CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES

CORE MANAGEMENT PLAN
INCLUDING CONSERVATION OBJECTIVES

FOR

MYNYDD HELYGAIN / HALKYN MOUNTAIN SPECIAL AREA OF CONSERVATION
SAC EU Code: UK0030163

Version: Final

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

Cyngor Cefn Gwlad Cymru
Countryside Council for Wales

NATURA 2000

Ramsar

Llywodraeth Cynulliad Cymru
Welsh Assembly Government
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CONTENTS

PREFACE

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

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

1. VISION FOR THE SITE

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

The short unimproved herb rich calcareous grassland, which occurs over the limestone bedrock, will be managed through a sympathetic grazing regime, which ensures the retention of floristic interest. Where opportunities present, management should aim to increase the extent of this habitat. Characteristic grass species in the sward will include sheep's fescue, crested hair grass and meadow oat grass along with broadleaved herbs such as carline thistle, bird's-foot trefoil, common rock rose and wild thyme. This habitat should also continue to support the locally scarce moonwort, adder's tongue fern, autumn gentian and stemless thistle that reaches the northern limits of its range in western Britain on this site.

The wetter areas of the common, should support rush pasture, fen meadow, acid purple moor-grass pasture and sedge-dominated flushes. These areas will again be maintained by a sympathetic grazing regime preferably comprising heavy livestock. An adequate water table level will be necessary to sustain the vegetation in these areas, which will be dominated by a mixture of wetland species to include purple moor grass, rushes, short sedges, meadowsweet and marsh valerian. Base-enriched areas should continue to support base-rich flush and fen-meadow vegetation with a population of the locally uncommon broad-leaved cotton grass. The wetland areas should be maintained as a mosaic of tussocky vegetation interspersed with shorter grasses and herbs, and more open flush zones.

The areas of dry dwarf shrub heath on the site will be characterised by a dense canopy of low growing western gorse shrubs interspersed with ericaceous shrubs such as bell heather and ling heather. Currently, western gorse dominates in many stands to the detriment of ericoid species. Management should aim to weaken the dominance of western gorse within this habitat and encourage the spread of ericoid species. The heath land would benefit from a reduction in grazing pressure in the autumn months.

The site also supports the largest areas of heavy metal tolerant (calaminarian) grassland in Wales. This is specifically associated with old mine spoil in areas formerly used for the mining of heavy metals such as lead and zinc. This habitat should be maintained as a short open sward supporting a prominent suite of lichens and mosses along with sheep's fescue and the nationally scarce plant spring sandwort. When succession to a more grassy sward threatens the condition of this habitat, it may be necessary to disturb these areas to re-start succession, and encourage establishment by moss and lichen species typical of the more open sward.

The site should continue to support at least 200 adult great crested newts as identified by torch surveys in the spring. Great crested newt breeding and display ponds across the site will be restored to a condition whereby they support sufficient open water and aquatic macrophytes to support the great crested newt population. Alien aquatic plant species such as New Zealand stonecrop (Crassula helmsii) will be controlled within ponds on the site with the ultimate aim to eradicate it from the site.

2. SITE DESCRIPTION

2.1 Area and Designations Covered by this Plan

Grid reference (Halkyn Mountain): SJ1955, 7188

Unitary authority: Flintshire

Area (hectares): 610.36

Designations covered:
Halkyn Common and Holywell Grasslands SSSI
Herward Smithy SSSI
Holywell Common and Halkyn Mountain Landscape of Outstanding Historic Interest
Regionally Important Geological Sites (RIGS):
Pen yr Henblas RIGS
Aberdo – Bryn Mawr RIGS
Rhes y Cae RIGS
County Wildlife Sites
Common Land Unit 11
Open Access Land (CROW)

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

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

2.2 Outline Description

The majority of the site is located 4km to the northwest of Mold in Flintshire, and lies at between 100-300m. The site comprises predominantly common land situated on an elongated plateau of Lower Carboniferous Limestone which trends north-south, with the Dee Estuary to the east and the Clwydian Hills to the west. The site supports many former mineral workings including metalliferous mine spoil tips along with small chert and limestone quarries. Three large quarries currently operate on Halkyn Common, two of which are included within Halkyn Common and Holywell Grasslands SSSI for their mineral interest.

The relict industrial landscape supports a mosaic of calcareous grasslands, bracken and dry heath with localised heavy metal tolerant vegetation developed on old metal mine spoil. In places where surface drainage is impeded small areas of rush pasture, wet heath, marshy grasslands and fen communities can be found. The disused quarries and pits throughout the site contain numerous small pools, which support one of the largest known breeding populations of the great crested newt (*Triturus cristatus)* in Wales along with an assemblage of other more widespread amphibian species. At the northern end of the plateau, along the west facing slope, a series of base-rich springs feed a small base-rich flush and associated fen-meadow.

Two outlying areas of Halkyn Mountain SAC supporting significant stands of calaminarian grassland over old lead workings are to be found near the town of Holywell. The first area known locally as the Gowdal lies just to the west of Holywell town centre and the other, Herward Smithy comprises a small enclosure lying 2km to the southeast of Holywell.

2.3 Outline of Past and Current Management

Common land that forms the vast majority of the site has traditionally been managed for grazing livestock on a year round basis. The majority of grazing rights over the common are for sheep. Grazing rights also exist for cattle, goats, horses and poultry. Stands of heath land, scrub, bracken and acid grassland have traditionally been burnt to try to extend the areas of grassland for grazing. Recent years have seen a decline in the number of active graziers. The distribution of grazing pressure across the site is not uniform; consequently some core areas see high stocking levels whilst some of the more peripheral areas of the common remain ungrazed.

Current management is through year round grazing by sheep and the odd tethered pony. Practical conservation management on the site such as bracken / scrub control is currently carried out by graziers within their own hefts. The Halkyn Common Ranger and volunteers or contractors carry out practical management across the remainder of the site.

The common is a registered urban common and designated open access land with a right of access on foot for recreation. Dog walking and horse riding across the common are popular activities.

At the northern end of the site, adjacent to the village of Brynford, there is an area of the common that is leased and managed as a golf course. The golf course includes rough areas that support habitats such as calcareous grassland, calaminarian grassland and ponds.

The local population uses some of the larger permanent ponds on the site for fishing.

The area has been an important lead mining area since the Roman era and likely earlier. The wealth of industrial archaeological features remaining across the site is testament to this, evidenced by bell pits, horse winding circles, shafts, kilns and lead washing ponds.

There are currently three large limestone quarries operating across the common. In addition chert is also extracted from Aberdo Bryn Mawr quarry. Both Pen yr Henblas and Aberdo Bryn Mawr quarries are now designated as Regionally Important Geological Sites (RIGS) for their exposures of Namurian shaley cherts. Pools (some seasonal) within Pen yr Henblas Quarry support the largest population of great crested newts on the site. Marble and sand have also been quarried from the site in the past, and the two old sand pits to the east of the village of Rhes y Cae are now also designated as RIGS for their role in demonstrating the key evidence and concepts concerning the long-term geomorhological evolution of the Welsh landscape.

The Halkyn Joint Consultative Board meets quarterly to discuss common management issues; stakeholders represented include the Grosvenor Estate, graziers, community councils, Flintshire County Council, Countryside Council for Wales and local quarry operators. The forum has no statutory powers but provides a platform for the exchange of ideas.

An Interpretation Plan has been prepared and implemented for Halkyn Mountain, which has included the production of an educational package for local primary and secondary schools along with the provision of information boards at local pubs.

A partnership currently exists between Cadwyn Clwyd rural Development agency, Flintshire County Council Countryside Service and the Countryside Council for Wales to manage the regeneration of Halkyn Common.

The partnership has attracted funding from the Aggregates Levy Bid and INTERREG Green mines Project. Funding has been put towards cattle grids, the employment and works of a full

time ranger and further interpretation. A Strategic Management Plan and 5year action plan is also currently being compiled for the common

Details of current management issues are contained in Section 6 – see later.

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 primarily on land designation, with reference to features and land management requirements.

