Dunsop Forest Plan 2015

Forestry Commission England

North England Forest District

Forestry Commission woodlands have been certified in accordance with the rules of the Forest Stewardship Council.

Planning and District Context

The Strategic Plan for the Public Forest Estate in England outlines the delivery of forest policy on the public forest estate at a national level. At a more local level there are six Forest Districts covering the country that directly oversee the implementation of policy actions in local public forest estate woodlands. Forest Enterprise England is the organisation responsible for managing the English public forest estate.

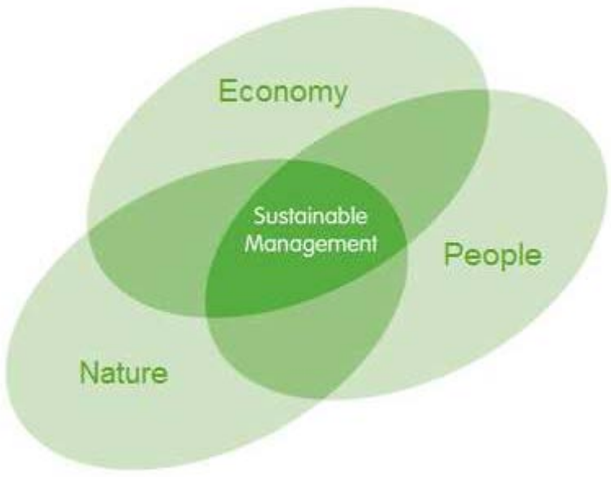
North England Forest District (NEFD) is the management unit that manages the public forest estate in Northern England. This is an extensive area encompassing 9 county or unitary authority areas from the Scottish border to Durham and Lancashire.

Our task is to realise the potential of each of the forests in our care for sustainable business opportunities, wildlife and nature conservation, and the enjoyment and well-being of local people and visitors. Each of our forests supports the economy through local jobs, sustainable timber production and the provision of recreation and tourism opportunities. All are funded by revenue from timber sales and recreation provision.

The woodlands of the district are currently arranged in 62 management areas, and their management is covered by individual ten year forest plans that identify local issues and the broad silvicultural management of the woods. Forest design plans are reviewed every five years.

These plans and their associated forest operations ensure that produce from the woodlands is endorsed by the Forest Stewardship Council® (FSC) and the Programme for the Endorsement of Forest Certification® (PEFC) as being produced from woodlands under good management that meet the requirements of the UK Woodland Assurance Standard and the UK Forest Standard.

Individual FDP's aim to deliver a range of public benefits with achievable objectives that deliver the three drivers of sustainable land management outlined in the North England Forest District Strategy.



These key drivers are supported by the following Forest District Policy;

- we will maximise the financial return from timber production compatible with achievement of other forest district objectives while complying with the UK Forestry Standard and meeting the requirements of the UK Woodland Assurance Scheme
- we will provide public access to all our forests and woodlands where there are no legal or safety restrictions. We will encourage and permit a wide range of recreational activities from walking and quiet enjoyment to more specialised activities including orienteering, horse riding and motor sports.
- we will ensure that rare and threatened habitats are protected and managed to maintain or enhance their conservation value

Dunsop Valley Forest Design Plan

This plan is a resubmission of the one submitted and approved in 2006. Following the five year review in 2012 the decision was made to review the objectives of the plan in order to deliver District Policy with consideration to available resources and the potential future economic value of the forest for commercial timber production.

Broadleaf conversion through natural regeneration at the scale proposed in the previous plan would require significant financial investment in the form of deer fencing and evidence on the ground has made it clear that the objectives for native woodland regeneration are unlikely to be met within the next rotation.

In addition, there has been an outbreak of *Phytophthora ramorum* in larch at the southern end of Staple Oak fell.

To take account of these factors, the Dunsop plan has been revised ahead of time and presented as a full resubmission.

Part 1 Background Information

Introduction

The Dunsop woods lie within the Forest of Bowland Area of Outstanding Natural Beauty, in Lancashire. They are situated to the north of the small village of Dunsop Bridge. The area amounts to 187ha of freehold land; purchased from the Duchy of Lancaster in 1952 and subsequently afforested by the Forestry Commission from the late 1950's to 1970. Management at this time focused on maximising softwood timber output with some regard to landscape through the planting of a variety of mixed conifer species.

The process of restructuring has begun with the completion of three clear felled areas in accordance to the Forest Design Plan. 10ha have been restocked with spruce and larch and 25 ha self seeded with mainly conifer natural regeneration.

Current Woodland composition

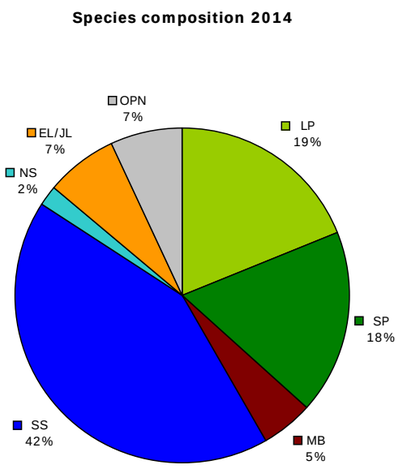
Of the total area 169 ha is woodland.

Of this woodland area, 55% has a tree cover, 7% is open land and 36% is felled, either awaiting restocking or stocked through natural regeneration. 2% is classed as unproductive.

Species

Coniferous trees dominate, with Sitka spruce and Lodgepole/Scots pine dominating. Other tree species present include Norway spruce and larch. There are areas of broadleaved trees particularly in Black Plantation and Dunsop Wood to the southern end of the valley.

Of the tree covered area, 88% is conifer, predominantly Sitka spruce and 5% is broadleaved and 7% open space.



