CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES

SITE OF SPECIAL SCIENTIFIC INTEREST: MANAGEMENT STATEMENT

FLINTSHIRE/DENBIGHSHIRE **ALYN VALLEY WOODS AND ALYN GORGE CAVES**

Date of Notification: 07 March 2002

Site Area: 190.3 ha

1. Introduction:

This management statement contains CCW's opinion of the way in which the SSSI should be managed in order to maintain its special interest. It also provides a basis for future discussions and decisions on the conservation management of the SSSI. It is important that any works described in this statement are fully discussed with and formally consented by CCW, before any of these management activities are started.

The document sets out a vision for the features of interest; it describes the key issues affecting those features and outlines any management considered necessary to safeguard the features.

It is very important to recognise that management may need to change with time. Problems that we are aware of today may be resolved or completely removed and new unforeseen problems may arise. New improved management techniques may also become available. Consequently the management outlined in this document is considered appropriate for the short term but may need to change in the long term.

2. Features of Special Scientific Interest:

- a large area of semi-natural broadleaved woodland, principally associated with limestone habitats
- unimproved calcareous grassland
- unimproved neutral grassland
- a population of grizzled skipper butterfly
- a plant assemblage comprising four nationally scarce species
- a population of wayfaring tree
- Alyn Gorge Caves, comprising three cave systems within the Carboniferous Limestone

3. Long-term Vision for the Site and Features:

3.1 A large area of semi-natural broadleaved woodland, principally associated with limestone habitats

Broadleaved woodland should cover at least its current extent of the site, currently around 75%. It should be dominated by ash with some oak (and wych elm, should this recover from Dutch Elm disease) and alder in wetter places, usually on the flatter valley bottoms. Yew should be encouraged to expand where it currently occurs at the

northern end of the site. The bulk of the gorge woodland should be allowed to continue to develop naturally giving rise to structural diversity and the development of a dynamic naturally occurring pattern of gaps. It should include trees of all ages, including a proportion of old veteran trees. Dead wood, standing and fallen, should be retained to provide habitat for invertebrates, fungi and lower plants. Areas of woodland supporting stands of non-native species including beech, sycamore, larch, Scot's pine and other conifers, should be managed to favour native broadleaved species in the short and medium term. Other areas of semi-natural vegetation including scrub, grassland, limestone rock outcrop, limestone pavement and running water, within or adjacent to the woodland should be managed to add diversity to the mosaic of habitats present to benefit invertebrate species.

3.2 Unimproved calcareous grassland

Areas of calcareous grassland, which currently occupies around 1% of the site, should be retained and managed to retain its floristic diversity. Characteristic species include quaking grass, salad burnet, carline thistle, common rockrose, thyme, small scabious, glaucous sedge, bloody cranesbill and lesser meadow-rue. Where the grassland is currently under-grazed, undesirable coarse grass species such as cock's-foot and false oat grass are more dominant.

3.3 Unimproved neutral grassland

Areas of neutral grassland, which currently occupies about 0.5% of the site, should be retained and managed to maintain its floristic diversity. Characteristic species include common knapweed, cowslip, betony, adder's-tongue fern and common bird's-foot trefoil. Species such as nettle, dock and rye grass characteristic of agricultural and nutrient enrichment would indicate undesirable change in species composition.

3.4 A population of grizzled skipper butterfly

The site should support a viable population of this butterfly, which is localised in its occurrence in North East Wales. It is only known from one locality within the site where open areas within the woodland are managed to provide suitable habitat for this species. As this population is vulnerable, it is proposed to manage additional areas in this vicinity to hopefully expand its range, in order to ensure its long-term survival.

3.5 A plant assemblage comprising four nationally scarce species

The site should continue to support populations of the four nationally scarce species, which constitute the assemblage. The woodland/scrub woodland supports stinking hellebore and green helleborine; spring sandwort occurs on lead mine spoil and rock stonecrop on limestone cliffs. The known populations of these scarce plants are all currently small and restricted to specific localities within the site. They should be found in at least the same areas in future. Opportunities to increase their population size should be taken where suitable habitats exist elsewhere within the site.