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

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

Unit no.	Unit name (Unique ISIS ID number)	SAC	SSSI	NNR/ CCW	Other
Halkyn Mountain SAC					
1.1	Halkyn Common (443)	✔	✔		LOHIW*. Common land (CL 11) RIGS** CWS*** Golf Course
1.2	Halkyn habitats (2730)	✔			Common land (CL 11)
2	Rhosesmor (444)	✔	✔		CL 11
3	Bryn Gwiog 1 (446)	✔	✔		
4	Bryn Gwiog 2 (447)	✔	✔		
5	Pant Quarry Fields (448)	✔	✔		LOHIW. CL 11
6	Pen y Parc (449)	✔	✔		LOHIW
7	Top Pen y Parc (450)	✔	✔		
8	Treetops (451)	✔	✔		
9	Bryn-y-mawn (452)	✔	✔		
10	Ael y Bryn (453)	✔	✔		
11	Tyn-Mynydd (454)	✔	✔		
12	Pen y Parc 1 (455)	✔	✔		
13	Ty Newydd (456)	✔	✔		
14	Rhos Awel (457)	✔	✔		
15	Bryn tirion (458)	✔	✔		LOHIW
16	Pentre Halkyn fields (459)	✔	✔		LOHIW
17	Herward Smithy (460)	✔	✔		CWS
18	Higher Gowdal (461)	✔	✔		CWS
19	Lower Gowdal (462)	✔	✔		CWS
20	Racecourse Mire (463)	✔	✔		

21	Ty coch 1 (464)	✔	✔		
22	Ty coch 2 (465)	✔	✔		
23	Ty coch 3 (466)	✔	✔		
24	Herward Smithy Verge (2367)	✔	✔		CWS
25	Pant Quarry		✔		LOHIW CL 11
26	Pant y Pwll Dwr Quarry		✔		LOHIW CL 11
27	Glannant		✔		

* Includes Landscape of Outstanding Historic Interest Wales (LOHIW)
** Includes Regionally Important Geological Sites (Rhes y Cae , Pen yr Henblas Quarry)
*** Includes County Wildlife Sites (CWS)

3. THE SPECIAL FEATURES

3.1 Confirmation of Special Features

Designated feature	*Relationships, nomenclature etc*	*Conservation Objective no. in part 4*
SAC features		
Annex I habitat that is the primary reason for selection of this site **6130: Calaminarian grassland of the *Violetalia calaminariae* type**		**1**
Annex I habitats present as a qualifying feature, but not a primary reason for site selection **4030: European dry heath** **6210: Semi-natural dry grassland and scrubland facies on calcareous substrates** **6410: Molinia meadows on calcareous peaty or clayey-silt-laden soils (*Molinion caeruleae)***		**2** **3** **4**
Annex II species that is the primary reason for selection of this site **1166 : Great crested newt (*Triturus cristatus)***		**5**

Special Features and Management Units

This section sets out the relationship between the special features and each management unit. This is intended to provide a clear statement about what each unit should be managed for, taking into account the varied needs of the different special features.

All special features are allocated to one of seven classes in each management unit. These classes are:

Key Features
KH – a 'Key Habitat' in the management unit, i.e. the habitat that is the main focus of management and monitoring effort, perhaps because of the dependence of a key species (see KS below). There will rarely be more than one Key Habitat in a unit.
KS – a 'Key Species' in the management unit, often driving both the selection and management of a Key Habitat.
Geo – an earth science feature that is the main focus of management and monitoring effort in a unit.

Other Features

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

a) they are present in the unit but are 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).

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

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

X – Features not present in the management unit.

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

Background information on Halkyn Mountain SAC

Halkyn Mountain SAC comprises two component SSSI: Herward Smithy SSSI (comprising a single management unit) and Halkyn Common and Holywell Grasslands SSSI. The site is included in the Natura 2000 series primarily for the areas of calaminarian (heavy metal tolerant) grassland habitat and the great crested newt population it supports.

The site hosts 9 SSSI features, namely the amphibian assemblage (of 5 widespread species to include great crested newt, smooth newt, palmate newt, common frog and common toad), Stemless thistle, Spring sandwort, Calcicolous grassland (a broad type that includes SAC feature 6210), Marshy grassland (a broad type that includes SAC feature 6410), Dry dwarf shrub heath, Basic flush, Spoil heaps (both as a geological mineralogy feature and for their support of calaminarian grassland habitat and Spring sandwort). Two large quarries have been included within the SSSI for the exposure of mineralised material, which is unveiled during their operations. The management of all these features will be addressed in subsequent plans for Herward Smithy and Holywell Common and Grasslands SSSI's.

In general, where calaminarian grassland vegetation and great crested newt breeding habitats are present, they are considered to be the main focus of management. Calaminarian grasslands provide habitats for a range of rare geographically restricted vascular plants and there have been significant historical losses in extent of this habitat in the UK through reclamation.

Halkyn Common and Holywell Grasslands SSSI is the most complex of the component SSSI in the SAC, containing 25 management units.

The Cirsium acaule population on the site represents the largest population in the Clwyd Area of Search and in Halkyn Mountain SAC it reaches the northern limit of its distribution in Western Britain, the management of the common land in unit 1 where it occurs should aim to maintain and where possible increase this population.

Calaminarian grassland, calcareous grassland, marshy grassland, basic flush and heath land features occur in intricate mosaic over much of unit 1. Within this unit, management should aim to maintain and where possible extend these features at the expense of bracken stands and areas of improved / semi-improved grassland always with sensitivity to the needs of the amphibian assemblage feature particularly adjacent to breeding ponds.

On enclosed land out with Halkyn Common, included in the site management will be aimed at maintaining and enhancing the calaminarian grassland habitat and the spring sandwort population that it supports where it occurs in units 3,4,11,14,17,18,19,20,24 and 27.

On enclosed land out with Halkyn Common, management should be aimed at maintaining and enhancing habitats for use by amphibian species, to include the establishment of sympathetic grazing regimes, pond creation, hedgerow and field margin restoration in units 5 –10, 12, 13, 15, 16,18 and19.

The quarry units (nos 25 and 26) are managed by quarry operators for limestone extraction and mineralogical features will be revealed during operations. Wherever possible any mineral material extracted during the course of operations should be stockpiled as an educational resource.

In Units 20-23 management should be aimed at maintaining and enhancing the marshy grassland and basic flush habitats that are localised in this part of the site to include the establishment of sympathetic grazing regimes, water level management and scrub control.

Halkyn Mountain SAC	**Management unit**									
	1.1	**1.2**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
SAC	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
SSSI	✔		✔	✔	✔	✔	✔	✔	✔	✔
NNR/CCW owned										
SAC features										
Calaminarian grassland	**KH**	**X**	**KH**	**KH**	**KH**	**X**	**X**	**X**	**X**	**X**
Great crested newt	**KS**	**X**	**KS**	**?**	**X**	**KS**	**KS**	**KS**	**KS**	**KS**
European dry heath	**KH**	**KH**	**Nm**	**X**	***X***	**X**	**X**	**X**	**X**	**X**
Semi-natural dry grassland and scrubland facies on calcareous substrates	**KH**	**KH**	**X**	**X**	***X***	**X**	**X**	**X**	**X**	**X**
Molinia meadows	**Sym**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
SSSI features										
Amphibian assemblage	**Sym**	**Sym**	**Sym**	**?**	**X**	**Sym**	**Sym**	**Sym**	**Sym**	**Sym**
Stemless thistle population (*Cirsium acaule)*	**Sym**	**Sym**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Spring sandwort population *(Minuartia verna)*	**Sym**	**X**	**Sym**	**Sym**	**Sym**	**X**	**X**	**X**	**X**	**X**
Calcicolous grassland non SAC	**Sym**	**Sym**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Fen meadow	**Sym**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Rush pasture	**Sym**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Mire	**Sym**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
*Mineralogy of Wales	**Sym**	**X**	**X**	**X**	**Sym**	**X**	**X**	**X**	**X**	**X**

*Exposed mineral veins and mine spoil containing mineral specimens

Halkyn Mountain SAC	**Management unit**								
	10	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
SAC	✔	✔	✔	✔	✔	✔	✔	✔	✔
SSSI	✔	✔	✔	✔	✔	✔	✔	✔	✔
NNR/CCW owned									
SAC features									
Calaminarian grassland	**X**	**KH**	**X**	**X**	**KH**	**X**	**X**	**KH**	**KH**
Great crested newt	**KS**	**?**	**KS**	**KS**	**Sym**	**KS**	**KS**	**X**	**KS**
European dry heath	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Semi-natural dry grassland and scrubland facies on calcareous substrates	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Molinia meadows	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
SSSI features									
Amphibian assemblage	**Sym**	**?**	**Sym**	**Sym**	**Sym**	**Sym**	**Sym**	**X**	**Sym**
Stemless thistle population (*Cirsium acaule)*	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Spring sandwort population *(Minuartia verna)*	**X**	**Sym**	**X**	**X**	**X**	**X**	**X**	**Sym**	**Sym**
Calcicolous grassland non SAC	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Fen meadow	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Rush pasture	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**Sym**
Mire	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Mineralogy of Wales	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**