Age class

The majority of first rotation conifers were planted within the period 1940 - 1970. The initial felling of these first rotation crops began in 2000 and subsequently restocked with 10ha of SS and JL in 2003. A further 25 ha was felled in 2011/12 on Beatrix South (now fully stocked with SS, JL and LP natural regeneration by 2014) and 16.5 ha clear felled in 2013 (currently unplanted).

Designated areas

Dunsop lies wholly within the Forest of Bowland Area of Outstanding Natural Beauty. All the adjoining open moorland is part of the Bowland Fells SSSI. The adjoining land in the valley bottom, owned by United Utilities is designated as a Biological Heritage Site.

Soils and Topography

The Dunsop woodland lies between 130 and 370 metres above sea level with generally an east – west aspect with steep to moderate slopes on both sides of the valley. The soils consist of a range that includes iron pans, peaty gleys and smaller areas of blanket bog.

Landscape

The forest is prominent from several minor, but well used, public highways and from numerous public footpaths and is most commonly viewed from the south. The forest is large enough to dominate the wider landscape from most viewpoints.

The Dunsop woodland is within the Forest of Bowland AONB landscape character type B - Unenclosed Moorland Hills, character area B7 (Langden) - for which the following key characteristics are identified.

1. Dramatic cloughs or valleys are incised into the hillsides and often contain fast flowing streams
2. Open and exposed character, with a strong sense of remoteness and tranquillity
3. Woodland on the clough or valley sides
4. Stone walls and fences are occasional features, but do not dominate landscape pattern

Principle landscape objectives within the AONB are to:

- Promote sustainable land management practices to help conserve and enhance the AONB landscape (based on 'guidelines for managing landscape change' within the Forest of Bowland AONB Landscape Character Assessment [2009])

- Encourage habitat creation and buffering of existing habitats in line with Biodiversity 2020 outcomes (and appropriate to landscape character), aiming to create more, bigger and more connected habitats

The Forest of Bowland AONB Management Plan (2014 – 2019) includes several landscape and woodland management related actions and objectives summarized below:

Objective 1.1 Landscape
Recognise the founding principles of the European Landscape Convention and implement the AONB Landscape Character Assessment as an integrated approach to managing landscape change.

Action 1.1F Develop plan for managing landscape change due to loss of woodland and veteran trees through increased incident of tree disease (e.g. Phytophthora ramorum, Chalara fraxinea).

Objective 1.3 Habitats
Support the delivery of 'Biodiversity 2020: a Strategy for England's Wildlife and Ecosystem Services' outcome 1A, 1B & 1D, with particular focus on peatland, blanket bog and other wet habitats, species rich grasslands and woodlands.

Action 1.3G Support creation of new native woodland in appropriate sites and the expansion of existing woodlands to reduce habitat fragmentation
Action 1.3H Conserve and enhance native woodland through appropriate management (e.g. small-scale, traditional coppice techniques), aiming to maintain good structure and biodiversity

Objective 2.1 Farming and Land Management
Promote and implement sustainable land management and farming practices that conserve and enhance the natural beauty of the landscape

Action 2.1H Support the development of local woodfuel economy, linked to improved woodland management and focusing on smaller and less accessible sites

Biodiversity

Wildlife interest within the conifer plantation is fairly limited due to the acid soil and dense shade, but some of the neighbouring land has significant interest. The moors above the forest are designated as SSSI and the area to the north of Beatrix Fell is a County Biological Heritage Site comprising a clough stream and open structured birch woodland (Figure 1).


Figure 1 Mixed native woodland on neighbouring land

The main areas of biological interest within the forest are the remnants of heather moorland and mire that have survived in unplanted areas such as the upper slopes of compartment 333 most northerly block. Species present include heather and bilberry with crowberry, heath bedstraw and wavy hair grass. On damper ground cross-leaved heath, cranberry, heath rush, soft rush, hare's tail cotton grass, purple moor grass and sphagnum and Polytrichum mosses occur, This habitat supports a population of green hairstreak butterflies.

Following recent harvesting operations structural diversity of trees is limited with the exception of Black Plantation which contains a number of over mature trees which are an important source of deadwood.

Communities and recreation

It is Forestry Commission general policy to promote quiet, informal recreation such as walking, cycling, picnicking, and studying wildlife. We also seek to provide opportunities for more specialist users and for events when this is compatible with site conditions and other management objectives.

However, even though the woodlands are freehold they are essentially landlocked by private land and thus not accessible for general public use and public recreational use is limited to the valley bottom bridleway which links the Slaidburn area to the Trough of Bowland public road. There are no public rights of way within or into the woodlands on either side of the valley although the forest road through Black Plantation is a popular local route. The Duchy of Lancaster, who retained the original sporting rights in the woodland, operates a successful tenanted pheasant shoot in the valley.

Heritage

There are no recorded heritage features within the woodland. Any features on neighbouring land are mostly associated with previous farming practices and land use.

Timber potential

The productive capacity of the land is mostly good with Sitka spruce growing especially well: the form and growth rate of Lodgepole pine is much poorer. Yield classes are generally of the range 12-18 for SS, 8-14 for LP/SP and 8-12 for larch. The most recent clearfell in 2013 produced 14,424 tonnes consisting 80% SS and 20% LP with an average value of £24.7/tonne. The most recent restocking of conifer was in 2003 with Sitka spruce and larch. Larch will no longer be planted due to the risk of Phytophthora ramorum.

Pests and diseases

Roe and Sika deer are resident in the valley and there is potential for damage to both tree crops and other habitat types through browsing and grazing. An annual cull is taken by Forestry Commission rangers; however, evidence of successful broadleaved regeneration from the recent stocking density assessment survey would suggest it is impractical to grow broadleaves without protection in the form of tubes or deer fencing.

Grey squirrels are well established in the area.

Larch is under serious threat from the disease Phytophthora ramorum and in 2013 an infection was identified at the southern end of Staple Oak Fell. In order to meet the requirements of the Statutory Plant Health Notice within the given timescale and the lack of suitable access for extraction these larch were chemically injected with roundup to kill them standing. The timber will be removed once the access situation has been resolved.

