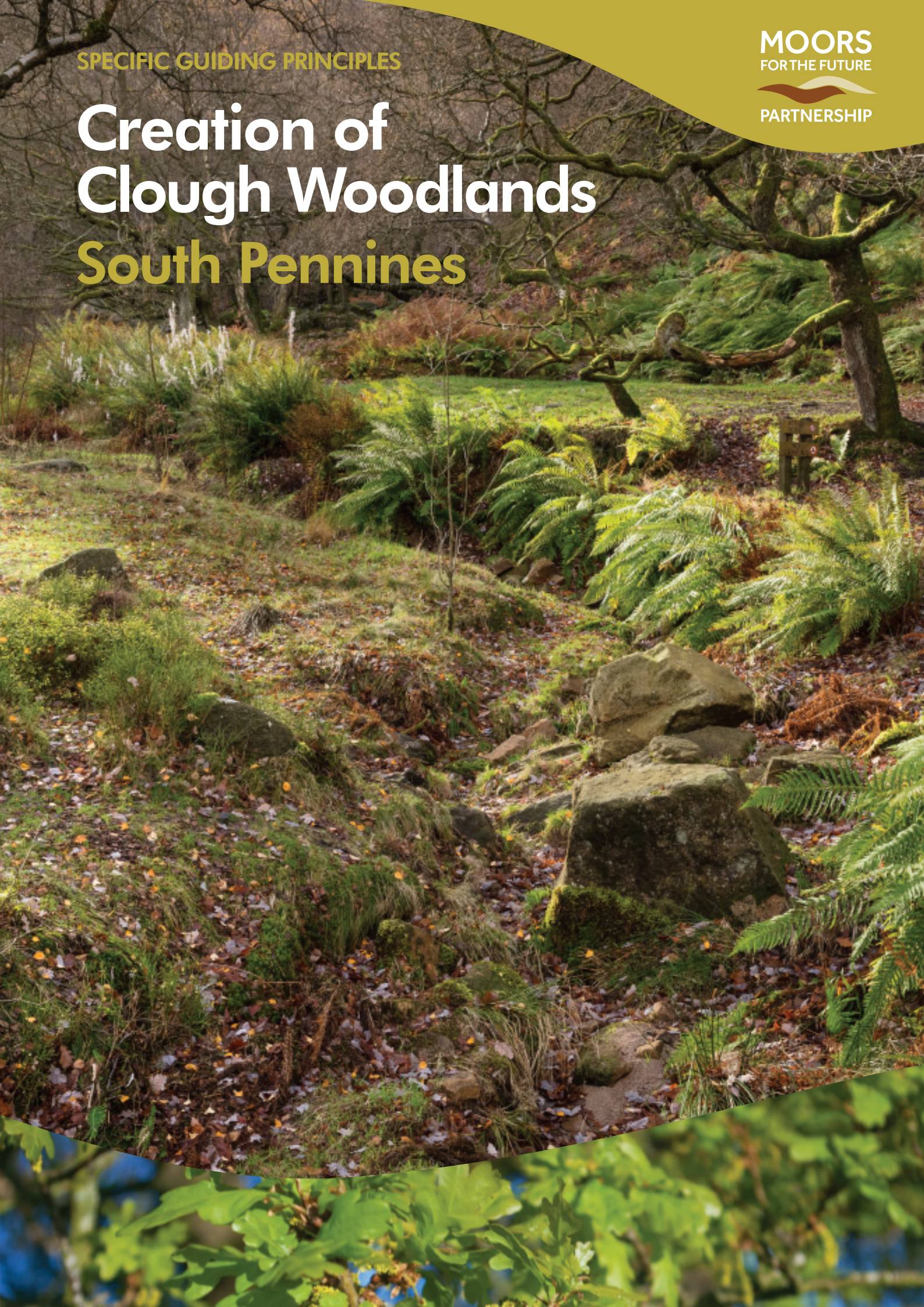
SPECIFIC GUIDING PRINCIPLES

Creation of Clough Woodlands

South Pennines

MOORS FOR THE FUTURE PARTNERSHIP



Contents

NATURAL ENGLAND

This edition of the Clough Woodland Guiding Principles has been reviewed and revised following input from Natural England. Guidance set out on this document may be subject to change following publication of the Defra Tree Strategy and emergence of new evidence.