Halkyn Mountain SAC	**Management unit**								
	19	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**
SAC	✔	✔	✔	✔	✔	✔			
SSSI	✔	✔	✔	✔	✔	✔	✔	✔	✔
NNR/CCW owned									
SAC features									
Calaminarian grassland	**KH**	**KH**	**X**	***X***	**X**	**KH**	**X**	**X**	**KH**
Great crested newt	**KS**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
European dry heath	**X**	**X**	**X**	***X***	**X**	**X**	**X**	**X**	**X**
Semi-natural dry grassland and scrubland facies on calcareous substrates	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Molinia meadows	**X**	**KH**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
SSSI features									
Amphibian assemblage	**Sym**	**Sym**	X	**X**	**X**	**X**	**X**	**X**	**X**
Stemless thistle population (*Cirsium acaule)*	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Spring sandwort population *(Minuartia verna)*	**Sym**	**X**	**X**	**X**	**X**	**Sym**	**X**	**X**	**Sym**
Calcicolous grassland non SAC	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Fen meadow	**X**	**Sym**	**KH**	**X**	**X**	**X**	**X**	**X**	**X**
Rush pasture	**X**	**Sym**	**KH**	**KH**	**X**	**X**	**X**	**X**	**X**
Mire	**X**	**X**	**X**	**X**	**KH**	**X**	**X**	**X**	**X**
Mineralogy of Wales	**X**	**X**	**X**	**X**	**X**	**X**	**GEO**	**GEO**	**X**

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:
3.1 Vision for the feature
3.2 Performance indicators

As a result of the general practice developed and agreed within the UK Conservation Agencies, conservation objectives include performance indicators, the selection of which should be informed by JNCC guidance on Common Standards Monitoring[1].

- There is a critical need for clarity over the role of performance indicators within the conservation objectives. **A conservation objective, because it includes the vision for the feature, has meaning and substance independently of the performance indicators, and is more than the sum of the performance indicators**. The performance indicators are simply what make the conservation objectives measurable, and are thus part of, not a substitute for, the conservation objectives. Any feature attribute identified in the performance indicators should be represented in the vision for the feature, but not all elements of the vision for the feature will necessarily have corresponding performance indicators.

As well as describing the aspirations for the condition of the feature, the Vision section of each conservation objective contains a statement that the factors necessary to maintain those desired conditions are under control. Subject to technical, practical and resource constraints, factors which have an important influence on the condition of the feature are identified in the performance indicators.

[1] Web link: http://www.jncc.gov.uk/page-2199

Conservation Objective for Feature 1:
Calaminarian grassland of the *Violetalia calaminariae* type (European code 6130)

4.1.1 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:

- There will be no overall decline in the extent of this feature and where possible, opportunities will be sought to increase its extent, subject to the provision of suitable substrate, delivered for example through quarry restoration schemes.
- This habitat will support *Minuartia verna* and *Festuca ovina* along with common vascular plant such as *Plantago lanceolata, Rumex acetosa, Thymus praecox* and *Euphrasia spp.*
- This habitat will support a prominent suite of bryophyte and lichen species: Lichen flora within this habitat will comprise a constant assemblage of generally common calcicole species. Ubiquitous elements will include the macro lichens *Cladonia rangiformis, C. pocillum, Peltigera rufescens* and the crustose lichen *Bacidia sabuletorum.* The small acrocarps *Bryum pallens, Dicranella varia* and *Weissia controversa* will also be very common bryophytes within the calaminarian grassland community forming low crusts with species of lichen and algae.
- The nationally scarce bryophyte *Bryum pallescens* will also be a common plant in this habitat.
- This habitat will support small areas of bare ground
- The sward height will be less than 5cm high.
- Where possible, areas of this habitat will be fenced to allow the control of access and grazing levels otherwise uncontrolled on the urban common.
- There will be an absence of taxa indicative of more mesotrophic, less toxic environmental conditions.
- As far as is practically possible, factors affecting the achievement of the foregoing conditions are under control.

4.2.1 Performance indicators for feature 1

NB The performance indicators are <u>part of</u> the conservation objective, not a substitute for it.

Performance indicators for feature condition		
Attribute	***Attribute rationale and other comments***	***Specified limits***
A1 **Extent**	Opportunities to further the extent of this feature through habitat creation schemes should be sought, for example through quarry restoration schemes.	*Upper limit*: n/a *Lower limit*: c.12 ha as mapped by Stevens et al., NVC 2002 survey
A2. Location	The distribution of this habitat is constrained by the availability of suitable lead laden substrate.	*Upper limit*: n/a *Lower limit*: c.12ha in locations as mapped by Stevens et al., 2002 survey
A3. Sward Composition: *Minuartia verna*	This is the only metallophyte species recorded on the site.	*Lower limit*: *Minuartia verna* is present within the habitat
A4. Sward composition: combined cover of		*Upper limit*: n/a *Lower limit*: 10% cover

bare ground, acrocarpous mosses and macro lichens		
A5. Sward Quality: Sward height	This attribute is used on Halkyn to reflect the degree of toxicity of the substrate, i.e. taller swards may indicate areas where the toxic nature of the substrate has been masked and the condition of the community is therefore compromised.	*Upper limit***: 5cm**
A6. Sward Quality: Presence of undesirable taxa indicative of more mesotrophic, less toxic environmental condition		***Upper limit:*** Absence of these taxa, to include *Cirsium arvense, Cirsium vulgare* and *Urtica dioica*
Performance indicators for factors affecting the feature		
Factor	***Factor rationale and other comments***	***Operational Limits***
F1. Grazing **F1**.Grazing (cont/d)	Grazing type, intensity, frequency and timing will influence sward height, extent of bare ground and species composition in this habitat type. Under grazing and overgrazing would be undesirable within this habitat. The current grazing regime is year round grazing by sheep. Ideal conservation grazing regime would be light mixed grazing by cattle, horses, goats or sheep with no over winter grazing.	***Lower limit*****:** No under grazing, as indicated in the sward by factors such as: a more closed sward deficient in bare ground and low growing acrocarpous mosses and macro lichens; sward height greater than 5cm. ***Upper limit*****:** No overgrazing, as indicated in the sward by factors such as: the presence of more mesotrophic species like *Cirsium arvense, Cirsium vulgare* and *Urtica dioica;* high intensity dunging and extensive poached bare ground; absence of *Minuartia verna* and a prominent suite of bryophyte and lichen species.
F2. Agricultural operations	Stock feeding, the application of fertilisers (including farm yard manure) and herbicides could cause nutrient enrichment of the substrate, encouraging undesirable species indicative of more mesotrophic conditions at the detriment of characteristic species. Aerial ammonia deposition from intensive poultry unit emissions for example would also be undesirable.	***Upper limit*****:** No agricultural activities that would increase nutrient load to this habitat and/or its substrate to be carried out.

F3. Edaphic factors	Fragmentary mineral soils and gravely debris with a high concentration of heavy metals (principally lead and zinc) provide the necessary edaphic conditions for this habitat type.	***Upper limit*:** No activities should occur that would substantially change the structure or mineral composition of the substrate on which this habitat survives.
F4. Natural Succession	It is possible over time that as toxicity is masked other vegetation types, including scrub, will succeed to replace this habitat. It would be necessary in these circumstances to consider active management. This might be the removal of uncharacteristic vegetation or the exposure of suitable adjacent substrate containing high concentrations of lead and zinc in order to restart succession.	***Upper limit*:** No bare ground, tall sward height (>5cm) and presence of species indicative of more mesotrophic conditions e.g. tree saplings
F5. Development		***Upper limit*:** Any plan or project that is likely to have a significant effect upon the SAC will be subject to an appropriate assessment under the Habitats Regulations.

Conservation Objective for Feature 2: European dry heath (European Code 4130)

4.1.2 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:

- The heath communities are typified by a closed canopy dominated by a mixture of ericaceous shrubs such as bell heather and ling heather together with western gorse. Bilberry and Wavy hair grass will also prevail through the H12 and H18 communities.

- European dry heath will cover c. 20% of the site and opportunities will be sought to increase its extent for example through quarry restoration schemes.

- Opportunities will be sought where appropriate to improve the species diversity of existing stands.

- As far as is practically possible, factors affecting the achievement of the foregoing conditions are under control.

4.2.2 Performance indicators for feature 2

NB The performance indicators are part of the conservation objective, not a substitute for it.

