

Bovey Valley Woods

(Plan period – 2024 to 2029)



WOODLAND
TRUST

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Introduction to the Woodland Trust Estate

The Woodland Trust owns and cares for well over 1,250 sites covering almost 30,000 hectares (ha) across the UK. This includes more than 4,000ha of ancient semi-natural woodland and almost 4,000ha of non-native plantations on ancient woodland sites and we have created over 5,000ha of new native woodland. We also manage other valuable habitats such as flower-rich grasslands, heaths, ponds/lakes and moorland.

Our Vision is:

“A UK rich in native woods and trees for people and wildlife.”

To realise all the environmental, social and economic benefits woods and trees bring to society, we:

- **Create Woodland** – championing the need to hugely increase the UK’s native woodland and trees.
- **Protect Woodland** – fighting to defend native woodland, especially irreplaceable ancient woodland and veteran trees; there should be no loss of ancient woodland
- **Restore Woodland** – ensuring the sensitive restoration of all damaged ancient woodland and the re-creation of native wooded landscapes.

Management of the Woodland Trust Estate

All our sites have a management plan which is freely accessible via our website

www.woodlandtrust.org.uk

Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

The following principles provide an overarching framework to guide the management of all our sites but we recognise that all woods are different and that their management also needs to reflect their local landscape, history and where appropriate support local projects and initiatives.

1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene in our woods when there is evidence that it is necessary to maintain or improve biodiversity, safety and to further the development of more resilient woods and landscapes.
2. We establish new native woodland for all the positive reasons set out in our Conservation Principles, preferably using natural regeneration but often by planting trees, particularly when there are opportunities for involving people.
3. We provide free public access to woods for quiet, informal recreation and our woods are managed to make them accessible, welcoming and safe. Where possible, we pro-actively engage with people to help them appreciate the value of woods and trees.
4. The long term vision for all our ancient woodland sites is to restore them to predominantly native species composition and semi-natural structure, a vision that equally applies to our secondary woods.
5. Existing semi-natural open ground and freshwater habitats are restored and maintained wherever their management can be sustained and new open ground habitats created where appropriate.
6. The natural and cultural heritage value of sites is taken into account in our management and in particular, our ancient trees are retained for as long as possible.
7. Land and woods can generate income both from the sustainable harvesting of wood products and the delivery of other services. We therefore consider the appropriateness of opportunities to generate income from our Estate to help support our aims.
8. We work with neighbours, local people, organisations and other stakeholders in developing the management of our woods. We recognise the benefits of local community woodland ownership and management. Where appropriate we encourage our woods to be used for local woodland, conservation, education and access initiatives.
9. We use and offer the Estate where appropriate, for the purpose of demonstration, evidence gathering and research associated with the conservation, recreational and sustainable management of woodlands. We maintain a network of sites for long-term monitoring and trials leading to reductions in plastics and pesticides.
10. Any activities we undertake are in line with our wider Conservation Principles, conform to sustainable forest management practices, are appropriate for the site and balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

The Public Management Plan

This public management plan describes the site and sets out the long term aims for our management and lists the Key Features which drive our management actions. The Key Features are specific to this site – their significance is outlined together with our long, 50 years and beyond, and our short, the next 5 years, term objectives for the management and enhancement of these features. The short term objectives are complemented by an outline Work Programme for the period of this management plan aimed at delivering our management aims.

Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. Any legally confidential or sensitive species information about this site is not included in this version of the plan.

There is a formal review of this plan every 5 years and we continually monitor our sites to assess the success of our management, therefore this printed version may quickly become out of date, particularly in relation to the planned work programme.

Please either consult The Woodland Trust website

www.woodlandtrust.org.uk

or contact the Woodland Trust

operations@woodlandtrust.org.uk

to confirm details of the current management programme.

A short glossary of technical terms can be found at the end of the plan.

Location and Access

Location maps and directions for how to find and access our woods, including this site, can be found by using the following link to the Woodland Trust web-site which contains information on accessible woodlands across the UK

<https://www.woodlandtrust.org.uk/visiting-woods/find-woods/>

In Scotland access to our sites is in accordance with the Land Reform Act (of Scotland) 2003 and the Scottish Outdoor Access Code.

In England, Wales and NI, with the exception of designated Public Rights of Ways, all routes across our sites are permissive in nature and where we have specific access provision for horse riders and/or cyclists this will be noted in the management plan.

The Management Plan

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Appendix 1 : Compartment Descriptions

GLOSSARY

1. SITE DETAILS

Bovey Valley Woods

Location:

Lustleigh, Bovey Tracey Grid reference: SX 78866 80088 OS 1:50,000 Sheet No. 191

Area:

86.19 hectares (212.98 acres)

External Designations:

Ancient Semi Natural Woodland, Landscape Recovery Area - Designated April 2023 - Whole Site, National Nature Reserve, National Park, Planted Ancient Woodland Site, Site of Special Scientific Interest, Special Area of Conservation

Internal Designations:

Demonstration Site for Ancient Woodland Restoration, Within WT Focus Area

2. SITE DESCRIPTION

The Bovey Valley Woods are a complex of three individual woodlands; Pullabrook, Hisley and Houndtor, all situated within a steep sided, peri-glacial valley on the south-east side of Dartmoor National Park. The valley features the river Bovey, a significant torrent watercourse with wooded banks, which rises between Postbridge and Mortonhamstead, and is fed by numerous deeply sloping brooks and tributaries such as the Becka. The Bovey is the largest tributary to the River Teign. The woodland soils are acidic, free draining loams over culm measures and granite bedrock that frequently protrude as outcrops and boulders throughout. Hisley Wood covers to 21.56 hectares of the site and lies within the nationally and EU legally designated 1422 hectare 'South Dartmoor Woods' Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). Much of the adjacent upland heathland and broadleaf woodland habitat, including Yarner Wood and Trendlebere Down common are owned and/or managed by Natural England, forming the East Dartmoor Woods and Heaths National Nature Reserve (NNR), one of the first NNRs to be designated in the UK in 1952. The entire valley area features biologically diverse and species rich habitats ranging from dry Oak Woodland habitat, to wet flushes, riparian bog and alluvial meadows, managed at a landscape scale in co-operative partnership with Natural England. 73% of Bovey Valley Woods is Ancient Woodland (63.51 hectares) and 50% of the ancient woodland was planted with conifer in the post war period and is deemed as Plantation on Ancient Woodland (PAWs). Half of the ancient woodland is therefore under a process of gradual restoration to a native broadleaf structure. The valley's watercourses not only contribute to biodiversity as an additional habitat, but also help provide the humid environment required by the bryophytes, lichen and fern species endemic to Dartmoor's temperate rainforest, some of which are internationally rare.

The Woodland Trust's properties: Hisley, Houndtor and Pullabrook Woods are treated as one management unit (Bovey Valley Woods) lying towards the middle and lower half of the valley system:

Pullabrook

Pullabrook wood is a 20 hectare (49.4 acres) Plantation on Ancient Woodland Site (PAWs) with a riparian open meadow alongside the Bovey river that is grazed by ponies to increase floral biodiversity and areas of naturalizing, mixed broadleaf Ancient Semi Natural Woodland (ANSW) (NVC W9/W17). Purchased by the Woodland Trust in 1985 with grant aid from the countryside commission, the site features a car park, timber stacking area and access tracks to the Old Manaton Road byway providing access to the rest of Bovey Valley Woods. 18.36 hectares of Pullabrook Wood is designated as ancient woodland, of which 9.36 hectares is PAWS.

Hisley

Hisley Wood is a 42.06 hectare (103.9 acres) PAWs site incorporating areas of SSSI and SAC ASNW and secondary woodland. The Bovey river flows along its southern boundary which is forded by a pre-18th century stone, pack-horse bridge. Other notable historic features include old wood banks, charcoal heaths, a glacial 'pudding stone' and the remains of a two medieval farmsteads. Much of the site is predominately NVC W9/W11/W17 Upland Oak, ANSW woodland with areas of Larch and former Sitka spruce plantation, which have been gradually strip clear-felled to encourage regeneration of secondary broadleaf woodland. The northern sections of the wood were historically open field farmland systems but now feature a canopy dominated by mature Ash and Larch (NVC W9), meaning the species composition and woodland structure will be greatly affected by diseases such as Ash Die Back and P. Ramorum in the short to medium term. Hisley shares a boundary with two registered commons, Trendlebere Down

and Lustleigh Cleave, depastured livestock occasionally find their way into the woodland for short-periods of time. An area of 19.74 hectares of Hisley Wood are designated as part of the SSSI, SAC area, and 21.02 hectares are classed as ancient woodland, of which 9.77 hectares is PAWs. Hisley Wood was purchased by the Woodland Trust in 1988 with support from the National Heritage Memorial Fund, the Dartmoor National Park Authority and the Nature Conservancy Council.

Houndtor

Houndtor Wood is a 24.13 hectare (59.6 acres) PAWs site of predominantly mature, even aged Douglas fir, Western Red Cedar and Beech plantation, with areas of naturally regenerating and restocked clearfell and naturalising ANSW broadleaf woodland (NVC W9). There is a small area of native ANSW broadleaf woodland in the western part of the site which is included within the South Dartmoor Woods SSSI/ SAC. Houndtor wood also features a historic pack horse bridge fording the river from the Old Manaton Road. 1.82 hectares of Houndtor wood is designated as part of the SSSI, SAC area, the entire woodland is designated as ancient woodland with 23.82 hectares is classed as PAWs. Houndtor Wood was purchased by the Woodland Trust in 2001 with support from the Heritage Lottery Fund.

