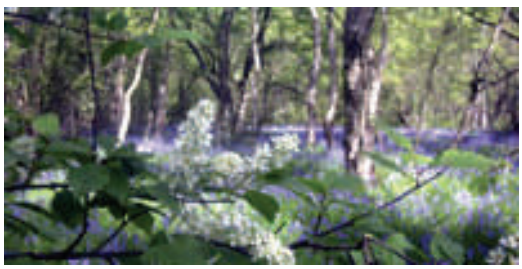
Durham Landscape

Understanding and conserving the diversity of the County Durham Landscape


Durham Landscape Guidelines

Woodland and Forestry:
Native Woodland Types in County Durham

Durham County Council

Native Woodland Types

The woodland types described below are based on plant communities identified in the National Vegetation Classification (NVC) system.

The main semi-natural native woodland types found in County Durham are listed below and described in detail over the following pages.

- Lowland Ash Woodland (W8)
- Upland Ash Woodland (W9)
- Lowland Oak Woodland (W10)
- Lowland Oak Birch Woodland (W16)
- Upland Oak Birch Woodland (W11)
- Upland Oak Birch Woodland (W17)
- Birch Woodland (W4)
- Bay Willow Woodland (W3)
- Alder Carr Woodland (W5)
- Valley Fen Alder Woodland (W6)
- Alder Ash Woodland (W7)
- Yew Woodland (W13)
- Juniper Woodland (W19)
- Hawthorn Scrub (W21)
- Blackthorn Scrub (W22)
- Gorse Scrub (W23)
- Bramble Scrub (W24/25)

Lowland Ash Woodland - NVC W8

Fraxinus excelsior – Acer campestre – Mercurialis perennis woodland.

Distribution

Typical of the East Durham Limestone Plateau and localised sites in the Tees Lowlands. Transitional in the North Pennines and Dales Fringe with W9.

Character

Dene & escarpment woodlands on the limestones of the East Durham Plateau. Secondary woodlands of abandoned limestone quarries. Gorge and ravine woodlands in the Dales Fringe.

Geology

Magnesian Limestone. Carboniferous Limestone.

Soils

Shallow soils over limestone, Brown Calcareous Earths.

Species

Ash and Wych Elm are the dominant species with Sycamore often replacing Elm where it is diseased. Common Oak is locally common. Hazel is often dominant in the understorey with a range of other shrubs including Hawthorn, Blackthorn, Elder, Guelder Rose, Privet, Goat & Grey Willow. Field Maple is occasionally present in the south & east. Yew is locally abundant on shallow soils. Dogwood is found locally as are Small-leaved Lime, Spindle and Spurge Laurel.

Ground Flora & Fauna

Dog's Mercury, Sweet Woodruff, Sanicle, Ramsons, Wood Anemone, Cuckoo Pint. Alkaline Ash bark supports rich lichen flora. Invertebrate fauna particularly important.

Structure

Semi-natural woodlands have a high degree of species and structural diversity. Ash and Elm are dominant in the canopy although most woodlands have been heavily affected by Elm disease. The understorey is usually well developed and diverse.

Management principles

- Prevent grazing by livestock or browsing by deer – particularly in small woods.
- Progressively remove non-native species.
- Maintain and increase the numbers of old trees and dead wood.
- Low intervention approaches are usually best & particularly for small woods.
- Use low impact felling & extraction techniques - minimise the scale of disturbance at any one time.
- Maintain areas of open ground.
- Use low-key establishment techniques - particularly natural regeneration.
- When planting is necessary use native species of local origins.

Planting sites for new woods

Escarpment and coastal Dene sites on calcareous soils. Limestone quarries. On grassland sites specialist advice should be taken on the value of existing vegetation. On upland and upland fringe sites W9 may be a more appropriate model.

Design principles

Simple planting mixtures based on Ash, Hazel and Hawthorn together with smaller numbers of minor species such as Oak and Blackthorn. Others species can be introduced in small numbers or left to colonise naturally. Rare species such as Small-leaved Lime and Spindle should generally be avoided. Field Maple should be used sparingly in the north. The provision of some open space and lower density planting may foster the development of a herb rich ground flora.