1 Introduction

Clough woodlands are areas of steep-sided woodland found on valley sides on the edge of open moorland. They are of value for:

- **Wildlife**
  Providing habitat for woodland plants, invertebrates and birds as well as shelter for species more associated with adjacent areas of moorland. The presence of clough woodlands also provides opportunities for the development of diverse woodland/moorland edge habitats.

- **Water, air and land management**
  Clough woodlands can help to improve water quality as well as contributing to the reduction of downstream flood risk. Woodland canopy adjacent to watercourses provides shade, thereby helping to control water temperature with resulting benefits for freshwater ecology and chemistry. Woodlands can also play a part in the control of atmospheric pollutants as well as reducing soil erosion and increasing the stability of slopes.

- **Landscape**
  Areas of clough woodland enhance the landscape by increasing its diversity.

- **Agriculture and forestry**
  Clough woodlands can be used to provide shelter and shade for livestock, in addition to which they can help to control Bracken. Appropriately managed, they can also be a source of timber for use as fuel and in wood crafts.

- **Control of wildfires**
  Although the role of native woodland in wildfires has not been well studied, clough woodlands may play a role in reducing the spread of wildfires as they are regarded as a 'low-risk habitat' in contrast to 'high-risk' moorland, heathland and grassland habitats. They may also reduce the 'chimney effect' of moorland cloughs.[1]

Although clough woodlands are an integral part of the moorland landscape, they have declined over the years, in part due to high grazing pressure, and this has led to small, fragmented areas of woodland with poor connectivity for wildlife and a decline in biodiversity.

The Clough Woodlands Project aims to demonstrate how a partnership-based approach to land-use change at a catchment scale can deliver benefits in terms of flood risk management, water quality, soil erosion and biodiversity. The project is funded by the following:

- Environment Agency (EA)
- Forestry Commission (FC)
- The National Trust (NT)
- Woodland Trust (WT)
- Royal Society for the Protection of Birds (RSPB)

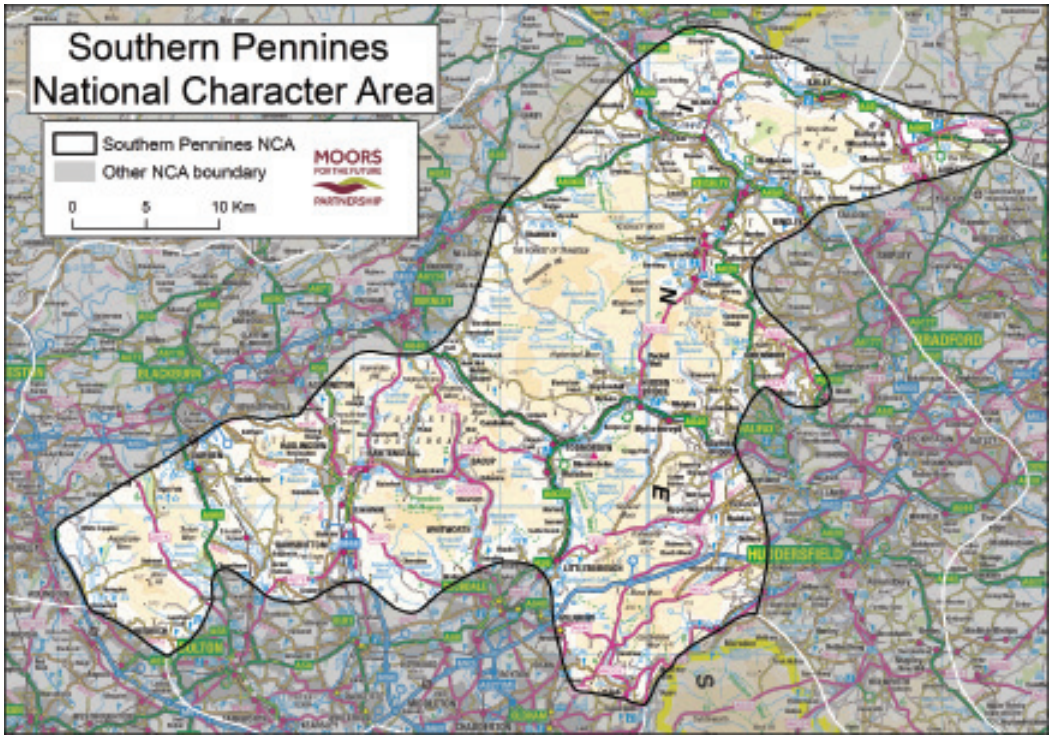
This document outlines the area-specific guiding principles to be adopted in the creation of any new native woodland in the South Pennine Moors National Character Area (NCA) –

as shown in Figure 1. It should be read alongside Moors for the Future Partnership's (MFFP) accompanying document, *Guiding principles for the creation of clough woodlands – methodology and design principles*, which outlines the methodology for woodland creation as well as broader design principles, for example those around fencing and grazing.