Bovey Valley Woods contains 42.95 hectares of designated PAWs woodland, felled and restocked with conifer species such as Douglas Fir, Scots Pine and Larch in the 1960s, which is being managed in line with the Woodland Trust's policy on PAWs restoration to native broadleaf woodland, resembling the currently species mixture and structure of the ANSW compartments within Hisley, Houndtor and Pullabrook. The intended long term conversion of these areas back to semi-natural cover will greatly increase the sites biodiversity and habitat condition. There is an abundance of historic features in the woodland from the legacy of human habitation within the last two to three thousand years, such as farm field boundaries and charcoal heaths. Both farming and coppicing have created niche habitats such as remnant ancient trees from parkland and open glades, providing habitats for notable species and biodiversity, the ecotone between farmland, woodland, freshwater stream and moorland also add tremendous value to wildlife. Ancient boundaries between the wood and commons (Trendlebere Down and Lustleigh Cleave) also feature veteran trees and notable lower plant species. These boundaries are maintained today to prevent depastured commoner's livestock from entering the woods, however this occasionally occurs, providing a valuable, intermediate disturbance mechanism improving ground floral diversity.

Landscape

The site is typical of the Dartmoor National Character area (NCA150/NE519) which states 'Dartmoor's extensive upland moorland core rises above the surrounding small-scale, enclosed, predominantly pastoral landscape. Granite unites and characterises the entire National Character Area. On the moors the distinctive tors create key landscape features, interrupting otherwise unbroken skylines and ridges, and provide focal points for visitors. Isolated farmsteads and scattered villages utilise granite for buildings and walls; and the area's strong time depth and rich cultural heritage are visually evident because of the granite, which includes the largest concentration of prehistoric stone rows in Britain. The high moors are overlaid with thick deposits of peat and support internationally important blanket bogs surrounded by large expanses of upland heathland and grass moorland. The bogs and valley mires absorb and store significant amounts of water, as well as carbon, released into the 16 rivers and 8 reservoirs that supply the surrounding urban and rural populations and industry. As rivers leave the high moor they flow through deep-cut valleys steeped in woodland – both semi-natural broadleaved and coniferous plantation. The fast-flowing rivers, strewn with granite boulders, are popular for recreation, both passive and active'

Landscape Scale Partnership Working

The East Dartmoor Woods and Heaths National Nature Reserve (NNR) also known as the East Dartmoor NNR comprises 365 hectares within the valley of the River Bovey catchment on the south east side of Dartmoor National Park, and is one of England's oldest NNR. The land is in joint ownership between Natural England, who manage several woodlands and heathlands including Yarner Wood and Trendlebere Down SSSIs, and the Woodland Trust who manage Bovey Valley Woods.

The entire area offers opportunities to manage co-operatively for conservation at a landscape scale, in the spirit of the 'Lawton' principles (Lawton, 2010). The rich, diverse nature of the reserve is typified by the high number of habitat types and variable ground flora, ranging from dry Oak Woodland habitat and wet flushes on the valley side, to upland heathland, bog habitats and rich alluvial meadows within the valley. The NNR also features a mixture of Temperate Atlantic Rainforest including Ancient Semi Natural woodland (ASNW), Plantations on Ancient Woodland sites (PAWS), under active restoration and naturalising secondary woodland and a variety of associated habitats. The river and brooks themselves not only add an important extra habitat but also help provide the humid environment required by bryophytes and ferns. Open ground consisting of old, streamside meadows and remnant ancient trees further increase the biodiversity found here supporting a number of notable species.

The importance of this landscape for nature recovery has recently been recognised by Natural England by its designation as Landscape Recovery Area (LRA) through which support for landowners will be targeted over the next 30 years. A partnership of organisations, and private landowners within the LRA will formalise a working relationship over the initial two year development phase. Another facet of the LRA working is the potential establishment of a "Super NNR" covering the same area.

The Woodland Trust is committed to partnership working with Natural England and other neighbours within the wider landscape surrounding Bovey Valley Woods in order to achieve landscape scale nature recovery and biodiversity benefits.

3. LONG TERM POLICY

The growing understanding of the rarity and value of temperate rainforest emphasises the need where practical to ensure the key role of watercourses in creating the relative humidity in the Bovey Valley can be enhanced to maintain longer term climatic conditions that supports this habitat.

Development from a conifer dominated PAWs site, into a predominantly native broadleaved, semi-natural woodland habitat with a wide age, species and structural diversity. Large areas of the previous conifer plantations will have been restored, or continue to undergo restoration to native woodland through regular thinning interventions to control the light levels on the forest floor and prevent coarse, smothering vegetation from compromising ancient woodland ground flora. Care will be taken not to compromise niche habitats such as veteranising trees with bat or bird potential and all protected species, particularly mammals will be protected during operations.

Small areas of conifer clear-felling, restocked through either planting or natural regeneration may be appropriate in some areas such as riversides, or isolated groups of trees. Management of the semi-natural areas, such as the riparian zones, and removing of dominating species such holly, will be on-going to maintain the light and humidity levels that support the current large range of lichens, ferns, insects and flora. There will be regular management to maintain the light, airflow and humidity conditions necessary for species of temperate rainforest to thrive, and some areas will be lightly grazed with livestock such as cattle or horses to benefit invertebrates and flora, trending towards wood pasture in some areas over time. Tree species will be predominantly native, with some older beech and sycamore specimens that support the sites remaining rare, lower plant species. The SSSI/SAC areas will continue to be maintained within 'favourable' status and the whole woodland will continue to be an important resource for education and research in Earth Sciences. The archeological and cultural heritage of the site will be protected whilst similarly providing significant educational capital to the local area.

These woodlands will continue to provide space for quiet recreational activities such as walking that is popular in this area of Dartmoor, with occasional interpretive and engagement activity and regular volunteering. Work will continue in partnership with Dartmoor National Park to ensure the rights of way network is fit for purpose in the long term, to maintain access and where necessary to manage inappropriate recreational activity.

All invasive species will have been eradicated or will be under control with annual monitoring for introduction of new invasive, pests and diseases. The introduction of severe tree diseases such as *Phytophthora ramorum*, *Phytophthora pluvialis*, *Phaeocryptopus gaeumannii* (Swiss Needle Cast), *Ophiostoma novo-ulmi* (Dutch Elm Diseases) and *Hymenoschophus fraxinea* (Ash Die Back) will cause a major decline in the canopy components of ash, elm, Douglas fir and larch which dominate the canopy of Hisley Wood. Hisley will likely undergo a significant shift in species composition which will be adaptively managed, ensuring the maximum number of native tree species suitable to the site are represented to increase resilience to future diseases. There will have been a balance achieved between managing the safety aspects of many dead standing trees, and the ecological potential of an increase in standing deadwood for fungi and invertebrates. Bespoke mitigation will also have taken place, such as the transplanting of rare lichen species to ensure their long term survival.

4. KEY FEATURES

4.1 f1 Watercourses

Description
<p>Flowing through the site are several kilometers of upland watercourse including the Becka Brook and Bovey River, the largest tributaries of the Teign River.</p> <p>Natural flood management</p> <p>Natural Flood Management (NFM) presents an opportunity to create significant biodiversity, carbon storage and flood mitigation benefits for relatively low cost within the Bovey river catchment, and is a critical tool in the effort to reverse the biodiversity and climate crises. The recognition of the Bovey Valley as temperate rainforest site and the relative rarity and value of this habitat and the threat that a warming and drier climate poses to it condition, highlights the need to implement strategies to maintain relative humidity in the valley systems and in particular the areas within the National Nature Reserve.</p> <p>The newly reviewed Dartmoor National Park Partnerships Plan (2021-2026), emphasises the importance of “restoring natural hydrological systems and well managed soils [and] adopting natural flood management techniques in key catchments to improve water absorption, slow the flow and reduce flood risk”. Both Natural England and The Woodland Trust’s long-established commitment to partnership work and joint ownership of large areas of land within the East Dartmoor NNR enables the chance for NFM to be carried out at a coordinated land-landscape scale, in cooperation with the Dartmoor Headwaters Project and the Environment Agency.</p> <p>As part of this management plan cycle NFM interventions within the landholdings of both Natural England and the Woodland Trust will be carried out to begin delivering the applied concept of ‘wild water’ and ‘re-wooding’ of watercourses, in which catchment flow is encouraged to travel down through the landscape at a more naturalised rate and through a more diverse series of pathways, giving wildlife a chance to access this currently transitory resource. The NFM approach has been adopted due to overall benefits it offers to the SSSI/SAC features within the NNR. The work will create a more varied woodland structure while increasing and maintaining the habitats humidity, and create new, small scale glades in over-shaded areas by carrying out selective felling operations in the steep sided areas of the valley where more conventional terrestrial management is both undesirable and impractical. All interventions will involve managing and utilising existing tree resources within the terrestrial and riparian woodland zone to increase light-levels and construct natural flood management features, which will have a net-benefit on biodiversity within the NNR, in addition to flood-alleviation utility.</p>
Significance
<ul style="list-style-type: none">- Wet woodland and the elevated humidity of habitats with naturalised hydrology are an essential component of temperate rainforest and ensures the long-term survival of species dependent on this habitats unique abiotic conditions.- Essential to the long-term survival and recovery of salmonid populations, particularly Atlantic Salmon which is on the

edge of population collapse, and are in turn vital to the ecology of temperate rainforest habitats.