Further Information

Forestry Commission Forestry Practice Guide 3: Lowland Mixed Broadleaved Woods

Upland Ash Woodland – NVC W9

Fraxinus excelsior – Sorbus aucuparia – Mercurialis perennis woodland.

Character Area

North Pennines, Pennine Dales Fringe.

Character

Riparian woodlands of incised limestone gorges and upland gills.

Geology

Carboniferous limestone.

Soils

Thin soils over limestone, basic brown earths.

Species

Ash and Wych Elm are dominant species. Downy Birch, Sessile Oak and Rowan are common. Hazel is often dominant in the understorey and influential in the canopy. Bird Cherry, Hawthorn and Holly are common. Elder and Grey Willow are occasionally present. Aspen is found in ravine sites.

Ground flora & fauna

Herb & fern rich. Dog's Mercury, Bluebell, Primrose, Wood Anemone, Wood Avens, Dog Violet, Wood Sorrel, Sanicle, Wood Cranesbill, Globeflower, Marsh Hawksbeard. Lady Fern, Male Fern, Broad Buckler Fern, Hard Shield-fern. Alkaline bark of Ash supports rich lichen flora. Invertebrate fauna particularly important.

Structure

Semi-natural woodlands have a high degree of species and structural diversity reflecting the complex interactions of terrain, soils and surface and ground water on typical gill/gorge sites. Riparian Ash woodlands may show transitions to Oak/Birch woodland (W11) on steeper upper slopes & base poor soils or Alder/Ash woodland (W7) on flushed slopes & wetter valley bottoms.

Management principles

- Prevent grazing by livestock or browsing by deer – particularly in small woods.
- Where grazing is long established, fit stocking periods & densities to conservation goals.
- Maintain and increase the numbers of old trees and dead wood.
- Low intervention approaches are usually best & particularly for small woods.
- Felling – minimise the scale of disturbance.
- Maintain areas of open ground.
- Use low-key establishment techniques – particularly natural regeneration.
- When planting is necessary use only native species of local origins.

Planting sites for new woods

Extensions to existing woodlands. Upland gills & ravines on limestone.

Design principles

Simple planting mixtures based on Ash and Hazel together with smaller numbers of minor species such as Birch, Oak and Rowan. Others species can be introduced in small numbers or left to colonise naturally. The provision of some open space and lower density planting may foster the development of a herb rich ground flora. Downy Birch could be used as a nurse species on exposed sites and its proportions in the canopy later reduced.

Further information

Forestry Commission Forestry Practice Guide 4: Upland Mixed Ashwoods

Lowland Oak Woodland - NVC W10

Quercus robur - Pteridium aquilinum - Rubus fruticosus woodland.

Region

Widespread on moderately acidic or neutral soils across the county.

Character

Existing semi-natural features are mostly riparian woodlands related to minor valleys, ravines, bluffs and river terraces.

Geology

Base poor superficial deposits. Boulder clays. Sands & gravels. Alluvium.

Soils

Base poor brown earths & gleys.

Species

Common Oak is the dominant species, often Sessile Oak in the upland fringes, and Silver Birch is common. Sycamore may be present in disturbed woodlands. Hazel is often dominant in the understorey. Hawthorn and Holly are common. Ash and Wych Elm are found in smaller numbers as are Rowan, Wild Cherry and Crab Apple. Elder, Blackthorn and Guelder Rose are often present. Small-leaved lime is rare & restricted to a few river gorge sites.

Ground flora & fauna

Bluebell and Wood Anemone are characteristic as are Bracken, Foxglove, Red Campion, Wood Sorrel, Wood Sage, Male Fern & Broad Buckler Fern. Bramble, Honeysuckle, Ivy. Ground flora is often strongly influenced by past management.

Structure

Variable. Typically a canopy dominated by Oak and Birch over a well developed understorey, often with under-scrub of Bramble, Honeysuckle or ivy.

Management principles

- Prevent grazing by livestock or browsing by deer – particularly in small woods.
- Maintain and increase the numbers of old trees and dead wood.
- Progressively remove non-natives at a pace flora & fauna can adapt to.
- Restore coppicing only where its history is well established and the effects on existing flora & fauna are understood.
- Low intervention approaches are best for small woods.
- Timber production - minimise the scale of disturbance.
- Use low-key establishment techniques - particularly natural regeneration.
- When planting is necessary use only native species of local origins.