Performance indicators for feature condition		
Attribute	***Attribute rationale and other comments***	***Specified limits***
A1. Extent	111.8ha is the extent of this habitat as mapped by *Stevens et al, 2002*. Opportunities will be sought to increase its extent for example through quarry restoration schemes	***Lower limit*:** Areas of European dry heath should occupy at least 111.8Ha (20%)of the site
A2. Number of dwarf shrub species		**Lower limit:** 2 species of dwarf shrub are present: *Calluna vulgaris, Erica cinerea, Vaccinium myrtillus, Erica tetralix.*
A3. Presence of suppressed growth forms of *Calluna vulgaris* **A3.** Presence of suppressed growth forms of *Calluna vulgaris (*cont/d)	Suppressed growth forms include 'carpet heather', topiary heather and drumstick or mop heather. Where ericoid growth forms presently appear suppressed it is forecast that heath land will be lost from these areas altogether.	***Upper limit:*** No suppressed growth forms are present.
A4. Percentage dwarf shrub cover (measured in a 1m radius)	Dwarf shrubs include: *Calluna vulgaris, Erica cinerea,Vaccinium myrtillus, Erica tetralix.*	***Lower limit*:** 50% cover of dwarf shrubs
A5. Percentage cover of *Ulex gallii* **(**measured in a 1m radius)	*Ulex gallii* can become dominant under poor management, such as over-frequent burning and over-grazing.	***Upper limit*:** *Ulex gallii* should form < 50% of the dwarf-shrub canopy
A6. Height of *Ulex gallii*		***Upper limit*:** 50cm.
A7. Presence of bracken		***Upper limit**:* Bracken is absent
Performance indicators for factors affecting the feature		
Factor	***Factor rationale and other comments***	***Operational Limits***
F1. Grazing	Grazing type, intensity, frequency and timing will influence the attributes for this feature. Under grazing and overgrazing would be undesirable within this habitat. The current grazing regime is	***Lower limit*:** No under grazing, as identified in the sward by factors such as: the spread of rank grasses, tree and scrub species. ***Upper limit*:** No overgrazing, as identified in the sward by factors

	year round grazing by sheep. A conservation grazing regime would be light mixed grazing by cattle, horses, goats or sheep with reduced levels in the autumn and no over winter grazing.	such as: high intensity dunging; the presence of suppressed ericoid growth forms; dominance of *Ulex gallii.* A sustainable stocking rate for these habitats would be c 0.09 lsu / ha*. *****live stock unit / hectare (lsu/ha)
F3. Nutrient Enrichment **F3.** Nutrient Enrichment (cont/d)	European dry heath typically occurs on freely draining acidic to circumneutral soils with generally low nutrient content. Low soil fertility is essential to enable ericaceous shrubs, such as bell heather, heather ling, and western gorse to dominate swards rather than competing with more vigorous grasses on more productive soils. Any activities which increase the nutrient input to this habitat such as the dumping of garden waste, stock feeding, application of fertilisers (including farm yard manure), herbicides must be avoided. Education and interpretation could influence attitude to and management of this habitat. Unsympathetic activities can be regulated and enforcement action taken where necessary.	***Upper limit*:** No activities, which increase the nutrient content of the freely draining acidic to circumneutral soils on which this habitat is dependent, are to be carried out.
F4. Burning	Over-frequent burning can encourage the growth of *Ulex gallii* and reduce the cover of ericoids. Due to a long history of poor burning management on the site and the impoverishment of existing heath land stands, burning should be avoided in future.	***Upper limit:*** Burning of vegetation within this habitat should be avoided* *Exceptions would be in those locations where it is impossible to manage the cover of western gorse by any other means e.g. steep inaccessible terrain or where it is part of a habitat restoration plan.
F5. Cutting	Cutting of heath land should be undertaken on a 12-15 year rotation.	***Upper limits:*** Heath land can be cut in patches between 0.25-0.5 ha in size.
F5. Development		***Lower limit:*** Any plan or project that is likely to have a significant effect upon the SAC will be subject to an appropriate assessment under the Habitats Regulations.

Conservation Objective for Feature 3: Semi – natural dry grassland and scrubland facies on calcareous substrates (European Code 6210)

4.1.3 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:

- There will be no overall decline in the extent of this feature and opportunities will be sought to increase its extent for example through quarry restoration schemes and bracken control programmes.

- The calcareous grassland sward will support forbs such as *Carex spp., Gallium verum, Helianthemum nummularium, Lotus corniculatus, Pilosella officinarum, Polygala vulgaris, Sanguisorba minor, Thymus praecox* along with characteristic grasses such as *Briza media*, *Festuca ovina* and *Koeleria macrantha.*

- The CG1 community, owing to its open character, might also encompass frequent small areas of bare ground and exposed rock along with a moderate cover of terricolous lichens and acrocarpous mosses.

- Uncommon vascular plants, including the locally scarce *Ophioglossum vulgatum, Botrychium lunaria, Gentianella marelle* and *Cirsium acaule*, will continue to prevail at favoured locations within this habitat.

- There will be an absence of taxa indicative of more mesotrophic, environmental conditions within this habitat.

- Agriculturally favoured species such as *Holcus lanatus, Lolium perenne* and *Trifolium repens* will be rare or absent within this habitat.

- Bracken and tree/scrub species will be rare or absent within this habitat.

- The cover of rank grassland species such as *Arrhenatherum* and *Dactylis glomerata* within this habitat will be nominal.

- There will be an absence of introduced species (e.g. non-native cotoneaster)

- As far as is practically possible, factors affecting the achievement of the foregoing conditions are under control.

4.2.3 Performance indicators for feature 3

NB The performance indicators are part of the conservation objective, not a substitute for it.

Performance indicators for feature condition		
Attribute	***Attribute rationale and other comments***	***Specified limits***
A1. Extent		**CG1** ***Lower limit***: 1.4ha **CG2** ***Lower limit*****:** 42.0ha **Total:** 43.4ha (as mapped by Stevens *et al.,* 2002) **Upper limit:** Opportunities should be sought to increase the extent of this habitat e.g. bracken clearance in stands that support a calcicolous ground layer and quarry restoration schemes.
A2. Presence of positive indicators		***Lower limit*** **CG1:** 3 of the following positive indicator species are present; *Carex* spp., *Carlina vulgaris*, *Lotus corniculatus*, *Pilosella officinarum*, *Sanguisorba minor*, *Thymus praecox*. ***Lower limit*** **CG2:** 4 of the following positive indicator species are present; *Carex spp*., *Galium verum*, *Helianthemum nummularium*, *Lotus corniculatus*, *Pilosella officinarum*, *Polygala vulgaris*, *Sanguisorba minor*, *Thymus praecox*.
A3. Grass: Herb and Sedge ratio		***Lower limit:*** 30% herb (and sedge cover) ***Upper limit:*** 90% herb (and sedge cover)
A4. Presence of agriculturally favoured species		**CG1 and CG2d** ***Upper Limit:*** *Holcus lanatus*, *Lolium perenne* and *Trifolium repens* are absent. **CG2c** ***Upper Limit:*** Lolium perenne is absent, and, Holcus lanatus and Trifolium repens jointly comprise <10% cover.
A5. Presence of rank grasses		**CG1** ***Upper Limit*****:** Dactylis glomerata cover is <10% **CG2c / CG2d** ***Upper limit*****:** Arrhenatherum elatius and Dactylis glomerata comprise <10% cover.

A6. Presence of species indicative of more mesotrophic conditions (CG1 and CG2)		***Upper limit*:** Thistles (excluding *Carlina vulgaris*) and nettles are absent.
A7. Presence of introduced species (CG1 and CG2)		***Upper limit:*** Introduced species e.g. non-native *cotoneaster spp* or *Berberis spp.* are absent.
A8. Presence of bracken (CG1 and CG2)		***Upper limit****:* 2 fronds of bracken present within a 1-metre radius of each sample point.
A9. Presence of trees / scrub (CG1 and CG2)		***Upper limit:*** Trees, scrub and saplings less than or equal to 10cm in height or length are absent.
Performance indicators for factors affecting the feature		
Factor	***Factor rationale and other comments***	***Operational Limits***
F1. Grazing	Grazing type, intensity, frequency and timing will influence the attributes of this habitat. Under grazing and overgrazing are undesirable within this habitat. The current grazing regime is year round grazing by sheep. A conservation grazing regime would be light grazing by cattle, horses, goats or sheep, no over winter grazing.	***Lower limit*:** No under grazing, as indicated in the sward by factors such as: spread of rank grasses, scrub, trees and bracken ***Upper limit*:** No overgrazing, as indicated in the sward by factors such as: the presence or increased cover by agriculturally favoured species. A sustainable stocking rate for these habitats would be c 0.05 lsu / ha.
F3. Nutrient Enrichment **F3.** Nutrient Enrichment (cont/d)	Stock feeding, the application of fertilisers (including farm yard manure) within or adjacent to this habitat type would cause nutrient enrichment, encouraging undesirable species indicative of more mesotrophic conditions at the detriment of characteristic species. The limited use of approved herbicides to manage undesirable species may be tolerated provided there will be no adverse affects on special features. Education and interpretation about the site will help to reinforce the importance of this habitat and its conservation to people.	***Upper limit*:** No activities, which increase the nutrient content of the thin, well-drained lime-rich soils on which this habitat is dependent, are to be carried out.
F4. Physical damage	Education and interpretation of the site will highlight the fragility of this habitat to people. Enforcement action may be taken as necessary to	***Upper limits:*** No human activities which cause the physical destruction of this habitat (its flora and substrate) are to be carried out e.g.