Any bespoke plan for woodland creation in this area should follow the principles outlined here, unless explicitly stated otherwise.

[1] See www.forestresearch.gov.uk/research/building-wildfire-resilience-into-forest-management-planning/
[2] *National Character Area profile 36. Southern Pennines*. Natural England, 2012

Figure 1: National Character Area 36 – Southern Pennines [2]



2 Why create woodland within the South Pennines?

Natural England's *Southern Pennines National Character Area profile (NCA profile 36)* identifies that there are opportunities to extend broadleaf woodland cover in appropriate locations to help mitigate climate change, improve water supply and quality, improve biodiversity, provide wood fuel and strengthen landscape character.

The creation of clough woodlands also makes a contribution to objectives in the Government's 25-year Environment Plan (2018) including:

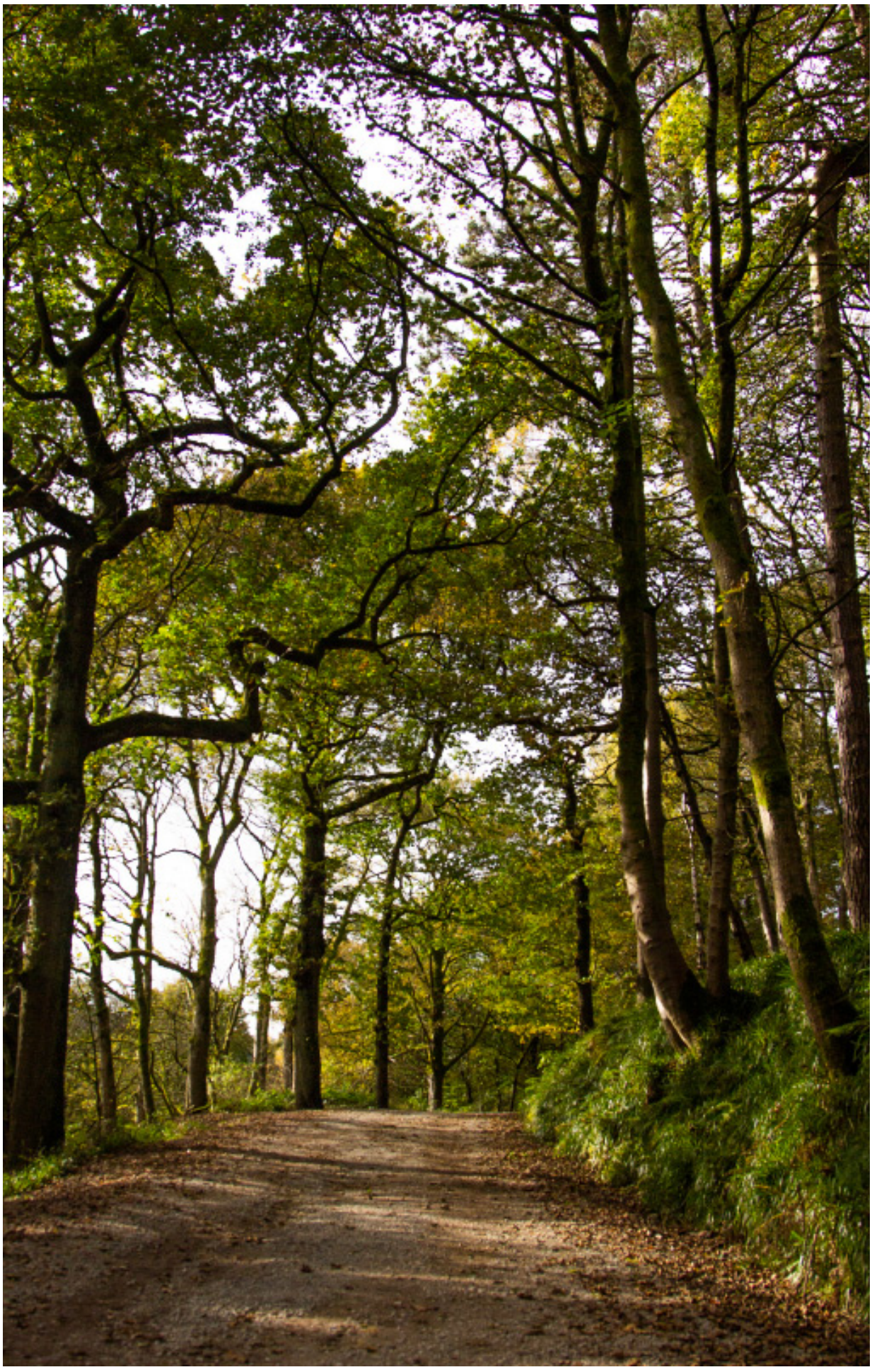
- increasing woodland cover
- creating wildlife-rich priority habitat
- improving water quality
- safeguarding and enhancing natural beauty.