Planting sites for new woods

Typical woodland type for most of Lowland Durham, for base poor soils on the East Durham Plateau and for much of the Pennine Fringe, penetrating into the uplands on valley floors. Extensions to existing sites.

Design principles

Planting mixtures based on Oak, Birch, Hawthorn, Hazel and Holly. Others species can be introduced in small numbers or left to colonise naturally. Silver Birch may be used as a nurse species on difficult sites and its proportions in the canopy later reduced. Rare species such as Small-leaved Lime should not be used as their natural distribution could be obscured by indiscriminate planting.

Further information

Forestry Commission Forestry Practice Guide 3: Lowland Mixed Broadleaved Woods.

Lowland Oak-Birch Woodland - NVC W16

Quercus spp.- Betula spp. - Deschampsia flexuosa woodland

Region

A scattered distribution in the Coalfield Pennine Fringe, Pennine Dales Fringe and Wear Lowlands.

Character

Existing sites form part of other Oak or Oak- Birch woodlands.

Geology

Free draining base poor superficial deposits such as fluvio-glacial sands & gravels.

Soils

Acid sands, rankers, base poor brown earths, podzolic brown earths, humo-ferric podzols, stagno-podzols.

Species

Silver Birch, Downy Birch and Sessile Oak are the dominant species (occasionally Common Oak). The understorey is sparse, sometimes including Rowan or Holly.

Ground flora & fauna

Species poor with Wavy Hair-grass and Bracken with Heather and Bilberry.

Structure

Semi-natural woodlands have little species diversity and are often dominated by Birch. Many have been heavily influenced by grazing.

Management principles

- Prevent grazing by livestock or browsing by deer – particularly in small woods.
- Maintain and increase the numbers of old trees and dead wood.
- Progressively remove non-natives at a pace flora & fauna can adapt to.
- Low intervention approaches are best for small woods.
- Timber production - minimise the scale of disturbance.
- Use low-key establishment techniques - particularly natural regeneration.
- When planting is necessary use only native species of local origins

Planting sites for new woods

In natural distribution limited to acidic free draining sites within more extensive Oak and Oak-Birch woodland in the lowlands and podzols in the upland fringes. May be a useful model for planting on disturbed substrates such as mineral spoils including sands and colliery shales.

Design principles

Simple planting mixtures dominated by either or both species of Birch and Oak with smaller numbers of Rowan and Holly.

Further information

Forestry Commission Forestry Practice Guide 3: Lowland Mixed Broadleaved Woods & Practice Guide 1: Lowland Acid Beech and Oak Woods

Upland Oak- Birch Woodland - NVC W11

Quercus petraea - Betula pubescens - Dicranum majus woodland.

Region

A scattered distribution in the North Pennines, Coalfield Pennine Fringe, Pennine Dales Fringe. Formerly more widely distributed.

Character

Existing woodlands are typically small woodlands of steep valley slopes & gills or the upper margins of gill & gorge ash woods marking the transition to more acidic soils.

Geology

Base poor superficial deposits including boulder clays, fluvio-glacial sands & gravels.

Soils

Base poor brown earths. Podzolic brown earths.

Species

Downy Birch and Sessile Oak are the dominant species. The understorey is sparse with Hazel, Rowan and Holly common.

Ground flora & fauna

Bluebell, Primrose, Pignut, Wood Sorrel, Bluebell, Wood Anemone, Wood Sage, Creeping Soft-grass.

Structure

Semi-natural woodlands have little species diversity and are often dominated by Oak where they have been coppiced or birch where under managed or disturbed and have often been influenced by grazing. The canopy is often low (<10m) and relatively open, and trees are often multi-stemmed.

Management principles

- Prevent grazing by livestock or browsing by deer – particularly in small woods.
- Maintain and increase the numbers of old trees and dead wood.
- Progressively remove non-natives at a pace flora & fauna can adapt to.
- Restore coppicing only where its history is well established and the effects on existing flora & fauna are understood.
- Low intervention approaches are best for small woods.
- Timber production - minimise the scale of disturbance.
- Use low-key establishment techniques - particularly natural regeneration.
- Increase species diversity in species poor woods.
- When planting is necessary use only native species of local origins.