	deter activities which cause longterm physical damage to this habitat within the site.	creation of informal bike tracks, vehicular access
F5. Development		***Lower limit****:* Any plan or project that is likely to have a significant effect upon the SAC will be subject to an appropriate assessment under the Habitats Regulations

Conservation Objective for Feature 4:
Molinia meadows on calcareous peaty or clayey-silt-laden soils (*Molinion caeruleae) (*European code 6410*)*

4.1.4 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:

- Purple moor grass and short sedges such as tawny sedge, flea sedge, carnation sedge, common sedge and glaucous sedge will be frequent throughout the sward. Species such as devil's bit scabious, tormentil, marsh valerian and black knapweed will also prevail along with the bryophytes *Calliergon cuspidatum* and *Campylium stellatum.*

- The habitat will continue to support marsh orchid and fragrant orchid.

- Adequate hydrological conditions are maintained to sustain this habitat in terms of water quantity and quality (much of this habitat is fed by springs issuing from base rich rock).

- There will be no overall decline in the extent of this feature and opportunities will be sought to increase its extent where hydrological and edaphic factors permit.

- Uncommon vascular plants, including the locally scarce *Valeriana diocia, Eriphorum latifolium, Carex diocica, Parnassia palustris, Eleocharis quinqueflora, Carex lepidocarpa, and Gymnadenia conopsea* continue to prevail at favoured locations within this habitat.

- As far as is practically possible, factors affecting the achievement of the foregoing conditions are under control.

4.2.4 Performance indicators for feature 4

NB The performance indicators are part of the conservation objective, not a substitute for it.

Performance indicators for feature condition		
Attribute	***Attribute rationale and other comments***	***Specified limits***
A1. Extent	Stevens et al, NVC 2002, mapped 1ha. Extent will be restrained by	***Lower limit*****:** 1ha

	hydrological and edaphic factors, but opportunities should be sought to try and increase the extent of this habitat for example by raising water levels on land held privately both within and adjacent to the site formerly known as Racecourse Mire SSSI or in conjunction with pond restoration / creation.	
A2. Percentage cover of *Molinia caeruleae*		***Lower limit*:** 25% cover ***Upper limit*:** 80% cover
A3. Percentage cover of *Juncus spp*	The Wern y gaer flushes are intimately mixed with areas of M23a and so have a slightly higher rush component than this habitat on other areas of the site.	**Upper limit**: 5%
A4. Presence of positive indicators		***Lower limit*:** 4 out of following 8 species are present*: Valeriana dioica, Carex flacca / panicea, Succisa pratensis, Filipendula ulmaria, Galium uliginosum, Cardamine pratensis, Caltha palustris, Anagallis tenella, Mentha aquatica* and Orchid species.
A5. Presence of scrub species		***Upper limit:*** Scrub species e.g. *Rubus idaeus* and *Ulex sp.* Are absent
A6. Presence of negative indicators		***Upper limit:*** negative indicators such as *Urtica dioica*, coarse grasses and *Cirsium* species *(*except *C.palustre)*, will be absent.
A7. Sward height		***Upper limit*:** 80cm ***Lower limit*:** 50cm
Performance indicators for factors affecting the feature		
Factor	***Factor rationale and other comments***	***Operational Limits***
F1. Grazing	Grazing type, intensity, frequency and timing will influence sward height, and species composition in this habitat. Under grazing and overgrazing are undesirable. A conservation grazing regime would be light grazing by heavy livestock, no over winter grazing.	***Lower limit*:** No under grazing , as indicated in the sward by factors such as: sward height in excess of 80cm; spread of rank grasses, scrub and tree species. ***Upper limit*:** No overgrazing, as indicated in the sward by factors such as : short sward height (<50cm); presence of negative indicators such as *Urtica dioica*.

		A sustainable stocking rate for this habitat would be c.0.07 LSU/ha.
F3. Nutrient Enrichment	Stock feeding, the application of fertilisers (including farm yard manure) within or adjacent to this habitat type would cause nutrient enrichment, encouraging undesirable species at the detriment of characteristic species. Education and interpretation about the site will help to reinforce the importance of this habitat to people along with the consequences of their actions.	***Upper limit*:** No activities, which increase the nutrient content of the base rich soils on which this habitat is dependent, are to be carried out.
F4. Mowing or Topping of rush	Topping in late Summer may control the spread of rush and its dominance at the expense of smaller growing species.	***Upper limit**:* 10% of rush to be left uncut each year
F5. Watercourse management	Over drainage would result in a decline in the more 'damp loving' species such as the rushes and purple moor-grass, with a corresponding increase in species more typical of drier grasslands, for example common sorrel, common knapweed, and sweet vernal-grass. By contrast, under-drainage and water-logging of the site, for example if the ditches become blocked, may lead to a decline in these species-rich purple moor-grass meadows in favour of the wetter rush-dominated pasture. It is important that CCW is consulted with regard to routine maintenance / clearance of existing watercourses both feeding and flushing these communities to ensure that adequate conditions are maintained to sustain these communities. *In addition CCW should seek opportunities to open or close any ditches or grips that it may consider necessary in the interests of nature conservation and enhancement of this habitat.	***Upper limit**:* No over-drainage: existing ditches feeding and flushing this habitat will not be regularly cleared (preferably manually); no additional ditches or grips will be created within this habitat. ***Lower Limit**:* No under drainage: no blocking of ditches that feed and flush this habitat will occur*.
F6. Hydrology	Water abstraction, causing a reduction in the quantity of water reaching these vegetation communities could result in drier conditions prevailing, promoting an undesirable change in species composition.	<u>Water quantity</u> ***Upper limits:*** no water abstraction licences to be permitted within an affective radius of this habitat type. <u>Water quality</u> ***Upper limits:*** Water draining into

	A change and/or deterioration in water quality could change species composition and allow species more characteristic of higher nutrient levels to dominate at the expense of more interesting wetland species and habitats. Such inputs need to be controlled as far as possible.	this habitat will have a low nutrient load. Nutrient rich farm run-off or saline carriageway run-off for example would be undesirable
F7. Natural Succession	The presence of tree saplings / scrub provide an indication that the habitat is succeeding towards wet woodland, due to factors such as under grazing or changes in hydrology.	***Upper limit****:* The absence of scrub species such as willow, alder, birch.
F8. Development		***Lower limit:*** Any plan or project that is likely to have a significant effect upon the SAC will be subject to an appropriate assessment under the Habitats Regulations.

4.1 Conservation Objective for Feature 5: Great crested newt *Triturus cristatus* (EU Species Code: 1166)

4.1.5 Vision for feature 5

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

- The site will continue to support at least 200 adult great crested newts as identified by torch surveys in the spring, in and around ponds within the pond clusters at Wern y Gaer, Pen yr Henblas, Rhes y Cae, Pant Quarry, Mount Villas, Mill Pond, Pant y Ffridd, Moel y gaer, Moel y crio, Plas Winta, Holywell Golf Course.
- Terrestrial and aquatic habitats will be managed to ensure high variability and thus the availability of suitable breeding ponds, and of foraging, sheltering, dispersal and over-wintering areas.
- The existing 99 ponds will be retained and restored where necessary and opportunities will be sought to deliver amphibian conservation schemes as they arise in suitable locations across the site.
- At least 50% of the 46 known great crested newt breeding ponds will have a water depth of 10cm of more during the summer months.
- At least 50% of the 46 known great crested newt breeding ponds will support a good cover of native macrophytes, yet at least 25% of the water surface in these ponds will still remain open to encourage display areas.
- Surrounding vegetation, particularly on the southern margins, will not heavily shade breeding ponds.
- Fish will not be present in any T.cristatus breeding ponds.
- Water and wildfowl will not be encouraged on great crested newt breeding ponds
- Invasive aquatic species such as Crassula *helmsii* will not be present within any ponds. Where they are currently present they will be subject to management.
- No barriers to newt dispersal will be permitted, which might further fragment the site.