- Vital habitat for many other species such as otter, kingfisher, dipper, goosander and freshwater invertebrate communities.
- Management has large effect on downstream benefits such as reducing flooding of settlements and improving water quality.

Opportunities & Constraints

Opportunities

- Potential to enhance the development of wet woodland habitats along the Bovey and Becka
- Scope for 'stage zero' river restoration to fully reconnect the incised river channel with the wider flood plain.
- Opportunity for active monitoring of water variables such as Ph, temperature, turbidity and water quality.
- Realign riparian footpaths as mitigation for river bank erosion and more dynamic hydrological flow.

Constraints

- SSSI/SAC/NNR citations potentially limiting the scope of river restoration works.
- Low proportion of willow species in the riparian zones of the Bovey and Becka limiting the quality of wet woodland habitat
- Deeply incised main river channel reducing the feasibility of flood plain reconnection

Factors Causing Change

- Climate change causing elevated water temperatures affecting spawning of fish species and survival of river wildlife.
- Increasing acidity (lowering Ph) due to changes in the soil on the high moorland headwaters associated with Climate change.
- Collapsing populations, particularly of Atlantic salmon.
- Natural introduction of woody debris to the watercourse
- Climate change increase the intensity of rainfall events, particularly in winter, leading to riverbank erosion events, damage to footpaths and floodplain re-connection.
- Acute pollution incidents

Long term Objective (50 years+)

Through a combination of targeted interventions and natural processes the river Bovey and Becka brook will gradually become restored rivers with natural hydrology, supporting a rich diversity of wet woodland and flooded river meadow habitat, acting as a vital carbon store and natural flood management asset in the Teign catchment. The Eurasian Beaver will eventually naturally recolonize (circa 15 years) the sites riparian habitats and assist in the restoration of a wild river reconnected with its flood plain and able to exhibit natural dynamics, creating high quality habitat for all temperate rainforest species, but in particular, spawning and nursery habitats for keystone species of fish such as Atlantic Salmon.

Short term management Objectives for the plan period (5 years)

- - Delivery of project program of NFM interventions between 2024 – 2028 (see 'Wild Water' project proposal), but including installation of leaky woody dams, floodplain timber flow deflectors, hinged highflow attenuation trees over the main watercourse and planting of willow.

- Monitoring Atlantic Salmon and Brown/Sea Trout populations through electrofishing and REDD surveying.
- Riverfly species monitoring to assess water and habitat quality
- Retention and management of fallen trees or large woody debris in the river channel to facilitate re-naturalisation of watercourse feature.
- Maintain riverside banks, including coppicing and layering to minimise erosion and bank collapse during flood events.

4.2 f7 Historic Features

Description

The Bovey Valley Woods are deeply ingrained in the ancient cultural landscape of Dartmoor, with a history of over 4000 years of human occupation. The site features many unscheduled historical remnants such as old stone walls and wood banks demarcating field boundaries from derelict 14th century farmsteads (Boveycombe and Vinnimore) with associated ruined structures, that were abandoned in the early 1900s, but was one of the last subsistence farms on Dartmoor, with records of potatoes being grown there as late as the 1920s. Other features include a historic stone pack-horse fording bridge over the river Bovey and a glacial 'pudding stone', all located within Hisley Wood. The ancient woodland areas contain defunct charcoal hearths resulting from at least 400 years of coppice management, in addition to a network of disused medieval paths, which are evident throughout. For centuries, much of the secondary woodland areas were farmed or under a grazing regime from cattle resulting in a wood pasture type habitat that now supports rare and important lower plant species communities, particularly along historic boundary banks supporting the largest and oldest trees. An archeological excavation of Vinnimore Farmstead in 2017 revealed evidence of a century of occupation between 1750 and 1850, in addition to a derelict bread oven and fireplace, with associated artefacts including pottery and ironmongery.

Significance

Numerous historical features of academic and cultural interest spanning from the post-glacial period to modern era, unaffected by development or industrial activities, including sites of some of the last subsistence agriculture on Dartmoor. The protection of archaeological features is considered a priority and is a key objective of Dartmoor National Park Management Plan 2020 - 2025, stating that "archaeological heritage will be conserved, enhanced and visible". Consideration and management of historic features assists the Trust in achieving its aim of increasing people's awareness and enjoyment of woodland. The current woodland structure and species composition has been dominated by the historical human activities and habitation that have occurred in the woodland for over 4 millennia.

Opportunities & Constraints

Opportunities:

- Creation and maintenance of new open ground areas if significant features are found are in need of protection from tree roots, creating open, semi-natural habitat and increasing biodiversity.
- Interpretation and education of some historical features may help increase public awareness of issues within the woodland and wider landscape.
- High resolution aerial or terrestrial LiDAR surveys and digital surface modelling of archeological features have dual utility of scanning and modelling data on woodland structure.
- New access tracks such as the medieval paths from Boveycombe Farm to Gradner Rocks could be re-opened up and maintained through management to increase recreational value and preserve historic route/s.

- Management of habitat for rare species often synergistic with maintenance of linear historic features, for example ancient boundary management and lichen habitat improvement.
- Opportunities for archaeological dig and/or research project to gain insights into history of the numerous features.

Constraints:

- Protective measures around archaeological features throughout the valley constrain on-going management, timber extraction and access route improvements in places.
- Potential conflict between woodland management, species conservation and protection or archaeological study of historical features, such as requirement to maintain open ground and desire to carry out natural flood management activities.
- Degraded condition of the archaeological features limit the potential for fully understanding the archaeology and history of the site.

Factors Causing Change

- Woodland succession to mature, closed canopy woodland potentially damaging historical features due to tree root penetration, uprooting and falling timber.
- Woodland management activities and forestry machinery accidentally damaging historic features such as ancient track surfaces and charcoal hearths throughout the wood.
- Climate change and increased severity and intensity of flooding events putting historic features such as old stone Bridges on the River Bovey at great risk of damage or destruction. Increased storm events leading to greater risk of mature trees uprooting and damaging features.
- Reduced organisational budgets and shifting policy priorities in a changing world, making maintenance and repair of archeological features less regular or feasible.
- Access to improving technology creating new opportunities and ways of working for researching archaeological features.

Long term Objective (50 years+)

Protection and maintenance of all historic, archaeological features within the wood will remain a key objective of the management of the site, particularly during forestry operations involving heavy machinery. Research, education and interpretation have increased professional and public knowledge of the sites history, creating new insights into known features, the overall woodland and potentially revealing new discoveries (particularly through the use of new technologies such as LiDAR). In the context of climate change and increased severe weather events, large trees threatening features with uprooting or crushing have been managed to reduce risk, while carefully balancing the ecological management objectives of the site.

Short term management Objectives for the plan period (5 years)

1. Utilise aerial or terrestrial high resolution LiDAR survey to identify, digitise and categorise all historic features.
2. Review of all features identified and ensure value is assessed in conjunction with DNPA and suitable management put in place.
3. Develop pragmatic plan for long term maintenance and visitor interpretation by end plan period.
4. Work with local community, and interest groups with specialisms in cultural heritage of Dartmoor

5. Management of trees and habitats around selected features to protect and enhance the features and habitats
6. Work in partnership and conjunction with Natural England partners in the East Dartmoor NNR to form a joint approach on management of archaeological features including their role in supporting key lower plant assemblages.

4.3 F7 Connecting People with woods & trees

Description

The Woodland Trust own and manage the Bovey Valley woodlands Pullabrook, Hisley and Houndtor. A fourth site called Higher Knowle Wood lies just outside the Bovey Valley complex.

Bovey Valley is considered part of the East Dartmoor National Nature Reserve (NNR) . The stated vision of NNRs is “England’s National Nature Reserves are the most special places for nature and we manage them in an exemplary way. They inspire people, promote learning and encourage actions in the wider landscape.”

One of the strategic purposes of all NNRs is “ NNRs will provide places for people through access, interpretation and direct participation, with our partnership work increasing the range and the variety of engagement opportunities.”

The East Dartmoor NNR covers over 400 hectares and is made up of three adjacent, but distinctly unique sites; Yarner Wood, Trendlebere Down owned and managed by Natural England, and Bovey Valley woods, elements of which are owned and managed by both organisations.

The Bovey Valley Wood can be accessed along many different paths and these converge and cross in a number of places allowing for a variety of circular and linear routes many of which have been described in regional and national walking and recreational guides. There are several footpaths and a BOAT (byway open to all traffic) that link the Pullabrook / Hisley and Hound Tor woods.

Bovey Valley Woods provides informal access to a wide range of users. There are some naturally “quiet” areas of the woodland where access is limited by a lack of paths and physical remoteness and these locations are consequently inhabited by a number of rare/threatened species.