Planting sites for new woods

Moderately acidic upland and upland fringe sites. Reclaimed sites on moderately acidic soils.

Design principles

Planting mixtures dominated by Birch and Oak with smaller numbers of Hazel, Holly and Rowan.

Further information

Forestry Commission Forestry Practice Guide 5: Upland Oakwoods.

Upland Oak-Birch Woodland - NVC W17

Quercus petraea – Betula pubescens – Oxalis acetosella woodland.

Region

A scattered distribution in the North Pennines, Coalfield Pennine Fringe, Pennine Dales Fringe and more rarely Wear Lowlands. Formerly more widely distributed in the uplands & upland fringes.

Character

Existing woodlands are typically small woodlands of steep valley slopes on thin soils.

Geology

Carboniferous sandstones & grits & shales

Soils

Shallow acidic soils, humo-ferric podzols, humic rankers.

Species

Downy Birch and Sessile Oak are the dominant species. Rowan is common. Holly and Hazel are less frequent. Structure and species composition may be influenced by grazing.

Ground flora & fauna

Heather, Bilberry, Wavy hair-grass, Sheep's fescue, Hard fern, Tormentil, Bracken, Broad buckler fern, Great wood-rush, Wood sorrel.

Structure

Semi-natural woodlands have little species diversity and are often dominated by Oak where they have been coppiced or birch where under-managed or disturbed. The canopy is low (<10m) and relatively open, and trees are often multi-stemmed.

Management principles

- Prevent grazing by livestock or browsing by deer – particularly in small woods.
- Maintain and increase the numbers of old trees and dead wood.
- Progressively remove non-natives at a pace flora & fauna can adapt to.
- Restore coppicing only where its history is well established and the effects on existing flora & fauna are understood.
- Low intervention approaches are best for small woods.
- Timber production - minimise the scale of disturbance.
- Use low-key establishment techniques - particularly natural regeneration.
- Increase species diversity in species poor woods.
- When planting is necessary usae only native species of local origins

Planting sites for new woods

Shallow acidic soils in the uplands and upland fringes. Mineral wastes, colliery shales.

Design principles

Planting mixtures dominated by Birch and Oak with smaller numbers of Rowan, Hazel and Holly.

Further information

Forestry Commission Forestry Practice Guide 5: Upland Oakwoods**.**

Birch Woodland - NVC W4

Betula pubescens - Molina caerula woodland.

Region

W4 communities are rare in Durham. They are likely to have occurred more widely on mires and wet heaths in the upland fringes of the North Pennines, Coalfield Pennine Fringe & Pennine Dales Fringe.

Character

Open woodland on the edges of bogs and mires.

Geology

Peats.

Soils

Peats, peaty gleys.

Species

Downy Birch is the dominant species with occasional Goat Willow, Common Alder, Grey Willow, Eared Sallow, Bay Willow or Rowan.

Ground flora & fauna

Purple Moor Grass, Sphagnum & other mosses. Broad Buckler Fern. Soft-rush.

Structure

Usually an open low (6-8m) canopy of widely spaced, often multi-stemmed trees. Birch is dominant, other species occurring as scattered specimens or local concentrations reflecting soil/drainage patterns.

Management principles

- Timber production is rarely practical or desirable. Low intervention approaches are best.
- Maintain the wetness of the site - avoid changes in hydrology through on or off-site drainage.
- Light grazing is often a natural part of the ecology of wet birch woods - stock may need to be periodically excluded to promote regeneration & overstocking should be avoided.
- Birch and willow regenerate well on wet ground – planting is rarely necessary.
- Maintain and increase the numbers of old trees and dead wood.
- Avoid damage from the tracking of vehicles or poaching by stock
- Maintain areas of open ground.

Planting sites for new woods

On many suitable sites the existing vegetation will be of sufficient value to preclude tree planting. In many suitable areas the landscape will be very open and tree planting may not be appropriate. Degraded fell land on humic gleys & peats. Woodland / wetland interfaces.

Design principles

Mosaics of woodland and heath. Stands in oak-birch woodlands on wetter ground.

Further information

Forestry Commission Forestry Practice Guide 8: Wet Woodlands.