Ways in which these objectives can be achieved include:

- Restoring, expanding and linking existing fragmented areas of broadleaved woodland and wood pasture, especially on valley sides.

- The creation of new upland woodland and wood pasture on valley sides and in cloughs and gills in order to stabilise stream banks, reduce erosion, capture carbon and increase wildlife value.

- Ensuring that new woodlands are created in suitable locations and include native species that are suitable for the physical location; thus contributing to the biodiversity resource, making the habitats more resilient to climate change, avoiding damage to historic features and strengthening landscape character.



3 Key features and designations

Where ecological, geological, cultural heritage, access and landscape features are identified as being important or protected, these must be carefully incorporated into woodland development plans in accordance with the principles outlined in Table 1 at the end of this document. In addition, local experts (see list of organisational stakeholders and consultees on page 14) should be consulted on the woodland design to ensure that this does not result in any adverse effects to protected characteristics.

Features and designations to be considered in the South Pennines area include:

3.1. South Pennine Moors Special Protection Area

This Special Protection Area (SPA) has been designated on the grounds of the presence of the following bird species:

- Merlin (at least 2.3% of the UK population)
- European Golden Plover (at least 1.9% of the UK breeding population)
- Short-eared Owl (at least 2.2% of the UK population)
- In summer, a diverse assemblage of breeding migratory birds of moorland and moorland-fringe habitats including: Lapwing, Dunlin, Snipe, Curlew, Redshank, Common Sandpiper, Whinchat, Wheatear, Ring Ouzel and Twite.

3.2. South Pennine Moors Special Area of Conservation

The presence of the following features forms the primary reason for the designation of this Special Area of Conservation (SAC):

- Blanket bogs
- European dry heath
- Old Sessile Oak woods with Holly and Hard-fern

The following qualifying features are also present, though not a primary reason for the selection of the site:

- Transition mires and quaking bogs
- North Atlantic wet heaths with Cross-leaved Heath

3.3. South Pennine Moors Sites of Special Scientific Interest

3.3.1. Vegetation

The South Pennines SSSI comprises the largest area of unenclosed moorland in West Yorkshire and contains the most diverse and extensive examples of upland plant communities in the county. These include:

- Blanket bog
- Acidic flushes and mires
- Wet heath
- Dry heath
- Acid grassland

Unlike the Dark Peak SSSI, which cites features such as Sessile Oak, Downy Birch and Alder-Ash woodlands within its reasons for SSSI notification, woodlands are not cited as a reason for notification for the South Pennine Moors SSSI. However, old Sessile Oak woods with Holly and Hard-fern are listed as features for the designation of the South Pennine Moors SAC; the citation for which states, "Around the fringes of the upland heath and bog of the South Pennines are blocks of old Sessile Oak woods, usually on slopes. Small areas of Alder woodland along stream-sides add to the overall richness of the woods."

3.3.2. Birds

The South Pennine moorlands support nationally important breeding populations of a number of key bird species as well as a diverse breeding assemblage of other moorland birds. Any planting will need to consider whether it would have a negative impact to the breeding and feeding habitats of these species, which may extend much further than the planted area.