Public Access:

The site has an extensive network of rough forestry tracks, some of which form the basis of the public footpath and byway network connecting to adjacent land within the East Dartmoor National Nature Reserve SSSI/SAC, Overall this provides some 12 km of accessible routes within the site. There is a section of well surfaced track (1.2 km) from the main car park entrance at Pullabrook that provides reliable access for off road mobility vehicles, to a short section of riverside path and a level riverside glade. Mobility groups have explored tracks across other parts of the site but as part of a guided group.

However the paths are steep, uneven and can become muddy in periods of wet winter weather, owing to the wild rugged nature of the steep valleys and the open moorland of Dartmoor. Together the forestry track and paths provide access to some of the most dramatic and beautiful scenery the national park has to offer, including open moorland, riparian meadows, ancient and coniferous woodland and the pristine Becka and Bovey rivers. The paths benefit from xx

km of forestry tracks that are off road wheelchair accessible.

Pullabrook Wood has two main points of access, one at each end of the woodland, which are connected by a permissive access path. One entrance is accessible from Pullabrook Wood Car Park, and the other from the Old Manaton Road (Lustleigh Byway 36).

Hisley Wood has five main access points, three of which are connected into the public right of way (Lustleigh footpath 15 and 16). Entry points are from Hisley Bridge and the Old Manaton road (Lustleigh Byway 36), Rudge Wood, Heaven's Gate and further downhill from Lustleigh Common. Another entrance is located on the zigzag path above Hisley Bridge which forms part of Lustleigh bridleway 14.

Houndtor Wood has four main entrance points two linking the Manaton footpath 33, the remaining two linking Manaton byway 48. One entrance fords the river Bovey at Houndtor bridge (SX77258028), another enters the wood at the historic hill fort (SX76778068), another at the public footpath to Beckhams (SX76498032), and a final entrance leading into Becky Falls (SX76358013).

Communication:

With temperate rainforest being a communication priority. Bovey Valley Woods provides an opportunity to showcase this important habitat. The focus will be to inspire people to better understand the habitat and our work to restore it. To value and in turn to want to care for these precious habitats and their wildlife. A range of channels will be used to communicate our restoration and management of this precious environment.

Call to actions will be considered, with "come to visit" being carefully planned

Events:

In the recent past the Bovey valley Woods have worked well for a formalised events with controlled numbers through the Moor Than Meets The Eye Project, which ran from 2013-2019.

Bovey Valley is one of the more accessible Woodland Trust temperate rainforest sites and is likely to continue to be a wood where we run planned events (managed carefully to preserve the special character and importance of this place).

Pullabrook provides a useful point of access for general public engagement with parking and good safe access to a riverside meadow all within close proximity.

Because of the NNR status and the importance of the site in a national context, the site is used regularly for best practice and demonstration activity aimed at professionals by both Woodland Trust and Natural England.

The recent inclusion of the Bovey Valley Woods in the East Dartmoor Landscape Recovery Area is likely to increase the opportunity for best practice and demonstration activity but also a need to engage more widely with the local community and site user groups.

Volunteers:

Bovey Valley is a core site for the Woodland Trust's Varsity Volunteers group which has facilitated practical conservation and species surveying tasks for both Plymouth and Exeter University students since 2020. The site is also used for occasional corporate volunteer days.

At present the site has no dedicated woodland working group but does support opportunities for specified tasks such as habitat and species monitoring.

The opportunity for volunteer activity will be kept under review and could be scaled up if required, incorporating specific roles (beyond estate based working activity) e.g Woodland welcomer / history volunteer.

Education:

There is no formal education programme at this site but support in the past 12 months has been provided to Dartmoor National Park Conservation Ranger trainees looking to broaden skills through our regular management and survey work. The site is often used for academic research because of the importance of the species assemblages at the site.

Significance

The Bovey Valley is a well-known site, much loved by Woodland Trust supporters, and it continues to play a key role in communicating the Woodland Trust's key messages. The site continues to be in active management and together with the wider East Dartmoor NNR being are sites of international importance, owing to the complex species assemblages found amongst its extensive ancient upland oak wood, temperate rainforest, heathland and mires.

Sites such as this are at the forefront of the current debate on Dartmoor around balancing the need and desire for access against the significant but arguably declining biodiversity as the climate changes.

The State of the Park Report published by the Dartmoor National Park in 2017, estimated the annual number of tourist visitors, including day visits to Dartmoor for 2015 at 2.31 million. These figures were from the 2015 STEAM report (monitoring system based on actuals used by all National Parks) this showed a 3% decrease in the annual number of tourist visitors from 2009 (previous STEAM report) ; visitor numbers decreased between 2011 and 2013, however, numbers began to rise from 2013; and 2015 saw a 5.9% increase in visitor numbers from 2014. This trend was consistent with overall tourist trends across the UK. Since 2015 and in particular post pandemic anecdotally numbers have increased but recent studies have been unclear about the rate of growth.

At a site level, new housing around Newton Abbot, Bovey Tracey and the perimeter of the National Park and in addition nearby visitor and tourism developments are beginning to feed into increasing visitor numbers on site. That increase is already evident in people counter data collected at a number of key locations within the East Dartmoor NNR and the Bovey Valley.

In 2010 visitor numbers at Pullabrook Wood were calculated at 11,140 per annum and at Hisley Bridge 13,992. The current estimate for 2022 indicates the number of visitor number at Pullabrook appear to be in excess of 20,000 per annum and at Hisley Bridge in excess of 25,000. These numbers are not as precise as we would like due to variations in data but there is a strong trend in growth.

The Bovey valley was selected as one of the Woodland Trust's Visitor Experience Welcome Sites in 2017 in acknowledgement of the way it helps deliver its aim of inspiring everyone to enjoy and value woods and trees. A number of site improvements were undertaken during the last plan period following an entrance audit aimed at Welcome Sites. This included two new entrance gates and two interpretations boards, partial car park resurfacing at Pullabrook and at Houndtor Wood, the main entrance gate was realigned and replaced. Path improvements are planned at Hisley wood in the next plan period.

Opportunities & Constraints

1. The growing numbers of visitors throughout the year provide an opportunity to develop and communicate the value of the Woodland Trust and its aims and objectives.
2. The consequent impacts of increasing visitor number on local communities through increased traffic, loss of tranquility, path/track erosion and tensions between different recreation users. Representatives of the local parishes of Bovey Tracey, Manaton and Hisley have all expressed concerns against the over development and promotion of this important site.
3. Natural England host regular meetings with community representatives to discuss the management of the NNR.
4. The announcement of the East Dartmoor Landscape Recovery Area increases the need to highlight the Bovey Valleys special qualities and its importance to a diversity of threatened species assemblages. It is essential to promote an increased understanding of the diverse habitats and to engender mutual respect between visitors and local communities.
5. Third party publications and the good work of Plantlife through recent Heritage Lottery programmes focusing on lower plants has re-emphasised the importance of Bovey Valley sites, and their status as temperate rainforest.
6. Challenges posed by increasing interest in Temperate Rainforest stimulated by third parties beyond the direct control of the Woodland Trust.
7. The majority of the access points to the Bovey Valley are not within Woodland Trust ownership and therefore the Woodland Trust is reliant on third parties to control/manage access. The Woodland Trust owned Pullabrook Wood has a small car park (approx 10 to 15 cars). This is accessible down a narrow country lane, increased visitors has resulted in issues for local people and put visitors off using this car park.

Factors Causing Change

1. Increasing visitor numbers, including walkers, dogs, specialist recreational user groups such as riders, cyclists, off road vehicles, professional dog walking companies.
2. Physical site damage – track/path erosion, flooding/damage, roadside walls and verges / vandalism / erosion / littering / dog faeces
3. Uninformed site use - loss and damage to the special nature conservation and heritage features of the site
4. Unintended site promotion – the recent promotion of “temperate rainforest” site through third party publications has led to increased interest in visiting the site and demands for information.
5. Loss of event and volunteer activity post Moor Than Meets the Eye creating a vacuum of local contact/information

Long term Objective (50 years+)

1. To protect, conserve and sustain the unique diversity of species and habitats in this historic landscape without detriment to the NNR.
2. To enhance physical and intellectual access to the ecological and cultural heritage landscape for visitors and local communities to enjoy

3. To offer visitor experience and interpretation that highlights the importance of this site as a temperate rainforest and its role within Dartmoor's wider landscape and balances the needs of visitors with the historical and natural landscape.
4. To develop new ways of increasing community involvement and understanding of the historic and natural landscape and improve the ability of local people to share, celebrate the value of their local landscape
5. To sustain a living and working landscape by encouraging and facilitating business opportunities that capture the value/management of the landscape
6. To develop a well-trained and coordinated volunteer workforce for the area to help conserve and interpret the area's heritage both now and in future years.

Short term management Objectives for the plan period (5 years)

1. Widen the understanding of the value of Bovey Valley and its importance as a temperate rainforest.
2. Support and undertake demonstration and knowledge sharing activities
3. Continue to monitor access demands in partnership with NE
4. Support volunteering opportunities
5. Explain the value of the LRA and its long term potential to support the work of nature recovery.
6. Develop plans to communicate the management aspirations and operational activity.
7. Make reference to Natural England's, East Dartmoor Woods and Heath Management Plan dated 2019 to 2023 and ensure any proposed engagement activity takes account of the "Summary of significant site features" described in the plan.