Access and roading

The eastern side of the forest is well served by internal roads and there are no significant restrictions on access to the public road network. Access for timber harvesting on the western side of the valley is more restricted and two new timber transfer points are proposed as an element of the plan to access timber in Staple Oak and Calder Moor. Each of these will require Environmental Impact Assessment determination. Additionally we propose to extend the forest road in Beatrix North to create a rough stoned forwarder track to access timber to the north of the beck. A temporary bailey bridge would be used to span the beck during harvesting operations to protect water quality. Post restocking with native broadleaves in this coupe no permanent harvesting infrastructure would be required.

Water Catchment

Several significant clough's either adjoin or run directly through the plantations which feed into the River Dunsop. Water extraction by United Utilities for public supply occurs off our holding to the north which is transported via a cast iron water pipeline down the eastern side of the valley within the woodland. All previous extraction from springs within the woodland has been discontinued. Standard Forest and Water Guidelines apply.

Part 2 Analysis and Concept

The factors outlined in Part 1 present some opportunities and issues. These are summarised below.

Factor	Opportunities	Issues
Soils	The soils over most areas are well suited to commercial conifers, principally spruce. Better soils occur in the valley sides and bottoms, and there is more potential for diversity here	
Landscape	Further opportunities exist for landscape improvement through diversification of the age class structure, incorporation of broadleaves into conifer woodland and realignment of the upper forest boundaries	The relatively narrow age class structure of the second rotation crops places constraints on the restructuring process. External boundaries will only be improved at the restocking stage
Biodiversity	There is potential for native woodland creation along the valley sides extending into the more sheltered and fertile clough areas Restructuring and diversification of age range will provide further benefits.	Potential for significant conifer natural regeneration
Recreation	Currently limited opportunity	Freehold but landlocked by private ownership
Current species	Sitka spruce is well suited to the site conditions and lodgepole and Scots pine provide species variety. There is opportunity to expand the range of broadleaved species in particular with regard to providing potential future woodfuel resources.	Larch is no longer desirable due to the threat of Phytophthora ramorum.
Windthrow hazard	Low to medium DAMS scores suggests that there may be opportunity for future thinning in some of the woodland where good access makes operations viable.	Currently limited access for harvesting on the western side of the valley.
Phytophthora ramorum		The southern end of Staple Oak will need to be felled in 2015 to remove the infected larch. Beyond this the felling of future coupes may be delayed to accommodate larch felling across the whole of North England FD in response to P.ramorum.

Part 3 Objectives and Proposals

The following key objectives have been identified for the Dunsop valley based on FC England National Policy and the North England Forest District Strategic Plan

Forest District Strategic Goal	How Dunsop FDP delivers	Plan Objectives
ECONOMIC Wood Production – *'we will maximise the financial return from timber production compatible with the achievement of other district objectives whilst complying with the UK Forestry Standard and meeting the requirements of the UK Woodland Assurance Scheme'*	Optimise the economic potential of conifer regeneration in Beatrix South whilst also addressing the landscape impact through realignment of the upper forest boundary and management of regeneration to improve integration with adjacent moorland habitat. Optimise economic value of recent clearfelling and existing conifer plantations through implementation of the harvesting and restocking plan.	Quantify species stocking density of regeneration in Cmpts 328,329,331and manage to maximise financial value for the future crop. Note: initial survey indicates area to be fully stocked with an average density 3800/ha 50% SS and 50% LP. 2013 clearfell in Beatrix North (previously achieved income of £25/T) to be restocked with MC to provide economic return for at least the next rotation. This is to be achieved through natural regeneration of SS, LP and SP as in Beatrix South). Extend felling period in Cmpt 323/324 (P2003) from current proposed fell year to optimise economic return circa. 2050. Establish two new timber transfer points at Staple Oak and northern end of Calder Moor to facilitate timber harvesting and provide access for future sustainable woodland management. Extend forward access beyond the existing forest road in Beatrix North to access timber at the northern end with the use of a temporary bailey bridge. Seek to silviculturally thin crops with a Dams score less than 17 and where good access permits thinning to be undertaken with no net forest cost loss or the net cost can be outweighed by the resulting improvement in the timber quality of the final crop.
Economic Regeneration – *'we will utilise the land and resources at our disposal to assist communities close to our forests and woodlands to help regenerate their economies'…forest land may be of value to sustainable developments which can help sustain local economies as well as mitigating climate change.*	Create new areas of broadleaf woodland with the objective of providing future localised woodfuel/biofuel markets. Focus on areas with limited access which lends itself to smaller scale harvesting and local contractors. Reduced haulage will enhance the economic value of these areas. Adopt Continuous Cover Forestry regimes as appropriate.	Adopt a phased approach, initially replanting Staple Oak (southern end) with MB species and adopting rotation lengths that will optimise future localised woodfuel markets. Conifer regeneration would be an acceptable component which could be removed through subsequent intervention. Depending on the success of the above seek to establish MB species in Staple Oak north (2022-2026) and longer term in Calder Moor block (post 2050). (Note: from previous experience at Beatrix South if establishment of mixed broadleaved woodland proves economically unviable due to excessive conifer regeneration then the future species composition will be reviewed at the 5 year review stage).
NATURE *'we will continue to diversify the age class structure of our even-aged woodlands and increase the value of all our woodlands and forest for wildlife'* *'we will ensure that rare and threatened habitats are protected and managed to maintain or enhance their conservation value'* *'work with others to achieve common objectives'*	The most extensive environmental improvements will be delivered through forest restructuring achieved through forest planning, felling, restocking and open space management. Expansion of new native mixed broadleaved woodland in Beatrix North to link and buffer the existing native clough woodland and riparian corridor. Contribute to objectives of the Forest of Bowland AONB Management Plan; Increase the significance of woodland and trees, and manage existing tree cover to provide a range of benefits, including helping to assimilate new infrastructure, restore lost habitats and landscape features, store carbon, reduce soil erosion, enhance water quality and provide timber, fuel and	Retain areas of mature Scots pine at Calder Moor to provide structural diversity, landscape and environmental benefits subject to wind throw risk. Continue low intervention management of Black Plantation to achieve a gradual conversion to mixed broadleaved woodland. Restocking in Cmpts 332,333,336 with native MB species. Species choice to optimise biological benefits according to the localised Ecological Site Classification. Delivered through felling and restructuring plan. Expansion of clough woodland habitat.