Species of national importance include:

- Golden Plover
- Curlew
- Merlin
- Twite

Other birds found in the area include:

- Meadow Pipit
- Skylark
- Dunlin
- Red Grouse
- Lapwing
- Snipe
- Redshank
- Peregrine
- Short-eared Owl
- Wheatear
- Whinchat
- Ring Ouzel
- Stonechat
- Common Sandpiper
- Grey Wagtail

Assuming that planting takes place in accordance with the guiding principles outlined in the accompanying document, birds that are likely to benefit from the development of clough woodlands include:

- Ring Ouzel – benefits from growth of berry-bearing trees such as Rowan in vicinity of crags – as long as crags are buffered against extensive woodland formation

Birds that may benefit from associated changes in management include:

- Meadow Pipit – as a result of reduction in grazing pressure allowing taller grasses to develop
- Stonechat – as a result of reduced grazing pressure meaning that heath is more able to mature
- Snipe – could benefit where low/ungrazed mires are kept as open ground
- Short-eared Owl – as a result of reduced grazing pressure increasing numbers of small mammals

3.3.3. Geology

There are three locations of special geological interest within the South Pennine Moors SSSI:

- Derby Delph Quarry (south-west of Ripponden) where sandstones of Namurian age (part of the Carboniferous period dating from 326 to 313 million years ago) display two distinct bedding forms
- Standedge Road Cutting which provides one of the most complete sections through the Namurian Kinderscout Grit
- Pule Hill which has exposures of the Namurian Pule Hill Grit, at its type locality as well as a sequence of goniatite-bearing shales which can be used to accurately date the rocks

3.4. Cultural heritage

The South Pennines NCA incorporates 261 Scheduled Monuments, including the following archaeological and historical features:

- Many carved rocks on Rombalds Moor – which are of international significance
- Multiple cairns on Midgley Moor including Millers Grave, another cairn 400m north east of Upper Han Royd, a ring cairn 360m north east of Upper Han Royd and a cairn with an oval bank 430m north east of Upper Han Royd
- Watersheddles Cross (also known as the Hanging Stone) on Kiln Hill near Scar Top

In addition, there are many other sites of archaeological and historical interest on the moorlands including Mesolithic deposits, upstanding remains from the Neolithic/Bronze Age, Iron Age settlements, packhorse routes, medieval boundary stones marking out township rights and patterns of drystone walls – the last of these being particularly strong on higher shelves of land where upland pastures fringe the moorland. The area also has a large number of listed buildings (3,823).

It is therefore essential that consultation with Historic England as well as with local authority archaeology departments and other relevant local groups – for example the relevant county archaeological society – should take place in order to identify any sites that may need to be incorporated into woodland schemes. A list of relevant stakeholders and consultees can be found on page 14 of this document.

3.5. Access

The South Pennines NCA contains 4,190 kilometres of Public Rights of Way – including the nationally significant Pennine Way and Pennine Bridleway routes. In addition, a large part of the area is Countryside and Rights of Way (CRoW) Access Land.

Any woodland creation should therefore be designed in line with the guidelines set out in the accompanying 'Guiding principles for the creation of clough woodlands – methodology and design principles' document in order to ensure access is maintained for all users.

Key considerations for access include:

- New woodlands must not obstruct access.
- Where possible, fences across footpaths should be avoided. If this is not possible, the relevant Highways Authority must be consulted and appropriate stiles or gates should be put in place.
- Fences across open access land should have a stile every 200 metres.
- The use of barbed wire should be avoided.
- Local access groups should be consulted when planning the development of clough woodlands in areas where they might impact on activities of sports enthusiasts.

The area also falls under the remit of the South Pennine Fire Operations Group who will need to be consulted on any plans in order to ensure that access to the moorland can continue to be obtained in the event of a fire.

Several sites in the South Pennines are registered commons, which have additional restrictions on works including fencing. Applying for fencing on common land involves consulting interested parties, publicising the application, and an assessment process which can take several months.

3.6. Landscape

The South Pennines NCA profile describes the landscape as one of 'large-scale sweeping moorlands, pastures enclosed by drystone walls, and gritstone settlements contained within narrow valleys.'

It specifies that any woodland creation should be in accordance with two 'Statements of Environmental Opportunity' for the area:

- SEO 1: 'Safeguard, manage and enhance the large areas of open, expansive moorland, and the internationally important habitats and species they support, as well as protecting soils and water resources.'

- SEO 2: 'Manage and enhance the pastoral character of the moorland fringes, lower hills and valleys, with their mosaics of pastures and meadows, and their strong field patterns defined by drystone walls, to improve ecological networks and strengthen landscape character.'

The NCA profile also identifies the following opportunities for woodland creation:

- Additional opportunities 2: 'Manage existing woodlands and extend broadleaved woodland cover in appropriate locations to help deliver climate change mitigation, improve water quality and supply, improve biodiversity, provide biomass, and strengthen landscape character.'

