Forestry Commission Scotland
Coimisean na Coillteearachd Alba

Newcastleton
Land Management Plan Brief

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1. Background and key information

The Land Management Plan (LMP) comprises 2376 Ha of predominantly upland conifer forest located in the very South of the Scottish Borders, immediately east of Newcastleton village and adjacent to Kershope and Lewisburn Forests in Northumberland.

The earliest planting dates back to the 1920s. Further planting was carried out in most decades, the forest gradually expanding north and east. Priest Hill, just to the north east of Newcastleton village, was the most recent addition, planted in 1990. Forest restructuring has been underway for the last 20 years, largely through a clearfell system, and is progressing well. Much of the older conifer planting has been thinned and earmarked for management under Low Impact Silvicultural Systems (LISS). Timber production and potential…

The forest lies in a large rolling landscape with dominant coniferous forest cover, and is simple and uniform in character (Scottish Borders Landscape Type 5 – Southern Uplands forest covered). Despite its size, the forest blends in well with the wider landscape, and only part of Priest Hill is visible from the village.

Main access routes are from the B6357 which links to the A68 via the A6088 to the north of Newcastleton, and to the A7 to the south of the forest (Timber Transport agreed routes).

There are many minor water courses throughout the forest that ultimately drain into the River Esk via the Liddel Water. The main burns within the forest are the Kershope Burn which marks the boundary with Kershope Forest, Tweeden Burn which runs through the centre of the forest (NE – SW) and has the most extensive catchment within the forest, and Whitehaugh Burn which is the only one flowing into the Liddel Water within the village boundary.

Peaty surface water gleys are the dominant soils in the forest. Surface water gleys are more evident in the riparian areas along the main watercourses, and there are notable patches of unflushed blanket bog areas on higher ground. There are also areas of ironpans and brown earths in the north western part of the forest, in particular on Priest Hill, where there are also some uncharacteristic sandy soils.

Topography is large rolling landscape with ridgelines running NE to SW. The land rises to 430m near Flight Moss in the NE of the forest down to 120m on the northern edge of Priest Hill.

Climate varies from warm, moist and moderately exposed in the SW to cool, wet and highly exposed in the NE. Temperature and climate wetness are generally favourable for tree growth. Climate change predicts a slight increase in drier and warmer summers.

There are several unscheduled ancient monument sites and no scheduled ancient monuments.

Whilst Newcastleton is no longer considered a 'core red squirrel area', it is still a high priority to enhance red squirrel habitat and make it less favourable for grey squirrels. The forest and surrounding area is home to a variety of species including red squirrel, raptors, waders, badgers, otters and some notable butterflies. Efforts to conserve biodiversity have otherwise focused on enhancing the riparian habitat network.

There are no ancient woodland sites in Newcastleton, although there are some sites close to the forest boundary, in particular close to Hillhouse Wood on the western edge of the forest.

There is a strong sense of community in Newcastleton, but there is little direct community involvement in management of the forest. Topics of interest within the community include flood resilience and development of tourism. The community see forest management in the Liddel catchment (not just Newcastleton Forest) as being a significant factor in what happens downstream in Newcastleton.

The community also see Newcastleton Forest as being an important resource in encouraging visitors to the area. Moving the 7 Stanes hub/start point to the centre of the village was welcomed, and appears to be having a positive impact in the village. Continuing to develop an attractive forest environment and maintain/improve recreational facilities will be important to the community.

2. Vision

To complete restructuring of the forest to achieve a healthy and resilient forest that contributes to long term economic, social and environmental benefits.

3. Key drivers for design

The key drivers for design have been taken from considering the potential in Newcastleton against the Dumfries and Borders Forest District Strategic Plan 2014-2017

http://scotland.forestry.gov.uk/images/corporate/pdf/DumfriesBordersDsp2014-17.pdf

Healthy: achieving good environmental and silvicultural condition in a changing climate

Continue to diversify the forest structure through clearfelling and restocking, and appropriate use of appropriate alternative silvicultural systems. There are currently 490 Ha designated for management through Low Impact Silvicultural Systems (LISS), 22 Ha Long Term Retention (LTR), 2 Ha Minimum Intervention (MI) and 20 Ha Natural Reserve (NR). These will be reviewed against management objectives and site suitability.