- Refuge potential, particularly within 50metres of breeding ponds is maintained or created. A shrub layer, tussocky grassland, rushes, sedges, scrub, heaped brash all provide examples of suitable refuge habitat.
- Any new roads and access tracks will not incorporate gully pots.
- Amphibian chytridiomycosis will not be present within great crested newt populations on the site.

- **4.2.4 Performance indicators for feature 5**

NB The performance indicators are <u>part of</u> the conservation objective, not a substitute for it.

Performance indicators for feature condition		
Attribute	***Attribute rationale and other comments***	***Specified limits***
A1. Extent and distribution of adult great crested newts, *Triturus cristatus* in breeding ponds	Based on the number of great crested newts required to maintain a viable population – knowledge provided by staff with experience of the site. [Monitoring should take place each year to allow for any climatic variation between years]	***Upper limit*****:** Not required ***Lower limit*****:** At least 200 adult T.cristatus in ponds across units 1.1,3, 5,6,7,9, 18,19 as identified by torch survey for four years in a six year reporting cycle
A2. Extent and distribution of great crested newt larva *Triturus cristatus*	Based on the number of breeding ponds showing recruitment which are required to maintain a viable population – knowledge provided by staff with experience of the site. [A breeding pond is defined as a pond in which *T. crisatus* is/or is likely to conduct egg laying, and successful metamorphosis once in every 4 years]	***Upper limit:*** Not required ***Lower limit:*** Great crested newt larvae are present in at least 2 ponds within each of the following pond clusters: Wern y Gaer, Pen yr Henblas, Rhes y Cae, Pant Quarry, Mount Villas, Mill Pond, Pant y Ffridd, Moel y gaer, Moel y crio, Plas Winta, Holywell Golf Course.
Performance indicators for factors affecting the feature		
Factor	***Factor rationale and other comments***	***Operational Limits***
F1. Extent of breeding/display ponds	Based on the number of breeding and display ponds required to maintain a viable population and to clarify the situation for legal purposes – knowledge provided by staff with experience of the site. [A breeding pond is defined as a pond in which *T. crisatus* is/or is likely to conduct egg laying, and successful metamorphosis once in every 4 years] [A display pond is defined as a pond in which adults and sub-adults occur between March and May]	***Upper limit:*** Not required ***Lower limit****:* 46 ponds in total across units 1.1,3, 5,6,7,9, 18,19
F2. Macrophyte cover	Based on the amount of plant material required for egg laying and the area of open water required for displaying – knowledge provided by staff with experience of the site.	***Upper limit****:* 60 % of display/breeding ponds will have 75% native macrophyte cover. **Lower limit***:* 60 % of display/breeding ponds will have 50% native macrophyte cover.

F3. Water depth	Based on the standard CSM parameters for this feature.	***Lower limit:*** Water depth > 10 cm between July and September in 50 % of display/breeding ponds.
F4. Presence of pollution	Based on the water conditions that are appropriate for successful breeding – knowledge provided by staff with experience of the site.	***Upper limit****:* No surface sheens and algae blooms on any ponds within any of the units.
F5. Extent of shading	Based on the water conditions that are appropriate for successful breeding – knowledge provided by staff with experience of the site. [Pond shading: % estimated for any tree/shrub cover greater than 1 m, for trees and shrubs up to 5m from a pond. Shading estimated for trees/shrubs casting shadow over a pond between 10am and 4pm]	***Upper limit****:* 20 % shading on the southern margin. Or 60 % of the total pond margin shaded on 50 % of breeding/display ponds. ***Lower limit:*** Not required
F6. Extent and quality of terrestrial habitat	Based on the habitat required to provide foraging areas, hibernacula and connectivity for dispersal – knowledge provided by staff with experience of the site.	***Upper limit:*** Not required ***Lower limit:*** Habitat with a 250m radius from a breeding/display pond should have all of the following characteristics: 1. Refuge areas, i.e. shady areas within the rough/tussocky grassland; scrub, fallen deadwood; underground crevices, tree root systems, mammal burrows, rubble piles, and/or old walls. 2. Foraging areas, i.e. grasslands and woodlands. 3. Potential hibernacula, i.e. log piles or piles of rubble. **7.** Migration and dispersal corridors (hedgerows and greenways).
F7. Presence of water and wildfowl	Based on the standard CSM parameters for this feature.	***Upper limit****:* 3 pairs of water and wildfowl per hectare of open water between April and September ***Lower limit****:* Not required
F8. Presence of fish	Based on knowledge from staff with experience of the site that the presence of fish will be detrimental to the great crested newt population	***Upper limit:*** No fish species (including sticklebacks) present in display/breeding ponds ***Lower limit****:* Not required
F9 Presence of non-native aquatic plant species, especially *Crassula helmsii*	Based on knowledge from staff with experience of the site	***Upper limit:*** No non-native aquatic plant species present in any ponds on the site. ***Lower limit****:* If non-native aquatic plant species are present within a

		pond, they are subject to a programme of strict, active controlled management and biosecurity measures.

5. ASSESSMENT OF CONSERVATION STATUS AND MANAGEMENT REQUIREMENTS

Conservation Status and Management Requirements of Feature 1: Calaminarian grassland of the *Violetalia calaminariae* type (European code 6130)

5.1 Conservation status assessment for feature 1

The quality of the calaminarian grassland feature within the main common land management unit (unit 1) was concluded to be in unfavourable condition when monitored in 2004. The primary reason for this conclusion was that the habitat consistently failed on having less than 10% in- combination cover of bare ground, acrocarpous mosses and macro lichens.

The extent of the feature has not been monitored, but since the NVC mapping by Stevens et al in 2002, but there have been no known loss of area of this habitat.

The conservation status of this feature within management units outside the main common land unit has to date not been formally monitored.

5.2 Management Requirements of Feature 1

Based on consideration of the feature and the factors affecting this habitat, it would seem that this habitat will only remain open in character and support the necessary cover of bare ground, acrocarpous mosses and macro lichens if in areas where there is evidence of a closing sward the habitat is periodically disturbed and bare spoil is artificially provided to restart succession, favouring the colonisation by mosses and lichens. This might involve spoil heaps where the calaminarian grassland is unfavourable and *Minuartia verna* does not grow being turned over or top soil adjacent to spoil heaps being stripped to reveal further spoil for example.

Opportunities will also be sought to increase the extent of this feature, subject to the availability of appropriate substrate.

Feature 2: European dry heath (European Code 4130)

5.1 Conservation status assessment for feature 2

The condition of the European dry heath according to the data recorded in 2004 is in an UNFAVOURABLE – DECLINING condition.

The limit for the extent of the European dry heath (extent mapped by Stevens *et al*. (2002)) was not fulfilled in 2004 due to areas being lost due to inappropriate management, i.e. bulldozing, stock feeding, tethered ponies and manure spreading. In such areas the European dry heath has often been totally lost.

The monitoring of the European dry heath revealed variations in vegetation quality across the assessment units, from units that were clearly under-grazed (evidence provided by scrub encroachment) to units that were over-grazed and have been, or are, regularly burned, and in some cases also mowed. The European dry heath exhibits suppressed growth forms where the grazing pressure is high, and in areas where the grazing continues at such high levels, it is postulated that the European dry heath will in the future be lost altogether.

73 of the 75 assessment areas failed on at least one attribute.

- 12% (9 / 75) of the assessment units did not fulfil the requirements of the attribute: Two or more species of dwarf shrub (namely *Calluna vulgaris*, *Erica cinerea*, *Ulex gallii*, *Vaccinium myrtillus*) are present. If *Ulex gallii* was not included in the list of dwarf shrub species, as per attribute A2 plenty more assessment units might have failed on this attribute.

- 20% (15 / 75) of the assessment units did not fulfil the requirements of attribute A3 (No suppressed growth forms of *Calluna vulgaris* are present).

- 29% (22 / 75) of the assessment units did not fulfil the requirements of attribute A4 (Dwarf shrubs make up at least 50% cover).

- 60% (45 / 75) of the assessment units did not fulfil the requirements of attribute A5 (*Ulex gallii* is less than 50% of the total dwarf shrub cover).

- 64% (48 / 75) of the assessment units did not fulfil the requirements of attribute A6 (*Ulex gallii* is <50cm in height).

- 40% (30 / 75) of the assessment units did not fulfil the requirements of attribute A7 (Bracken is absent).

5.2 Management Requirements of Feature 2

Based on consideration of the feature and the factors affecting this habitat, management techniques that control the dominance of western gorse *(Ulex gallii)* in this habitat will be implemented to try to encourage the spread of ericoid species more widely through the habitat.
Flailing or hand cutting and the subsequent treatment of stumps with an approved herbicide will control western gorse where it is dominant in heath land stands. Control by burning will be a last resort, where control by other means is not practically possible or where it is part of a habitat restoration plan.