	recreational opportunities. Exploring opportunities to modify the overall structure of conifer plantations to create softer outlines, a more organic shape that responds to topography, and a higher broadleaved content. Soil carbon is also high under areas of woodland, and carbon storage and sequestering is also provided by the woodland itself. Expanding the potential for plantation-type forestry to be managed to accommodate recreational interests, including improvements to the rights of way network, to allow public participation, understanding and enjoyment of the natural environment.	The upper forest boundary will be realigned post harvesting to achieve better integration with adjacent moorland. Aim to achieve a more natural feathered edge by managing natural regeneration of conifer and broadleaves. Native MB establishment adjacent to valley bottom and extending upwards e.g. Cross Clough and northern edge of Calder Moor. CCF management of woodfuel crops. LTR of Scots pine, Black Plantation and areas of ecological broadleaved woodland. See 'People' objectives below.
PEOPLE *'we will utilise the land and resources at our disposal to assist communities close to our forests to enhance their environments and hence their quality of life'* *'we will provide public access to all our forests and woodlands where there are no legal or safety restrictions…'*	Improve the external attractiveness of the woodland through restructuring and species choice. Although the FC woodland is leasehold access is restricted due to neighbouring private land.	Native mixed broadleaf planting adjacent to valley bottom and external boundaries to enhance visual impact of the forest from public right of way along the valley and to link with United Utilities planting in the valley bottom. Improved landscape impact entering the valley from the south through MB establishment of Staple Oak. Future opportunity to promote local low key access to the woodland and links to the existing public right of way network in the valley should be further explored through consultation and agreement with our neighbours.

Longer term management proposals

The proposals in this plan will lead to a more diverse and resilient woodland, with a greater range of species and habitats as it moves into its next rotation. By the end of this rotation, it is anticipated that a substantial area of native broadleaved woodland will have been established, and the range of conifer species will have been extended. Depending on the mix of objectives at that time, there will be a wider range of management options available. These will include a continuation of timber production from mixed stands but the presence of seed-bearing stands of broadleaves will also offer the possibility of further extension of the native woodland resource through natural regeneration.

Part 4 Monitoring plan

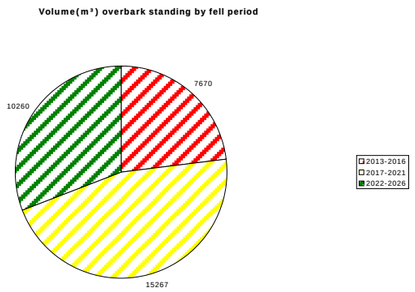
The objectives identified in Part 3 will be monitored in the following ways:

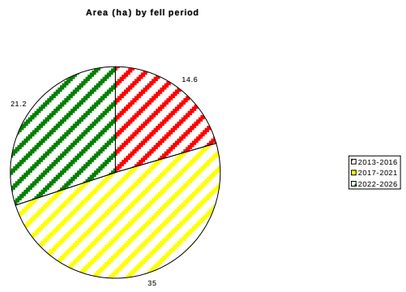
Objective	Criteria for success	Assessment
ECONOMIC Wood production Sustainable economic regeneration	 Marketable parcels of timber on offer to the trade. Improved timber harvesting access and infrastructure Successful establishment of future woodfuel crops in the southern end of Staple Oak.	 Production forecast and sales records Harvesting facilitated according to the felling plan OGB4 assessment
NATURE Restructuring New native woodland	 Delivery of FDP felling and restocking proposals Establishment	 Five yearly FDP review Visual and assessment according to FD policy for stocking density assessment of non productive broadleaves.
PEOPLE Explore opportunities to provide access to freehold woodland. Visual enhancement to visitors.	 Establishment of new native woodland and ongoing restructuring of the plantations.	 Evidence of discussion at FDP consultation. Five year FDP review.

Part 6 Forest Plan Outcomes

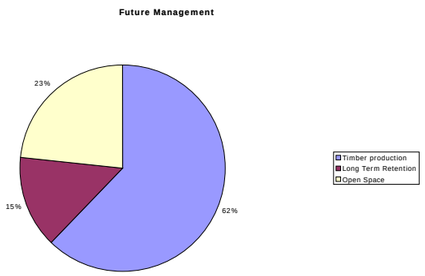
Timber production

Estimated timber volume and area for each felling period of the plan is listed below:

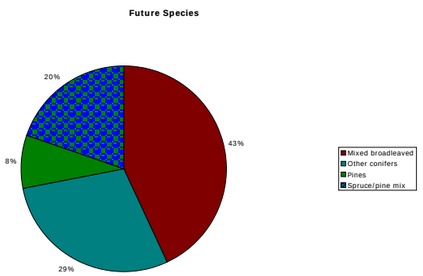




Future area by Management Type



Future area by Species Composition

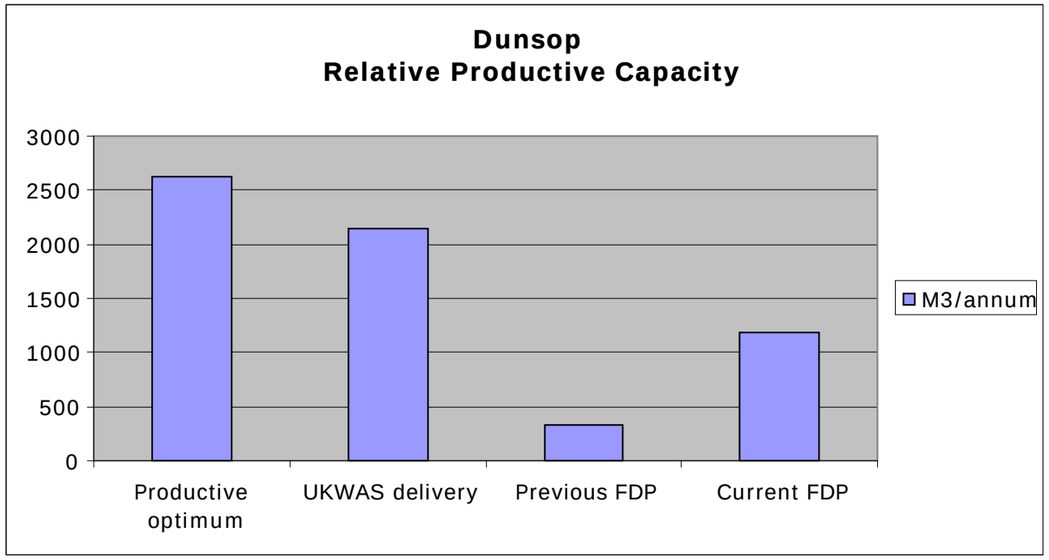


Productive Capacity Analysis

The graph below shows the relative productive capacity (m³/year) of the forest as a comparison between the following four scenarios;

1. Productive optimum – productive capacity assuming that the total productive area is planted with the optimum commercial species suited to the site (i.e. Sitka spruce).
2. UKWAS delivery – productive capacity achievable through minimum UKWAS compliance with a species percentage mix comprising 65% primary species (SS), 20% secondary species (MC), 5% broadleaved and 10% open space.
3. Previous FDP – productive capacity based on the percentage species mix and open land from the previous Forest Design Plan.
4. Current FDP – productive capacity based on the percentage species mix and open land from this plan.

Note: The difference between UKWAS delivery and FDP includes requirements such as riparian corridors, landscape, ancient woodland, heritage etc. which require going beyond the minimum species composition and open space percentages to achieve UKFS.



The United Kingdom Forest Standard (UKFS)

The UKFS is the reference standard for sustainable forest management in the UK. The UKFS is supported by a series of guidelines which outline the context for forestry in the UK, defines standards and requirements and provides a basis for regulation and monitoring. These include General Forestry Practice, Forests and Biodiversity; Climate Change, Historic Environment, Landscape, People, Soil and Water.

The Dunsop Forest Plan is able to demonstrate that relevant aspects of sustainable forest management have been considered and the stated objectives in Part 3 show how sustainable forest management will be achieved. The plan provides a clear means to communicate the proposals and to engage with interested parties and serves as an agreed statement of intent against which implementation can be checked and monitored.

In addition to conforming to general sustainable forest management principles UKFS is demonstrated in the following key areas:

Productivity	The productive potential is optimised through timber production achieved through delivery of the harvesting plan and delivery of ecosystem services and other non-market benefits included in biodiversity, climate change mitigation and landscape. This is represented in the Productive Capacity Analysis graph.
Structure	Future species composition; 43% mixed broadleaved, 20% spruce, 29% mixed conifer, 8% pine exceeds UKFS minimum requirements. Long term structure will improve through linking of permanent broadleaved and open habitats and long term retention of Scots pine.
Silvicultural	Clearfelling is the principal system but continuous cover principles will be adopted in Black Plantation and long term retention of areas of Scots pine that remain windfirm. Implementation of harvesting and restocking plans will introduce further age class diversity. Access improvements for harvesting are within the scope of EIA Regulations.
Biodiversity	Priority habitats and species are considered during the planning phase. Ecological connectivity will be enhanced by extending and linking areas of native broadleaved woodland and open space ensuring that a minimum of 15% of the area is managed with conservation and biodiversity as a major objective.
Climate change	Broadleaved woodland on Staple Oak will be managed with the principle objective of woodfuel. Long term retention and continuous cover areas will minimise soil disturbance. Utilisation of conifer natural regeneration in Beatrix south reduces the impact soil disturbance caused by cultivation.
Landscape	The planning process refers to the Local Landscape Character Assessment to inform the forest design. Visual sensitivity is analysed in the landscape appraisal with consideration to visibility and the importance and nature of views of the woodland from several key viewpoints. Shape, landform and scale are considered with particular emphasis on mitigating geometric shapes, symmetry and distinct parallel lines in the landscape through species choice, upper forest edge design and natural regeneration density.
People	The Forest Plan has been consulted with individuals, the local community and organisations with an interest in the management of the forest.

Forestry Commission
England

Dunsop
Location

1:150,000

N

Forestry Commission woodlands have been certified in accordance with the rules of the Forest Stewardship Council