3.6 A population of wayfaring tree

The population of wayfaring tree should be maintained and should be encouraged to increase in number. Currently it occurs at the southern end of the site, where it is usually associated with more open limestone habitat within the woodlands.

3.7 The Alyn Gorge Caves, comprising three cave systems within the Carboniferous Limestone

The caves should continue to demonstrate how geological structure, lithology and water flow influence passage profile. The range and distribution of sediments deposited in the caves should also continue to provide evidence of the solution and stream processes that have occurred over time. A variety of calcite formations should occur throughout the caves, providing an insight into the history of the caves and the contemporary environments. Access to the three cave systems, namely Ogof Hesp Alyn, Ogof Hen Ffynhonnau and Ogof Nadolig, should be available for legitimate study and research.

4. Key Management Issues

4.1 A large area of semi-natural broadleaved woodland, principally associated with limestone habitats

Accessible parts of the woodland have been managed in the past by a variety of practices including thinning, clear felling and coppicing and the planting of native and non-native tree species including beech and various conifers. These parts of the wood are largely dominated by even aged stands of non-native tree species, while the ash woodlands in the steep sided river gorge and the alder woodlands of the narrow floodplain have a more natural character.

Parts of the woodland area have been subject to past exploitation of the area's rich mineral resources for lead, zinc, calcite and limestone. The woodlands contain evidence of these former workings including spoil heaps, mine adits and shafts, leats for water supply and buildings.

Loggerheads towards the southern end of the site has been managed as a visitor attraction for many years, initially by the Crosville bus company and more recently by the local authorities. Infrastructure within the woodlands has been developed for its quiet recreational enjoyment by visitors.

To redress the artificial character of the more managed woodland, non-native species including beech will be selectively removed, allowing natural regeneration by ash, oak, wych elm and hazel. In exceptional cases, planting with saplings of local provenance may be considered to ensure woodland restoration. Expansion of the woodland onto adjacent formerly wooded areas might also be considered and this might also involve planting.

- **Grazing**
  Parts of the woodland have been grazed preventing natural regeneration of woody species, the development of an understorey and the full expression of the ground flora.

Action is necessary to control the number of grazing animals in the woodland and fences should be erected and maintained to achieve this.

4.2 Unimproved calcareous grassland

- **Under-grazing**

  Generally inappropriately low grazing levels on the calcareous grassland have allowed blackthorn, hawthorn and other scrub species to encroach, thereby reducing the area of open grassland. However at Loggerheads the grassland is characterised by bloody crane's-bill and lesser meadow rue, which has developed as a consequence of minimal grazing over a long period. If scrub invades, control may be necessary.

  This scrub should be removed by hand or machine cutting, with appropriate stump treatment to prevent re-growth. Re-instatement of an appropriate grazing regime or increasing grazing pressure from present levels will maintain the area of calcareous grassland and hopefully increase it. Poaching or over enrichment of the grassland, which encourages species such as daisy, nettle, dock, field thistle and spear thistle, should be avoided.

  In areas that are impracticable to graze, for example, alongside quarries, the grassland should be managed through hand or machine cutting in late summer, once flowering plants have set seed. Cuttings should be removed.

4.3 Unimproved neutral grassland

- **Under-grazing/lack of agricultural management**

  A lack of grazing and/or other agricultural management, such as grass cutting for hay, is currently allowing the spread of coarse grass species such as cock's-foot and false oat grass at the expense of finer grass species and broadleaved herbs.

  Grass cutting and removal as a late summer hay crop or the reintroduction of grazing by farm livestock at appropriate levels or a combination of both will assist in maintaining and improving these grasslands.

4.4 A population of grizzled skipper butterfly

- **Under-grazing**

  The loss of calcareous grassland and the food plants of the grizzled skipper butterfly by the invasion of rank coarse grass species and scrub is a particular threat to the butterfly.