In heath land stands where western gorse has been removed, the topsoil might be stripped and ericoid brash of local progeny broadcast to further encourage the regeneration of characteristic heath land species. Alternatively, in areas where this habitat is growing in mosaic the ground might be scarified to break up any grassy sward, to further encourage the establishment of ericoids. The management technique used will be dictated by the availability of a local ericoid seed source, topography and the opinion of the owners/occupiers.

Management will initially be targeted at those areas where ericoids are well established at present, thus promoting the favourable condition of the feature in these core areas before further works are undertaken to encourage the spread of ericoids from these core areas.

Cessation of autumnal / winter grazing on the site and a mixed grazing regime would further benefit this feature in those stands where it shows signs of over grazing.

Bracken control in heath land stands will also be necessary to prevent its spread at the expense of those species characteristic of this habitat. Bracken control by rolling within this habitat is the preferred method of control as the dwarf shrub species are resistant to damage by this method.

Feature 3: Semi – natural dry grassland and scrubland facies on calcareous substrates (European Code 6210)

5.1 Conservation status assessment for feature 3

The calcareous grassland feature according to the data recorded in 2005 is in an UNFAVOURABLE condition.

There appears to have been a reduction in the area of calcareous grassland communities at the expense of bracken and agriculturally improved grassland since 1999 when the site was originally surveyed at the Phase II level (Prosser and Wallace, 1999. Stevens *et al*., 2002). Furthermore, areas of calcareous grassland have lost condition since the 2002 survey (Stevens et al., 2002). It was concluded in some stands that the vegetation was no longer a CG2c calcicole-rich sward for example, but was moving towards a more mesotrophic sward type.

5.2 Management Requirements of Feature 3

Based on consideration of the feature and the factors affecting this habitat, it will be necessary to control bracken, scrub and introduced species within this habitat to prevent further colonisation at the expense of characteristic species. Management techniques will depend on topography and will include techniques such as rolling / spraying of bracken, flailing of scrub and hand cutting, removal and herbicide treatment of introduced species (such as non-native cotoneaster species).

Restoration and expansion in extent of this habitat may be achieved by the removal of bracken in those areas where the bracken stand supports a calicolous ground flora. Opportunities should be sought to increase its extent as part of development proposals for example quarry restoration schemes. Local seed could be harvested from existing stands to aid this process and promote local progeny.

It is necessary to establish a sustainable grazing regime over the common land that ensures the long-term survival of this habitat. This habitat would favour light grazing by cattle, horses, goats or sheep with no over wintering grazing. A cessation of winter grazing would omit the need for supplementary feeding on the site which both directly and indirectly has lead to the increased nutrient loading of this habitat and hence in some areas to its agricultural 'improvement'.

Feature 4: Molinia meadows on calcareous peaty or clayey-silt-laden soils (*Molinion caeruleae)* (European code 6410)

5.1 Conservation status assessment for feature 4

The *Molinia* meadow feature at Halkyn Mountain according to the data recorded in 2005 is in an UNFAVOURABLE condition.

The monitoring data revealed that the *Molinia* meadows were generally lacking the required number of positive indicator species, with many of the points having two or three positive indicator species, but not the required four. The JNCC CSM guidelines suggest that the attribute should be between two and six positive indicator species, and possibly the required number of positive indicator species was set too high for the *Molinia* meadows at Mynydd Helygain / Halkyn Mountain SCI / SAC. Additional positive indicator species to include *Angallis tenera* and orchid species have since been added to the positive indicator attribute.

In addition to the deficit of positive indicator species, many of the sample points additionally failed on the presence of negative indicator species.

5.2 Management Requirements of Feature 4

Based on consideration of the feature and the factors affecting this habitat, it will be necessary to control those factors which influence the presence of negative indicator species such as scrub species, rank grasses and thistle and nettle species within this community. The presence of scrub species and rank grasses would suggest that under grazing is a management concern within this community. In management unit 1, the molinia meadow vegetation occurs in isolated pockets at the periphery of the site, sometimes as in the case of Racecourse Mire in areas that are currently ungrazed. This vegetation would benefit from a reintroduction of a sustainable grazing regime, preferably by heavy livestock.

Conservation Objective for Feature 5: *Triturus cristatus* (European Code 1166)

5.1 Conservation status assessment for feature 5

The Great crested newt (*Triturus cristatus)* feature at Halkyn Mountain according to an appraisal of the great crested newt populations at Halkyn Mountain SAC (*L.Swankie, J.Colebrook & K.Atkins, 2005)* is deemed to be in an unfavourable condition.

This assessment was made in terms of population size, distribution of water bodies and water body quality. It was concluded however, that the terrestrial habitat quality is generally in a favourable condition in terms of its function in sustaining the great crested newt populations.

Of note is the fact that the 2005 survey was carried out in a particularly dry year and may therefore offer misleading results.

5.2 Management Requirements of Feature 5

Based on consideration of the feature and the factors affecting this habitat, it will be necessary to concentrate management on improving the quality of aquatic habitats (ponds) within the site. Restoration works should concentrate on deepening the more ephemeral ponds, managing aquatic macrophyte cover and controlling the highly invasive *Crassula helmsii*, which in some ponds may be possible only by infilling and excavating an adjacent pond anew.

Excessive growth of aquatic and emergent plants, accumulation of decaying vegetation and silt can lead to the gradual loss of open water areas that are important to breeding newts. This will be an ongoing problem. A programme of aquatic vegetation management and silt removal will be required to maintain sufficient open water in all water bodies but this must be undertaken very carefully under licence at the correct time of the year to avoid disturbance to breeding newts and/or preventing damage to breeding sites/resting places. Native vegetation and silt should be left on the sides of the pool prior to disposal to allow amphibians and other aquatic wildlife to return to the water. Alternative methods must be employed if non-native plant species are present. Bio-security techniques must be employed to minimize risks associated with the accidental spread of invasive non-natives (such as *Crassula helmsii).*

Opportunities will be sought to create additional ponds within and adjacent to the site as they arise, to increase the extent of aquatic habitat available to great crested newts, and thus increase the range and extent of suitable breeding habitats. Whenever appropriate further ponds should be created off-site thus reducing the risk of the spread of *Crassula helmsii* from 'infected' ponds by minimising access. Such ponds would also serve the purposes of creating "stepping stones" between SAC compartments.

6. ACTION PLAN: SUMMARY

This section takes the management requirements outlined in Section 5 a stage further, assessing the specific management actions required on each management unit. This information is a summary of that held in CCW's Actions Database for sites, and the database will be used by CCW and partner organisations to plan future work to meet the Wales Environment Strategy targets for sites.

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
1.1	000443	Halkyn Mountain	Crassula helmsii colonisation of great crested newt breeding ponds threatens the condition of the great crested newt feature across the site. Overgrazing (currently year round grazing by sheep) and related agricultural activities such as winter stock feeding threaten the condition of the grassland and heathland features.	Yes
2	000444	Rhosesmor	Undergrazing. This is an outlier to the main bulk of the grazed common land.	Yes
3	000446	Bryn Gwiog 1	There has been non-compliance (stock feeding and winter grazing) with current S15 Management Agreement which needs to be renewed and regularly monitored in 2008.	Yes
4	000447	Bryn Gwiog 2	Unit not visited recently, condition of the calaminarian grassland feature in this unit currently unknown.	Yes
5	000448	Pant Quarry Fields	Stablow field boundary is poor, so unit is accessed by stock from adjacent common land, which maintain a short cropped sward of less benefit to amphibian population. The other field within this unit is cut for silage again diminishing the habitats benefit to amphibians.	Yes
6	000449	Pen y Parc	Pond within shelterbelt silting up, needs dredging to deepen and removal of trees on southern margin to promote use by amphibian species.	Yes
7	000450	Top Pen y Parc	Unit has not been visited recently. Aim of conservation management should be to enhance this area for use by amphibian species.	Yes
8	000451	Treetops	Poor boundary, sheep access unit all year round from adjacent common land, the unit is not currently grazed for conservation benefit for amphibian species.	Yes
9	000452	Bryn-y-mawn	A S15 Management agreement should be pursued to ensure positive conservation management of the unit to benefit amphibian population.	Yes
10	000453	Ael- y- Bryn	Currently horse grazed. Amphibian friendly grazing regime needs to be established over unit.	Yes
11	000454	Tyn - Mynydd	No issues known at present. If the unit is left ungrazed / unmown for consecutive years, scrub establishment could threaten the condition of the calaminarian grassland feature. This can be addressed through the existing S15 management agreement.	Yes
12	000455	Pen y Parc 1	No issues known. A S15 Management agreement should be pursued to ensure positive conservation management of the unit to benefit amphibian population.	Yes