FSC

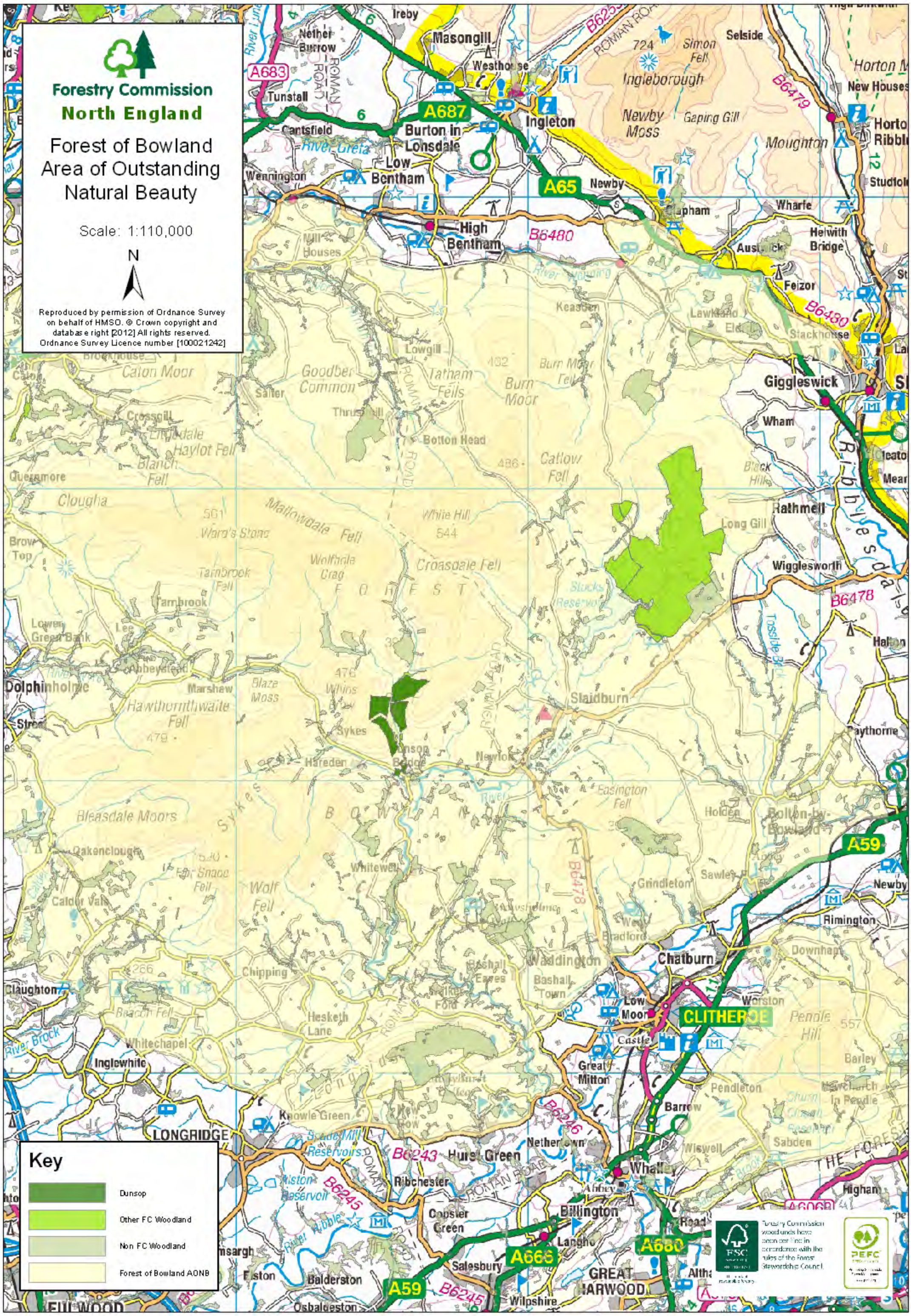
PEFC

Forestry Commission
North England

Forest of Bowland Area of Outstanding Natural Beauty

Scale: 1:110,000

N



Key

🟩	Dunsop
🟩	Other FC Woodland
🟩	Non FC Woodland
🟨	Forest of Bowland AONB

FSC

Forestry Commission woodlands have been certified in accordance with the rules of the Forest Stewardship Council

PEFC

Forestry Commission England

Dunsop Valley Current Species

1:10,000

N

Legend

- Pines
- Spruces
- Larches
- Mixed Conifer
- Mixed Broadleaves

Forestry Commission
North England

Dunsop

Contours and landform

Scale: 1:10,000

N

Woodland located on moderate to steep slopes on either side of north south orientated valley

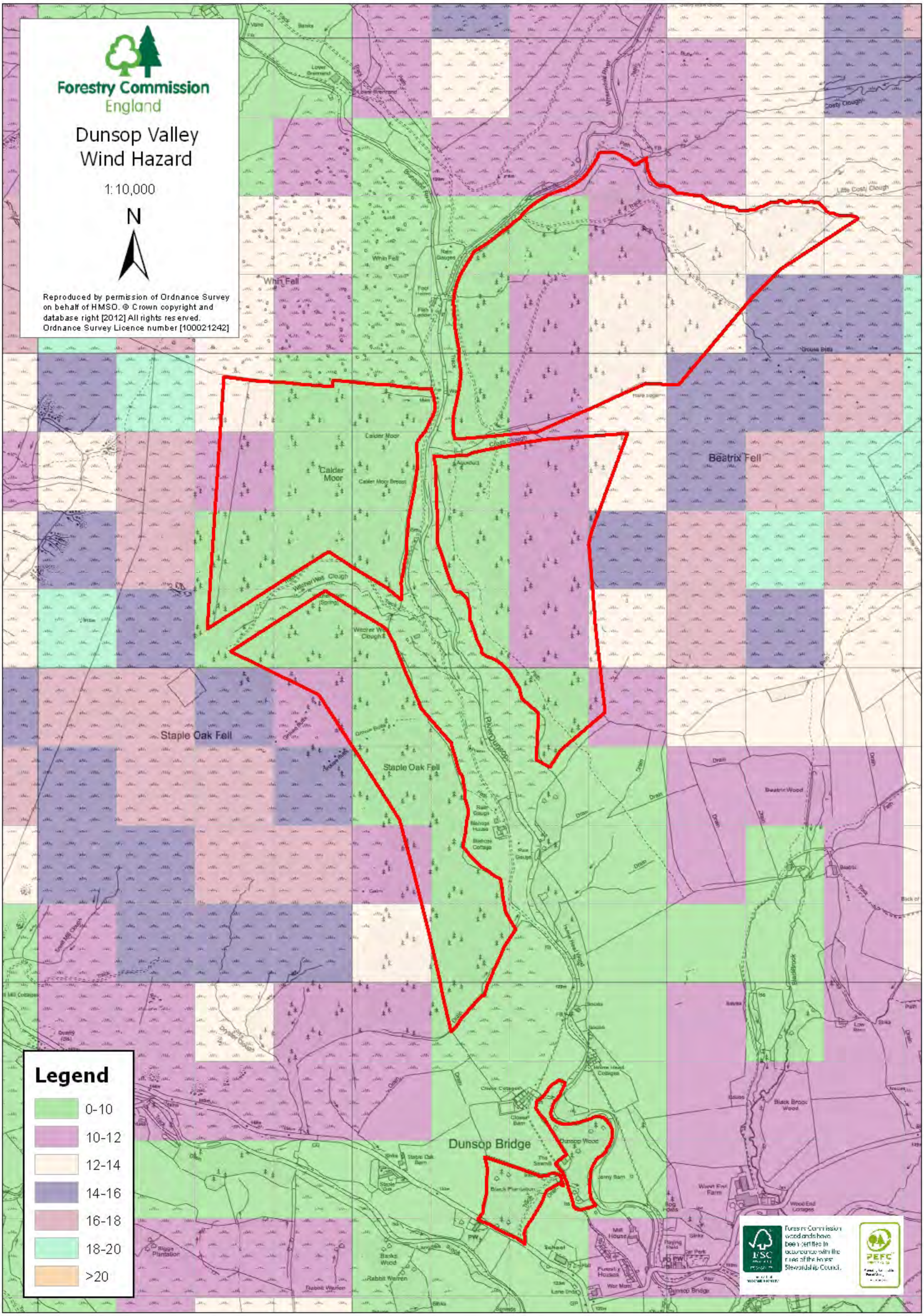
The Dunsop Valley woodland lies between 130 and 370m above sea level