4.4 F8 Ancient Woodland Site

Description

Ancient Woodland

The woods of the Bovey Valley are a mixture of ancient woodland(AW), planted ancient woodland (PAWs) coniferised in the 1960s on land previously managed as oak coppice. All the woodland hosts remnant populations of flora and fauna associated with ancient woodland. The woods contain significantly rich areas of permanent and temporary open ground, ride side margins and glades, bogs and wet flushes and riparian stretches along the River Bovey and Becca Brook and small areas of geological exposures and other earth features. Veteran trees and old growth features exist throughout, typically associated with historic boundaries and settlements supporting lower plants indicative of long term woodland cover of an open nature.

The restoration of the woodland in the Bovey and Becca Valleys has been in progress for over 20 years and the clear distinction between semi-natural woodland and PAWS is becoming increasingly less evident. The inventory estimates the following areas, Pullabrook 8.05 ha AW , 9.78 of PAWs, and 1.41 ha secondary, Hisley Wood 11.15 ha AW , 9.72 ha PAWs and 19.41 ha of secondary and Houndtor Wood 0.43 ha AW, and 26.01 has PAWs . The ancient woodland inventory undertaken by the Nature Conservancy Council contains a number of inaccuracies which further complicate arbitrary divisions based on designations. The Bovey and Becca Valleys have been settled since medieval times and possibly much earlier, a factor overlooked by the 1988 assessment. The following is a pragmatic division between Ancient Semi Natural Woodland and PAWS. The woodland or parts of it are also designated as a Site of Special Scientific Interest (SSSI); National Nature Reserve (NNR), Special area of Conservation (SAC).

Temperate Rainforest (Atlantic oak woodland)

The Bovey Valley Woods are some of the best examples in South West England of 'Temperate Rainforest' habitat, which are broadly categorised as woodlands experiencing >1400mm of rainfall spread over 200 days of the year, with a mild, oceanic driven climate, producing year round average temperature of between 10 and 18 degrees Celsius, typical of much of western Britain. These British rainforests are home to the richest diversity of lower plant species including Lichens and Bryophytes, anywhere in the world. They also feature stunning rare species endemic to UK temperate rainforests including pied flycatcher and the blue ground beetle. These are ocean dominated woodland ecosystems with water, and the species within them such as the Atlantic salmon playing a vital role in their cyclic ecological health.

Hisley Wood

Ancient Semi Natural Woodland (ASNW) (1c, 1g, 3a)

(SSSI/NNR/SAC) - predominately Western Upland Oak, dominated by mature sessile oak, hazel, with ash and wet woodland types following drainage features, and streamside flood plains, ranging from NVC class W14-W7. Other species include elm, sycamore, and beech. Regeneration is present throughout but the native woodland has largely reached a sustainable state of senescence and renewal. However, widespread regeneration of holly and areas of conifer impact greatly on the favourable status of the SSSI which as whole across East Dartmoor is in favourable condition.

Plantation on Ancient Woodland Site (PAWS) (1d,1e)

(SSSI/NNR/SAC) The areas of PAWS have been largely restored following clear fell operations and thinning, and what remains is a small area of Japanese larch planted in 1972. Coppice regeneration of hazel dominates in restored areas with sessile oak along sub cpt margins and historic boundaries.

Secondary Woodland (1a,1b,1c) 19.41 hectares

This covers a large area of conifer dominated woodland both DF/JL but in both areas there are good numbers of veteran trees and old growth features throughout. Past management interventions has aided the development of a vibrant understory dominated by semi natural species but with some conifer regeneration present. This is former subsistence farmland abandoned in the post medieval times and more recently in the 20th Century and therefore hosts many locally native species predominantly associated with historic boundaries.

Pullabrook Wood

Ancient Semi-Natural Woodland (ANSW) 5a, 5b, 5i, 5j

Ancient semi-natural woodland areas have been heavily modified by former felling operations and restocking with non-native broadleaves, the best representative of native woodland is sub cpt 5a NVC W8f. One sub compartment (5b) in particular is dominated by sweet chestnut but beech and sycamore are widespread with only occasional mature oak.

Planted Ancient Woodland Site (PAWS) (5c, 5d, 5e, 5f, 5g, 5h, 5i)

Areas of PAWS (including DF/SP) have been regularly thinned and DF regeneration is widespread in some sub cpts,

however the where advanced regeneration of sessile oak, hazel and holly have established this is now dominant as in sub cpt 5f.

Secondary Woodland 1.41 ha (5h)

A small area of former moorland at the south eastern end was planted with DF in the 1960s, this has a developing understory of heathland species.

Houndtor Wood

Ancient Semi Natural Woodland (ANSW) (2a, 2d, 2f)

The very far western edge of Houndtor the woodland adjoins the Becca Falls SSSI woodland. This is the only semi-natural part of Houndtor (NVCW11a) which was not heavily modified by 20th century planting of conifer but remains threatened by non-native species such as rhododendron. The clear fell (2004) areas of sub cpts 2a,2d are now in a regeneration phase dominated by birch, but contains some conifer regeneration.

Planted Ancient Woodland Site (PAWS) (2b,2c,2e)

This is the largest and most inaccessible area of conifer (DF/WRC/SP) within the Bovey Valley the majority dates from the 1960s. Two large scale thinning interventions since WT ownership have largely served to provide perfect conditions for conifer regeneration, rather than broadleaf regeneration as intended. Recent select fell and thinning operations have created a more targeted approach focused on features that has stimulated increased naturalisation of the woodland structure and has enhanced old growth characteristics and semi natural features.

Species

Associated flora and fauna, particularly lichen and bryophyte communities are particularly important. The SSSI citation for East Dartmoor Woods and Heath has 9 overlapping designations and 28 notable features identify the following assemblages/habitats as part of the Bovey Valley Woodland complex

Assemblages of breeding birds - Mixed: Scrub, Woodland - Bovey Valley Woodlands SSSI

Lichen Assemblage Bovey Valley Woodlands SSSI

Lepidoptera Assemblage - Bovey Valley Woodlands SSSI

Lowland Beech and Yew Woodland Bovey Valley Woodlands SSSI

Upland mixed ashwoods Bovey Valley Woodlands SSSI

Other priority species, including, otter, salmon, and dormice

Upland Oakwood Bovey Valley Woodlands SSSI SSSI

Wet Woodland Bovey Valley Woodlands SSSI SSSI

The principal driving force for the SSSI citation for Hisley Wood are the lichen assemblages.

Notable Lichens

Thirty-six notable taxa were recorded in the 2011 survey (Coppins, Acton - Dated Jan 2012) including: 24 Nationally

Scarce, 2 Nationally Rare, 3 Near Threatened, 1 Data Deficient, 2 BAP, and 17 International Responsibility species. Two of the lichen species are of principal biodiversity importance in England. Principal assemblages are:

Graphidetum scriptae and Pyrenuletum nitidae communities of smooth, mature bark (sometimes including smooth bark plates of otherwise rough bark).

Arthopyrenietum punctiformis and Leanoretum subfuscae communities on young smooth bark (including young stems, branches and twigs).

Lobarion pulmonariae alliance on trunks and large branches of old trees, often overgrowing bryophytes.

Lecanactidetum premneae community on dry, rough old bark of old trees and old ivy stems.

Usneion barbatae alliance on well-lit branches and larger twigs in the canopy.

Bats

Up to 13 of the UK's 17 bat species were identified as present in the Bovey/Becca Valleys in 2015 surveys, species are using the site for feeding, roosting and breeding. The most significant species is arguably the barbastelle a species categorised as near threatened at a global scale with populations still considered to be declining across Europe. The species is of such significance had the landscape not already been heavily designated to option of SAC designation may have been considered for the landscape.

Invertebrates

There are a huge range of rare invertebrate within the Bovey Valley the following three provide a useful indicator of the habitat condition.

Notable species include the Blue Ground Beetle a very rare species restricted to ten sites in Devon and Cornwall, and for this reason is included in the UK Biodiversity Action Plan. Oil beetles have been identified as priorities for conservation action through the UK Biodiversity Action Plan - meaning urgent work needs to be done to conserve them and their habitats. Oil beetles have an intimate relationship with solitary bees and are therefore dependant on the health and diversity of solitary wild bees. Once considered common and widespread, the Pearl-bordered Fritillary is now one of our most-threatened species. The cessation of coppicing/woodland management which resulted in the loss of suitable habitat is believed to be one of the major causes of this drastic decline. Conservation efforts have therefore focused on habitat management and there have been a number of success stories. However, this butterfly is still declining and, as such, continues to be a priority species for conservation efforts.

Significance

The Bovey Valley woodland complex is sits entirely within the East Dartmoor Woods and Heath NNR an area of over 400 hectares covered by 9 designations. Ancient Woodland ,Common land ,CRoW Access Land (not RCL), National Nature Reserve, National Park, NNR meeting Public Engagement Standard, Scheduled Ancient Monument, Site of Special Scientific Interest, Special Area of Conservation. It is a site of international importance, owing to its extensive ancient upland oak wood and heathland and mires. The mix of ancient woodland, open heathland, bogs, flower meadows and streams make it a haven for a wide mix of wildlife. The mix of habitats means the site is home to a wide range of animals, insects, birds and fish.

The East Dartmoor NNR has long been involved in scientific research and is a protected Site of Specific Scientific Interest (SSSI).