Considerations for landscape should also be in accordance with guidance in the accompanying MFFP document, *Guiding principles for the creation of clough woodlands - methodology and design principles*, namely:

- Maintain open views across the moorland by ensuring clough woodlands are generally kept to valley sides and cloughs and do not encroach onto open moorland. The intended tree line should not rise above the break of slope on the moorland.
- Link fragmented woodlands on valley sides to improve biodiversity and the connectivity of these sites.
- Ensure that the shapes of planting schemes are in keeping with the landscape by avoiding straight lines. The use of open ground, natural colonisation and varied tree spacing should be used to ensure that the woodlands look natural.
- Natural colonisation should be used in exclosures, where possible, to help ensure a natural look and feel to the woodland.
- Fencing lines should be designed so that they are considerate to the landscape.
- Local Access Groups and relevant stakeholders (including those taking part in sporting activities and those managing visitors to the South Pennines) should be consulted.

Further landscape resources include local authority 'Local Landscape Character Assessments', including those for Bradford, Calderdale and Kirklees, and local authority landscape architects.

4 Landownership and tenancy

The area has a broad range of landownership and tenancy. All relevant landowners and occupiers must be consulted on woodland development plans prior to works commencing. Graziers and shoot tenants should also be consulted to ensure that the creation of woodland and exclusion zones does not impact on their ability to manage their livestock or moorlands – including to ensure that there will be no adverse impact on the wellbeing of livestock grazing in the area (for example, by ensuring continued access to water).

Considerations for grazing should be in accordance with the accompanying *Guiding Principles for the Creation of Clough Woodlands – methodology and design principles* document, namely:

- Where woodland creation is to be through a mixture of planting and natural colonisation, exclosures should be used.

- Where exclosures are not used and woodland creation is through planting, tree guards should be used and a suitable grazing regime should be decided upon in consultation with the grazier and landowner.

- Where appropriate, grazing might be used as a tool to assist in ongoing management. However, the desirability of this is dependent upon the objectives for the area. Grazing may play an important role where scattered trees, open woodland or 'wood pasture' are the desired outcome. In other cases, public benefit may best be delivered by the exclusion of grazing.

5 Organisational stakeholders and consultees

Ecology
- Natural England
- Forestry Commission
- Royal Society for the Protection of Birds
- Wildlife Trusts – Yorkshire and Lancashire
- Woodland Trust

Ordinary Watercourses and Land Drainage Consent
- This should be sought from the relevant Local Authority, e.g. Calderdale M.B.C.

Main River Consent
- Environment Agency

Lead Local Flood Authorities
- Lancashire County Council
- North Yorkshire Council
- Calderdale Council
- City of Bradford Metropolitan District Council
- Leeds City Council
- Kirklees Metropolitan Borough Council
- Greater Manchester Combined Authority

Access groups
- South Pennines Fire Operations Group
- Local Highways Authorities – including but not limited to:
    - City of Bradford Metropolitan District Council
    - Calderdale Council
    - Kirklees Council
    - Leeds City Council
    - Oldham Council
    - Rochdale Borough Council
    - Lancashire County Council
    - North Yorkshire County Council

Cultural heritage
- Historic England
- Local authority archaeological/cultural heritage teams
- Local archaeological groups:
    - Yorkshire Archaeological & Historical Society
    - Lancashire Archaeological Society
    - Hebden Bridge Local History Society, Marsden History Group and Saddleworth Historical Society, which together form the South Pennines History Group

Geology
- Yorkshire Geological Society
- GeoLancashire

6 Useful resources

Natural England

- *National Character Area Profile: 36 Southern Pennines (NE323)*
  http://publications.naturalengland.org.uk/publication/511867

- *European Site Conservation Objectives for South Pennine Moors SAC (UK0030280)*
  http://publications.naturalengland.org.uk/publication/4973604919836672

- *European Site Conservation Objectives for South Pennine Moors (Phase II) SPA (UK9007022)*
  http://publications.naturalengland.org.uk/publication/4885083764817920

- *South Pennine Moors SSSI*
  https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1007196

JNCC

- *South Pennine Moors SAC*
  http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030280

- *South Pennine Moors SPA*
  http://jncc.defra.gov.uk/page-2001

Defra

- *Countryside Stewardship Woodland Creation Grant Manual 2018*
  https://www.gov.uk/guidance/create-woodland-overview