  Control of coarse grass species and scrub should be undertaken by grazing or its removal by hand or machine or a combination of both. Light grazing by animals throughout the year could be utilised but care would have to be exercised to ensure that:

  (1) the nectar sources of the grizzled skipper are maintained particularly in the months of May and early June, when the adult butterflies are active;

  (2) trampling and grazing by animals does not destroy its pupae, particularly since this butterfly has an extended pupal stage.

Selective scrub and coarse grass removal by hand and light strimming (approximately 10 cm above the ground) will maintain the grassland sward to benefit the most important larval food plants and adult nectar sources, which include wild strawberry, barren strawberry, creeping cinquefoil, hemp agrimony and bramble. Light grazing of the grassland by rabbits should be encouraged.

- **Fragmented habitat**
  Small, isolated areas of suitable habitat for the grizzled skipper have led to small and isolated populations that are vulnerable to change.

  The creation of wide rides through the woodland to connect existing small areas of suitable grassland would create a larger area of suitable habitat, encouraging the development of a larger population of butterflies.

4.5 A plant assemblage comprising four nationally scarce species

- **Distribution and population size**
  The precise distribution and population sizes of stinking hellebore, green flowered helleborine and rock stonecrop within the site are unknown and it is not yet possible to give detailed management prescriptions for each of them.

  A thorough survey of all suitable habitat is necessary to locate these species and to determine their population size. From current information, the population size of all species is, however, small and confined in their distribution to one or a few localities within the site. If this is confirmed, additional management will be considered to manage their habitats to enhance their population sizes.

  The population of spring sandwort is small and apparently confined to one former lead mine spoil heap. It is therefore vulnerable to natural succession and to inadvertent damage from woodland operations and to possible trampling damage from visitors to the woodlands. Its specialist habitat requirements mean that it will not be possible to increase the area of suitable habitat.

4.6 A population of wayfaring tree

- **Distribution and population size**
  The detailed distribution and abundance, including age-structure and reproductive output, of wayfaring tree within the whole site is unknown. However, it appears to be confined to the southern end of the site.

  The species is associated with natural rocky limestone outcrop and pavement mainly associated with more open areas within the woodland as in denser shade, it does not appear to flower. A detailed survey will be required in order to assess its present condition on the site and to determine whether additional management is required.

4.7 The Alyn Gorge Caves, comprising three cave systems within the Carboniferous Limestone

- **Caving**
  Ogof Hesp Alyn is a ‘sporting’ cave and attracts many visiting cavers; 400 recorded man visits were made over a seven-month period in 1996. Although the North Wales

Caving Club (NWCC) considers the cave to be fairly robust, with only minor damage from caving activities since its discovery, there have been no base-line studies against which to monitor the cave. Ogof Hen Ffynhonnau is an easier and popular cave to explore. It contains calcite formations and a greater variety of cave sediments and is less robust than Ogof Hesp Alyn. Significant damage to some of the calcite formations has already taken place. Ogof Nadolig is the smallest of the three cave systems. It is an older fossil cave, which is unconnected to the present river drainage. Though Ogof Nadolig is smaller and less well used than the two larger caves, it is more vulnerable. There is currently no effective control over who uses the cave and damage to calcite formations has taken place.

Currently, the main threat to the cave fabric and environment comes from the wear and tear resulting from the movement of cavers and their activities. It is important that the more delicate and important formations within the caves are taped off following the baseline survey to be carried out by the NWCC.

Controlling access to the caves, education of visitors and taping off of the more sensitive areas will lead to less damage of the cave formations and conservation of these important cave systems.

At present there is no immediate threat, either directly or indirectly, from mineral extraction/quarrying. However, if one quarry were ever reactivated, consideration would need to be given over the use of explosives and the charges used so that damage from blasting to the cave system and its structures was prevented.

Activities on the surface above the caves or in their catchment areas need to be monitored to ensure that activities which might adversely impact on these underground systems are controlled. Incidents of influxes of diesel oil and dirty water to the caves have been reported within the past five years.