Forestry Commission England

Dunsop Valley Wind Hazard

1:10,000

N

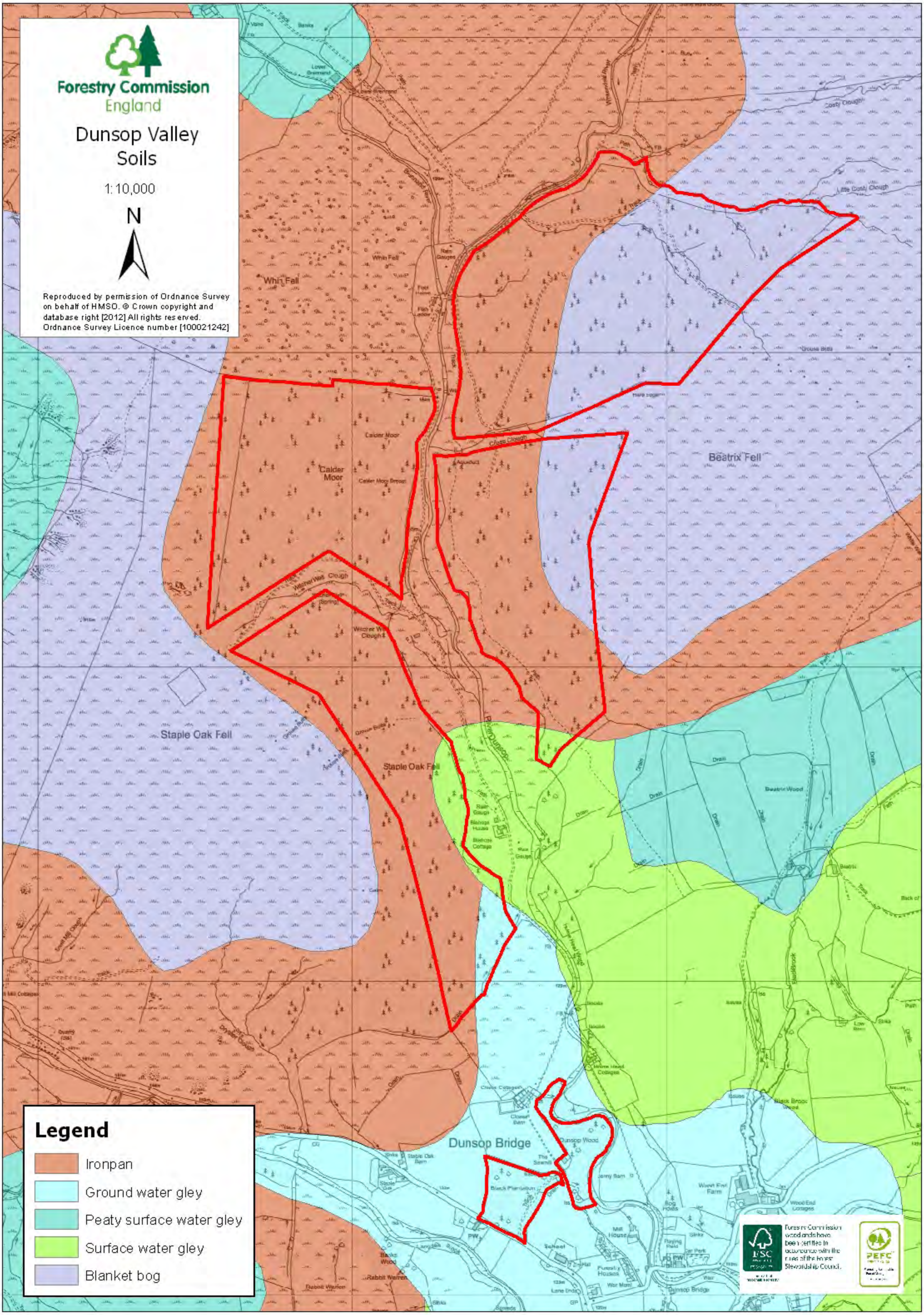


Forestry Commission England

Dunsop Valley Soils

1:10,000

N



Forestry Commission England

Dunsop Access

1:10,000

N

Lorry access only into eastern blocks. West side of valley restricted to forwarder access only.