Continue to increase species diversification to provide resilience to climate change and major threats to tree health such as *Phytopthera ramorum* (PR). Ensure that species are suitable for specific site conditions, using Ecological Site Classification (ESC) and local site knowledge. Where it is not possible to restock with larch (Newcastleton is in PR Management Zone 1), seek suitable alternative species to fit site objectives and avoid loss of species diversity. Consider alternative species should it become necessary to fell larch as a result of PR spreading.

Optimise carbon capture by selecting appropriate species using ESC and local site knowledge, but balance this against a need for species diversity. Seek opportunities to extend rotations where possible, and to maintain LTRs. Seek to optimise the timber products where possible, to maximise future revenue and lock up carbon for longer, through best silvicultural practice including thinning.

Management objective: To develop resilience to climate change and optimise carbon capture.

Productive: providing sustainable economic benefits from the land

In broad terms Newcastleton is a large productive forest, well-placed to supply the timber market in south west Scotland. However, as well as large areas of highly productive spruce and larch, there are extensive areas of poorer soils where the first rotation has been of low yield and where restocking with productive species is a challenge. Much of the north-west part of the forest has been previously thinned and is suitable for continued thinning and potential management as Continuous Cover Forest (CCF).

Review the Thinning Plan to ensure that thinning is targeted at the most suitable sites to optimise future quality and volume (and linking with the objective of optimising carbon storage).

Review the species suitability and management options for poorer quality sites using ESC and local site knowledge.

Seek to increase the opportunities for productive broadleaves on better sites, ensuring that proposals tie in with wider strategic priorities for growing productive broadleaves.

Consider niche marketing opportunities for larger timber products that may arise from LTRs and extended rotations.

Work with renewables partners to optimise the renewable energy potential in Newcastleton, ensuring this is realised with minimal loss to the productive potential of the forest.

Continue to develop a forest landscape and recreational infrastructure that meets the needs of local rural tourism, whilst fitting in with the wider Forest District recreational strategy.

Management objective: To optimise the productive potential of the land, for construction quality timber and other products for local and national markets.

Treasured: as a multi-purpose resource that sustains livelihoods, improves quality of life, and offers involvement and enjoyment

Actively engage the local community in and around Newcastleton village. Seek opportunities for local involvement and partnership working to improve the visitor experience and help support local tourism business. Be realistic as to how much is likely to be invested directly by FES in further recreational development.

Management objective: Actively engage with the local community in development of forest plans and on-going management of the forest.

Accessible: local woodlands and national treasures that are well promoted, welcoming and open for all

Maintain the existing walking and mountain biking/cycling trails to a high quality, and work with neighbours and the local community to enhance the physical links with the forest.

Improve visitor zones through best practise of normal forest operations and targeted visitor zone work where necessary.

Management objective: Manage recreational facilities and the associated landscape to maintain a welcoming and accessible forest environment.

Cared for: working with nature and respecting landscapes, natural and cultural heritage

There are no areas of ancient and semi-natural woodland in Newcastleton (although there are some close to the western boundary of the forest) , but permanent native woodland habitat will continue to be developed. This will focus on the main riparian corridors, with the primary aim of providing more diverse and better linked habitat within the forest. Where possible natural regeneration of native broadleaves will be encouraged, otherwise planting will focus on consolidated areas where establishment has the best chance of success.

There are no priority open habitats within the forest, but where it has been difficult to grow productive trees on areas of unflushed blanket bog, the potential for management for open habitat should be considered.

Newcastleton is an important forest for red squirrels, although no longer considered a 'core area'. Manage the forest to minimise its suitability for grey squirrels (invasive species), and increase its suitability for red squirrels. This should be achieved by minimising the area of larger seeded broadleaves and ensuring sufficient areas of conifers favoured by red squirrels, in particular Norway spruce and Scots pine.

There are several known nesting sites of Schedule 1 raptors in Newcastleton. Where possible these should be protected, but where felling will eventually take place, other suitable sites will be considered, ideally in areas of natural reserve, minimum intervention or long term retention.

There are several unscheduled ancient monuments that will be protected and managed in accordance with archaeological guidelines.

Management objectives:

- Continue to develop permanent woodland and other habitats for a variety of species, including red squirrels and raptors.
- Protect the historical and archaeological heritage of the forest.

Good value: exemplary, effective and efficient delivery of public benefits

As described under the 'Productive' above, we will optimise revenue, primarily from timber sales, ensuring that the procurement of services and sales is conducted in a fair, open and transparent way.