Alder – Ash Woodland - NVC W7

Alnus glutinosa - Fraxinus Excelsior - Lysimachia nemorum woodland

Region

Scattered distribution across the north and west of the county. North Pennines, Coalfield Pennine Fringe, Pennine Dales Fringe, Wear Lowlands

Character

Alder & Ash stands on flushed slopes within other woodlands. Typical of the lower slopes of upland ravine ash woods and oak woods.

Geology

Carboniferous Limestones, Millstone Grits, Coal Measures.

Soils

Flushed mineral soils. Moderately base rich & mesotrophic.

Species

Common Alder, Ash, Downy Birch. If not grazed there may be an understorey including Goat Willow, Grey Willow, Hazel, Hawthorn, Rowan & Bird Cherry.

Ground flora & fauna

Yellow Pimpernel, Creeping Buttercup, Opposite-leaved Golden-saxifrage, Soft Rush, Tufted Hair-grass.

Structure

Open stands often dominated by Alder with an understorey of Hazel, thorn and sallow. Often modified by grazing or coppicing.

Management principles

- Prevent grazing by livestock – and particularly in small woods.
- Maintain and increase the numbers of old trees and dead wood.
- Progressively remove non-natives at a pace flora & fauna can adapt to.
- Low intervention approaches are usually best although timber production may be an option on drier sites carrying better quality Ash.
- Restore coppicing only where its history is well established and the effects on existing flora & fauna are understood.
- Use low-key establishment techniques - particularly natural regeneration.
- When planting is necessary use only native species of local origins
- Maintain areas of open ground.

Planting sites for new woods

Lower valley slopes & flushes within other woodland types in the uplands and upland fringes. Avoid areas where existing vegetation has a conservation value.

Design principles

Strongly related to topography and drainage. Planting mixtures should be dominated by Alder on wetter sites. On drier sites a higher proportion of Ash and a greater diversity of shrub species may be appropriate.

Further information

Forestry Commission Forestry Practice Guide 8: Wet Woodlands, Guide 4 Upland Mixed Ashwoods.

Alder Carr Woodland - NVC W5

Alnus glutinosa - Carex paniculata woodland

Region

Sparse distribution across the county.

Character

Alder Carr. Fringes of swamp or fen.

Geology

Impervious drift materials. Fen peats.

Soils

Wet and waterlogged organic soils, base rich and moderately eutrophic. Surface water gleys.

Species

Alder, Downy Birch, Grey Willow.

Ground flora & fauna

Greater Tussock-sedge, Marsh Horsetail, Tufted Hair Grass, Marsh Marigold, Meadowsweet, Wild Angelica, Common Valerian, Pendulous sedge & ferns.

Structure

In mature stands Alder dominates the canopy with an understorey of Grey Sallow

Management principles

- Timber production is rarely practical or desirable. Low intervention approaches are best.
- Maintain the wetness of the site - avoid changes in hydrology through on or off-site drainage.
- Exclude livestock unless grazing is long established and known to be beneficial.
- Alder & willow regenerate freely on wet ground – planting is not always necessary.
- Maintain and increase the numbers of old trees and dead wood.
- Avoid damage from the tracking of vehicles or poaching by stock.
- Maintain areas of open ground.

Planting sites for new woods

New wetland sites. Avoid areas of existing conservation value.

Design principles

Simple planting mixtures of Alder and Grey Willow with smaller numbers of Birch..

Further information

Forestry Commission Forestry Practice Guide 8: Wet Woodlands.

Valley Fen Alderwood - NVC W6

Alnus glutinosa - Urtica dioica woodland

Region

Single site in Coalfield Pennine Fringe at Witton-le-Wear Nature Reserve. Likely to have occurred locally on alluvial terraces of river floodplains, flatts & carrs, particularly in the Wear Lowlands & Tees Lowlands.

Character

Carr woodland on river floodplains or fringing open water.

Geology

All

Soils

Moist eutrophic soils. Alluvial soils. Fen peats.

Species

Alder, Crack Willow, Downy Birch, Grey Willow and Elder.

Ground flora & fauna

Stinging Nettle, Bramble, Honeysuckle

Structure

Dominated by Alder, occasionally by Crack Willow, with an understorey of Grey Sallow.