The site helps to achieve national, regional and local biodiversity habitat plan targets and delivers the Woodland Trusts vision 'a world where woods and trees thrive for people and nature' and goals " Protect ancient, veteran and valuable woods and trees, to stop the loss of irreplaceable habitat and carbon stores and preserve our natural heritage and Restore the ecological condition of existing native woods and trees, increasing landscape resilience and creating conditions for nature and people to thrive.

Opportunities & Constraints

Opportunities

The high biodiversity value of this site and its location in the National Park provides a range of funding opportunities and access to specialist support. The intimate nature of the land holding means that land management developed in partnership with Natural England provides opportunities to extend the value of the site through partnership working and to adopt the "Lawton" principle of a landscape approach to land management. This is particularly pertinent given the recent assessment by Natural England which indicates that deep Dartmoor Valleys like the Bovey/Becca will become of increasingly strategic importance as "refugia" in any warming climate scenario for species at risk of decline.

The importance of this landscape for nature recovery has recently been recognised by Natural England by its designation as Landscape Recovery Area (LRA) based on its species assemblages through which support for landowners will be supported over the next 30 years. A partnership of organisations, and private landowners within the LRA will formalise a working relationship over the initial two year development phase. Another facet of the LRA is the potential establishment of a "Super NNR" covering the same area, based on the river Bovey and Becka Brook catchments.

The recent interest stimulate in "temperate rainforest"

Constraints

The key management constraint relates to the often steep and rocky terrain and the remote location of the site. Access for woodland management is severely limited by the narrow rocky track network and constrained by sensitive river crossing points to both Houndtor and Hisley Woods. The moorland rivers are renowned for the sudden rise and fall and are described as "torrent rivers". Limited management access and the "flashy" watercourse is further complicated by the increasingly large dimensions of the conifer crops and the logistical complexities working such areas without significant impact. The high biodiversity of the site and its nationally renowned status as a NNR adds yet more complexities along with increasing visitor numbers and careful consideration needs to be given to any access improvements.

Factors Causing Change

1. Climate change

2. Tree disease - in particular, *Phytophthora ramorum* affecting Japanese larch, *rhododendron ponticum*, bilberry and sweet chestnut; *Phaeocryptopus gaeumannii* (Swiss Needle Cast) affecting Douglas fir, *Phytophthora pluvialis* affecting western hemlock and Douglas fir, *Ophiostoma novo-ulmi* (Dutch Elm Disease) affecting Elm and *Chalara fraxinea* (ash dieback) which are likely to have a short term impact, however there are a range biotic factors likely to impact the site in the long term.

2. Conifer regeneration - conifer regeneration is widespread in many sub compartments and past management approach to PAWs is unintentionally favouring conifer regeneration.

3. Invasive species - including, non natives such as *rhododendron*, laurel, Himalayan balsam, skunk cabbage, Himalayan honeysuckle but also native species such as holly, sycamore and beech.

4. Deer and squirrels - the impact of deer is increasingly apparent and recent trial plots have indicated the preferential browsing habitats of roe deer which appear to favour the growth of conifer regeneration as the deer are targeting regenerating broadleaves. The impact of squirrel damage on young trees is less evident as the populations are considered to be relatively low and the recorded impact on squirrels on the breeding bird population is not deemed significant.

5. Declining light levels - the migration of lichen assemblages to the edges of the woodland indicates the standard approach to PAWs management over the past 20 years has been insufficient, in addition the development of dense understory in semi-natural areas due to a lack of management intervention and grazing has reduced light levels further

Long term Objective (50 years+)

Maintenance of semi-natural components of the complex associated with SAC western oak woodland/temperate rainforest habitat in a favourable condition and maintain and enhance associated flora and fauna. On-going woodland management and grazing will be necessary to maintain the complex interaction of woodland and open habitats to provide sufficient habitat niches to sustain the current range of species diversity. Areas of conifer will continue to be cyclically worked to reduce their dominance and to limit conifer regeneration with the intention of restoring these area to largely native woodland canopy over the next 50 years. It is anticipated that the site will be reaching restored condition with less than 20% within 15 years by 2036.

Short term management Objectives for the plan period (5 years)

1. Annual programme of thinning and regenerative felling interventions targeting areas of conifer and cleaning and re-spacing conifer regeneration to maintain progress of restoration.

2. Continue to develop the on-going recording of species to avoid harmful impacts and contravention of the law relating to protected species.

3. Maintain a programme to control invasive species including, *rhododendron*, laurel, Himalayan balsam, skunk cabbage, Himalayan honeysuckle and the range of non natives present at the margins of the site associated with formal gardens and visitor attractions as well as conifer regeneration triggered by the restoration works. This will be undertaken by a range of techniques.

4. Informed by the key surveys undertaken by Acton, Coppins (2012), Sanderson (2018), Acton (2021), and Lamacraft (2022). The on-going targeted management of dense holly/beech/sycamore by felling and thinning operations, treat stumps proportionally in selected areas to reduce rate of regrowth.

5. Management of tracks and maintenance of open areas through a combination of grazing and active management intervention to rotationally manage scrub and vegetation development.
6. Access improvements undertaken to facilitate restoration and habitat management
7. Underplanting, exclosures and deer population management undertaken as necessary to ensure successful regeneration and restoration.
8. Management will be conscious of the need to create standing and lying deadwood habitats in areas where it is less evident eg PAWS areas, through veteranisation and harvesting.
9. Make reference to Natural England's, East Dartmoor Woods and Heath Management Plan dated 2023 to 2027 and ensure all operations take account of the "Summary of significant site features" described in the plan.

5. WORK PROGRAMME

Year	Type Of Work	Description	Due Date
2023	WMI - General Site Restoration Work	Works associated with initial or restoration phases to conservation and physical features within the sites such as boundary ditches, fences and walls, hedges, infield and boundary trees	May
2024	WMI - General Site Restoration Work	Works associated with initial or restoration phases to conservation and physical features within the sites such as boundary ditches, fences and walls, hedges, infield and boundary trees	May
2024	CS - Ecological Survey & Assessment	Use of external consultants to support the provision of ecological surveys, assessment and biodiversity / species monitoring	May
2023	CS - Historical Survey & Assessment	Use of external consultants to support the provision of historical and archaeological surveys and assessment	May
2024	WMI - General Site Restoration Work	Works associated with initial or restoration phases to conservation and physical features within the sites such as boundary ditches, fences and walls, hedges, infield and boundary trees	May
2024	CS - Ecological Survey & Assessment	Use of external consultants to support the provision of ecological surveys, assessment and biodiversity / species monitoring	May