Proposed new forwarder extraction track and timber transfer point

Key

- Forest Road
- PROW
- CROW Access

Forestry Commission is and will always have been committed to operations in accordance with the rules of the Forest Stewardship Council

FSC

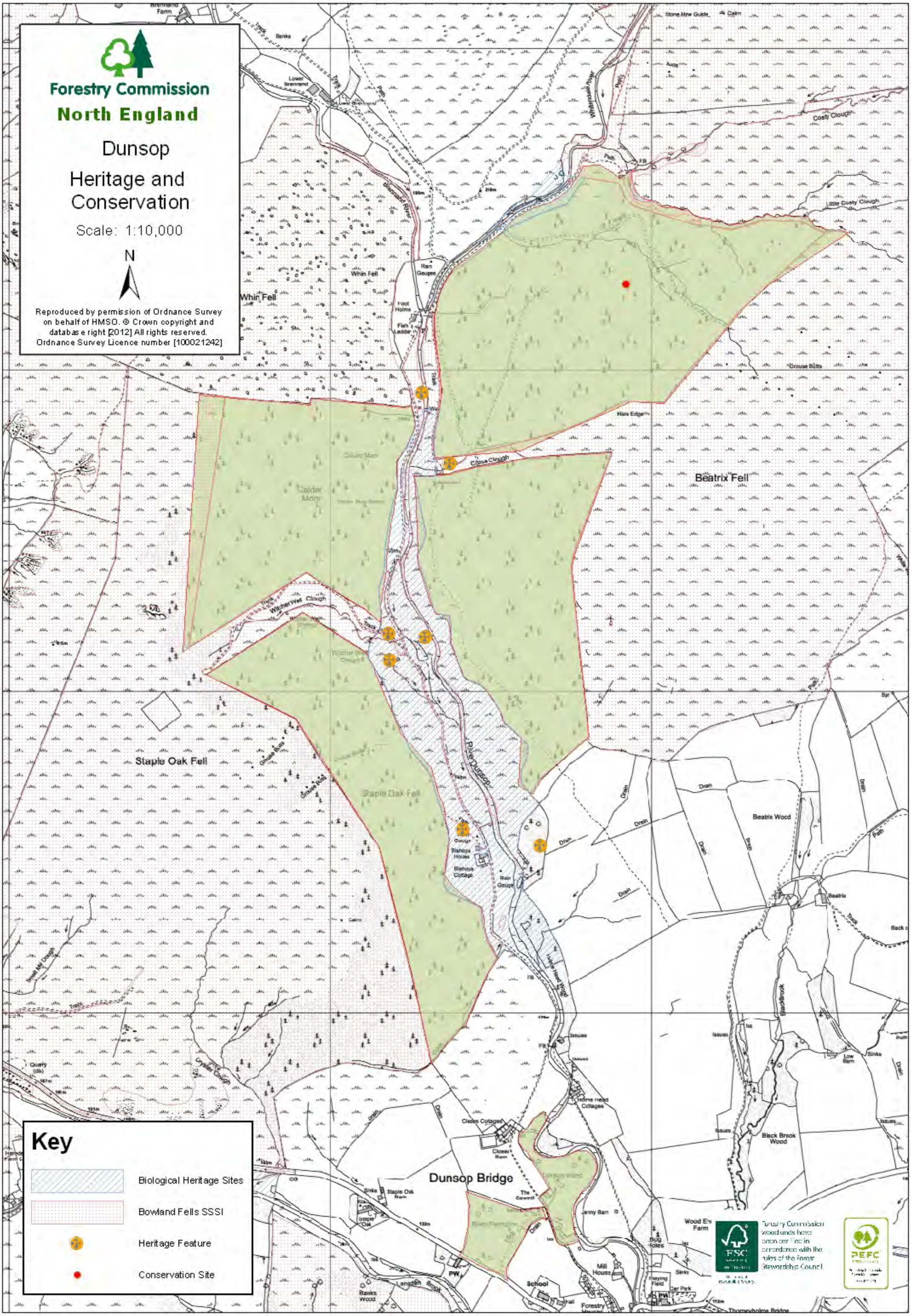
PEFC

Forestry Commission
North England

Dunsop Heritage and Conservation

Scale: 1:10,000

N



Forestry Commission England

Dunsop Valley Felling Plan

N

1:10,000

Proposed harvesting access and timber transfer point to access Calder Moor. EIA determination required.

New section of rough stoned forwarder track required and gabien foundation for temporary use of bailey bridge to access timber to the northern coupe

Proposed harvesting access and timber transfer point to access Staple Oak. EIA determination required.

Legend

- Open
- 2015-2016
- 2017-2021
- 2022-2026
- 2047-2051
- 2065 onwards
- Long term retention

Forestry Commission England

Dunsop Valley Future Species

N

1:10,000

Native mixed broadleaved species managed to maximise ecological and landscape benefits

Depending on the successful establishment and marketing of woodfuel from Staple Oak this coupe could also be managed as economically viable mixed broadleaves post felling circa 2050.

Long term retention of Scots Pine

Manage natural regeneration above realigned forest boundary to achieve scattered mixed woodland. Upper forest boundaries shown are indicative and may vary slightly depending on site conditions.

Mixed broadleaved species managed as an economic woodfuel resource

Native mixed broadleaved species along valley to enhance landscape benefit of adjacent broadleaved planting by United Utilities. Due to conifer regeneration the line shown is indicative and broadleaves will be focused in larger gaps

Gradual conversion to mixed broadleaved woodland.

Legend

- Open/scattered woodland
- MB
- MB/MC
- MB/SS
- MC
- MC/MB
- MC/SS
- SP

Forestry Commission woodlands have been certified in accordance with the rules of the Forest Stewardship Council.