PLANTED CONIFEROUS WOODLAND HABITAT STATEMENT

1. INTRODUCTION

Though the natural woodland in the majority of Britain is broadleaved/deciduous woodland, many woods contain conifer species, both native and introduced, that have been planted on otherwise open habitats. Although not a priority habitat in the UK BAP, existing conifer plantations have some biodiversity value, and the Planted Coniferous Woodlands Habitat Statement in the UK BAP[49] identifies conservation needs.

2. HABITAT DEFINITION

Woodlands composed wholly or mainly of conifer species, both native and introduced, have been planted throughout Britain and there are many to be found in the region of South Wales. The commonest species planted are larch (*Larix spp.),* douglas fir (*Pseudotsuga menziesii)* and spruce (*Picea abies* and *P. sitchensis)*, with smaller amounts of other species such as western hemlock (*Tsuga heterophylla)* and Corsican pine (*Pinus nigra* subsp. *laricio*). Conifer plantations often consist of blocks of even-aged crop trees and may include recently felled and recently planted areas, both of which may be invaded by birch, bracken and bramble, adding diversity to an otherwise uniform habitat.

There are two types of coniferous plantations, the Private Woodland, planted on many private estates, and what may be called the State Woodland administered by the Forestry Commission, with the majority planted as a result of the timber shortage in World War I.

3. CURRENT STATUS

3.1 UK and Wales

Approximately 7%, (1,516,000ha), of Great Britain is covered by conifer woodlands. The stands are usually of a single species, with approximately 40% being Sitka Spruce. However, at the forest scale, species composition is normally mixed; in thinned older stands and at edges and in glades, a variety of native trees and shrubs develop as an understorey. FE manages 775,000ha and 741,000ha are privately owned. The CCW Phase 1 survey results indicate that there is 8,138ha of coniferous plantation in Gwent and 24,696ha in Glamorgan[8].

When the trees reach harvesting age there are opportunities for restructuring the habitat, which will lead to diversification of the plant and animal communities they contain. Second rotation forests are more likely therefore to take account of the nature conservation needs through creating internal forest diversity, in tree and stand age. Many forests also have a number of associated features and habitats that are important for wildlife. Woodland rides and glades can be important for vascular plants and many invertebrates. They can also provide areas for targeting limited restoration of semi-natural habitat in conifer plantations. Old stands with dead or dying trees, understorey vegetation and open canopies are also important for a variety of species. A number of GB Red Data Book bird species may occur in plantations, including goshawk, and in clearfell or the early growth stage, nightjar and woodlark can be found.

3.2 Caerphilly County Borough

The ridges forming the southern crop of the coalfield have a mixture of private and state woodland. In the interior of the county borough most is state woodland. Prior to 1939 there was

not much forestry in the county borough, an exception was the Ruperra woodland, which was replanted with conifers following a disastrous storm in 1916. Post-1945 saw the growth of planted coniferous woodland throughout Caerphilly county borough.

There are two types of coniferous plantation in this area. The first is along the border ridges south of Caerphilly town, where historically the ancient woodland has been partially replaced by coniferous plantation by the landowners as part of an existing forest management system. Some ancient woodland remains and so this area is more varied than the conventional view of the planted woodland. Due to its history the habitats range from mature trees, clearfell sites, streams, ponds, abandoned clay and coal workings. The Clay Pits support breeding frogs, and grey heron and mallard have been known to roost there. The mature trees offer feeding and nesting sites for sparrowhawks, coal tits, goldcrests and treecreepers, seasonal visitors include cuckoos, tree pipits, and warblers. The nightjar has been seen in the clear-fell areas in Wern Ddu. Many species of plant are found in the forest, including yellow pimpernel, century, common spotted-orchid, and water mint. Several species of butterfly are also found and around 55 species of moth. The grass snake, adder, slowworm and common lizard represent reptiles, and mammals such as foxes, rabbits and grey squirrels are also common.

The second type is the large commercial conifer plantation that has grown up in the last 60 years, for example those managed by Forest Enterprise. Typical of these are the woodlands on both banks of the river Ebbw, especially on the eastern tributaries in the vicinity of Abercarn and Crosskeys. Other areas are on the southern slopes of Mynydd Machen and at Bryn Owen, above Llanbradach. Most of this is managed woodland on agriculturally poor land. Surveys in other areas have shown that this type of woodland can support a wide range of species including birds such as the nightjar, crossbill, and siskin, and mammals like the fox, rabbit, grey squirrel and the dormouse. In the north of the county borough in the Darren Valley, a conifer plantation supports a colony of breeding herons.

Elsewhere, however, there is a lack of knowledge regarding the biodiversity of coniferous woodlands.