APPENDIX 1 : COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
1a	7.6	Douglas fir	1963	High forest	No/poor vehicular access to the site	National Park, Planted Ancient Woodland Site
<p>A stand of High Forest, Douglas Fir (P1963) of reasonably good form over a remnant, locally common, c-11a / c-8e flora. Area formerly included heavily selectively thinned Sitka Spruce (P1959) close to Boveycombe Farmstead which has now been removed, ash regeneration is widespread but suffering from ash dieback. The occasional broad leaf veteran/ancient is scattered within the stand, mainly oak and silver birch. Understory consists of occasional to rare hazel coppice becoming frequent in some areas. The sub compartment descends moderately to a flat area in the valley bottom where there is a small [0.5ha] clear fell adjacent to northern boundary which contains coarse grasses, bramble and gorse with rare regenerating rowan and DF.</p>						
1b	6.53	Japanese larch	1963	High forest		National Park
<p>Secondary plantation comprising Larch (P1963) has been thinned and areas selectively thinned, aiming towards complete removal by 2030. Mature Oak, Ash, elm and Sycamore (P1870) veterans and ancients exist throughout stand principally on old-field boundaries along with ancient old coppice stools. Ash and Hazel coppice also exists within the understory. Ground flora is generally representative of c-8e and is locally abundant. Steep SW aspect. The trees provide an important framework for lower plants and the key species associated with temperate rainforest and the SSSI status.</p>						
1c	14.6	Ash	1950	High forest		National Park, Site of Special Scientific Interest, Special Area of Conservation
<p>A varied sub compartment: Mature Ash and Hazel coppice last cut 1960, dominated with mature (P1800) Oak, Elm, Ash standards, creating a varied High Forest structure. Generally W8e with W10c in small areas towards the Southeast part of the subcompartment. In places pure hazel coppice occurs, as does Mature Oak/Ash High Forest. Sycamore occurs throughout and some mature (P1830) specimens exist on boundaries. Mature Pure Oak High Forest (P1920) occurs along the Southeast boundary, Cherry is notably common here. Groundflora is abundant and diverse. Lower plants are more common within the valley bottom. Some of the more notable Lichens are prevalent adjacent to 3a. Moderate to steep SW aspect. The trees provide an important framework for lower plants and the key species associated with temperate rainforest and the SSSI status.</p>						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
1d	2.21	Japanese larch	1940	High forest		National Park, Planted Ancient Woodland Site
Mixed stand of mainly European and Japanese Larch (P1972 and P1967) over a frequent understory of coppice Hazel. The larch has been systematically removed since 2017 to favour the hazel understory and occasional regenerating broadleaves, small patches of oak have been planted. Objective is to remove all the larch by 2030 to fully restore to native species. Ground flora is principally c-10c and is locally occasional. A steep SW aspect.						
1e	1.66	Hazel	1972	Coppice		National Park, Planted Ancient Woodland Site
Formerly a mixed stand of mainly European and Japanese Larch (P1972 and P1967) over an occasional understory of coppice hazel. The hazel this now forms a dense stand of good quality coppice supporting good dormice populations. A small block of Norway Spruce (P1966) was removed in 2004 and the a diverse range of woodland species have recolonised the area and the lower fringe provides good habitat for woodland edge butterflies with a warm SW aspect. Regenerating conifer and laurel have been removed. Ground flora where present is principally c-10c and is locally occasional. A steep SW aspect.						
1f	0.58	Hazel	2004	Wood pasture		National Park, Planted Ancient Woodland Site
A small clear fell (2004) exists adjacent to Rudge Wood and contains some restocking hazel and oak with regenerating birch. The under storey is dominated by broom, gorse, and bramble. Ground flora is principally c-10c and is locally occasional. Moderate to steep SW facing slope, providing good habitat for butterflies and dormice are present in the better hazel areas.						
1g	0.76	Mixed native broadleaves	2004	Wood pasture	Management factors (eg grazing etc)	National Park, Planted Ancient Woodland Site, Site of Special Scientific Interest, Special Area of Conservation
A narrow strip of clear felled (2004) conifer (SS) on the site of an old meadow adjacent to the River Bovey. Large mature broadleaf trees line the river bank and include oak, ash, sycamore, alder and birch. Some of these support						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
<p>notable populations of rare lichens. The occasional oak standard exists in the clear fell with areas of patchy bramble and gorse. Ground flora is varied and abundant (W8b) in the open areas. This area is well used by foraging fritillary butterflies. A flat aspect. The river Bovey is increasingly creating erosion channels along the line of the riverside footpath, due to changing climate flooding is increasingly "erratic" and this is changing the way river bank erosion is happening.</p>						
1h	3.7	Sessile oak	1900	High forest	Mostly wet ground/exposed site, No/poor vehicular access to the site, No/poor vehicular access within the site	Ancient Semi Natural Woodland, National Nature Reserve, National Park, Site of Special Scientific Interest, Special Area of Conservation
<p>This area is known as Hisley Strip and is leased to E.N. Generally W11a-W8d-W7b communities are well represented. This narrow stand running adjacent to the river Bovey contains a coppice with standards structure, comprised of oak and ash standards with coppiced oak. The standards estimated to have been established around 1940, Mature quality sycamore (P 1840) are present in the areas of the southern section with sycamore saplings becoming locally invasive. Ancient coppiced alder are situated along the riverbank. Canopy density is poor in areas but improves towards the middle, providing better continuous cover. Hazel coppice forms the basis of the mixed shrub layer. Spindle is frequent throughout, Hawthorn, blackthorn, elder, rowan are always present, as is bramble and various ferns. Ground flora is diverse and abundant in places under the semi-closed canopy. Rarer species of lichen and bryophytes occur in this sub compartment.</p>						
2a	2.17	Silver birch	2004	PAWS restoration	No/poor vehicular access to the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	National Park, Planted Ancient Woodland Site
<p>Formerly very dense and predominately un-thinned area of Douglas Fir (p1962) with small pockets of Scots Pine (p1962). Clear felled in 2004, this was followed by gorse and scrub developing with birch and other shrubs regenerating alongside brook. The young woodland is beginning to extend onto the higher slopes and as its established a gradual change in the diversity of native species. Current structure provide favourable habitat for warbler species. Numerous rocky outcrops occur with patches of very shallow soil. A remnant coniferised c11a community occurs around the edges of the compartment, with W8e along the brook side.</p>						
2b	9.08	Douglas fir	1962	PAWS restoration	No/poor vehicular access to the site	National Park, Planted Ancient Woodland Site

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
<p>Predominately good quality thinned Douglas Fir with occasional blocks of planted Beech and Western Red Cedar (all p1962) over a rare remnant c-11a community. Understorey is generally poor away from the riparian zone and crop edges. Square deer fenced exclusion zones are being used to test deer impacts and the growth of planted hazel as timber crops are gradually thinned. Underplanting with shade tolerant hazel in 1.5m tubes was undertaken in 2018, this has achieved mixed success depending on light levels, Douglas fir regeneration is prolific. Some veteran broadleaved standards occur along the ride network and sub compartment margins. Rare hazel/oak understorey is present and deadwood is common throughout the middle and lower slopes. Very steep southerly aspect. This sub compartment is highly visible from Trendlebere Down.</p>						
2c	1.61	Douglas fir	1962	PAWS restoration	No/poor vehicular access to the site	National Park, Planted Ancient Woodland Site
<p>Douglas Fir (p1962) of good quality, remnant features including veteran pre-plantation oak, moss covered boulders and an increasingly developing W8e community along the margins of the Becka Brook This area is rich in lower plants and provides the best temperate rainforest habitat. Recent thinning has focused on reducing basal area along the riparian strip to simulate regeneration of native broadleaves with some success. Going forward regeneration felling approach will be undertaken along riverbank and track edges to limit Douglas fir regeneration and restore ancient woodland by 2030.</p>						
2d	2.61	Silver birch	2004	PAWS restoration	No/poor vehicular access to the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	National Park, Planted Ancient Woodland Site
<p>Former crop if Douglas Fir (p1962) clear-felled in 2004 at that time it had very few remnant communities, those existing tend towards c-11a, except some wetter flushes W9a, Ash-Rowan- Dogs Mercury. A number of veteran oak that were retained following the clear-felled we lost due to windthrow and desiccation. There has been rapid colonisation by gorse/birch/willow /hazel scrub and occasional oak. Douglas and Western Red Cedar regeneration has been cyclically removed but this remains an management issue. Young woodland is now established and diversity is increasing. Veteran oak/ash occur on the margins and boundaries.</p>						
2e	7.69	Mixed conifers	1962	PAWS restoration	Landscape factors, No/poor vehicular access to the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	National Park, Planted Ancient Woodland Site
<p>Predominately a remnant coniferised c11a community with W9a on wetter slopes to the west. A patchwork of alternating Beech and Western Red Cedar occurs in distinct blocks on the upper slopes, with continuous DF(1962) on the lower slopes. Whilst most ground flora is absent occasional pockets and remnant mature broadleaf standards</p>						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
do occur but are rare. Spring line seepages occur throughout the western end of the subcompartment tending towards W-9a. A narrow diverse broadleaved strip runs adjacent to the brook bank, which contains massive boulders, and with numerous lower plants and remnant temperate rainforest habitat. Significant mature oak trees occur, many with lichen coverage, Alder Sycamore and Hazel area also common. Aspect varies from southerly to southeasterly and is generally very steep.						
2f	1.07	Oak (sessile)	1890	PAWS restoration	Very steep slope/cliff/quarry/mine shafts/sink holes etc	Site of Special Scientific Interest, Special Area of Conservation
Mixed broadleaf High Forest with an open canopy (W11a). Oak, Beech and Sycamore (P1890) occur over an abundant coppice Understory of Hazel and Sycamore. Bramble is dominant in areas as is Rhododendron and Laurel making the sub compartment somewhat impenetrable. The area next to the river is very humid and supports many lichens and mosses on bankside mature trees, and rocky outcrops, some of the best but most remote temperate rainforest habitat on the site. Southerly aspect.						
3a	1.59	Oak (sessile)	1965	High forest	Mostly wet ground/exposed site, No/poor vehicular access to the site	Ancient Semi Natural Woodland, National Park, Site of Special Scientific Interest, Special Area of Conservation
A mixed broadleaf stand generally W8d, consisting of sycamore, downy birch and oak with the occasional ash (circa P1965). An abundance of sycamore at shrub and pole stage with birch and ash are locally dominant or co-dominant with alder. Understory consists of occasional hawthorn; mature well-developed hazel coppice stools are present throughout the stand increasing in density towards sub compartment 1g. The stools form a thick understory in some places forming the canopy layer. Ground Flora is especially rich along the riverbank. Bog mosses (Sphagnum spp.) are present. This sub compartment and sub compartment 4a are at the confluence of the Becka Brook and River Bovey.						
4a	2.18	Oak (sessile)	1950	Coppice	Mostly wet ground/exposed site, No/poor vehicular access to the site	National Park, Site of Special Scientific Interest, Special Area of Conservation