Forestry Commission

- *Woodland Creation Hub including information on current funding opportunities*
  https://www.forestry.gov.uk/england-woodlandcreation

Environment Agency

- *Woodland for Water: Woodland measures for meeting Water Framework Directive objectives*
  https://www.forestresearch.gov.uk/research/forest-hydrology/woodland-for-water-woodland-measures-for-meeting-water-framework-directive-objectives/
- *Working with Natural Processes to reduce flood risk*
  https://www.gov.uk/government/publications/working-with-natural-processes-to-reduce-flood-risk

Table 1: How protected and special features in the South Pennines will be conserved in the creation of clough woodland

Feature	Impact of woodland	Survey
Blanket bog	Increase in scrub and tree cover	Areas of blanket bog (peat > 40cm deep regardless of vegetation) to be mapped
Blanket bog and moorland tops: *Golden Plover, Merlin, Dunlin, Curlew, Snipe, Short-eared Owl, Peregrine*	Reduction in open moor and breeding/foraging habitat Risk of predation of breeding waders close to woodland edge	Local advice (for example from Natural England/RSPB) to be sought on bird populations
Dry heath	Increase in scrub and tree cover	Areas of dry heath to be mapped
Dry heath on clough sides: *Merlin, Ring Ouzel, Short-eared Owl, Twite*	Impact on nesting birds of tall heather, heathland invertebrates and specialist plants	Advice to be sought on local bird populations and any scarce plants or invertebrates (e.g. from Natural England/RSPB) Nesting sites and feeding grounds to be mapped
Wet heath	Increase in scrub and tree cover resulting in loss of typical wet heath vegetation	Increase in scrub and tree cover resulting in loss of typical wet heath vegetation
Acid flushes	Increase in scrub and tree cover	Areas of acid flushes to be mapped
Old Sessile Oak woodland	Potential to improve connectivity between ancient woodland sites	Areas of old Sessile Oak woodland to be mapped

Mitigation	Management plan
• No trees should be planted on blanket bog habitat • A 20m buffer zone must be applied around habitats identified as blanket bog	Habitat monitored through: • baseline surveys in first year and creation of control sites • sites monitored annually for at least 3–5 years after exclosure, to identify priorities for maintaining open ground Targets to ensure that buffer zones and open ground are maintained through ongoing management
• No trees to be planted on blanket bog • Flat and gently sloping moorland areas to be excluded from planting • Planting to be restricted to steeper sides, slopes, cloughs and valleys • Expected tree height not to rise above the moorland edge/break of slope • All areas of mature heath (potential Merlin nesting habitat) to remain unplanted • Access to wet features and flushes on open moor to be retained for foraging breeding waders • Woodland edges to consist of widely spaced trees (less than 20% tree cover) to reduce impact of predators	• Management plan to consider the need for predator control • Monitor nearby wader hotspots to ensure acceptable impact of new woodlands on these populations
• Native tree and scrub cover to be limited to 20% in dry heath areas. Trees to be widely spaced with up to 15 metre spacing	Habitat monitored through: • baseline surveys in first year and creation of control sites • sites monitored annually for at least 3–5 years after exclosure, to identify priorities for maintaining open ground Targets to ensure that buffer zones and open ground are maintained through ongoing management
• Retain these areas as open moorland • Tree line to be kept below clough edge to allow clear flight line across the clough • Omit these areas from woodland creation (through both tree planting and natural regeneration)	• Monitor key species in the area
• Wet heath is a relatively rare habitat in the South Pennines and emphasis should be on restoration and maintenance where it occurs • It is unlikely that Natural England could consent loss of this habitat where it is a SSSI feature • Local advice should be taken to inform the decision on planting trees on areas of wet heath. As these areas are on a pivot – decisions to be made on either the creation of wet woodland or to retain the wet heath/shallow peat habitat • Native tree and scrub cover to be limited to 20% in wet heath areas • Trees to be widely spaced with up to 15 metre spacing	Habitat monitored through: • baseline surveys in first year and creation of control sites • sites monitored annually for at least 3–5 years after exclosure, to identify priorities for maintaining open ground Targets to ensure that buffer zones and open ground are maintained through ongoing management
• In general, no trees to be planted on acid flushes with these to be retained as open sunlit habitats within planted areas • Some areas may however benefit from the establishment of wet woodland – depending on location, existing interest and surrounding habitats. Local advice should be taken • 20m buffer zone to be placed around identified habitats • Potential for areas to be lightly grazed to prevent deterioration	Habitat monitored through: • baseline surveys in first year and creation of control sites • sites monitored annually for at least 3–5 years after exclosure, to identify priorities for maintaining open ground Targets to ensure that buffer zones and open ground are maintained through ongoing management
• Where possible, scheme design should seek to connect these areas	n/a