Unit Number	CCW Database Number	Unit Name	Summary of Conservation Management Issues	Action needed?
13	000456	Ty Newydd	Currently unit is grazed occasionally by sheep accessing from adjacent common land. No S15 agreement exists over this unit.	Yes
14	000457	Rhos Awel	No known issues. If monitoring of calaminarian grassland feature within this unit in future shows that the condition of the feature in this area is suffering due to current management, a S15 agreement should be sought with the owner. Currently there is no stock proof boundary to this unit. It is grazed by sheep along with the adjacent common land.	Yes
15	000458	Bryn tirion	The two western fields which form part of this unit are currently managed as year round close cropped horse pasture. The grassland habitat could be enhanced for use by amphibia through establishment of an appropriate grazing regime / ponds or ungrazed margins.	Yes
16	000459	Pentre Halkyn Fields	This land is currently tenanted and managed for sheep grazing and a silage cut without sensitivity to its use by amphibian species. This unit also forms part of the area of a potential planning application for a new quarry access road (Pant y Pwll Dwr Quarry).	Yes
17	000460	Herward Smithy	Pursue Section15 Agreement.	Yes
18	000461	Higher Gowdal	Unlawful access by motorised vehicles is threatening the condition of the calaminarian grassland in this unit.	Yes
19	000462	Lower Gowdal	Unlawful access by motorised vehicles is threatening the condition of the calaminarian grassland in this unit. Siltation and vegetation of ponds, which are not currently managed to enhance usage by great crested newt feature.	Yes
20	000463	Racecourse Mire	Unit not recently visited. Condition of the wetland feature within this unit currently unknown.	Yes
21	000464	Ty Coch 1	Current grazing is by sheep, which predominantly graze the dry grassland areas within the unit. The Fen meadow then remains ungrazed. An appropriate grazing regime, preferably with heavy livestock needs to be established within this unit.	Yes
22	000465	Ty Coch 2	No recent access to this unit. The condition of the feature in this unit is currently unknown	Yes
23	000466	Ty Coch 3	No recent access to this unit. Condition of the feature in this unit currently unknown.	Yes
24	002367	Herward Smithy Verge	No known issues. S15 could be secured with Flintshire County Council Highways to ensure any verge cutting compatible with objectives for OV37 habitat. This unit falls within Herward Mine Wildlife Site.	Yes
1.2	002730	Halkyn Habitats	Grassland and heath land habitats grazed with the rest of the common. A sustainable grazing regime is needed to ensure this unit along with unit 1.1 is not overgrazed.	Yes

7. GLOSSARY

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

Action A recognisable and individually described act, undertaking or **project** of any kind, specified in section 6 of a **Core Management Plan** or **Management Plan**, as being required for the **conservation management** of a site.

Attribute A quantifiable and monitorable characteristic of a **feature** that, in combination with other such attributes, describes its **condition**.

Common Standards Monitoring A set of principles developed jointly by the UK conservation agencies to help ensure a consistent approach to **monitoring** and reporting on the **features** of sites designated for nature conservation, supported by guidance on identification of **attributes** and monitoring methodologies.

Condition A description of the state of a feature in terms of qualities or **attributes** that are relevant in a nature conservation context. For example the condition of a habitat usually includes its extent and species composition and might also include aspects of its ecological functioning, spatial distribution and so on. The condition of a species population usually includes its total size and might also include its age structure, productivity, relationship to other populations and spatial distribution. Aspects of the habitat(s) on which a species population depends may also be considered as attributes of its condition.

Condition assessment The process of characterising the **condition** of a **feature** with particular reference to whether the aspirations for its condition, as expressed in its **conservation objective**, are being met.

Condition categories The **condition** of **feature** can be categorised, following **condition assessment** as one of the following[2]:

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

Conservation management Acts or undertaking of all kinds, including but not necessarily limited to **actions,** taken with the aim of achieving the **conservation objectives** of a site. Conservation management includes the taking of statutory and non-statutory measures, it can include the acts of any party and it may take place outside site boundaries as well as within

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

sites. Conservation management may also be embedded within other frameworks for land/sea management carried out for purposes other than achieving the conservation objectives.

Conservation objective The expression of the desired **conservation status** of a **feature,** expressed as a **vision for the feature** and a series of **performance indicators**. The conservation objective for a feature is thus a composite statement, and each feature has one conservation objective.

Conservation status A description of the state of a **feature** that comprises both its **condition** and the state of the **factors** affecting or likely to affect it. Conservation status is thus a characterisation of both the current state of a feature and its future prospects.

Conservation status assessment The process of characterising the **conservation status** of a **feature** with particular reference to whether the aspirations for it, as expressed in its **conservation objective**, are being met. The results of conservation status assessment can be summarised either as 'favourable' (i.e. conservation objectives are met) or unfavourable (i.e. conservation objectives are not met). However the value of conservation status assessment in terms of supporting decisions about **conservation management**, lies mainly in the details of the assessment of feature **condition**, **factors** and trend information derived from comparisons between current and previous conservation status assessments and condition assessments.

Core Management Plan A CCW document containing the conservation objectives for a site and a summary of other information contained in a full site **Management Plan**.

Factor Anything that has influenced, is influencing or may influence the **condition** of a **feature**. Factors can be natural processes, human activities or effects arising from natural process or human activities, They can be positive or negative in terms of their influence on features, and they can arise within a site or from outside the site. Physical, socio-economic or legal constraints on **conservation management** can also be considered as factors.

Favourable condition See **condition** and **condition assessment**

Favourable conservation status See **conservation status** and **conservation status assessment.**[3]

Feature The species population, habitat type or other entity for which a site is designated. The ecological or geological interest which justifies the designation of a site and which is the focus of conservation management.

Integrity See **site integrity**

Key Feature The habitat or species population within a **management unit** that is the primary focus of **conservation management** and **monitoring** in that unit.

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

Management Plan The full expression of a designated site's legal status, **vision**, **features**, **conservation objectives**, **performance indicators** and management requirements. A complete management plan may not reside in a single document, but may be contained in a number of documents (including in particular **the Core Management Plan**) and sets of electronically stored information.

Management Unit An area within a site, defined according to one or more of a range of criteria, such as topography, location of **features**, tenure, patterns of land/sea use. The key characteristic of management units is to reflect the spatial scale at which **conservation management** and **monitoring** can be most effectively organised. They are used as the primary basis for differentiating priorities for conservation management and monitoring in different parts of a site, and for facilitating communication with those responsible for management of different parts of a site.

Monitoring An intermittent (regular or irregular) series of observations in time, carried out to show the extent of compliance with a formulated standard or degree of deviation from an expected norm. In **Common Standards Monitoring**, the formulated standard is the quantified expression of favourable **condition** based on **attributes**.

Operational limits The levels or values within which a **factor** is considered to be acceptable in terms of its influence on a **feature**. A factor may have both upper and lower operational limits, or only an upper limit or lower limit. For some factors an upper limit may be zero.

Performance indicators The **attributes** and their associated **specified limits**, together with **factors** and their associated **operational limits,** which provide the standard against which information from **monitoring** and other sources is used to determine the degree to which the **conservation objectives** for a **feature** are being met. Performance indicators are part of, not the same as, conservation objectives. See also **vision for the feature**.

Plan or project **Project:** Any form of construction work, installation, development or other intervention in the environment, the carrying out or continuance of which is subject to a decision by any public body or statutory undertaker.
Plan: a document prepared or adopted by a public body or statutory undertaker, intended to influence decisions on the carrying out of **projects.** Decisions on plans and projects which affect Natura 2000 and Ramsar sites are subject to specific legal and policy procedures.

Site integrity The coherence of a site's ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it is designated.

Site Management Statement (SMS) The document containing CCW's views about the management of a site issued as part of the legal notification of an SSSI under section 28(4) of the Wildlife and Countryside Act 1981, as substituted.

Special Feature See **feature**.

Specified limit The levels or values for an **attribute** which define the degree to which the attribute can fluctuate without creating cause for concern about the **condition** of the **feature**. The range within the limits corresponds to favourable, the range outside the limits corresponds to unfavourable. Attributes may have lower specified limits, upper specified limits, or both.

Unit See **management unit.**

Vision for the feature The expression, within a **conservation objective**, of the aspirations for the **feature** concerned. See also **performance indicators.**

Vision Statement The statement conveying an impression of the whole site in the state that is intended to be the product of its **conservation management.** A 'pen portrait' outlining the **conditions** that should prevail when all the **conservation objectives** are met. A description of the site as it would be when all the **features** are in **favourable condition**.