SINC sites[4]: (Map 3.1)

16: **Pont Caradog and Nant Ilan Woodlands** (part)
92: **Cwm Gelli Wood and Meadow** (part)
99: **Coed Goferau** (part spruce plantation)
104: **Cwm Pennar** part to the north)
112: **Coed Cil-Lonydd** (part)
113: **Coedcae Watkin Dafydd**
114: **Gwyddon Valley and Mynydd Maen** (some areas)
165: **Wern Ddu Woodlands** (notable for population of dormice)

Coniferous plantations found adjacent to the following:

106: **Tyle-Coch Wood**,
108: **Cwm Hafod-Fach Woodlands**
133: **Craig y Prisiad Woodlands** (the plantation separates two oak woods)

3.3 Associated Species

- **Birds**: ***goshawk***, ***nightjar****, *linnet**, *kestrel, long-eared owl, green woodpecker,*

woodlark*, crossbill, siskin, cuckoo, tree pipit, warblers, (mallard and grey heron on unplanted clay pits within the forest)

- **Mammals**: *dormouse**, *badger*, *lesser horseshoe bat**, *noctule bat*, fox, rabbit, grey
- **Reptiles:** *adder, grass snake, slow worm* and *common lizard*
- **Invertebrates:** butterflies and moths
- **Plants:** *bluebell, common spotted-orchid,* rosebay willowherb, water mint, bracken, bramble, sheep's fescue, yellow pimpernel, century, western hemlock, holly, silver birch, beech, pine, sessile oak, spruce, larch, star moss

3.4 Links with Habitats

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- Woodland rides and glades (e.g. clearfell sites): can have patches of ***Acid Grassland*** or ***Heathland*** in open areas where light reaches the ground;
- *Deciduous Woodlands* (mixed in with conifers)
- *Wetlands* (ponds, rivers and streams);
- Mature trees, deadwood and scrub

4. CURRENT FACTORS AFFECTING THE HABITAT

There is no particular threat to conifer plantations as a whole. However, the end of the coal industry and the closure of downstream hardboard manufacturing plants had local implications for soft wood production.

- Many of the species listed in 3.3 are dependent on a particular age of timber and therefore a clear-felling cycle. The moves towards continuous cover would be detrimental to these species, in particular nightjar and woodlark.

Other threats have been identified as:

- Lack of appropriate management, leading to decreases in structural diversity of stands and forests
- Lack of regeneration due to grazing of woods
- Felling without replanting
- Clear-felling and replanting that disrupts other elements of the forest ecosystem, eg, through erosion or effects on water bodies.
- Invasion of species such as Rhododendron, Japanese Knotweed
- Re-conversion to agricultural land

5. CURRENT ACTION

5.1 The overall UK policy aims are set out in *Sustainable Forestry: The UK Programme* (1994) and *Biodiversity in Britain's Forests* (1993).

5.2 The UK also signed up to Resolution for the Conservation of Biodiversity of European Forests, as agreed in Helsinki in 1993. This provides for the enhancement of biodiversity as part of the sustainable forest management programme by integrating the requirements of native, natural and managed woodlands.

5.3 There is a strong emphasis on wildlife conservation management in licences and grants administered by the FC. Through its Regional Advisory Committees and Environmental Panels, FC consults conservation specialists on its activities.

5.4 FE manages publicly owned plantations on behalf of the National Assembly for Wales.

5.5 FE is preparing Forest Design Plans with local conservation experts, which are subject to Forestry Commission approval. These plans are a major means of delivering biodiversity gains in FE forests through promoting structural diversity and populations of key species.

5.6 FC has also produced the documents *Forest and Water Guidelines* (1993), *Nature Conservation Guidelines* (1990) and *Landscaping Guidelines* (1989) which are used as a basis for prescribing management for wildlife conservation. The FC is working to draw these together, along with other environmental guidelines, to produce standards for enhancing biodiversity of planted forests. These will reflect the functional and structural elements of the forests as well as the species interest.

6. CONSERVATION DIRECTION

6.1 Main Objective is to:

- **Maintain** and **enhance** the wildlife potential of the existing conifer resource through continued restructuring and diversification.

6.2 Possible actions:

- o Maintenance of areas of existing planted coniferous woodland, and where appropriate enhancement of their wildlife value.
- o All semi-natural woodland should be buffered, and, along with planted woodland or native broadleaved woodlands, increased in size by natural regeneration and/or planting of local provenance stock.
- o The production of long term appropriate management plans for semi-natural and planted woodland sites should be agreed with owners and managers.
- o The provision of advice, information and training on grants, management schemes, enhancement techniques and the planting of new woodland, to owners and managers.
- o Species and habitat surveys in planted woodlands; require species and habitat surveys for all planning applications affecting conifer plantations.
- o Development of systems for monitoring the biodiversity conservation value of planted conifer woodlands, for eg, by assessing critical habitat features and selected key or indicator species.
- o Promotion of forestry management which enhances the conservation value of plantations through restructuring and diversification among landowners and managers, but also highlight the significance of coniferous woodlands for plants and animals to the general public.
- o Encouragement of sympathetic woodland ride management that benefits biodiversity.