Table 1: continued

Feature	Impact of woodland	Survey
Acid grassland	Low priority habitat – generally minimal negative impact. However, some areas may be of value for feeding Ring Ouzel and some specialist fungi and invertebrates	Areas of acid grassland to be mapped Advice to be sought on locations of bird populations and scarce plants and invertebrates (e.g. from Natural England/RSPB)
Species-rich grassland: *Skylark and Twite*	Potential loss of areas of species-rich grassland. Impact on Skylark and Twite	Areas of species rich grassland to be mapped. Advice to be sought (e.g. from Natural England/RSPB) on locations of bird populations (nesting sites and feeding grounds)
Bracken stands: *Ring Ouzel, Whinchat, Stonechat, Twite*	Impact on nesting birds and scarce ferns	Advice to be sought (e.g. from Natural England/RSPB) on locations of bird populations (including nesting grounds) and scarce ferns
Crags and rock ledges: *Peregrine and Ring Ouzel nesting habitat*	Potential to impact on Peregrine and Ring Ouzel nesting habitats	Crags and rock features to be mapped Local advice (e.g. from Natural England/RSPB) to be sought on bird populations Consult the British Mountaineering Council (if rock climbing is a current activity) to facilitate public awareness and mitigate adverse reactions
Crags and rock ledges: *specialised plants*	Potential to shade out plants that require open, sunlit ground	Crags and rock features to be mapped Surveys conducted to inform woodland scheme design Consult the British Mountaineering Council (if rock climbing is a current activity) to facilitate public awareness and mitigate adverse reactions
Birds	Disturbance and change to habitat	Advice to be sought on locations of bird populations (e.g. from Natural England/RSPB)
Archaeological and other cultural heritage features	Encroachment of tree and scree cover obscuring and damaging features Effect on heritage assets including views and significant aspects of setting	Survey of all features of interest including impact assessment and assessment of setting
Geological features	Encroachment of tree and scree cover obscuring and damaging features	Survey of all features of geological interest

Mitigation	Management plan
• Creation of closed canopy woodland may be acceptable, apart from in specific areas identified as important • Acid grassland is a designated feature of the South Pennine Moors SSSI which often occurs at moorland edges. It may be used for breeding by waders including curlew • Maintain areas of acid grassland as open ground and outside of exclosures	• Monitor key species in the area
• Exclude areas of species-rich grassland from woodland creation schemes (both tree planting and natural regeneration) • Ensure that the tree line is kept below the clough edge so allowing clear flight lines across the cloughs (Twite do not like to fly up over woodland due to the risk of predators)	• Monitor key species in the area
Appropriate approach depends on the precise nature of the Bracken stand. • Bracken over dwarf shrubs (e.g. Heather, Bilberry) to be maintained as open areas as should any areas known to be of importance for key bird species • Areas of Bracken over Creeping Soft-grass and/or Bluebells or over dense litter or bare ground may however be suitable for the development of open woodland • Follow guidelines for bracken control	• Monitor key species in the area
• Crags and rock features to be retained as open ground with a 20m buffer	• Monitor key species in the area
• Crags and rock features to be retained as open ground with a 20m buffer	• Monitor key species in the area
• The upland bird breeding season is often taken to run from 1 April to 15 July in the South Pennines. Activities with a potential to disturb nesting birds including vehicle access and machinery use should be avoided during this time. • Trees and fences should be kept below the clough edge	• Monitor key species in the area
• Features should be incorporated into areas of open ground • Fences must not cross features and should be sited at least 10 metres away • Archaeological and cultural heritage features can be included either within or outside of exclosures	• Targets to ensure that buffer zones are maintained through ongoing management
• Geological features to be incorporated into areas of open ground. Where trees are considered appropriate, they should be lightly spaced, with up to 15m between trees • Geological features can be included within or outside of exclosures	• Targets to ensure that buffer zones are maintained through ongoing management

PRODUCED BY MOORS FOR THE FUTURE PARTNERSHIP ON BEHALF OF THE PROJECT PARTNERS

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www.moorsforthefuture.org.uk

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