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
<p>An area of predominantly alder coppice W10e and W7b, with downy birch, ash and oak mixed in throughout the stand. The stand is estimated to have been last cut in 1950 with a proportion of the oak and ash being of a greater age, estimated to have been established around 1900. A number of very old, large, oak and ash coppice stools are situated along the external boundary adjacent to the public footpath. Understorey consists of frequent hazel coppice, with the occasional naturally regenerating ash. Ground flora is diverse and abundant and particularly attractive close to the river. Bog mosses (<i>Sphagnum</i> spp.) occur in boggy areas.</p>						
5a	3.87	Hazel	2001	High forest	Mostly wet ground/exposed site	Ancient Semi Natural Woodland, National Park
<p>Mixed Broadleaves coppiced in 2001 on a NE aspect adjacent to the Lustleigh road, which has more native broadleaves in the stand composition than 5b and akin to W8f. The whole sub compartment bears little resemblance to semi-natural cover indicated by the AWI register. Previously managed as long retained coppice, singling has taken place leaving some stems of good form. The sub-canopy contains a variety of native broadleaves which is frequent and contains silver birch, field maple, oak, hazel, sweet chestnut, rowan, sycamore and occasional elm. 2014/15 rotational coppicing of hazel, sweet chestnut, sycamore above road. Some garden escapes include laurel, buddleia.</p>						
5b	3.63	Sweet chestnut	1880	High forest	Mostly wet ground/exposed site	Ancient Semi Natural Woodland, National Park
<p>On the highest ground in the wood this sub comp. Has a NW Aspect and is dominated by Sweetchestnut and Sycamore (p1880) with the ground flora indicating W10c. The whole subcompartment bears little resemblance to semi-natural cover indicated by the AWI register. Previously managed as coppice, singling has taken place leaving some stems of good form. The sub-canopy contains a variety of native broadleaves, which is frequent and contains silver birch, field maple, Oak, Hazel, rowan and sycamore. Dense silver birch at E end of sub comp dominates remnant ground flora. W end of sub comp dominated by sweet chestnut and sycamore and poor ground flora though patches of small (200mm) ash regen present.</p>						
5c	2.8	Oak (pedunculate)	1987	High forest		National Park, Planted Ancient Woodland Site
<p>Area of Restocking (P1986) with Oak and Ash following premature clear fell of failed JL (P1965) crop. Prolific Birch regeneration has been cleaned repeatedly. The stand has a reasonably natural look and is representative of W10c. NW Aspect. 2015 further cleaning of birch, pole stage sycamore and conifer regen needed as casting shade.</p>						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
5d	0.48	Douglas fir	1962	High forest		National Park, Planted Ancient Woodland Site
An attractive group of DF (1965) with good form surrounding turning bay. A remnant flora representative of c-11a exists at stand edges. The stand has high aesthetic appeal and broad leaf understorey is developing but threatened by DF regen. NW Aspect						
5e	0.59	Douglas fir	1965	PAWS restoration		National Park, Planted Ancient Woodland Site
Douglas Fir (p1965) over improving hazel understorey, with birch regeneration. There are some large oaks (p1820) adjacent to and above the sub-compartment. What remnant flora that exists suggests c-11a. Abundant DF regeneration (seedlings to 4m poles) threatening understorey and ground flora, this is cyclically cut to waste.						
5f	2.63	Douglas fir	1965	PAWS restoration		National Park, Planted Ancient Woodland Site
Increasingly native high forest canopy with good native understorey as the Douglas fir/Scots pine (P1965) have been removed in thinning operations. Mature conifer DF (P1965) of reasonable form at NE end of sub comp and semi mature SP (P1966) of good form (thinned 2014/15), with a small element of multi-aged mixed native broadleaves towards SW end of sub comp. Dense clumps of holly also thinned 2014/15. Close to the river the communities representative of W8d elsewhere W11a. Communities are frequent at the edge of thinned conifer. Maiden oaks exist throughout. NW Aspect						
5g	0.49	Open ground	1998	Wood pasture	No/poor vehicular access to the site	National Park
A former riverside area of mixed conifer (p1964) cleared and now managed as a meadow. Ground flora along the edges is diverse. Broad leaves and shrubs along river bank have been cut to create windows to improve movement of butterflies. This area was unlikely to have been woodland in the past and is bounded by a wall, suggesting a history of open meadow. The sub compartment is level and provides a good location for event/demonstration activity.						
5h	3.36	Douglas fir	1965	PAWS restoration		National Park

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
<p>A block of Douglas Fir (p1965/6), Scots Pine (p1966) and an area of mixed broadleaves planted in 2018 following the clear fell of (0.6 ha) of Japanese Larch (p1965) removed and re-stocked due to plant health notice for phytophthora ramourm. Occasional gaps in the canopy provide and opportunity for c-10c communities to flourish. There is a particularly strong community of w17d towards the lower slope adjacent to the Old Manaton road where thinning DF has been ongoing. A small strip of mature open grown Scots Pine (p1920) exists on the South East Boundary. Increasingly good broad leaf regen seeded from adjacent sub comp 5f. This area has a NW Aspect.</p>						
5i	2.34	Oak (sessile)	2018	PAWS restoration		National Park, Planted Ancient Woodland Site
<p>A former stand of conifer on the upper slopes of the wood comprising JL (P1965) and SP (P1966) with a community NVC 10c. The larch was clear-felled in 2017 following the issue of a plant health notice, site was restocked with native broadleaves in 1.5 m shelters, establishment has been good with additional natural regeneration bolstering the stocking density, tubes have begun to be removed since 2021. Occasional broadleaves occur and a light understorey of coppiced Hazel. Individual semi mature oaks would benefit from halo cutting. Some DF regen from neighboring sub comp 5e. NW Aspect.</p>						
5j	0.37	Oak (sessile)	1940	Coppice		National Park
<p>Silver Birch Coppice (cut 1975) with scattered Oak standards (p1940) and in places a dominant Holly understorey. Flora varies from W11a through Vaccinum areas to Bracken dominated areas of W17b. Steep NW aspect.</p>						

Ancient Woodland

Ancient woods are defined as those where there has been continuous woodland cover since at least 1600 AD. In Scotland ancient woods are defined strictly as sites shown as semi-natural woodland on the 'Roy' maps (a military survey carried out in 1750 AD, which is the best source of historical map evidence) and as woodland all subsequent maps. However, they have been combined with long-established woods of semi-natural origin (originating from between 1750 and 1860) into a single category of Ancient Semi-Natural Woodland to take account of uncertainties in their identification. Ancient woods include Ancient Semi-Natural Woodland and plantations on Ancient Woodland Sites (see below). May support many species that are only found in ancient woodland.

Ancient Semi - Natural Woodland

Stands in ancient woods defined as those consisting predominantly of native trees and shrubs that have not obviously been planted, which have arisen from natural regeneration or coppice regrowth.

Ancient Woodland Site

Stands in ancient woods that have been converted to plantations, of coniferous, broadleaved or mixed species, usually for timber production, including plantations of native species planted so closely together that any semi-natural elements of the understorey have been suppressed.

Beating Up

Replacing any newly planted trees that have died in the first few years after planting.

Broadleaf

A tree having broad leaves (such as oak) rather than needles found on conifers (such as Scots pine).

Canopy

The uppermost layer of vegetation in a woodland, or the upper foliage and branches of an individual tree.

Clearfell

Felling of all trees within a defined area.

Compartment

Permanent management division of a woodland, usually defined on site by permanent features such as roads. See Sub-compartments.

Conifer

A tree having needles, rather than broadleaves, and typically bearing cones.

Continuous Cover forestry

A term used for managing woods to ensure that there are groups or individual trees of different ages scattered over the whole wood and that some mature tree cover is always maintained. Management is by repeated thinning and no large areas are ever completely felled all at once.

Coppice

Trees which are cut back to ground levels at regular intervals (3-25 years).

Exotic (non-native) Species

Species originating from other countries (or other parts of the UK) that have been introduced by humans, deliberately or accidentally.

Field Layer

Layer of small, non-woody herbaceous plants such as bluebells.

Group Fell

The felling of a small group of trees, often to promote natural regeneration or allow planting.

Long Term Retention

Discrete groups of trees (or in some cases single trees) that are retained significantly past their economic felling age. Operations may still be carried out within them and thinning is often necessary to maintain stability.

Minimum Intervention

Areas where no operations (such as thinning) will take place other than to protect public safety or possibly to control invasive exotic species.

Mixed Woodland

Woodland made up of broadleaved and coniferous trees.

National vegetation classification (NVC)

A classification scheme that allows an area of vegetation to be assigned to the standardised type that best matches the combination of plant species that it contains. All woodlands in the UK can be described as being one of 18 main woodland types (W1 - W18), which principally reflect soil and climatic conditions. For example, Upland Oakwoods are type W11, and normally occur on well drained infertile soils in the cooler and wetter north and west of Britain. Each main type can be subdivided into numerous subtypes. Most real woods contain more than one type or sub-type and inevitably some woods are intermediate in character and can't be properly described by any sub type.

Native Species

Species that arrived in Britain without human assistance.

Natural Regeneration

Naturally grown trees from seeds falling from mature trees. Also regeneration from coppicing and suckering.

Origin & Provenance

The provenance of a tree or seed is the place where seed was collected to grow the tree or plant. The origin is the geographical location within the natural range of a species from where seeds/tree originally derives. Thus an acorn collected from a Turkey oak in Edinburgh would have an Edinburgh provenance and a southern European origin.

Re-Stocking

Re-planting an area of woodland, after it has been felled.

Shrub Layer

Formed by woody plants 1-10m tall.

Silviculture

The growing and care of trees in woodlands.

Stand

Trees of one type or species, grouped together within a woodland.

Sub-Compartment

Temporary management division of a compartment, which may change between management plan periods.

Thinning

The felling of a proportion of individual trees within a given area. The remaining trees grow to fill in the space created.

Tubex or Grow or Tuley Tubes

Tubes placed over newly planted trees or natural regeneration that promote growth and provide protection from animals such as rabbits and deer.

Weeding

The control of vegetation immediately around newly planted trees or natural regeneration to promote tree growth until they become established.

Windblow/Windthrow

Trees or groups of trees blown over (usually uprooted) by strong winds and gales.

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