hide should be on a raised bank to give an elevated view over the bog.

5.4.2.8 Information

The car park should be clearly signposted at the site and on local roads. Leaflets should be available both at the car park and locally. On arrival, visitors should find a clear and welcoming information panel that will help them to plan their visit. It should set out the options available and, particularly

for wheelchair users and less mobile visitors, it should give a clear indication of the distances between turning and resting places.

5.4.2.9 Interpretation

With the prospect of increased visitor numbers, a separate interpretation plan will be necessary. Interpretation should be relatively low-key, but it should include a well-produced booklet describing the wildlife, history and importance of the reserve, and information panels along the paths and boardwalk highlighting the main areas of interest without being intrusive.

5.4.2.10 Education

Given the remoteness of the site there is unlikely to be a high demand for educational facilities. The main focus should be directed towards local schools. Ideally, every child attending a local primary school should be given the opportunity to visit the reserve and take part in a guided walk during their final year. Other schools should be accommodated as far as possible.

Educational packs should be available, consisting of a number of separate inserts so that they could be tailored to the requirements of the curriculum and the age of the recipients. These would be suitable for primary schools, high schools and universities



5. Glossary

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| Action plan | A plan of action for a specific period of time containing several individual projects that describe specific actions. The information contained in the individual projects is aggregated to produce a wide variety of work and resource plans. |
| Adaptable / Adaptive Management | A cyclical, adaptable management process which allows site management to: respond to natural dynamic processes; accommodate the legitimate interests of others; adapt to the ever-changing political and socio-economic climate; and, in the long term, succeed, despite uncertain and variable resources. |
| Attribute | An attribute is a characteristic of a feature that can be monitored to provide evidence about the condition of the feature. |
| Audit | A critical examination of the performance of the plan, or a part of the plan, so as to measure the quality of the plan and its implementation, carried out by the management organisation (internal audit) or by an independent authority not directly associated with the site (external audit), usually at the invitation of the management organisation. |
| Evaluation | Evaluation is simply the means of identifying, or confirming, which of the features on a site should become the focus for the remainder of the planning process. |
| Factor | A factor is anything that has the potential to influence or change a feature, or to affect the way in which a feature is managed. These influences may exist, or have existed, at any time in the past, present or future. Factors can be natural or anthropogenic in origin, and they can be internal (on-site) or external (off-site). |
| Favourable Conservation Status (FCS) | FCS is the desired status of a habitat or species, at any geographical scale from its entire geographical range to a defined area within a site. Although the concept of FCS originates in international and European treaties and directives, it is a concept that can be used for any wildlife management plan anywhere. |
| Feature | Nature conservation features can be a habitat, a community or a population. Other features of interest can include geological, geomorphological, archaeological and historical features. |

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| IUCN Protected Area | An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means. (Protected areas are categorised according to their primary management objective.) |
| The IUCN Protected Area Management Categories: | <p>Ia: Strict nature reserve/wilderness protection area managed mainly for science or wilderness protection</p> <p>Ib: Wilderness area: protected area managed mainly for wilderness protection</p> <p>II: National park: protected area managed mainly for ecosystem protection and recreation</p> <p>III: Natural monument: protected area managed mainly for conservation of specific natural features</p> <p>IV: Habitat/Species Management Area: protected area managed mainly for conservation through management intervention</p> <p>V: Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation or recreation</p> <p>VI: Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural resources</p> |
| Management | Management is about taking control to achieve a desired outcome. 'Control' does not necessarily imply taking an action. It can, for example, mean 'enabling' a process. |
| Monitoring | Surveillance undertaken to ensure that formulated standards are being maintained |
| Precautionary Principle | Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. |
| Rationale | The rationale is the process of identifying, in outline, the most appropriate management for the various site features. |
| Recording | Making a permanent and accessible record of significant activities (including management), events and anything else that has relevance to the site. |
| Site | A site is the area covered by a management plan. It can vary in size from less than a hectare to a large National Park covering many square kilometres. The term is used synonymously with area. |
| Specified Limits | Specified limits define the degree to which the value of a performance indicator is allowed to fluctuate without creating any cause for concern. |
| Stakeholder | A stakeholder is any individual, group, or community living within the influence of the site or likely to be affected by a management |

decision or action, and any individual, group or community likely to influence the management of the site.

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| Surveillance | Making repeated standardised surveys in order that change can be detected. |
| Survey | Making a single observation to measure and record something. |
| Zones | Sites may be divided into zones to meet a wide variety of purposes, for example, to describe management actions or to guide or control a number of activities. |

6. References

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