We will also work with partners to develop the potential for income from renewables.

There are no plans for direct charging for access in Newcastleton, but we will continue to explore opportunities to obtain revenue indirectly through recreation and tourism. Management of the forest and recreational infrastructure will contribute to the local tourism economy.

Primary Management Objectives

To maximise fast growing conifers for sawlogs (suitable for the construction market).

- *Provide a quality softwood timber into the future. As well as Sitka Spruce other conifers including Norway Spruce and Scots Pine will be planted to ensure to provide construction quality timber as well as offering species diversity benefits*
- *Thinning programme to increase potential quality*
- *Productive broadleaves should be a component*

To protect and enhance the environmental opportunities including water, soils, landscape and archaeology.

- *Water and soil quality is important to the forest and downstream users, the design should ensure these natural resources are protected*
- *Landscape character and design should merge with and enhance the local character*
- *Protection and enhancement of existing biodiversity; PAWS and juniper sites should be protected and enhanced*

To increase the overall biodiversity value of the forest

- *Tree species diversification*
- *Mixed forest and stand structure*
- *Strengthening and creating new permanent habitats (including native woodlands)*

Secondary Management Objectives

Healthy

- *Species and stand structure diversification to give greater resilience to climatic events and plant diseases*

Accessible

- *Maintain and facilitate current levels of recreation by the public for walking and horse riding*

4. Potential tree species and structure

To deliver the management objectives the proposal is to design a forest made up of the following proportions

Tree Species	*Current Forest Species %**	*Potential future forest %**	*Reason for proposed change*
Sitka spruce	*66*	*~45 %*	*Retain high percentage for Timber and Climate change mitigation. This species will be chosen only when there is no alternative species that will deliver the timber management objectives on these sites where the climate and the soils are more challenging (usually the more exposed plateaux between the habitat networks)*
Norway spruce	*2*	*~2 %*	*Very useful species to deliver timber, biodiversity and forest resilience to climate change (by diversifying from Sitka Spruce). To be located alongside the "Other conifers". NS is limited in growth potential by wind and should avoid exposed sites of DAMS >17.*
Scots pine	*1*	*~10%*	*Scotland's national tree which should form a component of the internal and external landscape.*
Lodgepole pine	*1*	*~3%*	*As a nurse species to facilitate establishment on spruce on heather dominated restock sites.*
Other conifers	*3*	*~5%*	*Douglas and other firs would be suitable in the more sheltered areas and site with better soils adding to diversity and resilience.*
Broadleaves	*6*	*~15 %*	*Key direction to protect and enhance the areas of PAWS and juniper. Focus of broadleaves is in the riparian areas to strengthen the riparian networks and comply with UKFS. Productive broadleaves should form a significant component of the total broadleaf areas out with NRs.*
Open	*18*	*~20 %*	*Main areas of open space are in and around the riparian areas, this will strengthen the habitat networks through providing light and access for birds and animals. Open space around roads, paths and quarries. Slight reduction in open space in exchange for woodland and the obvious benefits of woodland creation.*
	100	*100*	

Structure Type	*Current forest %**	*Potential future forest %*	*Reason for proposed change*
Clearfell	*93*	*~75 %*	*Retain large percentage of clearfell to deliver the timber management objectives. Aim for full restructuring to achieve maximum diversity for resilience for climate change and biodiversity benefits. These clearfell areas will be situated between habitat networks, away from key water courses.*
Long Term Retention	*1*	*~ 5 %*	*Significantly increase the LTR to strengthen the biodiversity value, particularly in areas adjacent to habitat networks. This management type will also deliver large volumes of timber.*
Minimum Intervention & Natural reserve	*5*	*~20 %*	*Significant increase in NR protecting areas of PAWS site in perpetuity.*

Glossary

LTR – long term retention
CCF – Continuous cover forestry
LISS – Low impact silvicultural systems
PAWS – Plantation on ancient woodland sites
ESC – Ecological Site Classification (FC system to explore site suitability for tree species)
NW – Native woodlands
AC – alternative conifers (alternative to Sitka spruce)
MB – Mixed native broadleaves
PBX – Productive broadleaves
SS – Sitka spruce
NS – Norway spruce
DBI – Downy birch for biomass
YC – Yield Class (timber volume production – m3 per ha per annum)
UKFS – UK Forest Standard
FCS – Forestry Commission Scotland.