Management principles

- Periodic coppicing (10 -20 years) for firewood/charcoal markets can be beneficial to maintain ground flora & encourage butterflies. Avoid large scale or sudden changes - retain some large trees and mature coppice stools.
- Exclude livestock unless grazing is long established and known to be beneficial.
- Alder & willow regenerate freely on wet ground – planting is not always necessary.
- Maintain and increase the numbers of old trees and dead wood. Pulling over individual trees can allow light into the woodland floor and create valuable dead wood habitat.
- Avoid damage from the tracking of vehicles or poaching by stock
- Maintain areas of open ground.

Planting sites for new woods

Floodplain sites on alluvial soils. Flatts and carrs of lowland plains.

Design principles

Simple planting mixtures of Alder and Grey Willow with smaller numbers of Birch and Crack Willow.

Further information

Forestry Commission Forestry Practice Guide 8: Wet Woodlands.

Bay Willow Woodland - NVC W3

Salix pentandra - Carex rostrata woodland.

Region

Coalfield Pennine Fringe.

Character

Single site in Durham at Causey Bank Mires associated with W5 alder woodland.

Geology

Basin mire.

Soils

Peat or peaty gleys flushed with base rich ground water.

Species

Bay Willow, Grey Willow, occasionally Eared Sallow or Downy Birch.

Ground flora & fauna

Diverse tall herb community: Angelica, Meadowsweet, Cuckoo flower, Bottle Sedge, Marsh-marigold, Marsh-bedstraw, Water Avens, Marsh Valerian, Marsh Thistle, Water Horsetail.

Structure

Uneven low canopy of bushy willows

Management principles

- Timber production isn't practical or desirable. Low intervention approaches are best.
- Maintain the wetness of the site - avoid changes in hydrology through on or off-site drainage.
- Exclude livestock unless grazing is long established and known to be beneficial.
- Willows regenerate well on wet ground – planting is rarely necessary.
- Maintain and increase the numbers of old trees and dead wood.
- Avoid damage from the tracking of vehicles or poaching by stock
- Maintain areas of open ground.
- When planting use cuttings or sets from local willows.

Planting sites for new woods

Peat or peaty gleys flushed with base rich ground water. Avoid areas of existing conservation value.

Design principles

Simple mixtures dominated by Bay and Grey Willow with smaller numbers of Birch and Eared Sallow.

Further information

Forestry Commission Forestry Practice Guide 8: Wet Woodlands.

Yew Woodland - NVC W13

Taxus baccata woodland

Region

East Durham Plateau.

Character

Yew dominated stands in coastal dene Ash woodlands.

Geology

Magnesian Limestone.

Soils

Thin soils over limestone outcrops.

Species

Yew dominated: species poor. Very occasional Elder, Hawthorn or Ash.

Ground flora & fauna

Very sparse. Occasional Dog's Mercury, Stinging Nettle, Ivy, Bramble.

Structure

Closed dense canopy of Yew to 10m. No understorey.

Management principles

- Timber production isn't practical or desirable. Low intervention approaches are best.
- Exclude livestock.
- Maintain and increase the numbers of old trees and dead wood.
- Use low-key establishment techniques - particularly natural regeneration.
- When planting is necessary use plant material of local origins.

Planting sites for new woods

Stands within new ash woodlands on limestone outcrops. Coastal denes. Magnesian Limestone quarries

Design principles

Stands of pure Yew.

Further information

Forestry Commission Forestry Practice Guide 3: Lowland Mixed Broadleaved Woods

Juniper Woodland - NVC W19

Juniperus communis - Oxalis acetosella woodland

Region

North Pennines. Formerly found in small pockets on the coast and in Coalfield Pennine Fringe heathlands.

Character

Open low scrub of rocky moorland margins and hill stream valleys.

Geology

Carboniferous Limestones & Millstone Grits, Magnesian limestones, Coal Measures.

Soils

Various. Acidic and podzolic brown earths. Podzols

Species

Juniper is the dominant species with occasional Downy Birch, Rowan and Hawthorn.

Ground flora & fauna

Bilberry, Heather, Cowberry, Wavy Hair-grass.

Structure

Open scrub heavily influenced by grazing. Very diverse form. Irregular canopy.

Management principles

- Seek specialist advice.
- Prevent grazing by livestock and rabbits.
- Where grazing is long established, and stands are healthy, fit stocking periods & densities to conservation goals.
- Avoid burning of heather other than in a controlled form to promote juniper regeneration.
- Control competing vegetation such as gorse and bracken.
- Create areas of bare ground to encourage regeneration.
- When planting is necessary use plant material of local origins.
- Seedlings take many years to establish - protect with tree guards or small rabbit-proof enclosures and maintain these carefully.

Planting sites for new woods

Coastal slopes & denes, lowland & mid altitude heath, upland gills & moorland fringes.

Design principles

Stands of pure juniper. Minor species in smaller numbers.

Hawthorn Scrub - NVC W21

Crataegus monogyna - Hedera helix scrub

Region

Widespread

Character

Diverse

Geology

Absent only from peat.

Soils

Most neutral or base-rich soils.

Species

Hawthorn is dominant, often accompanied by Blackthorn, Elder, Rose & Bramble species, Honeysuckle with Rowan, Ash or Hazel as trees. On the Magnesian Limestone species such as Privet & Dogwood may occur, and a wider range of roses (R. pimpinellifolia, R. mollis, R. coriifolia, R. afzeliana). Blackthorn may replace hawthorn as the dominant shrub on the coast being more tolerant of salt spray.

Ground flora & fauna

Ivy & Bramble

Structure

Extremely variable from scattered shrubs to dense continuous cover.

Management principles

- Intervention rarely required unless encroaching on other valued habitat.
- Maintain or create areas of open space.

Planting sites for new woods

Woodland margins, road verges, coastal and escarpment sites.

Design principles

Grassland/scrub mosaics. Design to promote diversity of structure and a high proportion of open space. Planting mixtures dominated by shrub species common in the locality (Hawthorn, Blackthorn, Dog Rose etc.) with occasional trees (Ash, Rowan). Less common species could be allowed to colonise naturally.

Blackthorn Scrub - NVC W22

Prunus spinosa - Rubus fruticosus scrub

Region

Widespread but sparse. More common on the East Durham Plateau

Character

Woodland margins. Abandoned grassland.

Geology

Generally associated with mesotrophic soils, avoiding both strongly acid soils, droughty rendzinas and infertile sites.

Soils

Absent from peat. More common on Magnesian Limestone.

Species

Blackthorn overwhelmingly dominant with occasional Hazel or Wild Privet.

Ground flora & fauna

Ivy & Bramble

Structure

Dense Blackthorn dominated thickets usually to 4m in height.

Management principles

Intervention rarely required unless encroaching on other valued habitat.

Planting sites for new woods

Coastal sites. Woodland margins on moist, moderately base rich soils.

Design principles

Blackthorn dominated stands.

Bramble Scrub - NVC W24/W25

Rubus fruiticosus scrub

Region

Widespread

Character

Low spreading scrub of woodland edge, roadside, derelict land.

Geology

Any except acidic peats.

Soils

Wide range of soils from mildly acidic to calcareous.

Species

Variable. Bramble with individual Rose sp., Hawthorn, Blackthorn or Elder. On coastal sites low scrub may occur in more open situations & contain a greater range of species (Rosa canina, R. pimpinellifolia, R. mollis, R. coriifolia, R. afzeliana, Salix repens)

Ground flora & fauna

Usually absent

Structure

Mosaic of grassland & bramble with occasional trees & shrubs, particularly bird sown species.

Management principles

Intervention rarely required unless encroaching on other valued habitat.

Planting sites for new woods

Woodland margins. Road verges.

Design principles

Low edge of Bramble and Rose to other mixtures.

Gorse Scrub - NVC W23

Ulex europaeus scrub

Region

Widespread. Absent from high moorlands.

Character

Continuous or open scrub.

Geology

Absent only from peat.

Soils

Free draining, mesotrophic & oligotrophic.

Species

Usually dominated by Gorse, occasionally with Broom and Bramble

Ground flora & fauna

Usually absent

Structure

Gorse dominated low canopy 2 - 3m either continuous or in a mosaic with grassland.

Management principles

Intervention rarely required unless encroaching on other valued habitat.

Planting sites for new woods

Infertile sites - mineral wastes. In most cases there will be alternatives with greater nature conservation or landscape value. Management can be a problem, particularly fire hazard & encroachment of other habitats.

Design principles

Single species stands of Gorse or Gorse and Broom.